

## Extra Feature Story

### Devastating Earthquake in Chile Recalls Crisis in Haiti

March 1, 2010

**A devastating 8.8 earthquake ravaged the South American nation of Chile Saturday, and while it was more powerful than the quake that struck Haiti in January, it caused less damage and fewer deaths because of strict building rules and a history of quake preparedness.**

Still, Chilean scenes of destruction and frantic rescue are reminiscent of the situation in Haiti: rescuers with trained dogs and search equipment hunt through the rubble of collapsed homes and buildings in search of survivors.

President Michelle Bachelet called the earthquake "an emergency unparalleled in the history of Chile."

The death toll is already 711 and experts expect the number to rise in the coming week, but not come close to the 220,000 estimated killed in Haiti.

Chile's farms and vineyards also suffered major damage. Chile is a major exporter of fresh grapes, apples, raspberries and other fruits to the United States.

#### **History of quakes and tsunamis helped mitigate damage**

Chile has a long history of powerful earthquakes and has some of the best quake experts in the world – many of whom were providing support and expertise in Haiti when the quake hit.

The fault that slipped during the Chile quake was the same one that shook Charles Darwin in 1835, according to University of Singapore professor John van Wyhe. Darwin later came to connect earthquakes, volcanoes and vertical movements of the Earth's crust as the results of subterranean phenomena.

The young English naturalist and geologist was in Chile as part of his voyage on HMS Beagle. He recorded in his diary: "It came on suddenly & lasted two minutes (but appeared much longer)... An earthquake like this at once destroys the oldest associations; the world, the very emblem of all that is solid, moves beneath our feet like a crust over a fluid; one second of time conveys to the mind a strange idea of insecurity, which hours of reflection would never create."

Since the mid-1970s, Chile has suffered 13 quakes of magnitude 7.7 or higher and has instituted rigorous building codes so many of the unstable buildings have been subsequently destroyed.

"Earthquakes don't kill people, buildings kill people," said David Wald of the National Earthquake Information Center of the U.S. Geological Survey.

Schoolchildren in Chile are subjected to mandatory earthquake drills three times a year, learning to "drop, cover, hold on."

The largest seismic event ever recorded, the Great Chilean Earthquake of 1960, was a whopping 9.5 on the Richter scale and produced tsunami waves along the Chilean coast, reaching heights of 80 feet and traveling half a mile inland.

Half a day after the 1960 quake, a 35-foot wave killed 61 people in Hawaii and continued to the Philippines and Japan to kill another 200. The death and destruction caused by the quake and ensuing tsunami led to the creation of the Pacific Tsunami Warning Center in 1968.

**Scientists say Chile quake not related to Haiti quake**

The Chile earthquake occurred at the boundary between the Nazca and South American tectonic plates, according to the United States Geological Survey. The two plates are converging at a rate of 80 millimeters a year. This tectonic movement causes tremendous tension in the ground.

The Chile earthquake was the largest of three quakes in the past two months. A 7.0 quake struck near Japan's Ryukyu islands just a few hours earlier, triggering its own tsunami warnings.

But scientists say the three recent earthquakes probably aren't related, mainly because they occurred at such great distances from one another, according to the Wall Street Journal.

The back-to-back quakes in Japan and Chile occurred along the notorious "ring of fire," a 25,000-mile zone of constant seismic and volcanic activity encircling the Pacific Ocean that accounts for 95 percent of the world's quakes. But the Chile and Japan quakes are separated by about 10,000 miles.

The Haiti quake was caused by different regional plates than the Chile and Ryukyu temblors.

**-- Compiled by Lizzy Berryman for NewsHour Extra**

© 2010 MacNeil/Lehrer Productions