

# The BIG earthquake

## that stopped the time!



On December 7, 1988, at 11:41 a.m., 40% of the territory of Armenia turned into the calamity zone in a blink. A magnitude 6.9 earthquake shook northwestern Armenia and was followed four minutes later by a magnitude 5.8 aftershock. Swarms of aftershocks, some as large as magnitude 5.0, continued for months in the area around Spitak. The earthquakes hit an area 80 km in diameter comprising the towns of Leninakan, Spitak, Stepanavan, and Kirovakan.

The earthquake epicenter was located in the Lesser Caucasus highlands, 80 km south of the main range of the Caucasus Mountains.

Despite its moderate size, the deaths and damage that the earthquake caused made it the largest earthquake disaster since the 1976 magnitude 7.8 earthquake in Tangshan, China that killed more than 240,000 people. The Town of Spitak (population 25,000) was nearly leveled and more than half of the structures in the City of Leninakan (population 250,000) were damaged or destroyed. Damage also occurred in Stepanavan and Kirovakan and other smaller cities. Twenty-five thousand were killed and 15,000 were injured by the earthquake. In addition 517,000 people were made

homeless. However, 15,000 people were rescued. Most of these rescues were made within the first few hours following the disaster.

Many factors contributed to the magnitude of the disaster, including freezing temperatures, time of day, soil conditions, and inadequate building construction. A large

number of medical facilities were destroyed, killing eighty percent of the medical professionals. In this earthquake both design deficiencies and flawed construction practices were blamed for the large number of building collapses and resulting deaths. Many of the modern multi-storied buildings did not survive. Soil conditions also contributed to building failures. The high death rate may in part be attributed to the way the buildings fell apart. When concrete floor panels about three feet wide collapsed into compact rubble piles, little open space was left where trapped people might survive. The proportion of survivors



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on upper floors added to the collapsed into compact rubble piles, little open space was left where trapped people might survive. The proportion of survivors among people trapped in the rubble of multi-storied buildings was approximately 3.5 times higher for the ground floor than for higher floors. The collapse

of a large number of apartments which had many occupants on upper floors added to the number of fatalities.

While the earthquake exposed the flaws in the construction, it also exposed

the good in people around the world.

*The cooperation of international teams in rescue efforts, the willingness of groups everywhere to contribute financial aid, and especially the undaunted determination of the Armenians themselves to rebuild their cities and their lives are worthy of commendation.*



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December 7, 1988 - "the black page" in the history of Armenia

