

Risk evaluation of steep slope failure using a slope angle and mean curvature

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According to the previous techniques for the evaluation of slope failures, only steep slopes are taken into account. However, the influence of earthquakes on slope failures has not been considered on the hazard map delivered by local government. After the Great East Japan Earthquake occurred in 2011, Necessity for considering earthquakes on to slope failure evaluation is increasing. Therefore, the present study focused on risk evaluation of steep slope failures caused by earthquakes. Within various techniques, a technique proposed by National Institute for Land and Infrastructure Management, was adopted in this study. With comparing manual and GIS calculations to obtain the parameters of slope angle and mean curvature, the degree of the risk was evaluated. The target slope is Mt. Shinobu, in Fukushima Prefecture. After examination , it is resulted in that the evaluation using GIS is useful as well.

Keywords: Slope failure, Risk evaluation