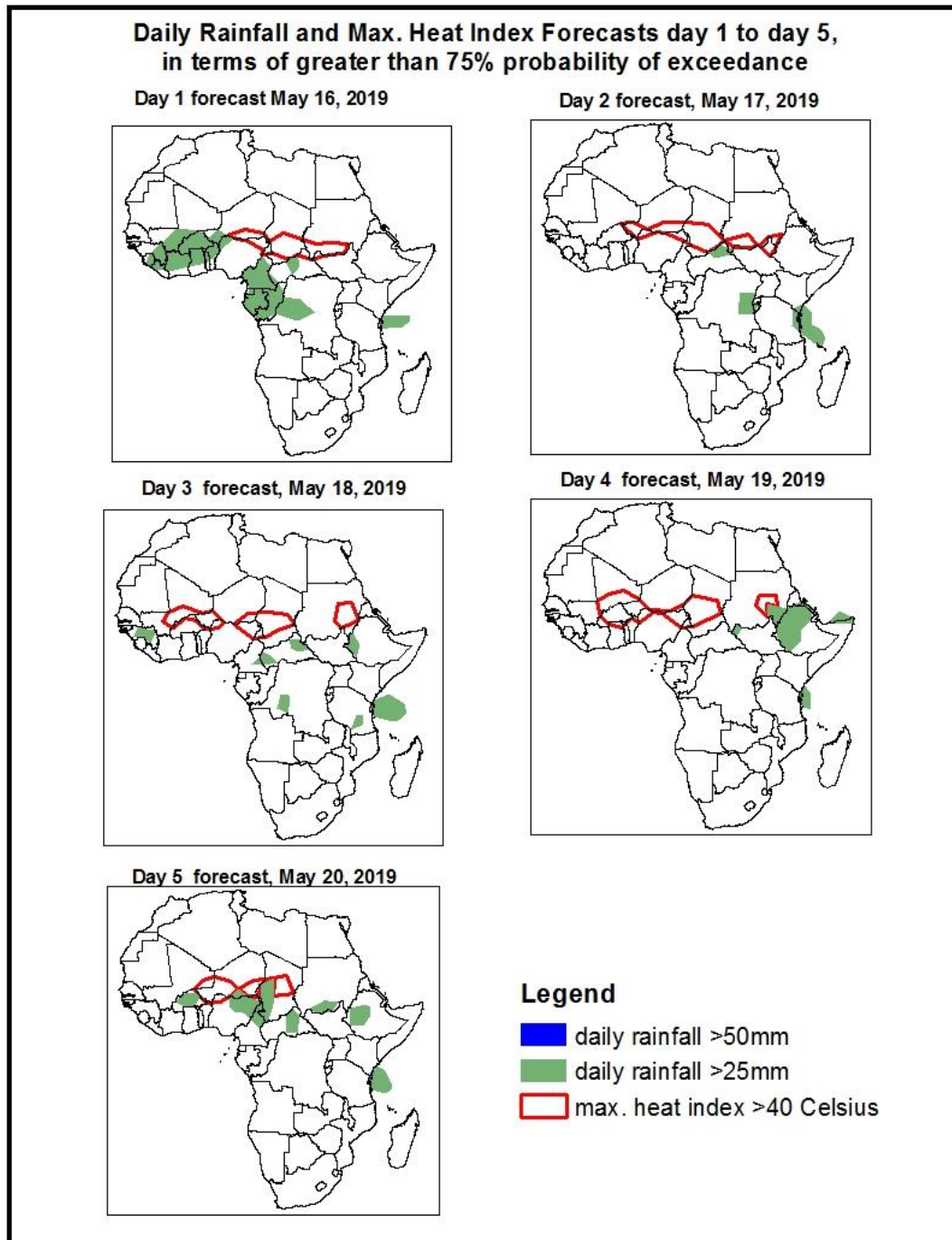


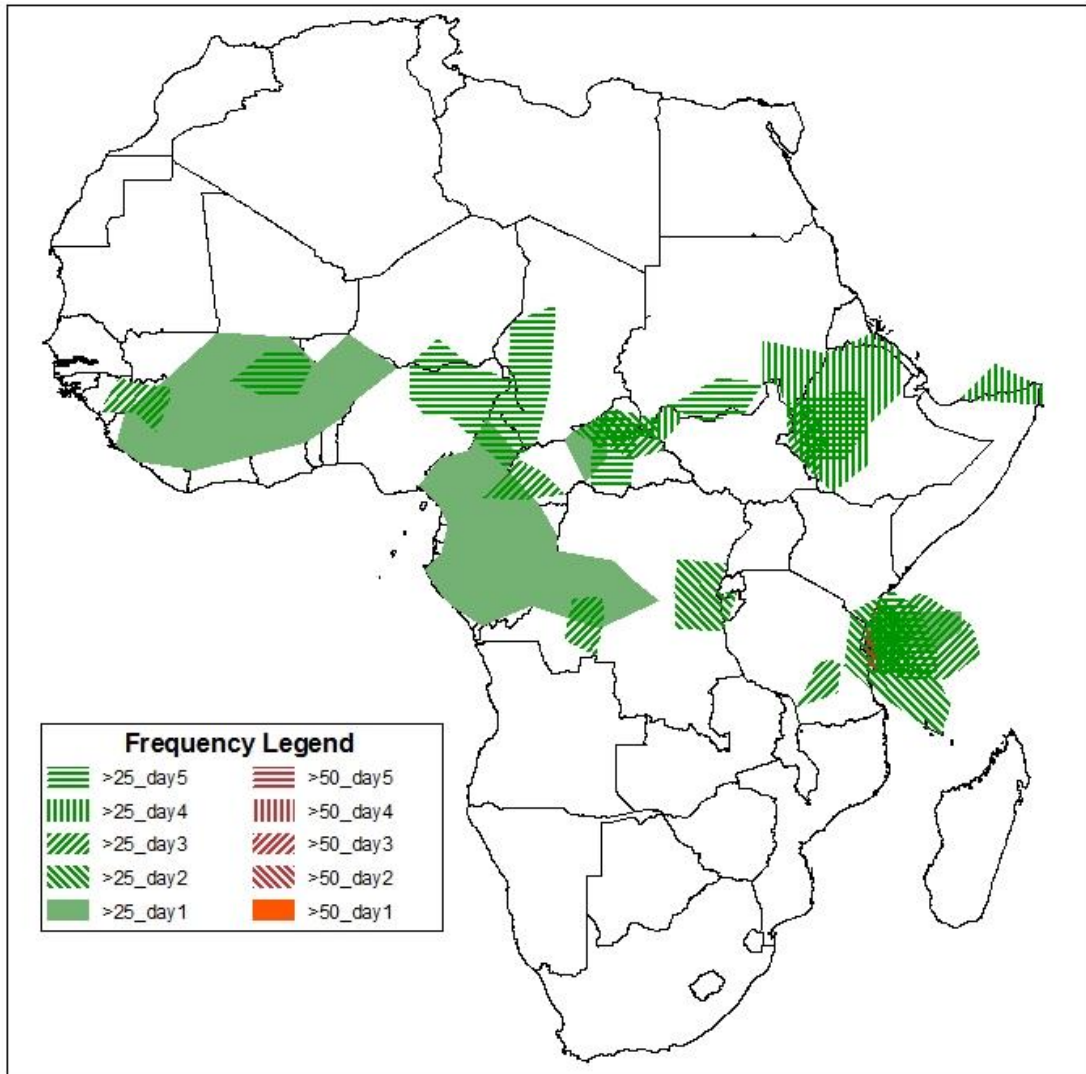
1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on May 15, 2019)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: May 16 – 20, 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 May 16 - 20, 2019

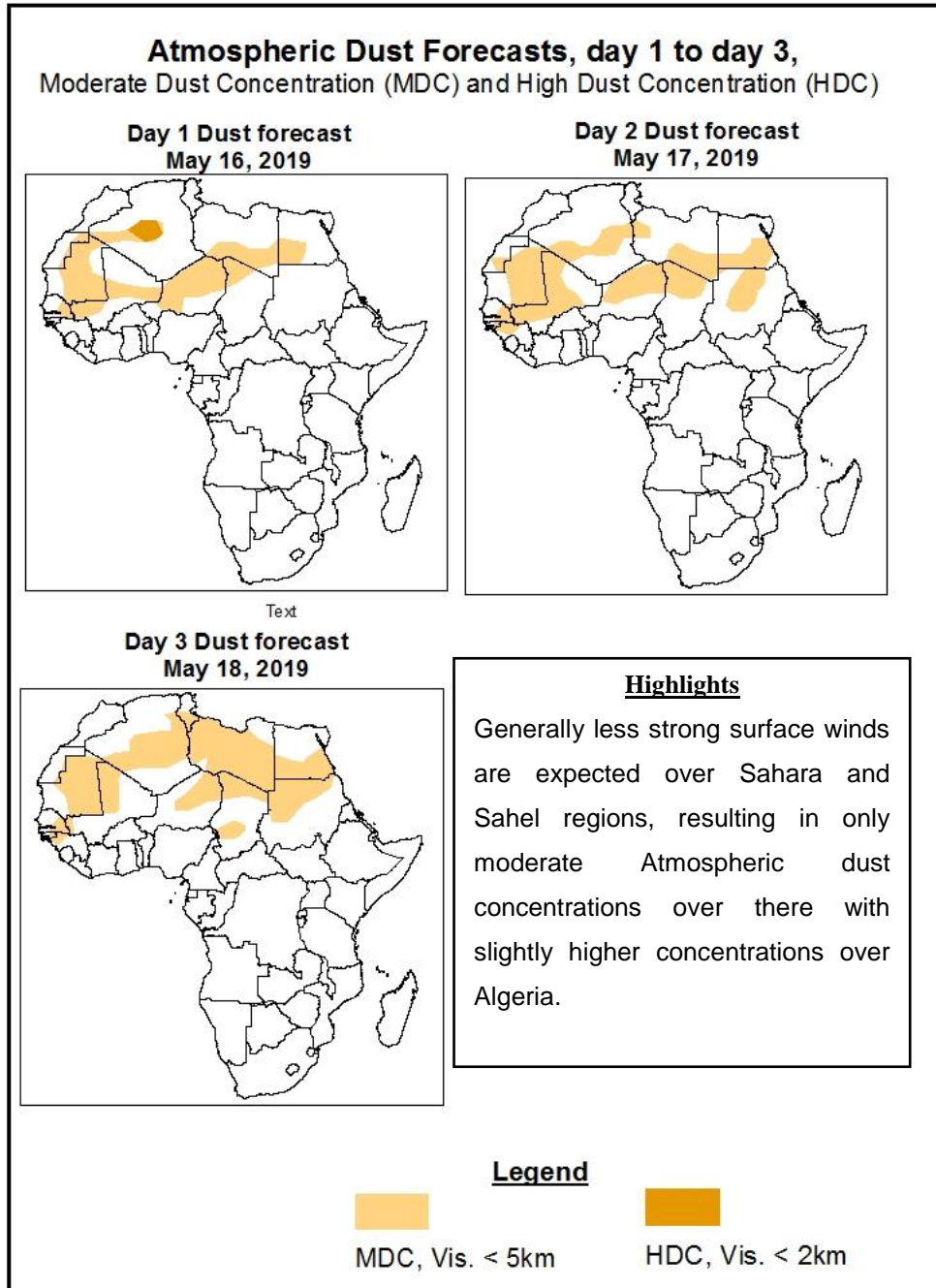


Highlights

- The Monsoon wind pattern over the Gulf of Guinea is expected to cause localized moderate to enhanced precipitation over there, spreading north to southern parts of Sahel (Mali and Niger).
- Low level converging winds over Guinea, Burkina Faso, central Africa (CAR), GHA (Sudan, South Sudan) 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, DRC) and the GHA (western Ethiopia).
- 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 16 – 18 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 16 – 20 2019

During the first half of the forecast period, the Azores High Pressure system over the North of Atlantic is expected to keep intensifying, reaching 1030hPa at times. During the second half of the period, the system is likely to relax down to 1026hPa. Throughout the period the system is expected to maintain its position further of northern Africa, leaving the later dominated by heat lows. No appreciable contribution of this system to African precipitation can be seen, particularly as the ITCZ is advancing towards the Sahel.

During much of the forecast period, the St. Helena High Pressure system over Southeast Atlantic Ocean is expected to migrate towards east while maintaining at 1031hPa. This is likely to result into migration of the Meridional component of the ITCZ towards east keeping precipitation further east in eastern DRC and western Tanzania, particularly during the second half of the forecast period.

During the first half of the forecast period, the Mascarene High Pressure system over Southwest Indian Ocean is expected to intensify reaching 1029hPa but then relaxing down to 1026hPa towards the end of the. This is likely to favor enhanced moist southeasterly winds towards the east African coast and keep moderate to enhanced precipitation along the east African coast, particularly in the first half of the period towards mid-period.

At 925hPa level, strong winds are expected the mid forecast period over Algeria and then Libya, influencing 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 over there as well as over parts of the Sahel region 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 along the coastal areas of Tanzania and Kenya.

At 850hPa, converging winds over coastal areas of East Africa (Tanzania and Kenya) are likely to maintain enhanced to heavy precipitation over these areas. Also, converging winds are expected over Sudan, South Sudan, CAR, western Tanzania and eastern DRC as well as LVB. These areas are likely to significant to isolated 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 (northern Kenya and Uganda), Great Horn of Africa (Ethiopia) as well as South Sudan. This is likely to favor deep convection over some of these areas which are also expected to feature low level (850hPa) convergence i.e. Sudan, South Sudan and CAR).

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 feature moderate winds, occasionally (>130kts). Also, a slight bending (trough) is likely to pass further north of Africa influencing slight increase in precipitation over the GHA.

The Monsoon wind pattern over the Gulf of Guinea is expected to cause localized moderate to enhanced precipitation over there, spreading north to southern parts of Sahel (Mali and Niger). Low level converging winds over Guinea, Burkina Faso, central Africa (CAR), GHA (Sudan, South Sudan) 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, DRC) and the GHA (western Ethiopia). 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 14, 2019)

Daily rainfall totals exceeding 25mm have been observed over very localized areas along the coastal areas of Ghana and Nigeria.

2.2. *Weather assessment for the current day* (May 15, 2019)

Deep convection is observed over northern DRC and Uganda.

