

Urban Vegetation as a Mitigation Strategy for Urban Heat Island Effect a Case of Kerala

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Abstract : Kerala cities in India are grappling with an alarming rise in temperatures fueled by the Urban Heat Island (UHI) effect. This phenomenon, exacerbated by rapid urbanization and climate change, poses a significant threat to public health and environmental well-being. In response to this growing concern, this study investigates the potential of urban vegetation as a powerful mitigation strategy against UHI. The study delves into the intricate relationship between micro-climate changes, UHI intensity, and the strategic placement of greenery in alleviating these effects. Utilizing advanced simulation software, the most effective vegetation types and configurations for maximizing UHI reduction will be identified. By analyzing the current state of Kozhikode's urban vegetation and its influence on microclimates, this study aims to tailor actionable strategies for Kerala cities, potentially paving the way for a more sustainable and thermally comfortable urban future.

Keywords : urban heat island, climate change, micro climate, urban vegetation

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