Earthquake Shaking **Orange Alert**

M 8.3, OFFSHORE COQUIMBO, CHILE

Origin Time: Wed 2015-09-16 22:54:32 UTC (22:54:32 local)

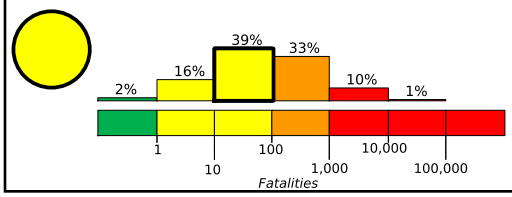
Location: 31.57°S 71.67°W Depth: 22 km

FOR TSUNAMI INFORMATION, SEE: tsunami.gov

PAGER Version 14

Created: 11 weeks, 5 days after earthquake

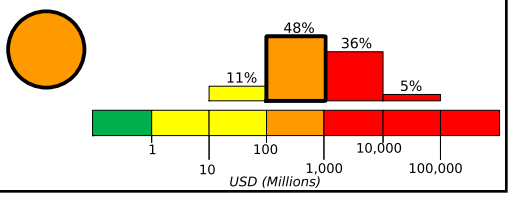
Estimated Fatalities



Orange alert level for economic losses. Significant damage is likely and the disaster is potentially widespread. Estimated economic losses are less than 1% of GDP of Chile. Past events with this alert level have required a regional or national level response.

Yellow alert level for shaking-related fatalities. Some casualties are possible.

Estimated Economic Losses



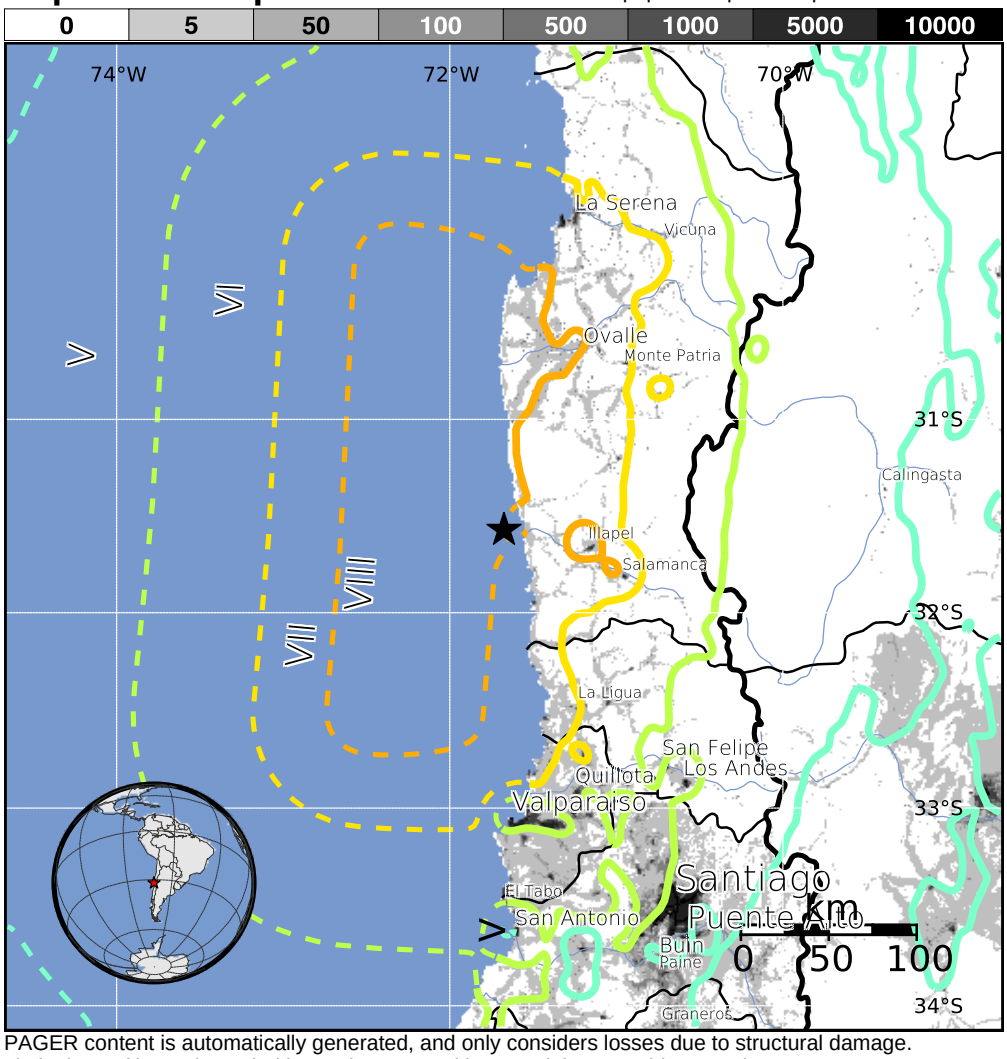
Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k = x1000)		- -*	- -*	1,004k*	6,386k*	2,635k*	823k	158k	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	none	none	none	V. Light	Light	Moderate	Moderate/Heavy	Heavy	V. Heavy
	Vulnerable Structures	none	none	none	Light	Moderate	Moderate/Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per ~1 sq. km from Landscan



Structures:
Overall, the population in this region resides in structures that are resistant to earthquake shaking, though some vulnerable structures exist. The predominant vulnerable building types are low-rise reinforced/confined masonry and adobe block construction.

Historical Earthquakes (with MMI levels):

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1973-10-05	168	6.7	VIII(2k)	0
1997-10-15	90	7.1	VIII(3k)	7
1985-03-03	174	7.9	VII(7,023k)	177

Recent earthquakes in this area have caused secondary hazards such as tsunamis, landslides, and liquefaction that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
VIII	**Illapel**	**23k**
VIII	**Salamanca**	**13k**
VIII	**Ovalle**	**77k**
VII	**Monte Patria**	**14k**
VII	Coquimbo	161k
VII	**La Serena**	**155k**
V	**Santiago**	**4,837k**
V	Vina del Mar	295k
V	**Valparaiso**	**282k**
V	**Puente Alto**	**510k**
V	Mendoza	877k

bold cities appear on map (k = x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.

http://earthquake.usgs.gov/pager

Event ID: us20003k7a