

KELIMPAHAN DAN KEANEKARAGAMAN JENIS VEGETASI PADA AREA KONSERVASI AEK PAHU, TAPANULI SELATAN, SUMATERA UTARA

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INTISARI

Indonesia memiliki kekayaan flora yang sangat tinggi, termasuk Pulau Sumatera yang menyimpan ribuan jenis tumbuhan endemik dan lokal. Namun, tekanan terhadap keanekaragaman hayati akibat aktivitas manusia terus meningkat dan berpotensi menimbulkan kerusakan ekosistem. Salah satu upaya mitigasi dampak tersebut adalah pembentukan kawasan konservasi, seperti Area Konservasi Aek Pahu di Tapanuli Selatan, Sumatera Utara. Penelitian ini bertujuan mengidentifikasi komposisi, kelimpahan, dan keanekaragaman vegetasi di Area Konservasi Aek Pahu sebagai dasar pengelolaan konservasi berbasis data ekologi.

Penelitian dilakukan di Area Konservasi Aek Pahu dengan luas 57,42 ha. Metode yang digunakan adalah petak bersarang berbentuk persegi berukuran 20 m x 20 m, yang diletakkan secara sistematis dengan awalan acak serta intensitas sampling 2,5%, sehingga diperoleh 35 petak pengamatan. Data yang dikumpulkan meliputi nama jenis, jumlah individu, tinggi, diameter, serta habitus pada tingkat semai dan tumbuhan bawah, pancang, tiang, dan pohon. Analisis data dilakukan menggunakan Indeks Nilai Penting (INP), indeks keanekaragaman Shannon, kekayaan jenis, dan pemerataan jenis.

Hasil penelitian menunjukkan terdapat 151 jenis tumbuhan yang termasuk dalam 103 genera dan 55 famili di Area Konservasi Aek Pahu. Famili dengan jumlah jenis terbanyak adalah Euphorbiaceae, Fabaceae, dan Moraceae. Tingkat semai dan tumbuhan bawah didominasi oleh *Artocarpus dadah*, sedangkan tingkat pancang hingga pohon didominasi oleh *Hevea brasiliensis*, yang mencerminkan bahwa sebagian besar area konservasi dikuasai oleh tegakan karet. Nilai indeks keanekaragaman (3,82), kekayaan jenis (21,00), dan pemerataan jenis (0,76) termasuk kategori tinggi.

Kata Kunci: Indeks Nilai Penting, Tegakan Karet, Struktur Vegetasi, Status IUCN, Komposisi Jenis

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**ABUNDANCE AND DIVERSITY OF VEGETATION SPECIES IN
AEK PAHU CONSERVATION AREA, SOUTH TAPANULI,
NORTH SUMATRA**

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ABSTRACT

Indonesia is home to a wide variety of flora, including Sumatra, which harbors thousands of endemic and native plant species. However, pressure on biodiversity due to human activities continues to increase and has the potential to cause ecosystem degradation. One effort to mitigate this impact is the establishment of conservation areas, such as the Aek Pahu Conservation Area in South Tapanuli, North Sumatra. This study aims to identify the composition, abundance, and diversity of vegetation species in the Aek Pahu Conservation Area as a basis for conservation management grounded in ecological data.

The study was conducted in the Aek Pahu Conservation Area, which covers 57.42 ha. The method employed was nested square plots measuring 20 m x 20 m, placed using systematic sampling with a random start and a sampling intensity of 2.5%, resulting in 35 observation plots. Data collected included species names, abundances, heights, diameters, and growth forms at the seedling and understory, sapling, pole, and tree stages. Data were analyzed using the Importance Value Index (IVI), Shannon diversity index, species richness, and species evenness.

A total of 151 plant species from 103 genera and 55 families were recorded in the Aek Pahu Conservation Area. Families with the highest number of species were Euphorbiaceae, Fabaceae, and Moraceae. The seedling and understory stages were dominated by *Artocarpus dadah*, while the sapling to tree stages were dominated by *Hevea brasiliensis*, indicating that much of the conservation area is dominated by rubber stands. The diversity index (3.82), richness (21.00), and evenness (0.76) all fall within the high category.

Keywords: Importance Value Index, Rubber Trees, Vegetation Structure, IUCN Status, Species Composition

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