

# Pengaruh *Vertical Greenery System* terhadap Lingkungan Termal Kantor Airmas Asri Cikini, Jakarta

Annisa Ledi Gustiputri<sup>1</sup> dan Ary Deddy Putranto<sup>2</sup>

<sup>1</sup>Mahasiswa Program Sarjana Arsitektur, Departemen Arsitektur, Fakultas Teknik, Universitas Brawijaya

<sup>2</sup>Dosen Departemen Arsitektur, Fakultas Teknik, Universitas Brawijaya

Alamat Email penulis: annisaledi@student.ub.ac.id

## ABSTRAK

Penelitian ini dilakukan untuk menilai pengaruh *Vertical Greenery System* (VGS) terhadap Lingkungan Termal pada bangunan Kantor Airmas Asri Cikini, Jakarta. Selama tiga hari, mulai dari tanggal 1 Maret hingga 3 Maret 2024, dilakukan pengukuran suhu dan kelembaban area yang memiliki VGS (*Living Wall* dan *Green Façade*). Pengukuran dilakukan dengan alat *Data Logger* untuk mengukur suhu dan kelembaban, serta *Thermal Imaging Camera* untuk mengukur suhu permukaan. Pada area outdoor, Entrance (*Living Wall*) memiliki suhu rata-rata 29,83°C dan kelembaban 74%, Inner Courtyard (*Green Façade*) memiliki suhu rata-rata 29,06°C dan kelembaban 73%. Pada area Indoor, R. Makan Indoor (*Green Façade*) memiliki suhu rata-rata sebesar 28,89°C dengan kelembaban sebesar 72%. Kemudian, Ruang Tunggu 1 memiliki suhu rata-rata sebesar 29,51°C, dengan kelembaban 73%. *Green Façade* menghasilkan suhu dan kelembaban yang lebih rendah dibandingkan *Living Wall*. Faktor-faktor seperti bukaan, selubung bangunan, keberadaan vegetasi, dan pembayangan yang tidak bisa dikontrol dalam penelitian juga mempengaruhi kondisi termal. Penelitian ini menunjukkan bahwa *Vertical Greenery System* secara signifikan berpengaruh terhadap penurunan suhu dan kelembaban

Kata kunci: *Vertical Greenery System*, Lingkungan Termal, Suhu, Kelembaban

## ABSTRACT

*This study was conducted to assess the effect of Vertical Greenery System (VGS) on the Thermal Environment at Airmas Asri Cikini Office building, Jakarta. For three days, starting from March 1 to March 3, 2024, temperature and humidity measurements were carried out in areas that have VGS (Living Wall and Green Façade). Measurements were made with a Data Logger to measure temperature and humidity, and Thermal Imaging Camera to measure surface temperature. In the outdoor area, Entrance (Living Wall) has an average temperature of 29.83°C and 74% humidity, Inner Courtyard (Green Façade) has an average temperature of 29.06°C and 73% humidity. In the Indoor area, Indoor Dining Room (Green Façade) has an average temperature of 28.89°C with a humidity of 72%. Then, Waiting Room 1 has an average temperature of 29.51°C, with a humidity of 73%. Green Façade produces lower temperature and humidity than Living Wall. Factors such as openings, building envelope, presence of vegetation, and shading that cannot be controlled in the study also affect thermal conditions. This study shows that Vertical Greenery System significantly affects the reduction of temperature and humidity.*

*Keywords: Vertical Greenery System, Thermal Environment, Temperature, Humidity*