

IMPACT OF TOURISM-DRIVEN LAND-USE CHANGES ON TEMPERATURE PATTERNS IN HIKKADUWA, SRI LANKA

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Hikkaduwa is a vibrant tourist destination among local and foreign tourists known for its stunning beaches, coral reefs, and laid-back atmosphere. It is located on the southwest coast of Sri Lanka. This study investigates the impact of Tourism-driven land use on average temperature changes in Hikkaduwa. With the expansion of the tourism industry, there have been obvious changes in land use and infrastructure that can affect the temperature distribution in this area. This study used historical weather data, satellite images, and photographs to analyze temperature trends over the past two decades. According to the findings of this study, there is a significant increase in average temperature especially in urbanized areas compared to rural areas. The analysis also highlights how urban heat island effects driven by increased concrete surface area and vegetation cover contribute to localize warming. This research emphasizes on the importance of sustainable tourism practices that advocates for the integration of green spaces and eco-friendly construction methods to reduce the adverse temperature impact. Strategies for economic development along with environmental conservation ensure long-term viability of the tourism industry in the Hikkaduwa area. Finally, this research emphasizes that efforts should be made to create a sustainable relationship between tourism and climate stability. For that, the study underscores the need for ongoing monitoring and management of coastal construction to mitigate environmental impacts.

Keywords: Tourism-Driven Land Use, Hikkaduwa, Urban Heat Island Effect, Average Temperature Changes

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