Geophysical Research Abstracts
Vol. 15, EGU2013-6467, 2013
EGU General Assembly 2013

Process and Mechanism of the Kokkawa Landlside Caused by Snowmelt

Hideaki Marui (1) and Yoshihiko Koizumi (2)

(1) Research Institute for Natural Hazards and Disaster Recovery, Niigata University, Niigata, Japan (maruihi@cc.niigata-u.ac.jp), (2) Department for Erosion and Torrent Control, Niigata Prfectural Government, Niigata, Japan (koizumi.yoshihiko@pref.niigata.lg.jp)

The background, process and mechanism of the Kokkawa landslide of 7 March 2012, Japan is reported. The landslide has the following dimensions; The width of the landslide is about 150m. The length of the landslide is about 500m. The depth of the sliding surfce is about 20m. The volume of the sliding soil mass is estimated to be 750,000m3. Although no one was killed or injured, several houses were completely destroyed by the sliding soil mass. In addition, a lot of inhabitants of neighbouring houses had to be evacuated. The Kokkawa landslide occurred in Joetsu City, which is located in southwestern part of Niigata Prefecture. Originally, Joetsu City area is famous as a typical landslide prone area in Neogene formations. The area is also characterized as heavily snowy area. A lot of snow accumulation was observed in the vicinity of the landslide area during winter season. Clearly the landslide was triggered by snowmelt. The soil layer above the geological formation border probably contained very much water due to antecedent snowmelt before occurrence of the landslide. It was a remarkable aspect that the sliding soil mass has a long travel distance and high velocity at the early stage of slide.