

Local site effect of soil slope based on microtremor measurement in Samigaluh, Kulon Progo Yogyakarta

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Abstract	This paper investigated soil slope-local site effect of earthquake inducing landslide by using microtremor Horizontal to Vertical Spectral Ratio (HVSR) method. Microtremor measurements of 15 sites which were recorded for 45 minutes at each site were carried out in Ngargosari village, Samigaluh, Kulon Progo-Indonesia. Microtremor analysis using HVSR method was performed using Geopsy software. HVSR method resulted in predominant frequency values that ranges between 2,77 to 13,82 Hz and amplification factors varied from 0,46 to 5,70. The predominant frequency is associated with the depth of bedrock and the amplification factor reflects the geological condition of soil (sedimentary layer). The soil vulnerability index (Kg) varied from 0,08 to 5,77 and the higher value (Kg>3,4) in the south of the research area was identified as the weak zone of earthquake inducing landslide.
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