EXAMINING THE INTRASEASONAL VARIATION OF MOISTURE IN NAIROBI

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ABSTRACT

As human populations in the urban areas increase, demand for housing grow and urbanization and industrialization intensify .Consequently, there is increased surface runoff causing sedimentation and eutrophication and untimely deterioration of water quality ,habitats, and the biodiversity .This trend requires integrated and sustainable urban planning strategies. This project presents a synthesis of the potential and challenges of existing variations in the atmospheric variables in Nairobi city as an urban environment. The data set used in this study was the monthly air temperature for the selected stations for the period of 30 years .The data utilized was from Wilson Airport, JKIA and Dagoretti corner.

The variables of the study were relative humidity, Rainfall, maximum temperature, minimum temperatures and wind roses over Nairobi. Actually Nairobi city is one of the fastest growing cities in the world and therefore it is necessary to study its the moisture field due to its impacts on the buildings, aviation industries among the others. This study looked at the long -term modifications of the annual conditions of surface temperatures, rainfall and the relative humidity .The rainfall and humidity trends showed an increasing trend.

The increase in temperatures in the city makes it to be warmer than its environs causing a condition called the Urban Heat Island (UHI). Alot of challenges seem to threaten the sustainable developments in cities. Such challenges include lack of awareness in planning, legislation, financial, technical and institutional resources as well as luck of crucial data and information about the state of the city environment. The methods used in the analysis included the time series analysis, lagged correlation analysis, Analysis of variance and the ratio of the goodness of fit.

Key Words: Urban Heat Island, moisture field, biodiversity, eutrophication, deterioration, sustainable