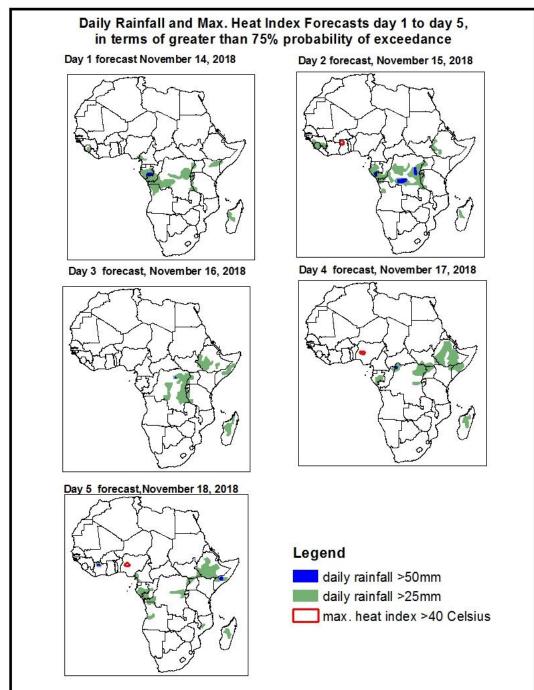
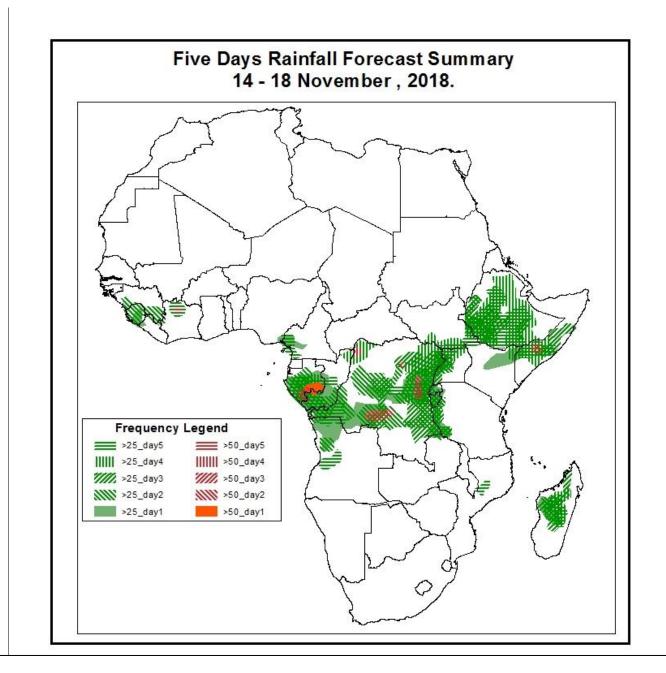
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

### 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on *November 13*, 2018)

#### 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Nov 14 - 18, 2018)

The forecasts are expressed in terms of high probability of precipitation (POP), valid 06Z to 06Z, and exceedance probability of maximum heat index (>40°C), based on the NCEP/GFS and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.

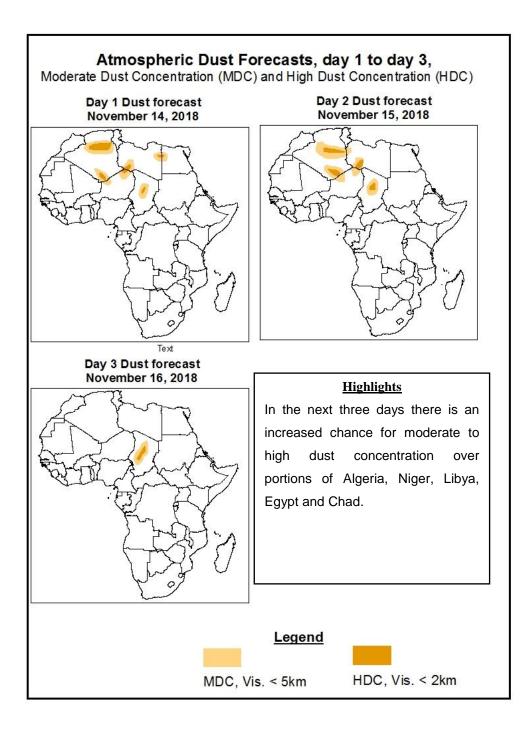




## <u>Highlights</u>

- In the next five days the Congo Air Boundary (CAB) is expected to remain active over Central African Countries. In the next five days, there is a chance for moderate to heavy rainfall over localized areas of Cote D'Ivoire, Gabon, Congo DR and Somalia.
- There is an increased chance for temperature heat index values to exceed 40°C over local areas of Ghana and Nigeria.

**1.2.** Atmospheric Dust Concentration Forecasts (valid: November 14 – 16, 2018) The forecasts are expressed in terms of high probability of dust concentration, based on the Navy Aerosol Analysis and Prediction System, NCEP/GFS lower-level wind forecasts and expert assessment.



#### 1.3. Model Discussion, Valid: November 14 – 18, 2018

The Azores High Pressure system over the North Atlantic Ocean is expected to relax. Its central pressure value is expected to decrease from 1028hPa to 1021hPa through the forecast period.

The St. Helena High Pressure system over Southwest Atlantic Ocean is expected to intensify as it progresses eastwards towards the sub-continent, its central pressure value is expected to increase from 1022hPa to 1030hPa.

The Mascarene High Pressure system over Southwest Indian Ocean is expected to maintain its strength as it progresses eastward with its central pressure value expected to fluctuate between 1032hPa and 1033hPa through the forecast period.

At 925hPa, strong northeasterly to easterly flow is expected to prevail over most parts of Northern Africa and the Sahel region. Moist and unstable Southwesterly winds are expected to prevail over Central Africa and parts of Gulf of Guinea.

At 850hPa, Lower-level wind convergence associated with the Congo air boundary (CAB) over parts of Central Africa.

In the next five days the Congo Air Boundary (CAB) is expected to remain active over Central African Countries. In the next five days, there is a chance for moderate to heavy rainfall over localized areas of Cote D'Ivoire, Gabon, Congo DR and Somalia.

There is an increased chance for temperature heat index values to exceed 40<sup>°</sup>C over local areas of Ghana and Nigeria.

# 2.0. Previous and Current Day Weather over Africa

## 2.1. Weather assessment for the previous day (November 12, 2018)

Above 25mm daily rainfall was observed over localized areas of Southwestern Cameroon.

### 2.2. Weather assessment for the current day (November 13, 2018)

Intense convective clouds are observed over some areas of the Central African countries.

