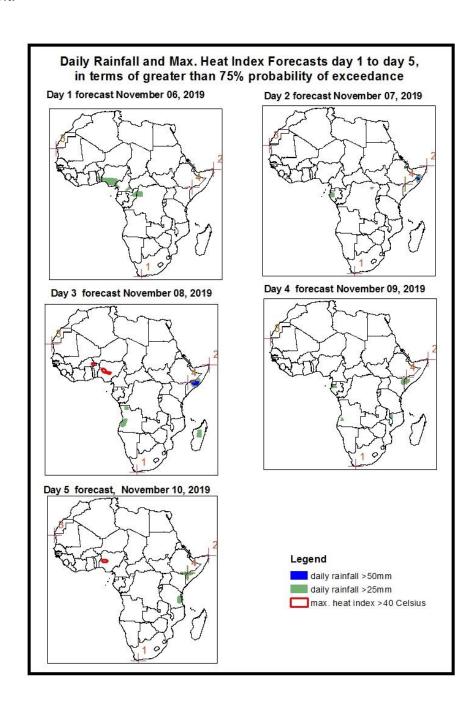
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

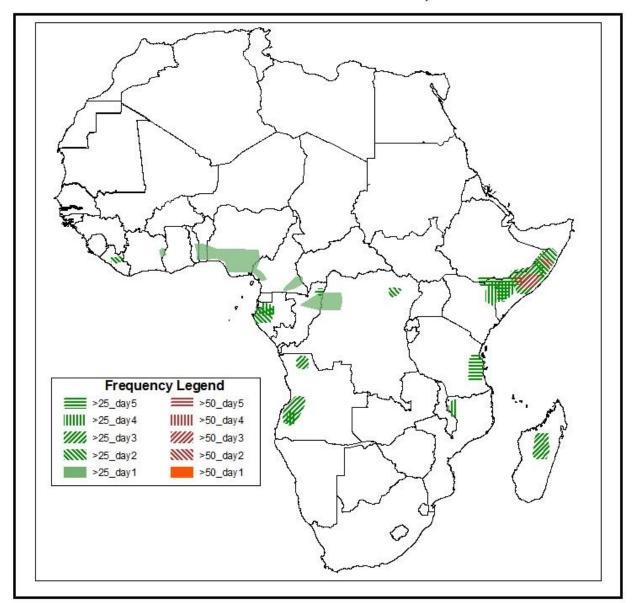
1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on November 05, 2019)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: 06 November – 10 November, 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 November 06 - November 10, 2019

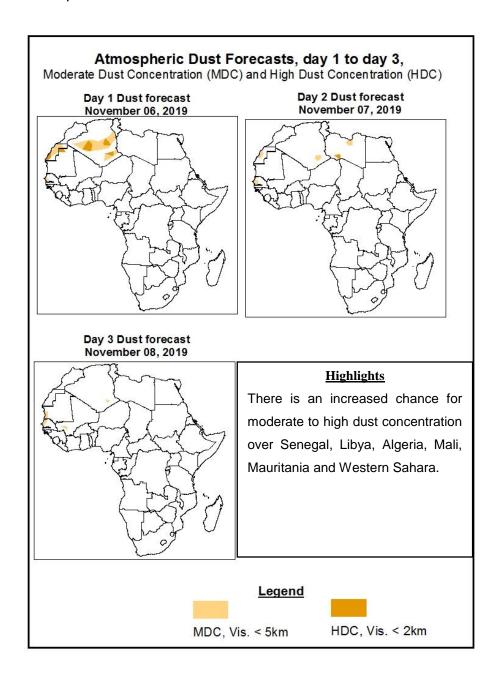


Highlights

- Westerly flow from the Atlantic Ocean with its associated lower-level convergence is expected to enhance rainfall over the western portions of equatorial Africa. Onshore flow from the Indian Ocean with its associated lower-level convergence is expected to enhance rainfall across southeastern Ethiopia and western Somalia.
- At least 25mm for two or more days is likely over portions of Liberia, Gabon, Republic of Congo, DRC,
 Angola, Kenya, Ethiopia, Somalia, Tanzania, Mozambique and Madagascar.
- There is an increased likelihood for daily rainfall to exceed 50mm over local areas in Somalia.
- There is an increased chance for daily maximum heat index to exceed 40°C over Nigeria and Burkina Faso.

1.2. Atmospheric Dust Concentration Forecasts (valid: 06 Nov – 08 Nov 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: 06 November –10 November 2019

The Azores High Pressure system over the Northeast Atlantic is expected to slightly weaken with its central pressure value decreasing from 1033hPa to 1029hPa for the first three days of the forecast period and then it will intensify again from 1029hPa to 1033hPa during the rest of the forecast period.

The St. Helena High Pressure system over Southeast Atlantic Ocean is expected to intensify while shifting eastwards with its central pressure value increasing from 1024hPa to 1033hPa during the forecast period.

The Mascarene High Pressure system over Southwest Indian Ocean is generally expected to strengthen while shifting eastwards with its central pressure value increasing from 1024hPa to 1028hPa for the first three days of the forecast period and then its central pressure value will decrease to 1026hPa during the remainder of the forecast period.

At 925-hPa level, moist southwesterly flow from the Atlantic Ocean is expected to prevail across the Gulf of Guinea, southern Sahel regions and the neighboring areas of Central Africa. On the other hand, easterly flow from the Indian Ocean with its low-level convergence is expected to prevail across the Great Horn of Africa and parts of Central Africa while the northeasterly flow is expected to prevail across eastern parts of southern Africa. Similarly, southwesterly flow from the South Atlantic Ocean with its low-level convergence is expected to prevail across the western parts of southern Africa.

At 850-hPa level, strong dry northerly flow is expected remain active and prevail across southern Sahel countries. Otherwise, meridional and seasonal wind convergence is expected to remain active in the Lake Victoria region, Congo Basin and the neighboring areas of Central Africa, southern Cameroon, Gabon, Angola, southern Chad, CAR and Sudan during the forecast period. Converging winds over Somalia, Kenya, Tanzania, Uganda, Ethiopia, South Sudan, Mozambique, Malawi, Zambia, Namibia, southern Botswana and northern South Africa; those are likely to maintain the occasional enhanced to moderate precipitation over these areas.

Westerly flow from the Atlantic Ocean with its associated lower-level convergence is expected to enhance rainfall over the western portions of equatorial Africa. Onshore flow from the Indian Ocean with its associated lower-level convergence is expected to enhance rainfall across southeastern Ethiopia and western Somalia. At least 25mm for two or more days is likely over portions of Liberia, Gabon, Republic of Congo, DRC, Angola, Kenya, Ethiopia, Somalia, Tanzania, Mozambique and Madagascar. There is an increased likelihood for daily rainfall to exceed 50mm over local areas in Somalia. There is an increased chance for daily maximum heat index to exceed 40°C over Nigeria and Burkina Faso.

2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (Nov 04, 2019)

Daily rainfall amount exceeded 25mm over Guinea, Sierra Leone, Liberia, Cameroon, Gabon, Republic of Congo, Angola, DRC, CAR, Kenya, Tanzania, Ethiopia, South Sudan and Sudan; and exceeded 50mm over Sierra Leone, Republic of Congo, DRC, Tanzania, Kenya, and Ethiopia.

2.2. Weather assessment for the current day (Nov 05, 2019)

Deep convective clouds are observed over many places in Central Africa, and portions of western, eastern and southern Africa.

