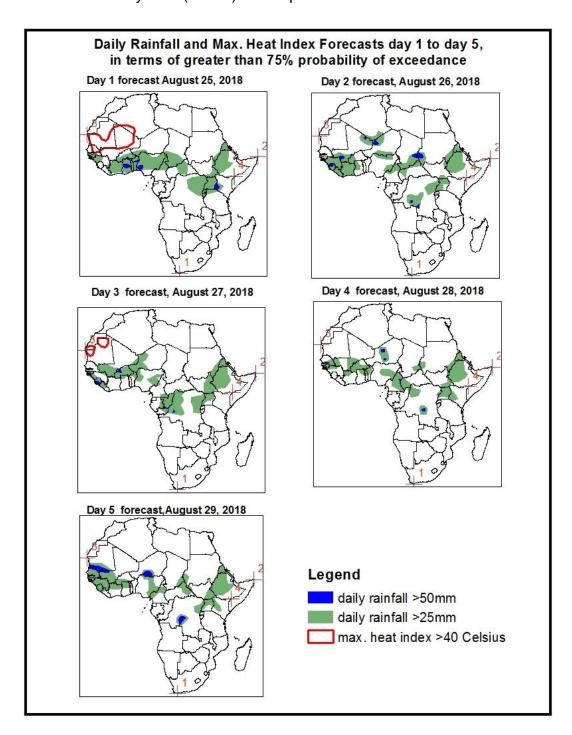
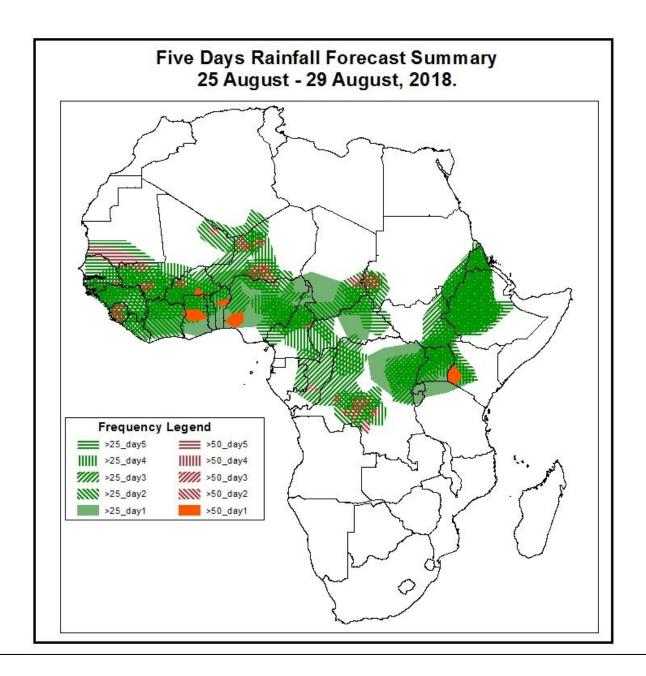
- 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on August 24, 2018)
- 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: August 25, August 29, 2018)

  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.



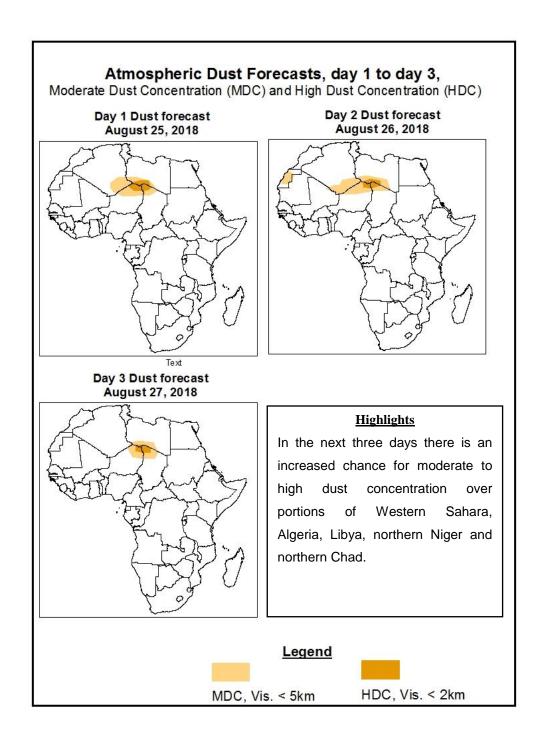


#### <u>Highlights</u>

- In the next five days, westward propagating cyclonic circulations across West Africa, active lower-level wind convergences in the Sahel and Lake Victoria regions, including portions of the Greater Horn of Africa are expected to enhance rainfall.
- There is an increased chance for 2 or more days of moderate to heavy rainfall over many places in the Gulf of Guinea countries and the neighboring areas of the Sahel region, southern Chad, DRC, portions of the Lake Victoria region, Ethiopia and Eritrea.
- There is an increased chance for high heat index values across northern Mauritania,
   northern Mali and southern Algeria during the first half of the forecast period.

# **1.2. Atmospheric Dust Concentration Forecasts** (valid: August 25 – August 27,2018)

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: August 25 – August 29, 2018

The Azores High Pressure system over the North Atlantic Ocean is expected to weaken during the forecast period. The central pressure value decreased from 1030hPa to 1023hPa in the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to weaken in the forecast period. The central pressure values decreased from 1039hPa to 1036hPa in the forecast period.

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The Mascarene High Pressure system over the Southwest Indian Ocean is expected to intensify during the forecast period. The central pressure value increased from 1036hPa to 1039hPa.

The thermal low near northeastern Mali and southern Algeria is expected to shift towards northern Mauritania while maintaining an average central pressure value of 1004hPa during the forecast period. The central thermal low near Chad is expected to maintain an average central pressure value of 1007hPa during the forecast period.

At 925hPa, dry strong northeasterly to easterly wind is expected to prevail across northern Africa. In contrast, moist southwesterly to westerly flow from the Atlantic Ocean is expected to prevail across much of the Gulf of Guinea countries and the neighboring areas of the Sahel region.

At 850hPa, a cyclonic circulation across northern Ghana and Burkina Faso is expected to propagate westwards, leaving the West Africa coast in 96 hours. A zonal wind convergence is expected to remain active across the Sahel region during the forecast period. Moist southwesterly flow from the Gulf of Guinea region, with its associated lower-level wind Convergence in Sudan and western Ethiopia is expected to enhance rainfall in the region. Lower-level meridional wind convergence is expected to remain active near the Lake Victoria region during the forecast period.

At 700-hPa, A cyclonic circulation with its associated trough is expected to propagate westwards in the region between Ghana and Senegal during the forecast period.

At 500-hPa, an area of strong wind (>30kts), associated with African Easterly Jet, is expected to prevail in the far western West Africa and portions of Chad and South Sudan..

In the next five days, westward propagating cyclonic circulations across West Africa, active lower-level wind convergences in the Sahel and Lake Victoria regions, including portions of the Greater Horn of Africa are expected to enhance rainfall. There is an increased chance for 2 or more days of moderate to heavy rainfall over many places in the Gulf of Guinea countries and the neighboring areas of the Sahel region, southern Chad, DRC, portions of the Lake Victoria region, Ethiopia and Eritrea. There is an increased chance for high heat index values across northern Mauritania, northern Mali and southern Algeria during the first half of the forecast period.

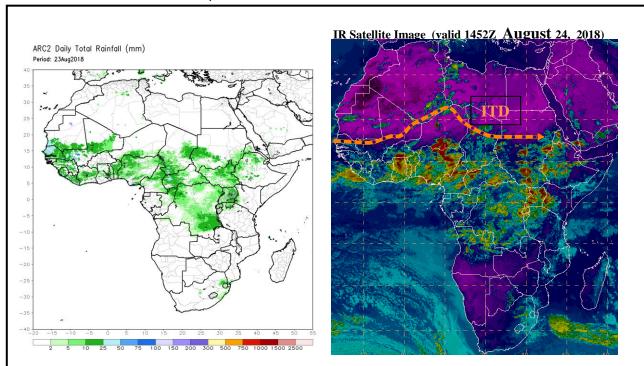
## 2.0. Previous and Current Day Weather over Africa

### **2.1. Weather assessment for the previous day** (August 23, 2018)

Moderate to locally heavy rainfall was observed over parts of Mauritania, Senegal, Mali, Guinea, Sierra Leone, Liberia, Cote d'Ivoire, Niger, Nigeria, Cameroon, Chad, CAR, DRC, Sudan, Uganda, Ethiopia, Mozambique and South Africa.

## **2.2.** Weather assessment for the current day (August 24, 2018)

Intense convective clouds are observed over parts of Burkina Faso, Ghana, Togo, Niger, Nigeria, Cameroon, Chad, CAR, Congo, DRC, Uganda, Kenya, Sudan, South Sudan, Tanzania, Eritrea and Ethiopia.



Previous day rainfall condition over Africa (Left) based on the NCEP CPCE/ARC2 and current day cloud cover and ITD (right) based on IR Satellite image and 925hPa wind.

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