

Earthquake tectonics, sustainability of cities and infrastructure, seismic hazard assessment and mitigation. A Case study in north-east of Azerbaijan

The worldwide-known seismic hazard assessment methods and approaches are regenerated according to the modern seismic requirements. Strong earthquakes cause numerous human losses and infrastructure damages. The earthquake causes a seismic threat to the sustainability of the cities, critical facilities, oil-gas pipeline, terminals, dams and others. In Azerbaijan, earthquakes occur and intensity strengthens in different years. The existence of the oil and gas pipelines is important to Azerbaijan for intensifying the economy, strengthening oil and gas potential, also politically and strategically in Caucasus. The regional main oil and gas pipelines pass through seismic active areas (Georgia, Turkey) in line with the seismically active north-east part of Azerbaijan. Seismic security should be accepted as integral part of the national security implication. The objective of the project is to estimate seismic hazard in the north-eastern part of Azerbaijan with the use of modern multi-parametric integrated methods considering the importance of national strategic objects and facilities to the economical development of the country which might lose sustainability as a result of earthquake. The outcome is to estimate seismic activity and plot models of seismic hazard based on the configuration of the multi-parametric values and make advises on establishing early-warning system in the country.

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