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-time monitoring of global seismicity, response of the public and detection of particular seismic events

The European-Mediterranean Seismological Centre (EMSC) monitors earthquakes on a global scale by merging the parametric data shared in real time by 113 networks; this represents almost 9 500 seismic stations, 5 million arrival times and 114 000 earthquakes (median location time: 15 minutes). The presence of the main global networks (e.g. NEIC, GEOFON, etc.) and numerous national networks among the contributors ensures exceptional coverage and detection levels, which are constantly being improved.

Thanks to their high visibility, EMSC information tools (websites, apps, social media bots, etc.) are natural focal points for witnesses seeking information after a widely felt tremor. This generates an immediate increase in usage, which can be automatically detected and its geographical origin determined. These 'crowdsourced detections' are fast (10 to 90 seconds) and their publication initiates the crowdsourcing of witness reports, which in turn contributes to rapid impact assessment. Sometimes, other types of seismic events are detected such as explosions, sonic booms or meteors. On 5 October 2024, within 30 minutes of the occurrence of an earthquake in Iran, a sudden increase in the number of visitors from Israel was detected, which for unclear reasons immediately led to online discussions about the possibility it was a nuclear test.

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