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Landslide events on Romanian national roads between 2005 and 2015

Mihai Niculita (1) and Iuliana Cornelia Niculita (2)

(1) Geography Department, Geography and Geology Faculty, Al. I. Cuza University of Iasi, Carol I, 20A, 700506, Iasi, Romania, (2) GeoGraphGIS, Iasi, Romania (geographgiscompany@gmail.com)

Beside floods, landslides are the hazards that affect the most the road infrastructure of the Romania. While the damages of floods on roads infrastructure can be repaired in a normal amount of time, the damages created by the landslides cannot be repaired easily. This is due to the fact that the landslides reactivates in time, increase their size and depth, and the stabilization of the entire hillslope is needed, intervention which usually require big investments in stability studies and the actual work. We have studied a database of landslide events that generated blockages or interruption of the circulation along the national roads in Romania, between 2005 and 2015, and were reported by the national authority for road administration. GIS analysis was performed on the digital data of road network in order to locate precisely the affected the roads, and a spatial database was created. Every event was reconstructed from the information available, regarding the mechanism of the landslide, its causes, the magnitude and the generated effects. For the entire study period, 19 events that reactivated along one to four years, generated the closure of the road sectors they affected during this time, while 106 events generated interruptions of the circulation. Beside the estimated costs related to the damage repairs, we have tried to estimate the costs related to the effects of the closure or interruptions of the circulation, in order to have an overall image of the losses generated by these natural hazards to human society.