EARTHQUAKE MICROZONATION IN CILACAP TOWN BASED ON MICROTREMOR MEASUREMENT DATA

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ABSTRACT

Cilacap Town circumstances which is facing the Java subduction zone in the Indian Ocean, as well as the fracturing Pamanukan-Cilacap cause the potential earthquake that could occur anytime. Therefore, it takes effort earthquake disaster mitigation. One mitigating earthquake in Cilacap Town is to make earthquake microzonation maps. This study has been made microzonation map earthquake in Cilacap Town based on the results of microtremor data processing. Microtremor data is measured on April 29, 2014 until May 3, 2014 by using a single station measurement, and processed by using the HVSR method. The result of data processing in the form of a dominant period value with a range of values between 0.28 s - 3.92 s, VS30 with a range of values between 30.6 m / s - 430.8 m / s, and the PGA with a range of values between 0.00404 g - 0.015139 g. Results of this research is a microzonation map which describing the danger zone of the earthquake in Cilacap Town. Results of this study can be useful in earthquake disaster mitigation efforts, and can be used in the planning and development of Cilacap Town.

Key word : Dominant Period, HVSR, Microtremor, Microzonation, PGA, V_{S30}