



Historical Tsunamis on the Eastern Coast of the Adriatic

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The paper presents results of the first systematic study of tsunami activity along the eastern coast of Adriatic, from 16th century until present, carried out in order to provide new data for the European tsunami catalog and to set basis for the assessment of tsunami potential and tsunami hazard of the region. Existing knowledge on historical tsunamis in this area is based to a great extent on 19th and 20th century catalogs which mostly rely on reports printed in western European journals and newspapers, while the few existing studies are focused on several particular events. The present work investigates all the available material – starting from modern and early tsunami and earthquake catalogs – but focusing on contemporary, original texts and locally published journals and newspapers. The search of bibliographical sources brought to light three reports on tsunamis not yet recorded in international literature. The study encompasses eighteen events, most of them now being closely examined for the first time. Each event has been examined following the standardized criteria recommended by the TRANSFER (Tsunami Risk AND Strategies For the European Region) EU project, evaluating the reliability, based on the knowledge of the generating cause, the description of the tsunami effects and the quality of the documentary source. Additionally, for each event the path of propagation of information, from original sources, through early catalogs to present-day publications, has been constructed.

The study established that six out of the eighteen events that were recorded on the eastern coast of Adriatic stretching from Slovenia to Montenegro, were true tsunamis, while the others were seaquakes or the sea effects could be attributed to meteorological forcing. The strongest one was related to the Montenegrin earthquake on 15 April 1979, when one victim was killed by the tsunami wave; on this occasion the tsunami waves were also recorded on the opposite, Italian coast of Adriatic. Three rather strong tsunamis occurred in the seismically active region near Dubrovnik: the first accompanied the devastating earthquake of 6 April 1667 that destroyed greater part of the town, the second occurred in Boka Kotorska on 21 September 1780 and the third one again in Dubrovnik, on 16 August 1845. The remaining two events (10 August 1838 at Rijeka and 11 January 1962 at Makarska) were light tsunamis and were observed only as sea agitation or were just registered by tide gauges. To all the events the highest reliability value was attributed, except the 1838 event which can be considered “questionable”.