

SARI

Penelitian dilakukan di Desa Sidototo dan sekitarnya, Kecamatan Padureso, Kabupaten Kebumen, Jawa Tengah, yang merupakan wilayah rentan terhadap gerakan tanah. Tujuannya membuat zonasi kerentanan gerakan tanah sebagai langkah mitigasi bencana. Metode yang digunakan adalah *Analytical Hierarchy Process* (AHP) yang belum pernah digunakan di lokasi ini. Data dikumpulkan dari 24 kejadian gerakan tanah. Parameter seperti kemiringan lereng, litologi, tingkat pelapukan, jarak dari struktur geologi, tata guna lahan dan jarak dari sungai. Hasilnya adalah peta zonasi kerentanan gerakan tanah dengan empat klasifikasi: sangat rendah, rendah, menengah, dan tinggi. Area utara umumnya memiliki kerentanan sangat rendah, sementara area utara dan selatan memiliki kerentanan rendah. Wilayah tengah sebagian besar memiliki kerentanan menengah, sementara tingkat kerentanan tinggi mendominasi area pada bagian sebelah timur, barat, dan tenggara daerah penelitian. Validasi model menunjukkan akurasi tinggi dengan nilai 0,801 , klasifikasi sebagai baik.

Kata Kunci : gerakan tanah, *Analytical Hierarchy Process* (AHP), *Area under the Curve* (AUC), kerentanan gerakan tanah

ABSTRACT

The research was conducted in the village of Sidototo and its surrounding areas, Padureso Subdistrict, Kebumen Regency, Central Java, which is a susceptible region to land movement. The aim of this research was to create a landslide vulnerability zoning map as a disaster mitigation measure. The method used was the Analytical Hierarchy Process (AHP), which had not been previously applied in this location. Data was collected from 24 instances of land movement. Parameters such as slope steepness, lithology, degree of weathering, distance from geological structures, land use, and proximity to rivers were considered. The result was a landslide vulnerability zoning map with four classifications: very low, low, moderate, and high. The northern area generally exhibited very low vulnerability, while the northern and southern areas showed low vulnerability. The central region mostly had moderate vulnerability, while high vulnerability predominated in the eastern, western, and southeastern parts of the research area. Model validation indicated a high accuracy with a value of 0.801, classified as good.

Keywords: *landslides, Analytical Hierarchy Process (AHP), Area under the Curve (AUC), landslide vulnerability.*