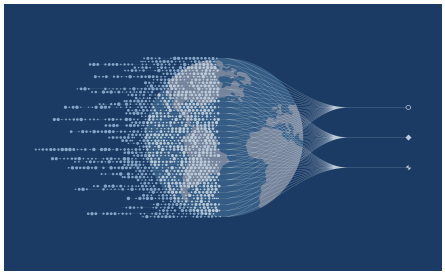

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of the Shkodër-Pejë Fault Zone: 50 Years Overview

The Shkodër-Pejë zone is an internal transverse fault zone with active normal faults stretching east-west, primarily along the boundary of the Mirdita ophiolitic zone. This fault divides the geological structure of the Albanides into two parts: the northern part, which continues with the Dinarides, and the southern part, which continues with the Hellenides. The region has been historically affected by strong earthquakes, including those on 1 February 1662 (Ms6.0, Pejë, Kosovo),3 July 1855 (Ms6.3 Shkodër), 1 June 1905 (Ms6.6 Shkodër) and 27 August 1948 (Ms5.5). Major earthquakes have been generated along the edges of this fault in previous centuries. This seismogenic zone presents a significant seismic hazard for northern and north-eastern Albania, southern Kosovo and southern Montenegro. Based on analysis of event parameters and seismicity features from 1971 to 2024, a total of 1187 earthquakes have been recorded, including a magnitude 4.5 event on 27 October 1986. Recent seismic activity in the Shkodër-Pejë zone is characterized by low energy events, mostly generated in the upper and middle crust, with fewer events in the lower crust. This study aims to define seismic typology, earthquake source parameters, and shed light on the seismotectonics of the region, highlighting the seismic risk.

Keywords: Earthquake, Seismicity, Fault Zone, Focal Mechanism.

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