USGS
science for a changing world

Earthquake Shaking Yellow Alert

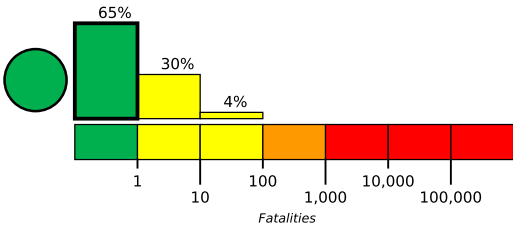
GSN ANSS USAID FROM THE AMERICAN PEOPLE

M 6.8, 6km S of Magsaysay, Philippines

Origin Time: 2019-12-15 06:11:52 UTC (Sun 14:11:52 local)
Location: 6.7078° N 125.1884° E Depth: 22.4 km
FOR TSUNAMI INFORMATION, SEE: tsunami.gov

PAGER Version 4
Created: 1 day, 0 hours after earthquake

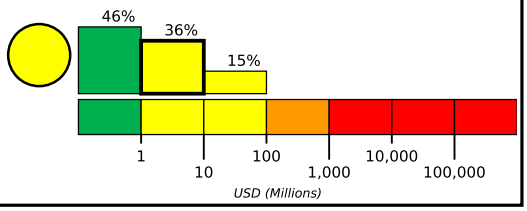
Estimated Fatalities



Yellow alert for economic losses. Some damage is possible and the impact should be relatively localized. Estimated economic losses are less than 1% of GDP of Philippines. Past events with this alert level have required a local or regional level response.

Green alert for shaking-related fatalities. There is a low likelihood of casualties.

Estimated Economic Losses



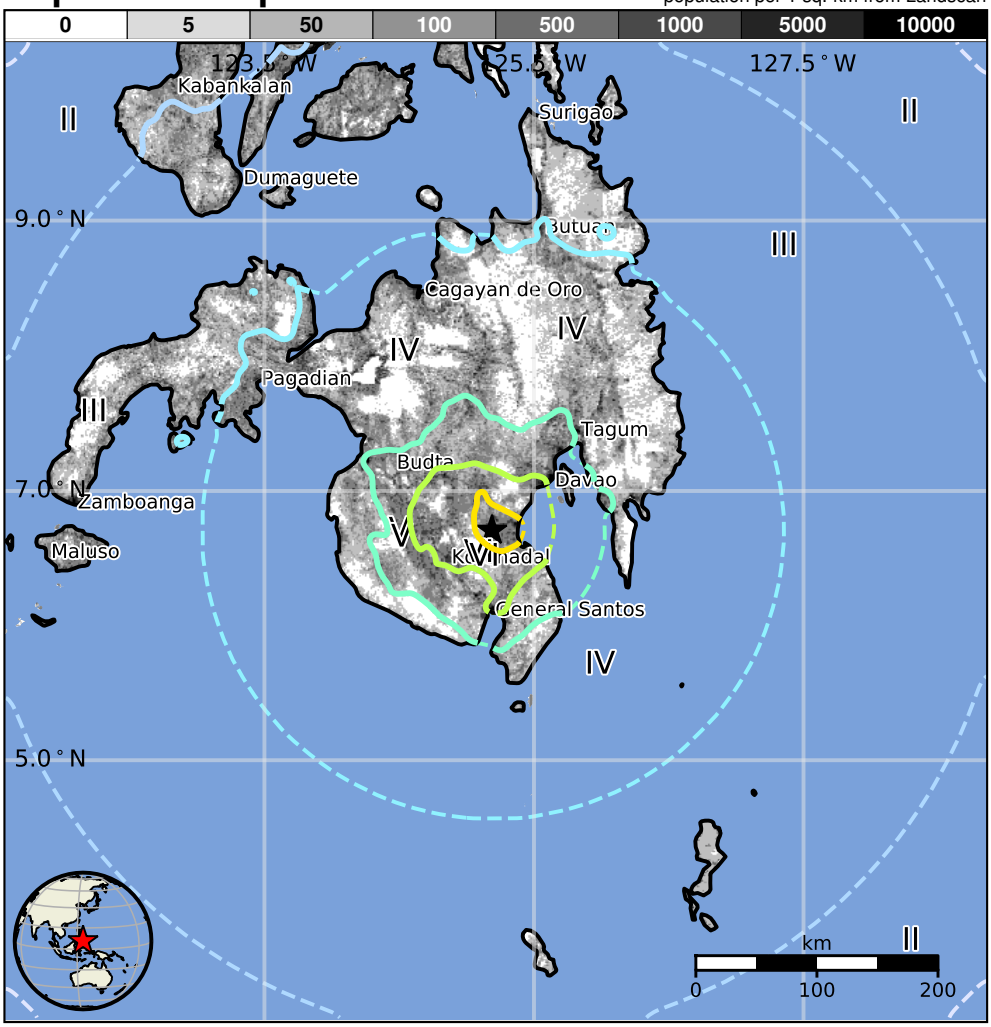
Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		–*	11,154k	10,904k	4,693k	3,736k	661k	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 a mix of vulnerable and earthquake resistant construction. The predominant vulnerable building types are reinforced concrete and unknown/miscellaneous types construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1987-05-23	149	5.7	VII(70k)	1
1990-02-08	345	6.7	VIII(96k)	1
2002-03-05	132	7.5	VIII(12k)	15

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
VII	Magsaysay	17k
VII	Sinawilan	4k
VII	Managa	3k
VII	Matanao	7k
VII	Bansalan	21k
VII	Ignit	3k
VI	**Davao**	**1,213k**
V	Cotabato	179k
IV	**Cagayan de Oro**	**445k**
IV	**Butuan**	**310k**
IV	**Pagadian**	**187k**

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/us60006rp9#pager

Event ID: us60006rp9