



Monitoring of landslides on corridor 10 passing through Serbia

S. Milenkovic, B. Jelisavac, V. Vujanic, S. Jotic

The Highway Institute, Department for Geotechnics, Belgrade, Serbia@Montenegro
(geoteh@ptt.yu)

Serbia is quite known for its conspicuous number of various landslides, formed prevalingly in the weathering crust, of neogene age, wherein the clays, marls, and sands alternate each other. Unstable slopes created along the river banks of Danube and Sava are particularly known, with great number of landslides which capture very large areas. Basic cause of such numerous occurrences, most frequently spacious and deep landslides, is attributed to complex geological and morphological evolution of the terrain. Immediate pretext, however, in our time is quite often the consequence of human building and economic activity such as construction of E-75 motorway within the corridor 10.

Road corridor 10 through Serbia is extending along major valleys of rivers Danube, Sava and Morava being located within the neogene basins prone to sliding. On the stretch Novi Sad - Nis, there were many occurrences of reactivation of old and formation of new landslides which by their vast dimensions and activity jeopardize the traffic safety. Detailed engineering-geological investigations of these slides were carried out in the previous period meant for repair works. Unfortunately, the works thereof were carried out within the budgetary constraints, so that the majority of landslides are still active. Highly precise data on the mechanism and depth of sliding processes and cause and effect links of soil water-saturation and landslide activity level have been obtained through long-standing monitoring of landslides.

The most complex landslides are as follows: Beska, Begaljicko Brdo, Kolari, Bracin and Razanj. These landslides were a calm phenomenons untill the construction of motorway. From then and onwards their activity was growing gradually, and thus causing more and more complex problems which were often culminating even with overall

traffic break-down along motorway.

his paper is presenting the results of the most recent, essential monitoring results, which among other things included as well the inclinometers, piezometers, surveying marks and triaxes deformeters). More objective assessment of hazards and risks has been made possible by this operation, along with the establishment of rating and prioritization for repairs. Moreover, certain stages of repair implementation are being checked-up by monitoring.