

Study on landslide-susceptible slopes by heavy rain in the Aso Caldera, Southwest Japan

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The Aso Caldera located in Kyushu, Southwest Japan has been affected by concentrated occurrences of surficial landslides in the tephra layers in the recent decade. This study aims to propose the detection of slopes with landside susceptibility by heavy rain based on interpretation of LiDAR-based high-resolution topographical maps. Remnants of past landslides are widely distributed on the tephra-covered slopes. Analysis on the locations of recent landslide occurrence indicates that surrounding slopes of remnants of surficial landslides and steep valley side slopes are prone to landslides by heavy rain. Inside of past landslide slopes partially covered with collapsed materials also may become susceptible after time of tephra deposition.

Keywords: landslide, tephra , Aso Mountains