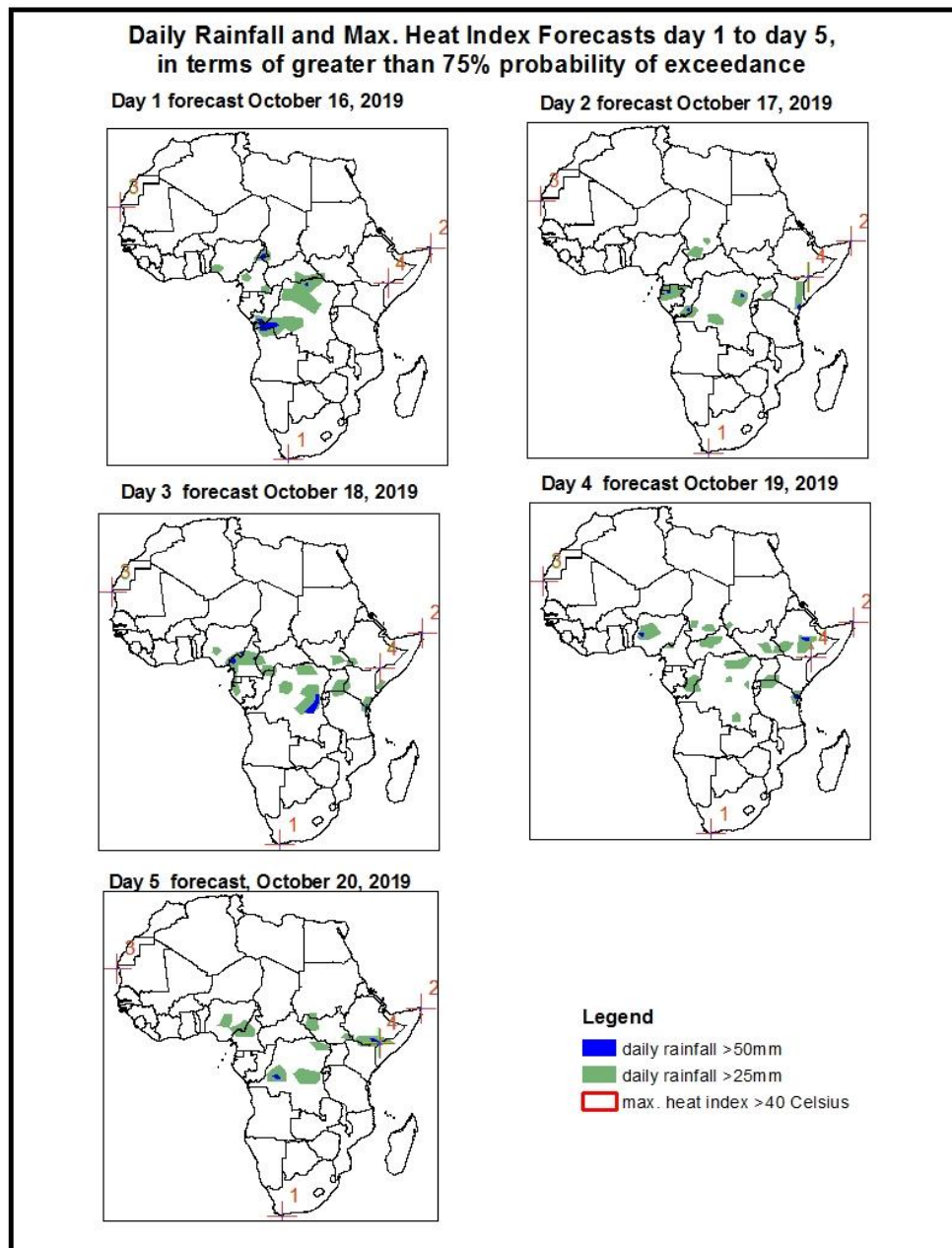


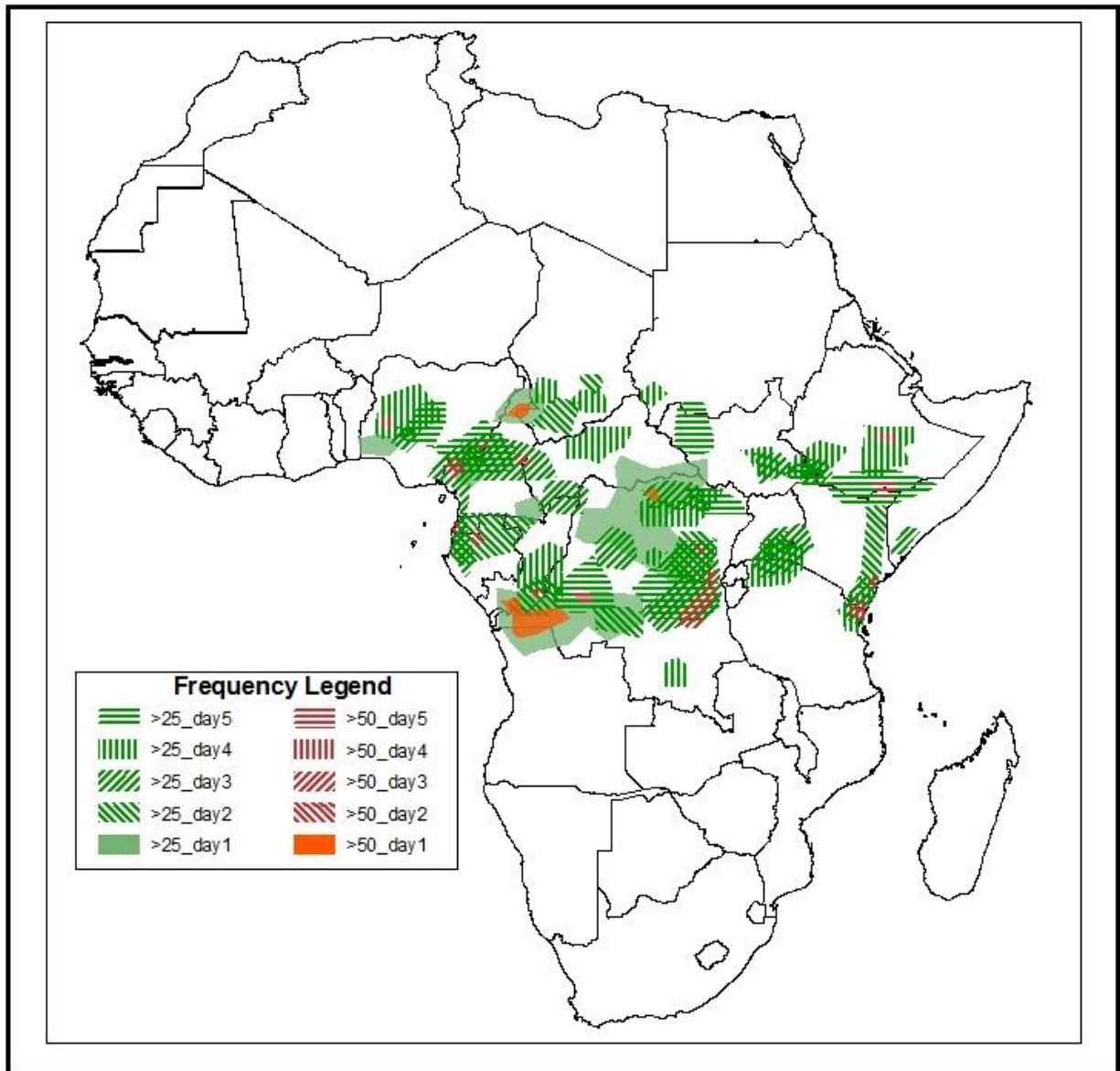
## 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on October 15, 2019)

### 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: 16 October – 20 October, 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°C), based on the NCEP/GFS and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



## Five Days Rainfall Forecast Summary October 16 - October 20, 2019

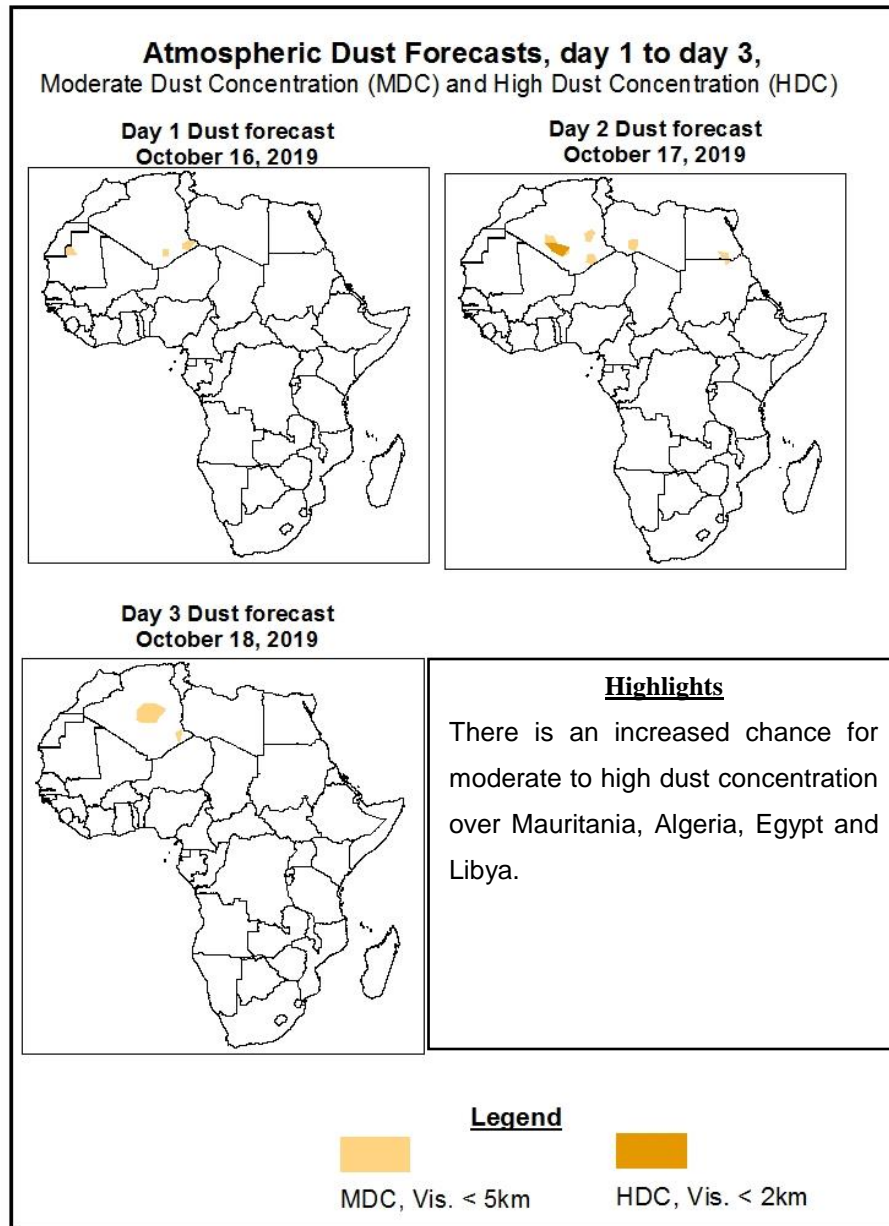


### Highlights

- The monsoon flow from the Atlantic Ocean with its associated lower-level convergence is expected to enhance rainfall over portions of West and Central Africa. Onshore flow from the Indian Ocean with its associated lower-level convergence is also expected to enhance rainfall over parts of the Greater Horn of Africa.
- At least 25mm for two or more days is likely over portions of Nigeria, Cameroon, DRC, Republic of Congo, Gabon, CAR, southern Chad, Central and eastern Uganda, northern and eastern Coast Tanzania, eastern Kenya, southwestern Somalia, Ethiopia, South Sudan and southern Sudan.
- There is an increased chance for daily rainfall to exceed 50mm over Nigeria, Cameroon, Gabon, DRC, Ethiopia, northeast coast of Tanzania.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: 16 Oct – 18 Oct 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: 16 October –20 October 2019**

The Azores High Pressure system over the Northeast Atlantic is expected to weaken with its central pressure value decreasing from 1026hPa to 1021hPa during the forecast period.

The St. Helena High Pressure system over Southeast Atlantic Ocean expected to weaken while shifting eastward, with its central pressure value decreases from 1031hPa to 1026hPa during the forecast period.

The Mascarene High Pressure system over Southwest Indian Ocean is expected to weaken while shifting eastward, with its central pressure value decreases from 10294hPa to 1023hPa during the forecast period.

Thermal low across the Sahel region is expected to slightly deepen with its central pressure value decreasing from 1009hPa to 1007hPa while shifting westward during the forecast period.

At 925-hPa level, strong dry northerly flow is expected to prevail across Northwest Africa. On the other hand, moist southwesterly flow from the Atlantic Ocean is expected to prevail across the Gulf of Guinea and the Sahel regions, the neighboring areas of Central Africa and southeastern part of Great Horn of Africa.

At 850-hPa, meridional wind convergence is expected to remain active in the Lake Victoria region and the neighboring areas of Central Africa, over Nigeria, Cameroon, Republic of Congo and Gabon during the forecast period.

Converging winds over coastal areas of East Africa (Tanzania, Kenya, Mozambique Somali and Ethiopia) are likely to maintain occasional enhanced to heavy precipitation over these areas.

At 700-hPa, a broad area of anticyclonic circulation is expect to remain while shifting westward over Northwestern Africa. Also, generally easterly flow is expected to steer convective activities from Tanzania towards the West affecting the DRC, Republic of Congo, Gabon and Angola.

At 500-hpa, wind speed associated with easterly flow is expected to exceed 30kts across the Northern Africa, Mozambique and Madagascar during the forecast period.

The monsoon flow from the Atlantic Ocean with its associated lower-level convergence is expected to enhance rainfall over portions of West and Central Africa. Onshore flow from the Indian Ocean with its associated lower-level convergence is also expected to enhance rainfall over parts of the Greater Horn of Africa. At least 25mm for two or more days is likely over portions of Nigeria, Cameroon, DRC, Republic of Congo, Gabon, CAR, southern Chad, Central and eastern Uganda, northern and eastern Coast Tanzania, eastern Kenya, southwestern Somalia, Ethiopia, South Sudan and southern Sudan. There is an increased chance for daily rainfall to exceed 50mm over Nigeria, Cameroon, Gabon, DRC, Ethiopia, northeast coast of Tanzania.

## 2.0. Previous and Current Day Weather over Africa

### 2.1. Weather assessment for the previous day (Oct 14, 2019)

Daily rainfall amount exceeded 25mm over Burkina Faso, Nigeria, Cameroon, Gabon, DRC and Angola and exceeded 50mm over Gabon, Cameroon and Angola.

### 2.2. Weather assessment for the current day (Oct 15, 2019)

Deep convective clouds are observed over West Africa, Central Africa and eastern Africa.

