



Terrain analyses and landslides using DTM in Himalayas

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Himalayan mountain system is the most dynamic and energetic system on earth which is producing huge sediment load due to erosion. This is caused by upliftment and thrust faulting along with normal erosion process. Terrain features of the Himalayas are related to plate motion and its northward push is the direct cause of all the earthquakes as well as huge erosion leading to the formation of cone in the Bay of Bengal. The paper discusses the modalities of presentation of a hierarchical scheme of terrain classification that has extensive potential to be used for landslide hazard zonation. This is the best outcome of applied geomorphology in India and has helped prepare LHZ maps for several areas in Himalayas which are presented. In addition a scheme using GIS and remote sensing data is also presented. Terrain parameters that have direct bearing or relation to landslide are presented in a sense to arrive at a statistical relation valid for the parameter. Examples of this are presented and limitations of the scheme are also presented in the existing set up of the Indian government and manpower involvement.