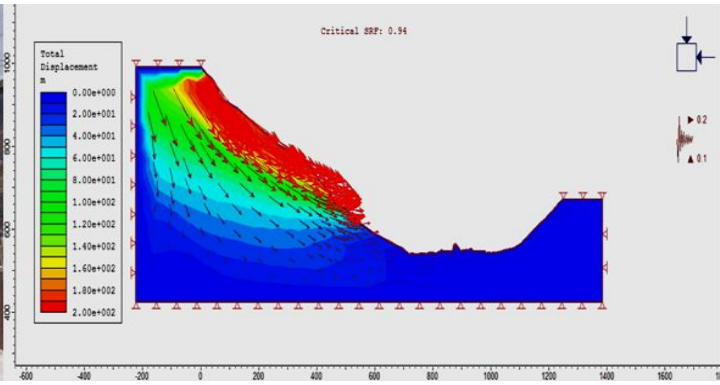

Lidar Comes In Aid to Asses Post Catastrophic Devastation

A premier institute for training and capacity development programs for managing natural disasters in India intended to assess instability of the slope across the territory of Kedarnath to develop disaster risk reduction procedure. Apart from enormous damage, difficult climate and terrain made the process even more challenging.

Considering the difficulties involved in conducting the study, NIDM intended to use high end survey technologies to gain accurate data and ensure ease in assessing the vulnerability quotient of the area affected.

Genesys-proposed solution involved developing an application for vulnerability analysis based on the highly accurate LiDAR point cloud data. Being a geo-technical requirement, it necessitated acquisition of highly accurate spatial data.

Spatial data acquisition was carried out using backpack and terrestrial LiDAR augmented with 360-degree Panoramic Imagery. The slope analysis was conducted using various software tools that allowed calculating shear strain using triangular mesh and contour data. The application was equipped with a tool to perform cross-sectional analysis of river bed. One of the final deliverables included a '360-degree Walk-Through' video of the entire Kedarnath Valley that provided ground information which proved helpful in assessing damage and development of risk reduction procedures.

Key benefits:

- Accurate spatial data with evidential proofs to assess damage.
- User friendly application to analyse slope gradation
- Predictive modeling