AOGS 2005

Paleoseismic Hazardous Phenomenon, Evolution and Mapping in the Moesian Platform, Bulgaria

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The analysis of paleoseismic dislocations is a method of rapid evolution on a world scale, providing the possibility to evaluate the seismic activity degree for concrete local regions. In this way, the transition from general to detailed seismic zoning can be realized even for territories where the seismic statistical data are not available or are insufficient. Moreover, the induced energy could be evaluated for areas that had been passive in seismic respect during the historic and instrumental periods. The paleoseismic dislocations include all the geological-geomorphological phenomena related to the catastrophic earthquakes (anomalous relief disturbances and arising of new specific relief forms, sedimentation disturbances, neotectonic structure processing, etc.). During the last 15 years the author managed to identify more than 60 paleoseismic dislocations in the Bulgarian part of the Moesian platform that had taken place prior to the historical stage (about 8000 B.P.). They provoked considerable and anomalous relief deformations and were accompanied in most of the cases by avalanche sedimentation. These were one-act events but in single cases they were reactivated during the subsequent stages earthquakes. The methodology of investigation and mapping is complex and is in accordance with regional and local geodynamic circumstances in the corresponding areas. The catastrophic earthquakes was reflected on the quantitative parameters of the occurring contemporary morphogenetic processes: erosion (soil, river – linear and surface one), accumulative, gravitation, karst and other processes. The consequences from the contemporary tectonic processes, and phenomena related to them, would have their reflection on the whole social life in the regions. The present work considers only some of the dislocations representing geological-geomorphological phenomena that are part of the natural and cultural heritage with the aim of real assessment of the hazards for them.