



## **A monitoring system for earthquake-generated tsunamis on the Maltese islands (Central Mediterranean)**

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The last known significant tsunami to have hit the Maltese islands was in 1908 following the magnitude  $>7$  Messina earthquake. It is reported that the sea around Malta became agitated and water rushed up inland. Fortunately, there were no casualties. If such an event were to recur, the impact on today's coastal urban development would be significantly higher. In recent years Malta's seismic monitoring capabilities have been enhanced with the installation of the Malta Seismic Network and real-time earthquake location systems at the University of Malta thanks to SIMIT - a European funded Italy-Malta Operational Programme (2007–2013), and other projects. During the last year, a tsunami observation and simulation system has also been installed and is currently being tested as part of a second project nicknamed SIMIT-THARSY (Tsunami Hazard and Response System). The local seismic network consists of 6 permanent broadband seismic stations, with two more stations planned in the pipeline, and complemented with real-time data from regional networks. For the tsunami monitoring, two tide gauges are planned for installation, eventually to be added with the Intergovernmental Oceanographic Commission open network.

These new systems pave the way for an earthquake and tsunami early warning system for the islands and provide information for the Civil Protection Department in case of real events. As an example, we present the performance and observations of the seismic network and tsunami monitoring for the Mw 6.8 earthquake in Zakynthos, Greece, on the 26th of October 2018, and compare observed parameters, such as sea-surface height and travel times with predicted values.

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