

FIFTH REPORT

FOREIGN DISASTER EMERGENCY RELIEF OPERATIONS

CASE STUDIES JULY TO DECEMBER 1966

PLUS

STATISTICAL TABLES, CALENDAR YEAR 1966

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Individual Accounts of Disasters - Case Studies

Office of Material Resources

Voluntary Foreign Aid

Disaster Relief Coordinator

January 26, 1967

BEST AVAILABLE COPY

FIFTH SEMIANNUAL DISASTER REPORT - CASE STUDIES OF FOREIGN
DISASTERS FROM JULY TO DECEMBER, 1966; STATISTICAL TABLE
INCLUDING LINE TOTALS FOR CALENDAR YEARS 1964, 1965 AND 1966

This Fifth Disaster Report is the most comprehensive issued by the Disaster Relief Coordination Office. Descriptive material received from the missions and statistics and other data accumulated from many sources have made this possible. Interest in reporting has been stimulated by the case studies issued during the past three years.

Worldwide communications have also contributed. TV and radio coverage are so good and so fast that disaster conditions and relief operations are being reported as they are happening. Wanting to know for purposes of curiosity has been replaced by needing to know in order to provide the right kind of assistance.

These reports on foreign disaster relief are the only cumulative records describing events and relief action. They record the facts for evaluation now and in the future. Three years of reporting are not sufficient to be conclusive, but they are a beginning toward establishing records of comparative and historical value.

STATISTICAL TABLES

There are two statistical tables in this report. One covers the first half of 1966 with fiscal year totals at the end; the other covers the last half of 1966 with calendar year totals at the end. The case studies for the last half of 1966 are included in this report; those for the first six months were included with the Fourth Disaster Report.

The following comparisons and analysis have been made on a calendar year basis. These facts were selected from the Fourth Disaster Report and this report.

QUICK FACTS AND COMPARISONS

	<u>Cal. Year 1964</u>	<u>Cal. Year 1965</u>	<u>Cal. Year 1966</u>
No. of Reportable Disasters	60	47	58
No. of Countries	41	37	46
Deaths	9,929	43,935	16,090
Total Victims	5,687,455	5,742,137	5,533,605
 COSTS:			
<u>AID, FAA Contingency Fund</u>			
Under Ambassador's Authority	215,700	489,600	431,400
AID/W Approval	4,123,300	1,964,300	1,695,000
<u>AID Project or Other Government Funds</u>			
AID Support Funds (Inc. P L 480 104-Q Funds)	1,363,900	19,367,700	2,874,900
Non-reimbursed US Military Assistance	160,000	28,000	406,400
<u>Food for Peace</u>			
Title II	11,894,500	33,589,000	9,764,800
Title III	2,371,400	4,371,900	1,755,100
Voluntary Agency and Other US Assistance	2,508,000	3,088,200	2,352,000
TOTAL VALUE OF U. S. ASSISTANCE	22,636,800	62,898,700	19,279,600

	<u>Cal. Year 1964</u>	<u>Cal. Year 1965</u>	<u>Cal. Year 1966</u>
ASSISTANCE FROM OTHER NATIONS	*	3,814,500*	16,186,300*
EXPENDITURES BY HOST COUNTRY GOVERNMENT AND ORGANIZATIONS	*	*	846,504,900*
TOTAL ESTIMATED DOLLAR DAMAGES (Of the 58 disasters in 1966, estimated dollar damages were given for 31; for the remaining 27, cost of relief oper- ations was used as the damage figure.)	*	*	\$2,408,795,900

3 YEAR TOTAL US FOREIGN DISASTER RELIEF ASSISTANCE - \$104,815,100.

*Incomplete or too few figures available to provide satisfactory comparison.

DISASTER RELIEF POLICY

U. S. foreign policy provides each Ambassador with authority to take immediate action to utilize civilian and military capabilities to relieve human suffering and give assistance to the countries concerned. It authorizes immediate use of FAA contingency funds up to \$25,000 and further amounts after AID/W approval.

ACCEPTANCE AND EXPECTATIONS

U. S. disaster relief reports from the missions have a general theme, specifically stated in the reports from Algeria, Ceylon, Dominican Republic and East Pakistan. From within the country it is: "The American people have always been in the forefront of those who have been ready on short notice to help those in difficulty". To which is added the U. S. Mission comment that: "U. S. assistance has grown to be expected as a normal part of U. S. humanitarian concern and lack of such could be interpreted in a negative manner." These reactions to disaster relief operations in 1966 are a reflection of the more than 154 years that the U. S. Government and people have helped disaster victims any place in the world. As appropriate, each case study records specific expressions of appreciation from the countries concerned.

MAJOR DISASTERS OF 1966

There were nine major disasters in 1966. They were: Turkey Earthquake, Italian Floods, Hurricane Inez, (which seriously affected Guadeloupe, Cuba, Haiti, Dominican Republic and Mexico) the earthquake in Peru, the cyclone and tidal bore in East Pakistan, the floods in Rio de Janeiro and Recife in Brazil, floods in Indonesia and the Mekong River Floods (which inflicted heavy damage in Laos, Thailand and South Vietnam). Of these the Turkey earthquake and Italian floods were of such magnitude that they caused great concern and generated assistance throughout the world.

TURKEY EARTHQUAKE

Timeliness was the mark of success when the USAF in Turkey located an equipped and staffed field hospital in Varto, Turkey, within hours after the earthquake.

Food for Peace from U. S. voluntary stocks was diverted into the earthquake area the next day. These actions were followed by 2,000 arctic tents that served Turkish Army and civilians during the emergency recovery period and as a critical reserve in case Turkey could not complete the "A" frames and prefabs before winter storms closed the area.

A remarkable achievement by the Government of Turkey was the construction of over 10,000 single-family wooden, temporary "A" frame shelters and erection of 1,400 prefabricated units for the homeless by December 1, 1966. This undertaking was made possible by the extraordinary effort of the GOT, and the unusually mild weather conditions in an area which usually suffers heavy snows and extreme cold as early as October.

ITALIAN FLOODS

Notable in the Italian flood disaster were the widespread human suffering and magnitude of the economic and cultural losses. In dollars, this loss has been estimated at \$2 billion. Lives were lost, homes, cars, personal belongings, means of livelihood, farms and livestock, and the damage and destruction to art treasures were unprecedented. Italy, with its long, long history, had never before known such a disaster. But the spirit of the people of Italy remained unbroken. Despite the thousands of handicraft firms, shops, stores, industrial units, hotels and agricultural areas that suffered great losses and required major clean-up and repair, superior human efforts were made to resume business operations and to reestablish farms. Economic assistance will be needed for a long time. The cry for help in restoration of art works met response from all over the world. It has been estimated that it will take 20 years to restore the paintings, books and sculpture damaged by the flood waters, the mud, debris and oil.

HURRICANE INEZ

Inez made disaster history because of the wide area of destruction and the length of time which elapsed between the birth of the storm and its death. It came into existence 1200 miles east, southeast of San Juan, Puerto Rico, on September 24. Seventeen days later, after striking hard at Guadeloupe, Dominican Republic, Haiti, Cuba and Mexico, and after limited damage to Florida and the Bahamas, it broke up against the hills of the Sierra Madre range in Mexico on October 10. Although dollar damage was greater in Guadeloupe and Mexico, the plight of the people of Haiti after the storm caused the most concern. The inability of the Haitian Government to provide adequate relief, the low income, lack of education and apathy of the people make recovery and rehabilitation a difficult process. Only the presence of the U. S. Navy Caribbean Ready Group, arriving immediately after the storm, brought hope to the Haitians that they would be given emergency medical care and assistance.

REGIONAL ANALYSIS OR COMMENTARY

AFRICA

Of the 13 reportable disasters in this region for calendar year 1966, 8 were the result of famine or near famine conditions. This region received most of its disaster relief from the U. S. in the form of P. L. 480 Food for Peace (74,515 metric tons), which involved 40% of the total value of U. S. foreign disaster assistance in 1966.

LATIN AMERICA

For calendar years 1964, 1965 and 1966 this region had 50 reportable disasters, 16 of which occurred in 1966. U. S. Military assistance groups in addition to working on disaster relief are also helping with disaster preparedness. Under the American Ambassador and Mission Directors, and guidance from CINCSO, Panama, initial disaster plans were prepared in Ecuador and Paraguay. Other Civic Action Programs have included outlines of working relationships with the Embassy, USAID and local military and civilian authorities. ARA/LA and MR/DRC are drafting guidelines for the Latin American missions and considering pre-emergency stock-pile proposals for disaster supplies.

Brazil - Disaster Prevention The Government of Brazil requested a survey for possible Recife flood control. USAID and AID/W arranged for Bureau of Reclamation Hydrology and Flood Team to make the study. The survey reports that an economical alternative for immediate protection to Recife from recurrence of flooding of the magnitude of the 1966 floods could be accomplished through construction of a diversion channel bypassing Recife to the south at an estimated cost of \$9.1 million. (The property damage of the 1966 floods alone exceeded this amount.)

Haiti - Action to Minimize Effects of Disaster The Mennonite Central Committee Construction Team inaugurated a new type of construction in the Hurricane Inez disaster area, using cement instead of sheet metal roofing to make houses more hurricane proof. Hope was expressed that this might start a trend in communities along the southern coast of Haiti.

Cuba Although suffering great damage from Hurricane Inez, no disaster case study appears in this report. There was not enough information available and no U. S. assistance was involved.

NEAR EAST, SOUTH ASIA

Twenty-nine percent of the total USG disaster relief assistance in 1966 went to this region. Although there were 12 reportable disasters in NESAs, the majority of this assistance was the result of the earthquake in Turkey and the combined cyclone and tidal bore in East Pakistan.

East Pakistan East Pakistan floods, cyclones and tidal bores of the past two years can be cited as the most disastrous human tragedies of the period. More than 13,560,000 people were affected and 39,095 persons were reported dead or missing in these two years. The need for disaster preparedness in East Pakistan is so great that plans are now underway to develop a better warning system and to promote the establishment of a disaster plan and organization by the GOEP.

East Pakistan - Disaster Prevention In connection with the 1966 cyclone, the GOEP reported that U. S. AID supported Cyclone Reconstruction Shelter Program and Coastal Embankment Program had materially reduced loss of life and damage. In some areas, it was reported that one-half the number of houses were damaged inside the embankment vs. that reported outside the embankment.

Turkey - Disaster Prevention U. S. Geological Survey geologist went to Turkey to give technical advice to the Government of Turkey on conditions in the earthquake area and proposed that earthquake resistant construction could be designed to prevent the extreme loss of life as caused by the August 19 quake.

India Large amounts of food were delivered to India for famine relief under Title II and other sections of P. L. 480. The food shortages of India are not reported as a disaster in 1966 because of their long-range, continuing nature. Severe conditions in the States of Bihar and Uttar Pradesh reached disastrous proportions in January 1967.

FAR EAST

The big disaster story in the Far East was the flooding of the Mekong River. Although this is an annual event, the 1966 floods compared with the worst in its history. U. S. disaster assistance for all of the Far East in 1966 amounted to \$2,392,100. The Mekong Floods accounted for \$1,870,100 of this. In 1965, the floods in Korea were the greatest single cause for U. S. assistance. This too is an annual occurrence, worse in some years than others. Although not a serious problem in 1966, the hurricanes which annually strike the Philippines have been the reason for considerable U. S. aid in recent years.

Laos and Vietnam - Diminishing Agricultural Losses from Floods A beneficial outgrowth of 1966 Mekong floods is the opportunity of USAIDs to initiate a forward looking approach to new crop production patterns. Planting of rice has been a ritual performed only during approved periods of time. Villagers have been reluctant to change these practices. Late plantings in 1966, caused by the floods, seem to have broken these barriers and created an opportunity for changes to other methods, times and crops.

Laos - Disaster Prevention USAID irrigation technicians have investigated, designed and assisted in construction of two self-help temporary dams in Vientiane Province, and another is under construction. Many other sites are being investigated at the request of local leaders.

U. S. VOLUNTARY AGENCIES

Reports from the U. S. missions, notably Algeria, Senegal, Morocco, Italy, Brazil, Colombia, Ecuador, Dominican Republic, Guadeloupe, Haiti, Peru, Ceylon, Greece, India, Jordan, East Pakistan, Turkey, Indonesia, Korea and the Philippines stressed the value of on-the-spot assistance provided by the U. S. voluntary agencies. Through their on-going programs, the volags diverted Food for Peace, other foodstuffs, clothing, blankets and emergency supplies. Their freedom of action increased their effectiveness in getting these items to the victims immediately. On their own initiative, they are pre-positioning supplies in disaster-prone countries. Specific appreciation is expressed by the countries concerned to Catholic Relief Services, C.A.R.E., Church World Service, Lutheran World Relief, Mennonite Central Committee, Seventh-Day Adventist Welfare Service, and the American National Red Cross, directly or through local Red Cross Societies.

In one reportable instance, food, equipment, liquor and other things were rushed to a disaster area by speculators to barter the victims out of their land,

prized possessions or future crops. Rapid action by a U. S. voluntary agency reassured the people that they would be helped and not have to compromise their few remaining possessions.

WITHIN COUNTRY DISASTER RELIEF

In some countries, the recipients are asking for and expecting more from their own governments. Questions are being raised concerning warning, evacuation, relief and recovery. These reactions by the people are not going unnoticed by the politicians. U. S. missions are encouraging local governments to do something about their responsibilities and to develop pre-emergency plans. U. S. missions are also providing more and more information on what each country is doing to help itself. There were enough reports in calendar year 1966 on dollar value of assistance, appropriations made by local, state and/or national governments, laws passed, etc., to add a new column to the statistical tables recording in-country costs.

MULTI-NATION ACTION

More facts are recorded on what other nations did to help disaster stricken countries. Assistance from other countries in the 58 disasters of 1966 amounted to \$16.2 million in cash or in kind. A quote from the Turkey report states: "Once it was only Uncle Sam providing relief supplies...this time Turkish officials were able to record donations from 58 other countries". Not only the United States but also other governments provided transportation for donated items, regardless of source, making disaster relief a truly multi-nation operation.

UNITED NATIONS

U. N. - Manual of Resources

Major disasters resulted in appeals for assistance to the United Nations and its technical agencies. In June 1966 the U. N. issued its manual which analyzes the resources available to the United Nations for responding to disaster appeals and the procedures to follow. It also describes the international disaster activities of the League of Red Cross Societies.

U. N. - Disaster Housing Study

U. N. is giving high priority to review of social and technical problems involved in reconstruction, and of effectiveness of the measures adopted to provide external aid, particularly towards restoration of housing and associated community facilities after a disaster. A progress report on Rehabilitation and Reconstruction following natural disasters was issued by the Committee on Housing, Building and Planning in order to provide information and guidance to Governments faced with disaster recovery and to guide the work of the United Nations and the specialized agencies.

U. N. - Peru Earthquake

In response to the offer of the Secretary General, the Peruvian Government expressed a desire for the following help; \$20,000 for health teams and to provide potable water; funding for Peruvian experts and to study and inspect experimental international work in progress and techniques applicable to the

reconstruction of earthquake zones; organization of an ad hoc committee of earthquake experts, representing five countries where earthquakes have recently occurred; two experts, one in land acquisition emergency housing programs, and one in building techniques; and establishment of an experimental housing unit in Lima. U. N. action is pending.

U. N. - Floods - Outer Mongolia

To assist in rehabilitation of the Ulan Bator flood disaster in July 1966, the United Nations responded to a request to provide dyestuffs valued at \$14,500.

U. N. - Turkey Earthquake

U. N. sent 48 tons of corrugated iron roofing material to Turkey for use on A-frame shelters.

U. N. - Taiwan

A cooperative project for improvement and expansion of typhoon and flood-warning services was signed by the Republic of China and the U. N. Development Program. U. N. will contribute \$626,100 and Taiwan \$752,800 in local operating costs and kind, it was reported by the Nationalist Chinese Information Services.

DISASTER SUPPLIES

Several missions have reported that money alone cannot buy relief. Until such time as the countries themselves can organize and finance disaster relief operations, the U. S. should be prepared to furnish critically needed disaster supplies, the missions report. Temporary shelters remain at the top of the list of supplies most difficult to obtain on an emergency basis. Tents are seldom available in the country hit by a disaster, are rarely available from U. S. military sources, and can only be obtained from commercial sources in the U. S. in small quantities. Neither can they be obtained quickly from other countries. This was attempted by the American Embassy in connection with the Algerian floods; when inquiry was made on availability of tents in Italy, firms there reported they could not make delivery before 30 to 50 days.

An important step was taken in November of 1966 to make available U. S. owned excess property. Assistant Administrator for Material Resources, Herbert J. Waters, authorized the establishment of a worldwide disaster relief segment under Section 608 of the Foreign Assistance Act. This permits excess property regional offices to obtain and store tents, tarpaulins, blankets, water purification tablets, folding cots, mattresses, used clothing, portable water purifiers, sterilizers, syringes, needles, jet injectors, lanterns, generators, radios, field kitchen equipment, hospital and first aid supplies and equipment. These items will be packed for airlift at each excess property warehouse. It may take a year or two to accumulate a reasonable quantity of excess stock since most of the items are in short supply. In the interim, other USG and commercial sources are being explored and the question of advance funding is under consideration.

FOOD

AID has developed a high-protein food mix. It is composed of cornmeal, soya flour, and small amounts of nonfat dry milk fortified with minerals and vitamins. When mixed with water the CSM makes a palatable food or can be adapted to local dishes. The first 95 million tons of this high-protein food are now being shipped overseas for major tests.

Food distributed by U. S. volags was significant to disaster relief operations in 17 disasters and was a part in 11 other disasters at an estimated market value of \$1,755,485. In these cases, the U. S. volags not only arranged for diversion of the food from other programs, but also assisted in distribution to the victims.

Future problems may occur should allocations of Food for Peace to U. S. voluntary agencies be insufficient for ongoing programs and disaster needs. Advance planning indicates the desirability of reserves for emergencies in some disaster prone countries.

The reduction in U. S. disaster assistance in 1966 can be accounted for in large part by smaller uses of Food for Peace under P. L. 480, Title II, grants for famine and disaster relief. In 1964, value of this food was \$11.9 million; in 1965 it was \$33.6 million; and in 1966 it was \$9.8 million.

PRIVATE INDUSTRY CONTRIBUTION TO DISASTER RELIEF OPERATIONS

Emergency Shelters

Growing out of an AID research project with the University of Michigan on the structural potentials of plastics for housing, a new concept for disaster shelter has been developed by International Structures Corporation of Pennsylvania. The proposed shelter is approximately 11'x11', weighs about 70 pounds, is easily erected without any frame and can be packaged for air shipment. The all-white material gives it a cheerful appearance inside and out. Consideration is being given to placing some of these shelters in the missions for trial tests in cooperation with voluntary agencies and countries concerned.

Drugs and Vaccines

U. S. drug firms continue to donate urgently needed drugs and vaccines to disaster stricken countries, usually through the American Red Cross or U. S. voluntary agencies. Contributions during 1966 were made by Eli Lilly, Wyeth, Parke Davis, Lederle, Upjohn, Abbott, Pfizer, Hoffman-LaRoche, Bristol and Squibb.

Air Transportation

U. S. airlines have been instrumental in getting U. S. disaster relief supplies to a stricken country in the quickest possible time. Their personnel have worked after hours to arrange transportation for disaster experts, shipments, and charter flights, and in addition, where scheduling permits, they have provided free airlift of donated items on a space available basis. Free space was provided by the following U. S. airlines in 1966: Pan American, Delta, Braniff, Panagra, and TWA. In addition, Varig and Alitalia donated space available airlifts.

OTHER 1966 FOREIGN DISASTERS NOT COVERED IN THIS REPORT

In addition to the disasters reported herein, there were 9 other countries hit by severe earthquakes that did not involve U. S. assistance. Earthquakes did massive damage in Tashkent, USSR and in Matsushiro, Japan. Other earthquakes did limited damage to parts of Colombia, Venezuela, Afganistan, West Pakistan, and the Ivory coast.

Severe floods hit parts of 9 countries, including Venezuela, Mexico, Iran, Taiwan, Burma, Japan, Poland, Austria and Hungary.

Worldwide attention was attracted to the landslide at Aberfan, Wales, that killed some 200 people, mostly children. Other disasters reported in the international news were a boat sinking in Greece, dam burst in Brazil, forest fire in Portugal, typhoon in Japan, bridge collapses in Canada and Venezuela.

DISASTER RELIEF COORDINATORS

Mr. Joseph F. Vaughan, G/PM, Department of State, was transferred to other assignments on November 1 and has been replaced by Mr. A. A. Rabida, Department of State. Mr. Vaughan served during the formative period of disaster relief coordination which began in 1963. His participation in disaster relief policy formulation and operations was of outstanding value to the program. Currently, the U. S. Government coordinators for foreign disaster relief are:

A. A. Rabida, Department of State
Capt. V. G. Holzapfel, U.S.N., Department of Defense
Alma E. Hughes, Department of Health, Education and Welfare
Stephen R. Tripp, Agency for International Development



Stephen R. Tripp
Disaster Relief Coordinator

State/AID
Office of Material Resources
Voluntary Foreign Aid
January 26, 1967

JULY-DECEMBER 31, 1966, REPORTED FOREIGN DISASTER STATISTICS AND EMERGENCY RELIEF EXPENDITURES
AND LINE TOTALS FOR CALENDAR YEARS 1964, 1965, 1966, PLUS 3-YEAR TOTALS

COUNTRY AND DISASTER	KILLED	TOTAL REPORTED VICTIMS	FUNDS EXPENDED OR VALUE OF ASSISTANCE PROVIDED IN THOUSANDS OF DOLLARS (\$1 million will appear as 1,000.0)									
			CONTINGENCY FUND		AID PROJECT OR OTHER GOVT FUNDS	P. L. 480 FOOD FOR PEACE		VOLAGS, OTHER U. S. ASSIST- ANCE	TOTAL U. S. ASSIST- ANCE	REPORTED ASSIST- ANCE OTHER NATIONS	HOST COUNTRY ASSIST- ANCE	
			BY AMB.	AID/W		TITLE II	TITLE III					DOD
<u>AFRICA</u>												
Algeria Floods 10/6-11/66	57	15,957	\$ 10.2		\$ 4.7		\$ 6.9		\$ 115.7	\$ 137.5	\$ 59.5	*
Chad - Grain (Not counted as Airlift 9/66 a new disaster)			\$ 25.0	\$ 43.7						\$ 68.7		*
Mali Drought/ Famine '66		*				\$1,160.0				\$1,160.0		*
Morocco Drought/Famine 1966		*				\$1,140.0				\$1,140.0		*
Senegal Drought/Famine 1966		*				\$2,080.0	\$ 550.0			\$2,630.0		*
Upper Volta Drought/Famine 1966		*				\$1,940.0			*	\$1,940.0		*
AFRICA TOTAL	57	15,957	\$ 35.2	\$ 43.7	\$ 4.7	\$6,320.0	\$ 556.9		\$ 115.7	\$7,076.2	\$ 59.5	*
<u>EUROPE</u>												
Italy Floods 11/66	116	100,116	\$ 25.0	\$155.0					X \$ 710.0	\$ 890.0	\$1,268.0	\$800,000.0
<u>LATIN AMERICA</u>												
Brazil-Recife Floods 5&6/66	147	125,647	\$ 16.8		\$ 7.3	\$ 11.5	\$ 169.0		\$ 31.8	\$ 236.4	\$ 14.0	\$ 4,357.0
Colombia Fire 10/26/66	1	3,001	\$ 16.0						X \$ 5.0	\$ 21.0		*
Ecuador Fire 10/14/66	0	800	\$ 3.0		\$ 3.8		\$.7		X	\$ 7.5	\$ 5.3	*

JULY-DEC. CUMULATIVE DISASTER STATISTICS (Cont'd)

FUNDS EXPENDED OR VALUE OF ASSISTANCE PROVIDED IN THOUSANDS OF DOLLARS
(\$1 million will appear as 1,000.0)

COUNTRY AND DISASTER	KILLED	TOTAL REPORTED VICTIMS	CONTINGENCY FUND		AID PROJECT OR OTHER GOVT FUNDS	P. L. 480 FOOD FOR PEACE		DOD	VOLAGS, OTHER U. S. ASSIST-ANCE	TOTAL U. S. ASSIST-ANCE	REPORTED ASSIST-ANCE OTHER NATIONS	HOST COUNTRY ASSIST-ANCE
			BY AMB.	AID/W		TITLE II	TITLE III					
Dom. Republic Hurricane Inez 9/29-30/66	74	7,074	\$ 25.0	\$ 1.5		\$ 8.3	\$ 32.0	X	\$ 36.5	\$ 103.3	\$ 505.0	\$ 1,533.0
Guadeloupe Hurricane Inez 9/27-28/66	25	10,000	\$ 13.8					X	\$ 29.9	\$ 43.7		\$ 3,000.0 *
Haiti Hurricane Inez 9/29/66	480	67,430	\$ 25.0	\$ 31.9			\$ 12.5	X	\$105.2	\$ 174.6	\$ 16.0	*
Mexico Hurricane Inez 10/7-10/66	14	10,014	\$ 25.0	\$ 1.8				X	\$ 3.0	\$ 29.8		*
Panama Floods 11/4/66	20	1,620	\$ 8.7				\$ 1.3	X		\$ 10.0	\$ 4.0	\$ 100.0 *
Peru Drought 1966		156,000				\$ 533.2			*	\$ 533.2		\$ 1,800.0
Peru - Earth- quake, 10/17/66	120	57,720	\$ 25.0	\$ 70.4	\$ 2.7		\$ 23.0	X	\$179.0	\$ 300.1	\$ 15.6	\$ 20.0*
LA TOTAL	881	439,306	\$ 158.3	\$105.6	\$ 13.8	\$ 553.0	\$ 238.5		\$390.4	\$1,459.6	\$ 559.9	\$10,810.0*
NESA Ceylon Floods 9&10/66	32	100,032			\$ 105.3		\$.4			\$ 105.7	\$.7	\$ 2,500.0
Cyprus -Victims Past Civil Strife 9/66		623		\$ 42.1						\$ 42.1	\$ 10.0	
Greece Earth- quake 9/1 & 10/29/66	1	15,001					\$ 1.0		*	\$ 1.0	*	\$ 86.0*
India Floods 6,7&8/66	30	900,030					\$ 3.6		\$ 5.0	\$ 8.6	\$	\$ 104.6*
India Cyclone 11/3/66	18	150,018	\$ 5.0						\$ 5.0	\$ 10.0	\$ 50.0	\$ 84.0*

JULY-DEC. 1966 CUMULATIVE DISASTER STATISTICS (Cont'd)

COUNTRY AND DISASTER	KILLED	TOTAL REPORTED VICTIMS	FUNDS EXPENDED OR VALUE OF ASSISTANCE PROVIDED IN THOUSANDS OF DOLLARS (\$1 million will appear as 1,000.0)									
			CONTINGENCY FUND		AID PROJECT OR OTHER GOVT FUNDS	P. L. 480 FOOD FOR PEACE		DOD	VOLAGS, OTHER US ASSIST-ANCE	TOTAL U. S. ASSIST-ANCE	REPORTED ASSIST-ANCE OTHER NATIONS	HOST COUNTRY ASSIST-ANCE
			BY AMB.	AID/W		TITLE II	TITLE III					
Nepal Earth-quake 6/27/66	80	20,080							\$ 5.0	\$ 5.0	\$ 90.9	\$ 80.1 *
E. Pakistan Floods 6-9/66	39	500,039				\$ 6.6				\$ 6.6	\$ 15.4	\$ 354.0 *
E. Pakistan Cyclone 10/1/66	850	1,500,850			\$1,463.0	\$2,050.0	\$ 11.5		\$ 16.5	\$3,541.0	\$ 119.0	\$1,300.0 *
Turkey Earth-quake 8/19/66	2,529	110,529	\$ 25.0	\$1,081.3	\$ 46.6**		\$ 42.7	X	\$ 632.8	\$1,828.4	\$4,498.9	\$11,222.2
NESA TOTAL	4,579	3,297,202	\$ 30.0	\$1,123.4	\$1,614.9	\$2,050.0	\$ 65.8		\$ 664.3	\$5,548.4	\$4,784.9	\$15,730.9
FAR EAST												
Indonesia Famine 1966	8,000	212,000				\$ 130.0	\$ 26.0			* \$ 156.0		\$ 27.0*
Indonesia Volcano 8/12/66	88	40,088					\$ 100.0			* \$ 100.0		* *
Korea Floods 7/24-29/66	95	131,999					\$ 33.0	X	\$ 28.5	\$ 61.5		\$ 399.0*
Outer Mongolia Floods 7/11/66	57	20,057							\$ 2.5	\$ 2.5	\$ 169.5	*
Ryukyu Isl. Typhoons 9/1&5/66	0	13,764			** \$ 200.0			X	\$ 7.0	\$ 207.0	\$1,004.0	\$ 600.0
Laos - Mekong Flood 8&9/66	20	70,020	\$ 25.0	\$ 204.4					\$ 11.2	\$ 240.6	\$ 160.2	\$ 123.3
Thailand Mekong Flood 9/66	6	200,006	\$ 4.4		** \$ 100.0			X		\$ 104.4	\$.5	\$2,500.0
Vietnam Mekong Floods 9&10/66		125,541			\$1,259.8	\$ 176.9		X	\$ 88.4	\$1,525.1	\$ *	\$ 120.0*
FAR EAST TOTAL	8,266	813,475	\$ 29.4	\$ 204.4	\$1,559.8	\$ 306.9	\$ 159.0		\$ 137.6	\$2,397.1	\$1,334.2	\$3,769.3*

JULY-DEC. 1966 CUMULATIVE DISASTER STATISTICS (Cont'd)

		FUNDS EXPENDED OR VALUE OF ASSISTANCE PROVIDED IN THOUSANDS OF DOLLARS (\$1 million will appear as 1,000.0)									
	KILLED	TOTAL REPORTED VICTIMS	CONTINGENCY FUND		AID PROJECT OR OTHER GOVT FUNDS	P. L. 480 FOOD FOR PEACE		VOLAGS, OTHER U. S. ASSIST- ANCE	TOTAL U. S. ASSIST- ANCE	REPORTED ASSIST- ANCE OTHER NATIONS	REPORTED HOST COUNTRY ASSIST- ANCE
			BY AMB.	AID/W		TITLE II	TITLE III				
TOTAL ALL REGIONS LAST 6MO. 1966	13,899	4,666,056	\$ 277.9	\$1,632.1	\$ 3,193.2	\$ 9,229.9	\$1,020.2	\$2,018.0	\$ 17,371.3	\$ 8,006.5	\$830,310.2*
REV. TOTALS 1ST 6MO. 1966	2,191	867,549	\$ 153.5	\$ 62.9	\$ 88.1	\$ 534.9	\$ 734.9	\$ 334.0	\$ 1,908.3	\$ 8,179.8	\$ 16,194.7*
TOTALS CY 1966	16,090	5,533,605	\$ 431.4	\$1,695.0	\$ 3,281.3	\$ 9,764.8	\$1,755.1	\$2,352.0	\$ 19,279.6	\$16,186.3	\$846,504.9 *
TOTALS CY 1965	43,935	5,742,137	\$ 489.6	\$1,964.3	\$19,395.7	\$33,589.0	\$4,371.9	\$3,088.2	\$ 62,898.7	\$ 3,814.5	*
TOTALS CY 1964	9,929	5,687,455	\$ 215.7	\$4,123.3	\$ 1,523.9	\$11,894.5	\$2,371.4	\$2,508.0	\$ 22,636.8	*	*
3-YR TOTAL	69,954	16,963,197	\$1,136.7	\$7,782.6	\$24,200.9	\$55,248.3	\$8,498.4	\$7,948.2	\$104,815.1	\$20,000.8	*

REGION	DISASTERS - LAST	DISASTERS TOTAL	DISASTERS TOTAL	DISASTERS TOTAL	% OF TOTAL U. S. ASSISTANCE		
	SIX MONTHS 1966	CAL. YEAR 1966	CAL. YEAR 1965	CAL. YEAR 1964	CY 1966	CY 1965	CY 1964
Africa	5	13	16	10	40%	24%	6%
Europe	1	1	1	2	5%	1%	2%
Latin America	10	16	16	18	9%	43%	22%
NESA	9	12	7	19	29%	18%	30%
Far East	8	16	7	11	17%	14%	40%
	33	58	47	60	100%	100%	100%

* denotes incomplete or not reported

**Military costs not reimbursed

X under DOD means disasters in which U. S. Military assisted.

JANUARY 1 - JUNE 30, 1966, REPORTED FOREIGN DISASTER STATISTICS AND EMERGENCY RELIEF EXPENDITURES
AND LINE TOTALS FISCAL YEARS 1965 AND 1966, PLUS 2 YEAR TOTALS (As Revised Dec. 1966)

COUNTRY AND DISASTER	KILLED	TOTAL REPORTED VICTIMS	FUNDS EXPENDED OR VALUE OF ASSISTANCE PROVIDED IN THOUSANDS OF DOLLARS (\$1 million will appear as 1,000.0)									
			CONTINGENCY FUND		AID PROJECT OR OTHER GOVT FUNDS	P. L. 480 FOOD FOR PEACE		DOD	VOLAGS, OTHER U. S. ASSISTANCE	TOTAL U. S. ASSISTANCE	REPORTED ASSISTANCE OTHER NATIONS	HOST COUNTRY ASSISTANCE
			BY AMB.	AID/W		TITLE II	TITLE III					
<u>AFRICA</u>												
Chad Drought 1st 6 Mo.66	*	*				\$ 77.5				\$ 77.5		*
Dahomey C.Strife Famine 1/66		2,000	\$ 5.4		\$ 3.2		\$ 2.5		\$ 1.5	\$ 12.6	\$.5	*
Congo Earthquake 3/20/66	24	3,024	\$.2						\$ 1.9	\$ 2.1	\$ 8.4	*
Niger Drought 1st 6Mo.66	*	*				\$ 433.0				\$ 433.0		*
Senegal Storm & Tidal W. 2/1&20 '66		2,000	\$ 5.0						*	5.0		*
Sudan Cholera Threat Mar. 66		*	\$ 21.9					X		\$ 21.9		*
Uganda Earthquake 3/20/66	104	5,104	\$ 5.6							\$ 5.6	\$ 69.1	\$ 38.2
Togo Storms 3/15/66		15			\$ 25.0					\$ 25.0		\$ 50.0
AFRICA TOTAL	128	12,143	\$ 38.1		\$ 28.2	\$ 510.5	\$ 2.5		\$ 3.4	\$ 582.7	\$ 78.0	\$ 88.2

JAN-JUNE 1966 & CUMULATIVE DISASTER STATISTICS (Cont'd) - Revised Dec. 1966

COUNTRY AND DISASTER	KILLED	TOTAL REPORTED VICTIMS	FUNDS EXPENDED OR VALUE OF ASSISTANCE PROVIDED IN THOUSANDS OF DOLLARS (\$1 million will appear as 1,000.0)										
			CONTINGENCY FUND		AID PROJECT OR OTHER GOVT FUNDS	P. L. 480 FOOD FOR PEACE		VOLAGS, OTHER U. S. ASSIST- ANCE	TOTAL U. S. ASSIST- ANCE	REPORTED ASSIST- ANCE OTHER NATIONS	HOST COUNTRY ASSIST- ANCE		
			BY AMB.	AID/W		TITLE II	TITLE III					DOD	
LATIN AMERICA													
Argentina Floods 2-3/66	62	120,062	\$ 25.0						X	*	\$ 25.0	\$ 196.0	\$ *
Bolivia Floods 2-3/66		5,500	\$.4				\$ 7.8	\$ 12.5			\$ 20.7	\$ 30.9	\$ 25.1*
Brazil - Rio, Guanabara Floods 1/66	373	52,254	\$ 9.1	\$ 62.9	\$ 3.9	\$ 21.4	\$ 14.4	X	\$ 51.8	\$ 163.5	\$ 20.5	\$ 1,644.8	
Ecuador Landslide 5/66	50	50					\$.3		*	.3			*
Paraguay Floods 2-3/66		4,890	\$ 5.0				\$ 6.8		*	\$ 11.8	\$ 18.0		*
Peru Fire 2/11/66	8	5,508	\$ 4.0			\$ 3.0	\$ 4.5	X	\$ 7.5	\$ 19.0			\$ 145.6
LA TOTAL	493	188,264	\$ 43.5	\$ 62.9	\$ 3.9	\$ 24.4	\$ 33.8		\$ 71.8	\$ 240.3	\$ 265.4	\$ 1,815.5	
NESA													
Greece Earth- quake, 2/5/66	1	11,001	\$ 10.0				\$ 6.0		\$ 108.5	\$ 124.5	\$ 112.4	\$ 205.4*	
Jordan Floods 3/11/66	259	2,792					\$ 7.3		\$ 21.8	\$ 29.1	\$ 1,156.0	\$ 1,580.0	
Saudi Arabia Fire, 3/19/66	1	318	\$ 1.0							1.0			\$ 17.9
NESA TOTAL	261	14,111	\$ 11.0				\$ 13.3		\$ 130.3	\$ 154.6	\$ 1,268.4	\$ 1,803.3	

TABLE II - page 2

JAN-JUNE 1966 & CUMULATIVE DISASTER STATISTICS (Cont-d) - Revised Dec. 1966

COUNTRY AND DISASTER	KILLED	TOTAL REPORTED VICTIMS	FUNDS EXPENDED OR VALUE OF ASSISTANCE PROVIDED IN THOUSANDS OF DOLLARS (\$1 million will appear as 1,000.0)										
			CONTINGENCY FUND		AID PROJECT OR OTHER GOVT FUNDS	P. L. 480 FOOD FOR PEACE		VOLAGS, OTHER U. S. ASSIST- ANCE	TOTAL U. S. ASSIST- ANCE	REPORTED ASSIST- ANCE OTHER NATIONS	HOST COUNTRY ASSIST- ANCE		
			BY AMB.	AID/W		TITLE II	TITLE III					DOD	
<u>FAR EAST</u>													
Indonesia Floods 3/14-17/66	176	524,176	\$ 5.0				\$ 649.8	\$ 61.4	\$ 716.2	\$ 6,188.5	\$1,000.0		
Indonesia Volcano 4/25/66	1,000	5,000	(Assistance included with above flood disaster)										
Hong Kong Floods 6/11-19/66	65	8,626	\$ 4.3					\$ 17.0	\$ 21.3	\$ 18.4	\$ 175.0		
Japan Fire 1/11/66		2,368	\$ 22.4		\$ 56.0**			X \$ 9.6	\$ 88.0		\$2,750.0		
Korea Fire 1/18/66	22	2,395				\$ 3.8	\$ 5.6	\$ 9.4			\$ 56.0		
Philippines Fire 2/7/66		10,430	\$ 4.2			\$ 31.7	X	\$ 32.4	\$ 68.3		\$8,469.1		
Taiwan Typhoon 5&6/66	36	5,036						\$ 2.5	\$ 2.5		\$ 37.6		
Western Samoa 1/29-30/66	10	95,000	\$ 25.0						\$ 25.0	\$ 361.1		*	
FE TOTAL	1,309	653,031	\$ 60.9		\$ 56.0		\$ 685.3	\$ 128.5	\$ 930.7	\$ 6,568.0	\$2,487.7		

JAN-JUNE 1966 & CUMULATIVE DISASTER STATISTICS (Cont'd) - Revised Dec. 1966

	KILLED	TOTAL REPORTED VICTIMS	FUNDS EXPENDED OR VALUE OF ASSISTANCE PROVIDED IN THOUSANDS OF DOLLARS (\$1 million will appear as 1,000.0)								
			CONTINGENCY FUND		AID PROJECT OR OTHER GOVT FUNDS	P. L. 480 FOOD FOR PEACE		VOLAGS, OTHER U. S. ASSIST-ANCE	TOTAL U. S. ASSIST-ANCE	REPORTED ASSIST-ANCE OTHER NATIONS	HOST COUNTRY ASSIST-ANCE
			BY AMB.	AID/W		TITLE II	TITLE III				
TOTAL ALL REGIONS 1ST 6 MOs. 1966, Rev.	2,191	867,549	\$ 153.5	\$ 62.9	\$ 88.1	\$ 534.9	\$ 734.9	\$ 334.0	\$ 1,908.3	\$ 8,179.8	\$ 16,194.7 *
TOTAL ALL REGIONS LAST SIX MOS. 1965	4,895	3,272,097	\$ 256.9	\$ 179.1	\$ 950.7	\$20,924.2	\$1,535.8	\$1,237.7	\$25,084.4	\$ 1,301.6	\$ *
TOTAL FISCAL YR. 1966	7,086	4,139,646	\$ 410.4	\$ 242.0	\$ 1,038.8	\$21,459.1	\$2,270.7	\$1,571.7	\$26,992.7	\$ 9,481.4	
TOTAL FISCAL YR. 1965	47,160	5,425,352	\$ 372.3	\$2,062.3	\$18,728.0	\$21,136.5	\$4,158.1	\$3,747.8	\$50,205.0	\$ 2,512.9	
2-YEAR (FISCAL) TOTAL	54,246	9,564,998	\$ 782.7	\$2,304.3	\$19,766.8	\$42,595.6	\$6,428.8	\$5,319.5	\$77,197.7	\$11,994.3	

REGION	DISASTERS - FIRST SIX MONTHS 1966	DISASTERS TOTAL FISCAL YEAR 1966	DISASTERS TOTAL FISCAL YEAR 1965	% TOTAL ASSIST-ANCE 1966 FY	%TOTAL ASSIST-ANCE 1965 FY
Africa	8	15	14	48%	5%
Europe	-	-	2	0%	2%
Latin America	6	16	14	10%	49%
NESA	3	5	12	4%	32%
Far East	8	12	8	38%	12%
	25	48	50	100%	100%

* denotes incomplete or not reported

** Military costs not reimbursed

X under DOD means disasters in which U. S. Military assisted.

ALGERIA

Characteristics of the Disaster:

Event: Flood

Date-Time: October 6-11, 1966

Location: Western Algeria - Departments of Oran, Mostaganem, Tiaret, Saida, Saoura, Aures and Al-Asnam

Damage:

<u>Number Killed</u>	<u>Number Injured</u>	<u>Number Homeless</u>	<u>No. Mass Feeding</u>
57	12	15,900	15,000 to 20,000

1,035 houses were destroyed and another 2,947 damaged. 10,659 head of livestock were lost. 50 irrigation systems and 60 wells were damaged or destroyed as well as 9 bridges. There was 100% loss to cotton crops in the area, 80% to market-gardens, 20% to cereals; 33,000 trees were destroyed of which 5,500 were palm trees. Future production will be impaired by the tremendous erosion. Agricultural loss was estimated at \$1.5 million. Damages to roads amounted to an estimated \$1 million. Total estimated dollar damage was \$10 million.

Description of the Disaster:

Normally receiving only 16 inches of rain annually and this year plagued by one of the worst droughts in memory, Western Algeria suddenly fell victim to 11 inches of rain which fell uninterrupted for six days and caused widespread flooding. Crops, homes, roads were destroyed; rail and telephone communications were cut throughout the flooded area. The Department of Al-Asnam was hardest hit but other areas were also affected. The floods washed away a half mile stretch of Algeria's new \$73 million oil pipeline. 20,000 cubic yards of oil were lost after gushing from the damaged pipeline which runs 500 miles from the Sahara oilfields to the Mediterranean Port of Arzew. Some towns and villages were without drinking water.

Action Taken by Local Government and Organizations

The first action was taken by the local leaders and citizens in the various Departments affected. In Al-Asnam, the Prefecture and the city of Al-Asnam worked together in setting up rescue committees. The civil protection service was mobilized for 24 hours daily. The fire pumping station and the prison were used as receiving stations for evacuees where they were checked in, vaccinated against typhoid, issued blankets, fed and housed. The prefect authorized the purchase of blankets for initial needs and the local relief agencies like CARITAS Algerienne and the Red Crescent immediately furnished additional blankets, clothing, medical supplies and P. L. 480 food. Portable soup kitchens and "Goutte de lait" stations were set up. The local government furnished transportation, teachers became volunteer workers, hospital staff personnel provided medical care and many other local organizations and individuals assisted in various ways. After several days the beginnings of a tent city began to rise and plans were directed to providing long term care to those whose homes were

completely destroyed. This same pattern was repeated in the other departments.

Once the emergency period was over committees were named in most disaster areas to continue the longer term coordination of assistance to and rehabilitation of disaster victims.

President Boumediene arrived in Al-Asnam the day after the rains ended and toured areas of severe damage. On the national level a committee was appointed to coordinate disaster relief. This committee was made up of representatives from the Ministry of Social Affairs and Labor, the Red Crescent Algerian and National Service of Civil Protection. When the emergency period ended the committee more or less disbanded and the Red Crescent became responsible for coordinating assistance.

The U. S. Mission reported that the local disaster relief operations were well coordinated; that the Algerians seemed to be well equipped psychologically and physically to respond to the emergency. There were some problems in coordination especially at first in knowing where to direct relief supplies-- to the National Committee, the Red Crescent or to the Prefecture directly-- but these were minimal in relation to the general smoothness of the operations.

Assistance Provided by the U. S. Government

Because tents were in such short supply and the Department of Defense unable to release any, AID/W could not meet the request of the U. S. Ambassador to supply 200 tents. AID/W suggested to the U. S. Embassy that tents might be purchased commercially in nearby countries. The Embassy attempted to locate tents which could be delivered promptly to Algeria from Italy. Although the Italian Government was prepared to provide free transport for tents obtained there, the Embassy reported firms could not make delivery before from 30 to 50 days and they were very costly. The U. S. Ambassador decided to present a check to the Algerian Red Crescent for 50,000 dinars (\$10,204) instead. This was done in a brief ceremony on October 18. Dr. Larbaoui, President of the Algerian Red Crescent, in accepting the check from Ambassador Jernegan said: *"We are very moved by this gift. The American people have always been in the forefront of those who have been ready on short notice to help those in difficulties. We are extremely touched by this important gift, and extend our warm thanks to the American people."* The full story on the check presentation plus other assistance by USAID and U. S. voluntary agencies appeared in "El Moudjahid", as an Algerian Press Agency release, was on Algiers TV and French language radio newscast, appeared on Oran regional station and in Oran newspaper. The Embassy commented that the extent and tone of coverage was unexpected and gratifying.

Following is a breakdown of USG assistance:

From the AID Contingency Fund - Ambassador's Authority

Cash donation in Algerian dinars which was used to house and feed disaster victims and provide essentials for those living in tents during the winter months.

\$ 10,204

Assistance Provided by U. S. Voluntary Agencies

The three major U. S. voluntary agencies in Algeria (CWS, CRS and CARE) all responded quickly to the emergency. Representatives visited the disaster areas and immediately pledge their support. The U. S. Mission reported that their ability to take action during the first days of the disaster was greatly appreciated and increased the effectiveness of their assistance. CWS and CRS directed most of their assistance to Al-Asnam while CARE provided food supplies in the Arrondissements of Mohamedia and Sidi-BelAbbes. Because of the limited nature of their field staffs the U. S. voluntary agencies did not become involved directly in the rescue operations or the treatment of sick and injured. In addition to items listed below CRS and CARE diverted P. L. 480 food commodities from their ongoing programs.

Church World Service (in cooperation with CCSA)

163 tents	\$ 15,000	
285 bales blankets	28,500	
192 bales clothing	14,400	
10 cartons shoes	500	
30 cartons soap	300	
5 bales layettes	500	
3 cartons first aid supplies	150	
2 bales sewing material	250	
	<u>250</u>	\$ 59,600

CARE

1,560 pkgs. omelet mix		
8,400 pkgs. instant pudding		
17,500 bars hard soap		
2,592 jars baby food		2,296

Catholic Relief Services

270 bales shoes	13,500	
600 bales clothing	40,000	
8 cartons aspirin	280	
	<u>53,780</u>	
		\$ 115,676

Assistance Provided by Other Nations

East German Red Cross - clothing blankets, medicines	12,500	
East Germany (Workers Union)- blankets and tents	25,000	
Government of Tunisia - 7 tons clothing, tents, food, medicines	*	
Embassy of Bulgaria - 20,000 DA	4,000	
Government of USSR - food, clothing and medicines - DA 80,000	16,000	
Government of Italy - 10,000 DA	2,000	
	<u>59,500</u>	\$ 59,500

CHAD

Characteristics of the Disaster

Event: Drought (this report is an addendum to the report made on the Chad drought during the first six months of 1966. It is not to be counted as a new disaster.)

Date-Time: September 3 to September 17, 1966

Location: Am Tima, Faya Largeau, Ati, Abeche, Mongo, Fort Lamy

Damage: See original report

Description of the Disaster: (Continuation of original report)

The 500 tons of P. L. 480 sorghum which had been given to the Government of Chad by the U. S. Government to feed 60,000 people for one month could not be delivered by ground transportation. The food was needed to prevent famine until the new crop could be harvested. It had not been possible to transport the grain from the United States to Chad prior to the start of the rainy season. During the rainy season, all roads in Chad are impassable. The only means of delivering the grain to the needy people was by airlift.

Action Taken by Local Government and Organizations:

The Government of Chad made a plea for the U. S. to airlift the grain to the isolated villages of Chad. Chad military personnel gave assistance in the preparation of air drop loads. Chad officials also took measures to assure efficient distribution of the grain to the people in greatest need.

Assistance Provided by the U. S. Government:

When AID/W informed the Department of Defense of the seriousness of the food shortage in Chad and that there were multiple problems in using commercial airlines, plus the fact that it would take 22 days to deliver the sorghum at a cost of \$161,000, the Department of Defense approved priority use of U. S. military aircraft. Despite difficulties in scheduling, official clearances in Nigeria and Chad, location of the grain at Maduguri, Nigeria, where it was sent by rail, and inadequacy of landing strips, operation "Brisk Cargo" was set up by CINCSTRIKE and the 500 tons of sorghum were successfully delivered. Rain, muddy airfields and minor mechanical difficulties hampered the operation but did not halt the deliveries. The U. S. Air Force began the airlift on September 3 using two C-130's and crews of 56 specialists to permit rotating the crews. After 109 flying hours, they completed the operation on September 17, having delivered sorghum to the following towns and cities: Am Tima - 21.85 tons; Faya Largeu - 50.15 tons; Ati - 33.75 tons; Abeche - 121.15 tons; Mongo - 56.4 tons and Fort Lamy - 217.4 tons.

At each touchdown point, the people gathered for tours of the C-130's and some villagers would stand by the door to gather up the few precious handfuls of grain that had spilled from the sacks.

According to the U. S. Military, the extra precaution of making an advance survey by USAF personnel of the airfields in the Republic of Chad during the period August 25-30 contributed to the success of the airlift. The USAF commended the Army Attache's effort in obtaining Chad military assistance in preparing air drop loads, and for his personal supervision in the delivery area thereby assuring an efficient and safe operation.

AID allocated \$120,250 from the Foreign Assistance Act Contingency Fund for air delivery of the grain, based upon USAF estimates. Because of leadership, dedication and competence of the crews, operation "Brisk Cargo" was able to complete the task in 15 days and at a savings of \$52,750, since total expenditures reported by DOD for reimbursement by AID amounted to: \$68,720.

An even greater savings can be pointed to when comparing "Brisk Cargo" with the cost of commercial airlift (WACASC). Commercial airlift was estimated at \$161,000 and would have required 22 days to complete delivery. Savings were \$92,300.

In ceremonies at Fort Lamy International Airport, Chad Minister of Economics and Transport, Abdoulaye Lamana said: "I thank the Government of the United States for having responded in such a rapid manner to the plea made by the Government of Chad. The sorghum grain which has been given by the Government of the United States will serve to assure the best of conditions in the interval between harvests, a period made difficult by the drought of 1965." Mr. Lamana noted the problems of transporting the grain by air and that the costs of transport far exceeded the cost of the grain itself. He continued, "The necessary measures have been taken in the various centers which will receive the grain to assure an efficient distribution to the population." He concluded: "I wish to express in the name of the Government of Chad the thanks of the Chadian people to the Government of the United States and also wish long life to the friendly and prosperous cooperation between the United States and Chad." A formal note was also received by the Embassy from the President's office requesting that it thank the USG for delivery of the sorghum, as well as hearty congratulations to the C-130 crews for the manner in which they carried out the airlift, including airdrops.

The U. S. Embassy cabled State/AID/W as follows: "We wish to express appreciation for manner in which Operation "Brisk Cargo" has been carried out under leadership of Colonel Francis Merritt. Task force has done great job in transporting 500 tons sorghum for which Chadian Government and people obviously most grateful, and behavior of all members of group has been exemplary. They have demonstrated complete dedication and great competence. Trust Dept and AID will express appreciation and congratulations to DOD and CINCSTRIKE. This message represents Country Team views, including those of Ambassador".

Both Assistant Secretary of State Joseph Palmer 2nd, State Department, and Herbert J. Waters, Assistant Administrator for Material Resources, AID, sent letters of appreciation to John T. McNaughton, Assistant Secretary of Defense, International Security Affairs.

Assistance Provided by U. S. Voluntary Agencies

None

Assistance Provided by Other Nations

The Nigerian Government played a vital role in speeding the grain by special train from Lagos Quay to the rail terminus at Maiduguri some 90 miles from the Chad border.

MALI

Characteristics of the Disaster

Event: Drought/Famine

Date-Time: 1966

Location: Kayes, Bamako, Gao, Timbuktu

Damage: Grain sorghum (millet), rice, flour and corn in extremely short supply, especially in above population centers.

Description of the Disaster:

Adverse weather conditions over an extended period of time resulted in abnormally low production of food crops. Grain sorghum was needed most urgently in urban areas where the lack of food rather than lack of purchasing power was the significant factor.

Action Taken by Local Government

The Government of Mali was unable to obtain food through regular channels and requested U. S. assistance.

The Government of Mali has taken steps to raise prices to peanut farmers which if extended to grain farmers may improve the supply situation.

Assistance Provided by U. S. Government

The U. S. Country Team recommended that the USG provide grain sorghum to the Government of Mali on a grant basis under Title II, Section 201, of P. L. 480 which could (1) be sold through regular commercial channels at normal market prices; and (2) distributed directly to victims of the emergency who, as mutually determined by the GOM and AID, were unable to obtain essential food requirements through their own resources. It was proposed that the proceeds resulting from the sale of grain sorghum by the GOM be deposited in a Special Account and utilized by GOM to pay local costs of economic development programs in Mali as mutually agreed upon by the GOM and USAID. AID/W approved this proposal and the following amount of sorghum was shipped to the GOM:

10,000 metric tons, estimated market value		\$550,000
Ocean freight charges	\$300,000	
Inland transportation costs	<u>310,000</u>	<u>610,000</u>
		\$1,160,000

Assistance Provided by U. S. Voluntary Agencies - None Reported

Assistance Provided by Other Nations - None Reported

MOROCCO

Characteristics of the Disaster:

Event: Drought

Date-Time: 1966

Location:

Description of the Disaster:

Extreme drought resulted in an abnormally low harvest of the principal food crops in Morocco. With the harvest nearly completed, wheat production was estimated to have declined by 38% from last season, barley by 57% and corn by 45%. Because the cereal crop of 1964-65 was also below normal levels, an extreme food shortage resulted. The Government of Morocco's assessment of the seriousness of the shortfall was verified by the U. S. Agricultural Attache in the American Embassy in Rabat as well as by Richard W. Reuter, AID Food for Peace Special Assistant, who made an inspection tour of the drought affected areas.

Action Taken by Local Government

The Government of Morocco attempted to purchase 300,000 MT of wheat to help meet the deficit. It also started a campaign to introduce fertilizer to 185,000 hectares of dry land farms and 15,000 hectares of irrigated farmland. Training workshops in extension methods for 160 agriculture agents already assigned projects were conducted. The Government of Morocco urgently requested the U. S. Government to assist with food supplies to relieve the grain shortage.

Assistance Provided by the U. S. Government

Following discussion with Moroccan officials, Country Team members, and the recent trip by Special Assistant Reuter, the Embassy urgently requested that 15,000 metric tons of wheat be provided under Title II, Section 201 of P. L. 480 for delivery by October 15 or as early as possible thereafter. Approval was granted by AID Washington on October 10, 1966.

15,000 MT wheat - market value	\$ 990,000
Ocean freight charges	150,000
	<u>\$1,140,000</u>

Assistance Provided by Voluntary Agencies

None reported.

Assistance Provided by Other Nations

None reported.

SENEGAL

Characteristics of the Disaster

Event: Drought/Famine
Date-Time: 1966
Location: Thies, Dourbel, St. Louis, Northern Sine Saloum and Cap Vert regions
Damage: Food Deficit 225,000 MT (According to local newspaper "Dakar Matin").

Description of the Disaster:

Worst drought in years ruined the early millet crop in northern half of Senegal and reduced considerably the total millet production. It was also reported that the peanut crop would be reduced by as much as 40 percent.

Action Taken by Local Government and Organizations

In a letter to President Johnson, President Senghor brought up two very distinct problems connected with the drought:

1. Need to help (through Catholic Relief Services) limited number of indigent victims who are unable to buy sorghum commercially even on easy credit and,
2. Need to import very large quantity of sorghum for regular commercial distribution as result anticipated shortage.

Assistance Provided by U. S. Government

10,000 metric tons of sorghum under Title III to Catholic Relief Services for distribution to those unable to buy sorghum even on easy credit. Estimated value	\$550,000	
26,000 metric tons of sorghum under Title II to the Government of Senegal to be sold to people in urban and rural areas who can pay at normal market prices.*	1,430,000	
Freight costs estimated at	<u>650,000</u>	
		\$2,630,000

*It was proposed that the proceeds resulting from the sale of grain sorghum by the GOS be deposited in a Special Account and utilized by GOS to pay the local costs of distribution, storage, and transportation involved in providing foods to disaster victims under this program and Title III of P.L. 480 and also to finance economic development program in Senegal, as mutually agreed upon by the GOS and USAID.

UPPER VOLTA

Characteristics of the Disaster:

Event: Drought/Famine

Date-Time: Second half 1966

Location: Throughout Upper Volta but especially in Yatenga Area, Mossi Plateau, Kaya, Enclave around Houde and Boromo

Damage: 30% Deficit on Crops - Number potential famine victims not given.

Description of the Disaster:

Extreme drought which extended throughout the last planting season and a plague of butterfly larva which attacked grains, especially late sown varieties, resulted in abnormally low harvests of the principal food crops of sorghum, millet and corn. This was a part of the overall drought which affected West Central Africa, including Chad, Niger, Mali and Senegal. Reports on droughts in Chad and Niger were covered in the last six months report on foreign disasters. Mali and Senegal are reported on separately within this same report. The drought was felt throughout Upper Volta, with the most serious repercussion being in inflated food prices in urban areas.

Action Taken by Government of Upper Volta

The Government of Upper Volta urgently requested that the U. S. Government provide food supplies to relieve the emergency grain shortage. RUA, Food for Peace and USDA officials explored the possibility of the use of either Title I or IV, P. L. 480 programs, but the finances of upper Volta, despite strenuous efforts on the part of the Government, were so strained that it was impossible for the GOUV to commit any funds whatsoever to the purchase of the necessary grain. After the allocation of the U. S. grain, the GOUV and USAID agreed to mutually determine how much of the sorghum and corn would be distributed directly to the victims due to inability to obtain essential food requirements through their own resources. The agreement provided that the balance of U. S. grain would then be permitted to be sold by the GOUV at amounts that would prevent undue inflation of food prices. Such sales proceeds are to be deposited by GOUV in a Special Account for payment of costs of incountry transportation and distribution to needy victims and for GOUV support of economic and community development projects, as mutually agreed by GOUV and USAID.

Assistance Provided by U. S. Government

The USG provided the following P. L. 480, Title II, Food for Peace Commodities. The U. S. Embassy requested that shipments begin arriving in Abidjan by mid-January 1967, that they be sent in five monthly lots of 3,000 tons each with the last shipment arriving in mid-May to permit distribution before the rainy season cuts road traffic.

10,000 metric tons of grain sorghum and 5,000 metric tons of corn--

with estimated export market value of	\$ 890,000
plus ocean freight charges, estimated at	450,000
plus inland transportation from ocean port of Abidjan, Ivory Coast to Ougadougou, recognized point of entry in Upper Volta	<u>600,000</u>
	\$1,940,000

Assistance Provided by U. S. Voluntary Agencies

Catholic Relief Services assisted with feeding program

Assistance Provided by Other Nations

None reported.

ITALY

Characteristics of the Disaster:

Event: Floods

Date-Time: Beginning November 4, 1966, and followed by other periods of flooding during the month.

Location: Cities of Florence, Venice, Grosseto, Trento and surrounding communes and areas; provinces of Arezzo, Livorno, Pistoia and Siena; villages of the Po River delta, including Porto Tolle; Alpine villages of Mezzano, Fiera di Primiero and Imer in Northeastern Italy; and over 100 communities throughout North and Central Italy.

<u>Damage:</u>	<u>Number Killed</u>	<u>Injured</u>	<u>Homeless (Temporarily)</u>
	116	Hundreds	Over 100,000

City of Florence: 435 industrial firms suffered losses in installations, buildings, equipment, raw materials and finished products; over 6,000 handicraft firms were harmed by the flood; 6,000 retail stores in the center of Florence plus 4,000 in other communities suffered flood losses. Of 357 hotels, 248 were damaged and 140 of 264 schools. There was incalculable damage to art work, some of it beyond repair and much of it estimated to take years for restoration at a cost of many millions of dollars. The worst single art loss was the "Crucifixion" by Cimabue, considered a total loss. 8,000 paintings kept in the basement of the Uffizi Gallery were damaged when the first floor became inundated. Water, thick with mud and fuel oil from broken home tanks poured into the Cathedral at Florence, the Church at Santa Croce and Church of San Lorenzo. They along with other churches in the city were seriously damaged. Five of the 10 Ghiberti panels on the bronze doors of the Baptistry adjacent to the cathedral were loosened and knocked off. The 15th Century Strozzi Palace was badly damaged. In the Abbey of San Salvi, "The Last Supper", painted by Andrea del Sarto in 1519, was under silt laden water. There was great damage to the Ponte Vecchio. 6,000,000 books in the National Library became waterlogged.

Venice: There was no report of damage to art treasures but half of Venice's picturesque gondola fleet was destroyed; 4,000 of its 4,500 shops suffered serious losses. Its famous glass and lace industries, shipyards and fuel installations suffered severely. Considered the most serious of all was the rupture of the sea walls protecting the Venetian lagoon from the storms and tides of the Adriatic Sea. The already shaky foundations of the city were believed to have been further weakened. Being built on a series of soggy islands it has been in danger of collapsing for centuries so that even the backwash of motorboats and dredging of new canals to

accommodate more traffic constituted a danger and has been cause for concern. So serious is the situation that there were threats that another high tide like that of November 4-5 might destroy the city.

Po Delta: When the high winds and waves broke the sea dikes and let tons of salt water from the Adriatic Sea pour over the Po delta, it caused long-lasting damage to 40 square miles of agricultural land. The area has been flooded many times before from the Po River but the fresh water from the Po did not do one-tenth the damage of the salt water. Engineers will have to plug the breach in the dikes, pump the land dry again and there will then be a long process possibly 2 to 3 years of leaching out the salt before the soil can be put back into cultivation of crops previously grown there.

Throughout Italy: Almost one-third of Italy suffered from the flood. 750,000 acres of agricultural land were affected. Large Tuscan vineyards producing Chianti wines were ruined. An estimated 80% of the livestock in Tuscany, Italy's biggest cattle raising region, lay dead in the fields. The Province of Grosseto lost almost every marketable animal (cattle, pigs, chickens) and suffered severe agricultural losses. The Provinces of Arezzo, Livorno, Pistoia and Siena were also flooded and while losses did not appear to be such as to endanger their economy there were substantial damages to industrial enterprises, handicraft firms, agriculture and public works. 60,000 people in industry and 40,000 in agriculture were put out of work. Thousands of homes were damaged or destroyed. Roads, rail lines, communications, electricity were cut off. Direct flood damages to public and private property were estimated at \$1 billion with another \$1 billion loss in the output of goods, services and other income over the period required for reconstruction, for a total estimated dollar damage of \$2 billion.

Description of the Disaster:

General: The massive floods which poured over one third of Italy during the month of November have been rated the worst in the entire history of Italy. Many rivers in Italy were already swollen from two weeks of rain; then a rainfall which normally would have been spread over three months came down in 72 hours. The initial flooding was followed by continued severe weather for much of the month and new flooding occurred in some areas. It was reported that November 28 was the first day Italy had been without rain for a month. Besides numerous rivers that flooded as a result of the heavy rains, among them the Po, the Adige, the Piave and the Arno, strong winds produced high tides in the Adriatic Sea which battered and broke down sea walls and flowed over Venice, the Venetian farmlands and the Po Delta. Roads and rail lines were impassable all across Italy cutting the north from the south. The November 4 floods were the result of a huge storm that affected Western Europe. There was loss of life and/or destruction in Austria, Switzerland and Yugoslavia, but the damage was not as great or as widespread as in Italy. One news article in commenting on the reason for so great a disaster said the floods had exposed the "fragility" of most of Italy's terrain, resulting both from its natural makeup and from centuries of mistakes and neglect. Indiscriminate deforestation, it said, hastened ground erosion, the effects of which were magnified by an inadequate and uncoordinated program of water control. Considering the extent and severity of destruction, the loss of life was low. This was attributed by authorities to two things: (1) the Arno broke its banks at dawn on a holiday.

At another hour on another day casualties could well have been higher. Children would have been in school, — 140 schools were inundated by the flood waters. (2) Officials decided not to warn the people of Florence when it was necessary to open the dam at Levane, 35 miles up river, making the flooding of Florence a certainty. Officials at the hydroelectric plant felt the dam had to be opened because it would have been impossible for it to hold back the flood waters. Otherwise the dam would have burst and released all at once and with great force 5 million cubic yards of water. The decision not to warn the people was made on the premise that alarm and panic would have sent them rushing to their shops and warehouses (mostly in cellars) to try and save their stocks and to their cars to make a general exodus to high ground. It was feared this would have caused a large influx to the low areas and also would have created traffic jams and led to hundreds of people being trapped in cars and drowned. Nevertheless, the decision to open the dam and failure to give advance warning were criticized in some quarters.

Florence: The Arno River surged over its bank covering the beautiful City of Florence and surrounding communities with 10 to 15 feet of water. It was estimated that the city was inundated by 250 million cubic meters of water, many times the capacity of two nearby flood control dams. Water swirled around the Baptistery near the Cathedral of Florence with a force estimated at 35 mph, causing five of the Ghiberti panels from the famous bronze doors to be knocked loose. Airplane pilots reported that the entire Tuscany region looked like a vast lake. Streets, churches, art museums, shops, factories, hotels and homes were covered with 500,000 tons of mud and debris when the waters receded. Many families forced out of their first floor flats were unable to find shelter in public buildings and spent a chilly night on their roofs. The city was without drinking water, electricity or telephone service for several days. Nearly 100 convicts broke out of jail and roamed the city. There was an outbreak of looting which police could not at first combat due to the more important job of rescue work. Automobiles were piled atop one another like broken toys; streets were littered with wreckage and bloated bodies of thousands of cattle drowned and washed down from the city stockyards. Banks, schools, businesses, factories, all ceased to operate and were closed for days and weeks after the flood. By November 7, Florentine banks reopened after drying out their paper money piece by piece but the city still battled hunger, thirst and cold. The stock exchange did not reopen until November 28. By November 29 most of the industrialists, tradesmen, shopkeepers and hotel-keepers had either resumed operation or anticipated they would within 15 to 20 days.

The area surrounding Florence also suffered severely, especially the coastal city of Grosseto south of Florence, which was covered by 9 feet of water and which for a time had only the airport as a link to the outside and to the food lifeline. Bread had to be flown in from other cities.

Venice and Surrounding Area: The November 4-5 storm brought in two great wind driven tides from the normally placid Adriatic Sea, which tore down sea walls guarding the Venice lagoon and poured into Venice and the surrounding area. The water was six feet above the normal level. Venice was littered with smashed and sunken gondolas and broken boats. Scores of lovely foot bridges that lace the city together were broken. The city was awash in stinking, salty slime—homes, shops, offices were clogged with filth. Electricity and telephone

service were cut. Water rose three feet deep in St. Mark's Cathedral. Officials feared the impact of the flood against the foundations of Venetian buildings would hasten the slow process that has been sucking the city deeper into its sea bed for centuries. The lagoon island of Murano, famous for Venetian glass, and the lace-making island of Burano were severely damaged. Rich Venetian farmlands were flooded by half dozen rivers. Latisama, San Dona and Pordenone were under water and 30,000 people in the area fled their homes.

Po River Delta

Most of the delta land is almost a yard below sea level. The Po River flows high above the plains between built up embankments and spills into the Adriatic Sea through 10 outlets. The people of the delta have suffered from 10 major and minor floods in a dozen years but these were from the fresh waters of the Po and did not cause the long lasting destruction that occurred to the delta on November 4 when the Adriatic Sea broke the dikes and surged over the valley, repeating the performance later in the month. In the first flooding, 20,000 persons in the Porto Tolle area were evacuated, many by boat, after the dikes protecting the marshlands breached in three places.

From November 17-19 new floods swept the delta as Adriatic waters rose to rooftop level in 3 towns. Rolling across sea dikes, the waves inundated 25,000 acres of land around Scardovari, Bonelli and Santa Furlia. A dozen villages had to be evacuated hurriedly in the night. While an estimated 10,000 delta residents fled to higher ground, hundreds of villagers and truck farmers clung to their homes and land and refused to leave.

Dolomite - Alpine Region: Flood waters of the Adige River cut the main railroad to Austria and Germany, flooded the City of Trento six feet deep and isolated Bolzano. Avalanches and landslides cut off whole communities in the Dolomites. One landslide was reported 219 yards across in front, about 1100 yards deep and imperiled the town of Caprile. Some of the heaviest damages in Italy occurred in the mountain villages. Whole villages were said to be buried in some areas and loss of life was reported to be heavier than elsewhere in the country. This was the result of the early November floods. Later in the month, drenched by days of rain and loosened by the flooding Cismon River, masses of earth piled around outlying buildings and oozed through the streets of Mezzano, Fiera di Primiero and Imer. Alpine troops joined residents in throwing up barriers of stone and wood and were successful in halting the flow.

Action Taken by Italian Authorities and Organizations

Disaster relief machinery was immediately put to work, and the Army, together with the Carabinieri, devoted themselves to rescuing people, consolidating dikes, parachuting foodstuffs and delivering relief supplies throughout the devastated areas of the country. Fleets of helicopters and amphibious craft were kept busy rescuing stranded survivors of floods in Pisa, Florence, Venice, Modena, the Po River valley and the Dolomite region, as well as other Italian cities. President Giuseppe Saragat and Premier Aldo Moro toured Florence, Venice and other flood devastated communities for a first hand inspection of the disaster. A 50,000-man emergency rescue and relief operation went to

work in Florence. A special train convoy was sent to Florence from Pistoia, 18 miles to the northwest, and special trains also delivered 33 carloads of water from Bologna to Florence. Food was in short supply in Florence and bakers in suburban areas above the water level worked relentlessly to produce bread. Officials, fearing a typhoid outbreak, sent Army teams into the hardest hit areas to destroy animal carcasses with flamethrowers or bury them. The cabinet voted on an immediate \$70,000,000 for emergency relief and decided to give immediate pay to those thrown out of work by the floods.

Early in the relief operations there was confusion and delay arising from uncoordinated activities on state, local and national levels, which resulted in strong criticism from the people and Italian press. Because of this, the Italian legislature is considering a bill for "civilian protection" that would insure an efficient coordination of efforts to cope with future floods and other calamities. According to a news report, a similar measure had been drafted in the early 1950's but was dropped because of strong Communist opposition.

The National Government authorized \$800,000,000 for reconstruction and rehabilitation to be spread over a period of two years. Also, the government has approved a bill in Parliament appropriating \$320 million for river control projects. Means to raise these funds included: 10% increase in income taxes for calendar year 1967 only, additional tax on gasoline, use of excess 1966 tax revenues and from a special bond issue. Major specific programs for which these funds will be used are: reconstruction of public works and buildings, rehabilitation of flooded agricultural areas, restoration of damaged art, agricultural aid to individuals whose land was partially or totally flooded, cash grants for capital replenishment, building repairs and flood control. For repair and reconstruction of housing, the Government of Italy planned to contribute up to 90% of cost for houses up to three rooms and 70% if larger. Work camps were planned for unemployed persons paying 1,000 lire per day for the purpose of reforestation and other reconstruction work. A general moratorium on debt (communal and private) for affected regions was declared as well as suspension of collection of taxes from disaster victims through June 30, 1967. Plans were set in motion for huge river control projects. In 1962, a master plan for the country's main rivers was enacted. But the \$200 million appropriated for it proved inadequate to cover even the most pressing needs. The current 5-year program for economic development calls for an allocation of \$600 million to finance public works, mostly in connection with flood control. A news report quoted experts as saying it would require as much as 20 years and \$24 billion to restore and secure the hydrogeological equilibrium and thus provide effective guarantees against further disastrous floods. Appropriations of such magnitude were expressed as being out of the question, but a realistic program was expected to call for a total expenditure of an estimated \$4 billion over a ten year period.

The Italian Red Cross came to the assistance of the people sending 600 volunteer nurses to the seriously affected areas, to care for the injured and sick. 2000 other Red Cross workers from all walks of life worked non-stop to provide victims with clothing, food and other relief supplies. In Florence alone the Red Cross operated 25 relief distribution centers. The Italian Red Cross, which cooperates very closely with the Ministry of the Interior and the General Civil Defense Directorate launched a nation-wide appeal for cash gifts and emergency relief items. More than 500 tons of clothing and other supplies were collected.

The children's homes run by the national Red Cross Society all over the country were transformed into reception centers. The Italian airline "Alitalia" authorized all its agencies abroad to grant free transport, under IATA Resolution No. 200, of plasma, medicaments and emergency foodstuffs to the Italian Red Cross.

Italian Customs authorities were authorized to admit, without charge or formalities all aid marked for Italian Disaster Relief. A special fund was established, administered by the Minister of Labor and representatives of Labor and Management, based on voluntary contributions of one-half day's earnings of all workers and employees not affected by the flood and on matching contributions by employers.

Assisted by experts from around the world, Italian art restoration specialists, technicians and students immediately set about the task of restoring the damaged paintings, sculpture and books. Large lots of books and papers were sent to tobacco drying rooms from Bari to Bologna, which had been emptied of the current crop. It was estimated that Italy was faced with a 20-year art repair job that would require more than \$300 million.

Assistance by U. S. Government

The American Ambassador at Rome reported that many types of U. S. assistance flowed spontaneously to Italy--ranging from a soldier performing rescue services and a US student working to save books in a flooded library basement to that of national and international relief agencies. Americans from U. S. Army Camp Darby at Leghorn, NATO headquarters at Vicenza, the U. S. Air Force base at Aviano and airfield at Verona volunteered and assisted. Rescue missions and delivery of emergency supplies were regular operations for U. S. Military personnel either from ground installations or via helicopters. The value of U. S. Embassy, Military and U. S. private citizens' services is inestimable and no attempt has been made to place a total cost on these services.

Italy is a developed country and disaster relief operations were handled mainly within the country's own resources. The request for USG assistance came because of the urgency of rescue operations, the need for airlift delivery of supplies and the immediacy for temporary shelter. Especially important to the relief operations was the capability of the U. S. Military in Europe to airlift urgently needed water purification units, trucks and filtering units donated by Germany and the Netherlands, and food, vaccine, blankets, bedding and clothing obtained from U. S. Military sources.

A funding of \$180,000 was approved by AID Washington from the AID Contingency Fund to pay for USG costs of Italy flood disaster operations. Known expenditures to date follow, but additional costs are expected:

Funding Approved by AID/W from Contingency Fund \$180,000

Estimated expenditures to Date

18,600 C rations	\$11,704
1,500 cans evaporated milk & powdered milk	280
40,000 doses typhoid vaccine, 150,000 vitamin tablets & other medical supplies	1,601
2,300 blankets	16,790

1,500 fatigue jackets and trousers	7,650
400 sleeping bags	10,000
100 property disposal depot mattresses	85
Miscellaneous supplies	600
Equipment and other misc. expenses	2,385
Personnel--TDY, Travel, Overtime & contractural costs	3,694
52 20x48 prefab buildings	75,660
Rail transportation of prefabs	942
	<u>\$131,391</u>

SETAF helicopter rescue flights	9,650
AVIANO rescue flight	934
USAF airlift German water filter unit	1,200
USAF airlift Dutch donation 24 water tank trucks & filtering units--airlift costs to be split 1/2 ea. between US and Government of Netherlands. Estimated US share	19,899
Misc. airlift costs	685
	<u>\$ 32,368</u>

- 163,759
\$ 16,241 *

*Balance remaining will probably take care of an increase over estimated costs as well as cost of additional assistance not yet reported.

The USG also provided 375 blankets, valued at \$1,500, which were purchased previously under other funding and held in storage in the U. S. This expenditure has already been accounted for and will not appear in the total under the contingency fund for Italy.

The following message was sent by President Johnson to President Saragat on November 6:

"Dear Mr. President: I was deeply distressed to learn of the tragic loss of life and human suffering caused by the floods in central and northern Italy. All Americans join me in offering our heartfelt sympathy to you and our good friends the Italian people. We stand ready to help in any way we can."

A message from the U. S. Ambassador in Italy, dated November 17, states:

"Prime Minister Moro during a luncheon today for Governor Volpe of Massachusetts took the occasion to express on behalf of the Italian Government and of himself personally deep gratitude for the timely United States demonstration of solidarity in connection with the recent flood disaster in Italy. On November 14 I had received a personal letter from the Minister of the Interior, On. Taviani, expressing his deep appreciation for the Embassy's interest and assistance with respect to the disaster in Florence."

Assistance Provided by U. S. Voluntary Agencies & Other U. S. Assistance

American National Red Cross

Cash donation	\$ 25,000	
Sweatshirts and clothing	4,600	
51,662 doses tetanus anti-toxin and toxoid (Wyeth, Parke Davis, Lederle donated)	46,355	
1,800 pkgs. and 1,000 vials typhoid, paratyphoid (Wyeth, Parke Davis, Lederle donated)	<u>3,549</u>	\$ 79,504

Catholic Relief Services

Cash donation	100,000	
50 tons clothing	<u>100,000</u>	200,000

Church World Service - Cash Donation (Also see World Council of Churches) 3,000

American Jewish Joint Distribution Committee - Cash donation 25,000

Other U. S. Assistance

Delta and PanAm Airlines - free airlift of 375 blankets, est.	550	
PanAm - free airlift of above ANRC medicines, est.	<u>974</u>	1,524

Committees formed in U. S. to help Italy

"American Volunteer Committee to Rescue Italian Art" established a fund raising goal of \$2,500,000. This committee is under the honorary chairmanship of Mrs. Jacqueline Kennedy. The committee arranged for immediate departure of 19 art restoration experts to go to Florence. They arrived there on November 18. Others will follow. The committee plans to concentrate on the supplying of restoration materials including humidifiers, driers, special paper and the transferring of art works to other Italian cities where the immense salvage operation can be carried out. The committee is presently showing on TV throughout the US a film, narrated by Richard Burton, which shows the flood and the incalculable damage to the art treasures of Florence, as well as the almost insurmountable job of restoration. The committee has expended \$100,000 to date and has raised from various sources as of December 22, 1966, approximately..... 400,000

"The Florentine Artisan Relief Fund" - this was started in New York and its aim is to help the Florentine artisans get back quickly into business. It is not known how much has been raised by this fund, except for one donation by Lord & Taylor of New York of..... 1,000

"The American Campaign for Italian Flood Relief" - operates in New York and New Jersey. No other information is available.

"The Florentine Relief Fund, Inc." - founded by the American Italy Chamber of Commerce to help the families, tradesmen, artisans, shopkeepers and craftsmen in Florence. No other information is available.

"Help the People of Italy" - No other information is available.

"American Committee for Flood Relief" - organized by a group of prominent Americans, resident in Rome under the honorary chairmanship of Ambassador Reinhardt.

Florence, Alabama, Chamber of Commerce has launched a drive to collect money, clothing and blankets for the people of Florence, Italy. It is not known how much was raised.

There were many inquiries to congressmen, state desk officials and the AID Disaster Relief Office by private individuals on how they could help the people of Italy. They were advised to contact the American National Red Cross in Washington, the American Council of Voluntary Agencies for Foreign Service in New York and Catholic Relief Services in New York for instructions on making cash or donations in kind through those organizations

Total known value of Volag and Other US private assistance	\$710,028
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Assistance Provided by Other Nations

Pope Paul - personal gift	80,450
The Netherlands - by Red Cross on behalf of the Government - bedding, clothing, rubber boots, foodstuffs	41,650
Netherlands ²⁴ water tank trucks and filtering units, value not reported. Transportation 1/2 airlift cost amounted to	*
	19,900

(Note - Under Red Cross Societies indication made of water purification equipment sent by Germany and Netherlands; it is not known whether this is in addition to the above or includes it.)

World Council of Churches	50,000
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Red Cross Societies

Australia - clothing and vaccines	4,470
Austria - made available 5 water purification units and 20 water pumps with technical personnel	*
Also vaccine, kerosene stoves, JRC disaster kits	50,200
Belgium - ambulance, vaccines, disinfectants, foodstuffs, bedding and vaccine (in cooperation w/Public Health Ministry)	6,760
Brazil - vaccine	*
Canada - clothing, bedding, cash grant	25,280
Czechoslovakia - 1 water purification unit	*
Denmark - antibiotics, cash grant	68,130
Finland - antibiotics, clothing	6,850
France - cash grant, foodstuffs, medicaments, clothing	7,110
Germany (Fed Rep) - made available 3 water purification units with technical personnel, medicaments, clothing, bedding and 2 VW ambulances	80,570
Great Britain - cash grant, bedding, clothing, disinfectants, medicaments, vaccine,	33,600
Hungary - clothing, bedding, vaccines, medicaments & disinfectants	11,160
Iran - cash grant	2,000

Ireland - Foodstuffs and bedding	2,100
Luxemburg - cash grant	1,000
Monaco - cash grant	1,000
Netherlands - made available 12 water purification units with technical personnel	*
Also foodstuffs, bedding, rubber boots, clothing, medicaments, blood plasma	53,900
Norway - cash grant, foodstuffs, rubber boots	44,920
Poland - vaccines and disinfectants, food	25,070
Spain - vitamins, food	1,590
Sweden - clothing, bedding, toilet kits	35,530
Switzerland - Food, vaccines, blood plasma, clothing, bedding, rubber boots and gloves	55,200
Also made available a helicopter	*
Thailand - cash grant	480
USSR - Foodstuffs and bedding	50,650
Yugoslavia - vaccine, bedding, foodstuffs	<u>8,430</u>
	\$768,000

*Value not reported

Canada - A news report of 1/18/67 indicated the Government of Canada would ship cattle to help farmers hit by the November floods. The cattle was valued at \$400,000, and Canada has allocated another \$100,000 in flood aid for a total of

	<u>\$500,000</u>
	\$1,268,000

BRAZIL

Characteristics of the Disaster:

Event: Floods

Date-Time: Between May 21 and June 14, 1966

Location: Northeast Brazil including Salvador in Bahia; Aracaju in Sergipe; Maceio in Alagoas, several interior cities, and Recife in Pernambuco, which was the hardest hit.

<u>Damages:</u>	<u>No. Killed</u>	<u>No Injured</u>	<u>No. Homeless</u>	<u>No. Evacuated</u>	<u>No. Mass Feeding</u>
	147	57	29,000	125,500	93,000

13,500 homes were damaged or destroyed in Recife and 150 elsewhere in the flood area. Damage to reservoirs amounted to an estimated \$975,000; to hospitals and clinics \$727,270; to streets, sewers, houses and public buildings \$5,939,090 in Recife alone. There was additional property damage to other cities estimated at \$2,272,720. Estimated total property damage \$9,914,090.

Description of the Disaster:

Torrential rains began on May 21. Violent rainstorms over the weekend of May 28 brought disastrous flooding to the Northeast area, especially the cities of Recife and Salvador. Just as Recife was beginning to recover from the effects of this flood, it was hit by a second and larger one on June 14. Both the Pernambuco and Zona Da Mata rivers were in flood stage. Many rural towns were affected also. Vital bridges were weakened and in Recife the Laserre bridge was washed out. This bridge carried power lines, water mains and traffic to the city. In the earlier flood lateral earth abutments of the Guajau Dam collapsed. This dam furnished water to 40% of Recife's population living in the southern sector of the city. All city water in Recife was contaminated because of damage to the reservoir and distribution system, compounded by the antiquated and extensive use of cesspools in the area. Most of the deaths in Recife occurred in hillside slums and in the shantytowns built on stilts in the city's lowlying areas. Despite the fact that the second flood in Recife was greater and caused more property damage, there were fewer lives lost (28) than in the first flood (109). This was attributed to the fact that adequate warning was given to city residents, who were thus able to take precautionary steps and avert a more massive tragedy. In addition to the above damages, homes and property of three American U. S. Government employees in Recife received serious damages.

Floods in the Northeast of Brazil are a recurring phenomenon and are expected seasonally. However, the suddenness and intensity of this year's floods, caused the most damage in years. Flood control projects in the area have been moving slowly. Correction of flood conditions is in the hands of Brazilian engineers. USAID sponsored a Bureau of Reclamation Hydrology and Flood team of specialists to analyze the major causes of these floods and make recommendations. Their interim report concluded: (1) The most effective, economical and immediate

protection to Recife from a recurrence of flooding of the magnitude of the June 14 flood could be through a diversion channel, approximately 7 kilometers long, bypassing Recife to the south. Estimated cost \$9.1 million. (2) There is no feasible upstream damsite or combination of sites to make a very large or effective flood control contribution. Further study of storage to supplement a major diversion channel should be made. (3) Channel improvements in the Recife area would not afford flood protection of sufficient magnitude.

Action Taken by Local Government and Organizations (includes State and Federal)

Officials declared a public catastrophe and requested assistance from the President of Brazil. Energetic efforts of the firemen and the military were effective in reducing loss of life. SUDENE (Superintendency of Development, NE Brazil), Brazil military, federal, state and city governments were all active in the organization of relief efforts. Also involved and effective in disaster relief operations were the counterparts of U. S. voluntary agencies (CRS/CARITAS and CWS/LWR/Confederacao Evangelica do Brazil) as well as School Lunch and FFP Workfront representatives. The Brazil Red Cross provided assistance. Organized disaster relief services used the Palace of the Governor as a command post and disaster relief intelligence was funneled through that area for analysis, coordination and operational instructions. Unorganized relief efforts were attempted but soon abandoned. A Flood Relief Council was formed to handle organized efforts of social clubs and other private organizations on a temporary basis. This council consisted of representatives of SUDENE, state, city, military and private organizations. Executive operations were directed by state personnel and the regional CARITAS director. The council did not remain as a permanent group, but it did provide the structure and model for future relief efforts.

The most pressing problem was temporary shelter for approximately 100,000 evacuees. 71,000 were housed in schools and similar public buildings; 29,000 in private homes. Of the 196 public buildings used for shelter, six were continued in use with 2,000 persons being cared for six months after the flood. In Ibura, a Recife suburb, 400 homes are being constructed on a self-help basis.

Logistics of supply, supervision and hygiene in the scattered posts created real problems. Health conditions were serious in some areas and an extensive inoculation program was carried out with jet injectors supplied by USAID. 167,798 vaccinations were given. Widespread publicity was given in cautioning inhabitants to take precautionary measures with drinking water. Water purification tablets, provided by Church World Service from New York, were distributed to hospitals, refugee centers and other concentration points by State Health authorities. It was felt that the inoculation program, publicity and use of the water purification tablets contributed to the low incidence of typhoid.

USAID reported that Brazilian assistance to the flood victims was impressive, particularly in Recife where it was possible to witness the operation more closely. Food, blankets, other disaster supplies were contributed from private sources. There were raffles, shows and community collection to obtain funds and supplies for the flood victims. The U. S. and local voluntary programs and recent Brazilian Government operation of programs for school lunch and child feeding, provided an organizational framework that could be put to immediate use in an emergency situation. Further, Brazilian Government organizations are cooperating in developing a manual of operations for use in future emergencies.

The concept of working together to solve problems, to plan ahead to meet emergencies is just developing, and the people are becoming capable of handling their own emergency problems. However, the gathering and developing of statistics continues to be a problem.

Following is a breakdown of local, state and federal contributions to the four flood areas:

Salvador, Bahia - 2,000 people temporarily housed and fed by the relief commission. Local contributions of food, clothes and medicine met the majority of needs. State and Federal money was allocated for public works rehabilitation and repair and for housing.

	<u>Cruzeiros</u>	<u>Total in Dollars</u>
Federal	1 Billion	
State	208 Million	
Private	15 Million	
	<u>1.2 Billion</u>	\$ 556,000

Aracaju, Sergipe - The 1,500 people driven from their homes were assisted primarily by other families. A Catholic Women's organization organized voluntary relief efforts.

Federal	150 Million	
State	5 Million	
Private	5 Million	
	<u>160 Million</u>	\$ 73,000

Maceio, Alagoas - 3,000 persons were temporarily sheltered and fed through the cooperation of the military, state government civic groups and Red Cross. SUDENE provided 6 tons of food and 1,000 blankets. The Army provided food. Private and industry contributions of food and clothing, including 42 tons of sugar, were made. SUDENE and CRS/CARITAS established a plan to help the people rebuild their houses.

Federal	150 Million	
Army	8.7 Million	
SUDENE	29.8 Million	
City	9.5 Million	
LBA	5 Million	
Private	17.5 Million	
	<u>220.5 Million</u>	\$ 100,000

Recife - Pernambuco - More than 100,000 people were driven from their homes. 71,000 were housed and fed in 196 shelters by the relief commission of SUDENE, CARITAS, state, city, private organizations and USAID.

Federal	6.4 Billion	
Local-Private	395 Million	
Local-Industry	230 Million	
SUDENE	956.2 Million	
	<u>8 Billion</u>	3,628,000
		<u>\$4,357,000</u>

Assistance Provided by the U. S. Government

USAID and Consulate personnel assisted in many ways—coordinated with Brazilian officials and agencies in relief efforts, served on relief commission, coordinated health measures with State Secretary of Health and participated in rescue operations. USAID provided 10 cars, 9 jet inoculators for typhoid immunizations, 16 Cinvaram brick making machines and purchased locally 4,000 blankets, 90 kerosene stoves, snake anti-venom, soap, creoline and dry meat and approved use of P. L. 480 Titles II and III FFP commodities.

18 Peace Corps volunteers assisted at the main collection and distribution center, in temporary housing and shelter areas in Recife. Their services were also used to demonstrate and in some cases supervise the use of the Cinvaram brick making machines. They contributed excellent support by encouraging the people to be vaccinated.

USAID sponsored a team of Bureau of Reclamation Hydrology and Flood specialists. This team analyzed the cause of the periodic floods and made recommendations to eliminate or minimize them. See descriptive portion earlier in this report.

Following is a breakdown of estimated USG costs for these disaster relief operations:

AID Contingency Fund/Ambassador's Authority

Air transportation of water purification tablets donated by Church World Service	\$ 1,739	
Air transportation of 7,200 lbs. of clothing from International Christian Relief in US to Recife	4,882	
Cost of 2 vaccine pump assemblies & clearance services	148	
Bureau of Reclamation Hydrology and Flood Control team recommended to be funded under the Contingency Fund, estimated costs.	<u>10,000</u>	\$16,769

Technical Assistance Cruzeiro Support Project

Relief Supplies purchased in Recife (CR 6,768,600)	3,076	
Relief supplies purchased in Rio de Janeiro (CR 9,176,570)	4,125	
Clearance and cartage in Recife of clothes donated by International Christian Relief (CR 233,000)	<u>106</u>	7,307

P. L. 480 Food for Peace

Title III

A total of 544.2 tons of wheat flour, bulgur, nonfat dry milk, oil, rolled wheat and cornmeal were provided by CRS/CARITAS; CWS/LWR; CNAE; ABC; and the Red Cross in Recife and by CRS/CARITAS in Maceio and Aracaju. Total estimated market value

\$ 169,061

	Brought forward	\$ 169,061	
<u>Title II</u>			
A total of 57.7 tons of wheat flour, bulgur, nonfat dry milk and cornmeal were provided from Workfront Title II commodities, estimated market value		<u>11,509</u>	<u>180,570</u>
			\$204,646

Comments of Note in USAID Report

Some difficulty was experienced servicing the jet inoculators because of what appeared to be solid matter in the vaccine. This was attributed to use by volunteers not completely acquainted with the injectors who would leave vaccine in the nozzle where it would dry and clog the head. This difficulty was overcome only by constant disassembly, cleaning, sterilization and re-assembly by USAID personnel.

It was recommended that USAID or the American Consulate prepare for similar emergency situations in the future by preparing its own local manual of operations (or adapting the Brazilian) and if possible arrange for a stock pile of equipment such as vaccine, injectors, blankets, temporary shelters, stoves, cooking equipment, etc. for future emergency operations.

The most important feature of US relief assistance was the ready availability of FFP commodities and USAID Mission ability to purchase needed supplies and equipment for donation to Brazilian agencies for immediate distribution, through use of the authority delegated to the Ambassador from the world-wide disaster relief fund of AID. It was stated that while it appeared Brazilian resources could and should provide for housing, our efforts would have been even more successful if we had been able to give assistance with temporary shelters. SUDENE and state and city governments most cordially thanked USAID for its effective collaboration during the emergency. There was extensive news coverage, including radio and TV.

Assistance Provided by U. S. Voluntary Agencies and other U. S. Assistance

CRS/CARITAS

Gave strong support to housing and feeding. In addition to emergency feeding, used FFP commodities on self-help projects in the repair of damaged homes.

Provided 6 tons of used clothing, estimated value \$ 12,000

Church World Service

Cash donation	\$2,000	
1,000,000 water purification tablets	<u>1,070</u>	3,070

Seventh-Day Adventist Welfare Service

Cash donation to their representative, Bahia		5,000
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International Christian Relief

7,800 lbs. used clothing, estimated value 7,000

New Jersey Partners for Alliance - Alagoas

Obtained through following U. S. drug firms:

Lederle - 75,000 bottles iron syrup & 75,000 bottles vitamins 3,400

Bristol Lab - 3,600 units syncillin (125 mg); 2,400 tablets
of syncillin (250 mg); 160 pkgs (150 each) oral syncillin;
2,400 units nose drops, estimated value 1,000

Hoffman LaRoche - 4,800 vitamin tablets 200 4,600

From Americans in Recife

Personal donation by the American Consul (CR 200,000) 90

Clothing and food drives were conducted among the
American community and sewing was done by the
American Women's Organization

\$31,760

USAID reported on the value of the regularly established social welfare posts of the U. S. voluntary agencies which enable them to give immediate assistance consisting of food and medicine already on hand.

Assistance Provided by Other Nations

Great Britain (OXFAM group) - cash donation \$14,000
for use in Pernambuco with which was purchased 1120
2-burner kerosene stoves; 1120 kerosene lamps, and
2,000 mattresses.

COLOMBIA

Characteristics of the Disaster:

Event: Fire

Date-Time: October 26, 1966 - 11:00 P.M.

Location: Quidbo in the Department of Choco

<u>Damage:</u>	<u>Number Killed</u>	<u>Number Injured</u>	<u>Number Homeless</u>	<u>Number Affected</u>
	1	11	3,000	20,000

90% of business establishments and 500 residential homes destroyed. Dollar damage estimated at \$8,000,000.

Description of the Disaster:

The fire raged throughout the night and ultimately destroyed the central, commercial portion of the city, an area of about 20 square blocks. All dwellings in the affected area and 90% of the businesses were destroyed. Two theories on the cause of the fire appeared in news accounts--one that a gasoline tank exploded and the flames spread to hundreds of wooden houses nearby; another that it originated from a short-circuit. The destroyed property included the civilian telephone exchange, government buildings, piers, warehouses, theaters, hotels, stores, restaurants and cafeterias. A fire truck enroute to the fire hit a car and four firemen were injured thereby knocking out the principal fire fighting force and permitting the fire to get out of control.

Action Taken by Local Government

Isolation of the city and difficult overland access made it necessary that relief supplies be delivered by air. The police in Quidbo gave the details of the fire to newspapers in Medellin and Bogota. The newspaper called the Military Hospital in Bogota, which in turn advised the Commander of the Armed Forces, who ordered the Military Hospital to send doctors and medicine to Quidbo from Bogota. The Commander of the Armed Forces made a direct call to the U. S. forces in Panama requesting U. S. assistance. President Lleras Restrepo appointed a man from his office to coordinate help. President Lleras also informed Mr. Dearborn, DCM, American Embassy, that he concurred in the request for U. S. assistance. The Colombian Red Cross assisted in carrying out emergency measures, particularly in the provision of food and cooperated well with the military. A U. S. mission report said that suffering was minimized because the homeless were absorbed into houses of friends and relatives. It was stated, however, that this could only be considered a temporary measure because congestion was a problem even before the fire. The opinion was prevalent that the Government of Colombia would have to provide funds for rebuilding since most businessmen were wiped out and few, if any, were insured.

Assistance Provided by U. S. Government

The U. S. military in Panama responded immediately to the request of the Government of Colombia. At 11:30 AM on the 27th a U. S. military reconnaissance mission from Panama arrived to survey the damage and determine assistance priorities. Early the same afternoon supplies from Panama began to arrive. All U. S. assistance was coordinated with the Colombian military and civilian authorities in Quidbo, and the American Embassy was guided throughout by on the spot reports and recommendations from Consul Torrey, AID Food for Peace Officer Noelke and the Air Force Mission Chief, Colonel Bradford.

Cost to AID Contingency Fund for U. S. Military Supplies for Canal Zone

Food, field eating utensils, water cans, halizone tablets and medical supplies, including air transportation - \$ 16,000

The U. S. Mission at Bogota reported that efforts in assisting Quidbo received excellent media coverage; that the U. S. had been praised by government officials, including the Governor of Choco. The following is quoted from the mission report: "The prompt and effective assistance rendered by the U. S. Government in this disaster situation has undoubtedly created a large reservoir of goodwill, not only in the Department of Choco, but throughout Colombia. This assistance enabled the Colombian Government to successfully solve the initial problems of providing food and medical supplies for the homeless and jobless in Quidbo and to begin the more difficult task of long range rehabilitation of the disaster area."

Assistance Provided by U. S. Voluntary Agencies

CARE

Distributed 2,000 CARE packages and started a food for work program designed to help in the clean up of the destroyed center of Quidbo. 35 tons of P. L. 480, Title III Food for Peace were provided under CARE's program to aid the disaster victims. Commodities and value not reported.

CRS

The CRS program director in Colombia went immediately to the scene of the disaster to guide distribution of food, clothing and medicine by CARITAS. CRS made a cash donation to be used for local purchase of household utensils and materials for emergency shelters of - \$ 5,000

Assistance Provided by Other Nations

None reported.

ECUADOR

Characteristics of the Disaster

Event: Fire

Date-Time: October 14, 1966

Location: Colimes in the Province of Guayas

Damage:

<u>No. Killed</u>	<u>No. Injured</u>	<u>No. Homeless</u>	<u>No. For Mass Feeding</u>
0	0	492	800

59 homes were destroyed as well as many commercial buildings.
Estimated dollar property damage - \$134,000.

Description of the Disaster:

The city firemen were unable to bring the fire under quick control due to lack of equipment. The fire spread from one house to another and eventually burned 10 city blocks in the City of Colimes, which has a population of 5,000. The city had a pump designed to be thrown into the river and to pump back water into the city. However, gasoline which had been reserved for use of the pump was stolen. Firemen, not knowing the gasoline was gone, began to lay the hose in preparation for the expected water. When no water came, they went to the pump to determine why. While they were investigating the pump, the fire began to burn the hose and rendered it useless before the needed gasoline arrived. Fire trucks were called from nearby cities but could not reach the city for lack of a bridge across the river. They had to return to Guayaquil in order to take another route over a very old road. The delay prevented the fire trucks from being of any use.

Action Taken by Local Government and Organizations

A relief committee was formed by city officials. This committee prepared a complete list of all affected families and persons. The Ministry of Social Welfare provided rice, salt, sugar, lard and potatoes for the disaster victims. The Red Cross brought in pots, pans, sheets and blankets. CARITAS made distribution of the food supplied by the Ministry of Social Welfare as well as food commodities provided to Catholic Relief Services under P. L. 480 Food for Peace. There was a delay in food distribution because national elections were held on Sunday, October 16, and no travel was allowed. Also, there was a problem of several politicians trying to take advantage of the presence of CARITAS to make a connection between the food and themselves. On Monday, October 17, CARITAS distributed a month's supply of food to 805 victims. CARITAS Guayaquil did all the work of packaging, organizing the recipients and making final delivery, and the people were reported to be very pleased with the manner in which CARITAS carried out the distributions. The following comment was made by the Assistant Program Director-Guayaquil:

"By this distribution we were able to defend the victims against speculators who were arriving as the distribution was taking place. In any disaster of this nature, certain antisocial characters will try to rush in food, equipment, liquor and other things in order to barter with the victims for their land, prized possessions or future crops. By making our distribution, we were able to keep the victims from

making rash agreements with speculators and hopefully they will regain what has been lost."

Ecuadorean Army Forces in the area were sent to help out. The Ecuadorean Directorate of Civic Action worked with the Ecuadorean military and U. S. Civic Action personnel. The Ecuadorean colonel in charge remarked that he never felt he had any authority to act but would assess the situation, the needs, Armed Forces capabilities to help and make recommendations. Due to lack of clear-cut guidance, the colonel was uncertain whether the military should assume a directive role or a coordinating role and asked for suggestions. The U. S. Civic Action Officer stated there was a rational precedent for civic action by commanders without need for orders and that the U. S. was able to give limited assistance. The Ecuadorean military and civic action group established a pup tent camp for the homeless and provided troop labor, hand tools and equipment for clearing debris and levelling the area. Most of the homeless were poor with no means to reconstruct. It was estimated it would cost \$100,000 to replace the homes destroyed. The Ecuadorean Armed Forces, despite their desire to help, lacked the necessary funds and looked to the U. S. Civic Action Program for assistance. An Ecuadorean Medical Team, together with a U. S. Medical Civic Action Team, spent one day giving free medical and dental services to 2,000 persons. There were no unusual medical problems--the teams were sent chiefly for morale purposes.

Representatives of the Lions Club in Daule brought gifts of clothing from that town. Following is a summary of promised help from various agencies within the country: Ministry of Commerce and Industry - \$500; Ministry of Social Welfare - \$2,500; Ministry of Public Works - \$750; Provincial Council - \$1,000; total - \$4,750. In addition to providing troops, the Ministry of Defense also provided food.

Assistance Provided by the U. S. Government

The U. S. military provided 350 cots, 508 sets of silverware and 130 lanterns, plus fuels and lubricants. USAID Civic Action assisted with clearing away of rubble, levelling and reconstruction of homes. U. S. Medical Civic Action team spent one day giving free medical and dental treatment to approximately 2,000 persons. USAID approved the use of P. L. 480, Title III commodities, by CARITAS. Breakdown of U. S. assistance follows:

Expenditures Chargeable to AID Contingency Fund, Ambassador's Authority

Above U. S. military supplies and transportation \$ 3,000

From FY 66 and 67 MAP program funds

700 sacks of cement for making blocks to reconstruct homes	\$ 756	
Approved purchase of additional 2,000 bags of cement	<u>2,168</u>	2,924

From FY 67 Civic Action funds

Fuels and lubricants	632	
Provision of two hand-operated concrete block making machines plus some hand tools, valued at	<u>200</u>	832

Also loaned 5 dump trucks, a payloader and tractor for ten

days to clear away debris.

P. L. 480, Title III, Food for Peace, from Catholic Relief Services

1,800 lbs. each of bulgur, flour, cornmeal and rolled wheat and
1,536 pounds of edible oil, for a total of 8,736 lbs, est. market value \$ 708

Total USG Assistance 7,464

Assistance Provided by U. S. Voluntary Agencies

Catholic Relief Services arranged for distribution of P. L. 480, Title III food through CARITAS. See comments on CARITAS distribution under Action by Local Government and Organizations.

Assistance Provided by Other Nations

Chile - sent 854 lbs. medicines; 6,700 lbs food; and 4,000 lbs. clothing, sheets, mattresses. Value not given but estimated by MR/DRC at \$5,300

DOMINICAN REPUBLIC

Characteristics of the Disaster:

Event: Hurricane Inez

Date-Time: September 29-30, 1966

Location: Barahona Peninsula, four provinces of Barahona, Pedernales, Baoruco and Independencia. Hardest hit towns were: Oviedo, Enriquillo, Los Cocos, Juancho and Pedernales.

Damages:

<u>No. Killed</u>	<u>No. Injured</u>	<u>No. Homeless</u>	<u>No. Mass Feeding</u>
74	442	5,500	7,000

1,470 homes were destroyed; losses to Dominican Republic State Cotton Corporation buildings and plantations at Juancho were estimated at \$600,000; damage to 2,000,000 board feet of standing timber \$800,000; coffee losses at \$1.4 million and banana crop losses \$1.7; damage to Alcoa Aluminum property, \$500,000. Total estimated property and crop losses \$5 million.

Description of the Disaster:

After striking hard at Guadeloupe, Hurricane Inez plunged across the Dominican Republic's Barahona Peninsula, entering at Juancho and exiting the country near Pedernales on her way to Haiti. According to U. S. Weather Bureau reports, winds reached 160 mph in the center of the storm. Inez's full force winds began slamming against the Barahona Coast at midnight on September 29 and the center passed over or slightly south of the southern tip of the peninsula and the little island of Beata. The four southernmost provinces which were the hardest hit have a population of approximately 12,500. Many took refuge on higher ground and in strong buildings as torrential rains and tides of 10 to 15 feet accompanied the storm. Rivers and streams swelled rapidly and many overflowed. From Enriquillo south along the coastal road to Oviedo, the highway was considerably damaged, bridge approaches were partially destroyed and many schools, churches and public buildings were demolished. The town of Oviedo, with a population of about 250 families, was completely destroyed except for the one public building left standing. Alcoa Aluminum interests in Pedernales suffered heavily. A loading boom was derailed, power transmission lines were destroyed, roofs were blown off barracks and other company buildings causing considerable water damage to interiors.

Action Taken by Local Government and Organizations

President Balaguer went to the disaster area on October 1 and 2. Elements of the Dominican Third Army Brigade, stationed at San Juan de Maguna, were dispatched to the scene to assist in rescue, cleanup and distribution of food and clothing. Civil Defense conducted a census of the disaster victims and through its mobile communications network performed valuable rescue coordination services. The Dominican Air Force enlisted men were the first to donate blood. About 40 University of Santo Domingo medical students were first on the scene

to provide medical attention to the sick and wounded. The Dominican Red Cross worked with the Government and Civil Defense. They assisted in evacuation of injured, gave medical aid, vaccinated 4,000 persons and set up a feeding program. The National Police sent five mobile medical units, a large truck with mosquito nets, tents, mattress covers, blankets and clothing and donated \$10,000. Various private firms, fraternal organizations, unions and individuals made contributions for the hurricane victims. The Archbishop of Santo Domingo made a special appeal for clothing, household items and cash donations for housing. Central Ramano donated 20,000 kilos of meat on the hoof. The Agricultural Bank shipped rice and planned to make special arrangements for debtors from the southern provinces.

On October 1, President Balaguer appointed the Minister of Agriculture to head up the Dominican rescue and disaster operations efforts. A request was made for U. S. assistance on the same day. On October 3, a government decree was passed establishing a 10-member disaster committee, headed by the governess of Barahona Province. The governess and her committee were responsible for coordinating distribution of relief supplies. The Ministry of Agriculture was charged with coordinating cleanup of the disaster area relating to crop damage. The Ministry of Public Works coordinated cleaning up and opening of roads. There was considerable confusion in these relief operations. Among public complaints of GODR action were: lack of necessary precautions before the storm struck; delayed information on storm effects; slow action in mobilizing and coordinating relief efforts. The U. S. Mission indicated that local disaster operations were complicated by the lack of a single director for Dominican relief with whom assistance efforts could be coordinated. For the future, the GODR needs a national disaster plan to make advance preparations and go into immediate effect when disaster strikes.

A phase down of Dominican rescue and relief operations was made on October 7 with final phase out November 10, 1966. Reconstruction through normal administrative and government channels was continued.

On October 4, Minister Alvarez announced \$1.5 million peso recuperation plan, declaring devastated region a "preferential zone". A special Inez account was established in the reserve bank with a \$20,000 contribution from Santiago municipality and \$1,000 from the Reformista Party. Members of Congress pledged \$20.00 each for a total of \$2,020.

A USAID Human Resources Division team (HRD) visited the disaster area on November 21 and 22 and reported as follows on the reconstruction program: The President's Commission, charged with the major task of rehabilitation, was proceeding slowly; there was confusion among local people on distribution of houses as well as priorities by location; people in the town of Oviedo protested resettlement plans at the newly proposed site; potable water and sanitary facilities were inadequate; agricultural recovery was lagging; there was apprehension over the shut down of the Consorcio Algodonero (cotton plant). Many of the people in the area derived some income from this industry and no plans had been announced on reconstructing the cotton gin. Multiple problems face the GODR in the disaster area due to its low economic condition and marginal agricultural production.

Assistance Provided by U. S. Government

Upon receiving a request for USG emergency assistance from the Dominican Government on October 1, U. S. Ambassador Crimmins sought the assistance of the U. S. Navy Caribbean Ready Group, who responded immediately. The USS Boxer (Helicopter aircraft carrier) took up a position just off Barahona Peninsula and the first Marine helicopters landed at the Barahona Airport at 5:10 PM, October 1. Stephen R. Tripp, AID Disaster Relief Coordinator, arrived from Washington, D. C., on October 2 to assist in assessing damage and suggesting USG disaster relief measures to be taken by the U. S. Embassy, USAID and voluntary agencies. During a four-day period U. S. Navy helicopters airlifted 91,800 pounds of food, medicines and clothing and evacuated the injured. U. S. Navy medical personnel vaccinated 2,500 Dominicans against tetanus and typhoid, treated the sick and wounded hurricane victims and in one instance delivered a baby. U. S. Coast Guard aircraft transported a voluntary aid group of four doctors from Miami, Florida, to the Barahona Airport on October 8.

AID/Washington arranged for the procurement of 200 lightweight, 9x12 tents, for the hurricane victims. They were purchased from the Camel Manufacturing Company of Knoxville, Tennessee, at a cost of \$10,500. Also, the American Institute of Free Labor Development (AFL-CIO) wished to contribute tents to the disaster victims and asked MR/DRC to obtain \$2,500 worth for them. The two orders were combined for a total of 247 tents. After an unsuccessful effort to obtain commercial airlift, Captain V. G. Holzapfel, USN, Foreign Disaster Relief Coordinator for the Department of Defense, obtained approval for USAF Military Airlift Command to transport the tents from Knoxville, Tennessee to the Dominican Republic on a priority basis. The tents arrived in Santo Domingo on October 10 aboard a C-124 Globemaster. Costs of tents and airlift were funded from the AID contingency fund.

AID Contingency Fund Expenditures

Procurement of 200 tents	\$10,500	
DOD costs for airlift of 200 tents plus 47 donated by Institute of Free Labor	5,800	
Medicines to repay loan from Cabral Hospital	1,150	
U. S. Navy costs	5,014	
Aviation-Gas (local currency)	1,494	
Per Diem and transportation (local currency)	<u>2,542</u>	\$26,500

P. L. 480 Food for Peace

Title II - 6,237 pounds of vegetable oil and 92,300 pounds of bulgur, estimated market value	8,300
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Title III from CRS - 50,631 pounds vegetable oil;		
27,400 pounds cornmeal; 45,700 pounds wheat flour;		
98,084 pounds nonfat dry milk and 69,000 pounds		
of bulgur, estimated market value	<u>32,051</u>	<u>40,351</u>
		\$66,851

From the \$40 million USAID Emergency Public Investment Program - agreed to provide loans for reconstruction and rehabilitation in the disaster area up to \$1 million.

At the time of the request for U. S. assistance, the GODR expressed in advance its gratitude for U. S. assistance. U. S. Ambassador Crimmins stated that the Navy Task Force had done an outstanding job and expressed appreciation to the State Department and Washington agencies for prompt effective back-stopping.

Comments from U. S. Mission Report

"To a stunned and dejected population who were homeless and destitute, the arrival of U. S. helicopters flying in formation overhead caused an instant psychological reaction that help and hope were at hand. Their assistance rendered in distributing food, clothing and medicines to this population was the most spectacularly successful part in the U. S. relief effort."

"It is worth noting that governments and peoples in this part of the world, in view of our customary favorable response over the years, have come to expect us to render this type of assistance. Accordingly, it would hardly be possible for the U. S. to deny a request from the Dominican Government, or other governments in the Caribbean area, without decidedly unfavorable political consequences."

The U. S. Mission plans to improve U. S. operations in disaster relief in the Dominican Republic by carrying out the following recommendations prior to June 1, 1967, the beginning of the 1967 hurricane season:

1. USAID Disaster Relief Officer will issue a new organization outline. Those persons indicated will be alerted to their specific functions.
2. The GODR will be alerted and urged to obtain a sufficient stockpile of medicines and vaccines.
3. The Chief, Food for Peace Division, will alert CRS (CARITAS) to have sufficient food on hand in the Barahona Peninsula area for emergency distribution, if required.
4. The Pan American Health Organization in Santo Domingo will be requested to have a sufficient quantity of medicines to be used in case of emergency.
5. U. S. Mission emergency disaster plans will be coordinated with the Dominican Red Cross and Dominican Civil Defense Corps.

6. The Disaster Relief Officer will maintain continuing liaison with those national/international agencies which can be expected to contribute personnel and resources to civil disaster relief programs.

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

Catholic Relief Services

Clothing for 2,000 persons (value not reported, estimated by MR/DRC)	\$2,000	
Household utensils for over 2,000 persons	<u>2,125</u>	\$ 4,125

<u>American National Red Cross - Cash Donation</u>		5,000
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<u>Church World Service - 1,250 blankets valued at</u>		3,750
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CARE

3 cases grape drink, 12 cases omelet mix, 1 case sour candy, 315 cases fruit jello, 200 cases baby food, 500 cases boraxo, 500 dozen anacin, 500 fly swatters, pots, spoons, cups, plates, first aid kit, settlers kit and carpenters kit, total value		10,100
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Seventh-Day Adventist Welfare Service

4,150 pounds of clothing, bedding and blankets, valued at		4,150
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Pan American - Free Airlift

SDAW material, airlift estimated value	\$1,400	
CWS material, airlift estimated value	1,200	
CRS material, airlift estimated value	<u>500</u>	3,100

American Institute of Free Labor Development (AFL-CIO)

47 tents	2,500	
105 mattresses	<u>1,000</u>	3,500

Medical Group

A voluntary aid group of four doctors from Miami, Florida, headed by Dr. Robert L. Cherry of Coral Gables, went to Barahona to assist in treating the sick and injured. They brought with them 2,750 pounds of medical supplies donated by Dade County drug concerns. MR/DRC estimated value of drugs at \$1.00 per pound

		<u>2,750</u>
		\$ 36,475

Assistance Provided by Other Nations

Pan American Development Foundation

310,000 doses Primetamines
25,800 doses Anti-Malaria
5,000 capsules Tetrasicilino (tetanus)
10,000 capsules Cloransenical (for Bronchitus)
200,000 tablets sulph drugs

6 large plastic emergency housing units	2,517	
Survival kits and miscellaneous tools	890	
From CROP:		
500,000 packets misc. vegetable seeds, 500 lbs.		
sorghum seed, 1,000 lbs. bean and 6,000 lbs.		
black eyed pea seeds, estimated value	50,000	
30 tons wheat and 60 tons corn	5,400	
Purchase of food and tools in Haiti		
w/cash contribution	5,000	
CWS - miscellaneous disaster operations		
expenditures	<u>109</u>	\$100,074

Mennonite Central Committee

Sent team of six builders for 7-week construction assignment		5,000
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CARE

Miscellaneous disaster operations expenditures		<u>128</u>
		\$105,202

Total USG and Voluntary Agency Assistance		\$174,572
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Assistance Provided by Other Nations

There was no indication that the Haitian Government requested assistance or received offers of help from any other government.

Diplomatic Corps in Haiti - cash donation		\$ 1,000
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World Council of Churches		<u>15,000</u>
		\$ 16,000

The United Nations Mission was active from the beginning in offering the assistance of its staff in Haiti. UN representatives made a survey of the devastated areas. The Secretary General sent a message of sympathy to the President and people of Haiti and referred to the possibility of UN assistance under General Assembly Resolution 2034, but there was no request for UN assistance.

MEXICO

Characteristics of the Disaster

Event: Hurricane Inez

Date-Time: October 7 to 10, 1966

Location: Yucatan, Tampico Areas

<u>Damage:</u>	<u>No. Killed</u>	<u>No. Injured</u>	<u>No. Homeless</u>	<u>No. Evacuated</u>	<u>No. for Mass Feeding</u>
	14	69	10,000	10,000	80,000

2,800 homes were damaged or destroyed. Many small fishing craft were lost along coastal towns in Yucatan. Severe damage resulted to the cotton crops in Tampico area, reducing the total number of bales expected for harvest from 400,000 to 250,000. Estimated total dollar damage - \$24 million.

Description of the Disaster:

After its brush with Florida, Hurricane Inez drove into the Gulf Coast where it again skirted Cuba on October 5. As it entered the warm Gulf waters, it picked up strength again to 125 mph and headed for Mexico. It hit Yucatan on October 7 with winds up to 115 mph, spending 24 hours off the northern tip of Yucatan and causing considerable damage in some coastal towns. This was the first hurricane in memory to strike Yucatan from the north. In the past all such storms have come from the Bay of Honduras and the Caribbean and their fury had been spent on land before reaching the populous northern coastal areas. When the storm arrived in Yucatan, it found only ghost towns as the people had been evacuated from the danger areas. It was reported that half of the homes in the City of Progreso were damaged. Inez then continued on across the Bay of Campeche where it battered an area some 50 miles in radius around the port of Tampico. The eye of the storm passed over the town of Aldama. Heavy rainfalls and flooding occurred throughout the general area, which has a population of some 350,000 persons. Hurricane Inez finally broke up against the hills of the Sierra Madre range on October 10, thus ending the longest hurricane on Weather Bureau records of 90 years. She had begun with a tropical depression in the Atlantic Ocean 1200 miles east, southeast of San Juan, Puerto Rico, on September 24 and lasted for 17 days. In addition to Mexico, Inez inflicted great damage to Guadeloupe, the Dominican Republic, Haiti and Cuba. It also touched Florida and the Bahamas causing limited damage.

Most of the damage to Mexican homes occurred along the coastal lowlands populated by people living in thatched roof huts and shacks. There was little damage to major buildings and more substantial homes. Communications and utilities were interrupted for periods ranging from a few hours to a week. Although during the height of the storm roads were blocked temporarily by water, there was no significant damage to major roads or bridges. Loss of homes and damage to the cotton crop constituted the major property losses.

Action Taken by Mexican Authorities and or Organizations

Newspaper and radio stations mounted a publicity campaign to warn residents to take cover. In the Yucatan, many families refused to leave their homes and Army troops forcibly bundled whole families into military trucks. Victims were housed in schools and other public buildings. Army Patrols were sent into the countryside to round up inhabitants of small villages. Medical aid, food and clothing were rushed to the stricken areas. The within-country operation was carried out by the Secretary of Defense of Mexico, under a disaster relief plan recently formulated by that Ministry. The U. S. Mission reported that the organization of the country's resources to meet this type of disaster was generally effective, but that the disaster was not of sufficient magnitude to have given the organization a real test. In response to an offer of assistance by President Johnson, the Mexican Government requested U. S. helicopters to assist in rescue and evacuation of flood victims. 1300 of the damaged homes were repaired by the Mexican Army and 1500 by the owners. The Mexican National Red Cross cooperated actively in relief measures.

Assistance Provided by the U. S. Government

President Johnson sent the following message to President Diaz Ordaz of Mexico on October 12:

"I was deeply distressed to read on the ticker a few minutes ago of the terrible damage done by Hurricane Inez to towns and communities along the coast. If there is anything that we can do to be helpful, please let me know. Our thoughts are with you and with your people in this stricken zone. Warmest regards."

In response to this message, the Mexican Government requested helicopters for rescue operations. Through a series of messages from the White House, Department of State, Department of Defense, American Embassy in Mexico City, and American Consul in Tampico, Mission BOLD PARTY was set up under direction of JCS and CINCSTRIKE under which Army/Navy helicopters and 80 supporting personnel were deployed to a forward operating base at Tampico, Mexico, to work in close cooperation with Mexican forces. There were six Army helicopters, three Navy helicopters and the Marine forces utilized a KC-130F at Tampico to provide ground refueling for the helicopters. Operation BOLD PARTY was activated on October 13. On October 14, the first group of three Navy helicopters arrived at Tampico and within one hour after arrival were dispatched on three relief missions (less than 24 hours after receipt of the JCS directive to launch rescue and relief support from the U. S.). By October 17, BOLD PARTY had completed its assignment and on October 18 all planes had returned to the U. S. There were 43 relief missions flown; 102,260 pounds of food, clothes, blankets and medical supplies were airlifted; 14 Mexican doctors were transported from village to village to treat the sick; 80 flood victims or sick persons were evacuated to Tampico; U. S. Navy doctors treated 174 villagers.

Expenses incurred by Operation BOLD PARTY were reimbursed to the U. S. Military from the AID Contingency Fund for Disaster Relief in the amount of.....\$26,792.

President Diaz Ordaz sent the following message to President Johnson on October 18:

"I received through your embassy in Mexico, the kind message of October 15 which you sent me concerning your authorization for seven helicopters of the United States Armed Forces to take part, in accordance with the request presented through our embassy in Washington, in the rescue of victims of Hurricane Inez. I am informed that the helicopters have already returned, since fortunately the situation in the affected zone is returning to normal. I wish to express, once again, my sincere gratitude for this demonstration of friendship, which the Government and the people of Mexico most thoroughly appreciated. I beg that you accept the assurances of my highest consideration and personal esteem."

A message of appreciation was also received by the Secretary of State from the Ambassador of Mexico.

Assistance Provided by U. S. Voluntary Agencies

Church World Service - cash donation to Council of Churches, Mexico \$ 3,000

Assistance Provided by Other Nations

None reported.

PANAMA

Characteristics of the Disaster:

Event: Flood

Date-Time: November 4, 1966

Location: Pacora-Chepo Area

<u>Damage:</u>	<u>No. Killed</u>	<u>No. Injured</u>	<u>No. Evacuated</u>	<u>No. Homeless</u>
	20	1600	1500	1000

There were widespread losses in crops and livestock.
Total estimated dollar damage - \$1 million.

Description of the Disaster:

The flash flood which was caused by continuing torrential rains was considered the worst flood in Panama in 30 years. It swept through the Pacora-Chepo area and a six feet high wall of water destroyed the small towns of Juan Gill and Carriazo and damaged San Miguel and Pacora. Most of the victims, half of them children, were from the small villages alongside the Pacora, Mamoni and Bayano Rivers at the end of the Pan American Highway and on the fringe of dense jungle. While the death toll was reported as being at least 20, it was feared that many others among the Indians living along the banks of the major rivers in the eastern part of the country may have drowned.

Action Taken by Local Government and Organizations

President Robles and Minister Pretto were brought to the disaster area in U. S. Air Force helicopters landing at Juafggill and Pacora. Minister of Health Pretto was appointed by President Robles as coordinator for entire relief operation. He set up a National Rehabilitation Committee to coordinate relief operations, including distribution of donated foods, clothing, etc., which poured in from all over the country. The Committee was composed of the Minister of Health, Vice Minister of Government, Vice Chairman National Red Cross, Executive Director of Road Commission, Deputy Controller General and Housing Engineer. President Robles requested \$100,000 for the Executive Budget in order to provide financial assistance to the disaster area. The U. S. Mission reported that the Panamanians used available resources adequately and had the situation under control.

Assistance Provided by U. S. Government

The U. S. Air Force and U. S. Army provided helicopters and fixed wing aircraft for numerous humanitarian missions and provided 300 cots and 300 mosquito bars. Five rubber boats were also made available by USAFSO for rescue efforts as well as MAP trucks and medical equipment to assist the victims of the flood. USAID, U. S. Military Group and Panama Canal representatives attended the first meeting of the National Rehabilitation Committee for the purpose of determining relief needs.

AID reimbursed the U. S. Military for out-of-pocket costs incurred with the above relief operations from the Foreign Assistance Act in the amount of \$8,754.

Also, 4 tons of P. L. 480, Title III, soybean oil, beans and powdered milk were provided through CARE, estimated market value \$1,300.

Assistance Provided by U. S. Voluntary Agencies

CARE distributed above P. L. 480 food.

Assistance Provided by Other Nations

Pan American Development Foundation - 10,000 doses Tetanus Anti-toxin *

Pan American Health Organization - 20,000 doses yellow fever vaccine
from PAHO stocks located in Colombia and Brazil, est. value by MR/DRC \$4,000

*Value not reported

PERU

Characteristics of the Disaster:

Event: Drought
Date-Time: 1966
Location: Department of Puno
Damage: Potential Famine Victims
156,000

Description of the Disaster:

The combined effects of extreme cold and lack of rain in the Department of Puno during the first few months of 1966 created famine conditions for the rural people. Levels of output were expected to drop by 63% for potatoes; 30 to 47% for barley, quinoa and canigua, beans and other crops; and livestock from 5 to 10%.

Action Taken by Local Government and Organizations

By supreme decree dated June 13, 1966, President Belaunde declared the Department of Puno in a state of emergency due to drought and frost. On July 8, 1966, a request was sent to USAID/Peru for emergency food assistance for Puno. Port and internal transportation costs of the P. L. 480, Title II, commodities were to be financed by the Government of Peru. The GOP was also to provide storage facilities. Catholic Relief Services (CARITAS) agreed to provide supervision and control the receipt, storage and distribution of the food.

The Government of Peru made available 49,000,000 soles (approximately \$1.8 million) for the emergency program in Puno. CRS reported that under the food-for-work arrangement the following types of projects would be worked on in approximately 120 communities: small scale road construction, community school construction, potable water supplies, construction of community buildings, education programs for rural mothers, and nutrition education programs. The Cooperacion Popular (COOPOP) planned to employ 5,000 laborers in 150 work fronts in the provinces of Puno, Juliaca, Huancane, Ilave and Azangaro of the Department of Puno in continuation of its project to fabricate 10 million adobes. The adobes are part of the COOPOP Community Development Program for which the Inter-American Bank recently made a loan of \$20,000,000 to construct schools, housing for teachers, artesan centers, fences for schools, buildings for cooperative farms and auditoriums. The COOPOP and CARITAS developed joint plans for the food for work activities.

Assistance Provided by U. S. Government

The Government of Peru requested assistance from the United States under the Alliance for Progress. AID provided the following P. L. 480 food commodities under the Title II disaster relief authority. The food was to be distributed free or as partial payment for wages to needy people employed on work relief community projects in the disaster area.

	<u>Market Value</u>	<u>Transp.</u>	<u>Total</u>
1,098 metric tons cornmeal	\$ 96,700		
943 metric tons bulgur	103,800		
426 metric tons rolled wheat	52,000		
284 metric tons vegetable oil	130,700		
<u>2,751</u>	<u>\$383,200</u>	\$150,000	\$533,200

Assistance Provided by U. S. Voluntary Agencies

Catholic Relief Services (CARITAS) provided supervision and control of the receipt, storage and distribution of above P. L. 480 commodities.

Assistance Provided by Other Nations

None reported.

PERU

Characteristics of the Disaster

Event: Earthquake

Date-Time: October 17, 1966, at 4:44 PM local time

Location: Area between Lima and about 400 kilometers north in Provinces of Lima, Callao, Chancay, Casma and Canta.

<u>Damage:</u>	<u>No. Killed</u>	<u>No. Injured</u>	<u>No. Homeless</u>	<u>No. Evacuated</u>	<u>No. Affected</u>
	120	(Est.) 1,500	49,256	2,500	57,600

Approximately 5,000 homes were destroyed. Damage to dwellings was estimated at \$11 million and to public buildings \$4 million, for a total estimated property damage of \$15 million.

Description of the Disaster:

The earthquake which ripped across the coastal edge of Peru had a magnitude of 7.5 on the Richter scale, according to the U. S. Coast and Geodetic Survey. It was centered at 10.7 S. latitude, and 78.7 W. longitude, just off the coast from Callao at a depth of 38 kilometers below sea level. Although earthquakes are a frequent occurrence in Peru, this was the most destructive since 1947 when 233 persons were killed. In 1946 an even more serious one took the lives of 500 persons.

The port city of Callao serves Lima and is a busy area. One Callao street was split by a chasm several feet wide and in the coastal residential district of Miraflores, chunks of cliff fell into the sea. A religious festival was underway in Callao and several persons were killed when some of the churches collapsed. Two women were killed as huge sections of the port's oldest church crashed down on the crowds below. The town of Huacho was the most severely damaged with 21,750 people left homeless. There was a tsunami tidal wave 11.3 feet high at LaPunta. It extended south to Valpariso but was only 1.6 feet high at that point. A seismic sea wave warning watch was issued. Both the earthquake and the tidal wave caused damage to the coastal towns in the disaster zone. Caleta Vical and Atalaya were almost totally destroyed. In Lima, the working day was just ending when the quake struck. Shoppers and office workers ran screaming into the streets and jammed the city's many plazas. Although, there was not extensive damage in the capital, 12 persons were reported killed in greater Lima. Cars were thrown about and traffic was snarled for hours. Cornices plunged into the streets, shop windows were smashed and a ten foot high stone statue fell from the roof of the historic Lima Cathedral, but it crashed harmlessly into the street 30 feet below. 2,300 houses in Lima suffered severe structural damage. Telephone and road transportation were cut off for one day between Lima and points north.

The quality of construction had a direct relationship to damages, with rural adobe construction suffering the most.

Action Taken by Peru Authorities and Organizations

The Junta de Asistencia Nacional (JAN) was given primary responsibility for coordinating Peruvian governmental earthquake relief efforts. JAN's immediate resources of approximately \$20,000 were used. Coordination with Peruvian Army Engineers and Ministry of Health was established. JAN experienced some difficulties with voluntary agencies, such as Boy Scouts, and the U. S. volags, on distribution of P. L. 480 food. The Peruvian Red Cross joined the Government in efforts to meet relief demands. Red Cross volunteers gave medical care through a mobile dispensary in cooperation with local health services. Some 80 patients of a wrecked hospital at Barranea were among those temporarily housed in Red Cross tents. Private donations to JAN were made through the El Comercio newspaper fund and the Catholic Church. Credits for reconstruction of houses from Bank of the Nation amounted to about \$30 million. An additional proposal to provide materials for self-help housing is pending before the Peruvian Congress. Assistance provided by JAN and agencies coordinated by it included first aid, evacuation of the injured, burial of indigents, provision of temporary shelters and distribution of bedding, clothing, food and medicines.

Assistance Provided by the U. S. Government

The Government of Peru requested USG assistance, especially tents and food. Based on needs over and above local availability, the U. S. Ambassador requested U. S. military in Panama (USCINCSO) to send tents, blankets, cots and emergency rations to airlifted to Lima/Callao International Airport. These were delivered on October 20 and 21. Through MR/DRC a purchase of 350 tents was arranged for air delivery through commercial channels on a free space available basis.

The American Embassy set up an earthquake relief committee to coordinate with the voluntary agencies, airlines, Red Cross, Texas Partners and JAN. The committee was helpful in clarifying issues and expediting aid to the disaster victims. USAID Food for Peace officers supervised Title III, P. L. 480, food distribution and performed end-use checks.

Authorized from the FAA Contingency Fund

USCINCSO - 56 general purpose tents, 920 canvas folding field cots, 3,000 blankets and airlift.	\$70,000	
Commercial purchase of 350 tents by AID/W	<u>25,375</u>	\$ 95,375
Airlift SDAWS supplies from Section 216 FAA funds		2,700

P. L. 480, Title III, Food for Peace by CRS, SDAWS and CWS

38,694 lbs. nonfat dry milk; 42,434 lbs. wheat flour; 19,884 lbs. cornmeal; 75,748 lbs. bulgur; 44,731 lbs. vegetable oil; 2,400 lbs. beans and 800 lbs. of rice, for a total of 224,691 lbs., estimated market value		23,059
		<u>\$121,134</u>

The following message was sent by President Johnson to President Belaunde on Oct. 18:

"I was distressed to learn about the large number of persons killed and injured by yesterday's earthquake. I have asked Ambassador Jones to consult with you on emergency relief measures for the victims. Please let me know if we can be of help."

The Government of Peru sent the following message to President Johnson:

"In the name of President Belaunde and the National Committee for Assistance, we are grateful for the noble gesture of your government coming to the aid of the earthquake victims."

JAN stated that the timely assistance from the United States, combined with that of the Chilean Government, provided a substantial contribution for the people.

Comments from the U. S. Mission

In general, the U. S. relief effort was successful. The U. S. military airlift, arriving soon after the earthquake, was a visible showing of concern by the United States for the plight of the Peruvian people. The small size commercial tents sent from the U. S. were particularly appreciated because of their suitability for family living. The larger U. S. Army tents were used for temporary schools, first aid stations, etc.

No preparedness facilities were available in Peru. Future action on designating JAN to serve on a continuing basis is pending. The presence of supplies on hand in Panama made possible a rapid U. S. response to the disaster. USAID/Peru specifically requested JAN to recover tents supplied by the U. S. Government and store them for use in any future emergency situation.

Initial newspaper accounts on the earthquake were exaggerated.

Recommendation by the U. S. Mission for Improvement in U. S. Disaster Operations

"It would, of course, help tremendously if the U. S. Army or government could stock sizeable quantities of large and small tents and blankets. It is also suggested that AID/W establish some sort of stand-by arrangement with U. S. airlines flying overseas that would permit free use of available space with adequate advanced knowledge of arrival dates and quantities of goods being shipped."

Assistance Provided by U. S. Voluntary Agencies and Other US Assistance

The U. S. Mission reported that all the voluntary agencies played active roles in the emergency relief operations. Two mobile food demonstration units of Great Plains Wheat were used by the voluntary agencies in making food distribution. Coordination among the voluntary agencies was very good throughout the emergency. They divided responsibility for various disaster areas in order to prevent duplication and to provide for more effective food distribution system. In addition to assistance listed

below, the Council of Foreign Voluntary Agencies in Peru is undertaking a project to assist self-help efforts to rebuild the towns of Caleta Vidal and Atalaya, which were almost totally destroyed.

Catholic Relief Services

Distributed 141,283 pounds of above P. L. 480 food.		
Purchased and distributed 145 tents, 1,000 blankets	\$ 16,345	
Provided medicine valued at	37,280	
Made local purchase of reconstruction material	<u>10,000</u>	\$ 63,625

Seventh-Day Adventist Welfare Service

Distributed 56,584 pounds of above P. L. 480 food.		
40 tents and 1,000 blankets, 1 Butler building and 31,250 pounds of clothing.	37,300	
Cash donation for local purchase rebuilding tools & materials	20,000	
Plasma, antibiotics and medical supplies	<u>11,000</u>	68,300

Church World Service

Distributed 26,824 pounds of above P. L. 480 food.		
500 blankets	500	
Cash donation for purchase of reconstruction materials	<u>3,000</u>	3,500

American National Red Cross

Cash donation	5,000	
1,772 pounds of clothing, est. value	<u>1,772</u>	6,772

American Institute for Free Labor Development in Peru

Assisted in obtaining interest free loan of \$1,000.		
Made grant to enable workers at a textile factory in Puente Piedra to repair and reconstruct their homes		3,000

<u>Texas Partners</u> - 200 blankets		600
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Braniff Airlines

Provided free airlift of 350 tents from USG and 50 tents paid for by CARITAS, est. 30,000 lbs. airlift valued at	18,600	
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Panagra

Provided free airlift 2,500 blankets donated by volags, 96 tents donated by CRS from NY and 40 tents donated by SDAWS from San Francisco, est. 23,600 lbs airlift valued at	<u>14,600</u>	<u>33,200</u>
		\$178,997

Assistance Provided by Other Nations

Government of Chile

1,500 blankets	4,500	
100 mattresses	750	
75 cases of food, 18 sacks dehydrated potatoes	*	
2,000 lbs dried milk	360	

Government of Chile (Cont'd)

160 lbs. absorbent cotton, 2,000 doses penicillin, 5,000 doses anti-typhoid vaccine, 180 roles adhesive tape	*	
Quantity of clothing	*	
Also, late in November, sent a 10-room prefabricated school to be erected by Chilean university students during summer vacations; and 25 pre-fabricated wooden houses to be used at Puente Piedra	*	\$5,610 *

Argentine Government - token contribution		
Government of Japan - cash donation to the Junta de Asistencia Social y Emergencia Regional		10,000
Government of Bolivia - token contribution		

Red Cross organizations of Chile, Bolivia, Israel and Spain donated plasma, medicines, blankets, tents and clothing to the Peruvian Red Cross, the Ministry of Health and a military hospital. *

Note: The U. S. Mission reported that the Chilean contribution was rapid (arriving the day after the earthquake), substantial, and well publicized.

* Not reported or incomplete

CEYLON

Characteristics of the Disaster

Event: Floods

Date-Time: September, October, 1966

Location: Southwest Section, particularly Ratnapura, Galle and Colombo and surrounding areas.

Damages: No. Killed No. Homeless

32 100,000

13,960 houses were damaged and 13,599 acres of paddy. Crop losses in rubber, mid and high country tea also occurred.

Description of the Disaster:

Protracted heavy rains following a prolonged dry spell caused severe flooding in Ceylon. The larger towns of Ratnapura, Galle and Colombo were especially hard hit. Large areas of agricultural land were under water for days. Many of the affected rural areas were inaccessible by car and flood waters in some areas reached roof-level.

Action Taken by the Local Government and Organizations

Several Government of Ceylon agencies were actively involved in relief operations including the Military Services, Health Department, Department of Social Services and Agrarian Services. The Government of Ceylon authorized 3,000,000 rupees (approximately \$620,000) for immediate flood relief. This sum was used for rescue, food and shelter. The GOC also planned emergency issuance of paddy rice seed to farmers whose crops were lost as well as housing rehabilitation grants. Estimated cost of relief operations and rehabilitation to the GOC was 12,000,000 rupees (about \$2.5 million). Fund drives to raise money and to obtain food and clothing were undertaken by many individuals, companies and private relief organizations in Ceylon.

Assistance Provided by U. S. Government

The U. S. Charge D'Affairs Garrett H. Soulen expressed the sympathy of the U. S. Government for the sufferings and losses caused by the floods and with the approval of AID/W presented 500,000 US-owned Ceylonese rupees to the GOC to be used for housing rehabilitation and toward purchasing paddy rice seed for resowing of fields in the flood-affected areas. These rupees came from previous P. L. 480 Title I sales program in Ceylon, with a dollar valuation of \$105,265. Also 2000 lbs. of P. L. 480 Title III nonfat dry milk valued at \$360 were provided through CARE.

The following statement was released to the press by the GOC Director of Social Services in response to the check for the 500,000 rupees:

"On behalf of the Honorable Minister of Social Services and the Government of Ceylon and also on behalf of the unfortunate people who were affected by the recent floods, I have great pleasure in gratefully accepting your generous contribution for the relief and rehabilitation of the flood victims. The American Government and people have always demonstrated their concern for the welfare of the people in Ceylon in various ways. In times of disaster your Government has always been the first in the field with substantial aid. In 1957 the American Government rushed aid in the form of food and medical supplies to the flood victims at Batticaloa and Anuradhapura by diverting one of your ships to Trincomalee from where supplies were dropped in the needy areas by means of helicopter. Subsequently, the U. S. Government gave us a sum of RS 706, 135 for the repair of flood damaged houses from the U. S. AID Agriculture Commodity Account under the P. L. 480 provision. Just after the cyclone in December 1964 we received aid to the value of RS 542,130 from the U. S. Government, not taking into account the assistance received from voluntary organizations of your country. On this occasion too your Government had been good enough to donate a sum of RS 500,000 for the benefit of the flood victims. We are grateful to you and your Government for this generous gift and the demonstration thereby of your Government's friendship and concern for the welfare of the people of Ceylon."

Assistance Provided by U. S. Voluntary Agencies

CARE provided above 2,000 pounds of P. L. 480 nonfat dry milk.

Assistance Provided by Other Governments

Ambassador of Yugoslavia - 3,500 rupees

\$735

CYPRUS

Characteristics of the Disaster

Event: Continuing Severe Hardship Resulting from 1963 Civil Strife

Date-Time: August, September 1966

Location: Kokkina area

Damage: Homeless
623

Description of the Disaster:

The continuing impasse in resolving the political situation in Cyprus again led to an emergency need for temporary shelter for some of the homeless Turkish Cypriots who fled their villages when fighting first erupted in December 1963. In 1964 the USG provided 200 tents for these victims as did the United Kingdom. While a few of the U. S. tents previously donated were in serviceable condition because of their nylon construction, most of the tents provided two years ago were reported torn, rotting and completely unserviceable for another winter, or even another rain.

Action Taken by Local Government

Tent material obtained through the Red Crescent was used for repair of existing tents, for ground cover and for other temporary shelters. Otherwise there was little that could be done since the Kokkina enclave does not offer an adequate supply of earth suitable for mud-brick construction and there was almost no roofing material available. UNFICYP (United Nations Forces in Cyprus) officers visited the Kokkina area and confirmed that the tents in use had deteriorated to such an extent that living conditions would be extremely difficult for those people in the coming autumn and winter months. The UN Special Representative, Headquarters, UNFICYP, forwarded to the USG a request from the Turkish Communal Chamber for assistance in obtaining tents.

Assistance Provided by the U. S. Government

At the request of the United Nations, the USG agreed to provide 85 Arctic Type Tents, wind and fire resistant, each having 200 square feet of space, suitable for family use. These tents were purchased from the Department of Defense. Arrangements were made for prompt delivery of the tents which arrived mid-September. Upon arrival, the U. S. Embassy turned the tents over to the Commander of United Nations Forces in Cyprus, who was responsible for delivering them to bona fide recipients and for supervising erection.

Frederick H. Sligh, AID Representative in Cyprus, sent a letter of appreciation to AID/W for its prompt response in providing these tents. He said: "The 85 tents are all in place and just in time, too. Heavy fall rains and winds hit the area shortly after our tents were erected. As far as I am concerned, this was a good job well done." Mr. Sligh's letter went on to say that word had

been received that the British High Commission would provide 50 additional tents and that according to UNFICYP sources, the worst needs of these poor people would then be taken care of.

Cost to AID from Contingency Fund for Tents from DOD

85 tents and poles	\$32,873
Transportation	<u>9,227</u>
	\$42,100

Assistance Provided by Other Nations

United Kingdom - 50 tents (estimated value)	\$10,000
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GREECE

Characteristics of the Disaster

Event: Earthquakes
Date-Time: September 1, 1966 and October 29-30, 1966
Location: Central Greece
Damage:

<u>Killed</u>	<u>Injured</u>	<u>Homeless</u>
1	123	15,000

Description of the Disaster;

These two earthquakes are being covered in one disaster report because they occurred in the same general area and because only limited information is available on each one.

The September 1 quake had its epicenter at Megalopos. There was considerable damage there and also in Plaka, Orestion, Trilofon, Yefirakia. Less damage occurred in the villages of Ipsous, Bardhakion and Leontarion. Some 30 villages were reported affected by the earthquake. More than 1000 homes were destroyed. It occurred in the afternoon when the villagers were working in the field making casualties lighter than they might have been.

The October 20 earthquake had a magnitude of 5.5 on the Richter scale. It struck Central Greece at 2:39 AM, was followed by new series of tremors the following morning and another shock again at noon. 10,000 persons were estimated to have been made homeless by this series of quakes.

Note: Central Greece also suffered a destructive earthquake on February 5 of this year. This disaster was reported on in the Fourth Disaster Report covering the period January 1 to June 30, 1966.

Action Taken by Local Government and Organizations

Government of Greece planes flew in food, blankets, medicines and other supplies. Greek Army and police rescue teams worked around the clock setting up tents and temporary shelters for the homeless. A Church World Service report indicated the Government of Greece moved in 500 tents and 12,000 blankets as well as food, following the September 1 earthquake.

Assistance Provided by U. S. Government

There was no request for outside U. S. assistance, but the following P. L. 480 Title III, Food for Peace, was distributed by CARE:

9,520 lbs. of nonfat dry milk, flour, cornmeal, vegetable oil	
estimated market value	\$1,000

Assistance Provided by U. S. Voluntary Agencies

CARE distributed 300 Food Crusade packages containing above P. L. 480 food.

Church World Service reported distribution of clothing and CROP beans but quantity and value were not given.

Assistance Provided by Other Nations

None reported.

INDIA

Characteristics of the Disaster:

Event: Floods
Date-Time: June, July, August, 1966
Location: Manipur State (Bombay) and Assam (Cachar)
Damage:

<u>Number Killed</u>	<u>Number Homeless</u>	<u>Number Affected</u>
30	200,000	900,000

Summer paddy crop in Cachar District seriously damaged.

Description of the Disaster:

Assam - The monsoon started late June and early July, when normally it does not occur until later in the summer, and it brought with it disastrous floods to Assam. Thousands were marooned without food. Large districts were isolated from one another. Five persons drowned after the Katakhal River burst its banks at 61 places. Landslides blocked the Shilchar-Shillong Road.

Manipur - Northeast India was also hit by its worst flood in 50 years and was entirely cut off to air and land transport. The turbulent river Iril breached its banks and submerged vast areas in and around the Town of Imphal sending flood waters swirling around the Manipur Maharaja's palace compound. Imphal's main shopping center was under three feet of water.

Note: - While the early monsoon brought some relief from the drought, especially in Orissa and Madhya Pradesh, it was patchy and inadequate and the drought situation continued in some parts of the country. Therefore, there are continuing severe food shortages in India.

Assistance Provided by the Local Government:

The Government of India and the State of Assam were actively engaged in flood relief including IAC airlifts of food, rehabilitation and reconstruction. Main difficulty was one of access rather than supply. The Indian Air Force had to make air drops of rice supplies on high ground near Silchar and other key centers so it could be moved by boat to stranded villagers. The Indian Red Cross provided milk powder, blankets, quilts, clothing and vitamins valued at \$104,600.

Assistance Provided by U. S. Government:

No outside U. S. Assistance was requested. However, through Catholic Relief Services, the following P. L. 480 Food for Peace was provided.

56,000 pounds bulgur, estimated market value	\$3,640.00
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Assistance Provided by U. S. Voluntary Agencies

CRS - distribution above P. L. 480 bulgur

CWS (CORAGS)

Cash donation

\$ 5,000

Multi-vitamin and water purification tablets

1000bags bulgur wheat, 400 cases milk, 200 bags grain

Assistance Provided by Other Nations:

None reported

INDIA

Characteristics of the Disaster

Event: Cyclone
Date-Time: November 3, 1966
Location: Madras State
Damage: Killed Homeless
 18 150,000 *

A Church World Service report indicates 50,000 homes destroyed and the homeless figure has been obtained by averaging 5 to a family. CWS also reported that the Indian Government estimated damage at 20 million rupees (approximately \$4.2 million).

Description of the Disaster:

A cyclonic storm lashed Southeast India devastating Chingleput District, Madras City and parts of South Arcot and North Arcot Districts. The Church World Service report indicated that in several of the villages all members of their congregations lost their homes and that scores of churches and schools were destroyed. Heavy losses were also sustained by coastal fishermen, who not only lost their dwellings but also their means of livelihood (boats and nets).

Four cargo vessels, approximately 10,000 ton size, were driven ashore. It was reported they received less than one hour's notice from meteorological stations that a storm with onshore winds up to 75 mph was approaching Madras. The S. S. Progress of Panamanian registry was driven against the outer rock jetty of Madras Harbor and broke up. 18 members of the 40-member crew were missing. The S. S. Marihora of Liberian registry was driven onto the beach at a point two miles south of the harbor. All crew members were rescued. The ship developed cracks. The S. S. Stamatis of Greek registry was driven onto the beach three miles south of Madras port. The S. S. State of Rajasthan, a new, fast motor vessel of Indian registry, was blown aground about 15 miles south of Madras. The Progress, Marihora and Stamatis were World War II vintage steamships which were standing off Madras Port in ballast waiting instructions to come inside the port to receive wheat being off-loaded from a tanker. They had short warning of the impending storm, were riding high in ballast and had insufficient power to put out to sea against the storm.

News of this disaster did not appear in the news media of Western Europe or the United States, but it was a serious blow to the people of the region who already live under difficult circumstances.

Action Taken by Local Government and Organizations

Limited information available. The Government of Madras mobilized relief operations through use of approximately \$21,000 in Indian Government funds and \$63,000 from the State Cyclone Fund. It was easier to organize and provide relief for city dwellers who suffered from the storm than for the coastal fishermen.

Assistance Provided by the U. S. Government

The U. S. Ambassador made a donation of 37,500 rupees (\$5,000) from the AID contingency fund, under the Disaster Relief Authority, for relief of the fishermen affected by the cyclone.

Assistance Provided by U. S. Voluntary Agencies

Church World Service - Cash Donation \$5,000

The U. S. Mission reported that CARE and Catholic Relief Services made distribution of food, clothing and vitamins but quantities and values were not reported.

Assistance Provided by Other Nations

World Council of Churches - Issued appeal to its members for \$50,000

With this money they propose to rebuild 10,000 village houses at 50 rupees per house. This would supplement the small grant of 30 rupees provided by the government. Also, churches and schools would be rebuilt or repaired.

NEPAL

Characteristics of the Disaster

Event: Earthquake
Date-Time: June 27, 1966, 4:35 PM
Location: Western Mountains of Nepal

<u>Damage:</u>	<u>No. Killed</u>	<u>No. Injured</u>	<u>No. Homeless</u>
	80 *	100's *	20,000 *

5,000 houses were destroyed.

Description of the Disaster

Earthquake shocks in Northwest Nepal began on Monday, June 27, along a fault line in the Himalayan Range near Tibet-Nepal border. There were 18 distinct shock waves felt in Baitadi over a three day period. The greatest damage was caused by the third quake at 4:35 PM Monday, June 27, which had a magnitude of from 6-1/2 to 6-3/4 on the Richter scale. A survey conducted by Acting Director of USAID and officials of Nepal in seven districts indicated extensive damage in Baitadi, Darchula and Chainpur.

* Damages above are only estimates because of inaccessibility of the area. The GON Minister of Agriculture estimated the loss of life at 80 persons. Apparently, many deaths occurred among herdsmen and farmers caught by falling rock on open hillsides far from towns. 13 deaths were recorded at Chainpur. The remoteness of the high mountain valley was a staggering obstacle to relief operations. From the relief center established in the Indian town of Pithoragarh, it was a slow, arduous, ten day trek on foot.

The general food situation in the earthquake area was poor. Drought followed by very heavy rains had reduced the paddy crop by 25% and this was the third successive poor crop for the area. Also, health problems relating to cholera and smallpox existed in the area prior to the earthquake.

Action Taken by Local Government and Organizations

The Government of Nepal requested and received U. S. assistance in providing air transport for a damage survey party and for medical teams. The GON officials in the survey party had with them 100,000 rupees (approximately \$13,210) for the earthquake victims. Four medical parties were dispatched to the area on July 4. The GON organized a coordination center for relief activities in Pithoragarh, an Indian frontier town. This was chosen as the base for relief operations because it was the only possible access to the disaster area.

The GON purchased 1,000 tons of U. S. P. L. 480 wheat (estimated value \$66,880), from the Government of India and requested the Government of India to undertake airdrops of a small part of the wheat into the remote disaster areas. Most of it was delivered from Pithoragarh by land route to Earchula, Baitadi, Banjura, Doti and Accham by conventional means. On July 19, the Government of India advised that the Indian Air Force had completed the requested air drops of wheat from the 1,000 tons purchased from the GOI.

On receipt of the news of the disaster, the Nepal Red Cross, in close cooperation with the Government of Nepal, immediately sent medical relief teams together with medicaments, milk and clothing and appealed to the League of Red Cross Societies for further assistance. The Indian Red Cross agreed to ensure the onforwarding of relief supplies from abroad from New Delhi to the base at Pithoragarh.

The disaster victims made temporary shelters from the ruins of their homes.

Assistance Provided by the U. S. Government

The only assistance requested by the GON was air transport of survey and medical teams to the disaster area, which was provided.

Assistance Provided by U. S. Voluntary Agencies

American National Red Cross - cash donation	\$5,000
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Assistance Provided by Other Nations

Canadian Government - cash donation	\$5,000
Indian Government - Provided wheat airdrops for inaccessible areas.	

Red Cross Societies:

Australia - cash grant, medicaments, medical supplies & JRC clothing	29,500
Burma - cash grant	310
Canada - cash grant	5,000
China - cash grant	6,510
Finland - cash grant	2,000
France - vitamins, medicaments	440
Germany (Fed. Rep.) - cash grant	2,280
Great Britain - cash grant	2,800
India - medicaments	1,880
Japan - blankets	1,045
Lebanon - cash grant	45
Monaco - cash grant	410
Netherlands - blankets, tents	910
New Zealand - cash grant	1,370
Norway - cash grant	2,795
Philippines - cash grant	250
South Africa - cash grant	275
Sweden - cash grant and blankets	2,900
Switzerland - cash grant	695
Thailand - cash grant	385
Upper Volta - cash grant	110
USSR - medicaments, bandages, foodstuffs, blankets	23,620
UNESCO Staff Association - cash grant	345
	\$90,875

EAST PAKISTAN

Characteristics of the Disaster:

Event: Floods

Date-Time: June, July, August, September 1966

Location: Sylhet, Rangpur, Bogra, Pabna, Mymensingh, Dacca, Faridpur, Comilla
Cox's Bazar, Dinajpur, Noakhali, and Chittagong

Damage:

<u>No. Killed</u>	<u>Estimated No. Displaced Persons</u>
-------------------	--

39

500,000

200,000 acres of rice were badly damaged.

Description of the Disaster:

The annual flooding began earlier in 1966 and was more severe than usual. The Sylhet District was hit first in June by flood waters from Assam in India, which were augmented by heavy local rains. The high water then hit Rangpur, Bogra, Pabna and other districts. The waters rose for a period, then receded somewhat, and rose again in August and September. They returned to normal about the latter part of September. An estimated 9,500,000 people were affected by the floods. A quarter of a million acres of farmland were reported inundated around Dacca alone in the September flooding, while 60 percent of the crops were damaged at Comilla, south-east of the provincial capital. Water became waist deep in Old Dacca and the stadium across from the office of A.I.D. and the Consul General looked like a swimming pool. The industrial city of Narayanganj was three quarters under water and was completely paralyzed for a time. Many areas were isolated and communications were cut in some districts.

Action Taken by Local Government and Organizations

On June 17, President Ayub authorized \$210,000 for relief in the Sylhet District. Another \$144,000 was provided in other flooded areas. From June through September, the GOEP released 457,993 tons of foodgrains from Government warehouses and arranged to replenish the reserve stocks. The GOEP scheduled import of 211,696 tons of rice and 339,764 tons of wheat from July to December 1966. In addition, the Government took all possible steps to ensure timely retransplanting of the aman seedlings in areas where the seedlings were damaged by the floods.

The Pakistan Red Cross sent clothing, medicine, food to Sylhet and other districts. The President of the Red Cross visited Sylhet, and 11 Red Cross centers and 24 sub-centers for relief were opened in that district.

Assistance Provided by U. S. Government

Utilization was made of 7,000 tons of wheat which had been provided previously for the May 1965 cyclone. Also used as a carryover were 15,795 pounds of nonfat dry

milk. Value of this food is not recorded in this report as a U. S. contribution inasmuch as it was already counted under the May 1965 cyclone report.

P. L. 480, Title III, Food for Peace from Catholic Relief Services

102 pounds of bulgur wheat, estimated market value \$ 6,630

Assistance Provided by U. S. Voluntary Agencies

CRS distributed above bulgur wheat.

Assistance Provided by Other Nations

Denmark Red Cross - Medicaments	\$ 5,700
Sweden Red Cross - Medicaments	9,700
	<u>15,400</u>

EAST PAKISTAN

Characteristics of the Disaster:

Event: Cyclone, accompanied by Tidal Bore

Date-Time: October 1, 1966

Location: Chittagong and off-shore islands of Sandwip (worst affected), Kutubdia, Maheshkhali, Hatiya, Charvother, and small villages in coastal area of Chittagong and Noakhali District and also limited damage in Barisal District.

<u>Damages:</u>	<u>Number Killed</u>	<u>Number Homeless</u>	<u>Number Badly Affected</u>
	850	300,000	1,500,000

60,000 houses were completely destroyed and 240,000 partially so; 6,000 fishing boats lost or damaged; 174,000 acres rice totally destroyed and 297,000 damaged; 25,000 tons of government and private food grain stocks destroyed; 65,000 livestock lost; 238 miles embankments damaged as well as 57 sluices. 150 deep tubewells and 1500 shallow tubewells in need of replacement.

Description of the Disaster:

The cyclone hit the coast of East Pakistan with winds sweeping up the Bay of Bengal at 80 to 100 miles an hour causing a wave 15 feet high, called a tidal bore. 3,500,000 persons were affected in some way by the disaster in an area with a total population of 8,000,000. Chittagong lay right in the path of the cyclone and took an eight-hour battering, destroying power lines and leaving the city half submerged and with immense damage. Devastation was even worse in the low-lying islands west of Chittagong, whose inhabitants, fishermen and their families, take the brunt of the periodic cyclones which sweep the Bay of Bengal. There was a critical shortage of water. In the coastal area and offshore islands, 85 percent of the houses were destroyed, 60 percent of the cattle killed. On Sandwip Island thousands of people were without shelter, the market was destroyed and goods were strewn over the waterlogged streets. Communications were disrupted throughout the disaster area.

A report from the League of Red Cross Societies said that while the official death toll was around 850 the total number of deaths probably approached 2,000. The fact that the tidal bore hit in broad daylight and that reasonably adequate warnings were given in advance, LICROSS said, explained why the number of casualties remained low in relation to the devastating impact of the tidal action.

Action Taken by Local Government and Organizations

Troops and police began rescue operations immediately. President Mohammed Ayub Khan ordered Central Government aid for the victims. The East Pakistan Governor Ali Asghar and other officials made a four-hour aerial survey of the ravaged areas by helicopter. Helicopters ferried medical personnel to the islands with vaccines to prevent outbreaks of disease, particularly cholera.

Two ships laden with medical supplies and food sailed from Dacca for the islands. Building materials were distributed to start the massive task of rebuilding the houses. Transportation as always was a problem. The Pakistan Navy made its ships available to move supplies to the off-shore islands and regular vessels between islands and shore delivered supplies. One problem encountered was the difficulty of the Navy boats and large private boats to get close enough to the islands to unload their cargo. This caused delays in making supplies available to the needy people. The GOEP made available free rail transportation for Red Cross to haul relief supplies. While the GOEP made foodgrains available to affected areas, these releases were relatively small because of the reduced inventories in the Government warehouses of food grains as a result of previous withdrawals for victims of floods from June through September.

The East Pakistan Government developed a two-phase rehabilitation program calling for: (1) Repair of 238 miles of embankments damaged in the Chittagong Noakhali Districts. (2) Construction of deep tubewells to restore sources of pure water in these districts. At the request of GOEP the USG agreed to provide 1.3 million dollars worth of U. S. owned rupees to pay one-half the cost of the embankment program with the GOEP providing the other half, as well as \$174,504 worth of rupees to construct deep tubewells. The GOEP also requested the US to provide foodgrains.

The East Pakistan Red Cross sent a 21-man medical team to Sandwip Island. The EP Red Cross provided 60,200 pieces of clothing, 13,000 tins of baby food, thrashed rice and medical supplies which included TABC typhoid vaccine, quinine sulphur and penicillin. They also provided water purification tablets, DDT, lamps, stoves, water bottles and misc. supplies. The Red Cross confirmed a shortage of food wherever their teams were operating and were grateful for the P. L. 480, Title III, commodities diverted by Catholic Relief Services and Church World Service for distribution by them. The Red Cross had 50 volunteers who worked in the field. Government officials assisted the program with medical teams, organized contractor groups to repair tube wells. Volunteer response was good in Chittagong area but was generally non-existent in other affected areas. The Red Cross was the only local relief organization operating. A few local people and/or students raised money by street collections and distributed some thrashed rice purchased locally.

U. S. Mission Evaluation on Effectiveness of Assistance Provided by GOEP

From various accounts, appearing mostly in the newspaper, it appeared that relief aid up to two weeks following the cyclone, as handled through Government facilities, may have been inadequate. The Government does not have any standard contingency disaster plan which would allow them to operate efficiently and effectively following a disaster. The communication system being poor makes it difficult to determine where, when and how much aid is needed immediately. In the Chittagong area the Government set up a disaster control center to monitor request for aid and dispatch supply boats with available foodstuffs to affected areas. In general with the facilities and resources available to the GOEP, they undoubtedly did the best job they could under the circumstances. However, an organized Disaster Plan together with an effective communication system, efficient, effective marshalling and utilization of available

transportation systems whether it be boats, car or rail would materially improve the over-all ability of the Government to respond to the needs of disaster victims. The mission commented that an effectively organized, equipped staff structure would be expensive to build and maintain and that because of budgetary and qualified personnel shortages, the GOEP would probably continue to deal with recurring disasters largely on an ad hoc basis.

With regard to the warning system the U. S. Mission stated: "GOEP's warning system effectively warned all residents in the path of the storm. However, even with warnings it would be almost impossible for residents of off-shore islands to reach a safe haven location if adequate permanent storm shelters were not available in their immediate vicinity. In all fairness it appeared from an on-the-spot check of the Chittagong area that the Government was utilizing available facilities to the maximum."

This represents an improvement in the use of the warning system over the past disasters. USAID is concerned with further improving the disaster warning system and has requested AID/Washington assistance in preparing a paper on this matter to be presented to President Ayub, provided definite recommendations can be developed.

Assistance Provided by the U. S. Government

USAID and State Department personnel were in the disaster area immediately upon restoration of transportation facilities and worked with Disaster Control officials of GOEP. At the request of the GOEP, the U. S. provided the following food aid and fund to help in the GOEP reconstruction program.

7,040,000 of US owned rupees under Section 104(q) of P. L. 480 were provided to be used as follows:

6,200,000 rupees to be used in the repair of 238 miles of embankment; 840,000 rupees to be used in the construction of deep tubewells. Equivalent dollar value of rupees.....\$1,463,010

P. L. 480, Title II Food for Peace

20,000 metric tons of corn, estimated market value	\$1,300,000	
Plus ocean freight charges		750,000
		<u>\$2,050,000</u>

184,000 pounds nonfat dry milk (this was a carryover supply previously donated for the 1965 cyclone; therefore value not used in this report since it was included on the 1965 cyclone report.)

P. L. 480, Title III Food for Peace

CRS provided 20,000 lbs. of nonfat dry milk; CWS 19,200 lbs. wheat; 20,000 lbs. bulgur; 23,000 lbs. vegetable oil; 24,000 lbs. of flour - estimated market value	<u>11,500</u>	\$2,061,500
		<u>\$3,524,510</u>

The GOEP thanked the USG for foodgrains "so generously and promptly made available."

The U. S. Mission stated: "Unquestionably, U. S. responsiveness to meeting periodic needs from disastrous floods, cyclones and tidal bores in East Pakistan has resulted in widespread appreciation among government officials and private parties. This was notably true following the May 1965 cyclone when the appreciation was prominently recorded in the annual budget policy speech of the Minister of Finance."

Note: The GOEP reported that U. S. AID supported projects (Cyclone Reconstruction Shelter Program and Coastal Embankment Program) had materially reduced loss of life and damage that otherwise would have resulted from the high winds and tidal bore. In some areas it was reported that one-half of the number of houses were damaged inside the embankment vs. that reported outside the embankment

Assistance Provided by U. S. Voluntary Agencies

Catholic Relief Services and Church World Service diverted the above P. L. 480, Title III, food from their ongoing programs.

<u>Church World Service</u> - 40 bales of clothing, estimated value	\$4,000	
<u>American National Red Cross</u> - cash donation	10,000	
<u>CARE</u> - distributed 1500 pot-utensil units	<u>2,500</u>	<u>\$16,500</u>
Total USG and Voluntary Agency Assistance		\$3,541,010

Assistance Provided by Other Nations

Red China - cash donation		400
12 National Red Cross Societies contributed cash, clothing and medicaments amounting to 500,000 Swiss Francs		<u>118,600</u>
		<u>\$119,000</u>

TURKEY

Characteristics of the Disaster

<u>Event:</u>	Earthquake		
<u>Date-Time:</u>	Friday, August 19, 1966, at 2:45 PM, followed by other strong earth tremors August 20 and 21 and lesser shocks which continued for several days.		
<u>Location:</u>	Eastern Turkey		
<u>Damages:</u>	<u>Number Killed</u>	<u>Number Injured</u>	<u>Number Homeless</u>
	2,529	1,500	108,000

19,013 houses were heavily damaged or demolished in a 40-square mile area with an estimated population of 156,000 people. 50 school buildings, including the Regional Boarding School at Varto recently completed at a cost of \$1.6 million, were destroyed, as well as the agriculture building and bank at Varto and some health centers. The town of Varto was almost totally destroyed with 500 people being killed in the town and 1,766 in 68 villages of the surrounding area. Most of the deaths and injuries occurred in this area. At Hinis and villages near Hinis, all traditional dirt roof homes and animal shelters were leveled; adobe-type buildings were partially destroyed. The hospital at Hinis was damaged. Altogether a total of 374 villages were severely damaged in the disaster area. Most of the well-built buildings with A-frame roofs remained standing, but these could be counted on one hand in each village.

Description of the Disaster:

Eastern Turkey is located on one of the earth's two great earthquake belts--the Caribbean, Mediterranean, Himalayan belt along which catastrophic earthquakes have occurred for centuries. The most recent major earthquakes along that belt occurred in Italy, Morocco, Yugoslavia, Iran and the USSR. The other belt is the Circumpacific along which the Tokyo, Alaska, California (San Andreas fault) and Chilean earthquakes have taken place. The August 19 earthquake in Turkey occurred near the eastern end of the North Anatolian fault, a 700-mile long series of depressions and valleys. There have been 60 major earthquakes along the fault in the last 40 years, three recent severe earthquakes having taken place in this same area of Eastern Turkey in March, April and July of 1966.

Robert E. Wallace, USGS geologist on the San Andreas Fault, went to Turkey and reported that the main shock was assigned a magnitude rating of between 6.8 and 7.25 on the Richter scale. The epicenter was a few kilometers south of Varto. The intensity in this area reached IX on the Mercalli intensity scale of XII. It affected the Provinces of Mus, Bingol and Erzurum, particularly the Hinis, Varto and Karliova Districts. The zone of surface fracturing north of Varto generally

parallels a previously recognized fault zone that in part is a range-front fault along the southwest flank of the Bingol mountains. Many landslides developed. One near Tepekoy measured approximately 100 by 250 meters and it covered the road for about 100 meters. Water became clouded in most streams and disappeared from the main stream channel at Sazlica for a day. Aftershocks occurred as much as two weeks after the main shock. One was particularly strong on August 20. These caused a few more deaths and the collapse of buildings previously damaged.

Three geologic factors that influenced damage were noted and reported by Dr. Wallace: (1) surface tectonic fracturing; (2) ground failure such as landsliding; and (3) differences in intensities of frequencies of shaking on different geologic units. The traditional house in the earthquake area is built of adobe brick, field stone (unshaped basalt blocks) and stream-rounded boulders. The stone or rocks are chinked with mud and sod. Over these walls are laid assorted poles and sticks. On top, earth and rocks are piled to a thickness of three feet or more. The earthquake caused the walls to disintegrate and tons of earth and rock fell into the houses.

In answer to many questions on the earthquake, Dr. Wallace stated that the North Antolia fault has been active for years, has generated countless earthquakes and there is no reason to believe that the earthquakes will stop. No one can predict when or where the next one will occur. Dr. Wallace emphasized that people should not leave this productive agricultural area as it can be inhabited in relative safety with proper building design and construction, even though some individual villages or parts thereof might have to be relocated after study by geologists and engineers.

Women and children suffered worst in the earthquake. It was a hot, sunny day and they were most apt to be indoors when the midafternoon earthquake struck. At the local movie house in Varto, it was ladies day (men and women attend separately), and all 30 women and girls there were killed when the walls pitched inwards and the heavy roof of dried mud fell.

The reported toughness of the people in this area was born out by many stories of victims trapped in the ruins surviving for days. There was one report of a child in Varto who had been hauled out three days after the earthquake, brushed himself off and walked away in no need of medical attention.

The shock to the survivors was overwhelming. They had lost from one to several members of their families. Some families were completely wiped out. The old dirt roofs on their homes had seemed like part of the land itself and therefore indestructable. After the earthquake, they were fearful of rebuilding the same kind of "death traps". There was a feeling of hopelessness. "What is to become of us when winter starts?" was heard repeatedly among the villagers. The complete destruction left them with no place to start, no initiative. Some small villages were abandoned entirely with families living in makeshift shelters and summer tents in the valley or near the fields of grain being harvested. The wish to get away was a steady refrain immediately after the quake but this feeling changed. In ancient days, all of these people might have packed their belongings, gathered their flocks and moved. But today life is too complicated, with land crowded and regulations to be concerned about. A few people with relatives elsewhere left but most of the people had all of their relatives in or around one village. All they had and knew was in that village and most of them stayed.

Action Taken by Government of Turkey and Local Organizations

The Turkish Government, helped by the United States and 59 other nations, mounted a massive emergency aid and rescue mission. The Turkish Prime Minister Suleiman Demirel and four cabinet ministers flew to the stricken area. Music was banned from the Turkish radio and newspapers appeared with black borders as the nation mourned its dead. Turks in Istanbul, Ankara, Izmir and other cities far from the area were urged to give blood in a nationwide donation program. Fund raising campaigns began. Rescue workers pushed on past the point of exhaustion to search for survivors who were buried in the rubble.

Immediately following the earthquake, an Inter-Ministerial Disaster Committee was established under the chairmanship of Fethi Tansuk, Undersecretary of the Ministry of Interior, including the Undersecretaries of the Office of the Prime Minister, Ministries of Reconstruction and Resettlement, and Health. Subsequently, the responsibility for emergency shelter construction was transferred to the Minister of Reconstruction and Resettlement. He established a "Directorate of the Earthquake Area" and empowered the director, Turan Alpdemir, to act in his name. The "Directorate" was given broad powers to bring together necessary financial, material and manpower resources to carry out the emergency shelter program, supported by five subcommittees in the disaster area. It was interesting to note that this "service" ministry, which normally had no power with its counterpart government agencies, was given, and used, direct authority to pull together the ingredients of a working team. It could order such key Ministries as Interior, Health, Education, Agriculture, Public Works, Transportation and Defense to perform a service. In the five district disaster headquarters, a representative from the "Directorate" headed all government disaster assistance programs except that which was handled by the Turkish Red Crescent.

One problem arose which prevailed throughout the operation. The extraordinary powers conferred on the "Directorate" naturally tended to confuse lines of communication and administrative authority normally vested in the Ministry of the Interior. Requests for housing, food, clothing, etc., were often received in the first instance by the Governors and "Kaymakams" (mayors), who were forced to turn to the "Directorate", the Turkish Red Crescent, and in some instances to the Army for assistance. These problems of coordination were largely solved on the basis of informal cooperation among the administrative representatives of the Ministry of Interior and the heads of the five subcommittees under the "Directorate".

Considering a 2-3 week delay in formalizing the establishment of the "Directorate", difficult conditions in the disaster area, length of the supply line and the quantity of men and materials needed, the operation was a notable achievement. Coordination among the government agencies and contractors was, by and large, good. This was due primarily to the authority given to the "Directorate" in Ankara and in the disaster area. The total accomplishment speaks for itself. The Turkish Government was able to construct over 10,000 single-family wooden dwelling units and to erect 1,400 pre-fabricated units. Materials were brought in from all parts of Turkey by truck and by mid-October huge quantities of lumber, roofing, etc., were stored at staging points in the area. This undertaking might not have been possible except for the extraordinarily favorable weather conditions which prevailed in the area virtually up to the first of

December. Local inhabitants described the weather as the "best in thirty years".

The Turkish Army took a major part in protection and distribution of aid in the earthquake area following complaints of disorganization and favoritism, thereby overcoming the problems encountered by local civilians.

The Turkish Red Crescent worked with the Government of Turkey and the Turkish Army throughout the emergency to obtain and provide tents, blankets, food and medical supplies for the victims.

Following is a breakdown in dollars of within country operations to assist the disaster victims:

Transferred to the Earthquake Relief Committee by the GOT from the Budget of the Ministry of Reconstruction and Resettlement.	\$ 7,333,333
Donations by private citizens and private organizations through the Turkish Red Crescent.	<u>3,888,888</u>
	<u>\$11,222,221</u>

Of this \$11.2 million, \$3.7 million was distributed in cash to the earthquake victims; \$2.6 million was used for construction of pre-fabricated houses, including foundations; and \$4.2 million for construction of A-frame shelters; leaving an unallocated balance as of December 1, 1966 of \$777,778.

Assistance Provided by the U. S. Government

President Johnson sent the following message to President Sunay of Turkey on Monday, August 22:

"The people of the U. S. have received with shock and sorrow the news of the devastating earthquake which has stricken Eastern Turkey. I express my deepest sympathy for the disastrous loss of lives and homes suffered by the Turkish people and I assure you that the U. S. will do everything it can to help its great ally Turkey in its relief efforts."

U. S. Embassy, TUSLOG, USAF Europe, Peace Corps

Immediately upon receipt of the news of the earthquake, TUSLOG (U. S. Logistics Support) Headquarters in Turkey ordered standby duty of all USAF medical personnel. When the GOT requested medical assistance through the American Embassy around midnight of August 19, they were ready for action and a 36-bed expandable field hospital with a medical task force of 130 USAF personnel, necessary auxiliary equipment, food, blankets and supplies arrived in Varto the morning of August 20. It provided treatment for approximately 1300 injured. Numerous visitors from all over the world used the hospital as their headquarters. Although emergency medical needs had been met

by August 26, the hospital remained until August 31 at the request of the Government of Turkey because it felt the presence of the American hospital was an important psychological factor during the initial stages of the disaster relief operations. Various supplies, such as blankets, food, medical supplies, were left at Varto for use by local medical and relief personnel.

Three U. S. Peace Corps Volunteers stationed in the area provided invaluable help as interpreters. The U. S. Mission felt that the PCV should be given special recognition. At one point there were six volunteers working on an A-frame construction project near Hinis. The GOT officials were particularly pleased at the efforts of these young people as they showed by design and example their initiative and ingenuity in building homes for the disaster victims.

Many donors, including other countries as well as U. S. voluntary agencies, had no means to transport their supplies to Turkey and appealed to the U. S. Government and the U. S. Air Force. Robert Pugh of the U. S. Embassy was appointed to coordinate these numerous requests in order to make maximum use of USAF planes in the area. Within Turkey alone, TUSLOG flew 42 sorties, carrying 279 passengers and 136,000 pounds of commodities. Cargo flights conducted by the USAF from abroad are summarized below. It was not possible, however, to meet all the requests for military airlift for supplies provided by the USG and the voluntary agencies, and arrangements were made with Pan American, TWA, Seaboard and Flying Tigers Airlines. Pan American and TWA provided some of the airlift on a free space available basis.

Ambassador Parker T. Hart designated Mission Director James P. Grant to coordinate the U. S. disaster relief action. Mr. Grant was assisted by Rodney B. Wagner, who went immediately to the disaster area, and by Mr. Ragnar Arnesen, who served as Disaster Relief Officer. Mr. Jerry Hopper was designated to work in the disaster area, particularly on the installation of the arctic tents. Close cooperation was maintained with the U. S. military units and voluntary agencies so that the over-all U. S. relief efforts were coordinated in the field.

AID/Washington

Stephen R. Tripp, AID Disaster Relief Coordinator, was called to Turkey to provide assistance in determining needs and assist with USG disaster relief operations. Mr. Tripp was in Turkey from August 26 to September 6 and in the disaster area of Eastern Turkey from September 1 to September 5.

AID/W arranged for procurement of arctic tents and tarpaulins and airlift of disaster supplies. See separate tent section below.

U. S. Geological Survey

The USGS provided the services of Dr. Robert Wallace, Research Geologist, Pacific Coast Branch, who personally surveyed the area. He established his headquarters at the camp set up by a group of Turkish geologists from Minerals Research & Exploration Institution at Hinis. He overflew the area in a light plane and made several reconnaissance trips. He took numerous photographs of the area. His final oral report to the GOT stressed the need for more careful engineering study of construction in the area and the need for geological knowledge of the potential relocation of certain villages and towns. He pointed out that geographic features, such as hard rock as distinguished from alluvium, could make a great difference in the resistance of structures, even within a very limited area. Just before his departure, Dr. Wallace presented a lecture

on earthquake phenomena at the Turkish American Association in Ankara. Dr. Wallace's presence was invaluable, particularly in that he was able to point out the need for a more complete understanding of the North Anatolian fault, which has been studied by a limited number of geologists in Turkey.

U. S. Public Health Service

Conditions appeared favorable for epidemics of cholera and typhoid. Dr. Eugene Gangarosa and Dr. E. Armstrong of the Communicable Disease Center, Atlanta, Georgia, went to Turkey and the disaster area. They made on the spot epidemiology surveys. Their recommendations on immunization against typhoid and cholera were accepted by the GOT. There were no epidemics in the area.

U. S. Arctic Tents

The first request for outside assistance from the Government of Turkey was for tents that could be used in severe cold. The U. S. Mission recommended that as many as possible be obtained. Upon investigation by MR/DRC and the Defense Supply Agency, it was proposed that the U. S. Army arctic type 10-man tent, which had been tested in Alaska, could meet the needs. Mr. Tripp arranged to have one arctic tent airlifted to Ankara so that it could be shown to GOT officials for their decision. The tent was erected on the American Embassy grounds. It was inspected by the Ministers of Interior and of Reconstruction and Resettlement, as well as the Turkish general staff. All parties concluded that it was a totally adequate shelter for the area and could meet the grave timing situation (the first week in September).

Also, Mr. Tripp and Major Jerry Hensley, U. S. Army, who had completed the Alaska training, went to the disaster area to describe the arctic tent to the people. Based on field review and strong endorsement by the mayor of Varto, a reporter from Mus who knew the people in the area, and some villagers, the tents were recommended. At that time the GOT plan for the "A-Frame" temporary shelter was vague. Snows in the earthquake area normally begin the second half of October and in the course of the winter reach depths of 6 to 8 feet. The GOT felt they had no more than 3-4 weeks to organize emergency shelter in the area and requested orally whether the USG could provide 3,000 arctic tents. Initially, 1,400 were authorized by AID/Washington and subsequently the amount was increased to 2,000. The tents were airlifted from the U. S. in several shipments via Seaboard World Airlines, Sudflug and Flying Tigers, with the last shipment arriving in Ankara on September 18.

The objective set by USAID was to have all the tents in the earthquake area by the end of September and erected by October 10. This required a massive coordinated effort, particularly since tent poles were not available in the U. S. and stoves had to also be acquired locally and shipped to the area. Through arrangements with the Ministry of Reconstruction and Resettlement, the tents were transported by rail and trucks to the earthquake area, assembled at Mus, marked with the AID emblem and dispatched to staging centers. 49 of the first shipment of 80 were set up in Varto. The target date was met and all tents were in the area by September 23, together with adequate supplies of locally acquired tent poles and stoves designed to burn the local dung fuel. The USAID Project Coordinator (Jerry R. Hopper) visited all parts

of the earthquake area, making arrangements with Governors and District Heads for careful issuance and erection of the tents.

In order to obtain full benefit from the tent, the U. S. Mission and GOT developed a plan for erection of them by trained personnel of the Turkish Army. Also the Army trained the head of the family responsible for tent use. The plan provided that places where the tents were to be used would be patrolled to make sure no one suffered or lost his life during the severe winter storms. It was stressed that a stove which would burn "tesek", the local dung fuel, should be provided for each tent, and that the traditional method of heating from an open fire dug into the ground and an adobe oven would not be used inside the tent. It was also arranged that warming shelters be established by the GOT so that during Army patrols, families discovered to be in trouble could be brought there for comfort, protection and emergency first aid.

Meanwhile, by late September the Turkish Government had completed its design for a simple wooden A-frame dwelling, roofed with corrugated iron. Because the weather continued dry and warm, the GOT was able to deliver huge supplies of lumber and roofing materials to the disaster area by early October and the five local task forces were hard at work constructing A-frames. Some attempts to distribute tents at the time were unsuccessful because villagers felt that acceptance of a tent would prejudice their right to receive a wooden frame dwelling unit. Moreover, the villagers were not convinced of the ability of the tents to withstand severe weather conditions. These two sets of circumstances meant that distribution of the tents went much more slowly than expected.

Having the 2,000 arctic tents in the area still proved to be a valuable and useful asset. The Turkish Army was in charge of security for a large volume of supplies and more than a thousand construction workers. Prompt approval was given for 4,000 Turkish Army personnel and construction workers to use the arctic tents on a temporary basis. These arctic tents were placed in direct support of the reconstruction efforts. Many of the tents were used by volunteer workers, government employees and members of the district task forces. By the first of December, some 520 tents had been distributed to the disaster victims. At that point in time, the GOT had completed the construction of over 10,000 A-frame units and had 1,400 pre-fabricated dwellings, produced in Turkey or donated from abroad, virtually completed. Throughout the period of emergency housing construction, the members of the "Directorate" insisted that the arctic tents were the critical reserve which would permit them to cope with a heavy snowfall, which would have mired roads and made delivery of materials as well as construction of the dwelling units impossible.

When it became clear at the end of November that the government target had been reached, owing to a massive and splendidly coordinated effort under extraordinarily favorable weather conditions, the GOT requested that the balance of the tents be turned over to the Disaster Committee. The present plan of the government is to store the tents in several localities throughout the earthquake area so they will be immediately available in the event of further earthquakes. The USAID Project Coordinator who visited the area November 26-28 reported that the tents were adequately stored and there was complete understanding of the need to keep them dry, through palletizing, proper ventilation and rotation of stocks.

USAID agreed to the creation of a ready reserve of tents in the disaster area, with

the understanding that proper records would be kept, tents properly maintained, and that the GOT would make them available, as mutually agreed between the two governments, in event they are needed in other countries for disasters requiring this type of winter emergency shelter.

The 355 panel markers provided by the USG, initially planned to be used as roofing until permanent roofing material could reach the area, were not needed for that purpose due to the success of the GOT construction program. Some of these panels were used to protect building materials from occasional rains and continue to be used for that purpose. The balance will be stored with the tents for future disasters and to cover defective roofs on the A-frames.

Breakdown of U. S. Government Expenditures

On August 23, 1966, the Ambassador authorized \$25,000 from the FAA Contingency Fund for initial emergency USG assistance. On August 26, AID/W allotted \$750,000 from the FAA Contingency Fund to meet further emergency costs and on September 9 this was increased by \$314,000 for a total of \$1,089,000. Expenditures were as follows:

	<u>Item, Personnel, Travel</u>	<u>Airlift Costs</u>	<u>Total</u>
<u>From the United States</u>			
2,000 arctic tents	\$ 758,352	\$ 168,648	\$ 927,000
55 panel markers from excess property delivered by U. S. National Guard plane at no charge to AID.	2,970		2,970
300 additional panel markers from excess property and airlift	16,200	28,000	44,200
20 generator belts	100		100
Commercial airlift for 3,000 Red Cross blankets		4,032	4,032
Commercial airlift for SDAWS blankets & tents		4,726	4,726
	<u>777,622</u>	<u>205,406</u>	<u>983,028</u>
<u>U. S. Military Assistance in Turkey (TUSLOG, CINCEUR)</u>			
Misc. disaster supplies such as sleeping bags, tents, poles, pegs, commissary goods, medical supplies and equipment, including 36-bed hospital	58,494		
Military personnel (136) salary	28,126		
Civilian personnel (salary)	28		
Commercial hauling and accessorial charges	1,187		
TDY travel	3,084		
Airlift of personnel, equipment and supplies		32,318	
	<u>90,919</u>	<u>32,318</u>	<u>123,237</u>
Total costs reimbursable from AID FAA Contingency Fund			\$1,106,265
In addition, TUSLOG provided services under its training program in connection with the operation of the 36-bed hospital valued at			46,641

P. L. 480, Title III, Food for Peace

CARE - from Crusade Stocks:

92,950 lbs flour	\$3,160
46,200 lbs. bulgur	2,310
6,500 lbs. milk powder	1,137

CARE - from Ministry Education Stocks:

420,000 lbs. flour	14,316
19,800 lbs. milk powder	<u>3,472</u>

CARE Total - 585,650 lbs. \$24,395

Catholic Relief Services

167,900 lbs. flour	5,708
67,500 lbs. bulgur	3,375
34,380 lbs. rolled wheat	1,890
42,504 lbs. vegetable oil	<u>7,353</u>

CRS Total - 312,284 lbs. 18,326 \$ 42,721

Total USG Assistance \$1,195,627

The following letter of appreciation, dated September 7, 1966, was sent to U. S. Ambassador Parker T. Hart by Suleyman Demirel, Prime Minister of Turkey:

"It was with deep appreciation that I received your kind letter of sympathy on the occasion of the tragic earthquake that struck our Eastern provinces. At a time when the Government and people of Turkey are making strenuous efforts to alleviate the suffering of our stricken citizens, we are touched by the generous offer of assistance on the part of President Johnson. Indeed, the promptness of the emergency help that was forthcoming from United States sources did much to comfort the victims immediately after the disaster, and was new proof of the ties of friendship that bind our two nations. Please accept, Excellency, the renewed assurances of my highest consideration."

Appraisal of U. S. Government and Voluntary Agency Assistance by the U. S. Mission

The emergency USAF field hospital arriving within 24 hours after the earthquake was the most successful element of the U. S. operation. The U. S. Consul in Adana, for example, reported being stopped in the streets and thanked for the generosity of the U. S. in providing the hospital. Also, the contribution by CRS and CARE in mobilizing P. L. 480 food supplies in the area immediately after the disaster was significant.

The U. S. goals were to give emergency treatment to the injured and to provide adequate shelter against impending snows, as well as blankets and clothing. These needs were more than adequately met. U. S. operations were notably efficient. From the point of view of advance organization, the U. S. could act immediately, and the availability of contingency funds for commitment by the Ambassador made initial

action possible without referring to Washington. The availability of detailed operating instructions and the presence of the U. S. Disaster Relief Coordinator from Washington made it possible to organize and coordinate U. S. effort with a minimum of confusion. The problems encountered in disasters are unique in each case, and it is difficult to provide advance guidance for the decision-making process which must take place rapidly in the field.

The continuing cooperation of the U. S. Government officials with the GOT created a favorable impression on the senior officials responsible for GOT management of disaster relief. In addition to the material assistance provided by the U. S., there was very close coordination with the GOT in the analysis of the emergency shelter problem, and the U. S. Government agencies in Ankara were looked on as a focal point for informal coordination of the international effort. For example, an informal meeting held by the USAID Director served to clarify the need for pre-fabricated houses and roofing materials. This is believed to have played an important role in the speed with which the European governments reacted to the real needs in the area.

Turkish news coverage on U. S. assistance was good both in connection with the field hospital and the U. S. donation of arctic tents.

Initial reports from the disaster area were conservative as to damage and casualties, owing to difficulty with communications. Reports were not exaggerated, and final figures on deaths and casualties exceeded most early estimates.

Virtually no preparedness facilities were available in the area despite the long history of tremors and earthquakes in that part of Turkey. If the American Air Force hospital had not been prepared to move on a very few hours notice, the organization for emergency treatment of injured would have been inadequate.

In providing for the future, the disaster districts were recently divided into sub-districts which will stock food, clothing, medicines, building materials and U. S. arctic tents, in the event continuing tremors or new earthquakes require emergency assistance. Each sub-district depot will be no more than a short distance from the more remote villages.

Assistance Provided by U. S. Voluntary Agencies

Representatives of CARE and Catholic Relief Services worked in all parts of the disaster area from the early hours following the earthquake until the latter part of November. The U. S. Mission made special mention of the personal efforts of Mrs. Marie de Salvo Schmidt of Catholic Relief Services in organizing transport of Title III food supplies and of the value of the shovels and picks provided by CARE, which were so badly needed in clearing away debris and in digging foundations for new construction.

<u>Catholic Relief Services</u>		
1,000,000 Halizone water purification tablets	\$ 893	
5,000 blankets	27,000	
14,000 lbs. bandages	1,484	
50 tents and components	1,750	
3,819 lbs. misc. medicines	15,883	
202,020 lbs. clothing	303,030	
Cash donation	<u>2,000</u>	\$ 352,040

<u>CARE</u>		
Cash donation for local purchase disaster supplies	\$ 5,000	
40 rebuilding kits (shovels, picks, adz, etc.)	21,000	
Clothing, soft drink powders	26,000	
Pudding Mix diverted from Greece to Turkey	<u>14,000</u>	\$ 66,000
<u>Church World Service</u>		
90,000 lbs. clothing	90,000	
Cash - fund set aside for housing, \$11,000 already collected, collecting \$14,000 more for	<u>25,000</u>	115,000
<u>American National Red Cross</u>		
Cash donation	15,000	
3,000 blankets	<u>11,000</u>	26,000
<u>Seventh-Day Adventist Welfare Service</u>		
1,200 blankets and 30 tents		5,069
<u>American-Turkish Association in Washington</u>		
6,000 lbs. clothing		6,000
<u>AFL-CIO - Cash donation</u>		
		1,000
<u>Chrysler - Ambulance</u>		
		8,000
<u>International Structures Corporation, Penn.</u>		
* One Plydom Structure		400
<u>TWA</u>		
Free airlift 24,681 lbs. CRS supplies to Frankfurt and 6,000 lbs. American Turkish Association supplies to Frankfurt, estimated value airlift		12,300
<u>PANAM</u>		
Free airlift 5,000 Red Cross blankets to Rome, est. value airlift		6,000
<u>USAF (Chief of Chaplains) in Turkey - Cash donation - Sunday collections</u>		
		20,000
<u>U. S. Drug Firms in Turkey</u>		
Wyeth - antibiotics, penicillin, nutrients	\$ 1,100	
Squibb - antibiotics, penicillin tablets	1,650	
Abbott - antibiotics, liver extracts & vitamin syrup	220	
Pfizer - terramycin, penicillin, injections	<u>770</u>	3,740
<u>American Women's Club in Istanbul - Cash donation</u>		
		444
<u>American Women's Club in Ankara - Cash donation</u>		
		200
<u>Foldes Benefit Concert - Ankara - Cash Donation</u>		
		2,600
<u>Girl Scouts of America - Raimstein USAF Base</u>		
Various commodities - 250 boxes clothing, food, toys		<u>8,000</u>
Total U. S. Voluntary Agencies' and Other U. S. Assistance		\$ 632,793

Mennonite Central Committee

Two American Mennonites spent a good part of the autumn of 1966 in the village of Akgelin near Hinis in Eastern Turkey helping to construct 32 A-Frame double shelters to house 64 families and an 80-bed clinic. Another American helped in the construction of 12 double shelters for 24 families in the village of Tasdibek, two miles from Varto.

* International Structures Corporation of Cornwall Heights, Pennsylvania, offered to donate one of its Plydom plastic structures and the offer was accepted by the Government of Turkey. The Vice President of ISC, Mr. Baylor Maynard, went to Ankara and Varto, erected and demonstrated the Plydom structure in both places. At Varto, the structure was given to the Mayor, who immediately designated it as the City Hall. U. S. Mission Director Grant reported that the Varto citizens were most favorably impressed with the Plydom shelter. The structure is made of plastic, is a self-supporting design, does not require a foundation and provides 314 square feet of usable space, about 3,000 cubic feet, and measures 21' long by 17' wide and is 10' high at the center. The weight of the shell is 135 pounds without the ends, door and windows.

<u>Assistance Provided by Other Nations</u>	<u>Cash</u>	<u>Donations in Kind Including Construc- tion Material</u>	<u>Total</u>
Afghanistan RC	\$ 5,000		\$ 5,000
Australia RC	1,000	\$	1,000
Albania RC - blankets, cotton material and 100 tons asphalt		2,000	2,000
<u>Austria</u>			
Government - disaster supplies		9,100)	
RC - medicine, vaccine		6,700)	15,800
Belgium RC - Antibiotics & blankets		3,500	3,500
Bulgaria RC - Blankets, medical supplies, tents, dressings		26,000	26,000
<u>Canada</u>			
Government - Medical supplies, blankets clothing		20,000)	
RC - Cash, medical supplies, blankets	9,300)	9,300)	
Canadian Embassy gift	3,000)		41,600
Burma RC	630		630
Ceylon RC - disaster supplies		1,740	1,740
Republic of China RC	14,000		14,000
Czechoslovakia RC - disaster supplies		9,800	9,800
Denmark Government and RC - blankets, medicine, infant clothing		36,000	36,000
Ecuador RC	230		230
Ethiopia RC	8,000		8,000
Finland RC - Antibiotics, blankets, tents and construction material		26,800	26,800

	Cash	Donations in Kind Including Construc- tion Material	Total
<u>France</u>			
Government	\$ 33,300)		
President de Gaulle	11,100)		
RC - antibiotics, medicine, blood plasma, blankets, canned food, cash	6,140)	\$ 3,070)	\$ 53,610
<u>Germany (Dem. Rep.) RC on behalf of Evangelical Church - disaster supplies</u>		29,840	29,840
<u>Germany (Fed. Rep.) - Government</u>	92,500)		
RC - cash, blankets, prefabricated buildings, clothing, medicine, tents, sleeping cots, baby food, dry milk	25,000)	127,000)	
Business Interests	35,574)		
Trade Union	7,535)		
Embassy and Churches	1,717)		
Workmen's Association	4,000)		
Also Government of Germany sent a construction team of 33 men to rebuild the hospital at Hinis.			293,326
<u>Ghana RC</u>	95		95
<u>Greece RC - blankets, clothing, medicine, powdered milk, cheese</u>		13,200	13,200
<u>Hungary RC - medical supplies</u>		11,100	11,100
<u>Iceland</u>			
Government - disaster supplies		1,160)	
RC	5,915)		7,075
<u>India RC - disaster supplies</u>		650	650
<u>Iran RC - tents, beans, lentils, rice, oil, sugar, bed covers, kitchen utensils, clothing, blankets, medicine and sent one doctor</u>	5,000	67,100	72,100
<u>Iraq</u>			
Government	300)		
RC	2,800)		3,100
<u>Ireland RC - blankets</u>		2,940	2,940
<u>Israel RC - plasma, antibiotics, infusion sets, blankets, tents, medicine, clothing, team of 10 senior medical students.</u>		3,500	3,500
<u>Italy</u>			
Government - tents, blankets, clothing, medicine, food		30,000)	
RC - disaster supplies		1,600)	31,600
<u>Japan</u>			
Government	10,000)		
RC - disaster supplies		1,740)	11,740
<u>Korea Republic RC - disaster supplies</u>	200	255	455
<u>Kuwait Government - cash donation</u>	55,555		55,555
<u>Lebanon RC</u>	230		230
<u>Liechtenstein RC</u>	1,380		1,380
<u>Libya Government</u>	139,400		139,400
<u>Luxemburg RC</u>	1,380		1,380
<u>Mexico RC</u>	1,000		1,000

	Cash	Donations in Kind Including Construc- tion Material	Total
Monaco RC	\$ 2,050		\$ 2,050
<u>Netherlands RC</u> - Tents, blankets, clothing, first aid bags, baby food, canned food, biscuits, blood plasma, medicine, dressings	27,700	\$ 69,100	96,800
<u>New Zealand</u>			
Government	1,390)		
RC - disaster supplies		<u>3,100)</u>	4,490
<u>Nigeria RC</u>	560		560
<u>Norway</u>			
Government	14,300)		
RC	7,000)	<u>22,400)</u>	43,700
<u>Pakistan</u>			
Government	26,000)		
RC - Tents, blankets, medicine, baby food, clothing	10,500)	57,200)	93,700
<u>Philippines RC</u>	500		500
<u>Poland RC</u> - tents		4,200	4,200
<u>Russia RC</u>			
Sugar, powdered milk, medical supplies, medicine, other disaster supplies		162,500	162,500
<u>Saudi Arabia</u>			
Government	196,000)		
RC - disaster supplies		<u>45,000)</u>	241,000
<u>South Africa RC</u>	1,150		1,150
<u>Spain RC</u> - disaster supplies & cash	830	1,370	2,200
<u>Rumania RC</u> - disaster supplies and construction material		12,550	12,550
<u>Sweden</u>			
International Development Authority - cash and construction material	9,700)	106,800)	
RC - Antibiotics, clothing, blankets, construction material & sent 2 doctors.	29,700)	<u>349,300)</u>	495,500
<u>Switzerland</u>			
Government	11,555)		
RC - blankets, clothing, medical supplies, iron corrugated roofing for A-frames		<u>104,100)</u>	115,655
<u>Syria RC</u> - disaster supplies & cash	490	320	810
<u>Thailand RC</u>	760		760
<u>Togo RC</u>	40		40
<u>Tunisia RC</u> - medical supplies, tents, posts, blankets, medical team		31,800	31,800
<u>United Area Republic Government</u> and RC - medicaments, clothing blankets		22,700	22,700
<u>United Kingdom</u> - Disasters Emergency Committee, including donations from the Government, RC, OXFAM, War on Want, Save the Children Fund & Radio & TV Campaign, provided 20 man rescue team, tents, blankets, medical supplies, clothing, steel, baby food, construction material.	39,300	899,500	938,800

	Cash	Donations in Kind Including Construc- tion Material	Total
<u>Upper Volta RC</u>	\$ 50		\$ 50
<u>Yugoslavia Government, City of Skopje and RC - soap, food, blankets, tents, medicine, clothing, beds, kitchen utensils, water purification tablets and construction material</u>		\$ 41,700	41,700
<u>Unesco Staff Association</u>	350		350
<u>United Nations</u>	10,000)		
<u>World Food Program - 10,340 tons wheat, 632 tons vegetable oil, 136 tons powdered milk, 415 tons sugar, 21 tons tea, 82 tons beans, 82 tons peas, beans, lentils</u>		Over 1,000,000)	1,010,000
<u>World Council of Churches</u>			
For assistance in construction of 44 A-frame double shelters for 88 families and an 8-bed clinic.	100,000		
Committee for assistance in perm- anent construction in spring.	<u>150,000</u>		<u>250,000</u>
Pope Paul made an unspecified cash donation and International Catholic Charities donated 10 prefab houses as part of 80-home project for Varto.			
Total Assistance - Other Nations	\$1,121,206	\$3,377,735	\$4,498,941

KOREA

Characteristics of the Disaster

Event: Floods

Date-Time: July 24-29, 1966

Location: Seoul, Kyonggi, Kangwon, Changpuk, Chungnam, Chonpuk, Chonnam

<u>Damage:</u>	<u>Number Killed and Missing</u>	<u>No. Injured</u>	<u>No. Homeless</u>	<u>No. Evacuated and Mass Feeding</u>
	95	85	65,630	131,904

Official dollar damage not available; newspaper estimated \$1,900,000. 21,049 homes were destroyed and another 1,670 were damaged.

Description of the Disaster

All of the above provinces were affected but Seoul bore the brunt of the week long siege of torrential rain. There were landslides and power failures. Traffic and communications were paralyzed. In Seoul, a 23-foot retaining wall collapsed killing eight out of a 10-member family when it crashed into their home as they slept. In Munsan, more than 9,000 people became homeless when the Imjin River destroyed the 40 year old wooden watergate and flooded Munsan township, about 35 miles north of Seoul. The road connecting Seoul and Munsan was temporarily cut off.

There were several articles in the Korean papers on the cause of the annual flood scourge and need for preventive action. One editorial said: "It was the same old story all over again. When the torrential downpour of rain hit the central parts of the country, the capital city was gripped by floods. Hurried evacuation, the familiar makeshift tents for flood victims and another pledge never to resettle the needy people in flood endangered areas told that another rain season had set it." The editorial also referred to the fact that the floods had many causes--inadequate and often clogged sewer systems, unauthorized or poorly planned housing construction along the river banks or on high ground, barren hills along the Han that cannot retain rainwater, inadequate flood control facilities. Being vulnerable to floods meant being weak to drought the paper reported, because both disasters are caused by insufficient water and land conservation efforts. It urged that the nation set in motion an effective long-term program to prevent the recurrence of such tragedies. At the same time it pointed out that the Government had already started mapping a long term anti-flood program* for the country and that President Park Chung-hee had directed that anti-flood measures be especially reflected in city planning for Seoul.

(* Refers to AID sponsored flood control survey now underway.)

Action Taken by the Local Government

The Korean Government has a disaster preparedness organization and operation plan. The following improvements were made in it this year prior to the floods: 41 disaster supply centers were established throughout the areas historically known to be disaster prone and stocked with disaster supplies, including dry biscuits prepared in advance from P. L. 480 flour; a movement was started for fund raising in anticipation of the annual flooding; a ruling was passed for free rail freightage for disaster relief from June 30 to October 31; preparation was made for a security reserve fund for disasters; a disaster relief training session was held; and some emergency telephone lines and other communication lines were installed.

When the floods swept in, the relief centers were ordered into action using police, firemen, civilian volunteers and local government employees. 105,562 packages of dry biscuits, 240 metric tons of grain, side dishes, utensils, bedding and other supplies were distributed from the various supply points.

Five medical mobile units consisting of a doctor, nurse and driver were organized. Precautions were taken to ward off communicable diseases usually prevalent in the wake of natural disasters. 336,000 cc's of typhus vaccine were provided. Drinking water and sanitation facilities were treated with necessary chemicals. The health ministry urged citizens to boil all their water before drinking.

Immediate direct relief grants by ROKG amounted to 5,900,000 won (approximately \$21,800) and the Seoul City Government drew up an emergency supplementary budget of 101,679,000 won (approximately \$376,900) to provide tents and meals for flood victims; to repair damaged roads, bridges, drains and waterways; and for refugee health expenses.

The ROKG was able to handle all relief requirements with the exception of the continuing need for grain. On July 27, the ROKG made a formal request through its National Relief Coordination Center for approximately 400 metric tons of P. L. 480, Title III, commodities for an estimated 60,000 victims. The U. S. voluntary agencies made the commodities available.

The Korean Red Cross provided grain, clothing, bedding, utensils, salt, other supplies and burial fees. The Korean Christian Missionary Church provided rolled wheat, blankets, clothing and \$500 in cash. The Christian Nazareth Church provided used clothing.

Assistance Provided by the U. S. Government

Due to advance planning for disaster relief activities by the ROKG, the U. S. involvement in this situation was limited. U. S. military forces in Korea assisted in evacuation, transporting victims and airlifting relief supplies to isolated areas. The following P. L. 480 food was provided through the voluntary agencies:

Church World Service - 264 metric tons grain, estimated value	\$23,232
Catholic Relief Services - 100 metric tons grain, estimated value	8,800
Seventh-Day Adventist Welfare Service - 10.8 metric tons grain, estimated value	<u>955</u>
	\$32,987

The U. S. Mission commented: "The impact of this disaster activity proved that with a minimum of U. S. assistance in pre-planning and stocking supply points, the ROKG can basically cope with disaster situations. This is within itself complimentary of the US, for we have for several years worked closely with the ROKG in the establishment of a disaster relief plan which would meet the needs of this type of situation."

Assistance Provided by U. S. Voluntary Agencies

CWS, CRS, and SDAWS diverted above P. L. 480 grain from their ongoing programs.

Church World Service

458 quilts and 400 blankets, estimated value	\$2,574	
10,000 lbs. used clothing, estimated value	<u>10,000</u>	\$12,574

Catholic Relief Services

70 quilts, estimated value	\$ 210	
5,700 lbs. used clothing, estimated value	<u>5,700</u>	\$ 5,910

Seventh-Day Adventist Welfare Service

10,000 lbs. of clothing, estimated value		<u>\$10,000</u>
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\$28,484

Assistance Provided by Other Nations - None reported.

OUTER MONGOLIA

Characteristics of the Disaster

Event: Floods

Date-Time: July 11, 1966

Location: Ulan Bator

Damage: Number Killed

57

Number Homeless

4,000 families (about 20,000 persons)

Industries were shut down due to lack of power and fuel, millions of dollars worth of raw material were damaged or destroyed, municipal water supply was out.

Estimated dollar damage - According to press reports, this was placed at hundreds of millions of togruas (4 to \$1). For purpose of this report therefore, we will use \$25,000,000.

Description of the Disaster:

The flooding was touched off when 3.8 inches of rain, about 30 per cent of the normal annual rainfall occurred in 24 hours on Monday, July 11. The rains came down in torrents on Monday as the Mongolians in Ulan Bator prepared to celebrate the traditional three-day holiday Nadam. Despite the downpour, a curtailed parade was held but the traditional games had to be cancelled. On Tuesday the rain started again. By Tuesday noon the Tola River had touched a level of 10.2 feet--twice the 4.95 feet of the previous record. In the afternoon, emergency radio broadcasts ordered everyone to get north of the river--that the bridges were about to go out. Thousands of Mongolians streamed over the high bridge, which survived the storm, but soon the smaller bridges collapsed and areas near the river were cut off. Power stations were flooded and the water system knocked out. Communications from north to south were almost cut off. Rail lines to China were cut so badly it was estimated it would take a month to restore them. Restoration of the city was complicated by the fact that the Tola River smashed through its normal gravel bed and flowed along the bed of a small subsidiary river, the Selba, sweeping a course through the heart of industrial areas. Virtually all industry in the city (population 250,000) was closed by the flood waters or because of lack of power.

Assistance Provided by Local Government

The homeless were moved to safer ground by trucks, amphibious vehicles, pontoon boats, rafts and by Mongolian and Soviet army helicopters. They were taken to rescue points in schools and hospitals. An army field kitchen was moved in to serve hot meals from the hotel.

The Mongolian Foreign Minister was reported by the press to have made a statement welcoming assistance from all foreign countries, including the United States.

Assistance Provided by the U. S. Government

Although the U. S. does not have formal diplomatic relations with Mongolia, it offered \$25,000 in cash for flood relief from the AID contingency fund for worldwide disaster relief. This gesture, based on humanitarian concern for human suffering, was the first official gesture of the U. S. toward Mongolia. The offer was rejected by the Mongolian Foreign Minister.

Assistance Provided by U. S. Voluntary Agencies

American National Red Cross - cash donation for drugs \$2,500

In a letter to the ANRC by the League of Red Cross Societies, Geneva, it was reported that this gift by the ANRC along with funds provided by Red Cross Societies of Canada, Sweden and Upper Volta, as well as the Staff Association of UNESCO, enabled the League and WHO to buy the following drugs:

200,000 tablets Sulphathiazole
200,000 capsules Chloramphenicol
48,000 capsules Auremycin (50 mgm)
200,000 tablets Phthalylsulphathiazole
200,000 tablets Sulphaimidine

These drugs were assembled in the United Kingdom and flown to Ulan Bator by Air India and Aeroflot in August. The total value was 130,500 Swiss francs (about \$30,300).

Assistance Provided by Other Nations

Deducting the above \$2,500 donated by ANRC, the balance from this \$30,300 worth of drugs was provided by Canada, Sweden, Upper Volta and LICROSS as well as UNESCO. \$27,800

The major aid to Mongolia came from the Soviet Union. There is no report of specific disaster supplies or value but news reports credit Soviet helicopters with saving many lives. Also the Soviet Union set up emergency bridges, provided railway specialists to assist in getting railroads working again and sent generator trains south from eastern Siberia to provide power to the stricken city.

Bulgaria - Medicaments	8,640
Canada - cash grant	
Czechoslovakia - vitamins, medicaments	14,100
Germany (Dem. Rep.) - Medicaments	64,700
Hungary - Medicaments	3,720
Japan - Vitamins	1,000
Cash grant on behalf of the Japanese Government	3,000
Poland - Vitamins, Medicaments	1,880

Rumania - Medicaments	5,000
Sweden - Cash grant	
Upper Volta - Cash grant	
USSR - Medicaments, food, textiles	38,800
Yugoslavia - Vitamins, medicaments	810
UNESCO Staff Association	
	<hr/>
	\$169,450

RYUKYU ISLANDS

Characteristics of the Disaster:

Event: Two Typhoons

Date-Time: September 1-5, 1966

Location: Especially the Island of Miyako but also Yaeyama and southern area of Okinawa

<u>Damage:</u>	<u>Number Killed</u>	<u>Number Injured</u>	<u>Number Homeless</u>
	0	41	13,764

2,768 houses were destroyed and another 4,756 partially destroyed. Estimated loss in livestock: 36 cattle, 44 horses, 437 pigs, 4,073 goats and 40,128 poultry. There was also considerable damage to crops, forestry and fisheries.

Estimated dollar damage:

House Damage	\$2,500,000
Crop Damage	5,200,000
Livestock Damage	138,600
Forestry Damage	17,100
Fishery Damage	59,000
	<u>\$7,914,700</u>

Description of the Disaster:

The Ryukyu Islands were first the victims of Typhoon Alice and then suffered even heavier damage from Typhoon Cora, which followed immediately after.

Action Taken by Local Government and Organizations:

From 1609 to 1870 the Ryukyus was a protectorate of Japan. In 1870 they became an integral part of the Japanese state. From 1945 to 1951 they were under U. S. Military Government. The U. S. Japanese peace treaty of September 1951 provides for administration by the U. S. and residual ownership by Japan. Under an Executive Order to DOD the Department of the Army established the United States Civil Administration for the Ryukyus Islands (USCAR). The Ryukyuans exercise considerable self-government in internal affairs. Their central governmental structure is called the "Government of the Ryukyu Islands".

Emergency food, supplies and other equipment were dispatched to many of the southern islands by USCAR and GRI as soon as weather permitted. Building materials donated by the Government of Japan, along with disaster relief funds provided by USCAR were used to provide temporary shelters and repairs. Private donations of over \$100,000 enabled the purchase of urgent necessities such as bedding, clothing and kitchen utensils.

The Government of the Ryukyu Islands programmed about \$500,000 of its current budget in support of emergency measures. The GRI reprogrammed its FY 67 budget to take care of additional emergency requirements and to begin work on long term rehabilitation projects. Funds of the Central Bank for Agriculture, Forestry and Fisheries and People's Finance Corporation were made available for emergency loans as well as longer term rehabilitation. The GRI estimated 2,000 homeowners would request to borrow funds and the GRI program called for providing 25-year loans of \$1,500 to each participant. The GRI planned to enact legislation in January 1967 to establish a special account for receipt of GOJ funds. Repayments would be held for use in rehabilitation from future disasters.

The GRI and USCAR welcomed the offer of assistance from Government of Japan. The GOJ has authorized an expenditure of \$1,000,000 for housing construction from FY 1966 supplemental funds. In addition, the GOJ indicated that it would consider in its FY 1967 appropriations funds amounting to approximately \$3,000,000 for general reconstruction and rehabilitation.

Assistance Provided by the U. S. Government

USCAR made available to GRI its entire annual disaster relief fund of	\$200,000
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Assistance Provided by U. S. Voluntary Agencies

<u>American National Red Cross</u> made cash donation to Okinawa	2,000
<u>Church World Service</u> provided funds for housing project	<u>5,000</u>
	\$207,000

Assistance Provided by Other Nations

Government of Japan for general housing construction	\$1,000,000
(Japan also donated building materials, seed potatoes, school textbooks and other emergency supplies.)	*
Japan Red Cross - Cash donations \$1,000 and 1,000 blankets estimated \$3,000	<u>4,000</u>
	\$1,004,000

LAOS

Characteristics of the Disaster:

Event: Mekong Flood (see also reports Mekong Flood for Vietnam and Thailand)

Date-Time: August 25 to September 19, 1966

Location: Houa Khong, Borikhane, Khammouane and Vientiane Provinces, especially the City of Vientiane and environs.

<u>Damages:</u>	<u>No. Killed</u>	<u>No. Injured</u>	<u>No. Homeless</u>	<u>No. Evacuated</u>	<u>No. Mass Feeding</u>
	20	0	2,000	70,000	50,000

500 houses were destroyed, buildings were damaged and there was extensive damage to streets in Vientiane. About 480,000 acres of rice paddy were destroyed as well as fruit and vegetable crops. There was not a great loss in livestock. Animals were moved to higher ground and a larger number than usual were slaughtered to avoid flood losses. Agricultural damage was estimated at \$13 million and property damage at \$2.3 million for a total of \$15.3 million.

Description of the Disaster:

It had rained hard for over a week in Laos. On August 25, the Mekong River began flooding in the area north of Vientiane. On August 26, along the lower portions of the bank towards Wattay, water began to creep into Wattai Noi and Wat Chan sections along the river road. People in the lower areas moved into higher ground with whatever personal belongings they could carry. August 28 saw the flood spilling over a long stretch of the main highway to Wattay airport. Lower portions of Chinaimo along the Thaddeua road were already under water. By August 31, nearly half the capital of Vientiane was under water. The City of Vientiane lies roughly in the middle of a plain some 100 miles in diameter along the Mekong River. The rampaging waters of the Mekong transformed it into an archipelago in the middle of a large lake. A system of dikes was quickly thrown up by the Ministry of Public Works and Army assisted by civilian volunteers, to hold back water from certain key areas of the city and to allow preparations for orderly evacuation and other activities. On September 2, with the river still rising, although slowly, only the high ground in the city and the diked commercial civic center was intact. The airport was closed. Roads and streets in Vientiane were covered with water and traversable only in trucks or boats. There were distress calls from needy communities isolated by the flood. Typical was one from the village of Ban Phay Lom, about 16 miles from Vientiane along the road to Paksane. A ton of rice was loaded in a truck in the city proper, driven across the morning market "river" to the boat landing point in front of UN headquarters and transferred to a waiting US AID barge. For one and a half hours, the barge sailed on a course paralleling or just following the highway, with tops of telephone poles marking the route up the Ban Done Noun. A waiting army truck then took the rice to a refugee camp for 500 victims of nearby flooded areas. Prices of food rose in Vientiane, meats by about 20%

pigs were propped up on boards above the water level. From experience with annual flooding of the Mekong, framers either sell their livestock before the flooding and buy new stock later or devise ingenious methods of protection, so there was not a serious loss of livestock. However, livestock prices fell considerably due to this preflood selling.

The affected provinces requested that USAID, Navy, Military Advisory Command and GVN boats move slowly in the Mekong and Bassac Rivers because waves from them were destroying partially flooded homes along the banks. At Moc Hoa, Kien Tuong Province, a Chinook helicopter landed on a pad which was under one to four feet of water. As the flooding worsened, only two airstrips remained open in the flooded areas, one at An Giang and the other in Chau Doc, and transportation of relief supplies had to be carried out mainly by boats, barges and helicopters. Conditions were difficult for aircraft landings at many points and supplies were off-loaded from helicopters directly into boats.

Nearly all of the string of 15 U. S. Special Forces camps, which maintain surveillance along the Cambodian frontier, were flooded.

The attitude of the Vietnamese people can be summed up in the remark by one local philosopher: "For 2,000 years the water has gone up, and for 2,000 years the water has gone down."

Action Taken by Local Government and Organizations

The Ninth ARVN Division in Sadec was designated responsible for supervising and coordinating relief activity. All sampans, boats and junks in the area were mobilized and placed on standby for emergency evacuation. It was agreed that the Civic Action supply point operated by the Ninth Division (ARVN) and MACV Advisors would be used as stockage point for disaster relief supplies because of its favorable location and already well-developed warehouse and transportation facilities in Sadec. The Minister of Social Welfare established a mobile task force composed of senior ministry officials and headed by Assistant Minister to maintain constant surveillance of relief operations. The Minister of Social Welfare allocated funds to each affected province to purchase 500 tons of rice and adequate supplies of dried fish, nuocmam and salt. It supplied \$2 million piasters in cash (approximately \$27,500), 480 tons of rice, 9 tons of salt, 17 tons of dry fish, 500 cans of kerosene, 7,000 sleeping mats and 100 boats. It set up refugee centers for the homeless. Relief supplies were stockpiled in key positions and communications and distribution channels were established for eventual movement of more than 1300 metric tons of USAID emergency goods.

Each of the four seriously affected provinces established a Disaster Relief Committee and developed provincial wide plans which were submitted to the Minister of Social Welfare.

The Ministry of Health worked with American and Korean Health Teams in inoculating the flood victims for typhoid, cholera and smallpox. 200,000 doses of vaccine were used.

First aid teams from the Republic of Vietnam Red Cross distributed rice, milk, clothing and sleeping mats and also assisted in the vaccination campaign against cholera, smallpox and typhoid. At the request of the Vietnam National Red Cross Society, the League of Red Cross Societies transferred to Saigon the balance of

the funds which had been held in Geneva since the 1964/65 floods. The Vietnamese Red Cross did not make a request of the League for an international assistance appeal, but the League issued a bulletin stating that spontaneous gifts from sister Societies would be of great help.

Voluntary assistance for flood relief was organized. The Saigon City Council formed a flood relief committee. The Vietnamese Junior Chamber of Commerce launched a collection campaign for flood donations. In Kien Hoa Province, approximately \$2,500 was collected from civil servants and used to furnish supplies to two stricken villages in Kien Phong Province.

The U. S. Mission reported that GVN response to anticipated flooding was excellent, and that in all four provinces, flood relief committees functioned well in offering emergency assistance and in distributing relief supplies.

Assistance Provided by U. S. Government

Disaster preparedness plans were made several days prior to the flood stage. USAID established a Disaster Relief Coordinating Committee, headed by Refugee Coordinator Eric M. Hughes. Also USAID Director of Region IV at Can Tho, established a Disaster Committee. These committees worked with all elements of the U. S. Mission and Government of Vietnam on relief operations. In Saigon, the Military Advisory Command Center was designated as the point of contact there for emergency flood operations around the clock. Supplies were delivered from Saigon and Sadeq to such prepositioning points as Long Xuyen in An Giang Province, Chi Lang in Chau Doc Province and Moc Hoa in Kien Tuong Province.

As the waters continued to rise, preparation and action proceeded apace. Arrangements were made to provide funds for hiring boats, barges and trucks for distribution of supplies. A mobile radio was assigned to USAID for use at Sadeq for coordinating requests for supplies and for coordination with regional headquarters in Can Tho. USAID planned a 30-day level of emergency relief supplies to be prepositioned in Region IV.

The Military Advisory Command Center provided helicopter support for the duration of the emergency.

A flood Recovery Committee was formed by USAID, Region IV, to prepare plans for agricultural programs, repair of schools, replacement of school equipment and supplies, rehabilitation of roads and public utilities and assistance to people in rebuilding their destroyed homes. With regard to the agriculture program a 78.5 million piaster fund (approximately \$1,000,000) was established by project agreement between the Ministry of Agriculture and USAID for the purpose of a crash program to plant extra quick maturing crops in the flooded areas to offset rice losses. 110,000 packets of quick-maturing seeds flown in from Taiwan were distributed to farmers whose crops had been entirely destroyed. Each pack contained sufficient seed to plant one-third of a hectare (approximately .8 of an acre) of such crops as mung beans, amaranth, water spinach and yardlong beans. Later plantings of soybeans, peanuts, corn, sweet potatoes and sugarcane were planned. Water pumps and engines were provided to help in draining off flooded fields and for later use in irrigation.

American National Red Cross

Cash donation	5,000	\$ 5,000
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Mennonite Central Committee-CWS & LWR (Vietnam Christian Service)

2,500 lbs. canned meat (est. at \$.25 lb.)	625	
5,000 lbs. clothing (est. \$1 lb.)	5,000	
	<u>\$5,625</u>	5,625

CARE

Cash donation to purchase materials for reconstruction of 100 houses	\$12,500	
Sewing Kits	250	
49,100 Kilos of rice, purchased locally (Not P. L. 480)	8,043	
6,000 mosquito nets	15,000	
	<u>\$35,793</u>	<u>35,793</u>

Total Voluntary Agencies Assistance 88,418

Total all U. S. Assistance \$1,525,192

Assistance Provided by Other Nations

Korea

Korean Preventive Medical team assisted in immunization program

Taiwan

8 tons of seed for replanting of crops

*Total value not available.