



## TSUNAMI GENERATION BY LANDSLIDES THE TAGUS PRO-DELTA LISBON A CASE STUDY

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Landslides triggered by earthquakes have been invoked as important contributors of tsunami inundation, particularly in the case of catastrophic events. We present here a case study focused on the Tagus pro-delta, where seismic profiles and drilling were recently made, to positively identify the sedimentary evidence of mass transport deposits triggered by the 1755 earthquake. The ebb delta of the Tagus river is a major shallow water, Pleisto-Holocene body located in the high energy, sediment starved, west Iberian shelf. The high sedimentation rates allowed for the preservation of the 1969 AD and 1755 AD tsunami evidence found in gravity cores in the Tagus pro-delta Abrantes et al. (2008).

Recently, the results obtained from seismic data acquired on previous geophysical (Lisboa 98 and Pacemaker 2011) and sediment sampling campaigns (Poseidon 287 and Discovery 249), in the area off the mouth of the Tagus river, identified a landslide in the Tagus delta and suggest that these landslides are linked to seismic activity and the generation of tsunamis Noiva et al. (2014).

In this study, we present a case study based upon the results of Noiva and co-authors [2] focused on the Tagus pro-delta, where seismic profiles and drilling were recently made, to positively identify the sedimentary evidence of mass transport deposits triggered by the 1755 earthquake. We model the tsunami that was generated and its impact close to the river-mouth. We show that the inundation generated by this landslide locally added to the Atlantic-wide 1755 tsunami, but its regional effects were comparatively small.

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