



Tsunamis in the Mediterranean and adjacent seas: a review

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Tsunami phenomena in the Mediterranean and adjacent seas are reviewed on the basis of historical tsunami documentation and of the results of modern scientific studies. Segments of the Mediterranean Sea coasts have been struck in the past by large, destructive tsunamis generated by submarine earthquakes and volcanic eruptions while powerful tsunamis have also been locally generated by landslides. Tsunami intensities, calculated on the classic 6-point Sieberg-Ambraseys scale were recalculated according to the more efficient 12-point scale introduced by Papadopoulos and Imamura (2001). The recurrence interval for tsunami intensities ≥ 4 , 5 and 6 on the classic scale is on the order of 12, 40 and 130 years, respectively. A statistical method is developed to determine tsunami potential as a convolution of the event frequency and event intensity. In this paper, the highest tsunami potential has been calculated in the Hellenic arc and the Gulf of Corinth. However, infrequent but large events have been recognized for the Cyclades, south Aegean Sea, and the Straits of Messina, southern Italy, as well as the Alboran, Levantine and Marmara Seas. It is clear, therefore, that tsunami waves should not be neglected as a potential source of risk that threatens coastal communities of the Mediterranean Sea.