

Magnitude 7.3 BANDA SEA

Monday, June 24, 2019 at 02:53:40 UTC

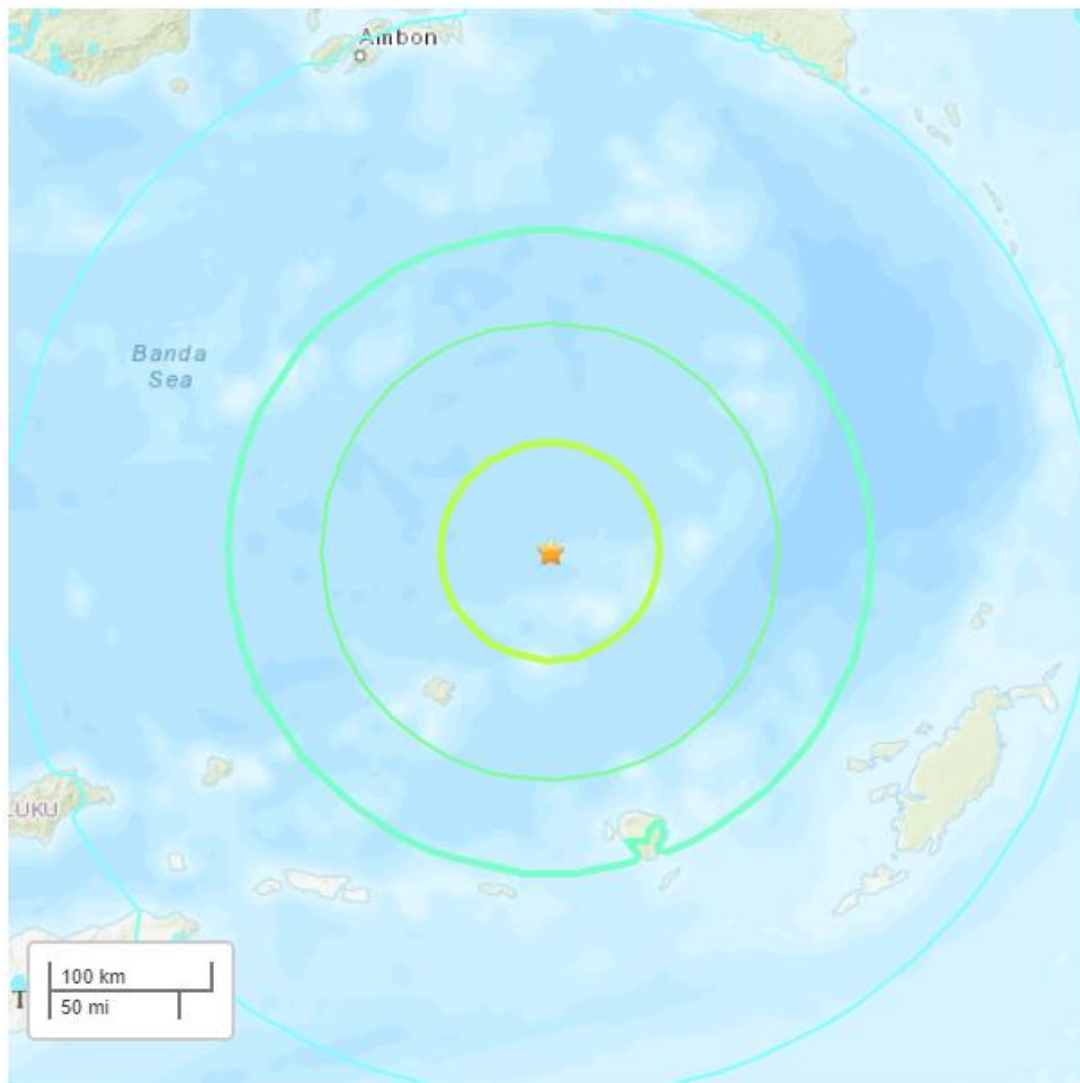
A magnitude 7.3 earthquake occurred 288km (178.9 miles) NW of Saumlaki, Indonesia at a depth of 208.3 km (129.4 miles).

There are no immediate reports of damage or injuries.



The Modified-Mercalli Intensity (MMI) scale is a twelve-stage scale, from I to XII, that indicates the severity of ground shaking.

MMI	Perceived Shaking
X	Extreme
IX	Violent
VIII	Severe
VII	Very Strong
VI	Strong
V	Moderate
IV	Light
II-III	Weak
I	Not Felt



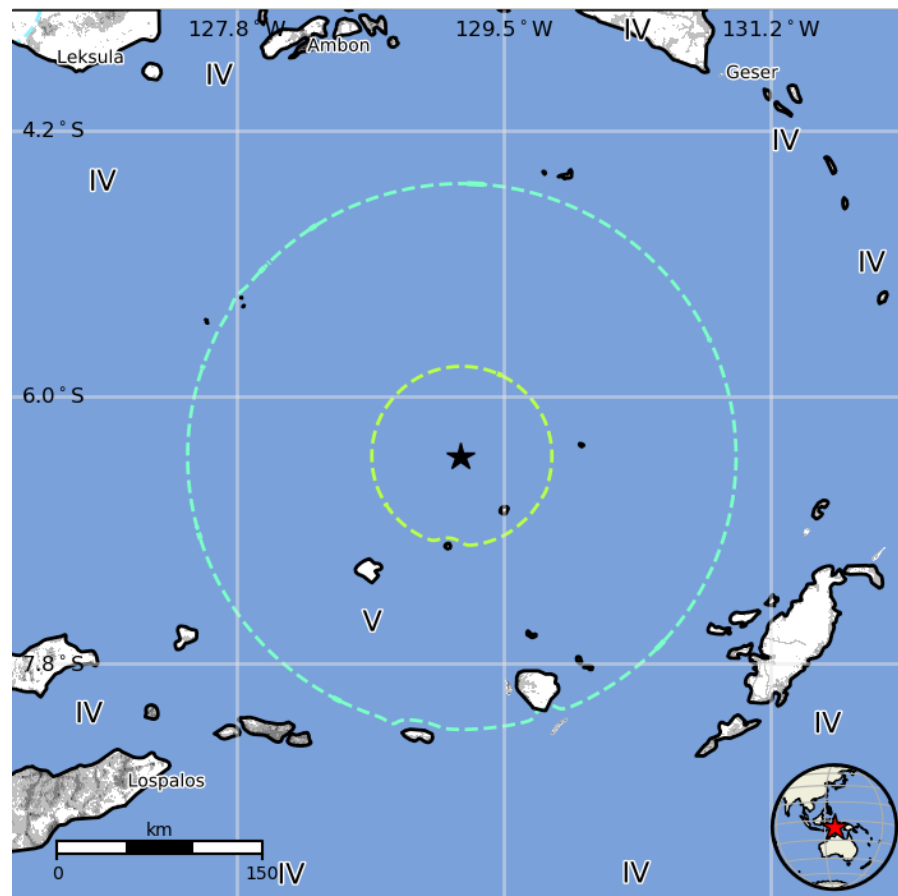
USGS Estimated shaking Intensity from M 7.3 Earthquake

The USGS PAGER map shows the population exposed to different Modified Mercalli Intensity (MMI) levels.

24,000 people were exposed to moderate shaking from this earthquake.

I	Not Felt	0 k*
II-III	Weak	2 k*
IV	Light	998 k*
V	Moderate	24 k
VI	Strong	0 k
VII	Very Strong	0 k
VIII	Severe	0 k
IX	Violent	0 k
X	Extreme	0 k

USGS PAGER
Population Exposed to Earthquake Shaking

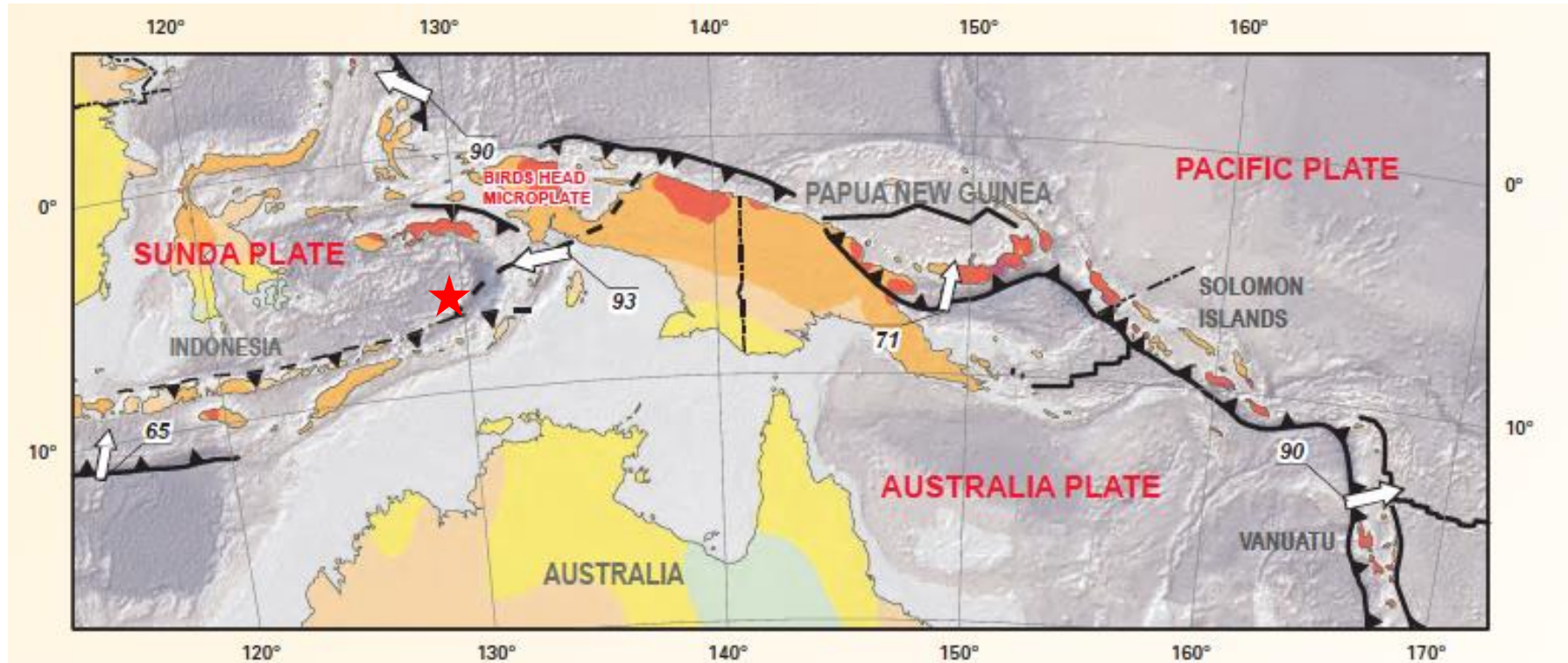


The color coded contour lines outline regions of MMI intensity. The total population exposure to a given MMI value is obtained by summing the population between the contour lines. The estimated population exposure to each MMI Intensity is shown in the table.

Image courtesy of the US Geological Survey

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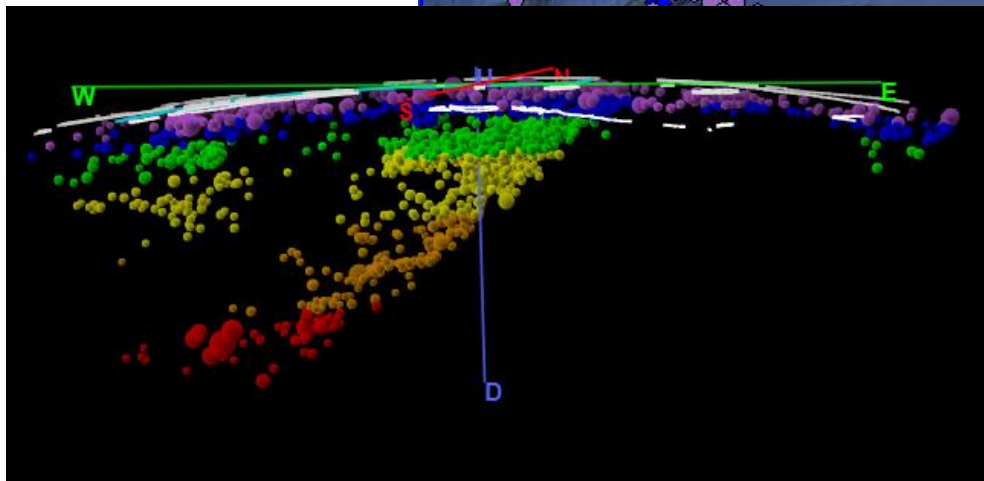
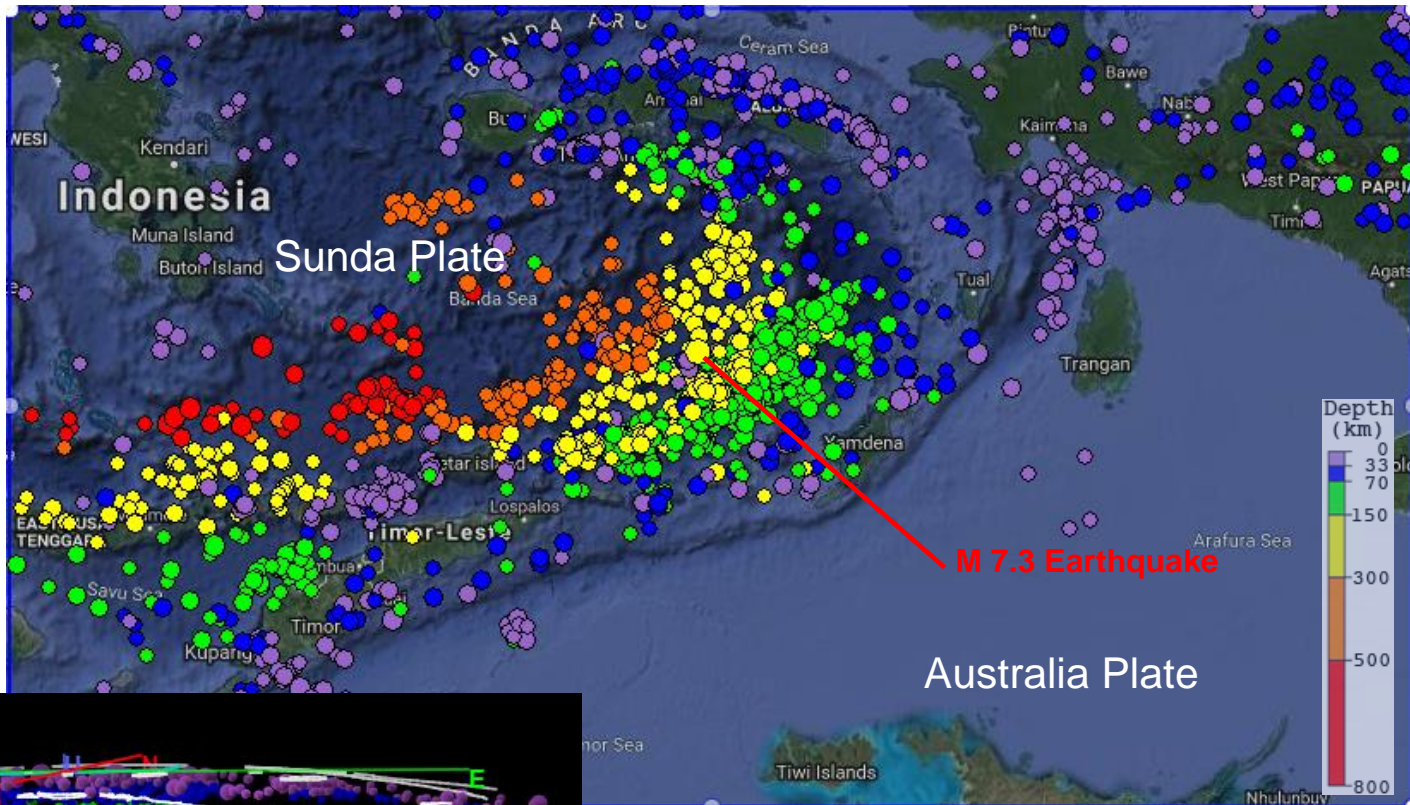


Map from USGS Open-File Report 2010-1083-H *Seismicity of the Earth 1900–2010 New Guinea and Vicinity*

According to the US Geological Survey National Earthquake Information Center: “At the location of this earthquake, the Australian Plate moves towards the north-northeast with respect to the Sunda Plate at a velocity of about 76 mm/yr. Motion between the two plates is dominantly convergent, and sections of the Australia Plate have subducted beneath the Sunda Plate.”

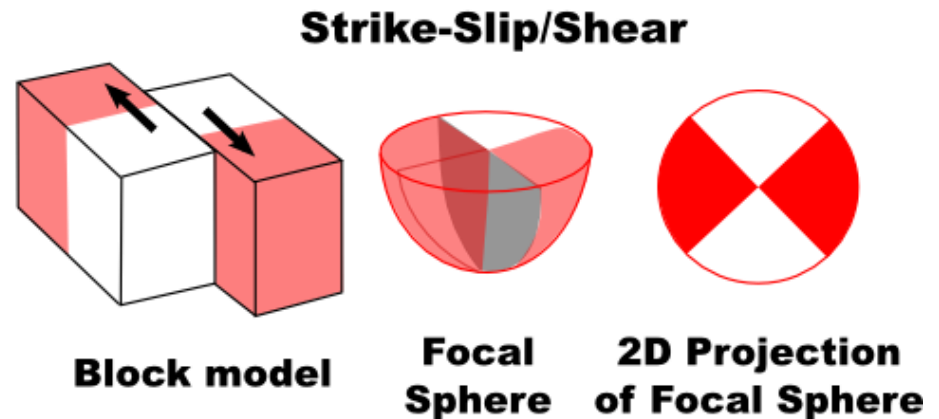
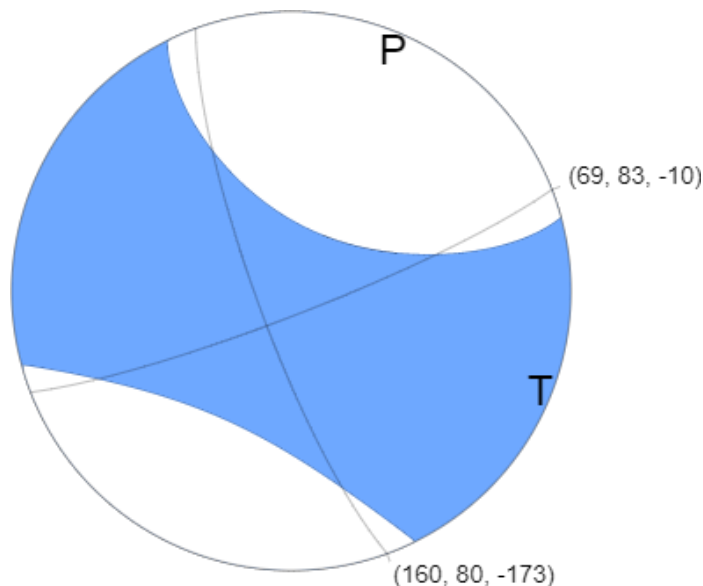
Locations of 2000 most recent earthquakes are shown.

The Australia Plate subducts under the Sunda Plate as seen in the 3D cross section below (looking to the NNW).



The focal mechanism is how seismologists plot the 3-D stress orientations of an earthquake. Because an earthquake occurs as slip on a fault, it generates primary waves in quadrants where the first pulse is compressional (shaded) and quadrants where the first pulse is extensional (white). The orientation of these quadrants determined from recorded seismic waves identifies the type of fault that produced the earthquake.

This earthquake occurred as a result of strike-slip faulting at intermediate depth, 208.3 km (129.4 miles) beneath the southeastern Banda Sea within the subducting Australia Plate.



The tension axis (T) reflects the minimum compressive stress direction. The pressure axis (P) reflects the maximum compressive stress direction.

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