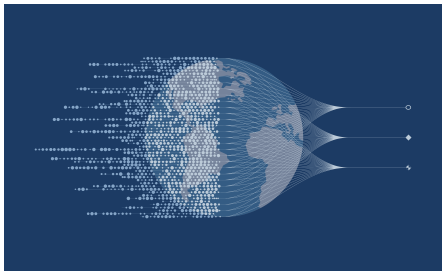

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tsunami database and analysis rupture duration for tsunami earthquake warning in Sumatra

The issuance of tsunami warnings constitutes a pivotal measure aimed at preserving human life and lessening the impact on local communities. The moment magnitude of the P wave (Mwp) alongside the rupture time duration (Tdur) can be employed as rapid parameters for disseminating tsunami warnings. In this manuscript, we analyze the seismic waveform data sourced from a global network to ascertain Mwp and Tdur pertaining to the South-West Coast of Sumatra earthquake. Mwp is computed through both automatic and manual phase picking of the P phase. The findings of this investigation reveal a well-characterized correlation between the P wave data obtained from both automatic and manual picking methods, as well as between Mwp and the duration of time. Moreover, the results provide promising insights for the development of an early warning system that is projected to be established in the region in the foreseeable future. The data generated from tsunami modeling are securely stored within the database utilizing an array of technological frameworks. The database visualization comprises a map detailing tsunami wave propagation, an animation illustrating tsunami wave movement and information regarding the affected areas, inclusive of location details, estimated time of arrival and estimated wave height.

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