

MINIMISING THE URBAN HEAT ISLAND EFFECT THROUGH LANDSCAPING

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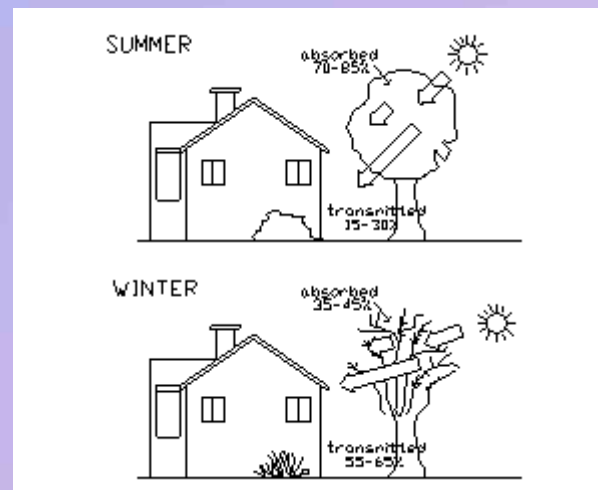
ABSTRACT

Urban areas present distinctive micro climates. In the study of causes of the special climate in cities, it is reported that “The total transformation of natural landscape into houses, streets, squares, big public buildings, sky scrappers, and industrial installations has brought about changes in climate of large cities”.

Temperature is one of the most important characteristics of urban areas. It is known that urban temperatures differ from those of sub-urban and rural areas. On hot summer days, one can feel the waves of blistering heat emanating from roads and dark buildings, which keep urban areas hot, even long after the sunset, where as rural areas begin to cool rapidly, depending upon topography, geological location, and anthropogenic factors. So urban areas are usually hotter than their rural surroundings. This phenomenon is described as the “Urban Heat Islands”. Vegetation has a large impact on micro climate and is considered an efficient mechanism for cooling down the temperature.

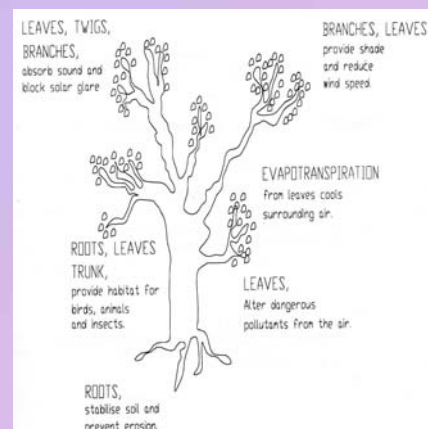
The various aspects of urban heat island like causes and temperature pattern in urban heat islands, urban and rural temperatures, reasons of increase in urban temperatures and the effects of landscaping on the surrounding climate were studied. Then, to overcome their effects landscaping elements like trees and other vegetation are discussed. To know the presence and to determine the intensity of urban heat island in the cities of Pakistan, a case study of Lahore is also carried out.

This paper therefore presents the causes, magnitude and impacts of urban heat islands and suggests the beneficial effects of strategic landscaping on the climate of a particular area.



EXCERPT FROM THE TEXT

Ground surfaces reflect solar radiation into building and decidedly have effect on building's heat gain and loss. Light colored or concerted surfaces are good reflectors and can increases the heat gain to the building. Dark colored surfaces, such as asphalt, will absorb and store large amounts of solar radiation as heat, and re-radiate it to the building at a later time.



To minimize this reflected radiation, as much ground vegetation as possible should be located around the buildings in conjunction with the trees and shrubs.