KESESUAIAN FUNGSI EKOLOGIS POHON PADA JALUR HIJAU DI JALAN DAENDELS KECAMATAN GRABAG SISI TIMUR KABUPATEN PURWOREJO JAWA TENGAH

Amelia Syfa Avriliyani[1], Dwi Tyaningsih Adriyanti[2], Widiyatno[3]

INTISARI

Perubahan kondisi lingkungan di sepanjang Jalur Hijau Jalan Daendels, Kecamatan Grabag sisi timur Kabupaten Purworejo, menunjukkan adanya peningkatan aktivitas lalu lintas, suhu udara, angin, serta penurunan kenyamanan lingkungan. Jalur hijau sebagai bagian dari Ruang Terbuka Hijau (RTH) memiliki peran penting dalam mendukung kualitas lingkungan melalui fungsi ekologis seperti peneduh, pengatur kelembapan udara, peredam kebisingan, dan penahan angin. Penelitian ini bertujuan untuk mengetahui keanekaragaman jenis vegetasi pohon serta kesesuaian fungsi ekologisnya pada jalur hijau Jalan Daendels sisi timur.

Pengambilan data dilakukan dengan mengamati pohon penyusun jalur hijau pada tiga segmen penelitian berdasarkan kerapatan vegetasi. Parameter yang dinilai meliputi karakteristik fisik pohon untuk penilaian fungsi ekologis, iklim mikro, dan kesehatan pohon. Penelitian menggunakan metode *scoring* berdasarkan kriteria penilaian yang telah ditetapkan, serta pengolahan data dilakukan dengan menggunakan Key Performance Index (KPI) yang didasarkan pada inventarisasi lapangan.

Berdasarkan hasil analisis didapatkan komposisi jenis yang tersebar pada tiga segmen pengamatan. Pohon pada lokasi ini didominasi oleh beberapa jenis utama seperti Trembesi, Mahoni, dan Mangga. Nilai keanekaragaman Shannon–Wiener menunjukkan Segmen 1 dan Segmen 3 termasuk kategori sedang, sedangkan Segmen 2 berada pada kategori rendah. Pada penilaian aspek kesesuaian fungsi ekologis terhadap 21 jenis pohon, diperoleh bahwa pada fungsi peneduh terdapat 1 jenis sangat sesuai dan 12 jenis sesuai. Pada fungsi pengatur kelembapan udara ditemukan 1 jenis sangat sesuai dan 10 jenis sesuai. Fungsi peredam kebisingan terdiri dari 2 jenis sangat sesuai dan 11 jenis sesuai, sedangkan fungsi penahan angin memiliki 1 jenis sangat sesuai dan 12 jenis sesuai. Secara umum, sebagian besar vegetasi yang ada telah mampu mendukung fungsi ekologis jalur hijau, terutama dalam aspek peneduh dan peredam kebisingan. Berdasarkan hasil penilaian tersebut, kombinasi jenis pohon pada jalur hijau Jalan Daendels masih perlu dioptimalkan melalui penataan vegetasi, peningkatan jumlah pohon pada segmen tertentu, serta pemeliharaan kesehatan pohon agar fungsi ekologis jalur hijau dapat berjalan secara maksimal dan berkelanjutan.

Kata kunci: jalur hijau, fungsi ekologis, keanekaragaman jenis, kesehatan pohon

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[1]Mahasiswa Fakultas Kehutanan UGM
[2]Staff Pengajar Fakultas Kehutanan UGM

ECOLOGICAL FUNCTIONAL SUITABILITY OF TREES IN THE GREEN BELTS OF DAENDELS ROAD EAST GRABAG DISTRICT PURWOREJO REGENCY CENTRAL JAVA

Amelia Syfa Avriliyani[1], Dwi Tyaningsih Adriyanti[2], Widiyatno[3]

ABSTRACT

Changes in environmental conditions along the green belts of Daendels Road, East Grabag District, Purworejo Regency, indicate an increase in traffic activity, air temperature, and wind speed, as well as a decrease in environmental comfort. As a part of Green Open Space (RTH), green belts play a vital role in supporting environmental quality through ecological functions such as providing shade, regulating humidity, reducing noise, and acting as windbreaks. This study aims to determine the diversity of tree species and their ecological functional suitability within the green belts of the eastern side of Daendels Road.

Data collection was conducted by observing the trees composing the green belt across three research segments based on vegetation density. The parameters assessed included the physical characteristics of the trees for ecological function evaluation, microclimate, and tree health. The study employed a scoring method based on established assessment criteria, and data processing was performed using the Key Performance Index (KPI) derived from field inventory.

Based on the analysis results, the species composition was distributed across three observation segments. The vegetation in the study area is dominated by several main species, such as trembesi, mahogany, and mango. The Shannon–Wiener diversity index indicates that Segment 1 and Segment 3 fall into the moderate diversity category, while Segment 2 is categorized as low diversity. In the assessment of ecological function suitability for 21 tree species, it was found that for the shading function, 1 species was classified as highly suitable and 12 species as suitable. For the air humidity regulation function, 1 species was highly suitable and 10 species were suitable. The noise reduction function consisted of 2 highly suitable species and 11 suitable species, while the windbreak function included 1 highly suitable species and 12 suitable species. Overall, most of the existing vegetation has been able to support the ecological functions of the green belt, particularly in terms of shading and noise reduction. Based on these findings, the combination of tree species along the Daendels Road green belt still needs to be optimized through vegetation arrangement, increasing the number of trees in certain segments, and maintaining tree health to ensure that the ecological functions of the green belt can operate optimally and sustainably.

Keywords: *green belt, ecological function, species diversity, tree health*

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[1]Student of Faculty of Forestry UGM

[2]Teaching Staff of the Faculty of Forestry UGM