



## **A Compilation of the Historical Earthquakes Database for Marmara Region from 2000 B.C. and 1900 A.D. in frame of Marsite and Mardim Projects**

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This study aimed at contributing to creation of a scenario database for tsunamigenic earthquakes occurred in Marmara Region through the investigation of the historical earthquakes under the frame of Marsite and also Mardim Projects for the work package 5 (WP5). Furthermore, this work provides an evaluation of earthquake history in Marmara Region which is important for seismic risk assesment in İstanbul and preparing an active fault map of the Sea of Marmara, which is one of the goals of the work package 7 (WP7) of Marmara Supersite Project. For this purpose, we have created a digital database containing 576 earthquakes with some parameters such as location and intensity, also including macroseismic explanations for Turkey between the dates of 2000 B.C. and 1900 A.D. by compiling over 20 available sources such as Ambraseys(2009), Ambraseys and Finkel(1995), Ergin et al. (1967 and 1971), Soysal et al. (1981), Guidoboni et al. (1994), Papazachos et al. (1997), Shebalin & Tatevossian (1997), Ambraseys & Jackson (1998), Kondorskaya & Ulomov (1999), Ambraseys & Jackson (2000), Guidoboni & Comastri(2005), Stucchi et al(2012), Papazachos&P.,(2003). Among these sources, the basic reference that we used for many earthquakes is the Soysal et al. (1981), including earthquake parameters such as macroseismic epicenter and intensity. Another important catalogue for the assessment of historical events is the Ambraseys (2009) which is a comprehensive review and contains macroseismic explanations of the earthquakes in Turkey from 2000 B.C. to 1900 A.D. Evaluation of every possible sources for the old earthquakes have enabled us to cross check differences among them , find dublicate events and debate the earthquakes in terms of their reliability. In the scope of this study, the historical earthquakes were classified to date, location, intensity, macroseismic explanations using available information. In addition, the coordinate and intensity were assigned to 343 and 114 events, respectively. In this respect, the intensity values were assigned using MSK (Medvedev–Sponheuer–Karnik ) scale by evaluating the sources that give comprehensive information. By reviewing the previous seismicity records and following a methodology of homogenization of the relevant catalogs, we could obtain a complete and coherent database of the historical earthquakes to interpret the seismicity of the region. This effort can be integrated with findings of the other work packages of Marsite Project and backed-up with the geological, tectonic information of region to assess the seismicity of Marmara Region.