

Abstract

The occurrence of fog and low level stratus at airports causes a number of negative impacts ranging from delays, diversions, cancellations, extra fuel leading to reduced loading capacity and customer discomfort. Some of the impacts can be greatly minimized if the occurrence of fog and low level stratus are accurately, reliably and timely forecasted.

The study aimed at investigating the utilization of METAR and satellite products, as well as their performance in issuance of Terminal Aerodrome Forecast at the Jomo Kenyatta International Airport. The study is based on a case study of 20th and 21st August 2012, utilizing TAFs, Water Vapour imagery of satellite and METARs, High Resolution Visible,

Infra-red channels. The fog and low level stratus were observed to form at around 0100 and 0500 UTC and dissipate at around 0500 UTC. The dissipation is mainly attributed to the incoming solar radiation.

The satellite observations replicated the METARs issued. The study therefore recommends further utilization of satellite products and METAR reports in the issuance of Terminal Aerodrome Forecasts to help in minimizing the impacts associated with fog and low level stratus at the airport. However, the study calls for quantitative verification of the performance of the satellite products is however recommended to ascertain the accuracy of the products.