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Rina DEMJAHA
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INVESTIGATION OF RELATIVE TECTONIC ACTIVITY OF THE KARAPINAR (KONYA) REGION BY GEOMORPHIC INDICES

KARAPINAR (KONYA) BÖLGESİNİN GÖRECELİ TEKTONİK AKTİVİTESİNİN JEOMORFİK İNDİSLERLE İNCELENMESİ

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ABSTRACT

This study aims to determine the relative tectonic activity of Seyithacı Fault Zone, Nasuhpınarı Fault Zone, Başaran Fault and Tilkili Fault with geomorphological indices. Rock units found in the study area are divided into 4 main groups as Triassic - Cretaceous basement rocks, Miocene - Pliocene lacustrine and terrestrial rocks, Miocene - Pleistocene aged volcanic rocks and Plio - Quaternary basin and alluvial sediments. The Seyithacı Fault Zone, Nasuhpınarı Fault Zone, Başaran Fault and Tilki Fault are important structural elements of the study area and form the margins of Karapınar (Sultaniye) basin. The observed surface faulting and fissures which are parallel to main fault system, and fault plane within Quaternary sediments are show that the region tectonically active. In the present study we using geomorphic indices as Mountain-Front Sinuosity (Smf), Ratio of Valley - Floor Width to Valley Height (Vf), Asymmetry Factor (AF), Hypsometric Integral (Hi), Drainage Basin Shape (Bs) and Index of Relative Active Tectonics (Iat) were calculated for 79 basin. The calculated values range from 1.2 to 2.24, 0.5 to 30, 0.02 to 35.38, 0.24 to 0.82 and 0.77 to 7.39 for Smf, Vf, , AF, Hi and Bs, respectively. According to the Iat values obtained from the analysis indicate that the faults have high and medium tectonic activity in the study area.

Keywords: *Geomorphic indices, Iat, relative active tectonics, Karapınar.*