

**VULNERABILITY LEVEL OF ANDOSOL AND REGOSOL LANDSLIDE
IN WONOLELO VILLAGE, SAWANGAN DISTRICT, MAGELANG
REGENCY, CENTRAL JAVA**

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ABSTRACT

Wonolelo is one of the villages in Sawangan district, Magelang Regency, Central Java. There are two type of soil in Wonolelo, Andosol and Regosol. Wonolelo is located at the foot of Mountain Sindoro with the high of rainfall 2.870 mm/year and also high frequency of landslides in the last year. The research purpose was to know and map landslide vulnerability level of Andosol and Regosol in Wonolelo village. The method in this research was a purposive random sampling survey to compare secondary data with real data in the land area. Secondary data were obtained from an administration map, soil type map, landuse map, and rock type map to get the land system map. Based on the land system map, there were 12 sites taken randomly in the Wonolelo district. There were two types of parameters of landslide, parameters observed in the field and parameters observed in the laboratory. The field parameters included slope, land use, soil solum depth, rock weathering, vegetation density, and rainfall. Laboratory parameters were texture and permeability. The parameters data were used to give a scores landslide vulnerability level. The result indicated that landslides caused by high rainfall, steep slope, the deep solum, un contour farming, and low vegetation density. Andosol with moderate vulnerability level is about 37,62 Ha (4,27%) and heavy level is about 504,73 Ha (57,22). Regosol with moderate vulnerability level is about 178,75 Ha (20,27%) and heavy level is about 160,85 Ha (18,24%). Vulnerability with moderate level covering 216,37 Ha in the upper and lower area of the district and heavy level covering 665,58 Ha in the central of the district.

Keyword: andosol, regosol, scoring, survey, vulnerability of landslide