



Landslide Hazard Zonation Mapping along national highway: NH-125, Pithoragarh-Kanthgaon Area, Uttarakhand, India

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Abstract

Landslide is one of the most common natural hazards that affect human population directly and also indirectly by causing fatal accidents, roadblocks and loss of biodiversity. The present study deals with the preparation of Landslide Hazard Zonation (LHZ) map along national highway NH-125 from Pithoragarh to Kanthgaon. This area lies in the calc zone of Pithoragarh. The presence of steep slopes, faults, shear zones along with extreme rainfall during monsoons make it very prone to landslides. This area is a part of government's multipurpose project to prepare all weather roads. It serves as a route of pilgrimage for the Kailash Mansarovaryatra and is also very close to the tri-junction of India, China and Nepal. This road often gets blocked due to mass-wasting in various forms. Hence, this study has been done to delineate the landslides and understand the cause of their occurrence. Both remote sensing and in-field techniques have been utilized for the study. Remote sensing techniques include the use of SRTM data, Google imagery, topographic, hydrological and other maps. In field techniques include geological studies and recheck of the observations made using remote sensing data. Factors such as hydrology, slope, overburden thickness, slope and discontinuity relation, joint and fracture, weathering, rock mass, lithology and vegetation type along with the precipitation data have been utilized for the calculation of Landslide Suceptibility Score (LSS) and the preparation of LHZ map. The investigations and interpretations of present study may be used by the workforce responsible for the on-going project so that their objective of public welfare is fulfilled. District administration can use this LHZ map for early warnings to overcome landslide hazards.

Biography:

Himanshu Pandey is in the IV semester of master in science in Geology in L. S. M.Govt. P. G.College, Pithoragarh, Uttarakhand, India. Research interest in Geodynamics.