INTISARI

Analisis Data Mikrotremor Kota Mataram Bagian Barat Untuk Aspek Gempabumi Dalam Rencana Tata Ruang Wilayah (RTRW)

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Telah dilakukan penelitian mikrotremor di Kota Mataram bagian barat yang terletak di Pulau Lombok. Penelitian ini di dasarkan atas gempabumi dari pemantauan *United State Geological Survey (USGS)* serta Badan Meteorologi Klimatologi dan Geofisika (BMKG) di Pulau Lombok khususnya di Kota Mataram bagian barat. Penelitian ini dilakukan untuk mengetahui tingkat kerawanan gempabumi di daerah Kota Mataram bagian barat untuk perencanaan tata ruang wilayah berdasarkan analisis sebaran nilai periode dominan, ketebalan lapisan sedimen dengan menggunakan V_{s30} dari inversi eliptisitas, indeks kerentanan seismic (K_g) , percepatan getaran tanah maksimum (PGA), *Ground Shear Strain* (GSS) dan analisis *Simple Additive Weight*.

Hasil penelitian menunjukan bahwa di Wilayah Kota Mataram bagian barat mempunya sebaran nilai indeks kerentanan seismik berkisar antara 38.309 hingga 170.894, sebaran nilai ketebalan lapisan sedimen berkisar antara12.390 meter hingga 36.690 meter, sebaran nilai PGA batuan dasar berkisar antara 25.460 gal hingga 28.835 gal, sebaran nilai *ground shear strain* berkisar antara 1104.683×10^{-6} hingga 4746.713×10^{-6}. Kota Mataram bagian barat teridentifikasi memiliki tingkat kerawanan seismik dengan skala rendah (ketegori resiko I,II,III dan IV), sedang (kategori resiko I dan II) hingga tinggi (kategori resiko I). Kecamatan Mataram memiliki tingkat kerawanan seismik berskala rendah dominan menengah, Kecamatan Sekarbela memiliki tingkat kerawanan seismik menengah dominan tinggi, Kecamatan Ampenan memiliki tingkat kerawanan seismik yang dominan tinggi dan Kecamatan Selaparang memiliki tingkat kerawanan seismik skala rendah. Oleh karena itu, dengan menggunakan analisis *simple additive weight*, Kota Mataram bagian barat secara keseluruhan teridentifikasi memiliki kerawanan seismik yang cukup tinggi.

Kata Kunci : Mikrotremor, Gempabumi, PGA, *Ground Shear Strain, Simple Additive Weight.*

ABSTRACT

Analysis of Microtremor Data in the West Mataram City Area for Earthquake Aspects in the Regional Spatial Plan (RTRW)

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Microtremor research has been conducted in the western part of Mataram City located on Lombok Island. This research is based on earthquakes from the monitoring of the United State Geological Survey (USGS) and the Meteorology, Climatology and Geophysics Agency (BMKG) on Lombok Island, especially in the western part of Mataram City. This study was conducted to determine the level of earthquake vulnerability in the western part of Mataram City for regional spatial planning based on analysis of the distribution of dominant period values, sediment layer thickness using V_{s30} ellipticity inversion, seismic susceptibility index (K_g), maximum soil vibration acceleration (PGA), Ground Shear Strain (GSS) and Simple Additive Weight analysis.

The results of the research showed that in the western Mataram City Region there is a seismic vulnerability index spread between 38.309 and 170.894, the spread of sediment layer thickness values ranges between 12.390 meters to 36.690 meters, the base rock PGA range between 25.460 gallons to 28.835 gallons, and the ground shear strain range between 1104.683$\times 10^{-6}$ to 4746.713$\times 10^{-6}$. The western part of the town of Mataram has been identified with seismic virility levels of low scale (risk categories I, II, III and IV), moderate (risc category I and II) to high. (kategori resiko I). Mataram district has a low-scale dominant seismic virility, Sekarbela district is a high-dominant mid-seismic Virility, Ampenan district, has a high dominant seismic virility and Selaparang district of a low scale seismical virility. Therefore, using simple additive weight analysis, the entire western part of the city of Mataram has been identified to have a fairly high seismic virility.

Keywords : *Microtremor, Earthquake, PGA, Ground Shear Strain, Simple Additive Weight*