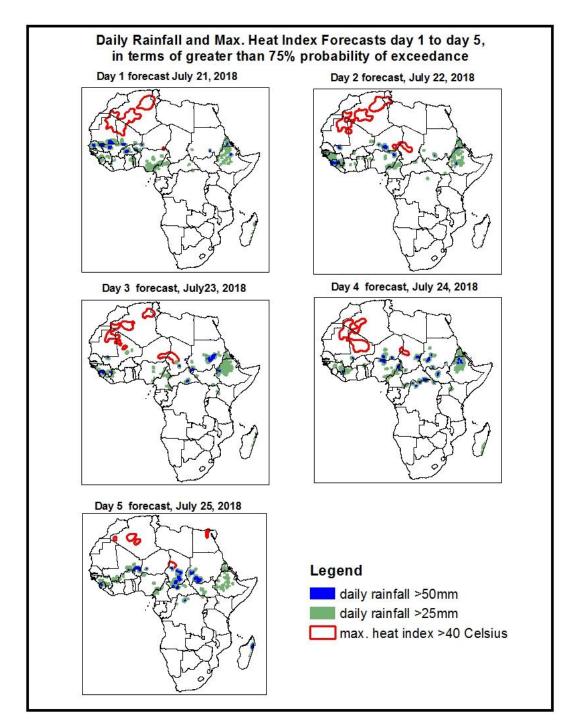
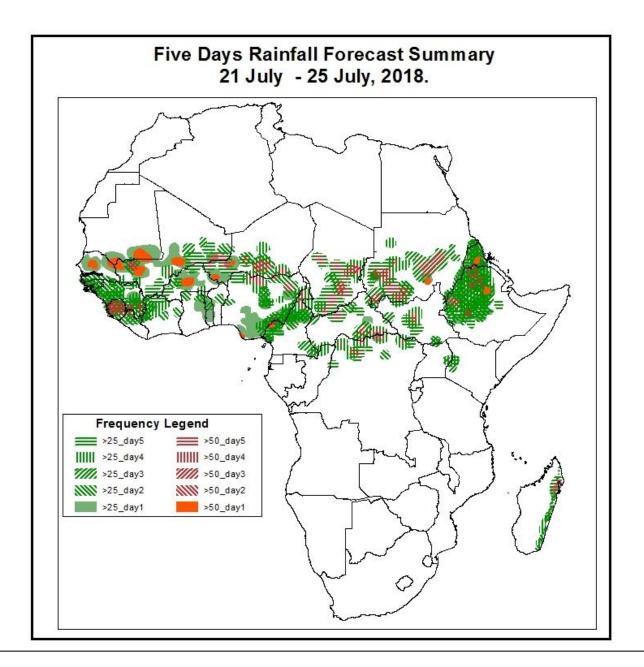
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

## 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on July 20, 2018)

## 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: July21, – July 25, 2018)

The forecasts are expressed in terms of high probability of precipitation (POP) and high probability of maximum heat index, based on the NCEP/GFS and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.

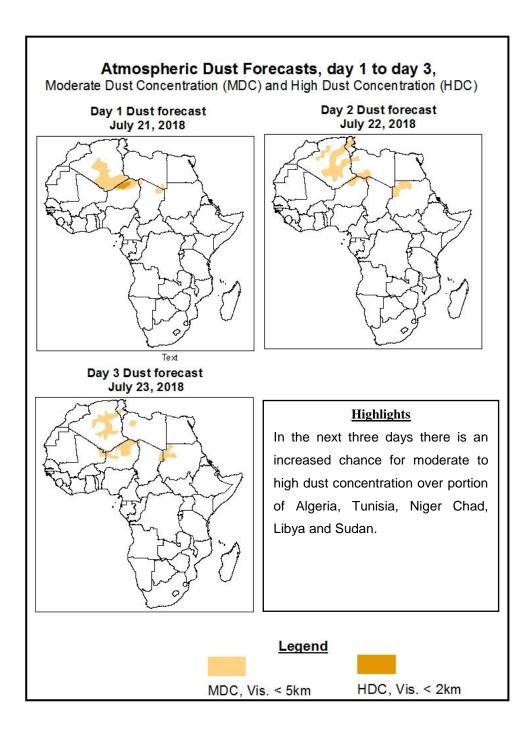




# <u>Highlights</u>

In the next five days, areas of anomalous lower-level convergence and upper level divergence over parts of East Africa, Central Africa and Gulf of Guinea Countries are expected to enhance rainfall, while areas of anomalous lower-level divergence and upper-level convergence is expected to suppress rainfall during the forecast period. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Senegal, Mauritania, Mali, Gambia, Guinea – Bissau, Guinea, Sierra Leone, Liberia, Cote d'Ivoire, Ghana, Togo, Niger, Nigeria, Cameroon, Chad, CAR, DRC, Sudan, South Sudan, Kenya, Eritrea, Ethiopia and Madagascar.

**1.2.** Atmospheric Dust Concentration Forecasts (valid: July 21 – July 23, 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: July 22 – July 25, 2018

The Azores High Pressure system over the North Atlantic Ocean is expected to remain quasistationary for three days and then weaken in the subsequent days of the forecast period. The central pressure value decreased from 1034hPa to 1033hPa in the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to weaken in the first three days and then intensifies during forecast period. The central pressure value decreased from 1030hPa to 1028hPa and increased to 1035 in the forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to weaken during the forecast period. The central pressure value decreased from 1041hPa to 1036hPa in the forecast period.

At 925hPa, dry strong northeasterly to easterly wind is expected to prevail across northern Africa and portions of the Sahel region.

At 850hPa, in West Africa, it is expected that the Inter Tropical Convergence Zone will oscillate above the Gulf of Guinea countries while the area of wind convergence remain active over Mali, Niger and Sudan.

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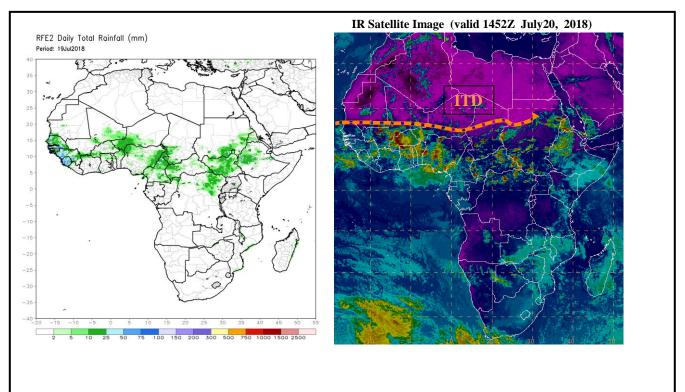
# 2.0. Previous and Current Day Weather over Africa

# 2.1. Weather assessment for the previous day (July 19, 2018)

Moderate to locally heavy rainfall was observed over parts of Mauritania, Senegal, Gambia, Guinea Bissau, Guinea, Sierra Leone, Cameroon, CAR, DRC, Sudan, South Sudan and Ethiopia.

## 2.2. Weather assessment for the current day (July 20, 2018)

Intense convective clouds are observed over parts of Mali, Burkina Faso, Ghana, Togo, Benin, Nigeria, Cameroon, Chad, CAR, DRC, Sudan, South Sudan, Eritrea and Ethiopia.



Previous day rainfall condition over Africa (Left) based on the NCEP CPCE/RFE and current day cloud cover and ITD (right) based on IR Satellite image and 925hPa wind.

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