

## INTISARI

Kajian fungsi ekologis tanaman di dalam taman dilakukan untuk mengetahui sejauh mana taman tersebut dapat memenuhi fungsi ekologisnya. Penelitian ini bertujuan untuk mengetahui jenis tumbuhan, iklim mikro di dalam dan di luar, serta fungsi ekologi tanaman di Taman Kearifan (TK) UGM. Penelitian dilaksanakan pada bulan Januari-Maret 2022 di TK. Metode penelitian yang digunakan adalah metode survei sampling kuadran. Data dianalisis menggunakan *Key Performance Index* (KPI) dan uji *T-Test* ( $p < 0,05$ ). Hasil penelitian menunjukkan, kelimpahan jenis tanaman di TK adalah 70% pohon. TK dapat mengendalikan suhu udara, kelembapan relatif, intensitas cahaya, kecepatan angin, dan tingkat kebisingan di dalam taman. Tanaman di dalam taman menurunkan suhu udara dan meningkatkan kelembapan sebesar 2-3°C dan 6-10% dibandingkan di luar taman. Kecepatan angin, intensitas cahaya matahari, dan tingkat kebisingan di dalam taman lebih rendah dibandingkan di luar, sebesar 0,84-1,21 m/s, 14900-60500 lux, dan 14,5-16 dB. Terdapat empat kategori tanaman yang dinilai, yaitu sangat sesuai, sesuai, kurang sesuai, dan tidak sesuai. Kategori dinilai berdasarkan tanaman yang diamati dibandingkan dengan parameter. Tanaman yang tergolong Sangat Sesuai dalam menurunkan suhu, kontrol kelembapan, dan mengurangi kebisingan adalah loa (*Ficus racemosa*) dan trembesi (*Samanea saman*); buah nona (*Annona squamosa*) dan trembesi (*Samanea saman*); serta beringin (*Ficus benjamina*) dan kapuk randu (*Ceiba pentandra*). Tanaman kategori sangat sesuai dan sesuai pada fungsi ekologis kontrol kelembapan, peredam kebisingan, kontrol kecepatan angin, dan penurun suhu sejumlah 2 dan 20 spesies tanaman, 2 dan 19 spesies tanaman, 0 dan 16 spesies tanaman, serta 2 dan 11 spesies tanaman.

Kata kunci : fungsi ekologis, tanaman, Taman Kearifan UGM, iklim mikro

## **ABSTRACT**

*The study of the ecological function of plants in the park is carried out to determine the extent to which the park can fulfill its ecological function. This study aims to determine the types of plants, the microclimate inside and outside, and the ecological function of plants in the UGM Wisdom Park (TK). The research was conducted from January-March 2022 in TK. The research method used quadratic sampling survey method. Data were analyzed using the Key Performance Index (KPI) and T-Test ( $p < 0.05$ ). The results showed that the abundance of plant species in the TK was 70% trees. TK can control air temperature, relative humidity, light intensity, wind speed, and noise levels within the park. Plants in the garden lower the air temperature and increase the humidity by 2-3°C and 6-10% compared to outside the garden. Wind speed, sunlight intensity, and noise level inside the park are lower than outside, by 0.84-1.21 m/s, 14900-60500 lux, and 14.5-16 dB. There were four categories of plants that are assessed, namely very suitable, suitable, less suitable, and not suitable. Categories were assessed based on the observed plants compared to the parameters. Plants classified as very suitable in reducing the temperature, humidity control, and reducing noise are loa (*Ficus racemosa*) and trembesi (*Samanea saman*); fruits of nona (*Annona squamosa*) and trembesi (*Samanea saman*); and beringin (*Ficus benjamina*) and kapuk randu (*Ceiba pentandra*). The plants in the category of very good and good for the ecological functions of humidity control, noise suppression, wind speed control, and temperature reduction were 2 and 20 plants, 2 and 19 plants, 0 and 16 plants, and 2 and 11 plants.*

*Keywords: ecological function, vegetation, Wisdom Park UGM, microclimate*