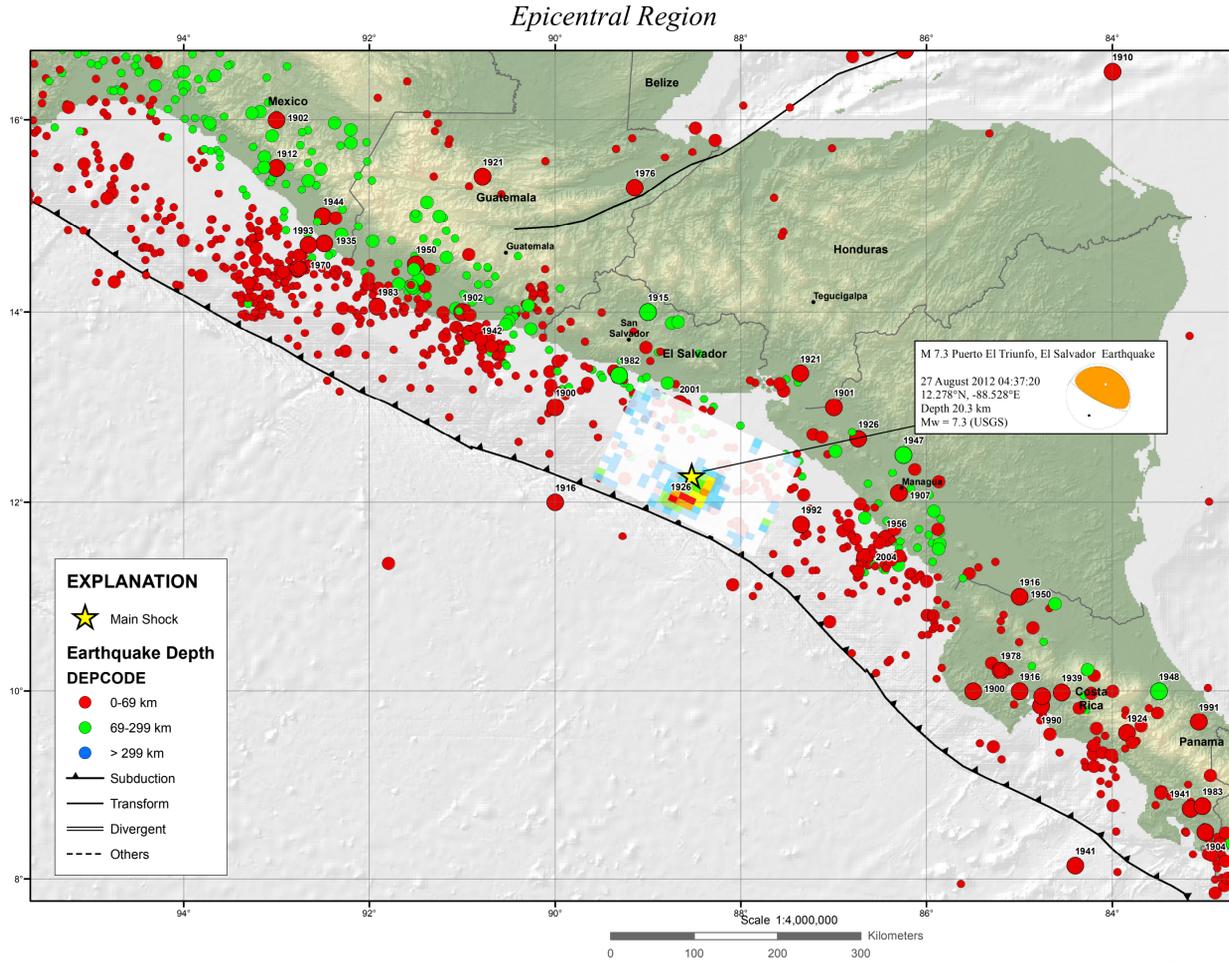
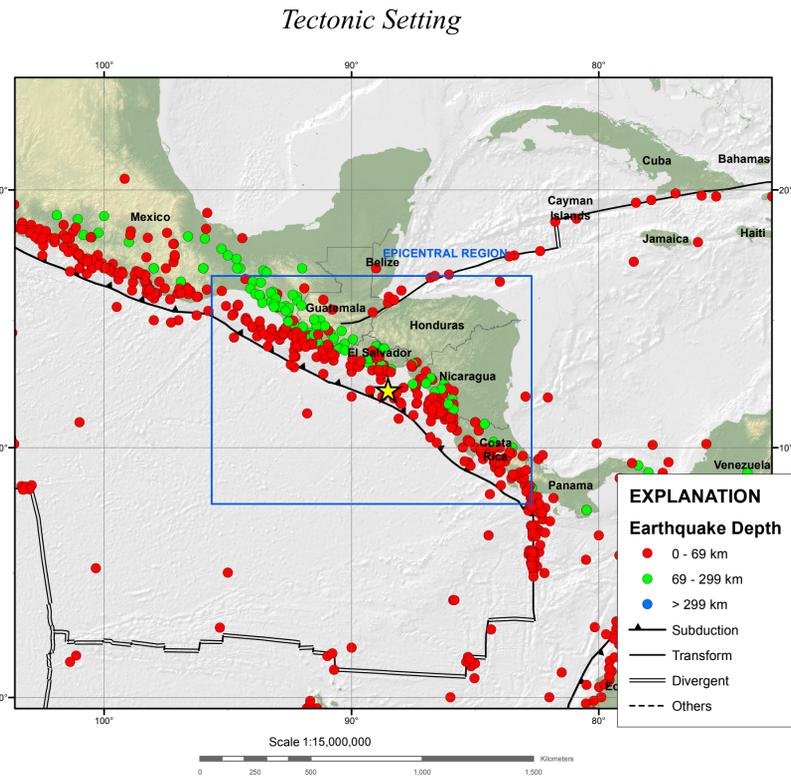




M 7.3 Puerto El Triunfo, El Salvador Earthquake of 27 August 2012

PAGER



USGS Earthquake Shaking Green Alert

M 7.3, OFFSHORE EL SALVADOR
 Origin Time: Mon 2012-08-27 04:37:20 UTC (22:37:20 local)
 Location: 12.28°N 88.53°W Depth: 20 km

Estimated Fatalities
 Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.

Estimated Economic Losses

Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSED (1:1500)	I	II-III	IV	V	VI	VII	VIII	IX	X+
13,028K	12,028K	234K	0K	0K	0K	0K	0K	0K	0K

PERCEIVED SHAKING
 none none none none V. Light Light Moderate Moderate/Heavy Heavy V. Heavy V. Heavy

POTENTIAL DAMAGE
 none none none none Light Moderate Moderate/Heavy Heavy V. Heavy V. Heavy

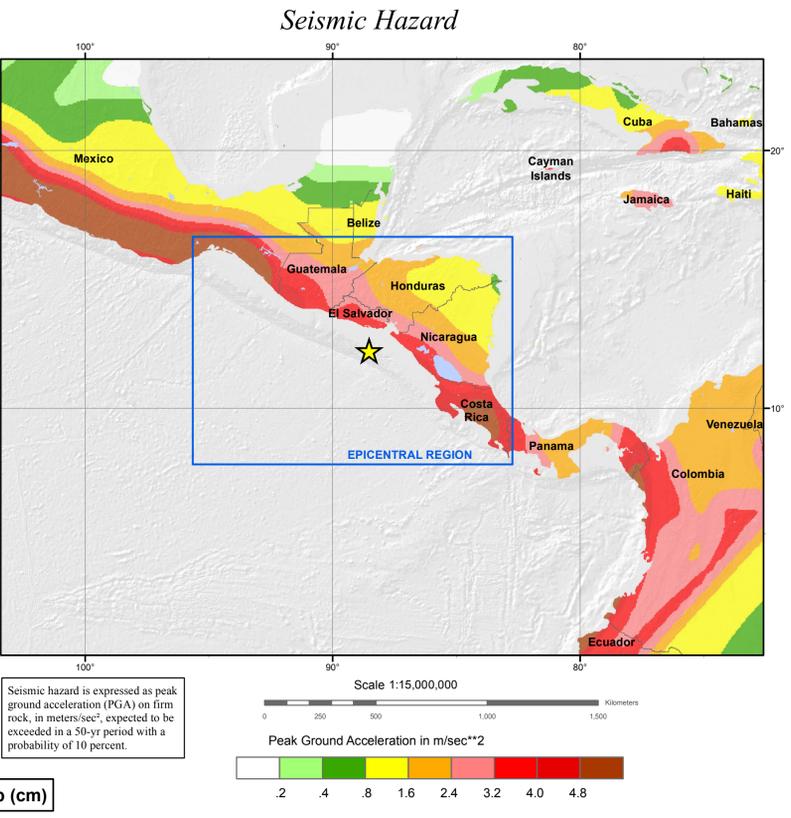
Population Exposure
 Overall, the population in this region resides in structures that are vulnerable to earthquake shaking, though some resistant structures exist.

Historical Earthquakes (with MMI levels)

Date	Lat	Mag	Max Shaking (MMI)	Deaths
1981-08-21	17.3	6.8	VI (140)	0
1982-08-19	14.7	7.9	IX (220K)	43
1986-10-10	18.2	5.7	V (100K)	850

Selected City Exposure

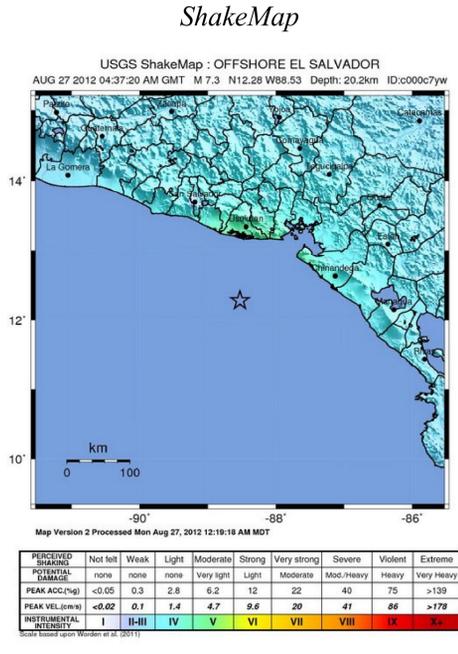
City	Population
V. Puerto El Triunfo	196
V. Juacaran	26
V. Chiriquia	66
V. Itipica	44
V. Jiquilisco	98
V. Usulután	526
IV. Managua	9734
IV. Tegucigalpa	8514
III. Guatemala City	9956
III. Mexico	4738
III. San Salvador	5288



TECTONIC SUMMARY

The August 27, 2012 M 7.3 interface between the Cocos and Caribbean plates. At the epicenter of this earthquake, the Cocos plate moves north-northeast with respect to the Caribbean plate at a velocity of approximately 73 mm/yr, and subducts beneath Central America at the Middle America Trench.

This plate boundary region has experienced over 20 earthquakes of magnitude 6 or greater over the past 40 years; three of these had magnitudes greater than 7. The largest of these were M 7.7 earthquakes in September 1992, approximately 140 km to the southeast of the August 26 earthquake, and another M 7.7 earthquake in January 2001, 85 km to the north of this event. The 1992 earthquake spawned a large and damaging tsunami along the coastline of Central America, particularly in Nicaragua and Costa Rica, and resulted in over 100 fatalities. That earthquake has been labeled a tsunami earthquake, characterized by the unusually large tsunami it caused in relation to the size of the earthquake. The 2001 earthquake offshore of El Salvador resulted in over 850 fatalities, many of which were caused by large landslides in multiple El Salvador cities.



Significant Earthquakes Mag >= 7

Year	Mon	Day	Time	Lat	Long	Dep	Mag
1900	06	21	2052	10.000	-85.500	0	7.2
1900	11	09	1610	13.000	-90.000	0	7.0
1901	10	08	0214	13.000	-87.000	0	7.1
1902	04	19	0223	14.000	-91.000	0	7.5
1902	09	23	2018	16.000	-93.000	0	7.8
1904	12	20	0544	8.500	-83.000	0	7.2
1907	12	30	0526	12.100	-86.300	0	7.2
1910	01	01	1102	16.500	-84.000	60	7.1
1912	12	09	0832	15.500	-93.000	0	7.1
1915	09	07	0120	14.000	-89.000	80	7.4
1916	02	27	0220	12.000	-90.000	0	7.3
1916	04	24	0802	11.000	-85.000	0	7.2
1916	04	26	0221	10.000	-85.000	0	7.1
1921	02	04	0822	15.411	-90.780	35	7.4
1921	03	28	0749	13.356	-87.361	35	7.2
1924	03	04	1007	9.557	-83.844	35	7.0
1926	02	08	1517	12.011	-88.758	35	7.1
1926	11	05	0755	12.670	-86.736	35	7.1
1934	07	18	0136	8.045	-82.480	25	7.6
1935	12	14	2205	14.718	-92.484	35	7.2
1939	12	21	2054	9.986	-84.566	35	7.2
1970	04	29	1401	14.461	-92.760	50.9	7.3
1976	02	04	0901	15.297	-89.145	12.1	7.5
1978	08	23	0038	10.222	-85.204	25	7.0
1982	06	19	0621	13.337	-89.312	73.1	7.3
1983	04	03	0250	8.777	-83.032	25	7.5
1983	12	02	0309	14.055	-91.914	31	7.0
1990	03	25	1316	9.847	-84.769	32.9	7.1
1990	03	25	1322	9.948	-84.757	22	7.3
1991	04	22	2156	9.675	-87.072	12.3	7.6
1992	09	02	0016	11.766	-87.352	45	7.7
1993	09	10	1912	14.702	-92.656	34	7.2
1995	10	21	0238	16.842	-83.158	15.9	7.2
2001	01	13	1733	13.038	-88.661	38	7.7
2012	08	27	0437	12.278	-88.528	20.3	7.3

DATA SOURCES
 EARTHQUAKES AND SEISMIC HAZARD
 USGS, National Earthquake Information Center
 NOAA, National Geophysical Data Center
 IASPEI, Centennial Catalog (1900 - 1999) and extensions (Engdahl and Villaseor, 2002)
 HDF (unpublished earthquake catalog) (Engdahl, 2003)
 Global Seismic Hazard Assessment Program

PLATE TECTONICS AND FAULT MODEL
 PB2002 (Bird, 2003)

BASE MAP
 NIMA and ESRI, Digital Chart of the World
 USGS, EROS Data Center
 NOAA GEBCO and GLOBE Elevation Models

REFERENCES
 Bird, P., 2003. An updated digital model of plate boundaries: Geochem. Geophys. Geosyst., v. 4, no. 3, pp. 1027-80.
 Engdahl, E.R. and Villaseor, A., 2002. Global Seismicity: 1900 - 1999, chap. 41 of Lee, W.H.K., and others, eds., International Earthquake and Engineering Seismology, Part A: New York, N.Y., Elsevier Academic Press, 932 p.
 Engdahl, E.R., Van der Hilst, R.D., and Buland, R.P., 1998. Global teleseismic earthquake relocation with improved travel times and procedures for depth determination. Bull. Seism. Soc. Amer., v. 88, p. 722-743.
 Map prepared by U.S. Geological Survey National Earthquake Information Center 27 August 2012
 Map not approved for release by Director USGS

DISCLAIMER
 Base map data, such as place names and political boundaries, are the best available but may not be current or may contain inaccuracies and therefore should not be regarded as having official significance.