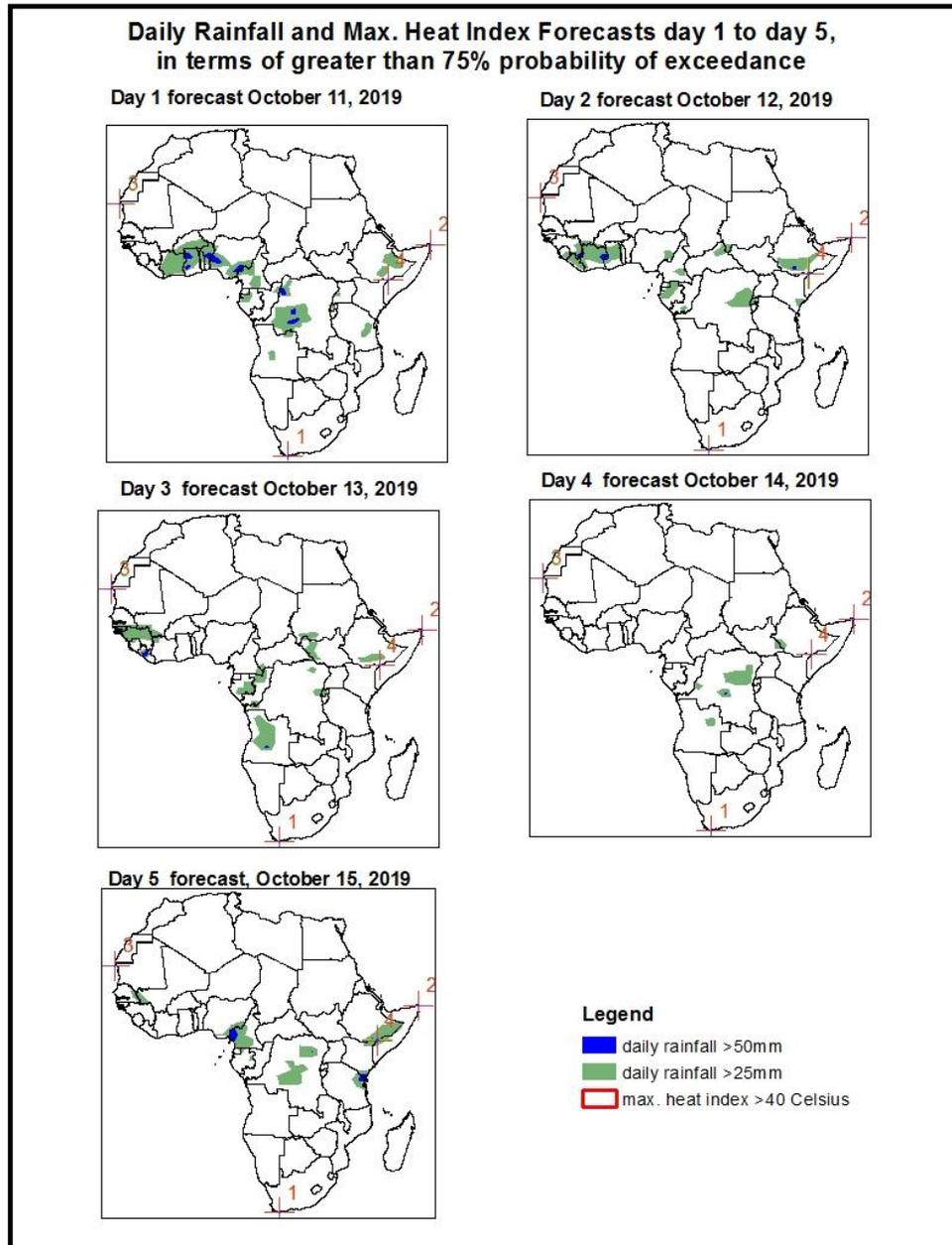


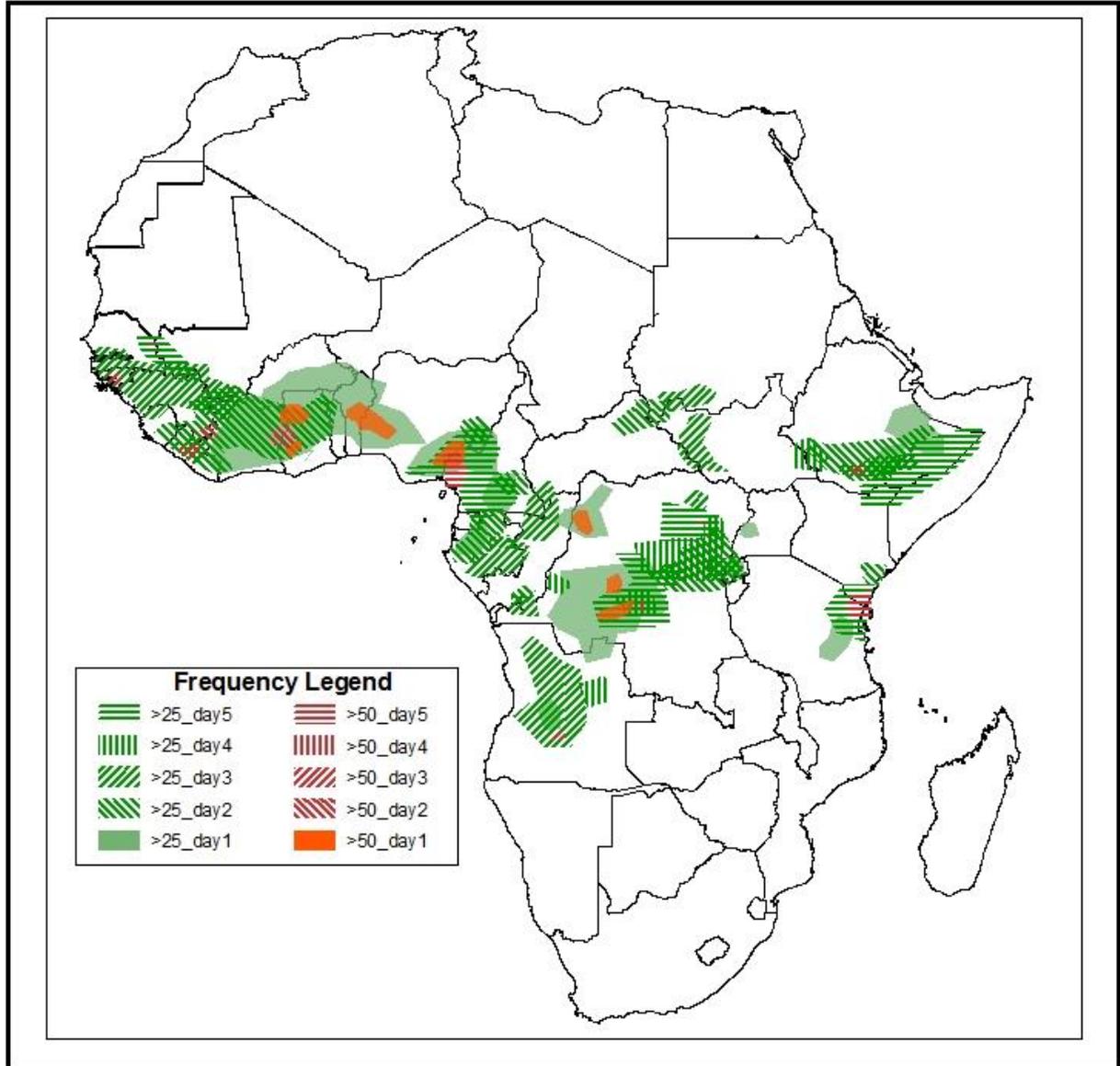
**1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on October 10, 2019)**

**1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: 11 October – 15 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 11 - October 15, 2019

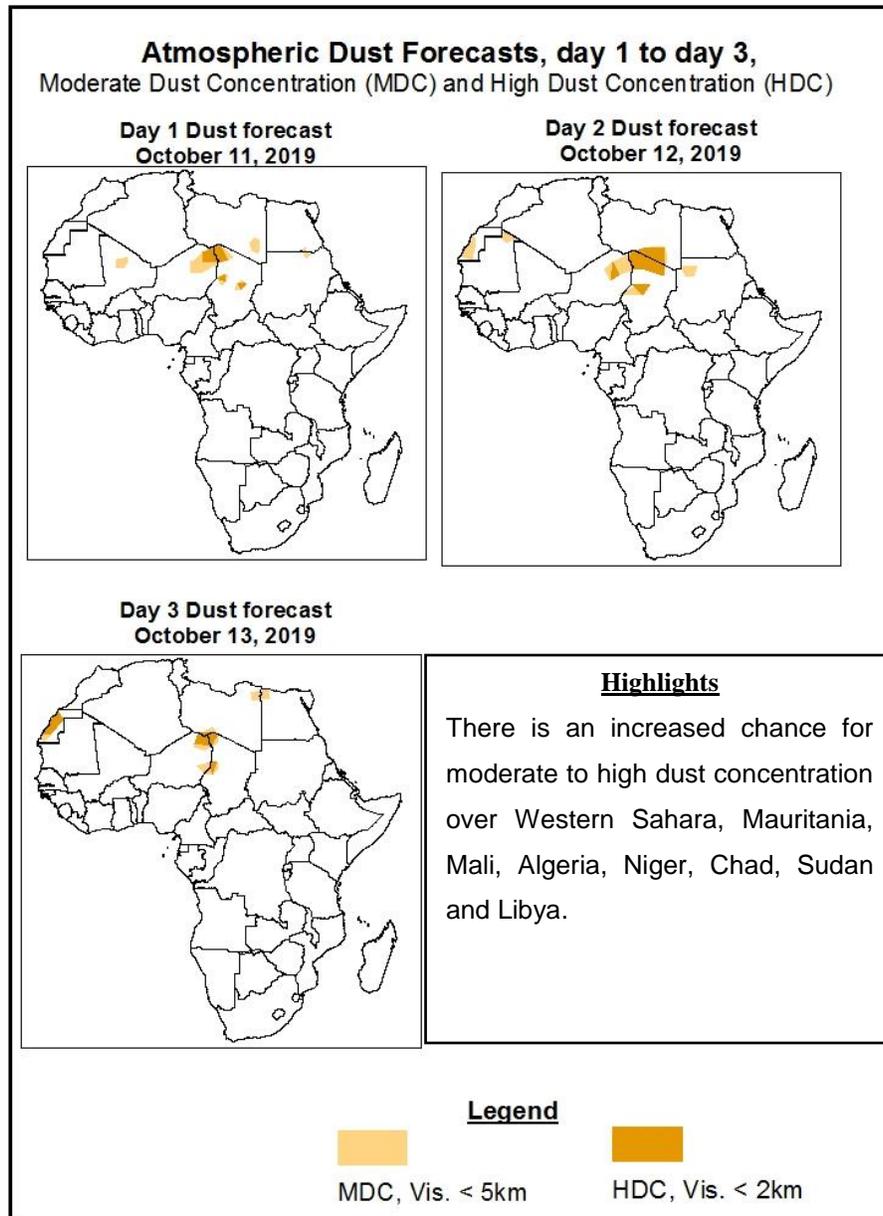


### Highlights

- 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 southern Senegal, Guinea-Bissau, Gambia, southwestern Mali, Guinea, Sierra-Leone, Liberia, Cote D'Ivoire, Ghana, Benin, Togo, southern Burkina-Faso, southern Nigeria, Cameroon, DRC, Republic of Congo, Gabon, Equatorial Guinea, CAR, eastern Tanzania, eastern Kenya, Somalia, Angola, Ethiopia, eastern South Sudan and southern Sudan.
- There is an increased chance for daily rainfall to exceed 50mm over southwestern Guinea, Guinea-Bissau, Liberia, Cote D'Ivoire, Ghana, Benin, Nigeria, Cameroon, Gabon, DRC, Angola, Ethiopia, southeast coast of Kenya and northeast coast of Tanzania.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: 11 Oct – 13 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: 11 October – 15 October 2019**

The Azores High Pressure system over the Northeast Atlantic is expected to strengthen with its central pressure value increasing from 1021hPa to 1030hPa during the first three days of the forecast period and then, expected to weaken, with its central pressure value decreasing from 1030hPa to 1025hPa during the last two days of the forecast period.

The St. Helena High Pressure system over Southeast Atlantic Ocean expected to weaken, with its central pressure value decreasing from 1031hPa to 1024hPa during the forecast period. The center is partly continental and hence we expect a reduction in the wet activities.

The Mascarene High Pressure system over Southwest Indian Ocean is expected to weaken while shifting eastward, with its central pressure value decreases from 1034hPa to 1029hPa during the forecast period.

Thermal low across the Sahel region is expected to slightly deepen with its central pressure value decreasing from 1007hPa to 1006hPa while shifting westward during the forecast period.

At 925-hPa level, strong dry northerly flow is expected to prevail across Northwest Africa. On 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 during the forecast period. Converging winds over coastal areas of East Africa (Tanzania, Kenya and Mozambique) are likely to maintain occasional enhanced to heavy precipitation over these areas. Otherwise, dry northeasterly flow from North Africa is expected to prevail across southwestern Sahel region that will be reducing precipitations in this area.

At 700-hPa, a broad area of anticyclonic circulation is expected to remain while shifting westward over North Africa. Quite significant divergence over central and Great Horn of Africa underscores the depth of the convergent wind system over. The convergence is likely to favor deep convection over these areas.

At 500-hPa, wind speed associated with easterly flow is expected to exceed 30kts across the Northern Africa, Sahel, central, east and West Africa region 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 southern Senegal, Guinea-Bissau, Gambia, southwestern Mali, Guinea, Sierra-Leone, Liberia, Cote D'Ivoire, Ghana, Benin, Togo, southern Burkina-Faso, southern Nigeria, Cameroon, DRC, Republic of Congo, Gabon, Equatorial Guinea, CAR, eastern Tanzania, eastern Kenya, Somalia, Angola, Ethiopia, eastern South Sudan and southern Sudan. There is an increased chance for daily rainfall to exceed 50mm over southwestern Guinea, Guinea-Bissau, Liberia, Cote D'Ivoire, Ghana, Benin, Nigeria, Cameroon, Gabon, DRC, Angola, Ethiopia, southeast coast of Kenya and northeast coast of Tanzania.

## 2.0. Previous and Current Day Weather over Africa

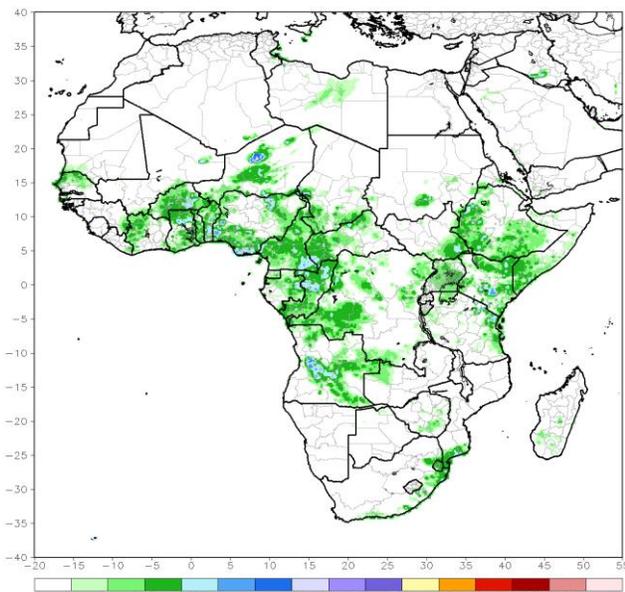
### 2.1. Weather assessment for the previous day (Oct 09, 2019)

Daily rainfall amount exceeded 25mm over Burkina Faso, Ghana, Benin, Niger, Nigeria, Cameroon, Gabon, Republic of Congo, CAR, South Sudan, eastern coast of Tanzania, Kenya, Ethiopia, Angola and DRC and exceeded 50mm over Niger.

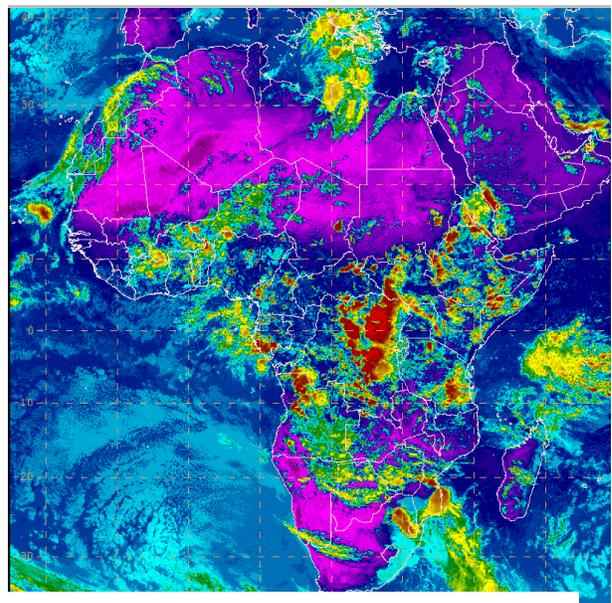
### 2.2. Weather assessment for the current day (Oct 10, 2019)

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

RFE2 Daily Total Rainfall (mm)  
Period: 09Oct2019



IR Satellite Image (valid 1352 October 10, 2019)



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