

ABSTRAK

GEOLOGI DAN PENGEMBANGAN GEOWISATA UNTUK MENDUKUNG GEOPARK GUNUNG SEWU DI KAWASAN KARST KARANGASEM, PALIYAN, GUNUNGKIDUL, YOGYAKARTA

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Geopark Gunung Sewu merupakan kawasan karst yang ditetapkan sebagai UNESCO Global Geopark (UGGp) sejak 2015 dan harus menjalani revalidasi setiap empat tahun. Salah satu upaya mempertahankan status UGGp saat revalidasi adalah dengan mengembangkan lokasi geowisata baru yang memiliki nilai ilmiah, edukasi, konservatif, dan potensi ekonomi. Desa Karangasem, Kecamatan Paliyan, Kabupaten Gunungkidul dipilih sebagai lokasi penelitian karena memiliki keragaman litologi karbonat serta bentuk lahan karst yang beragam, seperti bukit karst, gua, dan telaga. Namun, potensi tersebut belum dimanfaatkan secara optimal karena keterbatasan fasilitas, serta belum terintegrasinya potensi geologi, ekonomi, dan budaya setempat. Penelitian ini bertujuan untuk mengetahui potensi geowisata berdasarkan kondisi geologi, geomorfologi, dan faktor penunjang lainnya sebagai dasar dalam menyusun rekomendasi pengembangan geowisata berkelanjutan. Metode yang digunakan meliputi metode kuantitatif, kualitatif, deskriptif, dan analitik, dengan tahapan pemetaan geologi, pengukuran stratigrafi, analisis laboratorium (petrologi, petrografi, mikropaleontologi, kalsimetri), observasi geomorfologi, serta penilaian geowisata menggunakan metode Brilha (2016) melalui survei lapangan dan wawancara. Hasil penelitian menunjukkan bahwa daerah ini disusun oleh Formasi Kepek dan Formasi Wonosari dengan litologi napal, *wackestone*, *packstone*, *grainstone*, *rudstone*, dan *boundstone*. Persebaran fasies batugamping menunjukkan lingkungan pengendapan dari neritik tengah hingga neritik luar, didukung hasil analisis mikrofosil. Bentuk lahan yang berkembang di daerah penelitian meliputi dataran karst bergelombang dan *conical hills*, yang pembentukannya dikontrol oleh variasi litologi dan ketahanan mekanik batuan. Hasil penilaian geowisata terhadap delapan lokasi menunjukkan nilai ilmiah yang cukup tinggi serta potensi edukasi dan wisata yang baik, sehingga Karangasem layak dikembangkan sebagai kawasan geowisata berbasis edukasi dan konservasi yang mendukung keberlanjutan Geopark Gunung Sewu. Namun, tantangan seperti risiko geologi, keterbatasan infrastruktur, dan rendahnya kesadaran konservasi perlu diatasi melalui strategi pengembangan berbasis zonasi, peningkatan kapasitas lokal, serta kolaborasi antara masyarakat, akademisi, pemerintah, dan pengelola geopark.

Kata kunci: geologi, Geopark Gunung Sewu, geowisata, Karangasem, karst

ABSTRACT

GEOLOGY AND GEOTOURISM DEVELOPMENT TO SUPPORT GUNUNG SEWU GEOPARK IN KARANGASEM KARST AREA, PALIYAN, GUNUNGKIDUL, YOGYAKARTA.

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Gunung Sewu Geopark is a karst area that has been designated as a UNESCO Global Geopark (UGGp) since 2015 and must undergo revalidation every four years. One of the efforts to maintain UGGp status during revalidation is to develop new geotourism sites that have scientific, educational, conservation, and economic value. Karangasem Village, Paliyan Subdistrict, Gunungkidul Regency was selected as the research site due to its diverse carbonate lithology and varied karst landforms, such as karst hills, caves, and lakes. However, this potential has not been fully utilized due to limited facilities and the lack of integration between local geological, economic, and cultural potentials. This study aims to identify geotourism potential based on geological, geomorphological, and supporting factors as a basis for developing recommendations for sustainable geotourism development. The methods used include quantitative, qualitative, descriptive, and analytical methods, with stages of geological mapping, stratigraphic measurements, laboratory analysis (petrology, petrography, micropaleontology, calcimetry), geomorphological observations, and geotourism assessment using the Brilha (2016) method through field surveys and interviews. The results of the study indicate that this area is composed of the Kepek Formation and Wonosari Formation with lithologies of napal, wackestone, packstone, grainstone, rudstone, and boundstone. The distribution of limestone facies indicates a depositional environment ranging from mid-neritic to outer neritic, supported by microfossil analysis results. The landforms developed in the study area include undulating karst plains and conical hills, whose formation is controlled by lithological variations and the mechanical strength of the rocks. The results of the geotourism assessment of eight locations indicate a sufficiently high scientific value as well as good educational and tourism potential, making Karangasem worthy of development as an education- and conservation-based geotourism area supporting the sustainability of the Gunung Sewu Geopark. However, challenges such as geological risks, infrastructure limitations, and low conservation awareness must be addressed through development strategies based on zoning, capacity building, and collaboration between communities, academics, government, and geopark managers.

Keywords: geology, geotourism, Gunung Sewu Geopark, Karangasem, karst