Title
Use of Frequency Ratio Approach in Landslide Susceptibility Mapping in Jeneberang Watershed of South Sulawesi, Indonesia

Abstract
This research work basically aims to study landslide susceptibility mapping based on several landslide causal factors. The study area is Jeneberang watershed in South Sulawesi Province of Indonesia. A dam has been constructed in this area, which has been playing an important role in flood control and water supply in newly developing city area in the South Sulawesi Province. In this work, we use a field survey and google earth interpretation-based landslide distribution map as dependent variable. The landslide inducing factors considered as independent variables are topographic parameters such as slope, curvature and aspect as extracted from Aster DEM, geological parameters such as lithology and fault, proximity-related parameters such as distance to road, river and fault, and land use/land cover. All these independent variables were processed and put in a spatial database system using GIS. Then, the landslide susceptibility map was prepared using probabilistic frequency ratio (FR) model. The overlay map indicates that 77% of high to very high susceptibility ranges were landslide pixels and 90% of very low to low susceptibility ranges were non-landslide pixels.