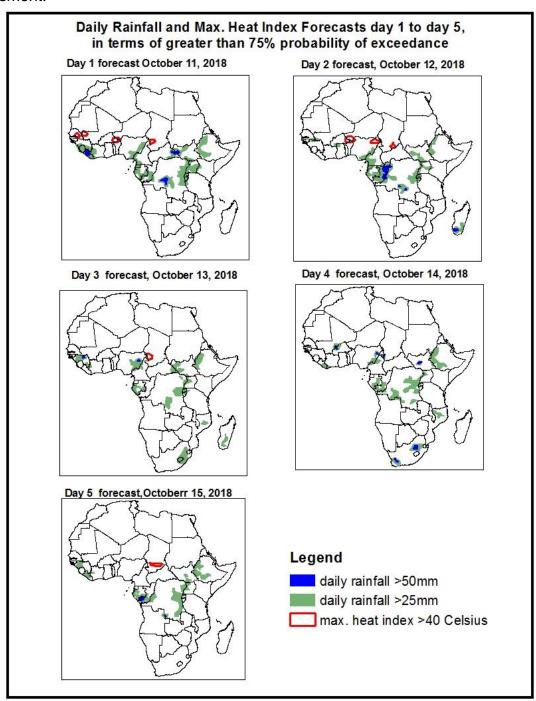
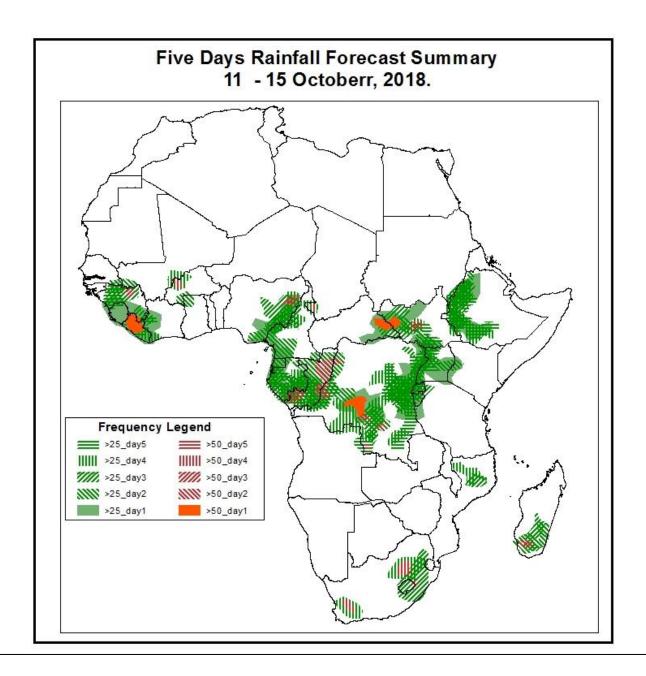
### 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on *October 10*, 2018)

## 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Oct 11, -Oct 15, 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.



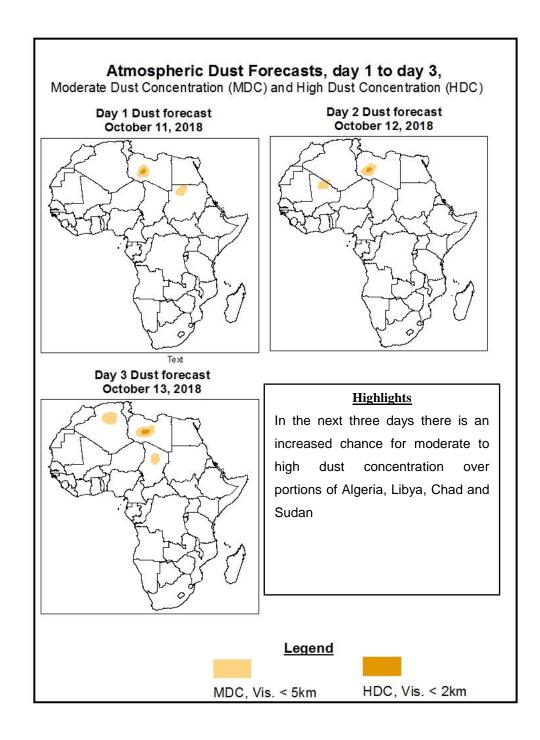


### <u>Highlights</u>

- In the next five days, lower-level wind convergences over parts of the Gulf of Guinea countries, active Congo air boundary, localized convergence in Sudan and Ethiopia are expected to enhance rainfall. There is an increased chance for 2 or more days of moderate to heavy rainfall over far western African countries, Central Africa, parts of South Sudan and Ethiopia, parts of Southern Africa and southern Madagascar.
- There is an increased chance for temperature heat index values to exceed 40°C over local areas in Mali, Senegal, Burkina Faso and Chad.

# 1.2. Atmospheric Dust Concentration Forecasts (valid: Oct 11 – October 13, 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: October 11 – October 15, 2018

The Azores High Pressure system over the North Atlantic Ocean is expected to strengthen towards the end of the forecast period. Its central pressure value is expected to increase from 1021hPa to 1023hPa between 13 and 15<sup>th</sup> October.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to intensify while progressing to the southwest Indian Ocean and dying off on the 14th. Developing St Hellen high pressure on the 15<sup>th</sup> moving southeast of the Atlantic Ocean Its central pressure value is expected to increase from 1019hPa to 1022hPa between 96 and 120 hours.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to weaken gradually, while progressing eastwards. Its central pressure value is expected to decrease from 1035hPa to 1024hPa.

A low Pleasure system associated with tropical cyclone (Luban) is moving towards the Arabian Peninsula and is expected to land fall through 72 hours. Its central pressure value of is expected to increase from 992hPa in 24hours to 1009hpa after land fall.

A low system is expected to develop over the southern Africa moving southeast during the forecast period.

At 925hPa, dry strong northeasterly to easterly flow is expected to prevail over portions of northern Africa and the neighboring areas of the Sahel region. Moist southwesterly to westerly monsoon flow from the Atlantic Ocean is expected to remain active along the Gulf of Guinea coast. A broad area of cross equatorial flow from the Indian Ocean is expected to prevail across the Greater Horn of Africa due to the presence of tropical cyclone (Luban) in the Arabian Sea.

At 850hPa, localized lower-level wind Convergence across portions of the Gulf of Guinea region, and lower-level wind convergence associated with the Congo air boundary (CAB) is expected to remain active during the forecast period.

In the next five days, lower-level wind convergences over parts of the Gulf of Guinea countries, active Congo air boundary, localized convergence in Sudan and Ethiopia are expected to enhance rainfall. There is an increased chance for 2 or more days of moderate to heavy rainfall over far western African countries, Central Africa, parts of South Sudan and Ethiopia, parts of Southern Africa and southern Madagascar. There is an increased chance for temperature heat index values to exceed 40°C over local areas in Mali, Senegal, Burkina Faso and Chad.

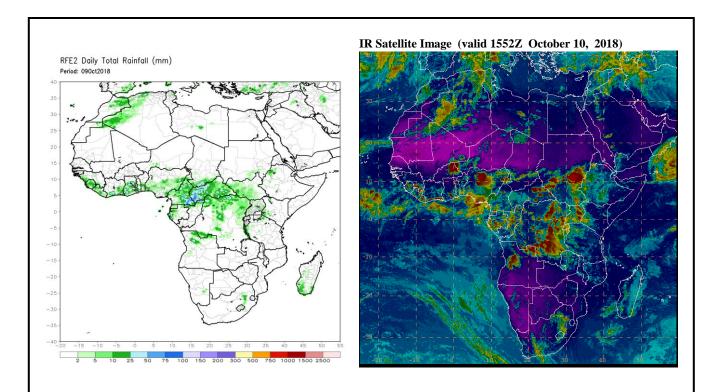
## 2.0. Previous and Current Day Weather over Africa

## 2.1. Weather assessment for the previous day (October 9, 2018)

Daily rainfall totals exceeded 25mm over Sothern of Cote d'Ivoire and Sudan, Ghana, Cameroon, Central Africa Republic and Northern of Congo DRC.

### **2.2.** Weather assessment for the current day (October 10, 2018)

Intense convective clouds are observed over most parts of Central African Countries.



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

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