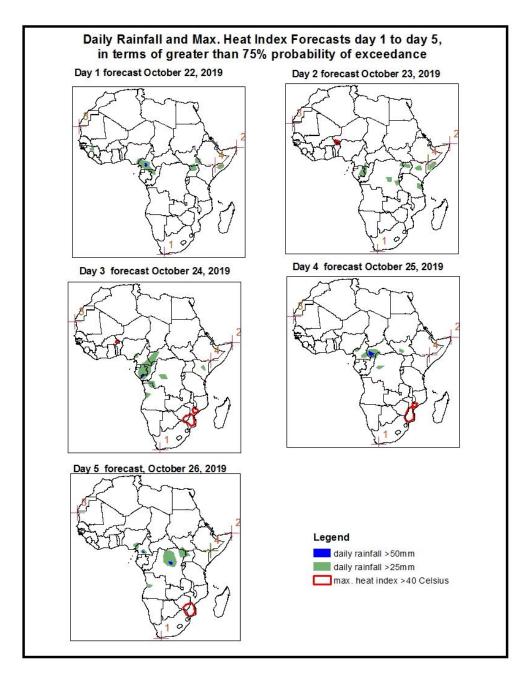
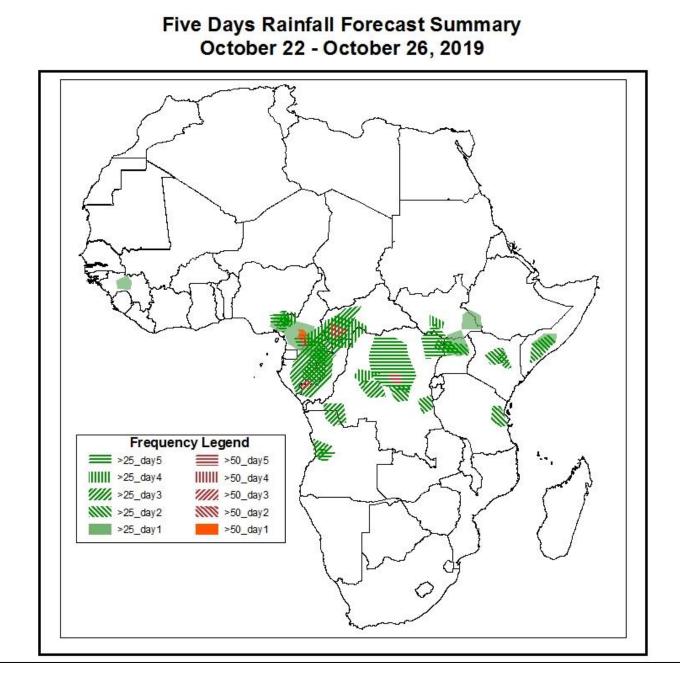
## 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on October 21, 2019)

# **1.1. Daily Rainfall and Maximum Heat Index Forecasts** (valid: 22 October – 26 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.

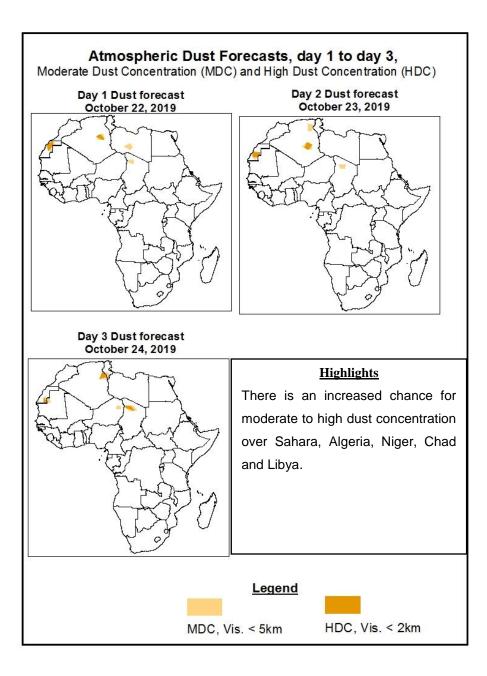




#### **Highlights**

- The monsoon flow from the Atlantic Ocean with its associated lower-level convergence is expected to enhance rainfall over eastern Gulf of Guinea and Central Africa countries. Onshore flow from the Indian Ocean with its associated lower-level convergence is also expected to enhance rainfall over parts of East Africa.
- At least 25mm for two or more days is likely over portions of southern Nigeria, Cameroon, DRC, Republic of Congo, eastern CAR, northern Uganda, eastern coast Tanzania, northern Kenya, southwestern Somalia, southern South Sudan and Angola.
- There is an increased chance for daily rainfall to exceed 50mm over DRC and Republic of Congo.
- There is an increased chance for daily maximum heat index to exceed 40°C over Niger, Mozambique and Zimbabwe.

**1.2.** Atmospheric Dust Concentration Forecasts (valid: 22 Oct – 24 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: 22 October – 26 October 2019

The Azores High Pressure system over the Northeast Atlantic is expected to weaken with its central pressure value decreasing from 1028hPa to 1022hPa during the forecast period.

The St. Helena High Pressure system over Southeast Atlantic Ocean expected to weaken while shifting eastward and crossing eastern coastal of Namibia, with its central pressure value decreases from 1028hPa to 1021hPa during the forecast period.

The Mascarene High Pressure system over Southwest Indian Ocean is expected to strengthen during the half part the forecast period. Then, weaken with its central pressure value increases from 1026hPa to 1023hPa during the second half the forecast period.

Thermal low across the Sahel region is expected to slightly deepen with its central pressure value decreasing from 1009hPa to 1006hPa while shifting westward during the forecast period.

At 925-hPa level, moist southwesterly flow from the Atlantic Ocean is expected to prevail across the Gulf of Guinea and the southern Sahel regions, the neighboring areas of Central Africa. On the other hand, southeasterly flow from the Indian Ocean is expected to prevail across the eastern part of Great Horn of Africa and eastern coast South Africa regions.

At 850-hPa, meridional wind convergence is expected to remain active in the Lake Victoria region and the neighboring areas of Central Africa, over DRC, Republic of Congo, Gabon and CAR during the forecast period. Converging winds over coastal areas of East Africa (Tanzania, Kenya, Somali and Ethiopia) are likely to maintain occasional enhanced to moderate precipitation over these areas.

At 700-hPa, a broad area of anticyclonic circulation is expect to remain while shifting westward over Northwestern Africa. Mainly easterly flow is expected to continue steer convective activities over central Africa regions. Meridional wind divergence is expected to remain active over southern Nigeria, Cameroon, Gabon, Tanzania, Kenya, Mozambique and Ethiopia; this is likely to be advecting convective activities.

The monsoon flow from the Atlantic Ocean with its associated lower-level convergence is expected to enhance rainfall over eastern Gulf of Guinea and Central Africa countries. Onshore flow from the Indian Ocean with its associated lower-level convergence is also expected to enhance rainfall over parts of East Africa. At least 25mm for two or more days is likely over portions of southern Nigeria, Cameroon, DRC, Republic of Congo, eastern CAR, northern Uganda, eastern coast Tanzania, northern Kenya, southwestern Somalia, southern South Sudan and Angola. There is an increased chance for daily rainfall to exceed 50mm over DRC and Republic of Congo. There is an increased chance for daily maximum heat index to exceed 40°C over Niger, Mozambique and Zimbabwe.

## 2.0. Previous and Current Day Weather over Africa

### 2.1. Weather assessment for the previous day (Oct 20, 2019)

Daily rainfall amount exceeded 25mm over Cote D'Ivoire, Ghana, Burkina Faso, Nigeria, Somalia and Kenya and exceeded 50mm over Nigeria, Ghana and Somalia.

#### 2.2. Weather assessment for the current day (Oct 21, 2019)

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

