



## **Tsunami deposits in the Balearic Islands (western Mediterranean) and implications for hazard assessment.**

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Significant earthquakes occur along the north Algerian and Carboneras faults (e.g. Djijelli 1865, Zemmouri 2003) and they may generate tsunamis in the western Mediterranean Basin and Alboran Sea, where tsunami hazard are poorly documented. The coast of southern Spain and Balearic Islands are densely populated, with touristic areas and important harbors. The 2003 event generated a small tsunami in the Balearic Islands (ships were moved by oscillations during more than 2 hours in some harbors). Reicherter et al. (2009) found evidences of two past tsunamis in lagoon of the Cabo de Gata (near Almeria), which they ascribed to the 1522 earthquake and an earlier event (< 850 BP).

Field surveys along the coasts of Mallorca and Menorca islands revealed few evidences of past tsunamis. Thin sandy layers with marine bioclasts, possibly deposited by tsunamis, were found in three areas at altitudes always lower than 2m. Boulder clusters were found along the southern coast of Mallorca, but they could have been deposited by storms as well.

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Reicherter, K., Becker-Heidmann, P., 2009. Tsunami deposits in the western Mediterranean: remains of the 1522 Almeria earthquake? Geological Society Special Publications, London, 316, 217-235.