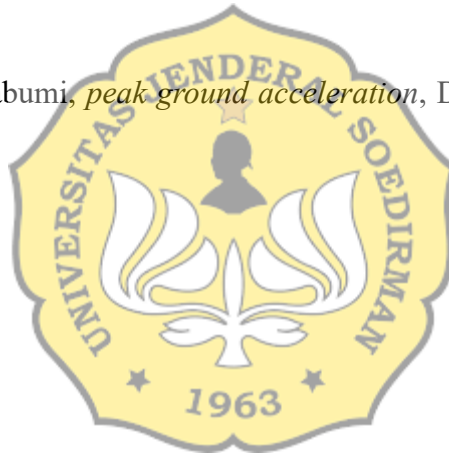


ABSTRAK

Peak Ground Acceleration (PGA) merupakan nilai percepatan tanah maksimum di suatu tempat akibat terjadinya gempabumi. Penelitian ini bertujuan untuk memetakan persebaran gempabumi berdasarkan kedalaman dan kekuatan magnitudo, menentukan nilai *Peak Ground Acceleratio (PGA)* dengan metode Donovan, dan menentukan nilai intensitas gempabumi dari hasil nilai PGA serta tingkat risiko gempabumi berdasarkan hasil perhitungan nilai PGA. Dari data gempabumi pada periode 2008-2024 dari BMKG pada koordinat 6°21'-7°10' LS dan 105°09'-106°11' BT dengan kekuatan $M \geq 3$. Selanjutnya data gempabumi diolah dan dibuat peta seismisitas persebaran gempabumi menggunakan *software ArcGis 10.8*. Hasil pengolahan dan perhitungan menunjukkan sebaran gempabumi di Kabupaten Pandeglang didominasi dengan gempabumi dangkal. Untuk nilai PGA berdasarkan rumus metode Donovan hasilnya berkisar antara 47,01 - 190,98 gal atau 0,048 - 0,195 g. Nilai percepatan tanah maksimum terdapat di wilayah Kecamatan Sumur. Hasil nilai intensitas berdasarkan nilai PGA itu dengan skala IV - VI MMI (*Modified Mercalli Intensity*). Tingkat risiko yang diperoleh yaitu tingkat risiko rendah - sedang.

Kata kunci: gempabumi, *peak ground acceleration*, Donovan, intensitas, tingkat risiko.



ABSTRACT

Peak Ground Acceleration (PGA) is the highest ground vibration acceleration value that has ever occurred in an area due to an earthquake. This study aims to map earthquakes based on depth and magnitude, determine the Peak Ground Acceleration (PGA) value using the Donovan method, and determine the earthquake intensity value from the result of the PGA value and the level of earthquake risk based on the results of the PGA value calculation. Earthquake data in the 2008-2024 period from BMKG at coordinates $6^{\circ}21' - 7^{\circ}10'$ South Latitude and $105^{\circ}09' - 106^{\circ}11'$ East Longitude with a strength of $M \geq 3$. Then, the earthquake data was processed and a seismicity map of the earthquake distribution was created using *ArcGis* 10.8 software. The processing and calculation results show that the distribution of earthquake in Pandeglang Regency is dominated by shallow earthquake. And PGA values based on the Donovan method formula, the results range between 47, 01 - 190, 98 gal or 0, 048 - 0,195 g. The Peak Ground Acceleration value is found in the Sumur Sub-District area. The intensity value is based on the PGA value on the IV - VI MMI (*Modified Mercalli Intensity*). The level of risk obtained is which produces a low - medium risk level.

Keywords: earthquake, peak ground acceleration, Donovan, intensity, risk level.

