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## The Western Black Sea Fault: Its significance in the Late Tertiary-Quaternary Tectonic Setting

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The northwestern Turkey is a tectonically active belt in with paleogeographical evolution related to the collision and the escape tectonics accompanied by development of the strike-slip North Anatolian Fault (NAF). In this tectonic setting, the significance the Western Black Sea fault (WBF) and its influence of on the modification of coastal and morphological features are relatively unknown and underappreciated.

In NW Turkey and the western Black Sea, the WBF is defined a roughly N-S trending transform fault extending into the Istranca (Strandza) Mountains, which was active prior to the Eocene (Okay, Sengor and Gorur, 1994). It is also considered a northerly branch of the NAF (Gokasan et al, 2002). However, at its north-southerly extension of the Istranca Mountains near Istanbul, there is evidence of a major fault indicated by intensely tectonized low grade metamorphic rocks and granites, and of its activity in the Neogene indicated by many syn- and post-tectonic features of the regressive and discontinuous Tertiary sequence extending from the Upper Eocene into the Upper Miocene/Lower Pliocene that overlies the basement rocks (Koral and Sen, 1995; Koral, 1998). Similar features are deduced in the shelf margin of the western Black Sea from the eco-sounder images taken during the ASSEMBLAGE cruise of 2004.

This presentation reviews first structural features of the WBF on the basis of field and shallow seismic evidence and then discusses its significance in the late Tertiary and Quaternary tectonic setting of the region that caused morphological and coastal transformations such as the formation of elongate bays, lakes, alluvial depressions, fluvial passage-ways and ridges.

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