

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON

May 17, 1976

THE ADMINISTRATOR

SPECIAL REPORT TO THE PRESIDENT
ON THE EARTHQUAKE IN ITALY

Mr. President,

In response to your instructions, Vice President Rockefeller and I have completed our assessment of the tragic impact of the earthquake in northeastern Italy on May 6th. Based on our observation of the disaster area and our discussions with officials of the Government of Italy, this report will describe the magnitude of the disaster, the current situation and the general needs.

It is important to point out that the information collected to-date is far from definitive or complete. Thus, we are not in a position to fully describe projects of assistance at this time. To do so, we must quickly refine the statistical information base and together with the Italian Government, assertively design specific programs to meet the needs for relief and rehabilitation. To do this, I plan to send a team of experts to the field to assist in the project development process.

General Situation

The initial shock occurred at approximately 9:00 p.m. local time in northeast Italy, Thursday, May 6th. It registered 6.5 on the Richter Scale and 9 to 10 on the Mercalli Index, a magnitude sufficient for extensive damage. There have been more than 50 aftershocks since then, including a relatively severe one on May 9th. The quake also caused some damage in southwest Yugoslavia and minor damage in southern Austria.

The Provinces of Udine and Pordenone in the Friuli region, within which is the area primarily affected, have a population of approximately 800,000. About 180,000

were in the most severely stricken zone. The official death toll is 903 and 1,742 are hospitalized. There are 80,000 to 100,000 homeless who are being sheltered in tents provided by Italy, the United States and other donor governments and organizations. Adequate food and medical care is being provided by the Italian Red Cross and military units. No contagious disease outbreaks have been reported. The numerous aftershocks caused further damage to many structures. Geologic changes to the terrain have caused numerous landslides and have increased the likelihood of future slides unless engineering actions are taken. Heavy rains on May 13th hampered relief efforts and added to the misery of the homeless, and four towns had to be evacuated because of landslides caused by the rains.

The most severely stricken areas of Udine and Pordenone comprise about 200 square miles. The area consists of an alluvial plain with rugged foot hills and low mountains on the north, gradually ascending to the Carnic Alps.

The people are known for their "tough fiber," independent spirit and capacity for hard work. They have a traditional life style in which family solidarity and religious traditions are firmly rooted.

Primarily an agricultural area with vineyards, farming and livestock, there is some light industry and handicrafts, consisting of woodworking, metalworking and thread spinning. Although the full impact of the quake on what industry exists is not assessed fully, we saw efforts to rebuild a severely damaged kitchen cabinet factory.

Newly planted crops were virtually unaffected, although displacement of small landholders and agricultural workers could cause some disruption in the proper care of the crops and livestock.

I. Assessment of Damage

Damage assessment efforts are at best partial and at worst highly impressionistic, and are colored by the psychological impact of the earthquake. Data collection problems are handicapped by a lack of comparability stemming from the use of different statistical bases and the fact that reconstruction planning is just beginning.

Apart from problems with the reliability of the statistics, understanding the narrow focus of the earthquake

is essential for interpreting the data. The most seriously affected area includes some 50 towns with 180,000 people. The destruction in this area was virtually total. A larger area characterized as having major damage includes an additional 100 towns with an additional population of 350,000 people. The Friuli-Venezia-Giulia region has a population of 1,300,000. There are no major cities located in the most seriously affected area, so an honest appreciation of the degree of suffering experienced, by those in the area cannot be captured by this statistical summary.

A. Physical Damage

1. Housing and other building damage:

a. Housing patterns in the most affected area are predominantly single family dwellings of masonry with tile roof construction. Initial data indicate that approximately 11,000 dwellings were destroyed, and an additional 13,000 damaged (of which 8,000 were heavily damaged). Homeless number approximately 90,000, perhaps 23,000 family units. Damage patterns, of course, vary widely by community. The total number of homes which are uninhabitable may grow as a more definitive assessment is completed.

b. Twenty public buildings (except schools and medically-related facilities which will be discussed separately) were destroyed and an additional 25 severely damaged. (Fifteen more received some damage). Normally, these buildings would house essential civic functions such as police and fire services, distribution of welfare benefits, registration of vital statistics, etc. Since these buildings were designed to house services for the existing population, reconstruction should be simultaneous with dwelling reconstruction. Some 60 churches were destroyed and another 70 were severely damaged. An additional 30 received some damage. The loss in this area is much more significant than the figure would indicate. Not only is the local church a center of religious life, but a focus of community activities and a civic symbol.

B. Agricultural Sector Disruption

Most seriously affected is the local dairy industry, which accounts for approximately 60% of all agricultural production in the two affected provinces, partly due to loss

of stock but more seriously, according to local authorities, through loss of and damage to farm buildings and other farm-related infrastructure. Dairy herds in the area numbered 20,000 head before the earthquake; thus, the reduction is on the order of 10% (see table below). The affected area suffered a major loss of hay and other feed storage facilities, and thus delays in reconstruction will be detrimental to the dairy industry.

Losses in the food processing sector were relatively light. Some wine storage and aging facilities were reportedly damaged, but wine production is not an important product of the immediate area (only 3% of the arable acreage is planted in grapes). In the important dairy product and cheese-making sector, some 60 small firms were reportedly destroyed or damaged severely.

<u>LIVESTOCK DAMAGE</u>	<u>NUMBER</u>
Destroyed	600
Not Producing	1,500 - 2,000
<u>FARM BUILDINGS</u>	
Destroyed	8,000
Damaged	7,000

C. Regional and Rural Services and Administration

Despite the widespread destruction of public buildings in the areas most seriously affected, essential local services were restored almost immediately. Variations exist, of course, but police functions were not seriously disrupted (and were in any case immediately reinforced). Disruption of secondary administrative and public services was heavy in the seriously affected areas. Services aimed at maintaining a flow of welfare benefits to those affected have been restored and are reaching relocated people. Some measures enacted by the GOI have worked to reduce the burden on local and regional administrative services; for instance, extending the filing date on tax returns and suspending the bankruptcy provisions of the law.

Particular importance has been given to restoring postal and telegraph facilities.

D. Social Services

Since emergency health services were provided to the earthquake victims, a complete assessment of damages or disruption in the provision of such services has not been made. Out of a total 9,000 hospital beds available in the affected Provinces of Udine and Pordenone, facilities containing 1,500 beds were moderately or severely damaged, and a 400-bed hospital under construction was also damaged. In the most affected rural areas, medical services are provided by doctors who have offices in their homes, and to a certain extent by pharmacies also located in homes. Disruption of these services is undoubtedly extreme in the areas most seriously affected since it is assumed that such homes were also destroyed.

Classroom destruction in the area is estimated at 500 to 600 units, affecting some 12,000 students which represents about 15% of the Udine provincial school population. The major damage is at the elementary school level since these schools are found in the small towns in the most devastated zone. The Ministry of Public Instruction in Rome has ended the school year and because of the disaster, the educational staff has been made available to the local communities to be used, as necessary, for emergency purposes. The GOI is considering providing pre-fabricated classrooms by October when the next school year begins. There is a three-month leadtime for provision of such prefabs.

E. Disruption to Industrial Base, Consequent Unemployment, etc.

Principal industries (those employing more than 3,000 workers in all) are furniture manufacturers, textiles, construction, food processing and metalworking. Of approximately 14,000 firms employing some 70,000 persons in the affected area, the majority employ less than 25 persons and at least 50% employ less than 10 persons. Most of the buildings that house these small firms also serve as dwellings. Many retail outlets, hotels and restaurants also serve as residences for immediate or extended family members.

1. Estimated number of jobs lost due to the earthquake (not including employees in cottage industries):

a. Furniture/Woodworking	1,600
b. Textiles	700
c. Construction	1,200
d. Metalworking	2,100
e. Food Processing	500
f. Paper	1,200
g. Other	1,000
TOTAL	8,300

2. Estimated number of firms destroyed or damaged:

<u>TYPE</u>	<u>DAMAGED OR DESTROYED/ TOTAL IN AREA</u>
Industries (over 10 employees)	240/-total unknown
Commercial Activities (wholesale/retail)	2,200/3,500
Cottage Industry (less than 10 employees)	2,800/4,900

F. Economic Impact

With an upturn in the fourth quarter of 1975, the Italian economy was beginning to recover from the 1973-75 recession. Unemployment and inflation are still serious. However, there are plans for long-term industrial development to reduce economic imbalance, which is an important factor in Italy's high rate of inflation.

The two provinces most heavily damaged, Pordenone and Udine, together contribute only slightly more than one percent to the overall national income. The disruption caused by the earthquake should have an imperceptible impact on Italy's balance of payments. There should be little effect

on national prices since the region is not a major supplier of any high-demand product. The building industry in the region has considerable unutilized productive capacity available for reconstruction.

The work force of the two devastated provinces is approximately 300,000 out of a total population of 800,000. The Government's assistance program for the two provinces should blunt the national effects of increased unemployment while reconstruction of productive enterprises takes place.

Lost revenue plus the emergency relief expenditures would increase the national budget deficit by \$588 million to \$1.8 billion. The U.S. Embassy in Rome, therefore, feels that the impact of the disaster at the national level is manageable even under the present economic circumstances.

II. Disaster Relief

A. Immediate Relief Efforts

1. The Government of Italy deployed 5,000 troops immediately following first reports of the quake, and Italian Red Cross authorities in the northern provinces mobilized all available resources, including medical personnel and supplies. Forty-four helicopters and 7 C-130's from the Italian military forces were deployed for rescue, reconnaissance, and delivery of supplies. They have evacuated more than 600 victims. Eight engineer battalions and six separate engineer companies have been used to search for victims and to clear debris, with the assistance of local units of the Fire-Fighting Service. Elements of the Italian military forces are operating field kitchens, providing temporary shelter and helping victims with other problems such as potable water and sanitation facilities. The Italian Red Cross is supervising all medical and sanitation requirements, and the Italian police (Carabinieri) are directing all traffic.

2. The United States, through Ambassador Volpe, immediately provided six helicopters for medical evacuations, for aerial reconnaissance and for carrying supplies. They were deployed from the U.S. Air Force Base at Aviano, about 25 miles southwest of the earthquake area. Ambassador Volpe also ordered the U.S. Consul in Trieste into the area to make a more accurate assessment of deaths, injuries, and destruction, and to recommend U.S. assistance in response to requests from Italian officials.

3. Since the most urgent need was temporary shelter, 100 tents were supplied by the 40th Tactical Group at the U.S. Air Force Base in Aviano on May 7th. In addition, they provided a generator and temporary lighting system, a large quantity of ready-to-eat field rations, blankets and medicine. AID authorized the release of 120 six-person family tents the same day from its regional disaster relief stockpile at Camp Darby in Leghorn, Italy. On May 8th, an additional 500 family tents were dispatched by AID to the disaster area from Leghorn. These family tents were designed by AID disaster relief specialists and industry specifically for disaster situations and are stockpiled at various locations throughout the world.

4. Other donor responses to requests for assistance included a complete field hospital and 200 personnel from Canada, 90 four-man tents and the services of a reconnaissance plane from the United Kingdom and 150 tents from the Netherlands. The Federal Republic of Germany dispatched 250 tents and 25 personnel to erect them. Austria sent in 100 army trucks and men to aid in the relief effort and the Danish Red Cross airlifted 26 tons of blankets, baby food, and dried milk to the area. Most of the above assistance was coordinated through NATO facilities using existing NATO communications links.

B. Post-Immediate Relief Phase

1. Italian Efforts

Following the immediate response to the disaster by Italian and United States agencies, as well as neighboring countries, the magnitude of the devastation and the needs of the victims became clearer. The Government of Italy appointed the Under Secretary of the Ministry of the Interior to coordinate all Italian and international efforts in the zone. He is now headquartered in Udine. Other nations and international organizations continue to offer additional assistance and contributions to the Italian Government.

On May 12th, the GOI Council of Ministers approved a Disaster Relief Decree which will provide approximately \$450 million to be distributed in the following manner:

Approximately \$236 million	Regional relief funds
Approximately \$118 million	Industrial reconstruction to be administered by Provinces of Udine and Pordenone
Approximately \$50 million	Central government
Approximately \$46 million	Ministry of Interior for direct relief assistance to quake victims
TOTAL	\$450 million

Italian press reports describe a broad range of reconstruction and relief activities announced in the Decree. These are the major points:

a. Cash benefits for wage supplements, increased unemployment payments, cash payments to pensioners, self-employed workers, and families who have members killed or injured and credits for grants for industrial reconstruction.

b. Funds will be provided later for reconstruction of private housing.

c. All public buildings such as schools and hospitals will be rebuilt.

d. Tax declarations have been postponed and military draft can be fulfilled by draftees who volunteer for civil service in Udine and Pordenone.

2. U.S. Efforts

On the morning of May 9th, a U.S. Air Force convoy departed Aviano Air Base for Forgaria with 89 military personnel and heavy equipment from the 40th Tactical Group to assist in clearing debris and with the demolition of dangerous structures. They are continuing operations. The Engineer Platoon of the U.S. Army's 509th Infantry from the NATO Base at Vicenza has been operating since the morning of May 12th in the Osoppo area. Tents provided by the U.S. Government through AID and the U.S. military are currently housing about one-half the victims of Osoppo whose homes are destroyed or severely damaged. Total U.S. assistance to-date is valued at \$627,071. (See TAB A).

3. Other Donor Efforts

Virtually all of the assistance from member countries of NATO was coordinated through NATO facilities, and most of the personnel and material was sent from their units stationed nearby. France, Canada, West Germany, Denmark and Greece all responded to requests from the Government of Italy with search teams, helicopters, water purification units, blankets, tents, heavy equipment and other urgently needed requirements (See TAB B).

Eighteen sister societies of the Italian Red Cross have donated almost \$900,000 in cash and in-kind through the League of Red Cross Societies (LICROSS) and the European Economic Community has donated 150 metric tons of skimmed milk powder. Catholic Relief Services has contributed over \$80,000 in supplies and cash. We are unaware of any UN relief efforts through the UN Disaster Relief Office or otherwise.

III. Rehabilitation and Reconstruction

A. Italian Efforts and Programs

The Government of Italy perceives Rehabilitation and Reconstruction as being the last two phases of a three-phase program.

- Phase I entails the provision of emergency relief. Tents, medical supplies and food are the prime elements of this phase.
- Phase II amounts to relocating the homeless from tents into intermediate shelter. During this phase, which must be completed by Fall, the GOI intends to complete all planning for Phase III.
- Phase III is the reconstruction effort which embraces the restoration and reconstruction of dwellings and returning destroyed communities to their pre-earthquake status.

The GOI expects all three phases to run over a two- to three-year period with costs ranging from \$1.5 billion to \$3 billion. This should provide permanent dwellings, schools, and health facilities to some 90,000 people whose lives have been adversely affected in varying degrees by the earthquake.

Phase III also includes repairing and reconstructing industrial and agricultural facilities which were affected by the earthquake. All in all, the GOI has two overriding objectives:

- to quickly restore the communities to pre-quake normalcy.
- to ensure that the affected population either returns to restored homes or is provided new dwellings in the communities in which they have lived. Relocation of the population to other, perhaps less earthquake-prone areas, is not being contemplated as the local populace has made it very clear that relocation is totally unacceptable.

B. Assistance from the United States

Our overall strategy is to devise a package of programs which are both qualitative and quantitative in nature and which serve to catalyze certain aspects of the Italian and other donor assistance efforts. We see definite promise in the following areas:

- technical assistance to assess structural damage to determine which houses, factories, public buildings and cultural and historic structures can be saved for renovation and which must be razed.

- technical assistance in structural engineering, especially for building footings and foundations.

- provide small-scale technology concrete-block production units to assist local populations to begin on-site reconstruction of dwellings.

- provide suitable roofing and structural support materials for the reconstruction of dwellings in a more earthquake-resistant manner.

- provide small tractors and wagons to community governments to be used for community efforts in removal of debris and in transportation of building materials and livestock feed.

- provide communications equipment for community use, to permit community leaders to exchange instructions and information with outlying smaller communities.

-- the use of a field computer terminal, hooked up to Washington and perhaps the capitals of other major donors, to accelerate the planning/logistical process.

-- the use of high altitude photography combined with LANDSAT imagery to develop a complete picture of the relationship of the communities to their environment. There is in the area a shortage of certain building materials and we may be able to identify both mineral and building resources which the local areas may not be aware of.

-- extremely sophisticated geologic assessment to identify faults, major areas of sliding, areas prone to subsidence and slippage. Our goal is to prevent the construction of houses in those locales which might be extremely prone to damage resulting from the quake.

C. Coordination of U.S. Efforts

In order to carry out this strategy, we plan to send in a small, highly specialized AID team to work with the Italians in the development of projects. With the help of this team, which can tap other U.S. Government agencies' capabilities, we plan to concentrate on the following areas:

1. Technology Resources

In my meetings with Italian officials, I repeatedly made the point that the United States and Italy have a unique opportunity to combine their technological resources for the benefit of the earthquake victims. The United States is an earthquake-prone country which has had its own share of suffering in such disasters as the San Francisco earthquake and more recently the "Good Friday" Alaska earthquake. In responding to earthquakes affecting our country and other countries, such as Guatemala and Nicaragua, the United States has had the opportunity to develop highly specialized expertise -- but we are also aware of shortcomings in the overall field of disaster prediction, preparedness and relief. With the earthquake in Italy, we have an opportunity to combine resources with an ally which can be of benefit not only to our countries, but also to NATO and the rest of the world.

In the fields of geology and structural engineering, the GOI has considerable expertise on-hand. Our hope is to be able to identify U.S. experts who have worked in applying geology, structural engineering, high resolution aerial photography, and satellite imagery to small areas. The challenge is to transfer high technology to meet fundamental

needs. A member of the AID team which will soon arrive in-country will be experienced in science and technology. We have not yet identified all the technological resources which the GOI has on-hand. We should be able to complement Italian scientific and technological expertise with U.S. experts to meet the needs of the affected population.

2. Social and Public Infrastructure Assistance and Planning Capability

We should propose to offer planning resources and positive courses of action for the restoration of social/community services and their infrastructure, we can be of great assistance to not only the people of Italy, but to their government. At this point, our course of action is to:

- offer computer modeling services in the field of earthquake relief, rehabilitation and reconstruction.
- determine forms of shelter which might be acceptable to the affected population.
- identify a variety of transportation and construction equipment which can be used on a small scale to assist the people in their efforts to rebuild their homes and with their own hands. From my meetings, I am left with the definite impression that the people will not move away and definitely do want to erect structures similar to the ones they previously inhabited. The challenge is thus not only to identify equipment to assist them in their self efforts, but also ensure that they are following sound structural practices -- such as the use of pre-stressed and reinforced concrete. As much of the industry in the area is cottage industry, hopefully this equipment can be used in a variety of applications which might improve their own small-scale industrial base.

Mr. President, the Government and the people of Italy, especially those of the Friuli area, have responded to this calamity in a rapid and commendable fashion. We admire the public at large and as well, the private citizens and the victims themselves who all joined in relieving the suffering of their neighbors and countrymen. As in any disaster situation, there were initial problems of communication and coordination, but these were quickly overcome. We also wish to commend the units and personnel of NATO which provided invaluable support in coordinating and delivering relief personnel and supplies.

Officials of the Government of Italy and the Friuli area asked that we convey to you the thanks of their people and many of the citizens with whom we spoke expressed gratitude to the people of the United States.

The Decree which the Government passed on an emergency basis for the relief of the victims should alleviate the short-term economic problems of the affected populace and their long-term plans should expedite a return to normalcy in the area.

We wish to express our gratitude for the assistance of Ambassador Volpe and the U.S. Country Team, as well as the elements of the U.S. Armed Forces which provided us with necessary services. The people of the United States should be proud of the expeditious and professional response which was provided. As outlined above, we shall continue to provide assistance to the Government of Italy in concert with their wishes.



Daniel Parker
President's Special Coordinator
for
International Disaster Assistance

TAB A

U.S. DISASTER RELIEF ASSISTANCE

Helicopter support and initial relief costs	\$ 25,000
283 tents (U.S. Army and Air Force)	180,000
1,050 tents (AID stockpile - Camp Darby)	246,316
Foodstuffs (military field rations)	50,000
U.S. military earthmoving equipment -- rubble removal and clean-up	70,000
Blankets, sheets, stretchers, medical supplies	13,000
TDY of U.S. foreign disaster relief specialists	13,755
Communications support	4,000
U.S. Army Engineer Unit (68 men)	25,000
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Estimated Total	\$627,071

OTHER COUNTRY DONOR ASSISTANCE

<u>Austria:</u>	131 man relief detachment, 54 trucks, 1,420 tents, 2,000 mattresses, 10,000 sheets, other supplies. Cash assistance of \$240,000
<u>Australia:</u>	Cash donation of \$45,000
<u>*Canada:</u>	Field hospital with medical support unit, 200 man engineer detachment, 3 helicopters, water purification units, other supplies
<u>*Denmark:</u>	26 tons of baby food, blankets, 2 generators, 8 ambulances, 60 firemen
<u>*Federal Republic of Germany:</u>	264 tents, 750 beds, 5,250 blankets, 1,500 air mattresses, laundry facilities, 26 technicians, one self-supporting battalion of engineers
<u>*France:</u>	120 man search team, 29 vehicles, 2 generators, 8 ambulances, 60 firemen
<u>*Greece:</u>	130 tents, foodstuffs, other supplies
<u>*Luxemborg:</u>	Tents
<u>*The Netherlands:</u>	1,900 beds, 145 tents
<u>Sweden:</u>	Cash donation of \$240,000
<u>Switzerland:</u>	Helicopter support, surgical teams, search dogs, medicines, milk, and tents. Cash donations of \$200,000. 100 tents, 100 beds, 2,000 blankets, plasma and foodstuffs
<u>*Turkey:</u>	100 tents, 100 beds, 2,000 blankets, powdered milk, plasma and food
<u>*United Kingdom:</u>	90 tents, 360 camp beds, 360 sheets, 720 blankets, 90 water purification units, RAF photo-reconnaissance plane, vaccines and other supplies
<u>Yugoslavia:</u>	Cash donation of \$57,000
<u>League of Red Cross Societies (LICROSS) Geneva</u>	Cash donation \$886,000
European Economic Community Financial Assistance	\$112,000
*NATO Member	

VOLUNTARY AGENCY ASSISTANCE

As of May 15, 1976

American National Red Cross	\$25,000
Baptist World Alliance	2,000
Catholic Relief Services - Cash Donation of:	
\$25,000 plus 10,000 blankets and other relief supplies valued at \$55,000	
Total CRS Contribution	80,000
The Salvation Army	10,000
Save the Children Federation	10,000
Seventh Day Adventist World Services relief supplies valued at	13,000
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TOTAL	\$140,000