

SURVEY ON LANDSLIDE SLOPES GEOELECTRICAL AND SEISMIC METHODS

For the stability analysis of slopes in landslides, and the consequent action planning for the stabilization and the monitoring plans, is of fundamental importance the precise definition of the geological model and of the geological structure. In particular, in addition to the high detailed surface geological mapping, must be located the critical elements related to the stability conditions, namely: a) Presence of underground water; b) zones of weakness (tectonic or morphotectonic discontinuities); c) main lithological contacts

The geophysical surveys provided a comprehensive view of the slope and - with a proper calibration with the expected geological setting - allowed a precise reconstruction of the subsoil.

The combined use of two methodologies (seismic method and geoelectric method) provides different physical parameters of the subsoil, which greatly reduces the ambiguity typical of the geophysical methods.

The example below refers to a landslide in a slope above a group of houses (Locana, Turin. Italy). The survey (conducted in 2009) has identified the area of detachment and the general geological setting of the slope.

