



Applicability of the NEAMTWS Decision Matrix for the Mediterranean to the Italian tsunamis

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The “decision matrix” is nowadays the main tool used by all the operating Tsunami Warning Systems to issue bulletins and launch alerts and alarms after the occurrence of a potentially tsunamigenic earthquake. A decision matrix for the Mediterranean area has been already defined and adopted also by the ICG/NEAMTWS (Intergovernmental Coordination Group/North Eastern Atlantic Mediterranean and connected Seas) for the Euro-Mediterranean Tsunami Warning System under implementation.

This work aims at applying the NEAMTWS decision matrix to the Italian historical earthquakes in order to check its applicability and estimate its performance to future cases. To this end, the TRANSFER tsunami catalogue and the most recent Italian seismic catalogues have been taken into account to examine both the really tsunamigenic and the potentially tsunamigenic earthquakes occurred in Italy, according to the magnitude thresholds and the epicentral distance from the coast defined in the decision matrix. The results allow to verify if (and what percentage of) false alarms can be expected and if (and what percentage of) under-evaluations (including missing alarms) can be foreseen for the Italian tsunamis.