

Inventory mapping of landslides along active faults in the Lower Nepal Himalayas as to the earthquake induced landslides

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Recent large earthquakes that occurred in mountainous region such as Chuetsu-Niigata in 2004, north Pakistan in 2005, Sichuan China in 2008 and Iwate-Miaygi Nairiku in 2008 caused innumerable landslides on mountain slopes. Those slope disasters are intensively distributed just along the co-seismic faults or on the hanging wall side just above the co-seismic faults. They are characterized by shallow debris slides, reactivated giant deep seated landslides and debris slides along gentle valley bottoms due to liquefaction. This paper reports geomorphological and geological characteristics of earthquake-induced landslides, inferred from inventory mapping of landslides triggered by the earthquakes as follows; Chuetsu-Niigata in 2004, north Pakistan in 2005 and Iwate-Miaygi Nairiku in 2008.



Fig. 1 Study area

Inventory map of landslides in the far and central western parts of Nepal Lower Himalayas (Fig.1), using aerial photographs in scale of 1/50000, is also shown in this report. Those areas are adjacent to Garwar Himalayan region in India marked as the seismic gap. The inventory map is superimposed with topographic map, geological map and active fault map. The active faults such as MCT and MBT continue along the base of the foothill of Nepal and Indian Himalayas. Earthquakes that are presumed to occur along those active fault will affect stability of Himalayan mountain slopes. Authors try to prepare the susceptibility map on earthquake induced landslides, combining with those causative factors of landslides due to earthquakes that occurred in these five years.

Keywords: Nepal, Lower Himalaya, landslide inventory map, earthquake induced landslides, active fault