

Slope failure events in Himalayan snow area due to Gurkha Earthquake

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On 25 April 2015, an earthquake (M7.8) occurred at Gurkha region located northwest of Kathmandu, the capital of Nepal. On 12 May, an earthquake of M 7.3 occurred at 80 km northeast from Kathmandu. Due to this series of large earthquakes, slope failure events (ice avalanche, snow avalanche, snow-rock avalanche, rock avalanche) occurred frequently in the snow mountain area of the Himalaya. In Langtang valley, a catastrophic snow-rock avalanche caused serious damages such as more than 100 victims at Langtang village. We investigated the distribution and characteristics of the slope failure events in snow area of the Himalaya using satellite data. In addition, we clarified the size and location of hanging glaciers which caused the failure in the Langtang Valley using the digital aerial images acquired in the field survey in the fall 2015.

Keywords: Gurkha earthquake, slope failure, hanging glacier, Langtang Valley