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The influence of spatial configuration of green areas on microclimate and thermal comfort

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Abstract

It has been shown that the spatial configuration of a green area can strongly influence its cooling effect. However, the specific correlation has not been sufficiently studied. To systematically clarify the correlation between the spatial configuration and the cooling effect of green areas, 25 idealized scenarios are designed and simulated using the microclimate model ENVI-met. These 25 scenarios represent green areas with five different spatial configurations (integrated green area, sparse dotted green areas, dense dotted green areas, belt-shaped green areas parallel to wind direction, and belt-shaped green areas vertical to wind direction) and five vegetation types (trees with big canopies, trees with small canopies, hedges and shrubs, 50 cm grass, and 10 cm

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