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FAKTOR LINGKUNGAN YANG MEMPENGARUHI KENYAMANAN PENGUNJUNG DI HUTAN KOTA PATRIOT BINA BANGSA, KOTA BEKASI

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INTISARI

Tingginya laju pertumbuhan penduduk dan urbanisasi mendorong peningkatan pembangunan fasilitas perkotaan dan kebutuhan lahan terbangun yang dapat memberikan tekanan terhadap ruang terbuka hijau (RTH) melalui berkurangnya tutupan vegetasi. Kondisi tersebut dapat mengganggu fungsi ekologis RTH pada peningkatan suhu udara dan penurunan kelembapan sehingga berpotensi memengaruhi kenyamanan pengunjung dalam memanfaatkannya sebagai ruang rekreasi publik.

Penelitian ini bertujuan mendeskripsikan faktor lingkungan dan persepsi kenyamanan pengunjung serta menganalisis secara statistik faktor lingkungan yang berpengaruh signifikan terhadap kecenderungan persepsi kenyamanan pengunjung dalam beraktivitas di Hutan Kota Patriot Bina Bangsa. Petak ukur 20 m × 20 m ditentukan melalui *stratified random sampling* berdasarkan analisis NDVI, sedangkan 118 responden berusia ≥15 tahun ditentukan melalui *simple random sampling*. Selama tujuh hari berturut-turut pada pagi, siang, dan sore hari, dilakukan pengukuran faktor lingkungan meliputi tutupan kanopi, suhu udara, kelembapan relatif, intensitas cahaya matahari, dan kecepatan angin, penilaian fasilitas oleh peneliti, serta penilaian persepsi kenyamanan pengunjung secara bersamaan dengan pengukuran faktor lingkungan. Data dianalisis secara deskriptif kuantitatif dan statistik menggunakan regresi logistik ordinal.

Hasil penelitian menunjukkan lima dari tujuh petak ukur memiliki tutupan kanopi tinggi (>70%) dan dua lainnya sedang. Rata-rata harian pada suhu udara 29,5°C (panas), kelembapan relatif 78,7% (agak lembap), intensitas cahaya matahari 2.054 lux, dan kecepatan angin 0,5 m/s (sedikit tenang). Fasilitas sangat lengkap dan berkondisi baik, meskipun tanpa perawatan. Pengunjung menilai intensitas cahaya matahari (38,14%) dan kecepatan angin (39,83%) nyaman, sedangkan tutupan kanopi (43,22%), suhu udara (42,37%), kelembapan relatif (50,00%), dan fasilitas (55,93%) cukup nyaman, dengan persepsi keseluruhan didominasi kategori nyaman (46,61%). Hasil analisis regresi logistik ordinal menunjukkan tutupan kanopi ($p = 0,001$), suhu udara ($p = 0,015$), dan intensitas cahaya matahari ($p = 0,001$) berpengaruh signifikan dengan koefisien determinasi 28,5%.

Kata Kunci: *hutan kota, faktor lingkungan, kenyamanan pengunjung*

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ENVIRONMENTAL FACTORS AFFECTING VISITOR COMFORT AT THE PATRIOT BINA BANGSA URBAN FOREST, BEKASI CITY

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ABSTRACT

High rates of population growth and urbanization are driving an increase in the development of urban facilities and the demand for built-up land, which can put pressure on green open spaces (GOS) by reducing vegetation cover. These conditions can disrupt the ecological functions of GOS by raising air temperatures and lowering humidity, thereby potentially affecting visitors' comfort when using these spaces for public recreation.

This study aims to describe environmental factors and visitors' perceptions of comfort, as well as to statistically analyze the environmental factors that significantly influence visitors' perceptions of comfort while engaging in activities at the Patriot Bina Bangsa Urban Forest. A 20 m × 20 m plot was selected through stratified random sampling based on NDVI analysis, while 118 respondents aged 15 years or older were selected through simple random sampling. For seven consecutive days in the morning, afternoon, and evening, environmental factors including canopy cover, air temperature, relative humidity, solar radiation, and wind speed were measured, facility assessments were conducted by the researchers, and visitors comfort perceptions were assessed simultaneously with the environmental measurements. The data were analyzed using quantitative descriptive statistics and ordinal logistic regression.

The results of the study showed that five of the seven plot sections had high canopy cover (>70%) and the other two had moderate canopy cover. Daily averages were as follows: air temperature 29,5°C (hot), relative humidity 78,7% (somewhat humid), sunlight intensity 2.054 lux, and wind speed 0,5 m/s (slightly calm). The facilities were very well-equipped and in good condition, despite a lack of maintenance. Visitors rated the sunlight intensity (38,14%) and wind speed (39,83%) as comfortable, while canopy cover (43,22%), air temperature (42,37%), relative humidity (50,00%), and facilities (55,93%) were rated as fairly comfortable, with the overall perception dominated by the "comfortable" category (46,61%). The results of the ordinal logistic regression analysis showed that canopy cover (p = 0,001), air temperature (p = 0,015), and sunlight intensity (p = 0,001) had a significant effect, with a coefficient of determination of 28,5%.

Keywords: *urban forest, environmental factors, visitor comfort*

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