INVESTIGATION OF SEISMO-GEOMORPHOLOGIC FEATURES OF FLOWER ISLANDS FAULT OF THE GULF IZMIR

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Abstract
Gulf of Izmir is located within a weakness zone known as Izmir – Balikesir transfer zone which is dominant by strike-slip faults. This zone's last activity has verified by 17-20 October 2005 dated "Gulf of Sigacik Earthquakes". The aim of our study is to investigate the seismo-geomorphologic features of Flower Islands Fault which we consider as a part of this zone.
Keywords: Geophysics, Hydrography, Aegean Sea, Seismics

The relation between gulf's seabed deformations and regional stress fields is known from Ocakoglu ve dig. [1]. Large numbers of strike-slip faults are indicated in the region according to their multi-channel seismic studies in the Gulf of Izmir and Gulf of Kusadasi. The cinematic analysis studies of the Gulf of Izmir and it's environs show a NNE – SSW directed expansion and WNW – ESE directed compression during the Quaternary – Holocene period [2]. The region changes it's shape under the influence of the transtensional tectonic regime in which NE and NW directed faults work together. Approximately N-S directed Flower Islands Fault is a fault which is located in this tectonic system. In this study, multibeam sonar (240 Khz – 480 beams), sub-bottom profiler seismic (3.5 Khz) and magnetometer methods are conducted to determine the fault with it's geomorphologic features (Fig. 1).

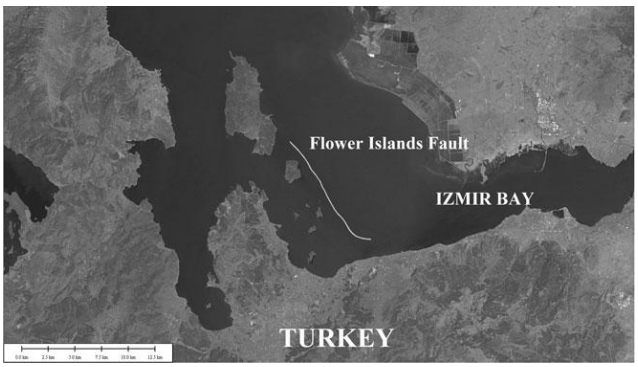

Fig. 1. Seabed surface fracture of the Flower Islands Fault.

Our reviews show a surface fracture of the fault more than 12km and a vertical component more than 2m – 3m. Seismological fault analyses are still being performed for the determination of the fault's other properties.

References
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