

## **Seismic study to support PSHA in Greater Caucasus (Azerbaijan)**

Seismicity is the severe stress-induced geohazard in Greater Caucasus (Azerbaijan). There are plenty of faults in the studied area of Azerbaijan, most of them believed to be active. The probability of an unexpected earthquake on such faults was quantified. In this study, classical Probability Seismic Hazard Assessment (PSHA) with two individual approaches was applied, one with area sources based mainly on clustering of historical earthquakes and the other one consisting of traces of seismoactive faults. The earthquake occurrences based on probabilistic theory was assessed, the sequence of the occurred earthquakes based on the energy class distribution regularities and modern mathematic and statistical values were defined. The results show that the maximum earthquake of Mw 8.0 is estimated for the western area zone and is used to generate one of the seismic scenarios of the region. This work was supported by the Science Development Foundation under the President of the Republic of Azerbaijan-Grant № EIF/GAM-4-BGM-GİN-2017-3(29)-19/08/2.

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