

Numerical modeling and tsunami inundation for potential earthquake at Makram subduction zone, Pakistan

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According to the historical seismic importance of Makran Subductin Zone (MKZ), it has the potential for future large earthquakes and tsunamis. This study is based on numerical modeling of tsunami propagation by taking Gwardar coast as focal area which has geographical and economical importance for Paksitan and had been extensively affected by tsunami generated in 1945 Makran earthquake. Simulation for tsunami propagation and inundation at Gwadar coast was carried out a moment magnitude Mw 8.5; 5.26 m rupture slip due to this earthquake and fixing the source area within Makaran Subduction Zone i.e. 120 km away from the coastline. The results show maximum flow depth of 5m and maximum inundation up to 1.46 km on Gwadar coast . Numerical simulation reveals that any future Makran Subduction zone earthquake with M2 8.5 can generate a destructive tsunami.