

# INVESTIGATION OF LANDSLIDES ON FLYSCH SLOPES IN NORTH ISTRIA AND RJEČINA RIVER VALLEY IN CROATIA

*Sanja Dugonjić Jovančević*

## Abstract:

Presentation presents a review of recently recorded instability phenomena on flysch slopes of Istria and Rječina River valley in Croatia, as well as present research projects in the area. The north-eastern part of the Istrian Peninsula, the so-called Gray Istria, is built of Paleogene flysch deposits, where instability phenomena are frequent and where a large number of landslides, with significant consequences, have been recorded over the past 35 years. Geological conditions, geotechnical properties, as well as sliding conditions are systematically represented. Landslides in Istria are usually caused by heavy rainfall and/or human activity that significantly changes the slope geometry and/or assists in leading and retaining surface water in the sliding zone. The Rječina River flows through three different geomorphological zones. The slopes around the Rječina riverbed are formed in similar siliciclastic sedimentary rocks with flysch characteristics. Flysch bedrock is characterized by great lithological heterogeneity, because of the frequent vertical and lateral alternation of different lithological sequences. The bedrock is mostly covered with unstable slope formations. A limestone rock mass is visible on the cliffs around the top of the river valley. History and characteristics of the largest regional active landslide is also presented in the presentation. This is Grohovo landslide, occurred in December 1996, as complex and retrogressive sliding, with 13 landslide bodies. Location of Grohovo landslide was a pilot area during the Croatian-Japanese joint research project from 2009- 2014, where comprehensive real time monitoring was established. Presentation presents first monitoring results and future plans and further research. Investigation of landslides on flysch slopes in north Istria and Rječina River valley in Croatia continues with new sliding phenomena occurred during 2014.