

THE FRAMEWORK TO MITIGATE THE URBAN HEAT ISLAND EFFECT FOR IMPROVING ENVIRONMENT AND PROTECTING HUMAN HEALTH

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ABSTRACT

Changes in temperature and precipitation, sea level, fisheries, agriculture, natural ecosystems, and air quality will all directly or indirectly affect human morbidity (illness) or mortality. One of the great challenges facing our current generation of scientists and engineers is how to protect urban population from health stressors associated with summertime heat. As heat-waves are likely to increase in frequency because of global climate change, the most effective interventions, measures and policies to protect the health need to be developed and evaluated. Therefore, this paper is focused on understanding the most important factors of urban heat island (UHI) formation and their effects on urban population health with an emphasis on the considerable growth of both population and rapid urbanization of Tehran, Iran. To achieve this aim, this paper explores literally a conceptual framework about the relationship between UHI and human health. Then, it suggests three important strategies to minimize the impact of UHI on human health: achieving appropriate transportation for mitigating air pollution, providing appropriate landscape, increasing the albedo of building materials.

Keywords: appropriate landscape, appropriate material, appropriate transportation, human health, natural ventilation, urban heat island.