

Earthquake deaths predicted to soar

David Perlman, San Francisco Chronicle, 2-26-13

With populations growing in the world's earthquake-prone regions, catastrophic quakes will kill more people during this century than ever before, scientists at the U.S. Geological Survey warn.

Thomas L. Holzer, an engineering geologist at the survey's Menlo Park offices, and James Savage, a retired survey seismologist, estimate that 21 earthquakes with death tolls greater than 50,000 - the kind they term "catastrophic" - will occur around the world before the end of this century, while only seven such killer quakes were recorded during the 20th century.

"It's not that we're having more earthquakes, it's that more people are living in seismically vulnerable buildings in the world's earthquake zones," Holzer said.

Earthquake fatalities around the world will reach at least 3.5 million in the 21st century - more than double the 1.5 million in the 20th century, the scientists forecast.

"And unless we take this issue of vulnerable buildings seriously, we're going to see even more catastrophes before the end of this century," Holzer said.

The current century began "most ominously," the scientists noted, when at least 700,000 people died in just seven deadly quakes within the first 10 years - an unprecedented decade of catastrophe, they reported.

The scientists based their forecast on U.N. estimates that the world's population will reach 10 billion by the end of this century. They combined that number with historic records of earthquake-prone regions where building standards are known to be weakest. Fatalities from major quakes have been estimated as far back as A.D. 1500, and modern records of quake deaths are known to be reasonably accurate.

"California and Japan have shown slow progress in designing quake resistance in their buildings," Holzer noted. "But in countries like China and Iran, and all along the front region of the Himalayan range, entire cities from Kathmandu to Delhi are particularly vulnerable to catastrophic quakes."

Their statistical study is published in the current issue of Earthquake Spectra, the journal of the Earthquake Engineering Research Institute, a national organization operating out of Oakland.

"There is no question that we are currently seeing a rapid increase in the number of catastrophes from earthquakes," said Richard Allen, director of UC Berkeley's Earthquake Engineering Laboratory, who was not involved in the study. "Therefore, we should not be complacent about the earthquake risks we face in the coming decades and ensure that we are taking reasonable actions to push back on the increasing trend in the number of fatalities."