



## Estimation of Multiple risks deciles for twelve natural hazards for the territory of Georgia

Nino Tsereteli (1), Otar Varazanashvili (1), Tamaz Chelidze (1), Emili Tsereteli (2), Jemal Dolidze (3), Avtandil Amiranashvili (1), Elizbar Elizbarashvili (4), and Alexandre Gvencadze (1)

(1) Institute of Geophysics, Department of Seismology and experimental geophysics, Tbilisi, Georgia (nino\_ts@ig.acnet.ge or nino66\_ts@yahoo.com, 995 32 332867), (2) V. Bagrationi Institute of Geography, Tbilisi, Georgia, (3) Ministry of Environmental protection and Natural Resources, Tbilisi, Georgia, (4) Institute of Hydrology, Tbilisi, Georgia,

Upward trend of disaster's intensity and frequency are observed worldwide. It is the result of the urbanization and rapid increase of the density of the population, global climate change and economical globalization, environmental deterioration and etc. Work presented here was initiated by the GNSF project "Reducing natural disasters multiple risk: a positive factor for Georgia development ". The main goal of the project was the assessment of 12 widespread natural disasters multiple risks for the territory of Georgia. These natural disasters are: earthquake, landslide, avalanche, flood, mudflow, drought, hurricane, lightning, hail, glaze, freeze, mist. The database created by realization of the project contain information about the natural disasters occurred in Georgia, and was the first attempt for a unified representation of all happened natural disasters. Specification of the energetic-spatial-time regularities of these phenomena filled the gaps in knowledge of natural disasters. The results obtained by the developed methodology for the assessment of multiple risks was allow us to compare the various part of Georgia by the levels of risk. It gave us possible to evaluate the type of risk, which makes main contribution in losses. In this sense the presented results can play an important role in determination of the main direction of the State effort to reduce the economic and life losses of the population caused by disasters.

All this is in full agreement with main priorities of Hyogo Framework of Action, namely to identify, assess and monitor disaster risks and enhance early warning. The framework also calls for the promotion of: regional programmes, including technical cooperation; capacity enhancement; the development of methodologies and standards for hazard and vulnerability monitoring and assessment; the sharing of information; and the effective mobilization of resources.