

Report Contributors:

Andreas M. Schaefer, James E. Daniell, Friedemann Wenzel, Armand Vervaeck

Official Disaster Name	Date	UTC	Local	CATDAT_ID
Chile Earthquake	16-Sep-2015	22:54:33	-4	2015-362

Preferred Hazard Information:

EQ_Latitude	EQ_Longitude	Magnitude	Hyp_Depth (km)	Fault Mech.	Source	Spectra
-31.57	-71.65	8.3Mw	25	Thrust	USGS	Some avail.

Duration: 80 secs

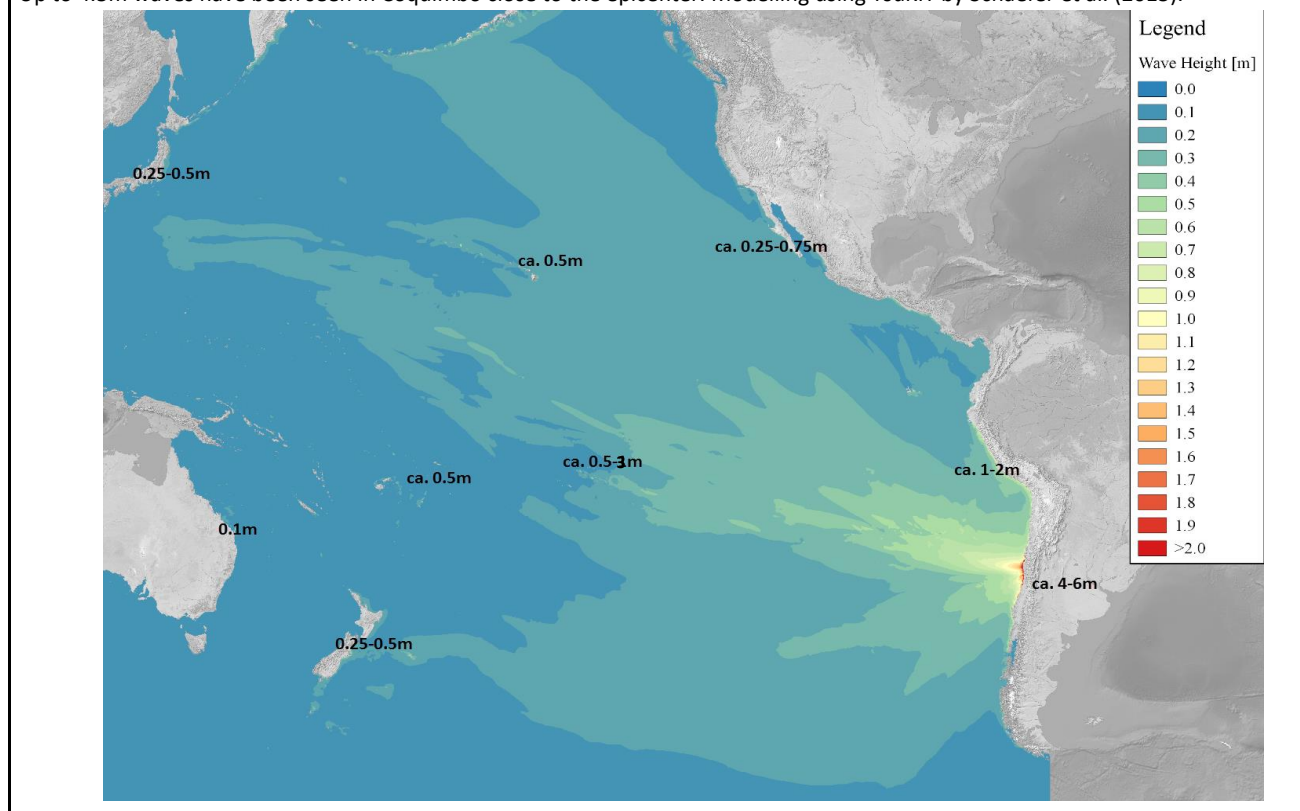
Location Information:

Country	ISO	Dev. Region	Most Impact	Building PF	HDI (2015)	Cap Stock	Population (2015)
Chile	CL	Coquimbo	Coquimbo	0.925	0.801	\$14.2bn	Ca. 750000
Chile	CL	Valparaiso	Coastal	0.946	0.810	\$47bn	Ca. 1.7 million

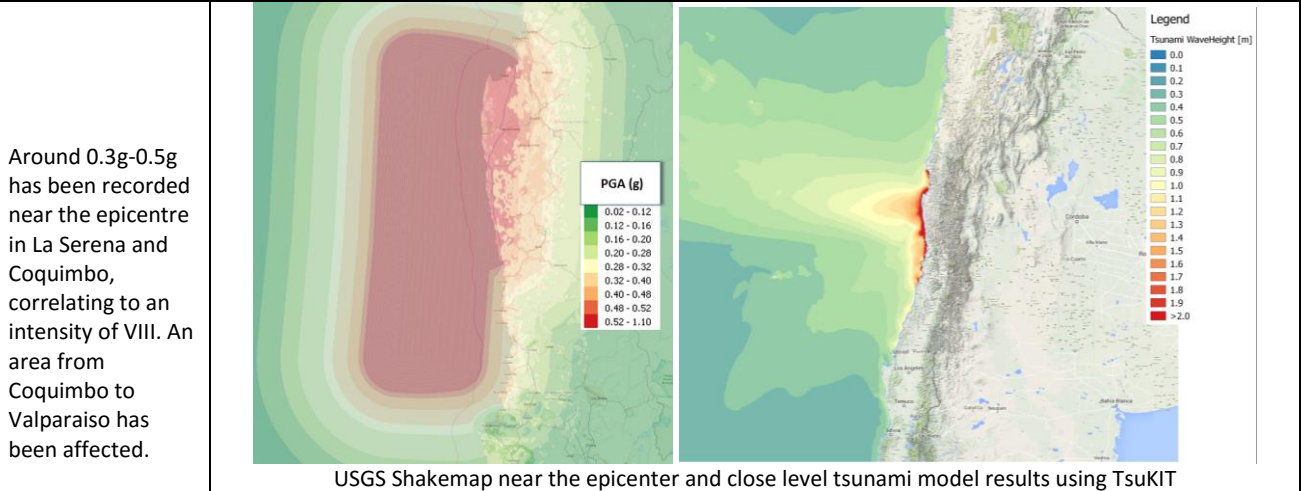
Preferred Hazard Information:

MSK-64	MMI	PGA	Key Earthquake Hazard Metrics
VIII	VIII	Ca. 0.5g	Coquimbo VIII, La Serena VIII, Los Vilos VII, El Quisco VII, San Antonio VII, Santiago VII, Tiltil VII, Valparaíso VI, Villa Alemana VI, San Pedro VI, Talagante VI
Tsunami Hazard Description			

Up to 4.5m waves have been seen in Coquimbo close to the epicenter. Modelling using TsuKIT by Schaefer et al. (2015).



Preferred Earthquake Hazard Information:



Preferred Building Damage Information: (Damage states will be filled in later when more info available)

Description: *Some buildings have been damaged with VIII*
 The counting of buildings destroyed has not been undertaken as yet with estimations only made via satellite imagery and photos. Based on news reports, there is minor damage to buildings in various locations, landslides and tsunami inundation damage close to the epicentre. Chile builds well for earthquakes so damage will be comparatively low.

Twitter photos of damage

Secondary Effect Information: For weather impacts see <http://www.wettergefahren-fruehwarnung.de/>

Type	Impact	Damage %	Social %	Economic %
Tsunami	Much coastal loss, infrastructure damage	Major	Deaths recorded	Unknown
Landslides	Some roads blocked	Minor	No deaths	minor

Preferred Loss Estimation for Earthquake and Tsunami

Type	Median	Type	Description	Source
Deaths	6	Earthquake	7 fatalities expected (range from 0 to 20)	Daniell, CATDAT, Earthquake Report.
Economic Loss	Ca. \$60m	Earthquake	\$58m USD (\$12m-176m)	

*The earthquake shaking losses are calculated using CATDAT EQLIPSE-Q by Daniell (2010); the tsunami modelling using TsuKIT by Schaefer (2015)

Current Loss Impact Information: \$million int. event-day dollars

Type	Median	Accepted Range	Description	Source
Deaths	5		Deaths due to shaking and tsunami	Earthquake Report
Total Loss	Unknown	Ca. \$10-200m	Rapid ELE models	CATDAT

About the modelling:

The tsunami modelling comes from Tsukit, a GPU tsunami modelling package developed by Andreas Schaefer as part of his doctoral thesis at KIT. The earthquake modelling comes from CATDAT EQLIPSE-Q, rapid earthquake loss estimation by James Daniell.

Abridged Summary Description from full CATDAT description sources:

A catastrophic earthquake hit the coast of Chile, causing some damage to buildings, but much of the impact due to 4.5m waves affecting Coquimbo. A tsunami will extend over the Pacific in the coming hours causing minor issues for some locations.

CATDAT Economic Index Rank:	7: Damaging	CATDAT Social Index Rank:	7: Destructive
------------------------------------	-------------	----------------------------------	----------------

This report was produced in conjunction with the CATDAT database, CATNews, earthquake-report.com, GEOFON and USGS data. As shown below is full size documentation of the diagrams shown in the summary above. The data is current as of 17th September 2015, 7:00am European Standard Time. For the current data, go to www.earthquake-report.com.