

March 2011

U.T.O.L UPDATE



*God is our refuge and strength, an ever-present help in trouble. Therefore we will not fear, though the earth give way and the mountains fall into the heart of the sea, **though its waters roar and foam and the mountains quake with their surging.***

Psalms 46: 1-3

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Are Filipinos ready for the "big one?"

The news of the horrific earthquake in Japan has shocked us all. We wait for updates and detailed news with apprehension every day. The quake -- one of the largest in recorded history -- triggered a 23-foot tsunami that battered Japan's coast, killing hundreds and sweeping away cars, homes, buildings, and boats.

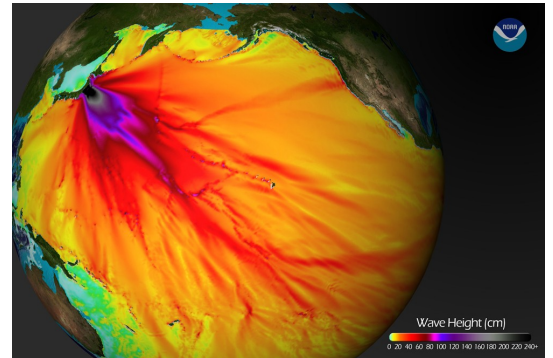
The principal lesson from the March 11 earthquake and tsunami in Japan is that even the richest and most disaster-ready country in the world cannot have enough of disaster preparedness.

Japan is one of the world's most technologically advanced countries, prepared to the hilt for a big earthquake. Yet they are still overwhelmed by the proportions of this disaster. Same thing happened with the first world country New Zealand who was also hit by an earthquake early this year.

BUT WHAT IF THE BIG ONE HAPPENS?

It seems that there are a lot of discussions on preparedness but poor at implementing them, reluctant to unlock resources necessary for equipment, training, and communication.

According to some experts, the Philippine's capital is sadly unprepared for a major quake that could hit at any time and kill tens of thousands of people, flattening nearly half the city's homes. Like Japan and New Zealand, the Philippines sits on the Pacific Ring of Fire. And heavily populated urban areas in Luzon, including Manila, sit on or near at least four fault systems.

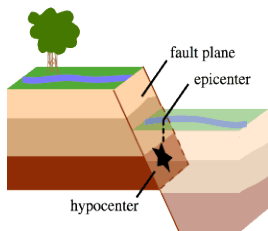


This National Oceanic and Atmospheric Administration (NOAA) image released on March 11, 2011 shows model runs from the Center for Tsunami Research at the NOAA Pacific Marine Environmental Laboratory showing the expected wave heights of the tsunami as it travels across the Pacific basin. The largest wave heights are expected near the earthquake epicenter off Japan. The wave will decrease in height as it travels across the deep Pacific but grow taller as it nears coastal areas. In general, as the energy of the wave decreases with distance, the near shore heights will also decrease (e.g., coastal Hawaii will not expect heights of that encountered in coastal Japan). Tsunami waves rolled thousands of miles across the Pacific Ocean after a massive earthquake off Japan and washed ashore in Hawaii early March 11. (NOAA) #

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WHAT IS AN EARTHQUAKE

An earthquake is what happens when two blocks of the earth suddenly slip past one another. The surface where they slip is called the fault or fault plane. The location below the earth's surface where the earthquake starts is called the hypocenter, and the location directly above it on the surface of the earth is called the epicenter.



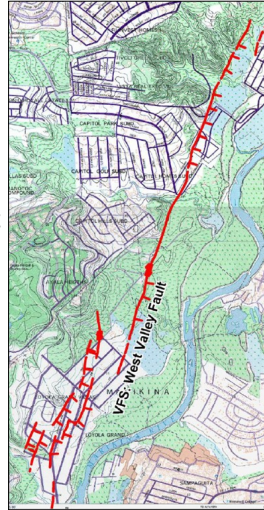
Sometimes an earthquake has foreshocks. These are smaller earthquakes that happen in the same place as the larger earthquake that follows. Scientists can't tell that an earthquake is a foreshock until the larger earthquake happens. The largest, main earthquake is called the mainshock. Mainshocks always have aftershocks that follow. These are smaller earthquakes that occur afterwards in the same place as the mainshock. Depending on the size of the mainshock, aftershocks can continue for weeks, months, and even years after the mainshock!

If you say,
 "The LORD is my refuge,"
 and you make the Most High your dwelling,
 no harm will overtake you,
 no disaster will come near your tent.

Ps 91: 9-10

The most active faults is the West Valley Fault System that cuts through the eastern section of the island, including across Manila and suburban areas to the south.

Studies indicate the fault moves once every 200 to 400 years and the last time it moved was in the 17th century. It is now primed to trigger a violent quake with an estimated magnitude of 7.2 that would plunge the country into crisis, Philvolcs deputy director Bartolome Bautista said. "The fault is ripe for movement. It can move anytime," He acknowledged that it was scientifically impossible to predict the exact time of a quake. "But what is for sure is that there is a very high probability the fault system will move in the future," he said.



A Metro Manila Earthquake Impact Reduction Study conducted in 2004 by Philvolcs revealed that the Philippines is vulnerable to a 7.2-magnitude earthquake that may be generated by the active West Valley fault line. 40% of Metro Manila's residential buildings will collapse and about 34,000 people will die from such an impact. The study concluded that the human and economic loss will be a national crisis. Authorities are now urging communities and residents to heed their warning, and prepare for this scenario.

Ishmael Narag from the Philippine Institute of Volcanology and Seismology, said: "Since the 90's, it has already been told that we do not build anything on top of a fault, because we all know that once the fault ruptures, definitely any structure on top of it will be destroyed. "So as a rule, and it is already in the law, you do not build anything on top of a fault. Now unfortunately some people did."

Pres Benigno Aquino has already ordered government agencies to review and come up with a comprehensive assessment of the country's disaster preparedness. A structural audit on bridges and buildings is also now being conducted by the Dept of Public Works and Highways to better prepare the country for such an eventuality.

Earthquake awareness and preparedness are key elements for anyone who lives in an earthquake country. Japan earthquake serves as a reminder for people to review, update, or develop their own earthquake preparedness plan. Emergency food and water for 1-2 weeks shall be maintained at any time along with personal survival kits and a household emergency kit. The benefits of seismic retrofitting and mitigation go well beyond being simply reducing financial losses. It will make our home safer and help in returning our family much more quickly back to normal life style. <http://www.gulf-times.com>

SOME EARTHQUAKE FACTS

1. The **largest recorded earthquake in the United States** was a magnitude 9.2 that struck Prince William Sound, Alaska on Good Friday, March 28, 1964 UTC.
2. The **largest recorded earthquake in the world** was a magnitude 9.5 (Mw) in Chile on May 22, 1960.
3. Although both are sea waves, a **tsunami and a tidal wave** are two different unrelated phenomena. A tidal wave is a shallow water wave caused by the gravitational interactions between the Sun, Moon, and Earth. A tsunami is a sea wave caused by an underwater earthquake or landslide (usually triggered by an earthquake) displacing the ocean water.
4. The **world's deadliest recorded earthquake** occurred in 1556 in central China. It struck a region where most people lived in caves carved from soft rock. These dwellings collapsed during the earthquake, killing an estimated 830,000 people. In 1976 another deadly earthquake struck in Tangshan, China, where more than 250,000 people were killed.
5. The **majority of the earthquakes and volcanic eruptions** occur along plate boundaries such as the boundary between the Pacific Plate and the North American plate. One of the most active plate boundaries where earthquakes and eruptions are frequent, for example, is around the massive Pacific Plate commonly referred to as the Pacific Ring of Fire.

<http://earthquake.usgs.gov>