

Pola keterpaparan wilayah terhadap bencana longsor akibat hujan lebat di Kabupaten Probolinggo, Jawa Timur = Place exposure pattern toward landslide disaster due to heavy rainfall in Probolinggo District East Java

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Abstrak

Longsor merupakan bencana terbesar ketiga yang terjadi di Indonesia, termasuk di Kabupaten Probolinggo. Menganalisis pola keterpaparan wilayah terhadap bencana longsor akibat hujan lebat yang memicu longsor di Kabupaten Probolinggo merupakan tujuan dari penelitian ini. Data curah hujan harian tahun 1990-2015 digunakan untuk mendapatkan wilayah frekuensi curah hujan lebat ($>50\text{mm/hari}$, $>100\text{mm/tiga hari}$ dan $>150\text{mm/lima hari}$) berbasis metode interpolasi poligon thiessen. Wilayah potensi longsor diperoleh dengan menggunakan model SINMAP yang diverifikasi dengan data kejadian longsor tahun 2015-2016.

Analisis spasial deskriptif menggunakan teknik overlay menunjukan bahwa seluas 50,30% (85.358 Ha) wilayah di Kabupaten Probolinggo memiliki potensi longsor terutama di Kecamatan Krucil, tanah Andisol, wilayah lereng 15-40%, dan wilayah curah hujan 1500-2000mm/tahun. Keterpaparan wilayah terhadap bencana longsor akibat hujan lebat di Kabupaten Probolinggo memiliki pola semakin tinggi potensi longsor dan frekuensi curah hujan lebat suatu wilayah maka tingkat keterpaparan wilayah terhadap bencana longsor akibat hujan lebat akan semakin tinggi.

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Landslide is the third largest disaster occurred in Indonesia, including in Probolinggo District. Analyze the place exposure patterns toward landslide disaster due to heavy rainfall which triggering the landslide in Probolinggo District is the purpose of this study. Daily rainfall data in 1990-2015 are used to obtain the frequency of heavy rainfall regions ($> 50 \text{ mm/day}$, $>100\text{mm/three days}$ and $>150\text{mm/five days}$) using the interpolation method based on Thiessen Polygon. The potential landslide region are obtained by using SINMAP models which is verified by the landslide location data from 2015 to 2016.

Descriptive spatial analysis using the overlay technique showed that 50,30% (85.358 Ha) area in Probolinggo District has the potential of landslide, especially in Sub District Krucil, Andisol Soil region, the slopes of 15-40% region, and the rainfall of 1500-2000mm/year region. The place exposure patterns toward landslide disaster due to heavy rainfall in Probolinggo District is in the region which has the higher potential of landslides and heavy rainfall frequency, the level of place exposure to landslides disaster due to heavy rainfall will be higher.