

Magnitude 7.3 Off the Coast of El Salvador

Monday, August 27, 2012 at 04:37:20 UTC

Epicenter: Latitude 12.278°N, 88.528°W

Depth: 20.3 kilometers.



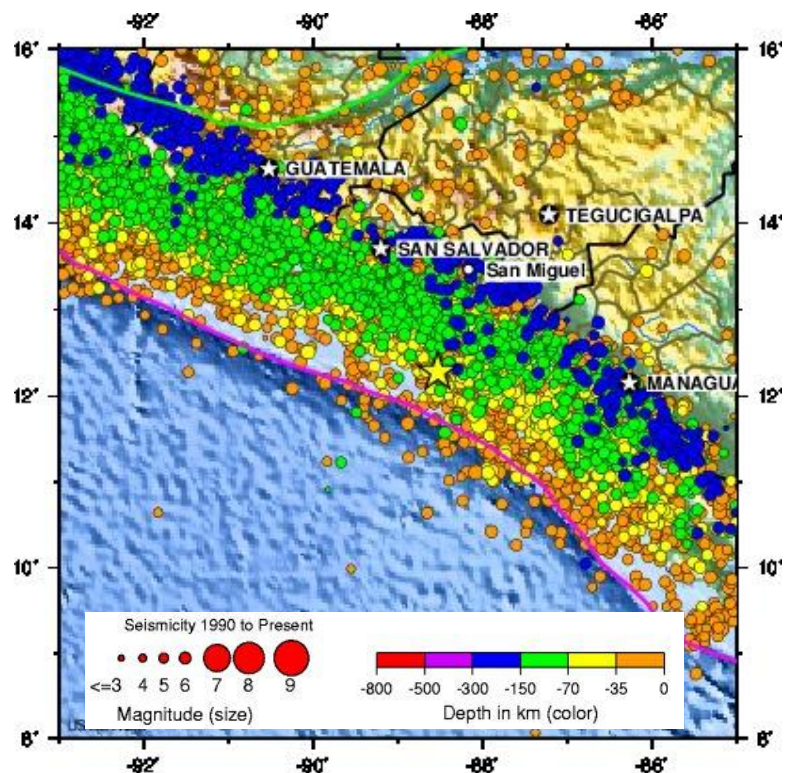
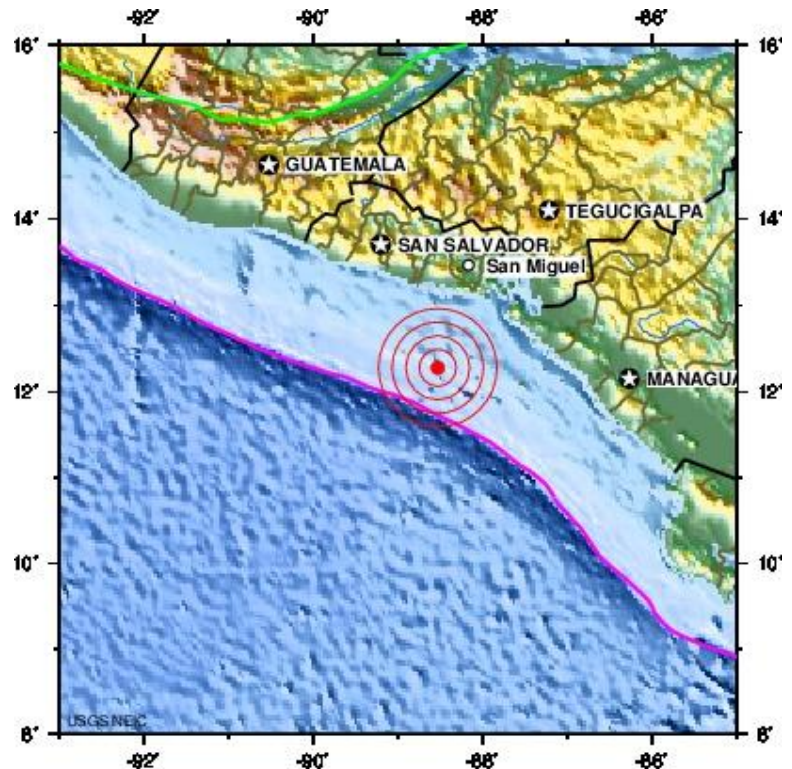
Earthquake Summary:

A major earthquake occurred (10:37 PM local time, 12:37 AM EDT) off the coast of El Salvador. The red circle on the map to the right shows the location of the epicenter as determined by the US Geological Survey.

There were no immediate reports of damage or injuries following the earthquake.

The map on the right shows historic earthquake activity near the epicenter (gold star) from 1990 to present. This earthquake occurred as a result of thrust faulting on the subduction zone plate boundary between the Cocos and North American plates. At this plate boundary, the Cocos Plate subducts toward the NE below the Central American portion of the North American Plate.

A tsunami warning was put into effect for Costa Rica, Nicaragua, El Salvador, Honduras, Guatemala, Panama and Mexico.



Regional Tectonics:

The epicenter of the earthquake that occurred August 27, 2012 (UTC) is indicated by the red star on the map below. This map shows the rates and directions of motion of the Cocos, Pacific, and Caribbean plates with respect to the North American Plate. The seismicity of El Salvador is dominated by the subduction of the Cocos plate below the Caribbean plate in the Middle America Trench.

The arrows on the Cocos Plate show that it moves northeastward at a rate of about 70 mm/yr (7 cm/year) with respect to the North American Plate. For comparison, the convergence rate between the Juan de Fuca and North American plates at the Cascadia Subduction Zone ranges from 35 mm/yr (3.5 cm/yr) to 45 mm/yr (4.5 mm/yr).

