



Office of U.S. Foreign Disaster Assistance

# DISASTER CASE REPORT

Agency for  
International  
Development

Washington D.C.  
20523

## AZORES - Earthquake

Date: January 1, 1980 (FY 80)

Location: Azores islands of Terceira, Sao Jorge, and Graciosa

No. Killed: 69

No. Injured: 600 (90 seriously)

No. Homeless: 21,300

No. Affected: approximately 70,000

Damage: 10,000 residences destroyed or damaged; most historic monuments, churches, and many public buildings, especially on Terceira Island damaged or destroyed; estimated property damage put at \$320-380 million

### The Disaster

The Azores, a group of nine islands about 800 miles west of the Iberian peninsula, are part of Portugal. On the afternoon of January 1, 1980, the islands of Terceira, Sao Jorge, and Graciosa were rocked by an earthquake measuring about 7.0 on the Richter scale. Eleven seconds of violent tremors were enough to bring down most older buildings, including historic monuments, as well as palace, church, and monastery buildings. Damage on Terceira was particularly heavy. Overall some 69 persons were killed and 21,300 were left homeless on the three islands.

The earthquake disrupted electric power, telephone communications, and water supplies for up to three days. Fortunately, schools, hospitals, and police and fire stations were not destroyed. Most residential and government buildings constructed within the last thirty years withstood the quake well and sustained little damage. However, damage to older residences was extensive.

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### Action Taken by the Government of Portugal (GOP) & the Regional Government of the Azores (RGA)

The Government of Portugal took a leading role in the relief efforts. On the day after the earthquake the President of Portugal, visited affected areas along with high-ranking civilian and military officials, and pledged GOP support. Portuguese military aircraft delivered emergency relief supplies and, with the U.S. Air Force, the Portuguese Air Force undertook a photo reconnaissance survey. The Portuguese Air Force also sent a plane to Canada to pick up relief supplies. Seismologists and other scientific personnel as well as a health team were sent to the Azores to assist. The Portuguese Red Cross was also active.

Within 24 hours of the quake, military and civilian authorities, in cooperation with the U.S. Air Force Base personnel on Terceira (see below), had begun to restore services. Basic public utility services and telephone communications were reestablished within three days.

The Regional President of the Azores toured the devastated islands and appointed his deputy as the coordinator of the relief effort. Once the initial relief effort was completed, it became clear that the major task in terms of rehabilitation and reconstruction would be the replacement of housing destroyed by the quake. In order to assess damages, meet the needs of displaced victims, and receive and account for funds, the RGA used its Fundo de Apoio e Reconstrucao-FAR (Fund for Assistance and Reconstruction), into which public and private contributions were made and from which disaster recovery expenditures were taken. To coordinate relief, rehabilitation, and reconstruction activities the RGA created an Office for Assistance and Reconstruction (Gabinete de Apoio e Reconstrucao - GAR) under the direction of the regional secretary.

Within four months of the disaster, the RGA, working through town and village councils, had taken the necessary steps to meet immediate shelter needs of the population. Public works teams inspected houses to determine habitability and needs for construction materials, advised on reconstruction and repair techniques, and distributed pamphlets on building standards for rural housing. The RGA distributed \$1.5 million worth of repair and reconstruction materials, purchased modular prefabricated homes for 130 families, and accepted 100 pre-fab units from the GOP's housing agency.

As of June 30, 1980, the Government of Portugal through the Ministry of Finance, the Ministry of Social Affairs, credit institutions, and the Portuguese Red Cross, had contributed \$6.5 million to the RGA. Contributions from the private sector in Portugal totalled \$2.2 million.

### Assistance Provided by the United States Government (USG)

The U.S. Air Force Base at Lajes on Terceira was not seriously damaged by the quake and remained fully operational. This allowed the base to function as a communications center and depot for relief supplies. Temporary housing in barracks,



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food and 1,480 mattresses and 2,000 blankets from base stores were supplied to over 600 homeless persons. Medical and civil engineering services, and other relief supplies were also made available.

American and Portuguese forces stationed at the base were heavily involved in relief activities. Three medical teams provided supplies and assistance for the towns of Villa Nova and Angra on Terceira. Work details were organized to assist the local population in clearing rubble and other clean-up operations. A civil engineering contingent, including a front-end loader and bulldozer, was dispatched to clear roads to Biscortes, a town severely damaged by the earthquake. Emergency power unit teams and generators loaned from the base kept the hospital and the bakery in Angra functioning until the normal power supply could be restored.

On January 2, the day after the quake, the U.S. and Portuguese Air Forces carried out a joint aerial survey of the stricken islands. In addition to the mattresses and blankets supplied from Lajes base, 1,000 blankets and 700 tents and tent flies were flown in from the U.S.A.I.D. stockpile in Leghorn, Italy.

In the aftermath of the quake a U.S. Geological Service expert was loaned to the Geological Service of Portugal to assist with a seismic study. The work was completed by January 15, 1980 and an official expression of thanks was received from the Government of Portugal.

Azorean-American groups in the New England area, working with the Salvation Army, collected large amounts of relief supplies. Approximately 100,000 lbs. of these supplies on the approved list of the Regional Government of the Azores, including cots, baby food, diapers, baby bottles, and heavy gauge plastic bags, were flown to the Azores on a flight chartered by A.I.D.'s Office of U.S. Foreign Disaster Assistance (OFDA) on January 18, 1980. Additional food supplies were transported free of charge on a "space available" basis by TAP, the Portuguese airline. The remainder of the supplies collected in New England and by other Portuguese-American groups were shipped by sea at a later date. The U.S. military on both the east and west coasts assisted this effort by providing temporary storage facilities and other logistical aid.

In March 1980, OFDA made an additional contribution to the relief effort in the form of 300 cots and tent repair kits. In the following month a second seismic expert was loaned to the Government of Portugal to assist in analyzing new data available and making recommendations for additional studies, seismic zoning, and the establishment of construction codes in areas subject to seismic activity.

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To facilitate a major U.S.A.I.D. contribution to housing reconstruction, two housing consultants were sent to assess shelter needs in the affected areas and to assist A.I.D. Lisbon in planning U.S. assistance. Subsequently, \$5 million in A.I.D. Economic Support Funds (ESF) were made available through the Government of Portugal for housing reconstruction.

Summary of U.S.G. Assistance

DOD costs, including airlift of tents and flies from Leghorn, supplies and food from the Lajes base, feeding and housing of homeless persons on the base, and other labor, transportation, and equipment costs not including the value of approximately 2,000 man-hours of time volunteered by military personnel and their dependents.....	\$243,070
Replacement costs for 700 tents and flies.....	\$108,525
Replacement costs for 1,000 wool blankets.....	\$8,700
Cost of cots and tent repair kits.....	\$4,978
Airlift of donated relief supplies.....	\$56,232
Travel and other costs for geological, housing, and management consultants.....	\$19,678
Total from International Disaster Assistance Funds.....	\$441,183
A.I.D. Economic Support Funds (ESF) in support of housing reconstruction program.....	\$5,000,000
Total U.S.G. contribution.....	\$5,441,183

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

Catholic Relief Services (CRS) - provided some immediate relief assistance, value not reported; proposed a rehabilitation and reconstruction project.

Portuguese-American groups on both the east and west coasts - collected tons of relief supplies.

Salvation Army - solicited garbage bags, diapers, baby bottles, and purchased cots; coordinated the collection and shipment of relief supplies donated by east coast Portuguese-American groups.

Seventh-Day Adventist World Service (SAWS) - cash contribution to SAWS/ Azores for the purchase of blankets, tents, and housing materials valued at \$57,000.

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Private U.S. contributions to the Fund for Assistance and Reconstruction (FAR) of the Regional Government of the Azores totalled \$186,820.

TOTAL \$243,820

Assistance Provided by the International Community

U.N. & Intergovernmental Organizations

European Economic Community (EEC) - cash contribution through UNDRO for the purchase of 605 tents valued at \$145,000.

Governments

Canada - cash contribution of \$69,920.

British Columbia Agricultural Aid Fund - cash contribution of \$833.

France - 100 tents; value not reported.

Switzerland (Government and Red Cross) - in kind contribution of \$42,200 including 100 tents.

United Kingdom - 100 tents; value not reported.

Voluntary Organizations

Canada Red Cross - cash contribution of \$174,750 through the League of Red Cross Societies (LORCS).

Denmark Red Cross - cash contribution of \$2,000 through LORCS.

Germany, F.R. Red Cross - cash contribution of \$24,860 through LORCS.

Greece Red Cross - cash contribution of \$622 through LORCS.

Italy Red Cross - cash contribution of \$2,400 through LORCS.

Luxembourg Red Cross - cash contribution of \$1,550 through LORCS).

Monaco Red Cross - cash contribution \$1,255 through LORCS.

Norway Red Cross - cash contribution of \$1,995 through LORCS.

Sweden Red Cross - cash contribution of \$5,966 through LORCS.

Switzerland Red Cross - see Government.



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United Kingdom Red Cross - in kind contribution of \$7,292 including 15 tents.

In addition, the regional government of the Azores reported the following government and private contributions to its fund for assistance and reconstruction (FAR):

Canada - cash contribution of \$20,000.

France - cash contribution of \$18,350.

Germany, F.R. - cash contribution of \$69,225.

Japan - cash contribution of \$10,170.

United Kingdom - cash contribution of \$11,450.

Other countries - cash contribution of \$8,700.

TOTAL

\$618,538

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