



Landslide study at Sacele reservoir in Romania

Massimiliano Cannata (1), Christian Ambrosi (1), Alessio Spataro (1), James Martin (2), and Guney Olgun (2)

(1) SUPSI, Earth Science Institute, Canobbio, Switzerland (ist@supsi.ch), (2) Civil & Environmental Engineering, Virginia Tech

Sacele reservoir is located on the river Târlung, about 3 Km upstream from Sacele and about 12 Km from Brasov (Romania). It represents the main drinking water source for Brasov. The Sacele reservoir is recognized as a dam of exceptional importance and therefore it requires special surveillance.

In the East side of the basin, in proximity of the barrage, the slope shows evidences of instability; for this reason stabilization works, mainly consisting in re-profiling the slope, and drainage installation, has been conducted without success.

This study, financed by the World Bank, aims to provide important information for the establishment of an automatic monitoring system able to reduce the existing risk.

Conducted studies includes:

- analysis of existing informations
- data acquisition by mean of field survey (geodetical and geological) and in situ investigation (boreholes, geophysical, sample test)
- development of GIS based geological model
- development of landslide models based on FLAC and FLAC3D

Finally the model results leading to the identification of the triggering factors are discussed.

The conducted work is a comprehensive study (from data to models) that highlight some interesting conclusions showing how the "stabilization" works increased total displacements and shear strain, and produced a new deeper cinematic.