

Signs of climate change at Port Sudan using Minimum temperature

Kazim Babikir Abdalla

University of Bahri

Abstract

The objective of this study is to investigate signs of global warming at the coastal city of Port Sudan. The parameter selected for this purpose is the minimum temperature. The minimum temperature is controlled to a great extent by the outgoing terrestrial radiation. This radiation is affected by the greenhouse gases accumulated in the atmosphere. The data used here are collected from the archive of the Sudan meteorological Society. It represented the months of January and July for the period 1981 to 2010. Deviations of monthly minimum temperatures from their averages were normalized and arranged in time series to find the behavior of the minimum temperature. A significant rise in minimum temperature was found in the dry month of July. In a cloud-less sky long-wave radiation is expected to escape to the space. Due to greenhouse effect these are trapped and resulted in a steady rise in temperature. This rise in temperature was not clear in the rainy month of January. Another important finding was that the amount of rise in temperature was significant. If the temperature keeps rising at this rate serious consequences are to be awaited.