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Report of the Comptroller General of the United States

Observations on the Guatemalan Earthquake Relief Effort

Report to the Congress



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**Comptroller General of the United States
Washington, DC 20548**

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To the President of the Senate and the
Speaker of the House of Representatives

This report discusses the management system for the disaster relief operation mounted by the international community in response to the February 1976 earthquake in Guatemala. The relief operation was generally well organized and an overall success, but there were some problem areas. The report analyzes those problems as well as the more successful management aspects and draws a number of lessons that should help improve future disaster relief operations.

We made our review pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

Copies are being sent to the Director, Office of Management and Budget, and to the heads of interested agencies.

James A. Stacks

Comptroller General
of the United States



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			UNDRO United Nations Disaster Relief Office
			UNICEF United Nations Children's Fund

FOREWORD

A major natural disaster in a developing nation triggers a massive international response. All too often, however, problems of coordination among donors and lack of managerial ability or distribution resources on the part of the host country result in subsequent charges of waste, mismanagement, and, above all, failure to promptly get the aid to those in need.

The recent relief effort in the Sahel area of Africa is a case in point. We reviewed the Sahel response as an indepth case study in the management of international disaster relief, and our report to the Congress ^{1/} details the serious management and coordination problems that occurred. These included inadequate and untimely assessments of relief requirements; uncoordinated donor shipments that caused serious port congestion and storage problems and increased food deterioration; lack of a system for pooling donor food contributions so that older or more perishable foods could move inland first; donor competition for limited transport facilities; and finally, lack of a monitoring system to insure that the six governments of Sahel were getting the food to their starving peoples, amid strong indications that their performance was less than adequate. That report recommended that the U.N. Disaster Relief Office, established in 1972 to coordinate donor efforts in major disasters, be immediately strengthened to enable it to carry out its mandate. More importantly, however, we proposed that the longer term need was for a strong international disaster relief agency to mount and carry out integrated, large-scale disaster relief responses using resources committed for these purposes by the donors.

This report continues the work we began a Sahel. Guatemala represents a different kind of situation--a sudden calamity, a more or less hemispheric response of very short duration, and, by all accounts, a well-organized and successful response. We decided to review the Guatemalan situation, primarily to analyze the system established to manage and coordinate the efforts of the many participants, to see how well that system worked, and to ascertain whether any of the same types of problems experienced in Sahel resurfaced. The results of our analysis reinforce the central finding of our Sahel report--namely, the need for strong, centralized management. This report also discusses a number of lessons to be learned and problem areas warranting further study so that future relief efforts may be better managed.

This report would have not been possible without the cooperation and contributions of many individuals. Particular thanks go to the U.S. Embassy staff, the Guatemalan National Emergency Committee, staffs of CARE and Catholic Relief Services, the U.N. Disaster Relief Organization, and the Office of Foreign Disaster Assistance at the Agency for International Development Headquarters.

^{1/}"Need for an International Disaster Relief Agency," May 5, 1976. (ID-76-15.)

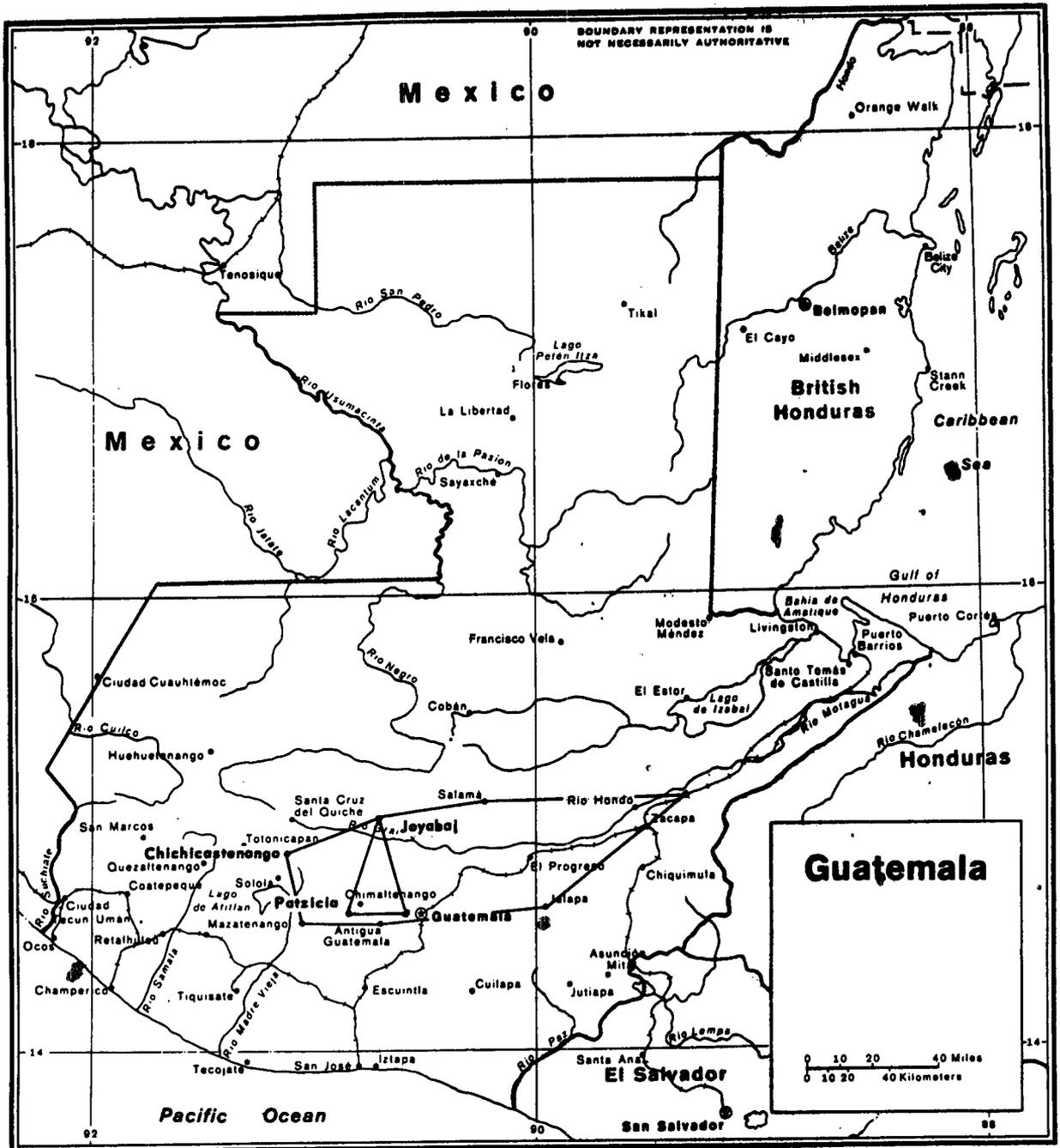


Figure 1
 Damage area: Outer zone represents area damaged by earthquake. Small triangle represents zone of total destruction.

GUATEMALA AND THE EARTHQUAKE

SOME RELEVANT FACTS

Guatemala, Central America's most populous republic, is bordered by Mexico, Honduras, El Salvador, and British Honduras (Belize). It has three fairly distinct geographic regions. The Pacific belt, about 30 miles wide, lies between the Pacific and the mountains from Mexico to El Salvador. Further inland is the heavily populated central highland region, comprising about one-fifth of the country's land area. To the northeast lies the heavily forested, sparsely populated, limestone lowland region of Peten, some of which is accessible only by air.

Guatemala's 1974 estimated population of 5.8 million people reside in an area of some 42,000 square miles, slightly larger than the State of Tennessee. Spanish is the official language, but there are as many as 17 local dialects and Spanish is not universally understood. The population over the age of 15 is about 38 percent literate, and the average life expectancy is about 54 years.

There are two seasons--the rainy season runs from May to October and dry season from November to April. Temperatures are generally moderate, ranging from 50 to 70 degrees.

The transportation network is reasonably well developed. Guatemala's two major seaports are the shallow draft Pacific port at San Jose and a deep water Caribbean port at Puerto Barrios. Most exports and imports are handled through the latter because of superior port and transportation facilities and ready access to the U.S. eastern seaboard. There are three major highways--the Inter-American, Pacific Coast, and Inter-Ocean, the last of which runs from Guatemala City to Puerto Barrios. Guatemala City has an international airport, and the Guatemalan Division of the International Railways of Central America operates about 510 miles of track. The Government line between Puerto Barrios and Guatemala City is used heavily for freight transportation.

Guatemala's political history has been turbulent. It has passed through a series of dictatorships and short periods of representative governments since it gained independence from Spain in 1821 and is currently a representational democracy, headed by a president elected to a 4-year term. Major political subdivisions consist of 22 departments, each headed by a Governor appointed by the President, and a central district, Guatemala City.

In 1974 the gross national product was \$2.7 billion, annual growth rate 4.6 per-

cent, and per capita income \$468. In 1973 exports, principally farm products, totaled about \$436 million while imports, mostly processed goods, totaled \$431 million. The industrial base has been growing about 10 percent a year since 1960, but agriculture still employs about 65 percent of the labor force.

The earthquake that rocked Guatemala on February 4, 1976, was the greatest recorded natural disaster in Central America's history. Earthquakes are not new to Guatemala. Its first two capitals were destroyed by earthquakes--Vieja in 1541 and Antigua in 1773--and in 1874 Guatemala City was damaged severely. A series of shocks over a period of 5 weeks in 1917-18 again wrecked Guatemala City, but it recovered to become Central America's leading city.

The February 4 earthquake, measuring 7.5 on the Richter Scale, occurred at about 3 a.m. when most people were asleep and unable to respond quickly. What electricity was available was turned off to prevent fires and electrocution from broken and exposed wires. Although the initial shock caused most of the deaths and destruction, there were at least two other major aftershocks--one measuring about 6.0 on the Richter Scale at 12:20 p.m. on February 6, and another measuring 5.5 at 2:14 a.m. on February 8. In all, more than 1,000 aftershocks of varying intensity have been reported.

The major shock area encompassed Guatemala City and a wide surrounding area. As figure 1 shows, the area most affected was a densely populated belt about 35 miles wide. Towns within the smaller triangle-shaped zone at the western edge of this area were almost totally destroyed.

Official casualty figures showed about 23,000 people killed, 77,000 injured, and 1.2 million left homeless. More than 5,000 children reportedly were orphaned. In all, the disaster directly affected about one of every five Guatemalans.

The earthquake, essentially a rural disaster in a populous area of small towns and villages, had its greatest impact on the poor who generally live in clustered adobe houses, shacks, and makeshift huts. The quake crumbled the adobe walls and the heavy clay tile roofs fell in, killing or seriously injuring the occupants. Photos on pages 5 and 6 show some of the damage. In the major urban centers, modern residences constructed of brick or cement and commercial buildings designed to absorb shock generally withstood the earthquake. The Government has estimated that over 222,000 homes were destroyed and that it will require between \$150 and \$250 to replace them.



Figure 2
 Rubble of destroyed homes in Patzicia
 (Mar. 4, 1976) (GAO Photo)



Figure 3
 Landslide on the Atlantic highway from
 Guatemala City to Puerto Barrios where
 dirt and rock 45 feet deep must be removed.
 (Mar. 16, 1976) (GAO Photo)

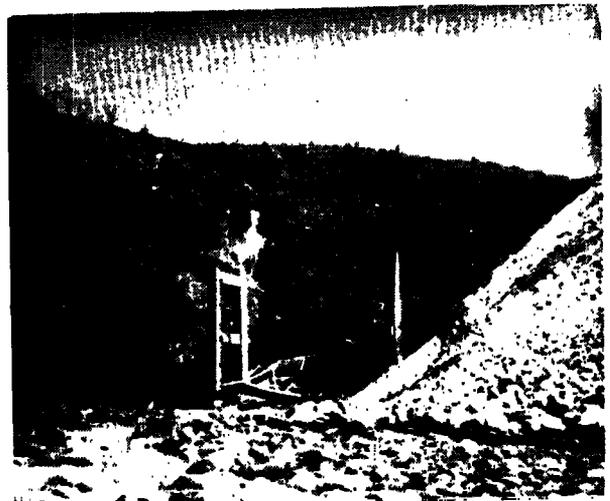


Figure 4
 Destroyed bridge at Agua Caliente on the
 Puerto Barrios Highway, Guatemala's main
 link with the outside world.
 (Mar. 16, 1976) (GAO Photo)

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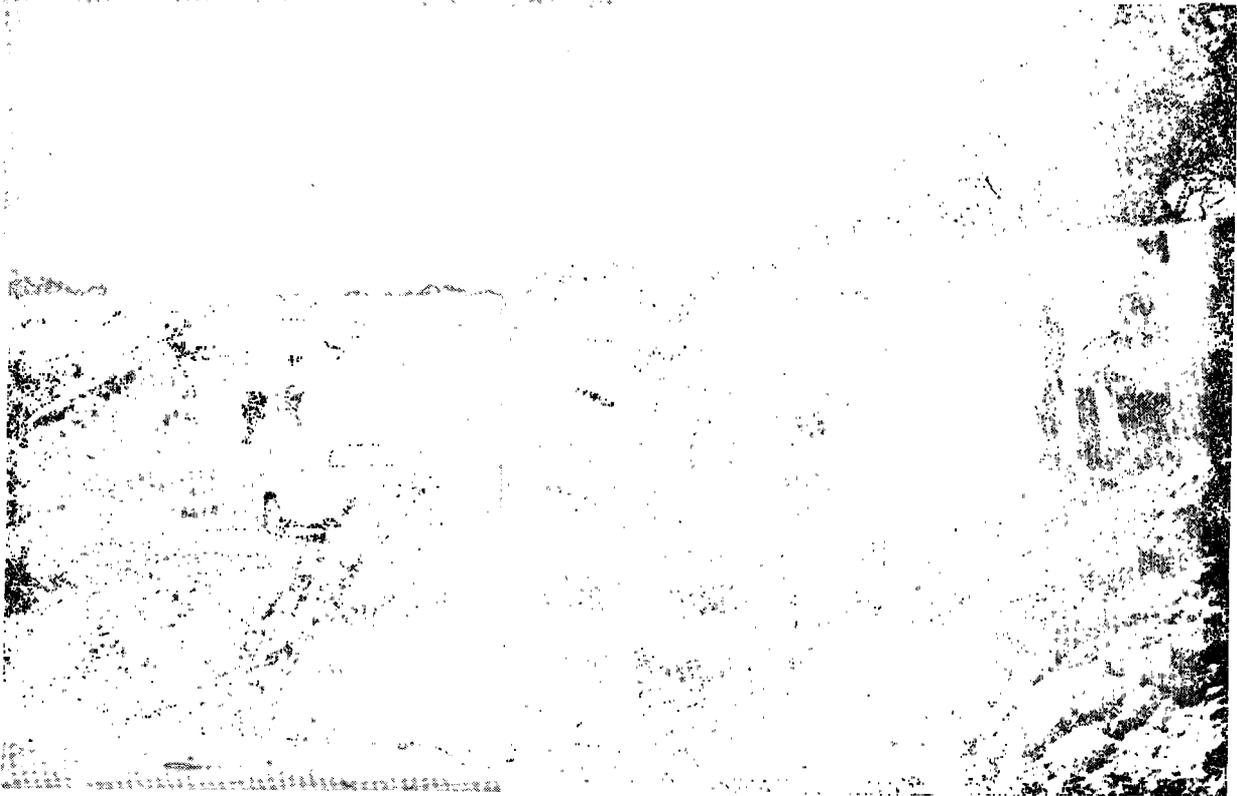


Figure 5
Clearing the rubble in Chimaltenango.
(Mar. 4, 1976) (GAO Photo)

Although damages to commercial, church, and public buildings occurred primarily in the smaller towns, Guatemala City was the only major urban center to incur substantial casualties and destruction. For example, only two of seven first-class tourist hotels continued normal operations after the initial shock and the water distribution system was out in about 40 percent of the city. Only two of seven major hospitals continued to function without major interruptions. One hospital evacuated 500 patients after being severely damaged by the second major shock, and 4 hospitals moved operations to other locations. There were reported shortages of food, water, and beds for patients.

The earthquake seriously disrupted transportation. Routes from Guatemala City through the surrounding mountain terrain to the most damaged areas were blocked. Roads were covered by landslides, bridges were out, and the railroad was disrupted. This hindered officials from immediately assessing the scope of damage and assistance needed following the earthquake.

The Inter-Ocean highway from Guatemala City to Puerto Barrios, the primary transportation link to the outside world, was cut

when the earthquake triggered more than 100 landslides, collapsed a major bridge (see fig. 4), and made a second major bridge unsafe to cross. Although a smaller mountain road was passable, it extended the one-way travel distance 100 miles, increasing the travel time at least 7 hours.

Local telephone lines were down throughout the area and international telephone lines in Guatemala City were cut from 42 to 13. Radio stations were off the air for 6 hours.

Water stations and storage systems were generally intact but many distribution systems were damaged or developed leaks that prevented the water from reaching its destination. Water and sewer lines which paralleled each other cracked, permitting sewage to contaminate the water lines. In Guatemala City, some sections were without water and in others the water was not chlorinated. Water was supplied to these sections by mobile trailer tanks or by U.S.-provided and installed 3,000-gallon, rubberized canvas, water containers placed in the areas. However, keeping them filled was difficult. In the rural areas, water sources were generally available but most distribution systems were destroyed. Partial or complete restoration was accomplished in some areas by self-help and efforts of relief assistance representatives. Eventually, large

water tanks were positioned in the larger population centers and 5-gallon containers were flown to the isolated areas.

The full effects of the earthquake on Guatemala's economy are difficult to assess. At the end of 1975, the country reportedly had a net foreign exchange reserve of \$280 million, including \$70 million in tourist income. Because of the earthquake, 1976 earnings are expected to decline and large stocks of reconstruction materials and manufactured goods will have to be imported. Also, much arts and crafts material was lost in the destroyed homes, and the income from this home industry will be reduced temporarily. However, agricultural foreign exchange earners, primarily coffee, sugar, cotton, bananas, and meat, were not affected and most industrial production capacity remained intact.

The Guatemalans' strong determination to rebuild their country and the degree of assistance from multilateral agencies, voluntary agencies, and donor governments will greatly influence Guatemala's economic recovery. It is obvious, however, that the economic and social effects of the earthquake will be felt for years.

ORGANIZATION OF THE RELIEF EFFORT AND ROLES OF MAJOR PARTICIPANTS

Following the February 4 earthquake, the President of Guatemala appealed to the world community for food, medicines, tents, and other relief supplies to assist his stricken country. The response was generous and immediate. Within hours, planeloads of medical supplies, food, shelter, and clothing began arriving at Guatemala City's airport. By the first week of March, the Government of Guatemala calculated that more than 4,200 tons of supplies from 31 countries had been airlifted to Guatemala. Also, the inestimable services of countless private and public individuals helped relieve the devastation.

The organization of the relief effort by the Government of Guatemala and the roles of the major contributors are discussed below.

GUATEMALAN GOVERNMENT

In Guatemala, the National Emergency Committee is responsible for carrying out disaster relief operations. Established in 1969, the Committee was permanently attached to the office of the President in 1971 with functions similar to that of a U.S. Presidential commission. On February 5 it was reorganized at the President's direction to improve its effectiveness and enable it to coordinate bilateral donor assistance and government efforts. Although the Committee is composed of the heads of several Guatemalan ministries and leaders of business and private organizations, it is headed by the Minister of National Defense, and a group of senior military officers are responsible for coordinating and operating the disaster relief program. DLG 01206

The National Emergency Committee is organized into sections, such as distribution, engineering, intelligence, and warehousing, and is controlled by an operations coordinator. Since its reorganization, the Committee has taken an active leadership role in the emergency phase and, more recently, in planning for reconstruction.

The Committee maintained four warehouses at the airport for food, clothing, medicines, and shelter consigned to Guatemala. Distribution from these warehouses was controlled by the Committee but was not limited to official channels. The Emergency Committee provided supplies and transportation to voluntary organizations which would then redistribute the supplies through their channels.

Information on local conditions and needs in the rural areas or specific re-

quests for assistance were compiled by the Committee's intelligence unit from reports by the military departments, municipal authorities, and other government entities. Allocation of assistance was decided on the basis of this information, analysis of the U.S. assessment survey, aerial reconnaissance photos, and eyewitness accounts from private individuals.

A major subdivision of the Committee was a flight coordination center, jointly operated by Guatemala, the United States, and the Venezuelan Civil Defense Group to make maximum use of available helicopters in distributing relief assistance to otherwise inaccessible areas. United States and Guatemala helicopters were used as a single force, and transportation priorities were established and decisions made on a joint basis.

The Emergency Committee did not directly operate or control donor facilities and personnel, such as the U.S. field hospital, but it would request the donor to center its operation in a particular area or to provide certain types of assistance.

The voluntary agencies received supplies from their own organizations and distributed them through their own infrastructures. We were told the voluntary agencies were permitted to do this because of their well-developed organizations in Guatemala and because the National Emergency Committee did not have the capability to direct every aspect of the relief operation. The large voluntary agencies informed the Committee of assistance provided in order to preclude duplication of efforts.

U.S. GOVERNMENT

The U.S. Ambassador was responsible for the U.S. disaster relief operation. At his disposal were the Department of State, Agency for International Development (AID), and U.S. military contingent incountry, augmented by civilian and military specialists. He designated the AID Mission Director as Disaster Relief Coordinator. The commander of the military advisory mission assumed operational authority over all U.S. military forces in Guatemala and reported directly to the Ambassador.

The AID Mission was responsible for logistical matters, such as marshalling U.S.-provided relief supplies in Guatemala and channeling them to private organizations or Guatemalan agencies for distribution. It also informally attempted to establish an information exchange system to help the voluntary organizations coordinate their programs. Information on local conditions and unmet needs came from the indi-

vidual voluntary organizations, Peace Corps volunteers, National Emergency Committee, debriefings of helicopter pilots, and U.S. military personnel, private groups operating in rural areas, etc. AID established an ad hoc committee to gather, assemble, and distribute the information through a daily bulletin. In addition, U.S. officials referred requests for supplies and other assistance from the voluntary organizations and private individuals to the National Emergency Committee in order to strengthen the Committee's coordination role.

The U.S. military helped to assess the earthquake damage, provided air medical evacuation and supply transportation to otherwise inaccessible areas, and operated an emergency hospital in the hardest hit area. This required additional personnel and material to be integrated into the existing military organization.

Beginning February 5, the U.S. Disaster Area Survey Team from the Southern Command in the Panama Canal Zone made a broad four-phase assessment of the earthquake's impact. It began surveying Guatemala City by road and testing the city's water system for contamination. Subsequent surveys were made by helicopters and random spot checks of the rural countryside. The four phases of the survey included:

1. Initial damage survey in the capital and rural areas.
2. Survey the Inter-Ocean highway.
3. Locate possible landing zones for helicopters.
4. Detailed surveys of small outlying villages by two-man paramedic/communication teams.

The first phase of the survey served as the basis for the U.S. and the National Emergency Committee initial relief effort.

Major U.S. inputs to the disaster relief effort included medical supplies from an AID stockpile in the Canal Zone; a 100-bed, fully equipped and staffed field hospital from the United States; and 17 heavy-lift and utility helicopters from the United States and the Canal Zone. Guatemala asked the United States to concentrate its medical relief efforts in the area most seriously damaged by the earthquake, so the field hospital was situated near the town of Chimaltenango and operated in conjunction with an existing private clinic. It treated 460 people and averaged nearly 36 surgeries a day for the 7 days it operated. The U.S. helicopters flew nearly 1,000 hours to evacuate almost 800 injured people and carry 1,000 tons of cargo.

Other U.S. assistance was provided by numerous technicians and advisors, such as

public health officers, pharmacists, engineers, and a water purification expert. Also, the U.S. AID mission authorized private voluntary organizations to distribute 5,500 tons of Public Law 480 foodstuffs (warehoused in Guatemala for other purposes) for emergency relief.

UNITED NATIONS

The U.N. Development Program, Food and Agriculture Organization, United Nations Children's Fund (UNICEF), United Nations Educational, Scientific and Cultural Organization, and World Health Organization have a total of more than 100 representatives in Guatemala. However, most of them are contract workers who give technical assistance to the Guatemalan Government.

The resident representative of the Development Program, who is the head of the U.N. delegation in developing countries, also represents the United Nations Disaster Relief Office (UNDRO). Created in March 1972, UNDRO is charged with mobilizing and coordinating international disaster relief efforts. It is expected to assist stricken countries with disaster assessments and coordination of relief assistance and to serve as a clearinghouse and point of analysis for disaster information and requirements. It is also responsible for seeking relief contributions from donor governments and participating organizations.

When the earthquake occurred, two UNDRO staff members from Geneva were assigned to assist the U.N. Development Program representative in carrying out the in-country relief operation. They collected information primarily on relief needs which was then relayed to the Geneva headquarters.

UNDRO, Geneva, analyzed the data together with information from other sources and transmitted a summary to potential donor governments, U.N. organizations, and

voluntary agencies, such as the Red Cross. It then coordinated various donor contributions by maintaining a continuous exchange of information among the donors on what the needs were and what each donor had committed itself to provide.

As of March 1, 1976, UNDRO had received contributions of \$756,236 from seven member countries. This money was channeled to relief agencies or to U.N. organizations in Guatemala for local purchase of emergency relief goods.

Also, the U.N. Development Program Resident Representative met with all the U.N. organization representatives in Guatemala to discuss the relief needs and the contribution to be made by each. As of February 22, 1976, relief assistance of about \$3.5 million had been announced by various U.N. organizations, as shown below. Late in February, long after the emergency response to the disaster was underway, UNDRO-U.N. Development Program representatives accepted responsibility for organizing regular meetings among representatives of the voluntary organizations, the Guatemalan Government, and interested bilateral donors to coordinate their reconstruction and rehabilitation activities.

REGIONAL ORGANIZATIONS

In addition to the substantial bilateral contributions of Latin nations, significant contributions were also made by the Pan American Health Organization, and the Organization of American States.

The Pan American Health Organization contributed about \$650,000 for drugs and vaccines, medical equipment and a medical team, and water purification. The Organization of American States contributed \$693,000 to the Guatemalan Government. Most of this contribution is being used to buy roofing materials.

U.N. Development Program	Relief supplies, support for technical team from Economic Commission for Latin America	\$ 30,000
World Health Organization	Medical supplies	100,000
Food and Agriculture Organization/World Food Program	Food supplies	3,200,000
UNICEF	Relief supplies and repair of health centers and schools	175,000
UNDRO	Cash	20,000

PRIVATE VOLUNTARY AGENCIES

Numerous voluntary organizations are participating in both the emergency relief and reconstruction efforts. These organizations are normally involved in nutrition and development programs, but they quickly established emergency food distribution programs, supplied clothing and blankets, and, in some cases, brought in medical supplies and personnel. The major voluntary organizations involved include:

- CARE
- Catholic Relief Services/CARITAS
- The Salvation Army
- The International League of Red Cross Societies/Guatemalan Red Cross
- The Seventh Day Adventist Welfare Service
- The Baptist World Alliance
- Church World Services
- OXFAM/World Neighbors
- Save the Children Federation
- The Mennonite Central Committee
- Comite Evangelico Permanente de Ayuda
- Jehovah's Witnesses

The larger voluntary agencies, such as CARE and Catholic Relief Services/CARITAS, had well-developed infrastructures throughout the country, built up over their long-term involvement in Guatemala. As a result, during the chaotic first days following the disaster, they were receiving information on what was needed from their workers and contacts throughout the country. Goods stockpiled in warehouses for use in ongoing programs were converted to the disaster relief effort. The major voluntary agencies' international organizations supplied other relief materials and quickly put together teams of experts to assist the local Guatemalan organizations. Their extensive infrastructure served as networks to distribute the relief materials to those in need. Thus, the larger organizations carried out relief activities independent of the Guatemalan Government and the bilateral donors.

The smaller voluntary organizations and those without ongoing programs in Guatemala did not have the capabilities to determine what was needed, where it was needed, or how to get it there. They were, therefore, more dependent on the Guatemalan Government for information, direction, and logistics support.

A complete listing has not been compiled showing the assistance each organization contributed to the disaster relief effort; however, estimates of the monetary value of the supplies provided totaled more than \$20 million. In general, food, blankets, clothing, tents, first aid kits, medicines and medical teams, shelter material,

and tools were supplied. These groups also helped clear the rubble in preparation for reconstruction, restore water supply systems, and plan the construction of more earthquake-resistant permanent housing.

BILATERAL DONORS

Many countries, particularly in Latin America, responded quickly and generously to the disaster. Although no statistics are available showing the total bilateral contributions, the Guatemalan National Emergency Committee compiled the following figures on the volume of relief supplies arriving at the airport. These shipments generally consisted of food, medicines, clothing, blankets, and tents.

<u>Latin America</u>	<u>Number of flights</u>	<u>Tons of supplies</u>
Argentina	5	41
Bolivia	1	5
Brazil	4	63
Chile	1	9
Colombia	5	58
Costa Rica	12	(a)
Dominican Republic	1	11
Ecuador	7	33
El Salvador	3	6
Haiti	2	4
Honduras	16	70
Jamaica	1	1
Mexico	37	745
Nicaragua	13	120
Panama	13	56
Peru	2	10
Puerto Rico	2	10
Uruguay	5	12
Venezuela	10	243
		<u>1,497</u>
<u>Other countries</u>		
Belgium	5	21
Canada	12	234
France	2	11
Germany	6	116
Holland	1	(b)
Israel	2	23
Italy	2	(b)
Pakistan	1	10
Spain	20	244
Switzerland	1	1
Yugoslavia	1	(b)
		<u>660</u>
	<u>Total</u>	<u>2,157</u>

a/ Data unavailable.

b/ Less than 1 ton.

The above figures do not include materials that arrived by land or sea. Colombia sent two ships, one with a hospital and the other with prefab housing. The Philippines sent 1,000 tons of rice by ship. Costa Rica sent 10 boxcars of supplies by rail. El Salvador, Honduras, and Mexico delivered large quantities of relief supplies by truck. It was estimated that as of February 21, Mexico had sent 87 truck convoys with 1,641 tons of relief supplies.

Many countries also sent personnel to help in the relief effort. For example, El Salvador provided doctors, nurses, paramedical personnel, and relief workers in addition to food and medicine; Costa Rica sent a field hospital and 254 relief workers; Mexico supplied numerous relief teams, a huge field kitchen with a staff of 68, and 75 road engineers with equipment to clear sections of the Pan American Highway west of Guatemala City.

Venezuela sent in a task force to operate its relief program. This task force was supported by management people, medical and paramedical personnel, troops, civil defense personnel, and firemen from various ministries of the Venezuelan Government.

The Venezuelans worked closely with the Guatemalan National Emergency Committee and the United States and participated in a systematic survey to insure that all medical needs were being met. They provided food, medicines, clothing, and miscellaneous equipment, gave medical assistance in the affected zones, and reestablished potable water in areas assigned to them.

EVALUATION OF THE RELIEF EFFORT AND PROBLEM AREAS

Our report on the relief effort in the Sahel ^{1/} discussed the lack of a good system for organizing, coordinating, and managing the response to that disaster and the problems that resulted. Although the earthquake in Guatemala and the famine in Sahel differ in many ways, we again focused on the management system and its impact on the overall relief effort.

The donors generally agreed that the Guatemalan relief effort was well organized and, overall, successful. We agree that the organizational plan was basically a good one, but several large voluntary agencies operated outside the channels used by other donors, and the U.N. Disaster Relief Office played only a limited role in the relief operation. Also, overall, the operational phase of the relief effort was successful, but there were problems in the assessment phase; there was no centralized information-analysis point to keep track of unmet needs and relief provided; tons of unusable and outdated commodities were received; and a few problems occurred in the U.S. response.

EVALUATION

Relief aid began arriving in Guatemala from neighboring countries immediately after the earthquake and well before the full impact of the damage had been determined. During the first 2 days, assistance came from official and private donors with little attempt at organizing a coordinated effort. However, it soon became apparent that, to be effective, relief operations had to be organized to direct assistance to stricken areas. The National Emergency Committee was reorganized on February 5 and thereafter led in performing this task.

As shown in chapter 2, the Guatemalan Government organized and provided overall management for the relief effort. The National Emergency Committee requested the United States to center its medical assistance efforts within the so-called Chimaltenango triangle, the hardest hit area, and similarly influenced the placement of other bilateral donor efforts. It provided the primary logistical support and other support for the many smaller voluntary organizations.

The Committee received some intelligence on activities in the countryside from voluntary groups and other donors. However, it relied more on its military structure and the U.S. disaster team's surveys to obtain information and also, to-

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gether with the United States and Venezuela, sent out special military paramedic teams to establish communications and survey remote areas for unmet needs.

Key features of the relief effort's organizational structure were the joint flight operations center and central warehousing. All requests for relief that required helicopter transport to rural towns were flown out of the center, using any available U.S. or Guatemalan helicopter. The warehouses were similarly used to control issuance of all government-owned and consigned commodities, which were requisitioned and used by government forces and smaller voluntary organizations.

The donors we talked to generally agreed that the relief effort was well organized and, overall, successful. With several exceptions (discussed in the following pages), we agree that the management system established by the National Emergency Committee was a good one. Also, the needs were met in a relatively short time and therefore, overall, the relief effort must be considered a success. Although we did not attempt to evaluate whether the relief was provided as effectively and efficiently as possible, we did note a number of problem areas in the operational phase.

The Guatemalan relief effort was certainly much better organized and managed than the Sahel famine relief effort. The Sahel experience demonstrates, however, that many developing nations do not have the administrative ability, governmental infrastructure, or resources to organize and manage a major relief effort, even one for which the external inputs were as relatively small as those in Guatemala. Also, Guatemala was aided by strong neighbors, whereas the next major disaster may occur in a developing nation which cannot rely on this aid. This is why our Sahel report proposed the long-range establishment of an international disaster relief agency capable of mounting and carrying out integrated large-scale relief efforts using the donor community's resources. Such an agency should be capable of assessing requirements, managing transportation of relief commodities to the country, and monitoring and actually assisting the host nation as necessary to distribute those commodities. Thus, we believe that the Guatemalan effort reaffirms (1) the need for strong central management and (2) that an international disaster relief agency, capable of performing the above functions anywhere at any time, would be the best system for organizing and managing a major relief effort.

NEED FOR A DETAILED ASSESSMENT

A timely and comprehensive assessment of damages and injuries is essential to the successful operation of a disaster relief effort. It should form the basis for deciding what is needed and what is to be provided. Problems arising later in the relief effort can often be traced to an incomplete or faulty assessment.

In Guatemala, the assessment was a broad-range effort conducted principally by a U.S. Army Disaster Area Survey Team from Panama. The Team was assisted by three professionals from AID's Office of Foreign Disaster Assistance. In addition, a U.S. water specialist surveyed municipal water requirements throughout Guatemala, and a two-man team of U.S. epidemiologists from the Center for Disease Control's El Salvador station provided a valuable assessment of the health situation in certain specific rural areas and advised the Guatemalan Government on establishing and operating a disease surveillance system. The Team's primary function was to assist the U.S. military group in Guatemala in professionally surveying the damage area and estimating the damage situation and general relief needs. Because of a delay in getting to Guatemala, the team began its survey on February 5 by overflying the countryside in a cloverleaf pattern and spot-checking towns and villages. The initial survey and the resulting estimates served as the foundation for U.S. and Guatemalan relief efforts.

The initial phase of the survey provided very rough estimates of the earthquake's aftermath, and it follows that the interpretations of these estimates by relief effort managers, and their resultant decisions, would also be very general. U.S. officials in Guatemala recognized this and continually updated and refined those initial estimates throughout the emergency period. In fact, the final phase of the survey involved the use of two-man foot patrols between February 13 and 20 to search the small, outlying towns and villages and to report on specific unmet medical needs. Nevertheless, important decisions were made based on the team's initial assessments.

While the U.S. assessment team's survey was invaluable in getting an early picture of the destruction and of broad requirements, and certainly should not be minimized, we believe that additional expertise could have been applied earlier to

1/ "Need for an International Disaster Relief Agency," May 5, 1976 (ID-76-15).

get a more refined picture of specific relief needs. For example, as discussed on page 30, the absence of a detailed assessment of medical needs undoubtedly contributed to the United States sending in a field hospital that was not configured to treat serious orthopedic and trauma cases. While the hospital did perform orthopedic surgery, it had to augment its personnel and equipment to perform this function. The U.S. assessment team subsequently recognized that a medical and a logistics expert would be needed on the team in the future. We believe that additional specialized personnel skilled in medical related considerations could have provided additional advice on the decision to bring in the 100-bed field hospital. However, perhaps the water supply survey most clearly illustrates the value of a detailed assessment.

The U.S. assessment team and the Emergency Committee initially recognized the critical need to reestablish potable water sources after the earthquake. It was also recognized that to accomplish this, a more detailed survey of the problem and the needs of each locality would be required. On February 6, a specialist arrived and began a survey of the countryside. On February 10, after completion of the survey, AID ordered about ninety 3,000-gallon water tanks for deployment throughout Guatemala. The tanks, many of which were located in AID's Panama disaster stockpile, arrived on February 12 and were fully deployed and in operation by February 16, restoring emergency water supply systems in Guatemala City and about 60 rural towns. We were told the delay in completing this survey was primarily due to the lack of helicopter support for the water treatment specialist. However, this was nearly 2 weeks after the problem had been initially recognized.

Although the United States has undoubtedly learned a valuable lesson from the Guatemalan experience and would provide a fuller assessment team in future disasters, we have observed that the United Nations recognized the need for good assessments and that this is a key reason the U.N. Disaster Relief Office was established. We believe that UNDRO should be built up to perform this function for the international community in every disaster.

LACK OF CENTRALIZED INFORMATION GATHERING, ANALYSIS, AND SHARING

Although most relief effort participants were receiving information on requirements from their own representatives, no central-

ized point was established to formally gather, analyze, and communicate information to the various contributors operating in Guatemala. The lack of such a mechanism greatly increased the possibility that donors were duplicating each other's efforts or that, more seriously, some areas of the country were being neglected.

For example, the Disaster Area Survey Team's initial damage assessments and estimates of needs for the U.S. and Guatemalan Government were not communicated to the other bilateral donors and voluntary agencies until the U.S. Embassy held briefings for other donors later in the relief effort. On the other hand, these donors were receiving information from their own sources which could not be fully shared with other donors and which could have helped refine and update the Team's information. As a result, many donors made decisions without knowing what other donors were doing or planning to do.

The AID Mission recognized the growing need for communication and information exchange, especially among the voluntary agencies, and subsequently began issuing daily bulletins which informally reported on relief activities and unmet needs throughout the country. At one point, the U.S. considered bringing in a field computer to inventory donated commodities, but it was decided that time would not permit this. Embassy officials told us that this information was fragmentary and, for the most part, unverified; however, several voluntary agency officials told us this information was very useful.

The U.S. military, in its after-action report, recognized this problem and recommended that an "information collection center" be established in future disasters and that it work with the host country's disaster relief organization.

In our view, information gathering, analyzing, and sharing at the country level is essential to an effective relief operation. Furthermore, we believe this function is best performed under the direction and guidance of a single entity. Information coordination is a function that UNDRO could be providing in disaster relief operations in accordance with its coordination mandate. Yet, its representatives in Guatemala did not feel this was among the Office's responsibilities.

VOLUNTARY AGENCIES OPERATED INDEPENDENTLY

In Guatemala it was generally acknowledged that voluntary agencies, with their knowledge of the culture, well-developed infra-

structures, and long-established contacts, were able to make a unique contribution to the relief operation. They were able to mobilize resources from their external organizations and to arrange distribution without burdening the infrastructure of the Guatemalan Government.

When the relief effort began, the larger voluntary agencies greatly expanded their organizations and scope of operations. Therefore, the opportunity existed to channel their efforts into priority areas where their self-contained operations could best contribute while the smaller voluntary agencies had to rely on the Guatemalan Government for logistical and other support. This, however, was not done. Therefore, the large voluntary agencies made their own decisions on where to operate and conducted their operations outside government channels, channels which most bilateral donors and other organizations used.

The voluntary organizations did give summary information to the Guatemalan Government showing assistance provided, but this was done after the fact. Such notification, while useful in preventing duplication by Government-operated programs, did not allow the Government to plan the relief operation to insure the most effective use of all resources. There was a considerable potential for duplication of effort and, even more, for failure to meet all needs as quickly as possible. The lack of a central information point to provide the latest data available on specific needs in each area, assistance being provided by the donor groups in each location, and relief material available, further compounded the potential for problems. For example, in a situation where voluntary agencies may have lacked blankets or the capability to provide water for a particular area, other relief groups (either voluntary or Government-directed) working nearby may have been able to provide the needed service but could not do so because they and the Government were unaware of the unmet need.

While the lack of good documentation in Guatemala and our time constraints did not permit us to evaluate the extent to which these types of problems occurred, we believe that attempts should have been made to make these voluntary agencies a part of the government-established system. This could have been done by establishing a central information gathering and analysis point which would have given a good hour-by-hour picture of what was needed and where. This should have included establishment of a strong liaison function with

these voluntary agencies, so that each side would be aware of the other's activities. We believe that UNDRO should have taken the major role in establishing this information and coordination point.

LIMITED UNDRO ROLE

The U.N. membership established the U.N. Disaster Relief Office in March 1972 to mobilize and coordinate international disaster relief efforts.

The resolution which created UNDRO directed it to:

Establish and maintain the closest cooperation with all organizations concerned and to make all feasible advance arrangements to insure the most effective assistance.

Help the government of the stricken country to assess its relief and other needs and to evaluate the priority of those needs, to disseminate that information to prospective donors and others concerned, and to serve as a clearinghouse for assistance extended or planned by all sources of external aid.

Mobilize, direct, and coordinate the relief activities of the various U.N. organizations in response to a request for disaster assistance from a stricken nation.

Coordinate U.N. assistance with assistance given by intergovernmental organizations.

Receive, on behalf of the Secretary General, contributions offered to him for disaster relief assistance to be carried out by U.N. organizations for particular emergency situations.

Arrangements have been made for U.N. Development Program Resident Representatives to represent UNDRO in developing countries. For example, UNDRO has developed guidelines to assist these representatives in carrying out their UNDRO responsibilities, including working out predisaster cooperative arrangements with host governments and other U.N. agencies incountry and establishing liaison with embassies of the various bilateral donors and with voluntary agencies in the developing nations. In a disaster, the U.N. Development Program's staff is supposed to serve as UNDRO's staff, thus providing UNDRO with "arms and legs" for carrying out its responsibilities.

Notwithstanding the above responsibilities, UNDRO played only a limited role in the Guatemalan relief effort. It did not perform the initial assessment of needs, the U.S. team did. It did not perform a communications or coordination function for donors operating incountry. UNDRO's primary contribution in Guatemala was to collect piecemeal information on needs from various donors and transmit it to UNDRO's Geneva headquarters, where it was summarized and relayed to potential donors. Thus, the UNDRO team did act as a middleman in arranging for contributions from other countries. However, the information was not shared with donor embassies and representatives in Guatemala who were actually planning the responses and were much more involved in day-to-day operations. The UNDRO team told us that it does not consider incountry coordination as part of UNDRO's responsibilities.

Also, the U.N. Development Program Resident Representative in Guatemala made no advance arrangements with the Guatemalan Government or with donor embassies to facilitate communications and operations once the disaster hit. This responsibility was levied several years ago and, in our view, steps should be taken to insure that Resident Representatives in other developing countries have made such arrangements.

In late February, after the response to the disaster was underway, UNDRO and the U.N. Development Program accepted responsibility for organizing regular meetings with representatives of the voluntary organizations, Guatemalan Government, and interested bilateral donors to coordinate their reconstruction and rehabilitation activities. The UNDRO representative felt that the U.S. Embassy staff was better equipped to handle such an undertaking, but the United States encouraged the United Nations to accept this responsibility in an effort to broaden attendance to include Guatemalan groups and other official bilateral donors in addition to the voluntary agencies, most of which are U.S.-based. The UNDRO representative, while accepting this responsibility, made it clear that it did not fit into his interpretation of UNDRO's assigned responsibilities. We agreed that this would be a useful function for UNDRO to perform, but only if it did not detract from UNDRO's primary coordinating responsibilities.

Coordination of a disaster relief effort requires much more than mobilizing contributions. It should include performing the assessment and coordinating donor operations incountry. Assessment need not be made directly by UNDRO, but UNDRO should

be the prime recipient of the assessment data generated. For example, the United States established an informal information-sharing system in Guatemala that the voluntary agencies found very helpful. This is one type of function that UNDRO could be performing. We believe that UNDRO's relatively limited role in Guatemala does not meet the responsibilities of its coordination mandate. Further, it suggests the need to specify exactly what UNDRO's coordination mandate is and what services it can and should be expected to provide for the international community.

UNUSABLE MATERIALS CREATE DELAYS

The volume of relief supplies arriving in such a brief timespan overtaxed the limited Guatemalan logistical facilities. Inappropriate, unsorted, or unidentifiable supplies further burdened the system by drawing away needed manpower and delaying distribution.

For example, U.S. officials estimated that only 10 to 15 percent of the medicines stored in the medical warehouse could be immediately shipped to disaster areas because they first had to be sorted, classified, and packaged. On February 16, a team of U.S. and Guatemalan pharmacists and pharmacy students were in the process of classifying an estimated 38 tons of mixed medicines. The problem became so serious that a U.S. Public Health Service advisor working in Guatemala recommended that donors send only emergency-type medicines that had been sorted, classified, and packaged. He suggested that guidelines to that effect be made available to other governments for future disaster relief operations.

In one town, we observed 9 or 10 Guatemalan military personnel and civilians attempting to identify and inventory 2 rooms of boxes containing unmarked drugs and medicines. None of these personnel were trained pharmacists, so the process was painstakingly slow and inefficient. Some of the drugs were very near their expiration date and would have to be distributed soon to be of any use.

At warehouses operated by a large voluntary organization, we observed containers of unmarked medicines. Because many of the medicines had foreign brand names and were unfamiliar to the Guatemalans, volunteer pharmacy students had to refer to the pharmaceutical guide to correctly identify and classify them. We were told that only 30 percent of the medicines received were usable. The rest were out of date, opened, or unidentifiable.

The food warehouse contained such items as raisin bran, canned sweet corn, yams, and clam chowder—a far cry from the traditional Guatemalan diet of beans, corn, and rice. According to U.S. officials, it was highly unlikely that the rural inhabitants would use these items.

Much of the inappropriate or unusable supplies were from private donors in the United States and other developed countries who wanted to help relieve the suffering of the Guatemalan people. These contributions were spontaneous, uncontrolled, and, for the most part, unorganized, and it would be difficult to prevent this type of situation from reoccurring.

However, part of the problem may have been attributable to the broad and vague appeals that many donors and the Guatemalan Government itself were making for relief items. We believe that an early, detailed assessment and communication to donors of the specific types of medicines, foods, clothing, etc., needed and guidelines for

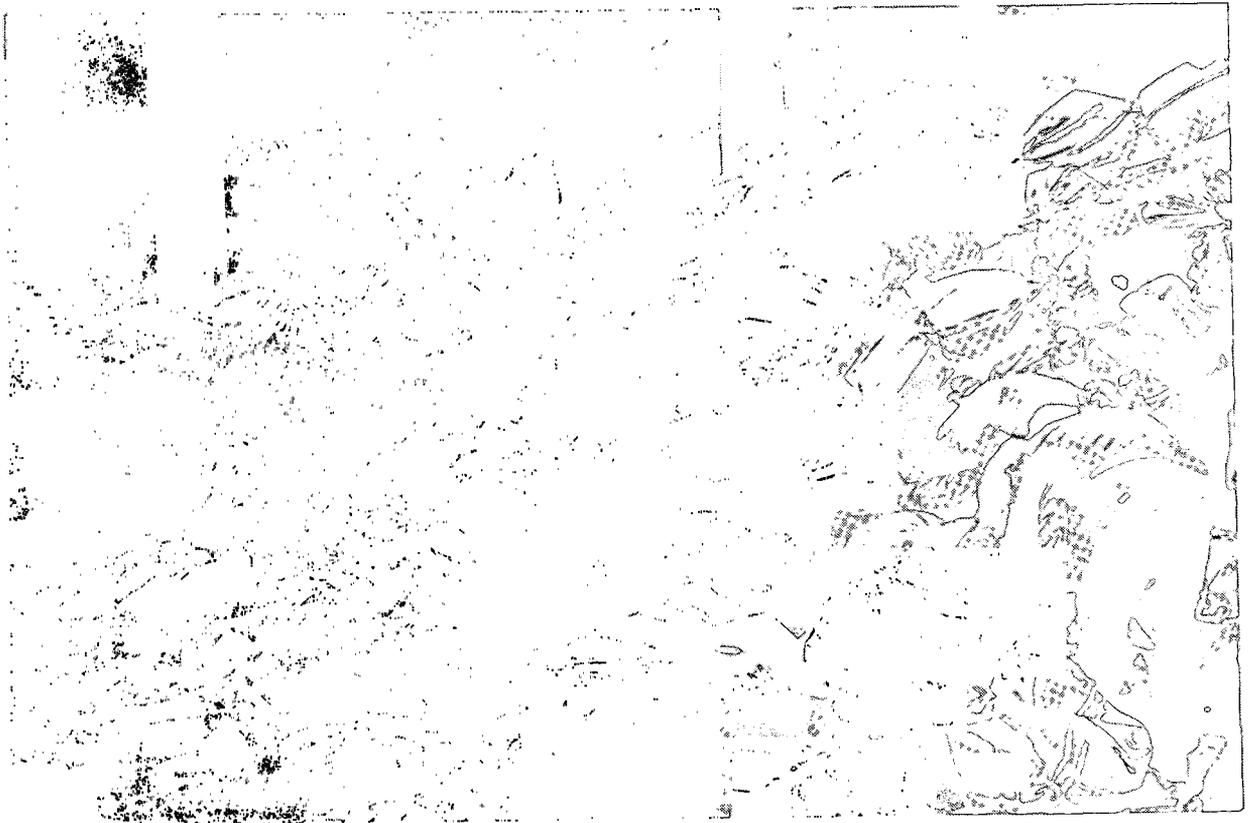
Figure 6 (GAO Photo)
Relief supplies in Guatemala warehouse awaiting sorting and classification before they can be distributed. (Feb. 19, 1976)

sorting those donations could help reduce this problem in the future. There should only be one voice communicating these needs, and this is a function which we believe could best be performed by UNDRO under its coordination mandate.

PROBLEMS IN U.S. RESPONSE

The United States was the largest contributor to the Guatemalan disaster relief effort. In general, the U.S. response was timely, effective, and well managed, and the materials and services contributed were crucial to the relief operation. A number of individuals and groups, both private and official, complimented the efficient and professional manner in which the United States performed its relief missions. We believe, however, that lessons can be drawn from problems experienced that will improve future U.S. disaster relief operations.

For example, critically needed U.S. heavy-lift helicopters did not arrive in Guatemala until February 9 and 10—nearly a week after the earthquake. We were told that this delay was partly due to bureaucratic problems in getting overflight clearance from the Mexican Government on a holiday and partly because the helicopters



were grounded by thunderstorms for 8 hours in Mexico. It was also due to a lack of data in the early hours on which to base the decision to deploy very costly helicopters. In view of the critical need for helicopters in the early days of the relief effort to transport food, medicines, and other relief supplies to rural areas and to evacuate seriously injured people, we believe that this response time should have been faster. Given the logistics problem and leadtime associated with shipping heavy-lift helicopters, the U.S. may wish to rely on other means of transport for incountry operations in the future.

One other reported problem was that the U.S. disaster assessment team was delayed some 6 hours in leaving Panama. This delay occurred in the process of obtaining U.S. authorization to deploy the military force to Guatemala and communicating that approval to the U.S. Command in Panama.

A major problem involved the U.S.—contributed field hospital. On the morning following the earthquake, the Guatemalan Government requested the United States to provide a field hospital for the Chimaltenango area. The U.S. Ambassador requested the field hospital to be staffed and configured to be able to treat approximately 3,000 persons suffering from minor trauma and orthopedic injuries. It was antici-



Figure 7 (GAO Photo)
Residents of Chimaltenango waiting in line to receive clothing. (Mar. 4, 1976)

Figure 8 (GAO Photo)
Donated food and clothing being sorted at the Guatemala City Airport. (Feb. 19, 1976)



pated that the hospital would be needed for 15 to 30 days and should be able to handle only minor surgery, with a substantial portion of the injured treatable as outpatients.

It soon became evident, however, that massive trauma and fractures were the most serious injuries and that the original hospital configuration was not what was really needed. Meetings with other medical groups operating in the Chimaltenango area before the field hospital was installed resulted in a system whereby a Nicaraguan group examined the injured and sent minor injuries to the Guatemalan facility or a private clinic while injuries requiring surgery were sent to the U.S. facility. Thus, the field hospital had to augment its personnel and equipment to handle the 250 surgical cases it received in the 7 days it was in operation. Outpatient care was, for the most part, provided by other medical facilities in the area.

This problem illustrates the crucial importance of a rapid and detailed assessment of relief needs. This assessment should be performed by a team of experts from each field. While the afteraction report of the U.S. military team recognized the need for additional U.S. medical and logistics expertise in the future, as noted elsewhere in this report, UNDRO was assigned this responsibility by the United Nations and it should be built up to perform this function in every disaster.

NEED FOR COMPREHENSIVE HOUSING PLAN

The earthquake caused immense destruction to property throughout Guatemala. Estimates of the number of houses totally destroyed range from 220,000 to 254,000. Regardless of the variation, it is clear that there was substantial destruction. Equally clear is the need to provide both temporary and permanent housing for the earthquake victims. It was generally recognized that a significant effort was needed to provide adequate temporary shelter to the homeless before mid-May—the start of the rainy season.

At the time our team was leaving Guatemala in late March, an analysis of the response to immediate and longer term shelter requirements suggested the need for a better coordinated effort among donor countries and organizations and between them and the Guatemalan Government. A better program plan also was needed to specifically establish requirements, how to meet them, and who will do what and where. The various proposals under consideration as of late March are described below.

GUATEMALAN GOVERNMENT PLAN

In the latter part of February, the National Emergency Committee announced a 100-day crash program to provide basic shelter for homeless earthquake victims before the start of the rainy season. The plan called for erecting 100,000 units, consisting of a roof of 6 or 7 corrugated metal sheets slightly slanted and supported with wooden poles. The units would be open, with no walls. Recognizing that reconstructing all the destroyed homes would be impossible, the plan called for providing some shelter for all, beginning in small towns in the most affected areas.

The 100-day crash program would be implemented by 64 teams of 11 men each who would clear away rubble, salvage all available wooden resources, and help homeowners build the structures.

At the time this plan was proposed, none of these teams had been mobilized nor did the Government have the required amount of metal sheets to build the proposed shelters. In addition, other proposals were under consideration, and no clear plans had been developed to implement such a complex and complicated program.

As of March 22, a reconstruction committee had been established but various plans were still being discussed and little had been done to organize the capabilities of the various voluntary organizations operating in this area.

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Figure 9
Temporary shelters being built in Patzicia
(Mar. 4, 1976) (GAO Photo)

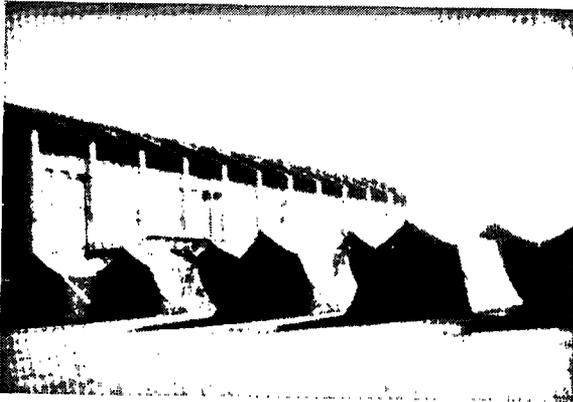


Figure 10
Tents provided for shelter by the International Red Cross in Guatemala City.
(Mar. 11, 1976) (GAO Photo)

DONOR PLANS

U.S. Government

U.S. AID estimated that, in addition to the 100,000 units of temporary shelter, a minimum of 150,000 units of rural and small community housing has to be replaced. AID proposed to assist in this effort by:

1. Providing 500,000 sheets of roofing purchased in the United States at a cost of about \$3 million to be distributed by agencies of the Guatemalan Government and private voluntary organizations.
2. Constructing 400 model homes throughout rural Guatemala to demonstrate improved design techniques. This project would be implemented through cooperatives and private voluntary agencies. Each model would cost about \$500.
3. Instituting a pilot program to construct permanent structures using materials distributed under the temporary shelter program.

OXFAM

OXFAM, a private voluntary agency, began assisting the Guatemalans with their shelter

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needs almost immediately after the earthquake. It bought 125,000 metal sheets and has been selling them to homeless persons, mostly in rural areas, at subsidized prices. The plan is to help the homeless construct temporary lean-to shelters before the start of the rainy season. Later, instruction would be given on how to construct simple "earthquake proof" homes, using the metal sheets as roofing.

CARE

CARE is trying to meet both temporary and permanent housing needs of the homeless victims of the earthquake. Its initial efforts included the purchase and distribution of metal sheetroofing material. CARE received Guatemalan approval to distribute the roofing material without charge to those interested in rebuilding. One example of how CARE was operating involves its cooperative housing project with a Mennonite group helping the people of St. Maria Cauque. At this village, CARE provided the roofing metal for about 200 wooden dwellings to be constructed by the townspeople under the training, supervision, and direction of Mennonite craftsmen.

CARE also distributed a substantial quantity of metal roofing directly to homeless people who used them to construct temporary lean-to shelters.

CARE was also proposing to provide housing for 20,000 families. A specific program to implement this plan had not been worked out. CARE was asking the AID Mission in Guatemala for financial support for the project, and this proposal was under discussion.

Mexico

The Mexican Government became involved in providing shelter for the homeless very early in the relief effort. In Patzicia, which was 98-percent destroyed, Guatemalan military personnel were supervising the erection of prefabricated houses by residents of the town. Mexico provided the materials for the houses, which measure about 15 x 20 feet and are made of wood with corrugated tin roofs. When we visited Patzicia on March 4, about 50 of the planned 200 houses had been completed. They were built in an open field adjacent to the town and were intended to be temporary. We were told that the shelters will be used while rubble is being removed from the town and permanent structures are being built. At the time of our visit, Mexican workers, townspeople, and voluntary groups were clearing roads and removing rubble.

Other proposals

Willingness to help the homeless has also been expressed by various countries, cities, and voluntary organizations through a "sister city" type arrangement. Notwithstanding the good intentions of these offers, there was some concern about their ability to translate their offers into reality. Most of these groups did not appear to have the local personnel and material resources to help much in this matter.

CONCLUSIONS

As of late March 1976, no clear picture had emerged as to how much of the temporary housing needs of the earthquake victims had been met, either through donor programs or self-help measures of the Guatemalans. Substantial quantities of temporary shelter materials had been distributed, but preliminary estimates being developed by an UNDRO/U.N. Development Program-sponsored survey team conducted by the World Friends University indicated a substantial unmet requirement for temporary shelters.

Also, no overall plan had been established which specified what the housing needs were and how they would be met. Most efforts to meet some of the temporary and permanent housing needs have been unilateral actions of a variety of donors, not a part of any overall and comprehensive plan.

Accordingly, we believe there was an urgent need to establish a comprehensive plan to meet the temporary and permanent housing needs of the earthquake victims. This plan would bring some unity to the individual efforts of the various donor groups and establish a combined and totally coordinated attack on the housing problems.

OUR OBSERVATIONS AND SOME
LESSONS FOR THE FUTURE

Overall, the management structure established by the Guatemalan Government for the relief effort was a good one, and the relief effort was basically successful. However, the key to this success was the strong leadership and managerial ability of the Guatemalan Government. Thus, the Guatemalan experience reaffirms the central finding of our May 5, 1976, report--namely, the primary need in international disaster relief is strong, centralized management. We continue to believe that, over the long term, this need can best be fulfilled by a strong international disaster relief agency.

Our analysis of some of the types of problems that occurred also showed a number of lessons that can be learned for the future:

UNDRO informed donor capitals of selected relief requirements and mobilized contributions, but it did not perform coordination or communications functions for donors in Guatemala. Also, the top U.N. representative in Guatemala had not established advance relief coordination arrangements with the government. In our view, UNDRO's relatively limited role did not appear to meet its coordination mandate and suggests the need to clarify just what that mandate is and what services UNDRO can give the international community.

There was no formal central information gathering and analysis point to keep track of unmet needs and of assistance provided. Also, several large U.S. voluntary agencies operated outside government-established channels. To prevent duplication or omission of needs and to insure that needs were met in priority order, consideration should have been given to establishing such an information analysis point which should also have included a strong liaison function with the voluntary agencies. UNDRO is the logical choice for this role in disasters.

Although the U.S. disaster assessment team, assisted by the U.S. epidemiologists and the water specialist, gave the Guatemalan Government an early picture of destruction and of relief requirements, additional expertise could have been used. The problems that occurred demonstrate the crucial

importance of a rapid and detailed assessment of relief needs. This is one of UNDRO's primary responsibilities, and it should be built up to do this.

Tons of unsorted, unsuitable, or outdated clothing, food, and medicines were received in Guatemala, clogging the logistics system and diverting manpower from more urgent tasks. A clearer communication by "one voice" --UNDRO--of the specific types of relief commodities needed could alleviate or minimize this problem in future disasters.

The U.S. relief effort was basically well managed and generous; U.S. disaster assessment experts, helicopters, hospital, and water tanks were invaluable. However, there were a few problems, particularly with the response time of critically needed heavy-lift helicopters. Given the logistic problem and leadtime associated with shipping heavy-lift helicopters, the United States may want to consider other means of transport for future incountry relief operations. Also, the U.S. Army hospital needed to augment its personnel and equipment to meet the primary medical needs.

Our May 1976 report to the Congress recommended that, for the present, UNDRO needs to be strengthened to carry out its relief coordination mandate. For the longer term, however, we felt that the real need was for an international disaster relief agency capable of mounting and carrying out integrated disaster responses using donor community resources. We are, therefore, making no further recommendations at this time. However, we believe that the observations in this report warrant further analysis by the Department of State, AID, and others, so that future relief efforts may be better managed.

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SCOPE OF REVIEW

The major part of this review was made in Guatemala during March 1976. Some information on the U.S. response to the disaster was obtained at the U.S. Army Southern Command in the Canal Zone, at the Department of State, and at AID in Washington, D.C. We visited Guatemala City, Chimaltenango, Patzicia, Santa Maria Cauque, St. Thomas, El Progreso, Antigua, and Chichicastenango, and toured the heavily damaged portions of the Inter-Ocean highway to observe the damage, discuss the quantity and timing of emergency relief, and view the rehabilitation/reconstruction efforts underway.

Our emphasis in this review was on the roles of the Guatemalan Government, major donors, and the U.N. Disaster Relief Office. As such, we did not attempt an in-depth effectiveness and efficiency analysis of the individual assistance efforts. Our work on operations of the individual donors was limited to discussions with the major donors on their contributions to the relief effort.

We also obtained the views of national and local Guatemalan officials, representatives of voluntary agencies (including CARE, Catholic Relief Service/CARITAS, Seventh Day Adventists, and OXFAM), and of UNDRO and the U.N. Development Program and of officials responsible for various aspects of the U.S. disaster response.

APPENDIX I

PRINCIPAL U.S. OFFICIALS RESPONSIBLE FOR
MATTERS DISCUSSED IN THIS REPORT

SECRETARY OF STATE
Henry A. Kissinger

Appointed—Sept. 1973

ADMINISTRATOR,
AGENCY FOR INTERNATIONAL DEVELOPMENT
AND PRESIDENT'S SPECIAL COORDINATOR FOR
INTERNATIONAL DISASTER ASSISTANCE

Daniel S. Parker
Appointed--Oct. 1973