

INTISARI

Penelitian ini mengenai identifikasi tanah longsor menggunakan metode mikrotremor di Desa Gerbosari Kecamatan Samigaluh Kabupaten Kulonprogo dengan koordinat geografis $7^{\circ} 38' 45,33'' - 7^{\circ} 41' 35,24''$ LS dan $100^{\circ} 9' 20,80'' - 110^{\circ} 11' 16,52''$ BT. Dengan kondisi topografi berada pada ketinggian 500 – 1000 mdpl. Penelitian ini bertujuan untuk mengetahui struktur bawah permukaan daerah rawan longsor berupa ketebalan lapisan lapuk dan pengaruh kemiringan lereng pada daerah rawan tanah longsor sehingga dapat digunakan dalam pembuatan peta mikrozonasi daerah rawan tanah longsor.

Penelitian ini menggunakan 43 data mikrotremor dengan jarak antar titik sejauh 650 m. Sinyal mikrotremor dianalisis menggunakan metode HVSR. Dari hasil pengukuran diperoleh nilai frekuensi dominan berkisar 1 – 22 Hz, nilai faktor amplifikasi diperoleh nilai berkisar 1 – 10.5, nilai *peak ground acceleration* berkisar 60 – 300 cm/s^2 , ketebalan lapisan lapuk diperoleh berkisar 12 – 22 meter. Berdasarkan hasil analisis lereng, daerah penelitian berada pada kemiringan dengan klasifikasi agak curam – sangat curam.

Berdasarkan peta potensi bahaya tanah longsor menunjukkan bahwa, daerah penelitian yang berada di Desa Gerbosari berada di daerah dengan potensi sedang – sangat tinggi. Dimana daerah dengan klasifikasi potensi bahaya tanah longsor tinggi terdistribusi pada sisi utara dan selatan daerah penelitian. Sedangkan pada sisi tengah daerah penelitian menunjukkan potensi bahaya tanah longsor dengan klasifikasi sedang.

Kata kunci: tanah longsor, ketebalan lapisan lapuk, Desa Gerbosari.

ABSTRAK

Research on Landslide Identification Using Microtremor Method in Gerbosari Village, Samigaluh District, Kulonprogo Regency with geographic coordinates $7^{\circ} 38' 45.33'' - 7^{\circ} 41' 35.24''$ LS and $100^{\circ} 9' 20.80'' - 110^{\circ} 11' 16.52''$ BT. With topographic conditions at an altitude of 500 - 1000 mdpl. This study aims to determine the subsurface structure of landslide prone areas in the form of weathered layer thickness and the effect of slope slope in landslide prone areas so that it can be used in making microzonation maps of landslide prone areas.

This study uses 43 microtremor data with a distance between points of 650 m. The microtremor signal was analyzed using the HVSr method. From the measurement results, it is obtained that the value of the dominant frequency ranges from 1 – 22 Hz, the value of the amplification factor is obtained from values ranging from 1 – 10.5, the value of the peak ground acceleration ranges from 60 – 300 cm/s^2 , the thickness of the weathered layer is obtained in the range of 12 – 22 meters. Based on the results of the slope analysis, the study area is on a slope classified as a bit steep - very steep.

Based on the map of the potential for landslide hazards, it shows that the research area in Gerbosari Village is in an area with medium to very high potential. Where areas with a high potential landslide hazard classification are distributed on the north and south sides of the study area. Meanwhile, in the middle of the research area, it shows the potential hazard of landslides with a moderate classification.

Key words: landslides, weathered layer thickness, Gerbosari Village.