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Landslide Susceptibility Assessment in the Central Part of Republic of Moldova

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There has been an increasing interest in natural hazard assessments within the scientific community, particularly in the last two decades. In other respect, there is also a dramatically rising trend in the number of natural hazards. Growing population and expansion of settlements and lifelines over hazardous areas have largely increased the impact of natural disasters both in industrialized and developing countries. Furthermore, natural disasters such as earthquakes, landslides, floods have dramatic effects on human life, infrastructures, environment, and so on. Landslides, one of the most destructive natural hazards, constitute a major geological hazard throughout the world, like in Turkey and Moldova. There are a lot of regions affected by landslides in Turkey (particularly the West, Middle and East Black Sea Region) and Moldova (e.g.: area between Nisporeni, Calarasi, Balti, Western Rezina District, Codri Hills in Central Moldova etc.), and consequences of landslides are of great importance in the two countries. In the last 50 years' period, only the economic loss due to landslides in Turkey is estimated about 5 billion $, and 12.5 % of the whole settlement areas, including big and populated cities, are facing landslide threat. Similar to Turkey, there are about 16000 areas affected by landslides in Moldova. In February-March, 1998 the intensity of landslides in the central part of Moldova, including Chisinau, considerably increased. In total, 357 private households involving 1400 people were affected, 214 houses were destroyed, and 137 were damaged. The total national damage accounted for 44.3 million Lei. At present on Moldavian territory, there are more than 17000 landslides of various types. These landslides are mostly located within Central Moldavian heights, one of the most complicated geomorphologic structure and territory's fragmentation. Among major landslide triggering factors, in addition to natural ones, one should also consider the anthropogenic factors such as unreasoned road and civil construction, agricultural activity, failure of water pipe systems. Fragmentation of the agricultural lands and appearance of hundreds of thousands of small farmers have destroyed previous land protection system as well as landslide control system. Lack of financial resources played the main role in failing of these systems. In order to help the decision makers and to prevent human life, we initiated a collaboration as being the two landslide suffering countries, Turkey and Moldova, under the Science For Peace Project supported by NATO. It is believed that integration of the two teams' experience and knowledge under landslide topic will provide useful and beneficial information and economic benefits for the future works such as urban development and planning, engineering applications, land-use potential planning etc. in Moldova, based on the ideas of application of scientific principles to reach a better and peaceful world. Research results will be helpful in developing new regulations on territory protection, existing and currently designed buildings, infrastructures, and facilities as well as land management in the Republic of Moldova.