

A predictive method to detect the possible positions of landslides and debris flows resulting landslide dams and lakes

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A method for predicting the possible locations of slope failures is presented. Case studies of slope failures triggered by the intense rainfalls are conducted by using the 10m-DEM which are obtained from the topographic maps before the events. The upstream area maps give important information to detect the locations of the hidden valleys in the basin which are unable to detect by the interpretations of aerial photographs. The distributions of the slope inclination also play the important rolls to delineate the extents of the slope failures.

Case studies are as follows, the debris flows at Izumi in 1997, the debris flows at Minamata in 2003, the debris flows at Kasugatani Valley and slope failure at Satonaka in 2004, the debris flow at Adué in 2005 and the debris flows at Okaya in 2006.