

Seismic risk and water security

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The report focuses on assessment and reduction of seismic risk in Central Asia and ensuring water security. It provides criteria for assessment of seismic risk, impact of earthquakes on seismic resistance of dams and public water supply systems, as well as analyzes response of dams and water supply systems to strong earthquakes in Japan (Kobe), China, USA, etc.

The main seismic safety principles are given with reference to dams. Moreover, the report presents principles and alternatives of continuous operation of water supply systems in San Francisco (USA).

Supply of water for population needs and operation of industries under the conditions of seismic activity is of vital importance for cities that have experienced earthquakes. The highlights of the report are given in:

1) Tursunbay Rashidov , Gaibnazar Hojmetov , Abdurakhman Ischanhodjaev, Dilshod Azizov. Estimation of Seismic Risk and Reduction of Damages for Life-Support Systems. Results of Experimental Research of Seismic Stability of Underground Constructions. The report at Asia Megacities Forum « Disaster Risk Reduction in Mega Urban Centers». November, 3-4. KOBE, 2006

2) Tursunbay Rashidov, Elena Kuzmina. Development of Seismic Risk Mitigation Strategy Based on the Probabilistic Assessment of Residential Buildings Damages. The report at Asia Megacities Forum « Disaster Risk Reduction in Mega Urban Centers». November, 3-4. KOBE, 2006

3) Rashidov T.R., Kondratev V.A., Akhmedov M. A.Tuchin A.I. Strategy of reduction of seismic risk for hydro-technical structures. Proceedings of The International Conference on Performance-Based Design in Earthquake Geotechnical Engineering – from Case History to Practice. 15-18 June. 2009. Tokio. Japan. pp. 975-981.