



## An Experimental Seismic Data and Parameter Exchange System for Interim NEAMTWS

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In 2008 GFZ Potsdam has started to operate its global earthquake monitoring system as an experimental seismic background data centre for the interim NEAMTWS (NE Atlantic and Mediterranean Tsunami Warning System). The SeisComP3 (SC3) software, developed within the GITEWS (German Indian Ocean Tsunami Early Warning System) project was extended to test the export and import of individual processing results within a cluster of SC3 systems. The initiated NEAMTWS SC3 cluster consists presently of the 24/7 seismic services at IMP, IGN, LDG/EMSC and KOERI, whereas INGV and NOA are still pending. The GFZ virtual real-time seismic network (GEOFON Extended Virtual Network - GEVN) was substantially extended by many stations from Western European countries optimizing the station distribution for NEAMTWS purposes. To amend the public seismic network (VEBSN – Virtual European Broadband Seismic Network) some attached centres provided additional private stations for NEAMTWS usage. In parallel to the data collection by Internet the GFZ VSAT hub for the secured data collection of the EuroMED GEOFON and NEAMTWS backbone network stations became operational and the first data links were established.

In 2008 the experimental system could already prove its performance since a number of relevant earthquakes have happened in NEAMTWS area. The results are very promising in terms of speed as the automatic alerts (reliable solutions based on a minimum of 25 stations and disseminated by emails and SMS) were issued between 2 1/2 and 4 minutes for Greece and 5 minutes for Iceland. They are also promising in terms of accuracy since epicenter coordinates, depth and magnitude estimates were sufficiently accurate from the very beginning, usually don't differ substantially from the final solutions and provide a good starting point for the operations of the interim NEAMTWS. However, although an automatic seismic system is a good first step, 24/7 manned RTWCs are mandatory for regular manual verification of the automatic seismic results and the estimation of the tsunami potential for a given event.