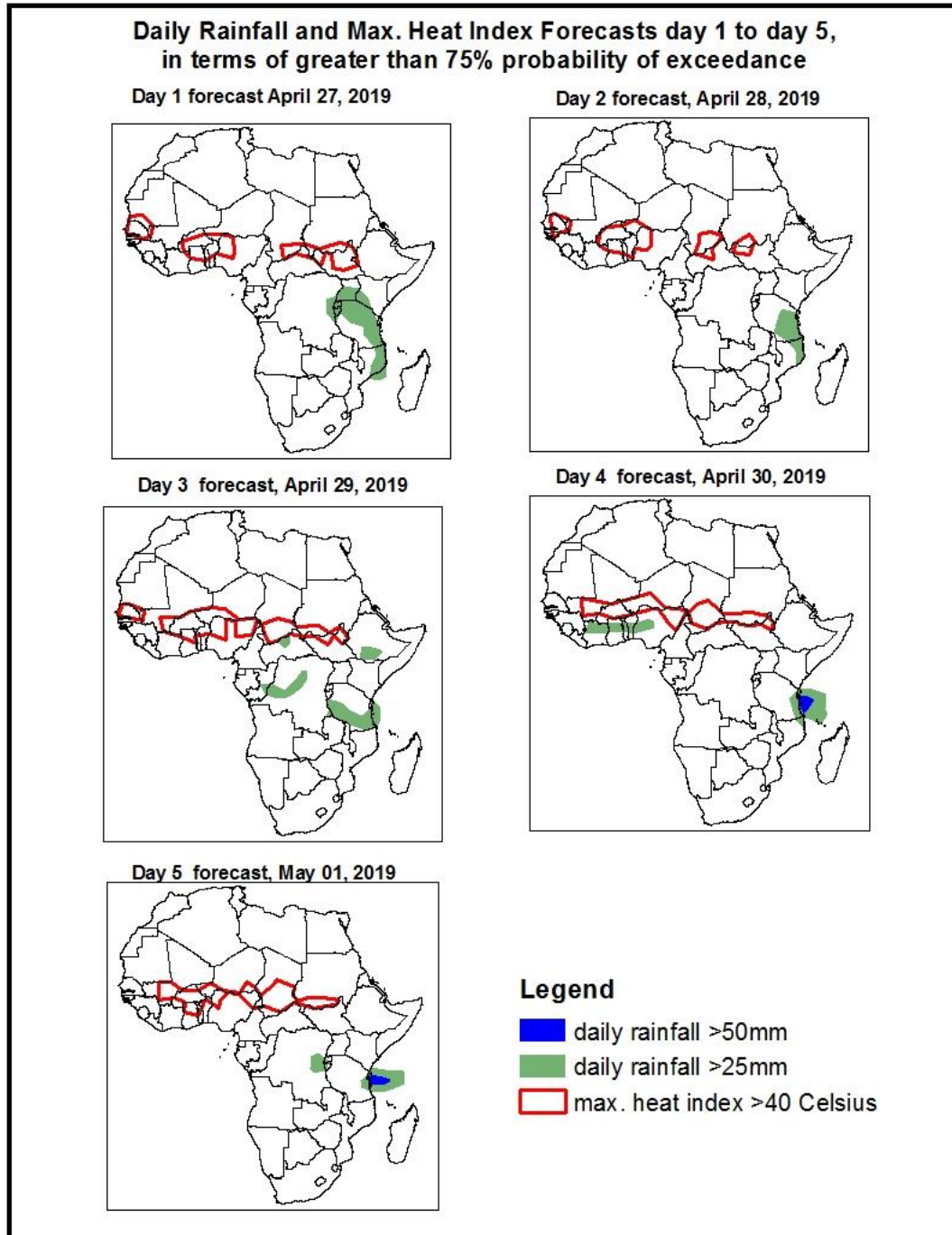


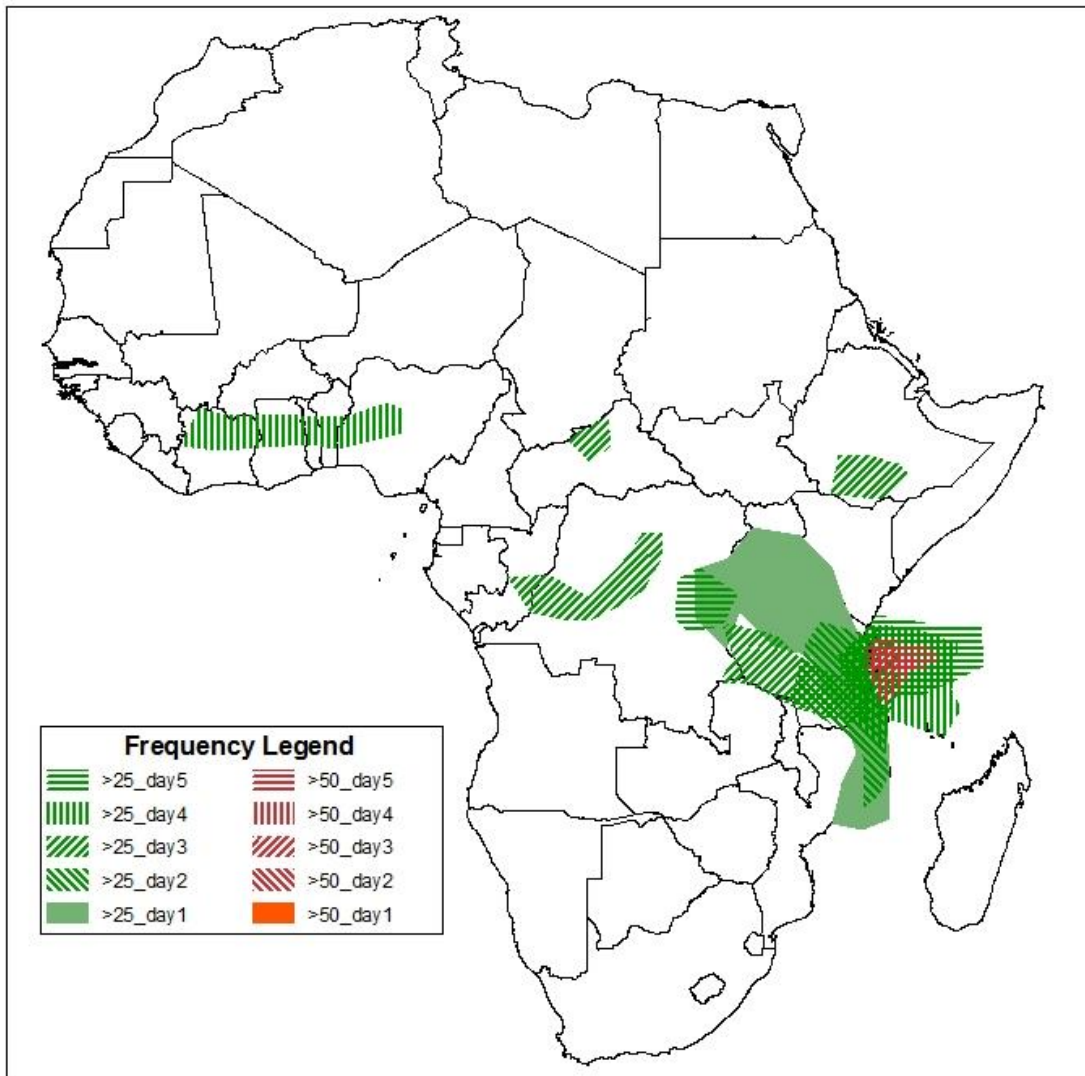
**1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on April 26, 2019)**

**1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: April 27 – 01 May, 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 Apr 27 - May 01, 2019

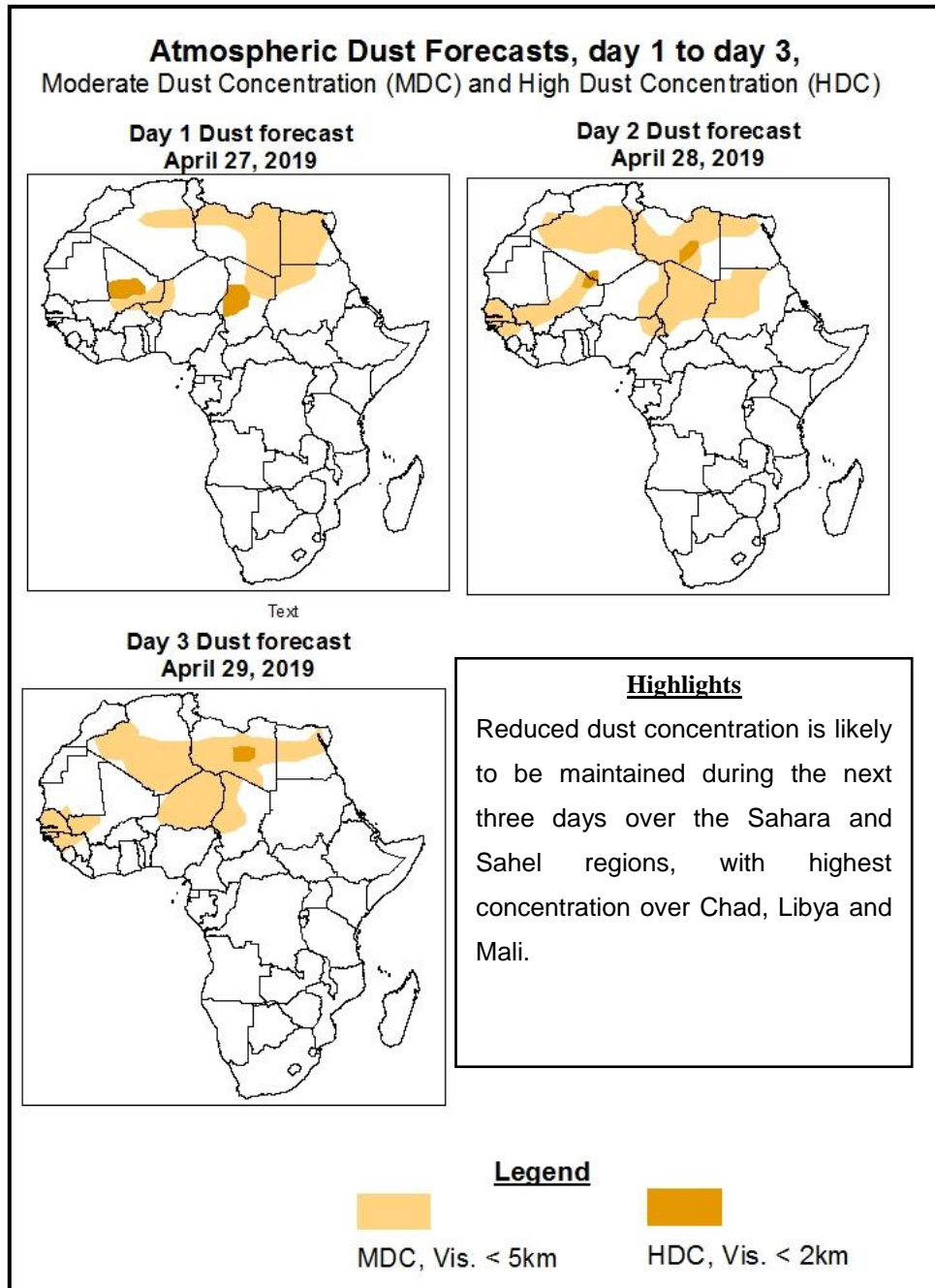


### Highlights

- Less pronounced lower-level wind convergences are likely to keep precipitation less significant over many parts of central Africa. Occasional isolated cases of enhanced convective precipitation are expected, however, over few areas.
- The tropical storm Kenneth is expected to rapidly fill up but the remnant cyclonic flow is likely to keep moderate to enhanced precipitation along the coastal areas of northern Mozambique and southern Tanzania. The cyclone is also likely to enhance low level convergence over central towards northeast Tanzania and southern Kenya causing significant precipitation over there.
- At least 25mm for two or more days is likely over some areas in east Africa particularly along the coastal areas of Tanzania as well as those in Mozambique.
- There is an increased chance for daily maximum heat index to exceed 40°C across some areas in the Sahel region as well as Gulf of Guinea, CAR, southern Sudan and South Sudan.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: 27 – 29 April 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: April 27 – 01 May 2019**

During the first half of the period, the Azores High Pressure system over the North of Atlantic is expected to continue intensifying, reaching as high as 1031hPa then relaxing during the second half of the period, giving way to heat lows.

During much of the forecast period, the St. Helena High Pressure system over Southeast Atlantic Ocean, is expected to be highly eroded by the frontal low from the west, only starting recovering during the second half of the period reaching a mere 1021hPa at the end of the period. Since it is rather weak, its influence on African weather is minimal.

The Mascarene High Pressure system over Southwest Indian Ocean is expected to continue rebuilding throughout the forecast period from 1024 to 1029 by the mid-period, feeding moist southeasterlies along the east African coast. Meanwhile, after making a landfall, the Tropical Cyclone Kenneth is likely to rapidly fill up, significantly reducing activities there. Moderate precipitation is likely to be maintained however.

At 925hPa, winds have continued weakening over the Sahara and Sahel region, reducing dust concentrations over there. Minor cyclonic flow from rapidly filling Kenneth is expected over northeast Mozambique, during the start of the forecast period, keeping significant precipitation there. Southeasterlies are likely to maintain slight to moderate activities along the east African coast.

At 850hPa level, rather weak convergence patterns over central Africa (CAR, DRC), GHA (Ethiopia and South Sudan) as well as over the LVB (mostly Tanzania) are likely to result into slight to moderate precipitation over there. The cyclonic flow associated with Kenneth over northeast Mozambique, during the start of the forecast period, is likely to keep significant precipitation there.

700hPa wind pattern is dominated by converging, mainly northeasterlies, winds, fostering and advecting convection over the Gulf of Guinea and central Africa towards southwest. Cyclonic flow associated with Kenneth is expected over northern Mozambique and southern Tanzania

during the start of the forecasting period, causing some precipitation over there. The associated converging winds are likely to influence precipitation over northern Tanzania.

Easterly to northeasterly, 500hPa wind pattern is expected to help propagating activities towards west over most of the areas expected to feature significant convection, particularly in the Gulf of Guinea and central Africa.

During most of the period, a Subtropical Westerly Jet at 200hPa is expected to be generally weak with winds less than 130kts. However, at the end of the period the jet is likely to strengthen with winds (>130kts) expected over North Africa. As no bending (trough) is likely, then its influence on African precipitation is minimal.

Less pronounced lower-level wind convergences are likely to keep precipitation less significant over many parts of central Africa. Occasional isolated cases of enhanced convective precipitation are expected, however, over few areas. The tropical storm Kenneth is expected to rapidly fill up but the remnant cyclonic flow is likely to keep moderate to enhanced precipitation along the coastal areas of northern Mozambique and southern Tanzania. The cyclone is also likely to enhance low level convergence over central towards northeast Tanzania and southern Kenya causing significant precipitation over there. At least 25mm for two or more days is likely over some areas in east Africa particularly along the coastal areas of Tanzania as well as those in Mozambique. There is an increased chance for daily maximum heat index to exceed 40oC across some areas in the Sahel region as well as Gulf of Guinea, CAR, southern Sudan and South Sudan.

## 2.0. Previous and Current Day Weather over Africa

### 2.1. Weather assessment for the previous day (April 25, 2019)

Daily rainfall totals exceeding 25mm is observed over western DRC and Angola as well as north east Mozambique.

### 2.2. Weather assessment for the current day (April 26, 2019)

Enhanced convection is evident off the coast of Ivory Coast, northern Uganda, southern South Sudan and over parts of Kenya.

