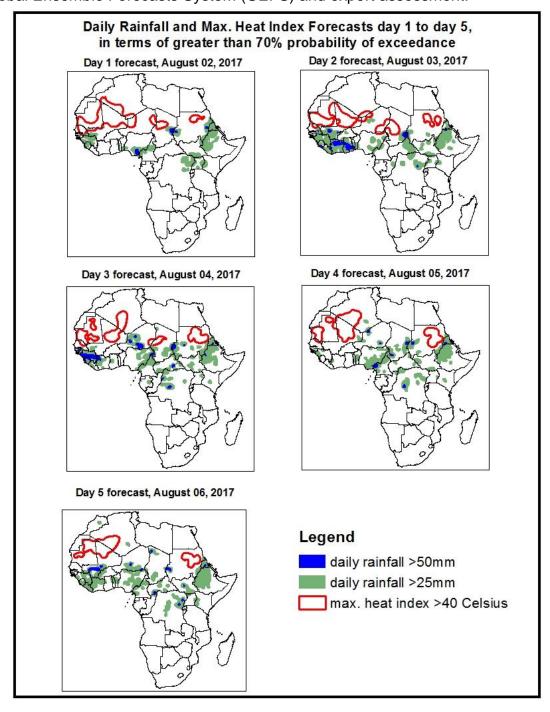
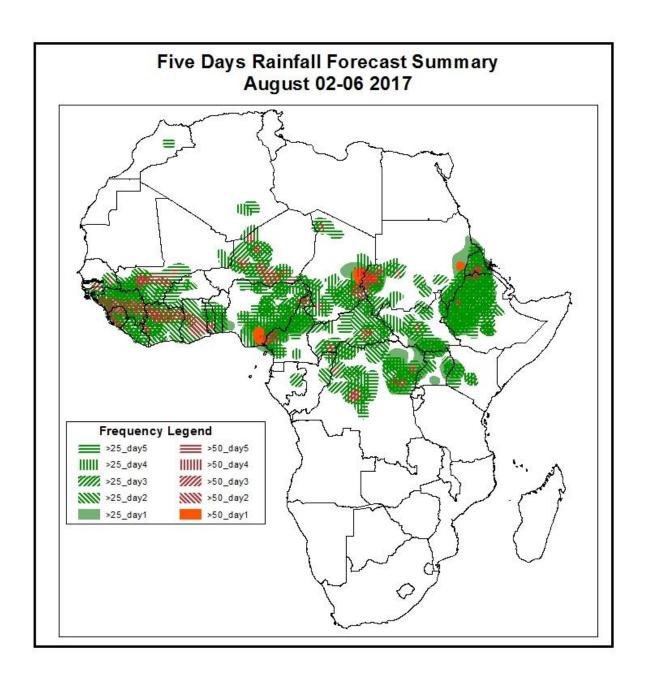
## 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on August 01, 2017)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: August 02–06 August, 2017)

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



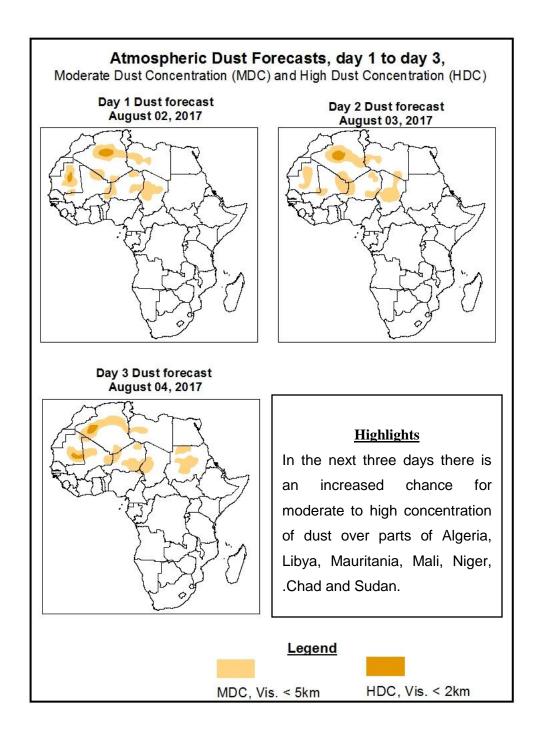


# **Highlights**

In the next five days, a strong monsoon flow from the Atlantic Ocean across West and Central Africa combined with a lower-level cyclonic circulation propagating across the Sahel and Gulf of Guinea countries is expected to enhance rainfall over many places in West and Central Africa. Lower level wind convergence is expected to enhance rainfall over Sudan and Ethiopia. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over many places in the Gulf of Guinea and parts of the Sahel countries, and portions of South Sudan, Sudan, northeastern DRC, western Kenya, northern Uganda and Ethiopia.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: August 02–04, 2017)

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: August 02– 06, 2017

The Azores High Pressure system over the North Atlantic Ocean is expected to weaken with its central pressure value decreasing from about 1025hPa to 1023hPa in the next 96hours and tends to maintain an average central pressure value of 1024hPa towards end of the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to intensify with its central pressure value increasing from about 1026hPa to 1029hPa during the forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to weaken with its central pressure value decreasing from about 1036hPa to 1029hPa during in the towards end of the forecast period.

The heat low over western Sahel is expected to deepen slightly with the lowest central pressure value of 1004 hPa during the forecast period.

At 925 hPa, strong dry northerly to northeasterly flow is expected to prevail over many places northern Africa leading increased dust activity in the region.

At 850 hPa, a cyclonic circulation over southern Algeria is expected to propagate westwards into Mauritania across Mali through 120hours.

At 700 hPa, a trough in the easterlies is expected to propagate westwards across the Gulf of Guinea region during the forecast period.

In the next five days, a strong monsoon flow from the Atlantic Ocean across West and Central Africa combined with a lower-level cyclonic circulation propagating across the Sahel and Gulf of Guinea countries is expected to enhance rainfall over many places in West and Central Africa. Lower level wind convergence is expected to enhance rainfall over Sudan and Ethiopia. As a result, there is an increased chance for two or more days of moderate to heavy

rainfall over many places in the Gulf of Guinea and parts of the Sahel countries, and portions of South Sudan, Sudan, northeastern DRC, western Kenya, northern Uganda and Ethiopia.

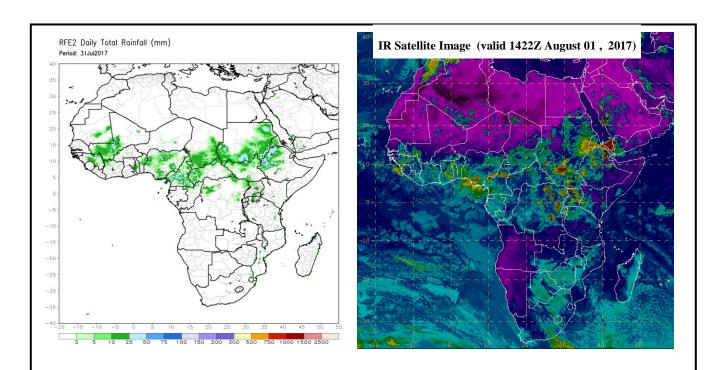
## 2.0. Previous and Current Day Weather over Africa

## 2.1. Weather assessment for the previous day (July 31, 2017)

Moderate to locally heavy rainfall was observed over parts of Mauritania, Mali, Guinea, northern Cote d'Ivoire, Benin, Nigeria, Cameroon, southern Chad, western CAR, local areas in DRC, Sudan, South Sudan, and Ethiopia.

### **2.2.** Weather assessment for the current day (August 01, 2017)

Intense convective clouds are observed over portions of the Gulf of guinea region, parts of Sudan, South Sudan and Ethiopia.



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

**Authors:** Bakari MANGANE (Mali – MM)/ (CPC-African Desk);
Bakari.mangane@noaa.gov