

Distribution of Cumulative Tsunami Energy along the Pacific Coast of Central America

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Historical tsunamis in the Central American region have been recorded since 1732. In recent year, the moderate tsunamis having $m=2.5$ (magnitude on the Imamura-Iida scale) were generated in Central Mexico (1985) and Nicaragua (1992). In the present paper, the distribution of cumulative energy (square of tsunami height, H squared, where H : the mean height in segment unit) for each 150km segment from Mexico to Panama is investigated for the recent 104-year (1900-2003) and historical (1732-1899) periods. For the total tsunamigenic energy, sum of H squared, during 272-year period, percentages of the received energy were 51% from Manzanillo to Acapulco, Mexico, and 21% in El Salvador to Nicaragua. For the recent 104-year, the arrival energy from Manzanillo to Zihuatanejo is about twice larger than the mean rate of energy accumulation, because of the recent high seismic activities. However, the observed energy value in 300km segment from Acapulco to Puerto Angel is small comparing with the expected value. On the long-term hazard, it is necessary to take precautions against earthquake activities off South Mexico.