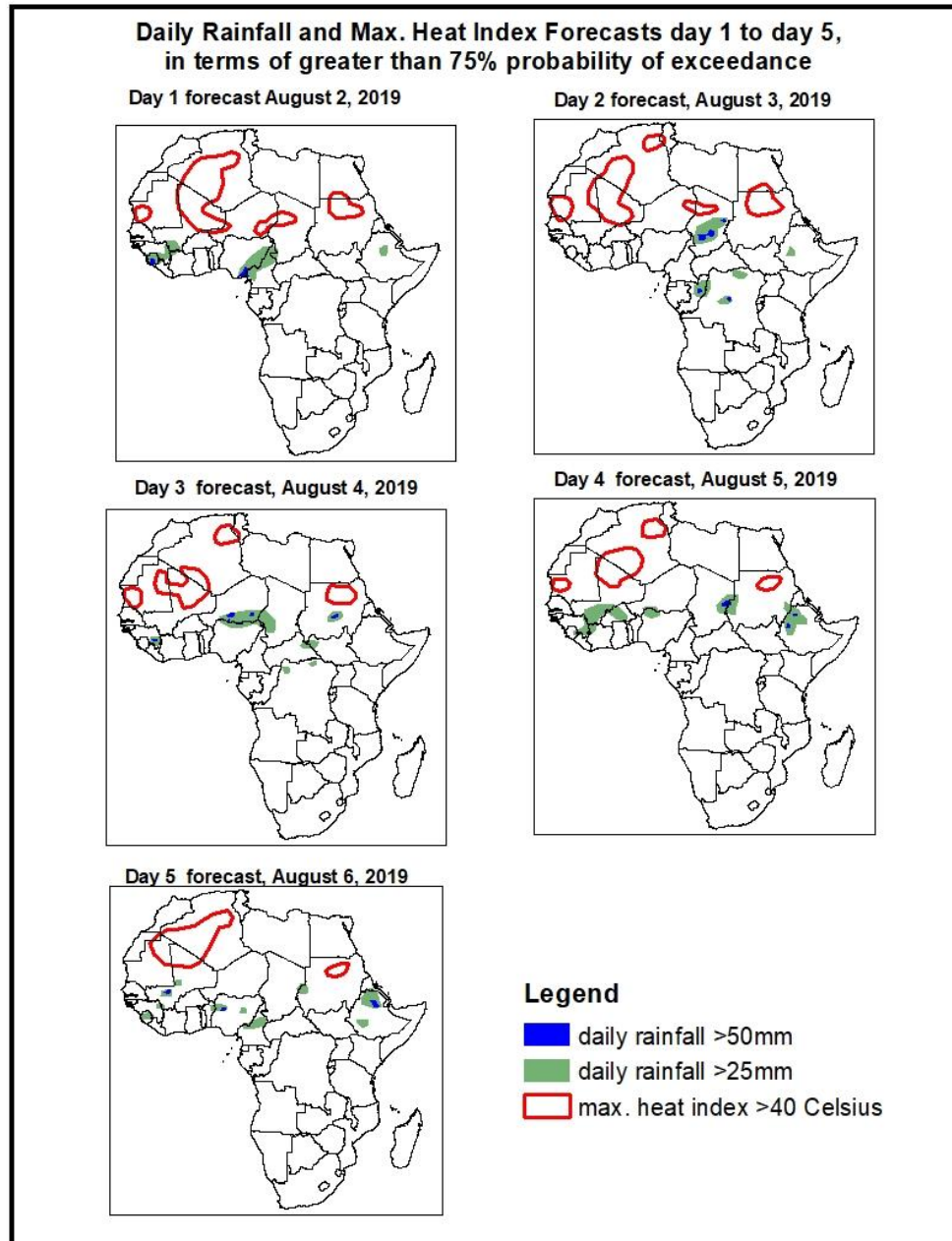


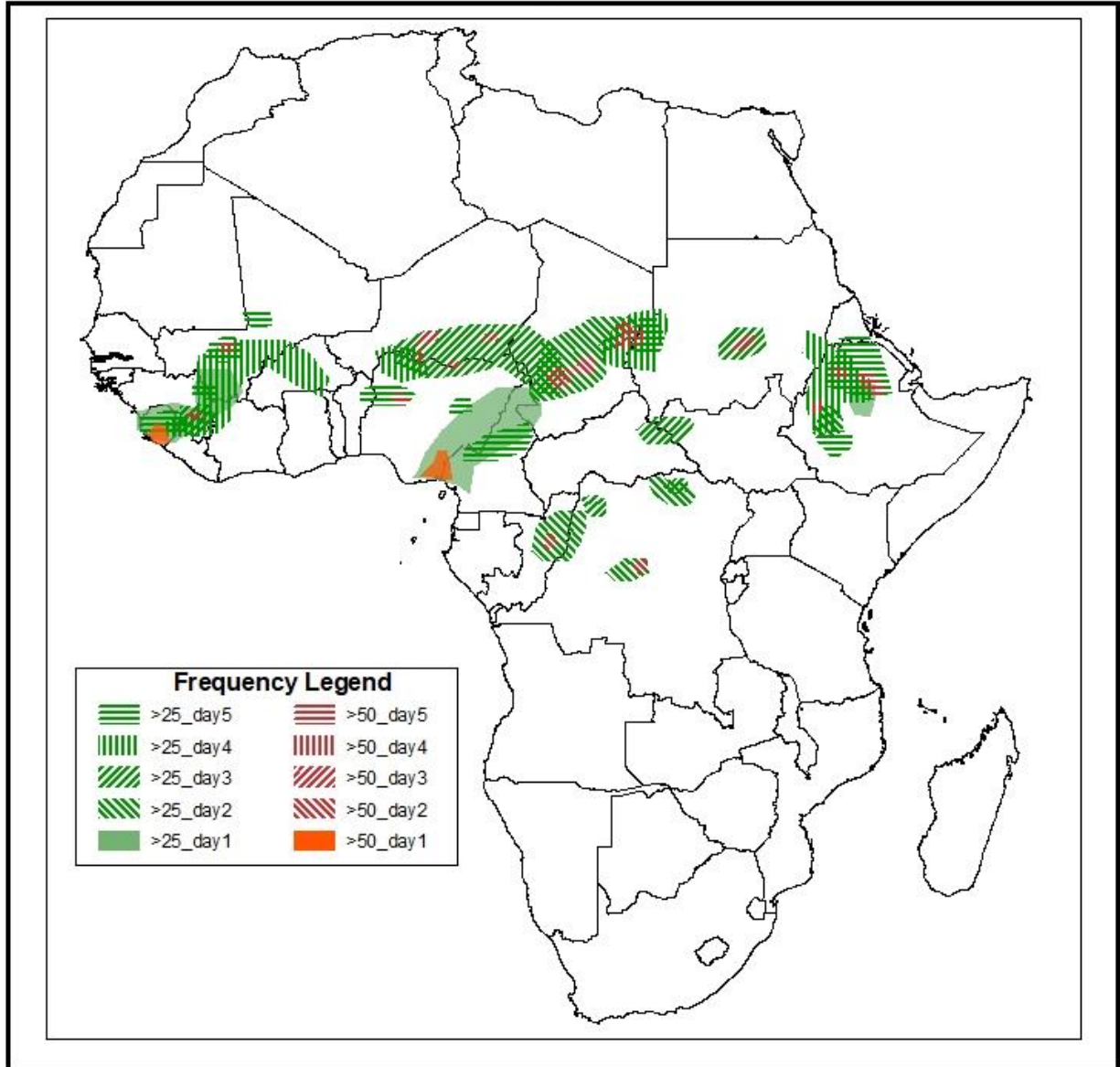
## 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on August 1, 2019)

### 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: 2 – 6 August, 2019)

The forecasts are expressed in terms of high probability of precipitation (POP), valid 06Z to 06Z, and exceedance probability of maximum heat index ( $>40^{\circ}\text{C}$ ), based on the NCEP/GFS and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



## Five Days Rainfall Forecast Summary 2 - 6 August, 2019

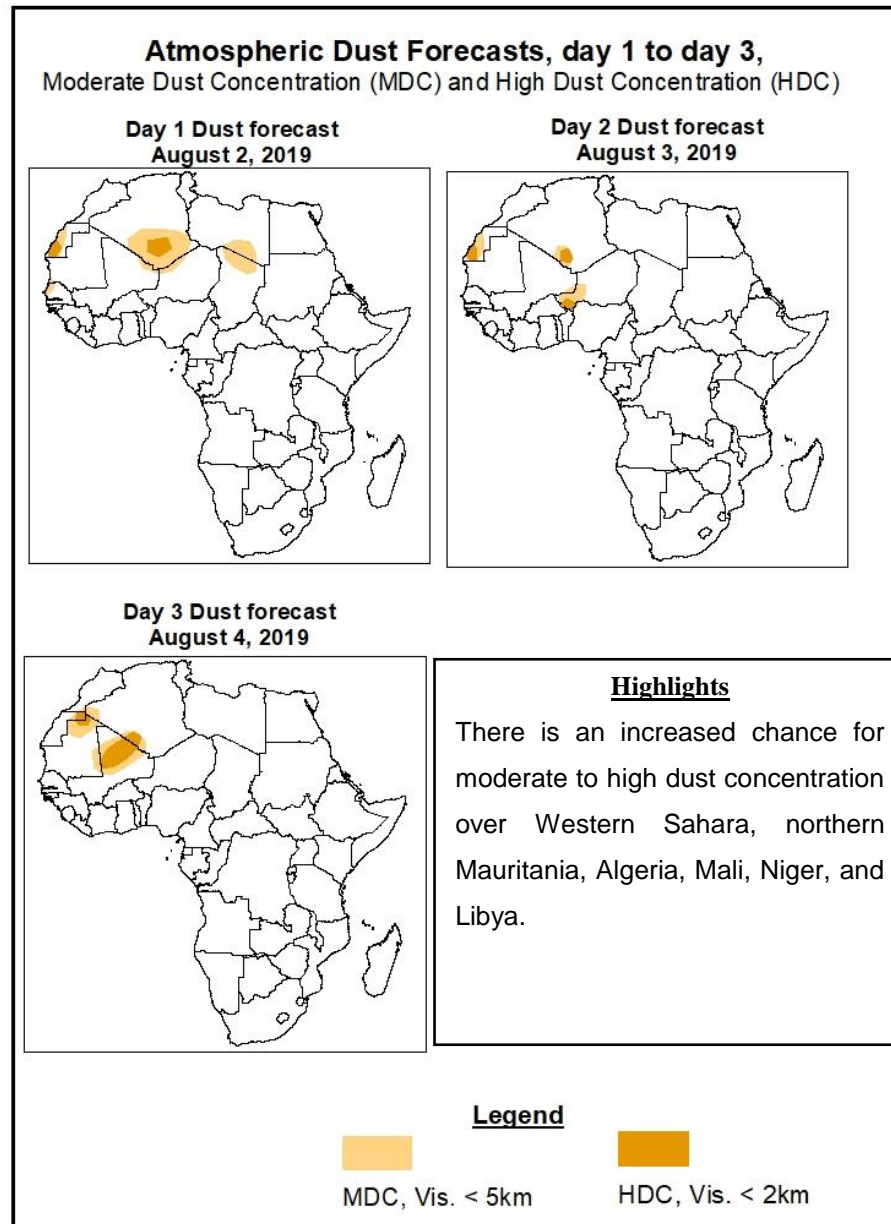


### Highlights

- The monsoon flow from the Atlantic Ocean with its associated lower-level convergence, and westward propagating meso-scale convective systems are expected to enhance rainfall over portions of the Sahel and central Africa countries.
- Lower-level wind convergences are expected to enhance rainfall across portions of the Greater Horn of Africa.
- At least 25mm for two or more days is likely over portions of the Sahel, central Africa and the Greater Horn of Africa. There is an increased chance for daily rainfall to exceed 50mm over local areas in Sierra Leone, Mali, Niger, Nigeria, Cameroon, Chad, Congo, DRC, Sudan and Ethiopia.
- There is an increased chance for daily maximum heat index to exceed 40°C over portions of Northwest Africa and the Sahel region.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: 2 – 4 August 2019)

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: 2 – 6 August 2019**

The Azores High Pressure system over the Northeast Atlantic is expected to weaken slightly with its central pressure value decreasing from about 1024hpa to 1023hpa and stay just northwest of West Africa during the forecast period.

The St. Helena High Pressure system over Southeast Atlantic Ocean is expected to strengthen, with its central pressure value increasing from 1023hPa to 1026hPa during the forecast hours.

The Mascarene High Pressure system over Southwest Indian Ocean is expected to strengthen with its central pressure value increasing from 1031Pa to 1035hPa during the forecast period.

Thermal low over northern Mali is expected to deepen with its central pressure value decreasing from about 1006hPa to 1004hPa through 72 hours. Thermal low across Niger and Chad to fill up slightly with its central pressure value increasing from about 1006hPa to 1010hPa during the forecast period.

At 925-hPa level, strong dry northerly to northeasterly flow is expected to prevail across portions of Northwest Africa. In contrast, moist southwesterly flow from the Atlantic Ocean is expected to prevail across the Gulf of Guinea and the Sahel regions, and the neighboring areas of Central Africa.

At 850-hPa, lower-level wind convergences are expected to remain active over portions of the Lake Victoria regions. A cyclonic circulation over Chad is expected to propagate westward into Mauritania while deepening during the forecast period.

At 700-hPa, a trough in the easterly flow over Chad is expected to propagate towards Cote d'Ivoire during the forecast period.

At 500-hpa, wind speed associated with easterly flow is expected to exceed 30kts across portions of West Africa during the forecast period.

At 150-hPa, a strong wind (>70kts) associated with tropical easterly jet (TEJ) is expected to prevail across the far eastern East Africa and northern Indian Ocean.

The monsoon flow from the Atlantic Ocean with its associated lower-level convergence, and westward propagating meso-scale convective systems are expected to enhance rainfall over portions of the Sahel and central Africa countries. Lower-level wind convergences are expected to enhance rainfall across portions of the Greater Horn of Africa. At least 25mm for two or more days is likely over portions of the Sahel, central Africa and the Greater Horn of Africa. There is an increased chance for daily rainfall to exceed 50mm over local areas in Sierra Leone, Mali, Niger, Nigeria, Cameroon, Chad, Congo, DRC, Sudan and Ethiopia. There is an increased chance for daily maximum heat index to exceed 40°C over portions of Northwest Africa and the Sahel region.

## 2.0. Previous and Current Day Weather over Africa

### 2.1. *Weather assessment for the previous day* (July 31, 2019)

Daily rainfall amount exceeded 25mm over eastern Guinea, Mali, Burkina Faso, southern Chad, eastern Sudan and northwestern Ethiopia.

### 2.2. *Weather assessment for the current day* (August 1, 2019)

Localized convective clouds are observed over portions of the Sahel and the Gulf of Guinea regions.

