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Practical applications of displacement monitoring using satellite technology to landslides, land subsidence, and dam deformation- including case studies in Croatia, Bosnia and Herzegovina, etc.

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Summary:

Monitoring is important for assessing the stability of natural slopes and manmade structures, and for confirming the validity of the design and countermeasure works. In addition, it is also useful for predicting risks, for managing safe operations, and for reducing project costs in Geotechnical Engineering.

There are various types of instruments for taking field measurements: extensometers, inclinometers, etc. Although they are useful, these instruments may not be adequate for monitoring large slopes or extensive areas because they can only be applied to limited areas. The satellite technologies, GPS and DInSAR, can be applied to monitor the displacement of the ground and structure surfaces over large areas.

This lecture will explain how such modern technologies work on various geotechnical issues, i.e. landslides, subsidence and dam deformation, through practical applications including case studies in Croatia, Bosnia and Herzegovina, and some other countries.