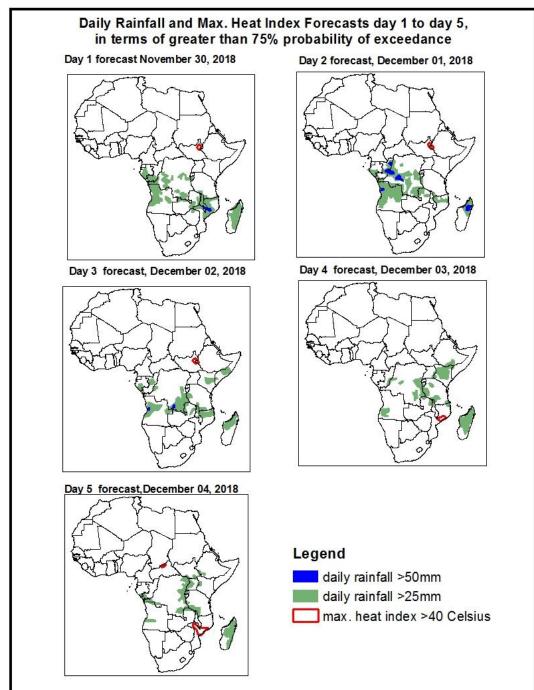
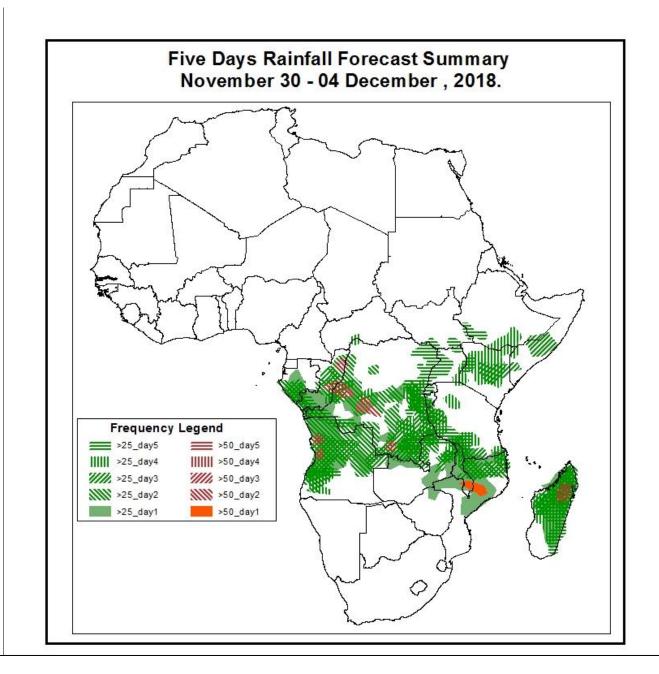
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

### 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on November 29, 2018)

### 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Nov 30 -04Dec, 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.

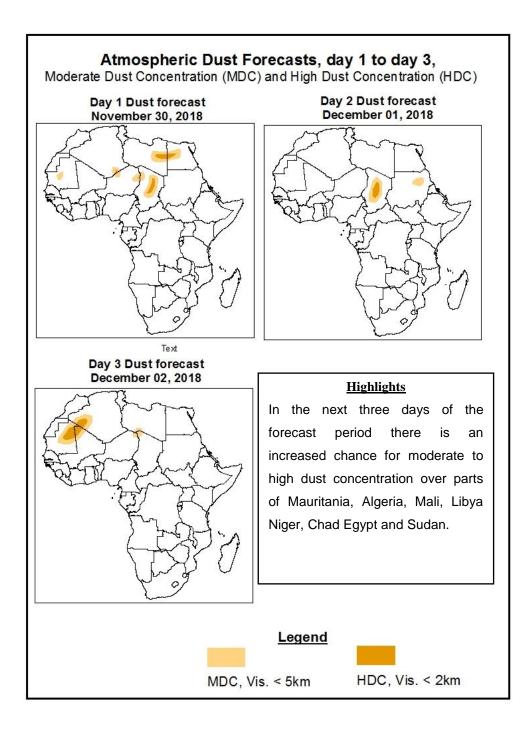




#### **Highlights**

- In the next five days the Congo Air Boundary (CAB) is expected to continue been active over Central Africa and the northern parts of Southern African countries, The Southern Costal low is expected to continue fluctuating over South Africa. These two systems are likely to enhance rainfall activities over most parts of Central and Southern African countries, there is a chance for moderate to heavy rainfall through the forecast period over localized areas of Gabon, Congo Brazzaville, Congo DR, Angola, Malawi, Mozambique and Madagascar.
- There is an increased chance for temperature heat index values to exceed 40<sup>o</sup>C over local areas of the Republic of Central Africa, South Sudan and Mozambique.

**1.2.** Atmospheric Dust Concentration Forecasts (valid: November 30 – 02, 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 30 – 04 December, 2018

The Azores High Pressure system is over land and is expected to maintain its strength and continue to fluctuate over the Northern regions of the Continent. Its central pressure value is expected to vary between 1021hPa and 1024hPa through the forecast period.

The St. Helena High Pressure system over Southwest Atlantic Ocean is expected to relax and maintain its position. Its central pressure value is expected to decrease from 1023hPa to 1019hPa through the forecast period.

The Mascarene High Pressure system over Southwest Indian Ocean is expected to sustain it's strengthen as it progresses eastward. It's likely to cut away from the sub-continent before the last 24hours of the forecast period. Its central pressure value is expected to vary between 1027hPa to 1030hPa through the forecast period.

A deep low Pressure system over Southern Africa is expected to continue covering most parts of the sub- region 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. Congo air boundary continues to remain active over the Central parts of the continent. Also, Northeasterly flow over Southern and the Southeast of Africa.

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

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# 2.0. Previous and Current Day Weather over Africa

# 2.1. Weather assessment for the previous day (November 28, 2018)

Above 25mm daily rainfall was observed over localized areas of Zambia, Botswana, Zimbabwe and South Africa.

### 2.2. Weather assessment for the current day (November 29, 2018)

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

