

Analisis Kecukupan Ruang Terbuka Hijau untuk Ameliorasi Iklim Mikro di Kecamatan Medan Satria, Kota Bekasi

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INTISARI

Letak Kota Bekasi yang berada di ketinggian 11-81 mdpl menyebabkan kondisinya lebih panas jika dibandingkan dengan daerah lainnya. Hal tersebut juga diperparah dengan semakin berkembangnya daerah perkotaan yang memicu terjadinya alih fungsi lahan. Seperti yang terjadi di Kecamatan Medan Satria, peningkatan luas lahan terbangun berpengaruh terhadap iklim mikro dan kenyamanan termal. Kondisi termal yang tidak nyaman di suatu wilayah memerlukan langkah amelioratif agar terciptanya kenyamanan. Adapun tujuan dari penelitian ini adalah untuk mengetahui kondisi iklim mikro dan kondisi kenyamanan termal di Kecamatan Medan Satria, menganalisis pengaruh RTH terhadap suhu dan kelembapan, serta mengetahui tingkat kecukupan RTH untuk merencanakan kebutuhan RTH di Kecamatan Medan Satria.

Penelitian ini dilakukan dengan metode survei dan wawancara. Survei dilakukan untuk mengukur suhu udara dan kelembapan, sedangkan wawancara dilakukan untuk mengetahui persepsi masyarakat mengenai kenyamanan termal. Kondisi iklim mikro diketahui secara spasial menggunakan pemodelan interpolasi kriging. Kecukupan RTH diketahui dengan membandingkan antara RTH yang tersedia dengan RTH yang dibutuhkan. RTH yang dibutuhkan ditentukan berdasarkan persamaan regresi antara variabel luas RTH dengan variabel iklim mikro berupa suhu udara dan kelembapan sehingga luas RTH yang diperoleh nantinya diharapkan mampu memberikan efek ameliorasi iklim di Kecamatan Medan Satria.

Hasil penelitian menunjukkan bahwa, kondisi iklim mikro di Kecamatan Medan Satria saat pagi hari tergolong nyaman di sebagian besar daerah, tergolong tidak nyaman untuk siang hari, dan cukup nyaman di beberapa daerah saat sore hari. Berdasarkan hasil wawancara juga diketahui bahwa batas kondisi nyaman di Kecamatan Medan Satria dicapai saat suhu udara kurang dari 30,5°C dengan kelembapan sebesar 60%. Keberadaan RTH sangat berpengaruh terhadap suhu udara dan kelembapan. Setiap penambahan 1 hektar luas RTH akan berpengaruh pada penurunan suhu udara sebesar 0,051°C dan peningkatan kelembapan udara sebesar 0,14%. Agar dapat mengameliiorasi iklim mikro, maka luas ruang terbuka hijau yang harus ditambahkan untuk mencapai suhu udara nyaman (30,5°C) adalah 333,2 ha, sedangkan untuk mencapai kelembapan nyaman (60%) adalah 265,7 ha.

Kata kunci: Iklim Mikro, Kenyamanan Termal, Ruang Terbuka Hijau

***Analysis of Green Open Space Adequacy for Micro Climate Amelioration
in Medan Satria Subdistrict, Bekasi City***

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ABSTRACT

The location of Bekasi City which is at an altitude of 11-81 meters above sea level causes the condition to be hotter compared to other regions. It is also exacerbated by the growing development of urban areas which triggers land conversion. As happened in Medan Satria Subdistrict, the increase in built up land area affects the micro climate and thermal comfort. Thermal conditions that are not comfortable in an area require ameliorative steps to create an ideal thermal comfort. The purpose of this study was to determine the conditions of microclimate and thermal comfort conditions in Medan Satria Subdistrict, to analyze the effect of green open space on temperature and humidity, and to determine the level of adequacy of green open space for planning green open space needs in Medan Satria Subdistrict.

This research was conducted by survey and interview methods. The survey was conducted to measure air temperature and humidity, while interviews were conducted to determine the public's perception of thermal comfort. Microclimate conditions known spatially using kriging interpolation modelling. The adequacy of green open space is known by comparing the available green open space with the required green open space. The required green open space is determined based on the regression equation between the area of green open space variable and the microclimate variable in the form of air temperature and humidity, so that the area of green open space obtained later is expected to be able to provide a microclimate amelioration effect in Medan Satria Subdistrict.

The results showed that, microclimate conditions in Medan Satria Subdistrict was classified as comfortable in most areas in the morning, it was classified as uncomfortable in most areas during the day, and was quite comfortable in some areas during the afternoon. Based on the results of the interview it was also known that the limit of comfortable conditions in Medan Satria Subdistrict was achieved when the air temperature was less than 30.5°C with humidity of 60%. The existence of green open space is very influential on air temperature and humidity. Each addition of 1 hectare wide open green space will affect the decrease in air temperature by 0.051°C and increase in air humidity by 0.14%. In order to observe microclimate, the area of green open space that must be added to achieve a comfortable air temperature (30.5°C) is 333.2 ha, while to achieve comfortable humidity (60%) is 265.7 ha.

Keywords: Microclimate, Thermal Comfort, Green Open Space