

Landslide Hazard and Risk Zonation of Chamba Valley in Himachal Pradesh, India

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Being located in the fragile Himalayan regions of Himachal Pradesh, Chamba is highly susceptible to landslides and mass wasting. Frequent landslides pose not just a risk to lives and properties of places in and around Chamba, but also block vehicular traffic and communication channels in and out of an already inaccessible area. However, most disaster management measure focus on post-disaster relief operations and hazard mitigation. To provide a more holistic support to the local population, it is important that preparedness at the level of pre-disaster planning is needed. This can be done by first identifying the regions in Chamba Valley that are most vulnerable to Landslide. The present study is an attempt to identify such areas by preparing a Risk and Vulnerability map of Chamba Valley. To obtain the land use classes Landsat 8 images will be used and Cartosat DEM will be used to create the slope, aspect and hillshade layers. In this work, a Risk Zonation map of Chamba will be prepared by overlaying maps of high population concentration, major transport networks, past Landslide events, and Digital Elevation Model.

Keywords: Vulnerability, Landslide, Digital Elevation Model, Risk Zonation