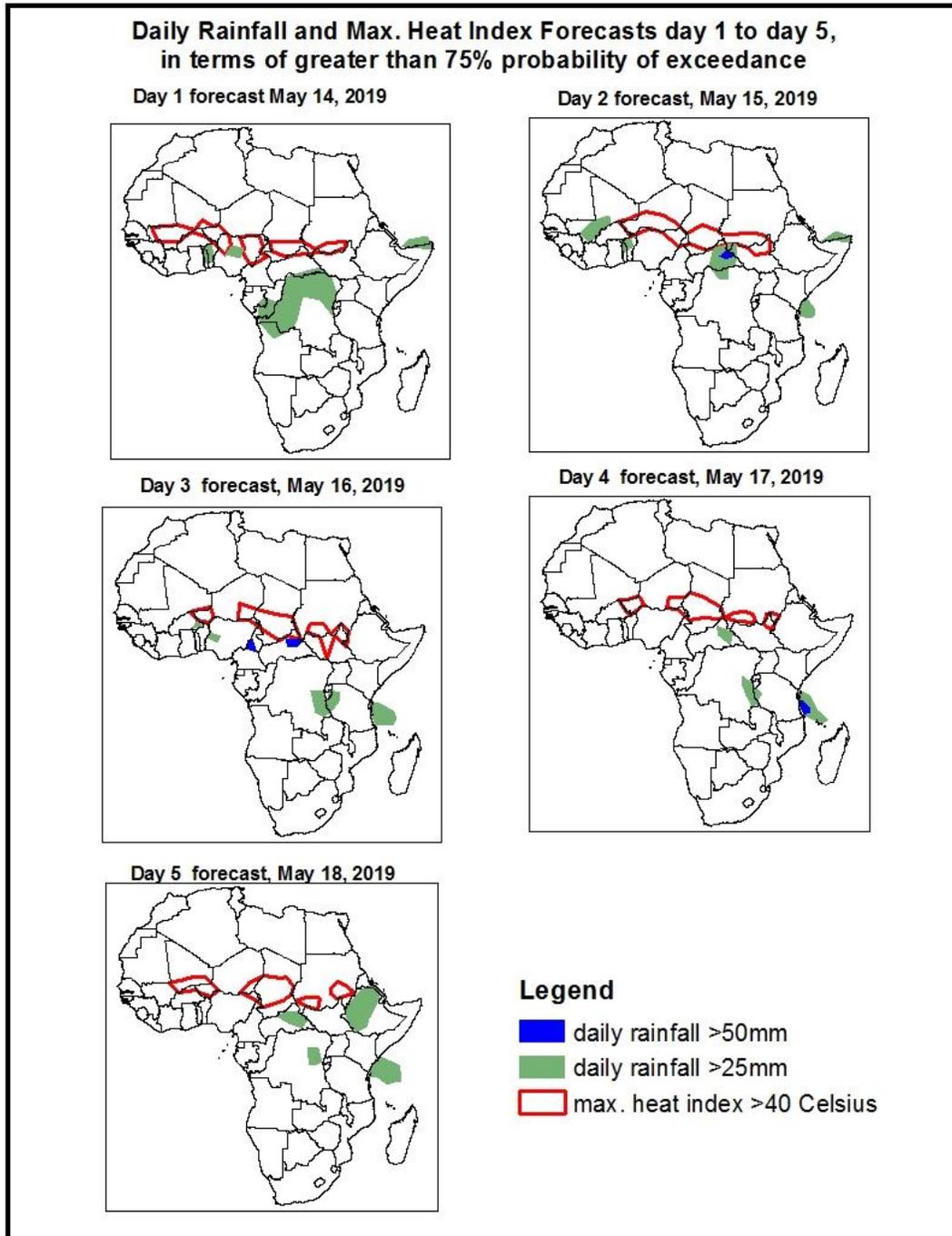


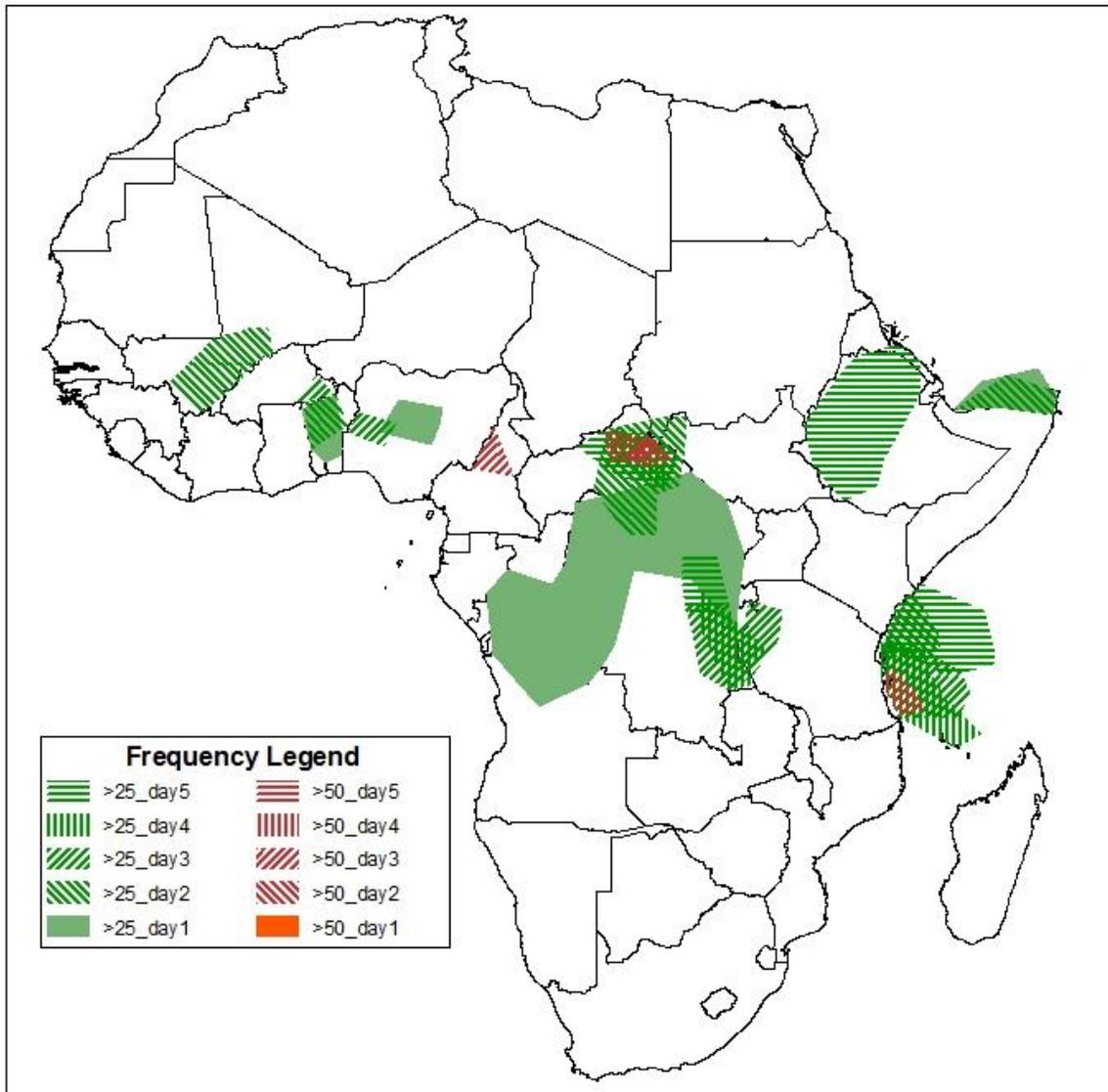
**1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on May 13, 2019)**

**1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: May 14 – 18, 2019)**

The forecasts are expressed in terms of high probability of precipitation (POP), valid 06Z to 06Z, and exceedance probability of maximum heat index ( $>40^{\circ}\text{C}$ ), based on the NCEP/GFS and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



## Five Days Rainfall Forecast Summary May 14 - 18, 2019

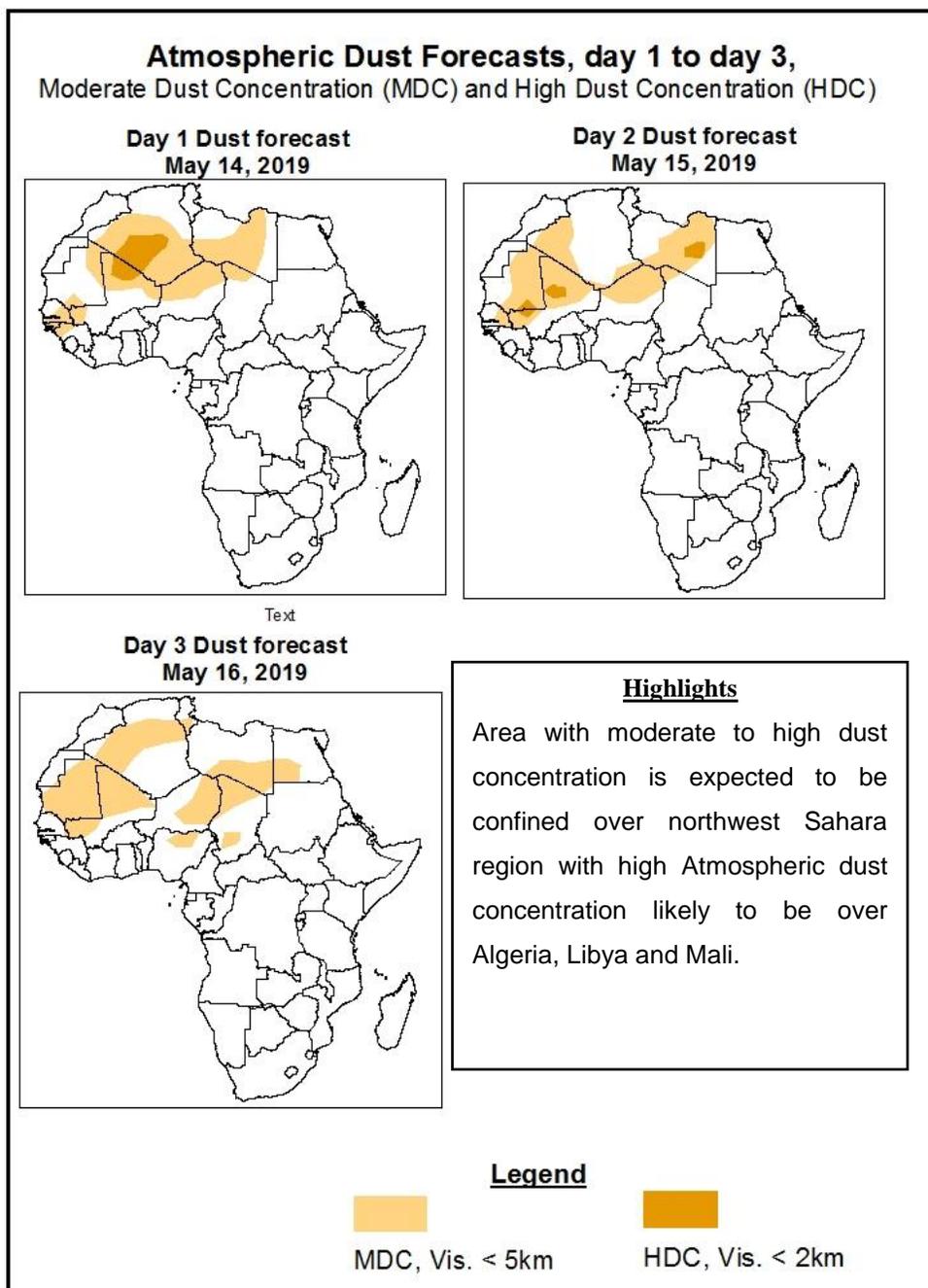


### Highlights

- The Monsoon wind pattern over the Gulf of Guinea is expected to cause localized moderate to enhanced precipitation over there.
- Low level converging winds over central Africa (CAR), GHA (Somalia) and East Africa (coastal areas of Tanzania and Kenya) are likely to cause scattered moderate to localized enhanced precipitation.
- At least 25mm for two or more days is likely along the east African coast, central Africa (CAR) and the Gulf of Guinea (Benin and Togo).
- Some areas in the Sahel, southern Sudan and Sudan are likely to feature increased chance for daily maximum heat index to exceed 40°C.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: May 14 – 16 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: May 14 – 18 2019**

Throughout the forecast period, the Azores High Pressure system over the North of Atlantic is expected to intensify but lies further west leaving west Africa dominated by heat lows. No appreciable contribution of this system to Africa precipitation can be seen.

During much of the forecast period, the St. Helena High Pressure system over Southeast Atlantic Ocean is expected to rebuild to intensify, reaching 1033hPa at times. At the end of the period, however, the system is likely to be eroded by the well-organized frontal low from west.

Throughout the forecast period, the Mascarene High Pressure system over Southwest Indian Ocean is expected to rebuild from 1024hPa to 1030hPa at the end of the period. This is likely to favor southeasterly winds towards the east African coast and keep moderate to enhanced precipitation along the east African coast.

At 925hPa level, strong winds are expected during the start and end of the forecast period Algeria. This is expected to enhance Atmospheric dust concentrations over there. On the other hand, Monsoon winds in the Gulf of Guinea are expected to be maintained and likely to keep occasional, moderate to enhanced, localized precipitation during the forecast period. Meanwhile, converging, moist southeasterly winds towards East Africa are likely to maintain moderate to enhanced, occasionally heavy, precipitation over there, particularly long the coastal areas of Tanzania and Kenya.

At 850hPa, converging winds over coastal areas of East Africa (Tanzania and Kenya) and Great Horn of Africa (Somalia) are likely to maintain enhanced precipitation over these areas especially in East Africa. Also, converging winds are expected over CAR, southern Chad, western Tanzania and Ethiopia, LVB and eastern DRC. These areas are likely to feature moderate to enhanced rainfall.

At 700hPa, mainly easterly wind pattern is expected to be maintained, converging over central Africa (CAR, DRC), Gulf of Guinea (Cameroon, Republic of Congo, Gabon, Equatorial Guinea), east Africa (western Tanzania), and the Great Horn of Africa (Ethiopia) region. This

is likely to favor deep convection over some of these areas which are also expected to feature low level (850hPa) convergence.

Flow at 500hPa is expected to be almost purely easterly during the period over many parts which are expected to feature convective activities. This is likely to favor advection of convective activities towards west.

During the period, a Subtropical Westerly Jet at 200hPa is expected to be weak, only occasionally (>130kts). Also, no bending is likely and therefore the GHA region is likely to feature mainly moderate precipitation.

The Monsoon wind pattern over the Gulf of Guinea is expected to cause localized moderate to enhanced precipitation over there. Low level converging winds over central Africa (CAR), GHA (Somalia) and East Africa (coastal areas of Tanzania and Kenya) are likely to cause scattered moderate to localized enhanced precipitation; heavy falls are likely over east African coast at times. At least 25mm for two or more days is likely along the east African coast, central Africa (CAR) and the Gulf of Guinea (Benin and Togo). Some areas in the Sahel, southern Sudan and Sudan are likely to feature increased chance for daily maximum heat index to exceed 40°C.

## 2.0. Previous and Current Day Weather over Africa

### 2.1. Weather assessment for the previous day (May 12, 2019)

Daily rainfall totals exceeding 25mm have been observed over few areas in the Gulf of Guinea (Nigeria and Cameroon) and GHA (southern Ethiopia).

### 2.2. Weather assessment for the current day (May 13, 2019)

Significant convection is observed over central DRC, Republic of Congo and northern Uganda.

