Abstract

Clean air is a basic requirement for human health and wellbeing. The Kenya Meteorological Department has established air pollution monitoring activities in various sites in Nairobi, at Dagoretti Corner meteorological station and at Mount Kenya. Different pollutants are measured including ozone. The increased concentration of greenhouse gases in the atmosphere has influenced the weather and climate. This study examined the variations of surface ozone over Dagoretti Corner, Nairobi for a 12-month period ending July 2013, exactly one year after the start of data acquisition. The trend was studied using time series analysis of ozone concentration on both an hourly and monthly basis. The ozone data was then combined with meteorological data and temperature to find correlations between the two. Overall, the air quality of Nairobi, represented by Dagoretti Corner meteorological station is good as compared to the World Meteorological Organization ozone standards. The highest concentration of ozone is observed in the afternoon and the minimum at dawn on a daily basis. On seasonal scale, the highest levels are recorded in the cold months. This information helps to reduce exposure to the gas and thus to reduce its impacts on living things. The study recommends the reduction of exposure to the gas during the times when it has been observed to be highest in order to minimize its impacts.