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HGM002-P01

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Landslide susceptibility mapping considering earthquake in west Nepal

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We used distribution data of 2005 north Pakistan (Kashmir) earthquake (M7.6)-induced landslides as the training data, and mapped earthquake-induced landslide susceptibility in study area of 27km by 27km in west Nepal using four causative factors: slope, convexity, pit-peak, and distance from active faults. For calculating the former three factors we used 30-m-resolution digital elevation model, and for calculating the distance, we dealt Main Boundary Fault as strike slip fault and Himalayan Frontal Fault as reverse fault in the study area. And for classifying the susceptibility we used the Information Value (InfoVal) method. As a result, four susceptibility classes, Very low (landslide area ratio, 0-1%, same as hereinafter), Low (1-3%), High (4-9%), and Very high (10-75%) are mapped; however, threshold decision according to the probability remains to be solved to keep objectivity.

Keywords: landslide, susceptibility, Nepal, earthquake, fault