



Landslide Hazard Zonation and Risk Assessment of Ramganga Basin in Garhwal Himalaya

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The Himalaya being unique in its physiographic, tectonic and climatic characteristics coupled with many natural and man-made factors is inherently prone to landslides. These landslides lead to mass loss of property and lives every year in Himalayas. Hence, Landslide Hazard Zonation is important to take quick and safe mitigation measures and make strategic planning for future development. The present study tries to explore the causes of landslides in Ramganga Basin in Garhwal Himalaya, which has an established history and inherent susceptibility to massive landslides has been chosen for landslide hazard zonation and risk assessment. The satellite imageries of LANDSAT, IRS P6, ASTER along with Survey of India (SOI) topographical sheets formed the basis for deriving baseline information on various parameters like slope, aspect, relative relief, drainage density, geology/lithology and land use/land cover. The weighted parametric method will be used to determine the degree of susceptibility to landslides. Finally, a risk map will be prepared from the landslide probability values, which will be classified into no risk, very low to moderate, high, and very high to severe landslide hazard risk zones.

Keywords: Landslides, Hazard Zonation, Risk Assessment