



## **Tsunami potential and possible impacts of coastal disasters in the sea of Marmara**

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The coastal disasters (earthquakes, tunamis, storms, floods) were destructive in the Mediterranean Basin and in the sea of Marmara where now the coastal areas are fully utilized by several types of plants and structures for several purposes by several tens of millions of population directly or indirectly. The main sources of coastal disasters in the sea of Marmara are faults, submarine landslides, tsunamis and storms. The proper and safe utilization of coastal areas need proper assessment of coastal disasters occurred in history and estimation of their possible impacts in the future.

In this study the occurrence of possible maximum significant wave height in a possible extreme storms in the sea of Marmara is hindcasted and their possible effects on the coastlines, harbors and ships are estimated. The overall evaluation of the historical earthquakes, submarine landslides, tsunamis, possible strongest storms are performed and characterized, by using existing data (i.e. historical documents, archives and archaeological sources) and tools (i.e. modeling, hindcasting, forecasting tools). Their occurrences are analyzed, their potential and possible future effects are determined. The risk analysis, possible impacts, better preparedness, effective mitigation measures, inter disciplinary collaborations are presented and discussed for the sea of Marmara.