

The West Java Tsunami of July 17, 2006 and Tsunami Magnitudes in the Java Region, Indonesia

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[1] None

An large earthquake occurred off the southwestern Java Island at 08:19(UT) on July 17, 2006. The epicenter was 9 deg 16.1'S, 107 deg 23.1'E, d=34km with magnitude Ms7.2(USGS). The tsunami associated with earthquake killed over 525 persons at Pangandaran, Java Island (Run-up height:6-7m,Tsuji et al.,2006), and was observed in the whole of the Indian tidal stations. The maximum double amplitudes were 82cm at Christmas Is., 8cm at Cocos Is. and 70cm at Rodorigues with wave-period 5-15 min. Judging from the attenuation of tsunami height with distance, tsunami magnitude is determined to be $m=3$. The tsunami grade is three rank large for the earthquake magnitude, suggesting **tsunami earthquake**.

Tsunamis generated near the Java region have been recorded since 1722 (Soloviev and Go, 1984). The source areas of large tsunamis lie along the Sunda Trench. The 1977 Sumba tsunami is the largest (Inundation heights were 3-8m from Bali Is. to Sumba Is. and 2-6m at the NW Australian coast). The revised magnitude is $m=4$. Magnitude of the 1994 East Java tsunami was $m=3$ that caused the tsunami earthquake (Ms7.2). Some historical tsunamis near the Java coast were also irregular magnitude. Magnitude scales in the Java region exceed more than 1-2 grade (tsunami heights: 2-5 times) compared with the same earthquake magnitude of the Pacific region.