ABSTRAK

ANALISIS HUBUNGAN FENOMENA *URBAN HEAT ISLAND* DENGAN TUTUPAN LAHAN (Studi Kasus :Kota Metro Tahun 2018 – 2021)

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Peningkatan pembangunan di area perkotaan untuk menunjang aktivitas masyarakat serta meningkatnya perpindahan penduduk dari desa ke kota merupakan salah satu penyebab timbulnya fenomena *urban heat island*. Fenomena *urban heat island* merupakan suatu fenomena dimana suhu perkotaan lebih tinggi dibandingkan suhu pedesaan. Tujuan penelitian ini adalah untuk mengetahui keberadaan fenomena *urban heat island* dan menganalisis hubungan tutupan lahan dengan suhu permukaan.

Lokasi penelitian ini dilakukan di Kota Metro pada bulan februari – agustus 2022. Metode penelitian yang diterapkan yaitu deskriptif kuantitatif dengan memanfaatkan perhitungan hubungan analisis dan overlay peta dalam pelaksanaannya. Keberadaan fenomena *urban heat island* dihasilkan dari overlay peta penutup lahan dan peta tutupan lahan yang terdampak suhu maksimal berdasarkan data suhu udara BMKG dan data suhu permukaan. Distribusi suhu udara BMKG didapatkan dari interpolasi spasial data suhu harian, sedangkan data suhu permukaan dihasilkan dari Landsat 8.

Hasil penelitian ini menunjukan bahwa *urban heat island* terjadi di Kota Metro berdasarkan suhu udara BMKG terjadi pada tahun 2019 – 2021 dengan luas tutupan lahan terbangun yang mempengaruhi peningkatan suhu.pada 2019 yaitu seluas 1761,66 Ha, 2020 yaitu 1680,37 dan tahun 2021 yaitu 1672,44 Ha. Kemudian, *urban heat island* berdasarkan suhu permukaan dari Landsat 8 terjadi pada tahun 2018 – 2020, Hal ini dibuktikan juga berdasarkan nilai luasan lahan terbangun terdampak suhu permukaan maksimum, dengan luas lahan terbangun pada tahun 2018 yaitu 1833 Ha, 2019 yaitu 2482,39 Ha dan pada tahun 2020 yaitu 2129,96 Ha. Dari hasil analisis, dibuktikan bahwa lahan terbangun memiliki pengaruh terhadap suhu permukaan sebesar 30% di Kota Metro.

Kata Kunci : Kota Metro, *urban heat island*, tutupan lahan, sebaran suhu.

ABSTRACT

ANALYSIS RELATION OF THE URBAN HEAT ISLAND PHENOMENON WITH LAND COVER
(Case Study : Metro City, 2018 – 2021)

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Increased development in urban areas to support community activities and increasing population migration from rural to urban areas is one of the causes of the urban heat island phenomenon. The urban heat island phenomenon is a phenomenon where urban temperatures are higher than rural temperatures. The purpose of this study was to determine the existence of the urban heat island phenomenon and to analyze the relationship between land cover and surface temperature.

The location of this research was carried out in Metro City in February - August 2022. The research method applied was descriptive quantitative by utilizing the calculation of relationship analysis and map overlays in its implementation. The existence of the urban heat island phenomenon is generated from the overlay of land cover maps and land cover maps that are affected by maximum temperature based on BMKG's air temperature data and surface temperature data. The distribution of air temperature from BMKG is obtained from spatial interpolation of daily temperature data, while surface temperature data is obtained from Landsat 8.

The results of this study indicate that urban heat island occurs when the built-up land has a positive relationship value to temperature, meaning that the increase in land cover is accompanied by an increase in temperature and the relationship between land cover affected by maximum temperature and has the largest land cover value compared to other land covers. BMKG air temperature occurred in 2019-2021 with a positive correlation, as evidenced by the area of built-up land cover that affected the temperature increase. In 2019 it was 1761.66 Ha, 2020 was 1680.37 and in 2021 it was 1672.44 Ha. Then, the urban heat island based on the surface temperature from Landsat 8 occurred in 2018 - 2020, this is also proven based on the value of the built-up land area affected by the maximum surface temperature, with the built-up land area in 2018 being 1833 Ha, 2019 being 2482.39 Ha and in 2020 which is 2129.96 Ha. From the results obtained, a proof is made that the built-up land has a low comparison value from field temperature