

Dampak Aktivitas Pendaki Terhadap Vegetasi dan Timbulan Sampah di Jalur Pendakian Suwanting Taman Nasional Gunung Merbabu

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INTISARI

Taman Nasional Gunung Merbabu merupakan kawasan konservasi dengan potensi wisata alam, terutama aktivitas pendakian yang kian diminati, salah satunya di Jalur Suwanting yang terkenal dengan panorama sabananya. Kegiatan ini berdampak positif bagi ekonomi masyarakat, namun juga menimbulkan tekanan terhadap kelestarian lingkungan. Penelitian ini bertujuan mengidentifikasi karakteristik aktivitas pendaki serta dampaknya terhadap vegetasi dan timbulan sampah di Jalur Suwanting.

Data aktivitas pendaki dikumpulkan melalui wawancara dengan metode *stratified random sampling*, sedangkan dampak vegetasi diukur menggunakan indeks keanekaragaman *Shannon-Wiener* (H') pada setiap kenaikan 200 meter. Timbulan sampah dianalisis berdasarkan jumlah dan jenis sampah di tiap pos pendakian.

Hasil menunjukkan lima aktivitas utama pendaki, yaitu mendaki, memotret, beristirahat sejenak, berkemah, dan buang air. Nilai indeks keanekaragaman vegetasi (H') pada area dengan aktivitas pendakian berkisar antara 0,450–1,545, sedangkan pada area tanpa aktivitas pendakian berkisar antara 0,529–1,205. Jenis vegetasi yang paling dominan dijumpai pada area yang terdapat aktivitas pendakian adalah Edelweiss (*Anaphalis javanica*) dan Alang-alang (*Imperata cylindrica*). Sampah plastik, sisa makanan, dan kertas mendominasi di seluruh pos, dengan intensitas tertinggi di Pos 3 Ndampo Awang sebagai area berkemah. Sedangkan, pada area yang tidak mengalami aktivitas pendakian tidak ditemukan timbulan sampah, baik dari jenis organik maupun anorganik. Diperlukan pengelolaan berkelanjutan melalui pengaturan zonasi, edukasi pendaki, serta pengawasan dan evaluasi rutin pengelolaan sampah.

Kata Kunci: Aktivitas Pendaki, Vegetasi, Timbulan Sampah, Indeks Keanekaragaman *Shannon-Wiener*, Pengelolaan Sampah, Pengelolaan Jalur Pendakian

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The Impact of Climbing Activities on Vegetation and Waste Generation on the Suwanging Climbing Trail in Mount Merbabu National Park

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ABSTRACT

Mount Merbabu National Park is a conservation area with significant ecotourism potential, particularly for hiking activities that have become increasingly popular, one of which is the Suwanging Trail, renowned for its scenic savanna views. This activity contributes positively to the local economy but also exerts pressure on environmental sustainability. This study aims to identify the characteristics of hikers' activities and their impacts on vegetation and waste generation along the Suwanging Trail.

Data on hiking activities were collected through interviews using the stratified random sampling method, while vegetation impacts were measured using the Shannon-Wiener diversity index (H') at every 200-meter elevation interval. Waste generation was analyzed based on the quantity and types of waste found at each hiking post.

The results revealed five main hiking activities hiking, taking photographs, resting, camping, and defecating. The vegetation diversity index (H') in areas with hiking activities ranged from 0,450 to 1,545, while in areas without hiking activities it ranged from 0,529 to 1,205. The most dominant vegetation species found in disturbed areas were Edelweiss (*Anaphalis javanica*) and Alang-alang (*Imperata cylindrica*). Plastic waste, food residues, and paper were the most common waste types found at all hiking posts, with the highest intensity recorded at Post 3 Ndampo Awang, which serves as a camping area. Meanwhile, in areas without hiking activity, no waste accumulation was found, either organic or inorganic. Sustainable management through zoning regulation, hiker education, and regular waste management monitoring and evaluation is therefore required.

Keywords: Hiker Activities, Vegetation, Waste Generation, Shannon-Wiener Diversity Index, Waste Management, Hiking Trail Management.

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