Earthquakes Kill Nearly 90,000 In 2005

January 23 2006

Although there were fewer deaths worldwide in 2005 due to earthquakes, more than 89,353 casualties were reported, according to the U.S. Geological Survey (USGS) and confirmed by the United Nations Office for Coordination of Humanitarian Affairs (OCHA). Nearly all of the fatalities for the year, more than 87,000, occurred when a magnitude 7.6 hit Pakistan on Oct. 8.

In 2004, the third deadliest earthquake year on record, over 283,000 perished in the Dec. 26 magnitude 9.0 Sumatra quake and related tsunami. This event was likely the trigger for a magnitude 8.7 quake, which struck the adjacent zone of Sumatra on March 28, 2005. This earthquake left 1313 people dead and was the largest temblor for 2005.

The deadliest quake of 2005 was the 7.6 in northern Pakistan, killing 87,351 and injuring more than 69,000. Extensive damage occurred in the Muzaffarabad area, Kashmir, where entire villages were destroyed, and at Uri where 80 percent of the town was devastated.

The most notable U.S. quake occurred offshore Eureka, Calif. This magnitude 7.2 event on June 15 was widely felt onshore and triggered tsunami warnings in several communities from Washington to Mexico along the Pacific coast. A series of smaller events on the southern end of the San Andreas Fault followed, with the largest magnitude being 5.2.

The largest onshore earthquake recorded in the United States during 2005 was a magnitude 5.6 in western Montana that produced no fatalities, but was felt as far as Denver, Colo., Seattle, Wash., and

Calgary, Alberta, Canada.

To see a complete list of noteworthy seismic events for the year, go to: neic.usgs.gov/neis/eq_depot/2005/

The USGS locates about 80 earthquakes each day or almost 29,000 a year. On average, there are 18 major earthquakes (magnitude 7.0 to 7.9) and one great earthquake (8.0 or higher) each year worldwide. Several million earthquakes occur in the world each year, but many go undetected because they occur in remote areas or have very small magnitudes. In the U.S., earthquakes pose significant risk to 75 million people in 39 States.

Under the authority of the National Earthquake Hazards Reduction Program (NEHRP), last reauthorized by Congress for the years 2003 to 2008, the USGS is mandated to monitor earthquakes and provide earthquake warnings and notifications. It is the only agency in the Government that provides this service nationwide.

The USGS and its partners operate a nationwide earthquake monitoring system that provides warnings, assesses seismic hazards, records earthquake activity and provides information essential in the design of building codes for new construction and retrofitting of existing structures.

Timely information on the distribution and severity of earthquake shaking in urban areas is used to direct emergency response and to minimize disruption of lifelines and infrastructure. Data on earthquake shaking is used in the design and construction of safer, more earthquake resistant, future buildings and structures.

Although significant progress has been achieved in earthquake research and mitigation, earthquake risk is still high, especially in places in the

world where population growth and lack of earthquake-resistant structural design standards have put more and more people at risk.

In the U.S., the USGS and partners are working to improve earthquake monitoring and reporting capabilities to speed earthquake response efforts while at the same time minimize economic impact and enhance business continuity. Central to this goal is construction of an Advanced National Seismic System (ANSS) designed to improve earthquake monitoring and reporting infrastructure.

This effort has resulted in the installation of over 500 new earthquake-monitoring instruments in vulnerable urban areas including San Francisco, Seattle, Salt Lake City, Anchorage, Reno, Las Vegas, and Memphis. Full implementation of the ANSS will result in 7000 new instruments on the ground and in structures.

Where fully constructed, the ANSS provides emergency response personnel with real-time (within 5-10 minutes of an event) information on the intensity and distribution of ground shaking that can be used to guide emergency response efforts and rapidly estimate casualties and economic loss. Information on building shaking will equip engineers with the data they need to improve building designs in the future.