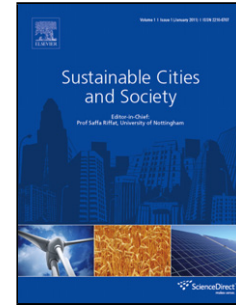


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Title

Effects of Urban Heat Island Mitigation in Various Climate Zones in the United States

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Highlights

- Investigation of the UHI effect in different climate zones.
- Development of an urban model using statistical urban district information.
- Investigation of sensitivity of UHI mitigation strategies in different climate zones.
- Analysis of the impact of the UHI on the level of heat stress in different climate zones.

Abstract

This research investigates the Urban Heat Island (UHI) effect in different climate zones in order to analyze the efficacy of UHI mitigation strategies. A base case urban canopy model was developed using statistical urban district information for Houston, Texas. The Urban Weather Generator (UWG) was employed to simulate the UHI effect during the hottest week of the Typical Meteorological Year (TMY3). Two case studies were conducted to represent the impacts of UHIs on the different climate zones. First, a case study was conducted to compare the

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