

Turns out it's an average year for earthquakes

Bruce Newman, Bay Area News Group, 4-15-10

For many Californians, it is science fiction's ultimate doomsday scenario: A large earthquake in another part of the world ignites a long seismic fuse that races around the globe, unleashing a cataclysmic quake here.

On the heels of Tuesday's devastating earthquake in China — a magnitude 6.9 event, according to the U.S. Geological Survey in Menlo Park — it seemed like a plausible idea. "It's certainly a question we wrestle with," said USGS seismologist Tom Parsons. "How linked are these earthquakes?"

As it turns out, not very.

April shakers in Sumatra (7.7) and Mexico (7.2), an 8.8 monster off the coast of Chile in February, and January's ruinous 7.0 Haiti quake left so many people nervously wondering whether the apocalypse was imminent that the USGS issued a news release Wednesday under the headline, "Is Recent Earthquake Activity Unusual? Scientists Say No."

The USGS found that since 1900, the annual average for magnitude 7.0 or higher earthquakes is 16, putting 2010 on course for a fairly normal year, with six so far. "A lot of the quakes this year have unfortunately happened in populated areas, and as a result casualties and damage are in the news," Parsons said. "The variability year to year is very large, but the rate this year is not higher than normal."

Parsons refused to call the possibility of a seismic China Syndrome sci-fi hogwash, however. Could what happened near the mountains of Tibet affect us here?

"That's an open question," he said. "When a big earthquake happens, we see seismicity rates rising, temporarily but quite significantly, as the surface waves from these big quakes travel around the planet." But he cited an unpublished study that indicates big earthquakes don't trigger other big earthquakes.

"The Sumatra quake lit up parts of the globe everywhere," he said. "So in that sense, it's valid to ask, Is there some kind of a physical link?" Parsons examined mega-quakes for the past 30 years, and could find no evidence that one led to another. "That doesn't say it couldn't happen," he said, "but over the last few decades it doesn't appear it has."

Popular culture has contributed to the apocalyptic quake talk. The 2004 TV movie "10.5" and "Crack in the World" from 1965 suggested the Really, Really Big One could turn the planet inside out.

"The idea comes up from time to time, but there doesn't appear to be the fault necessary to produce such an event," Parsons said. "In terms of a cataclysmic event, you really need a fault that's already in existence to break. The energy required to fracture intact rock is so great, the forces just aren't there to start a new fault all at once and cause a giant earthquake."