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Morphotectonics of the Asopos Valley, Viotia, Greece

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This research is devoted to investigate the Asopos Valley (Viotia, Central Greece) following a detailed field mapping and GIS-based (Geographical Information Systems) geomorphological analyses. In order to determine the tectonic activity affecting the area and the most recent fault evolution several morphotectonic indices were used (Asymmetry Factor, Transverse Topographic Symmetry, Hypsometric Curve and Integral, etc.). Our results confirm a neotectonic activity along several faults that control the Asopos River, while only few geomorphic anomalies show a possible connection with other factors, like lithology. Our preliminary conclusion is that a dense network of small normal faults exists in the region, mainly trending WNW–ESE to E–W, which in some case generate a larger fault zone. Estimation for tectonic activity varies from 'low active' to 'highly active' faults. Based on these results, we also estimated the seismic potential that is connected to each fault concluding the faults' efficiency is moderate.