

Seismotectonic activity of earthquake source zones in Northern and Central Armenia for the period 2019–2023

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Abstract The article is devoted to the study of seismotectonic activity of focal zones in Northern and Central Armenia. In order to assess the degree of activity of seismotectonics in two regions of the region. An analysis of the seismic regime was carried out and a graph of earthquake recurrence was constructed. The earthquake recurrence graph consists of two lines. The first reflects the frequency of earthquakes in the northern, the second in the central parts of the region. Through the use of hydrogeological methods for studying the geodynamic processes of the earth's crust and identifying hydrogeodynamic and hydrogeochemical effects that precede tectonic movements of the earth's crust. The nature and form of hydrogeochemical effects preceding earthquakes along the waters of mineral springs were determined. A map of the distribution of earthquake sources by seismically active and seismogenic places of deep faults has been compiled, highlighting the spatial location of deep faults in the earth's crust in the region. The study of the stress-strain state of the earth's crust in the region and the determination of deformation structures of compression and tension. The influence of the catastrophic Turkish earthquake on the stress-strain state of the earth's crust in the territory of Armenia has been studied. Turkish earthquake affected the change in the chemical composition of the mineral waters of central Armenia and the dynamics of waters in the hydrogeodynamic wells of the region.

Keywords Seismotectonics, earthquake, hydrogeodynamics, hydrogeochemistry.

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