



INTISARI

Penelitian ini bertujuan menganalisis fungsi ekologis vegetasi di Taman Balekambang Surakarta dalam mengendalikan iklim mikro serta mengidentifikasi dan mengklasifikasikan jenis vegetasi berdasarkan potensi dan perannya. Studi ini menggunakan metode survei dengan pendekatan campuran (kuantitatif dan kualitatif), melibatkan pengukuran langsung parameter iklim mikro (suhu, kelembaban, kecepatan angin, intensitas cahaya, tingkat kebisingan), inventarisasi vegetasi, dan survei kuesioner pengunjung. Penelitian ini dilaksanakan pada April-Juni 2025. Data dianalisis menggunakan uji ANOVA (signifikansi 95%) dan uji lanjut *HSD Tukey* untuk parameter iklim mikro dan kebisingan, analisis *Key Performance Index* (KPI) untuk vegetasi, serta Skala Likert untuk data kuesioner. Hasil penelitian menunjukkan bahwa vegetasi di Taman Balekambang secara signifikan memodifikasi iklim mikro: pada siang hari, suhu Dalam Taman lebih rendah 2,61°C dari Jalan Raya dan 2,77°C dari Pemukiman; kelembaban lebih tinggi 11,95% dari Jalan Raya dan 10,45% dari Pemukiman; kecepatan angin lebih rendah 1,77 m/s dari Jalan Raya dan 1,06 m/s dari Pemukiman; intensitas cahaya lebih rendah 92.731,94 lux dari Jalan Raya dan 88.056,11 lux dari Pemukiman; serta tingkat kebisingan lebih rendah 13,48 dB dari Jalan Raya dan 7,2 dB dari Pemukiman. Dari 62 jenis vegetasi, skor keseluruhan taman menunjukkan fungsi penurun suhu (224,18) dan penahan angin (259,99) tergolong Sedang, sedangkan kontrol kelembaban (187,1) dan peredam kebisingan (195,17) tergolong Buruk.

Kata Kunci: fungsi ekologis, iklim mikro, Surakarta, Taman Balekambang, vegetasi



ABSTRACT

This study aims to analyze the ecological function of vegetation in Taman Balekambang Surakarta in controlling microclimate and to identify and classify vegetation types based on their potential and role. This study used a survey method with a mixed approach (quantitative and qualitative), involving direct measurement of microclimate parameters (temperature, humidity, wind speed, light intensity, noise level), vegetation inventory, and visitor questionnaire surveys. The research was conducted from April to June 2025. Data were analyzed using ANOVA (95% significance) and HSD Tukey post-hoc test for microclimate and noise parameters, Key Performance Index (KPI) analysis for vegetation, and Likert Scale for questionnaire data. The results showed that vegetation in Taman Balekambang significantly modified the microclimate: during the day, the temperature in the Inner Park was 2.61°C lower than the Main Road and 2.77°C lower than the Residential area; humidity was 11.95% higher than the Main Road and 10.45% higher than the Residential area; wind speed was 1.77 m/s lower than the Main Road and 1.06 m/s lower than the Residential area; light intensity was 92,731.94 lux lower than the Main Road and 88,056.11 lux lower than the Residential area; and noise level was 13.48 dB lower than the Main Road and 7.2 dB lower than the Residential area. Out of 62 vegetation types, the overall park score showed the temperature reduction function (224.18) and windbreak function (259.99) were classified as Moderate, while humidity control (187.1) and noise reduction (195.17) were classified as Poor.

Keywords: ecological function, microclimate, Surakarta, Taman Balekambang, vegetation