

Abstract

Developing countries are becoming more urbanized leading to modification on climate over the cities. Proper urban atmospheric planning and management are thus fundamental for cities' sustainability. Urban weather and climate therefore needs continuous monitoring to offer accurate, reliable and timely update of any significant changes. This study examined the long term modification of temperature by urbanization utilizing decadal population data, monthly maximum and minimum temperature and land surface albedo for forty years. The data were subjected to homogeneity test using Short-Cut Bartlett test method that showed both maximum and minimum temperature increasing, though insignificant. Urbanization is evidenced by the reducing land surface albedo and increasing population. The study revealed the influence of urbanization on urban climate. The increase in temperatures is harmful to human comfort. Practical approaches, such as increasing the urban forest cover and a proper planning of the cities, have been suggested to help prevent further modification of weather and urban climate by urbanization. The findings of this work are thus important for multi-sectoral use in the Kenyan cities.