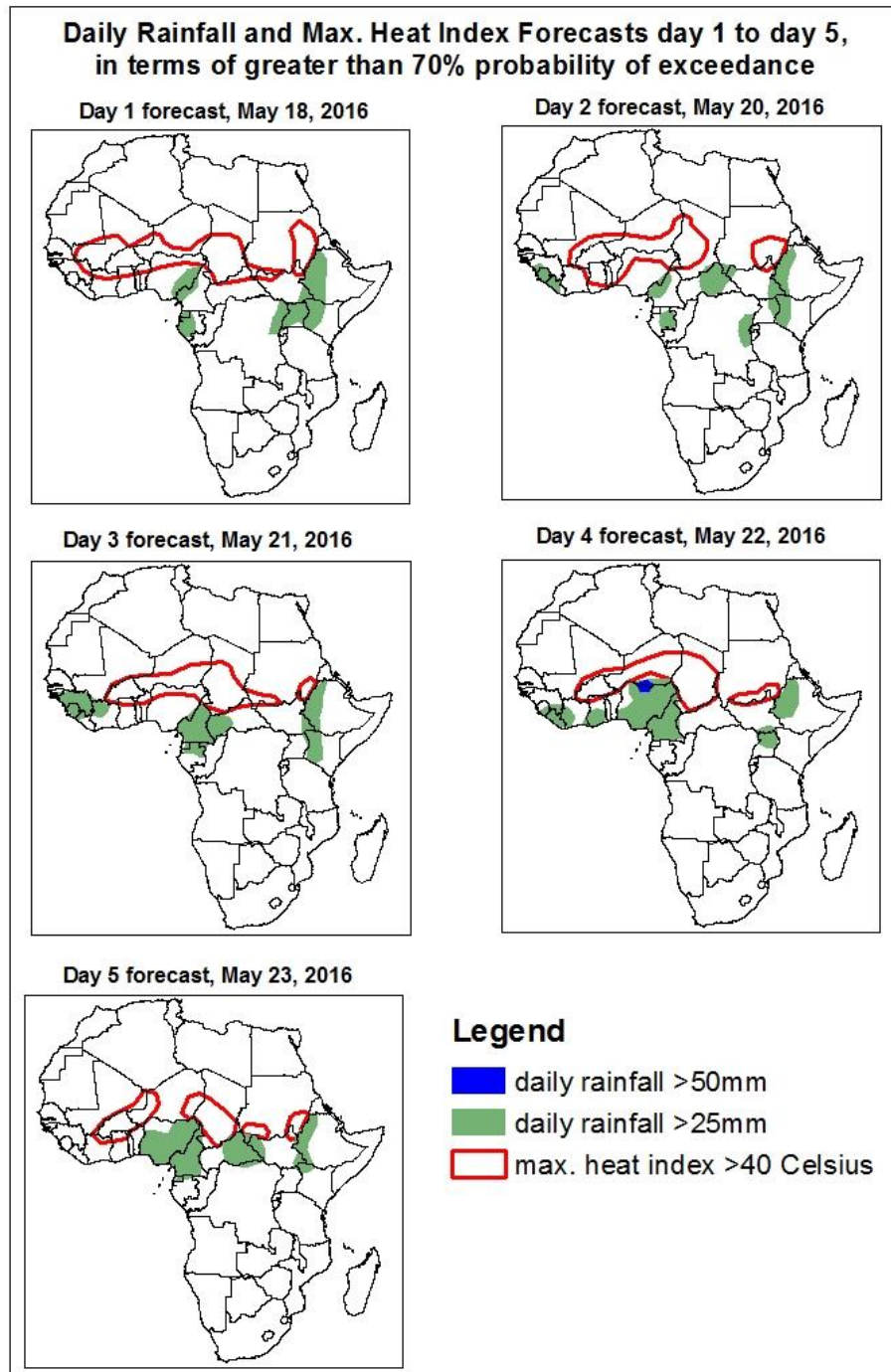


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

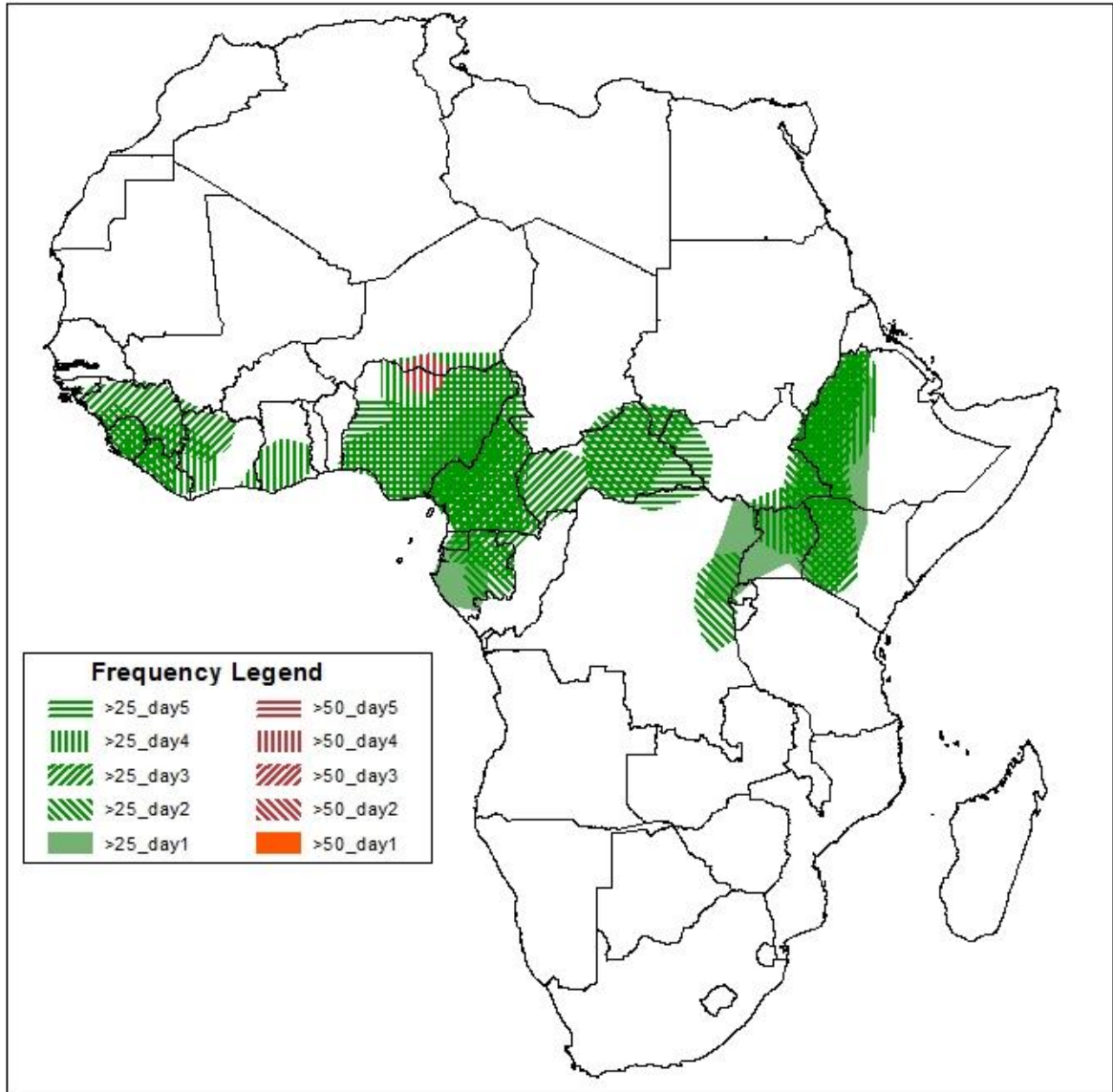
1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on May 18, 2016)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: May 19– May 23, 2016)

The forecasts are expressed in terms of high probability of precipitation (POP) and high probability of maximum heat index, based on the NCEP/GFS, ECMWF and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



Five Days Rainfall Forecast Summary May 19 - May 23, 2016

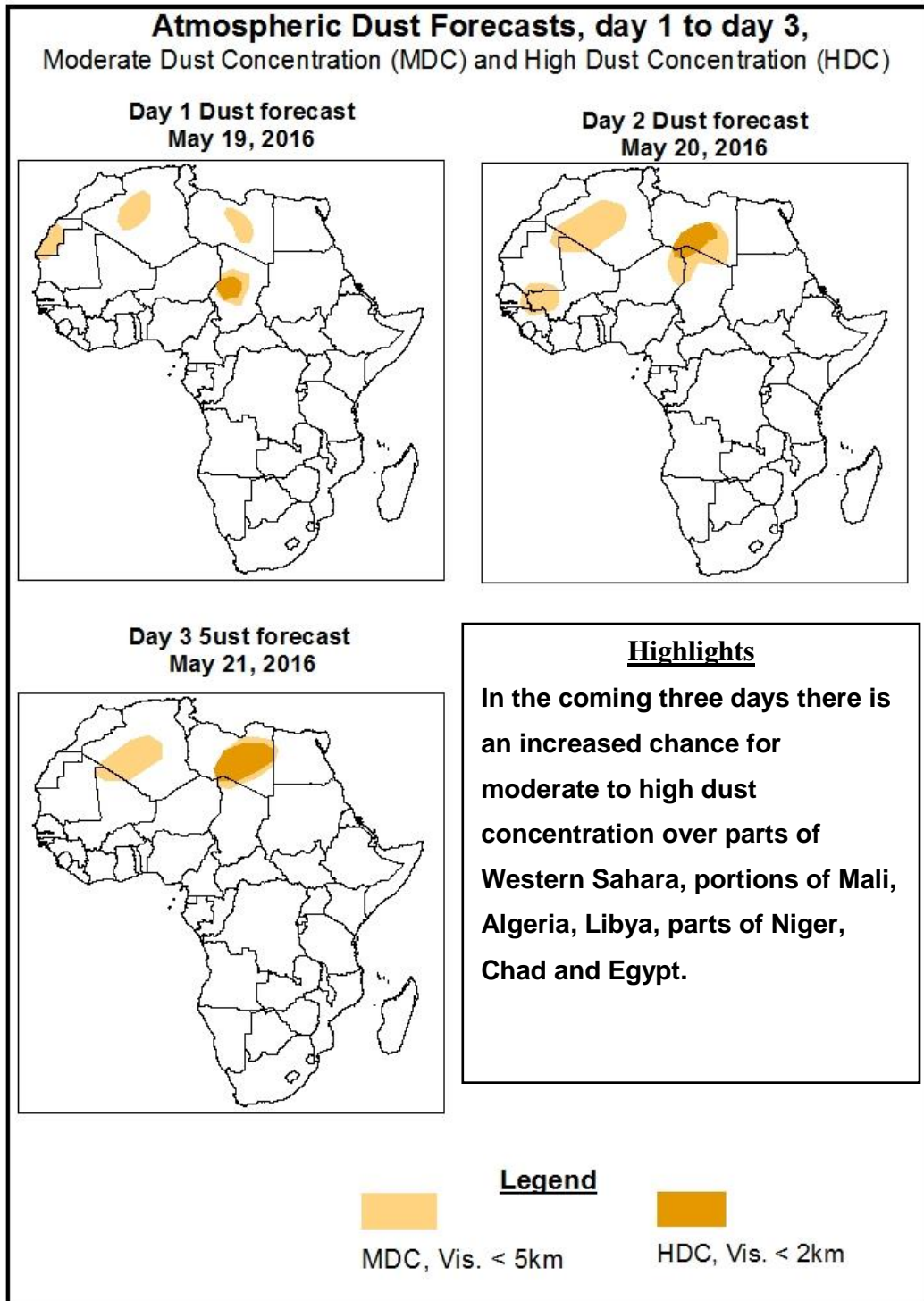


Highlights

In the coming five days, monsoon flow from the Atlantic Ocean with its associated lower level convergence is expected to enhance rainfall across portions of West Africa. Local wind convergences across central Africa, western Ethiopia, and active meridional wind convergences near the Lake Victoria region are expected to enhance rainfall in their respective areas. Therefore, there is an increased chance for two or more days of moderate to heavy rainfall over parts of Guinea, Sierra Leone, Liberia, western Cote d'Ivoire, Nigeria, Cameroon, Equatorial Guinea, Gabon, eastern CAR, portions of eastern DRC, eastern South Sudan, western Ethiopia, Uganda and western Kenya.

1.2. Atmospheric Dust Concentration Forecasts (valid: May 19 – May 21, 2016)

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: May 19 – May 23, 2016

The Azores high pressure system over the Northeast Atlantic Ocean is expected to weaken gradually with its central pressure value decreasing from about 1029hPa to 1022hPa during the forecast period.

The St. Helena High pressure system over the Southeast Atlantic Ocean is expected to intensify while shifting eastwards; with its central pressure value is expected to increase from 1030hPa to 1035hPa through 24 to 48 hours.

The Mascarene high pressure system over the Southwest Indian Ocean is expected to weaken while shifting eastwards; with its central pressure value is expected to decrease from 1039hPa to 1035hPa through 72 hours.

Central pressure values associated with heat lows across the Sahel and Sudan are expected to remain in the range between 1005hpa to 1009hpa during the forecast period.

At 925HPa level, strong dry northeasterly to easterly flow (>20kts) is expected to prevail across Morocco, Western Sahara, Mauritania, Algeria, Libya, Chad, Egypt and northern Sudan. On the other hand, moist southwesterly monsoon flow is expected to prevail across the Gulf Guinea countries during the forecast period.

At 850hPa level, a cyclonic circulation is expected to propagate westwards between western Sudan and northern Mali across Chad and Niger during the forecast period. A broad area of southeasterly flow is expected to prevail across eastern and central Africa. Meridional wind convergence near the Lake Victoria region is also expected to maintain seasonal rainfall in the region.

At 700hPa level, easterly flow is expected to prevail across central and eastern Gulf of Guinea region during the forecast period.

In the coming five days, monsoon flow from the Atlantic Ocean with its associated lower level convergence is expected to enhance rainfall across portions of West Africa. Local wind

convergences across central Africa, western Ethiopia, and active meridional wind convergences near the Lake Victoria region are expected to enhance rainfall in their respective areas. Therefore, there is an increased chance for two or more days of moderate to heavy rainfall over parts of Guinea, Sierra Leone, Liberia, western Cote d'Ivoire, Nigeria, Cameroon, Equatorial Guinea, Gabon, eastern CAR, portions of eastern DRC, eastern South Sudan, western Ethiopia, Uganda and western Kenya.

There is also an increased chance for maximum heat index values to exceed 40°C over portions of Mali, Burkina Faso, northern Ghana, Togo, Nigeria, Niger, Chad, eastern and southern Sudan, and portions of South Sudan Republic.

2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (May 17, 2016)

Moderate to locally heavy rainfall was observed over many places in the Gulf of Guinea region, South Sudan, western Ethiopia, and southwestern Kenya.

2.2. Weather assessment for the current day (May 18, 2016)

Intense convective clouds are observed across Northeastern Nigeria, Cameroon, northern DRC, Sudan, South Sudan, Western Ethiopia and the Lake Victoria region.

