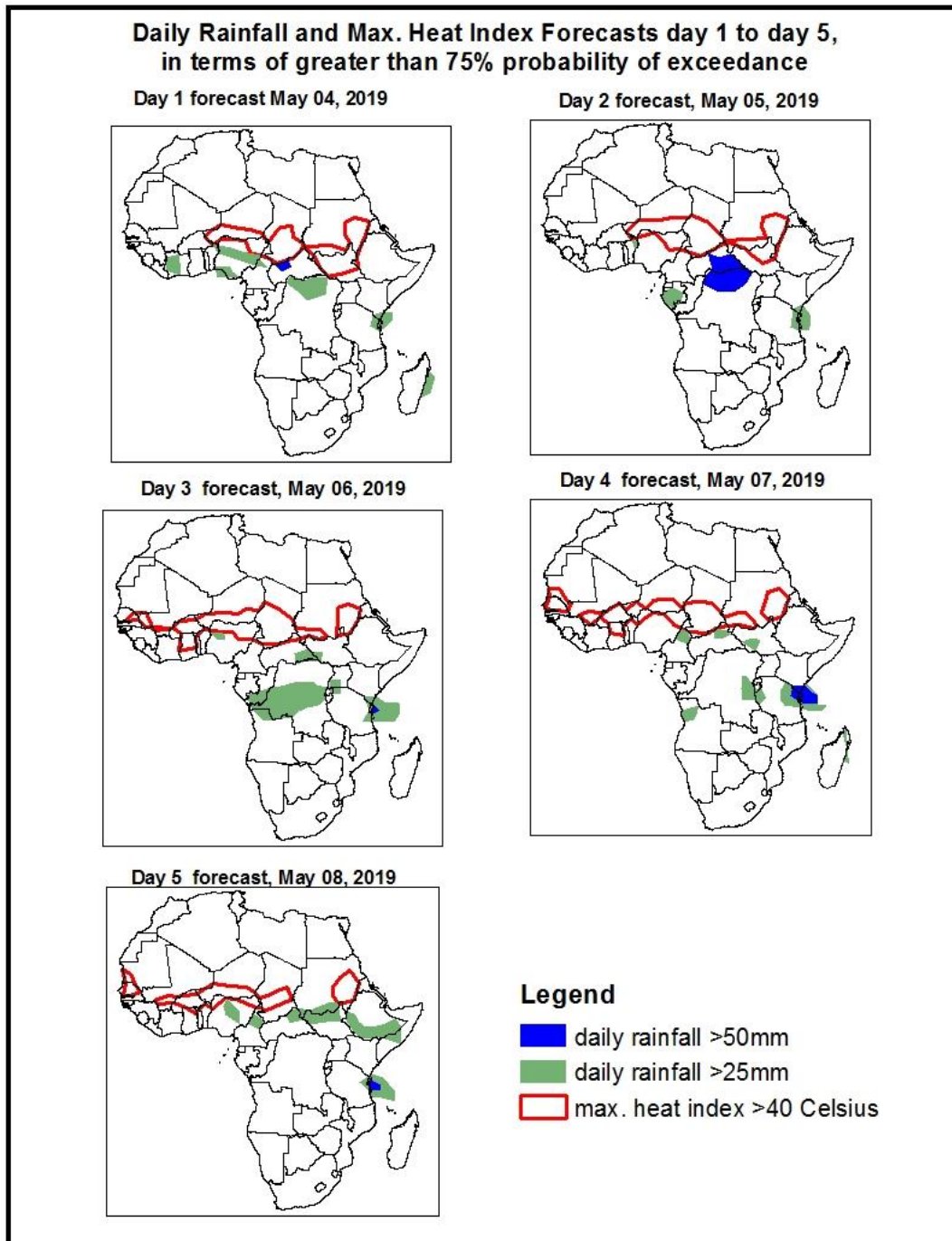


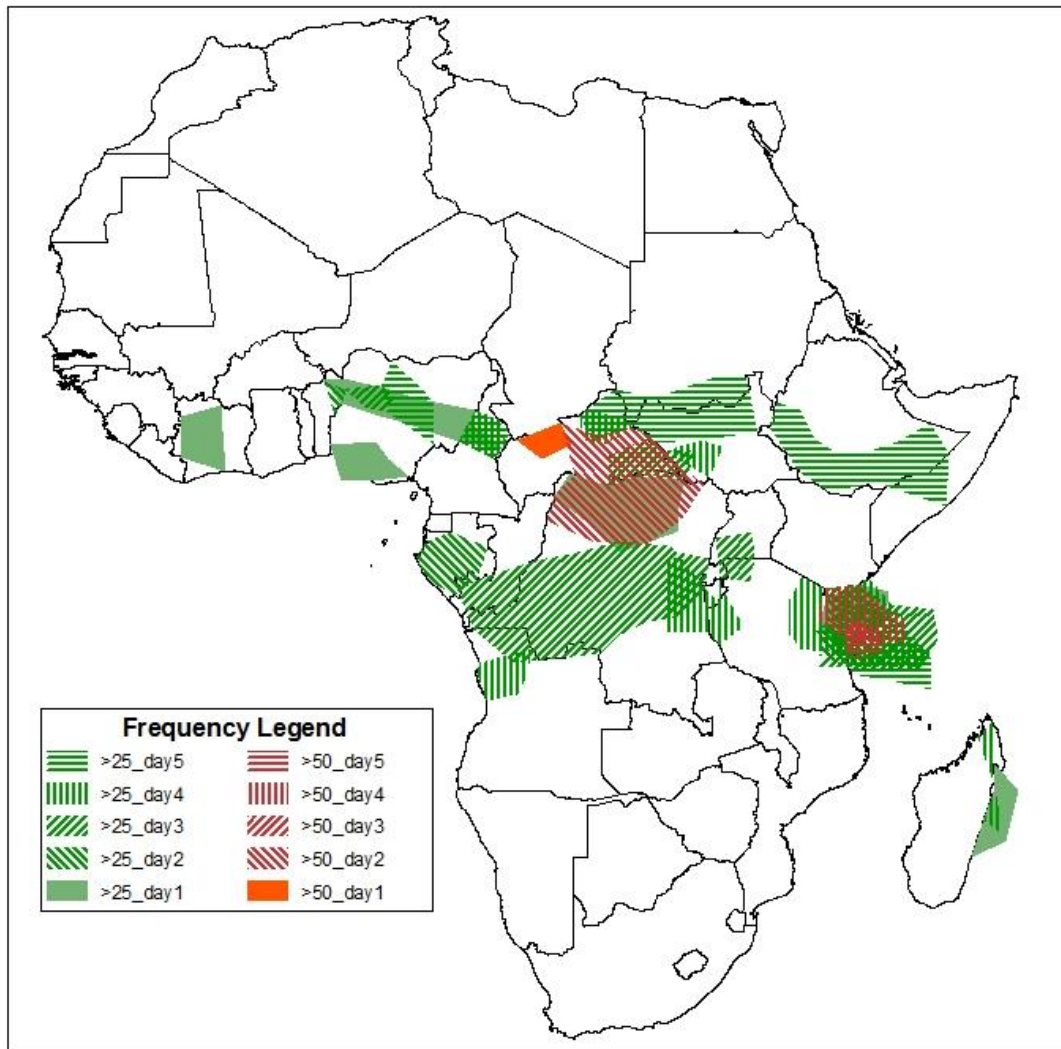
**1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on May 03, 2019)**

**1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: May 04 – 08, 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 04 - 08, 2019

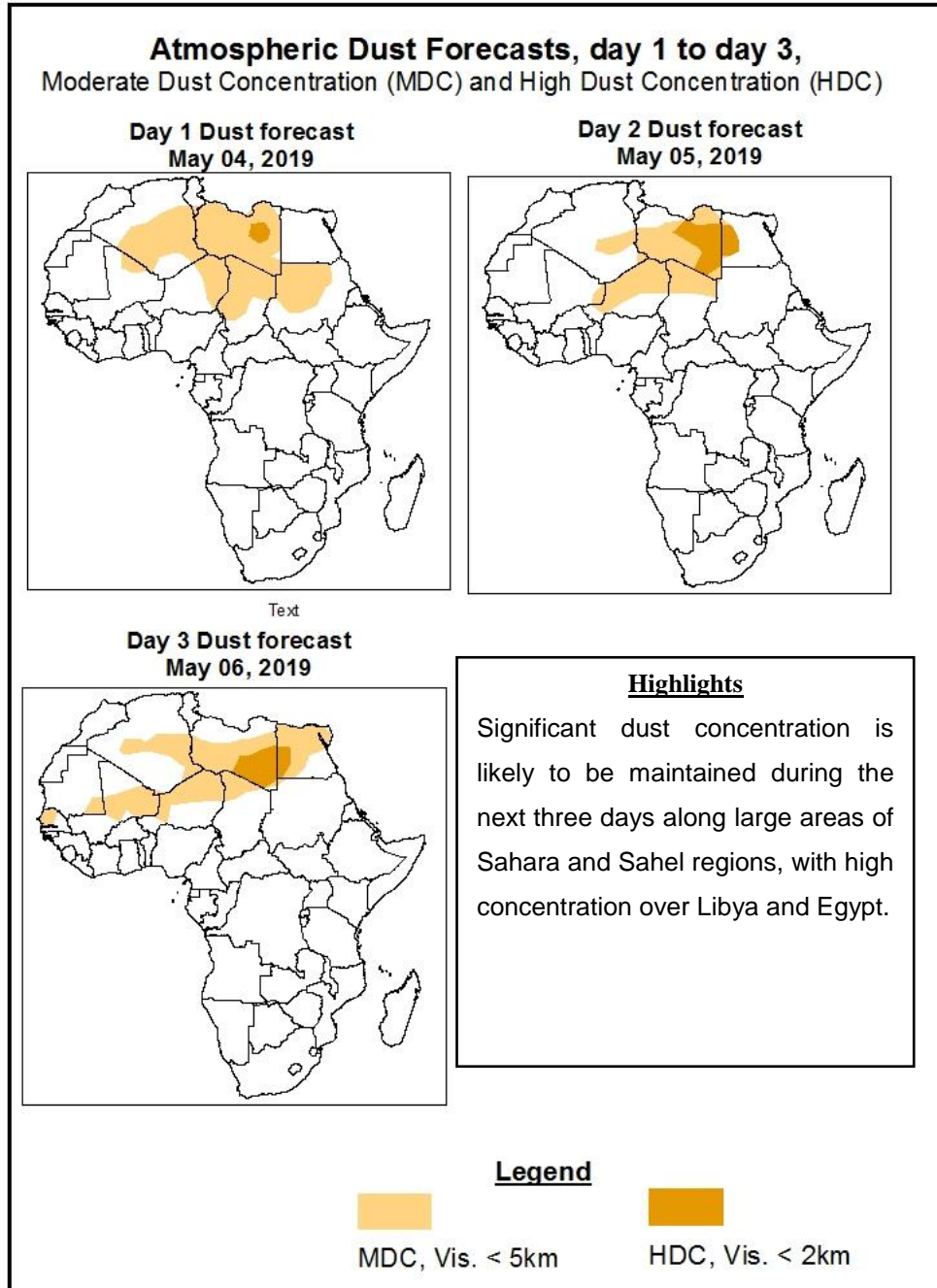


### Highlights

- The Monsoon wind pattern over the Gulf of Guinea is expected to keep isolated significant to enhanced scattered over few areas in the Gulf of Guinea.
- The low level converging winds are likely to cause moderate to enhanced precipitation over some areas in central Africa (CAR and DRC) and few in South Sudan towards southern Sudan.
- The ITCZ across the coast of east Africa is likely to keep enhanced to heavy precipitation over some parts of the east African coast, particularly in northern Tanzania and, with lower chances, south coast of Kenya.
- At least 25mm for two or more days is likely over some areas over east Africa, particularly along the coastal areas of Tanzania, and over central Africa (northeast DRC and eastern CAR).
- There is an increased chance for daily maximum heat index to exceed 40°C across some areas in the Sahel region as well as few in southern Sudan and South Sudan.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: May 04 – 06 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 04 – 08 2019**

The Azores High Pressure system over the North of Atlantic is expected to slightly intensify while migrating towards the northwest Africa, filling the heat lows and reaching 1024hPa at the end of the forecast period. This is likely to keep, and even exacerbate dry conditions over extreme northern Africa.

Throughout the forecast period, the St. Helena High Pressure system over Southeast Atlantic Ocean is expected to keep on relaxing from 1032hPa to 1021hPa at the end of the period. In light of this, its influence on southwest Africa is therefore minimal.

During the first half of the forecast period, the Mascarene High Pressure system over Southwest Indian Ocean is expected to intensify from 1026hPa to 1031hPa, but due to the coming frontal low from the west, it is likely to be quite eroded during the second half of the period. However, its orientation is expected to still cause moist southeasterly winds towards the east African coast.

Generally, 925hPa winds are expected to peak up, especially towards the second half of the forecast period, mainly over Libya, Algeria, Chad and Niger, enhancing Atmospheric dust concentrations over there. Further south over the Gulf of Guinea, Monsoon winds are favoring only localized enhanced precipitation over few areas, especially near the or at the coastal areas. Meanwhile, converging, moist southeasterly winds towards the East African coast are likely to keep moderate to enhanced precipitation over there, particularly towards the end of the period.

At 850hPa, a trough from the Indian Ocean, associated with the zonal component of the ITCZ, is expected to shift further north affecting extreme southern parts of Kenyan coast in addition to that of Tanzania. Moderate to enhanced, with chances of heavy, falls exist over there. Further north, over CAR, South Sudan and northern parts of DRC and Uganda, occasional converging wind patterns are expected to cause moderate to enhanced precipitation.

700hPa mainly easterly wind pattern is expected to be maintained, converging over CAR, northern and central DRC as well as northern Tanzania. This is likely to keep convective precipitation over these areas.

Mainly easterly 500hPa wind pattern, together with 700mb pattern, are likely to help propagating activities generally towards west over central and east Africa.

During the period, a Subtropical Westerly Jet at 200hPa is expected to be rather weak, with only occasional winds (>130kts). However, from mid towards the end of the forecast period, a sharp bending is likely to enhance precipitation over the GHA, particularly over Ethiopia, Somalia and South Sudan.

The Monsoon wind pattern over the Gulf of Guinea is expected to keep isolated significant to enhanced scattered over few areas in the Gulf of Guinea. The low level converging winds are likely to cause moderate to enhanced precipitation over some areas in central Africa (CAR and DRC) and few in South Sudan towards southern Sudan. The ITCZ across the coast of east Africa is likely to keep enhanced to heavy precipitation over some parts of the east African coast, particularly in northern Tanzania and, with lower chances, south coast of Kenya. At least 25mm for two or more days is likely over some areas over east Africa, particularly along the coastal areas of Tanzania, and over central Africa (northeast DRC and eastern CAR). There is an increased chance for daily maximum heat index to exceed 40oC across some areas in the Sahel region as well as few in southern Sudan and South Sudan.

## 2.0. Previous and Current Day Weather over Africa

### 2.1. *Weather assessment for the previous day* (May 02, 2019)

Daily rainfall totals exceeding 25mm is observed along southeastern Tanzania.

### 2.2. *Weather assessment for the current day* (May 03, 2019)

Very deep convection is observed over Cameroon. Otherwise shallow isolated convection is also observed over parts of DRC, Ethiopia and Uganda.

