

ABSTRACT

Indonesia is a country which prone to natural disasters such as earthquakes, and tsunamis. In addition, Indonesia is also vulnerable to hydrometeorological disasters such as floods and landslide. One of the many causes of landslides is due to the high intensity of rainfall in a particular area. In this research we will examine the distribution of factor of safety (FS) and distribution of pore-water pressure on the slope while in rain condition. The values of the Factor of Safety (FS) and the increase of pore-water pressure were obtained from numerical modeling using the TRIGRS (The Transient Rainfall Infiltration and Grid-Based Regional Slope-Stability Model) version 2.0 software. The results of the modeling processed in a Geographic Information System-based software so that the distribution of Factor of Safety (FS) values and pore-water pressures can be visualized in the form of a 2-dimensional spatial map.

Key word: Landslide, Factor of Safety (FS), TRIGRS, GIS,