Earthquake Shaking Green Alert

# M 5.5, 84 km WSW of Vallenar, Chile

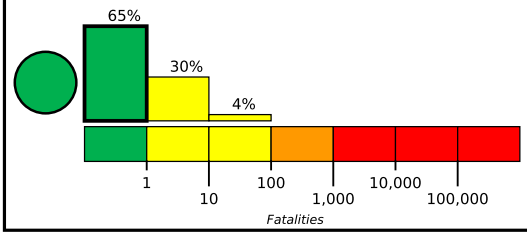
Origin Time: 2021-07-08 20:38:32 UTC (Thu 16:38:32 local)
Location: 28.7469° S 71.5997° W Depth: 20.0 km

**PAGER Version 9**

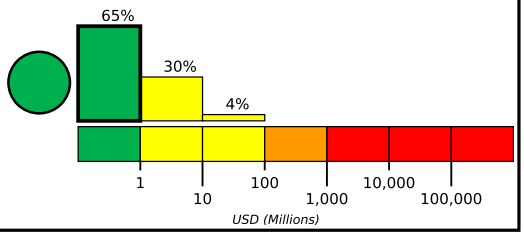
Created: 2 weeks, 5 days after earthquake

## Estimated Fatalities

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




## Estimated Economic Losses



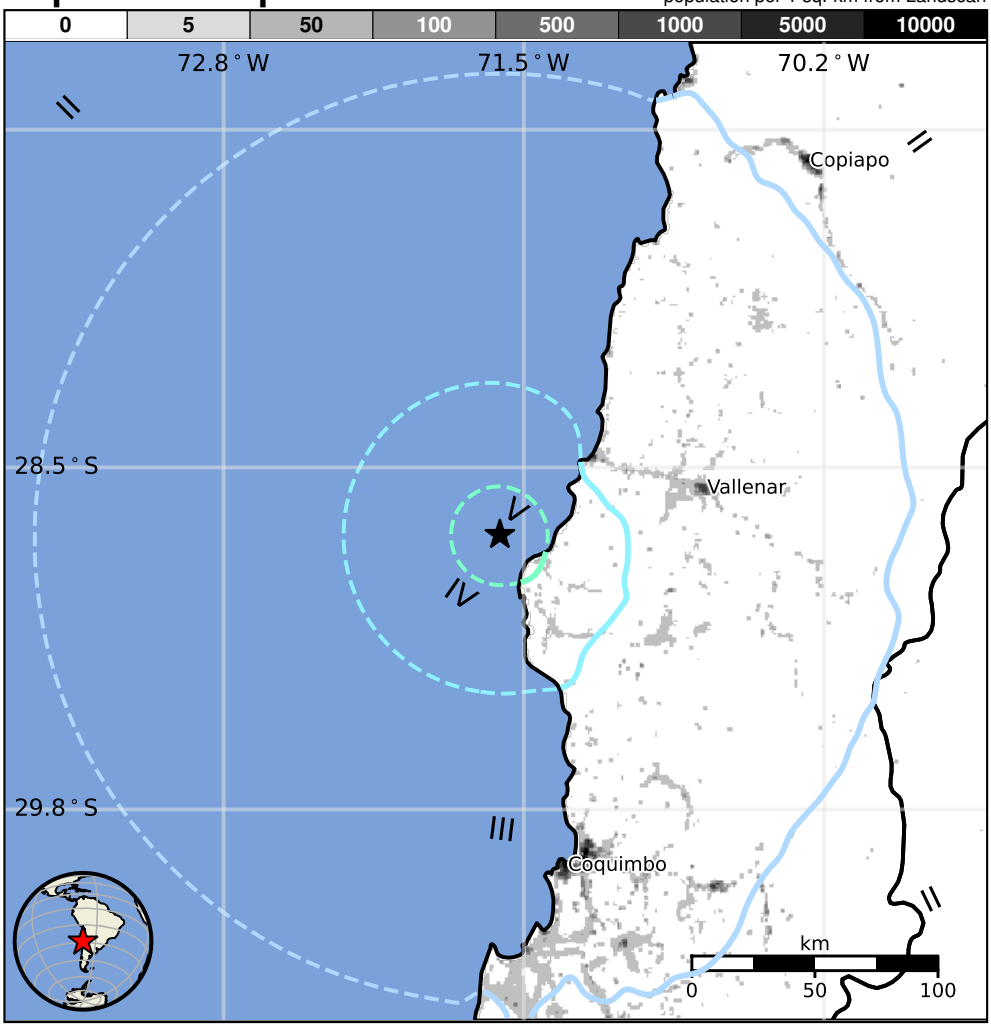

## Estimated Population Exposed to Earthquake Shaking

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ESTIMATED POPULATION EXPOSURE (k=x1000) | | –* | 799k | 5k | 0 | 0 | 0 | 0 | 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 | Mod./Heavy | Heavy | V. Heavy |
| | Vulnerable Structures | None | None | None | Light | Moderate | Mod./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 vulnerable structures exist. The predominant vulnerable building types are adobe block and rubble/field stone masonry construction.

## Historical Earthquakes

| Date (UTC) | Dist. (km) | Mag. | Max MMI(#) | Shaking Deaths |
|---|---|---|---|---|
| 1983-10-04 | 267 | 7.6 | VII(30k) | 5 |
| 1975-03-13 | 131 | 6.9 | VIII(266k) | 2 |
| 1997-10-15 | 242 | 7.1 | VIII(3k) | 7 |

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

## Selected City Exposure

from GeoNames.org

| MMI | City | Population |
|---|---|---|
| **III** | **Vallenar** | **45k** |
| III | La Serena | 155k |
| **III** | **Coquimbo** | **161k** |
| III | Vicuna | 13k |
| **III** | **Vallenar** | **<1k** |
| **II** | **Copiapo** | **129k** |

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.

**https://earthquake.usgs.gov/earthquakes/eventpage/us6000etaq#pager**

**Event ID: us6000etaq**