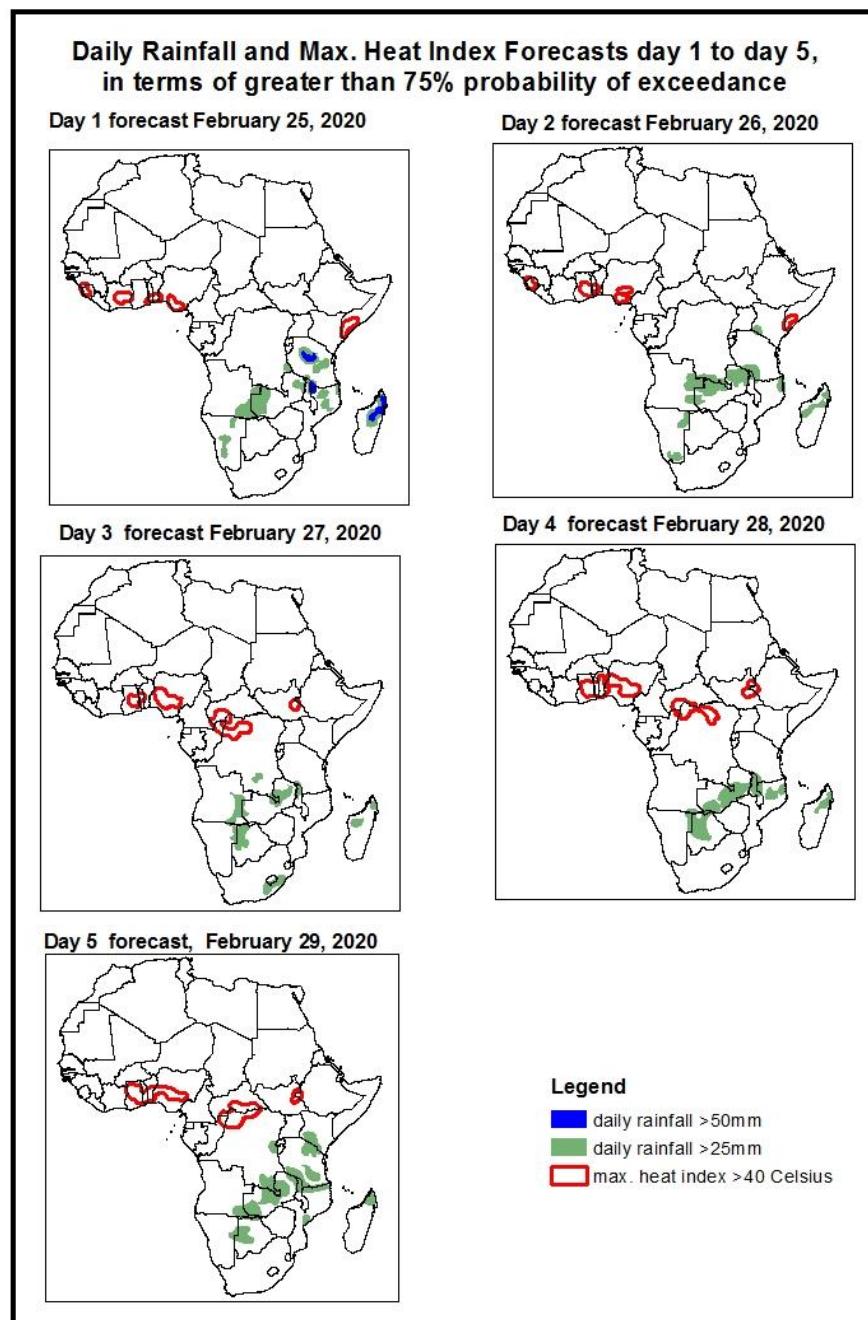


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

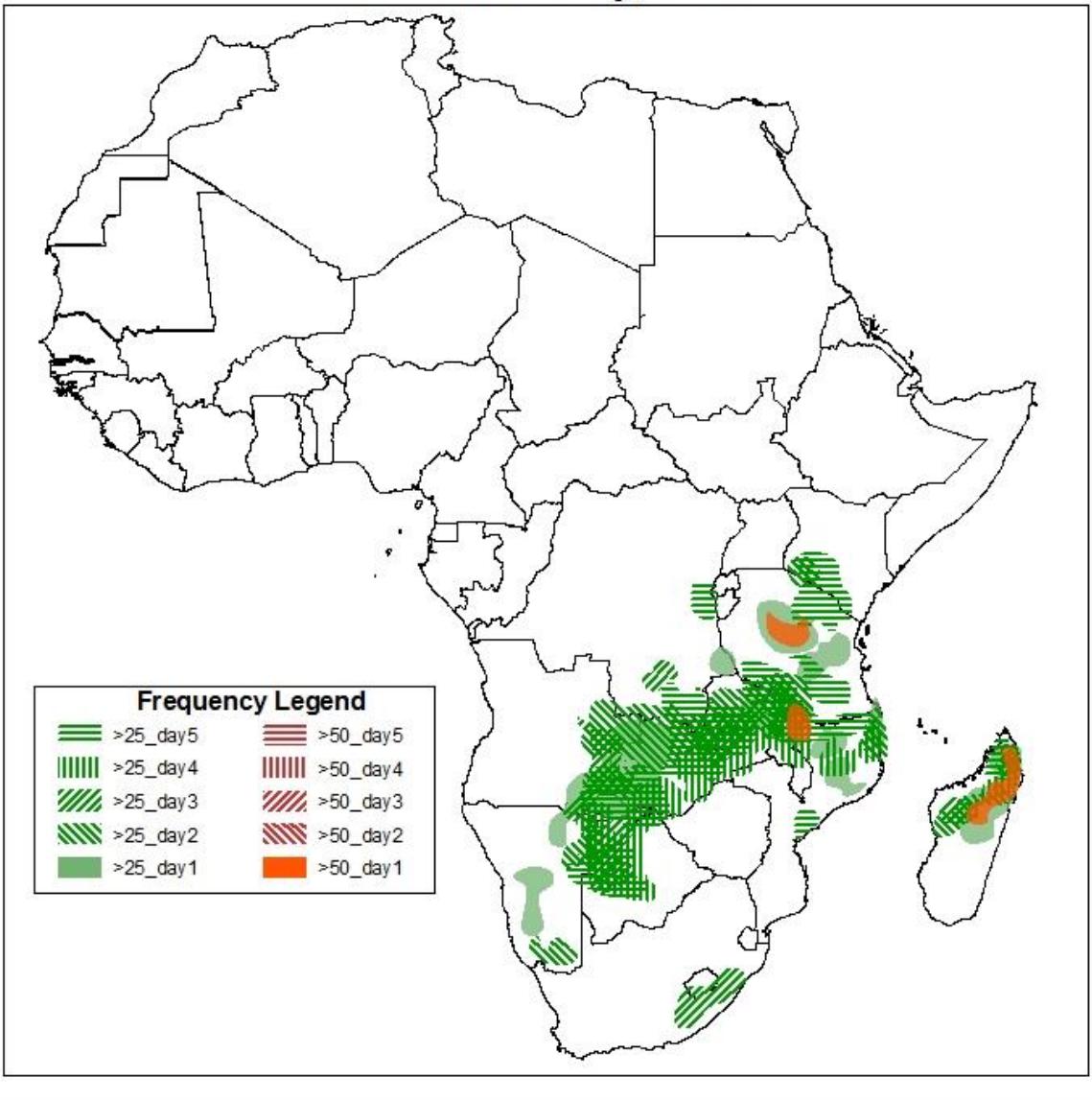
1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on February 24, 2020)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (*valid: 25 – 29 Feb, 2020*)

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 25 - 29 February, 2020

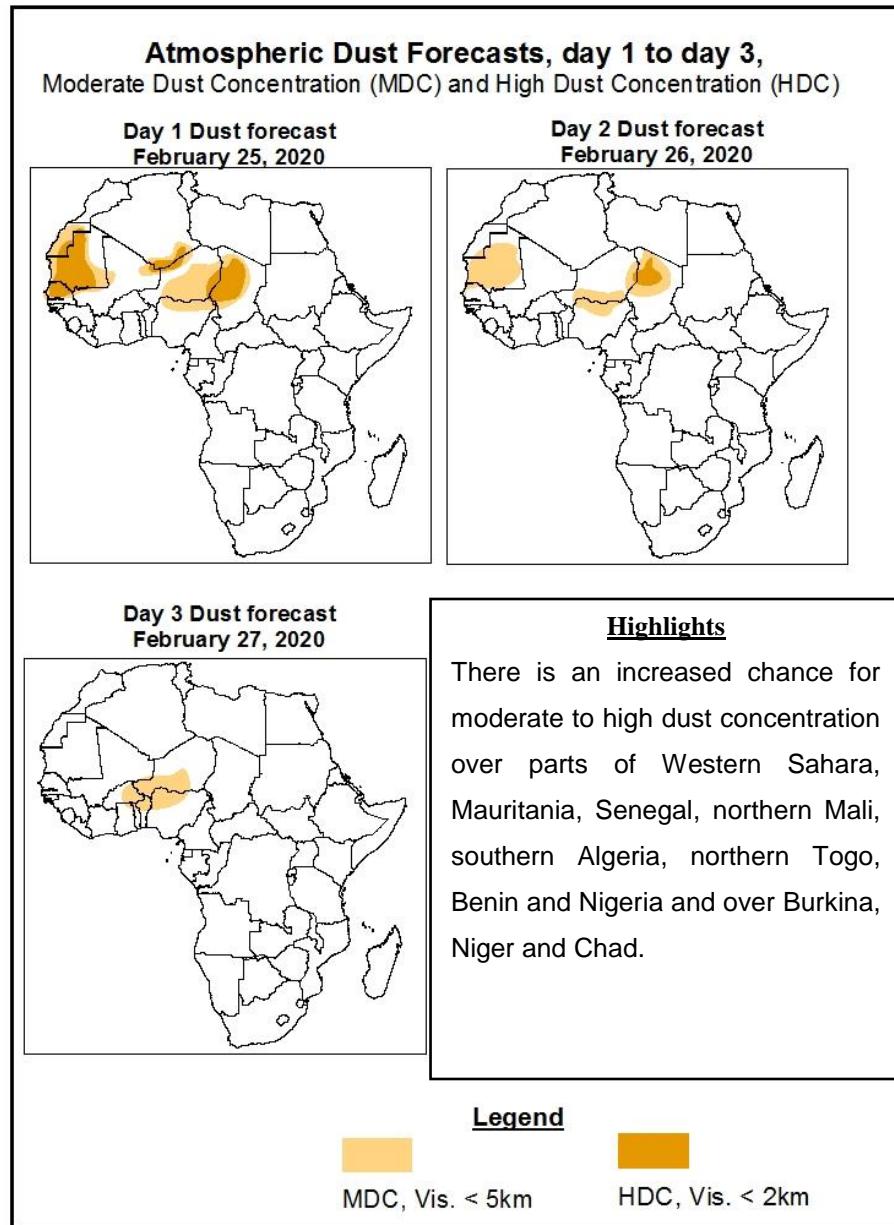


Highlights

- Cyclonic through and wind convergences over southern Africa and in portions of East Africa are expected to enhance rainfall over these areas.
- At least 25mm for two or more days is likely over eastern Angola, southern D R Congo, southern Namibia, Botswana, Zambia, Malawi, Tanzania, Mozambique and southeastern South Africa, with an increased chance for rainfall to exceed 50mm over central Tanzania, northern Mozambique and northern Madagascar.
- There is an increased chance for daily maximum heat index to exceed 40°C over local areas in the Gulf of Guinea region, southern Central African R, northern R Congo, eastern South Sudan and southern Somalia.

1.2. Atmospheric Dust Concentration Forecasts (valid: 25 – 27 Feb, 2020)

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: 25 – 29 February 2020

The Azores High Pressure system over Northeast Atlantic and neighboring areas (West Europe and Maghreb) is expected to weaken significantly with its central pressure value decreasing from 1032hPa to 1023hPa during the forecast period.

The St. Helena High Pressure system over the South Atlantic Ocean is expected to move eastwards while intensifying significantly with its central pressure value increasing from 1021hPa to 1033hPa during the forecast period.

The Mascarene High Pressure system over Southwest of Indian Ocean is expected to weaken significantly with his central pressure value increasing from 1035hPa to 1025hPa during the forecast period.

At 925-hPa level, an area of strong dry northerly to northeasterly flow is expected to enhance atmospheric dust concentration over the Sahel and Sahara region. Zonal wind convergences and cyclonic through are expected to remain active along 5°N and in some parts of central and southern Africa.

At 850-hPa level, lower level-wind convergences and cyclonic trough are expected to remain active along 5°N and over central and southern Africa.

At 700-hPa level, cyclonic circulation and mid-level wind convergences are expected to remain active in portions of central Africa and over southern Africa. A trough associated with mid-latitude frontal system is expected to propagate eastward across the eastern Mediterranean region, and is likely to cause increased cloudiness over parts of the Greater Horn of Africa during the forecast period.

Cyclonic through and wind convergences over southern Africa and in portions of East Africa are expected to enhance rainfall over these areas. At least 25mm for two or more days is likely over eastern Angola, southern D R Congo, southern Namibia, Botswana, Zambia, Malawi, Tanzania, Mozambique and southeastern South Africa, with an increased chance for rainfall to exceed 50mm over central Tanzania, northern Mozambique and northern

Madagascar. There is an increased chance for daily maximum heat index to exceed 40°C over local areas in the Gulf of Guinea region, southern Central African R, northern R Congo, eastern South Sudan and southern Somalia.

2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (February 23, 2020)

Daily rainfall amount exceeded 25 mm over local areas in eastern Angola, northeastern Namibia, southern D R Congo, Zambia, northern Botswana, Zimbabwe and northeast South Africa, with rainfall amount in excess of 50 mm observed over local areas in northeastern Angola and southern D R Congo.

2.2. Weather assessment for the current day (February 24, 2020)

Convective clouds are observed across Southern and Central Africa.

