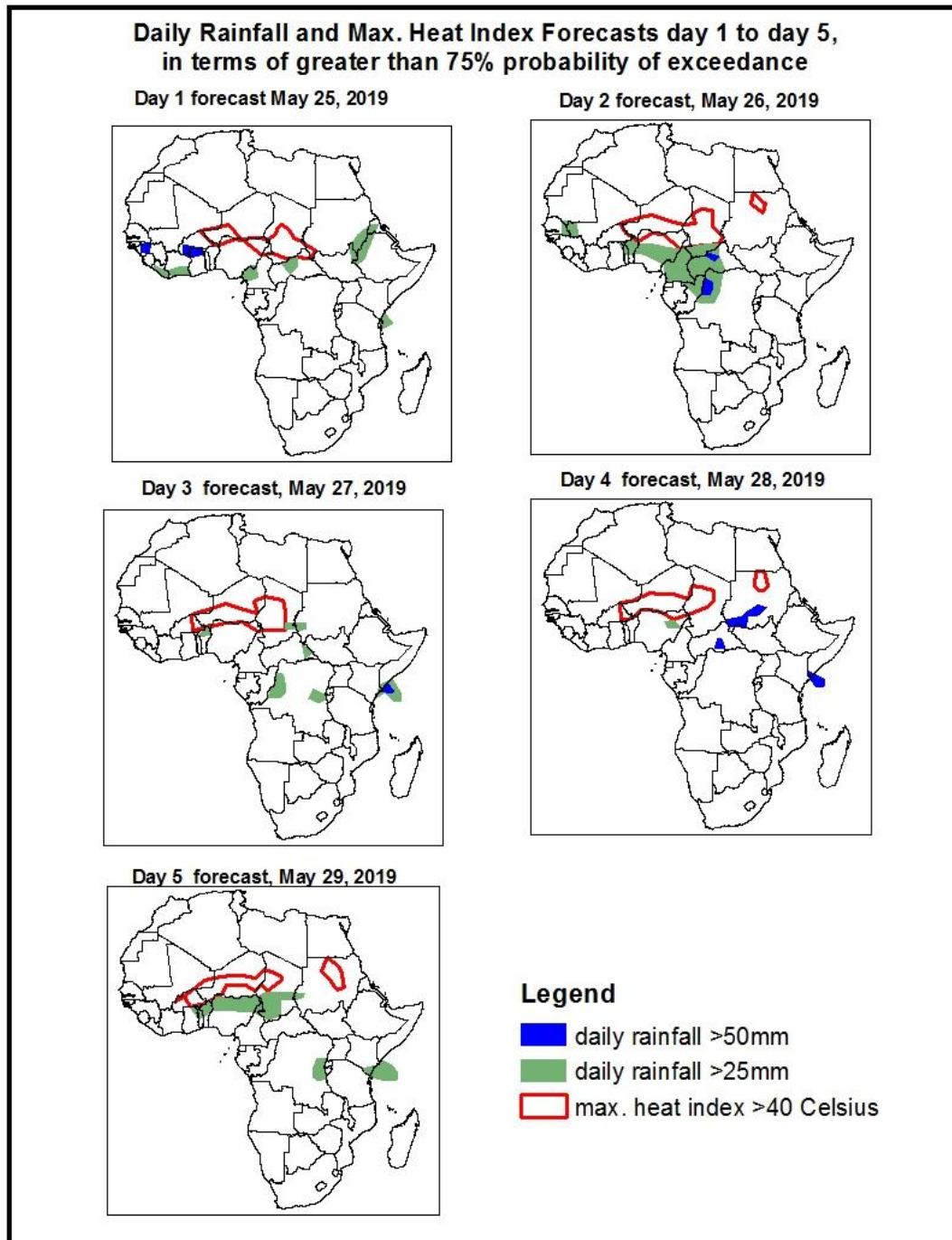


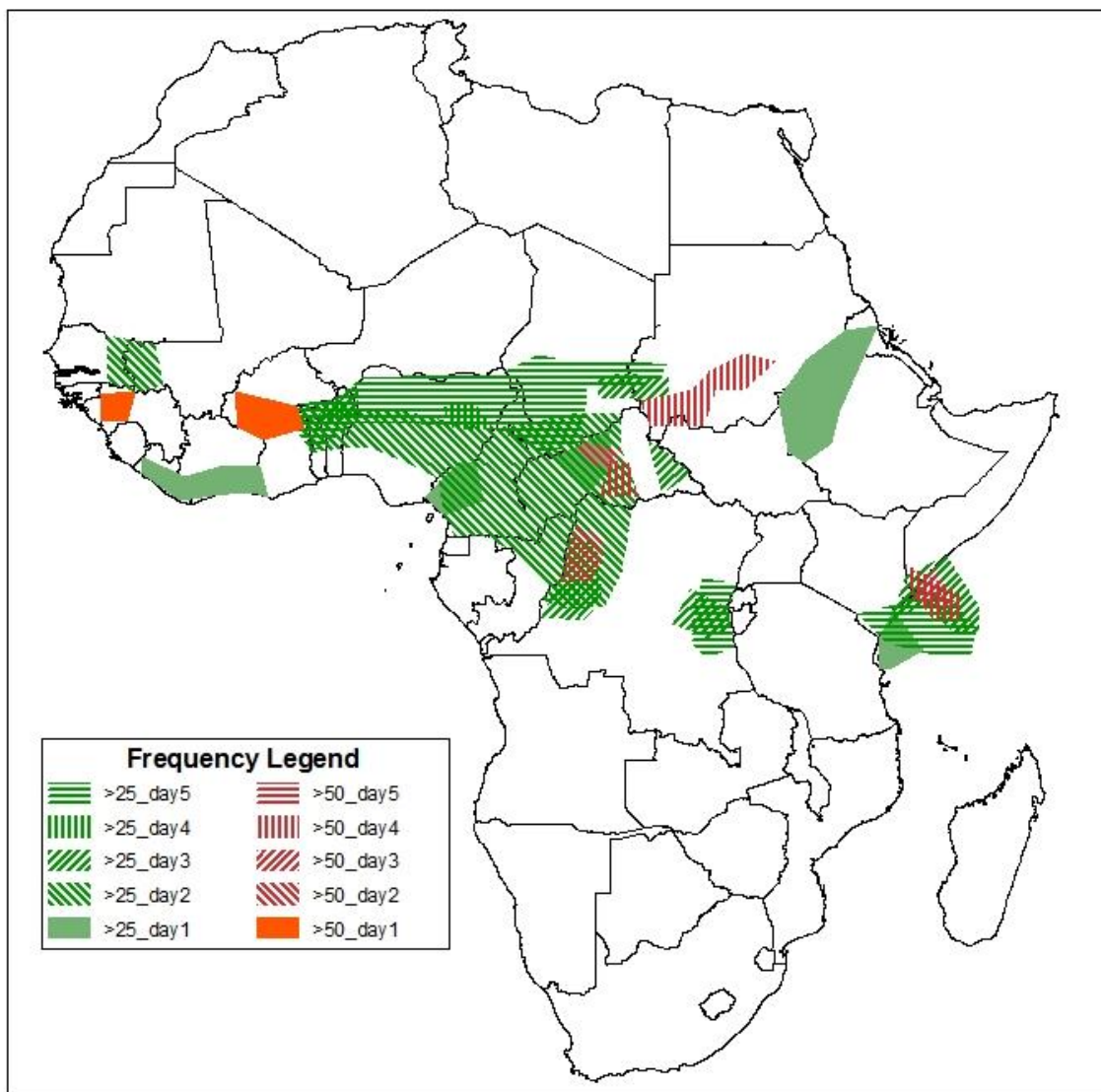
1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on May 24, 2019)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: May 25 – 29, 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 25 - 29, 2019

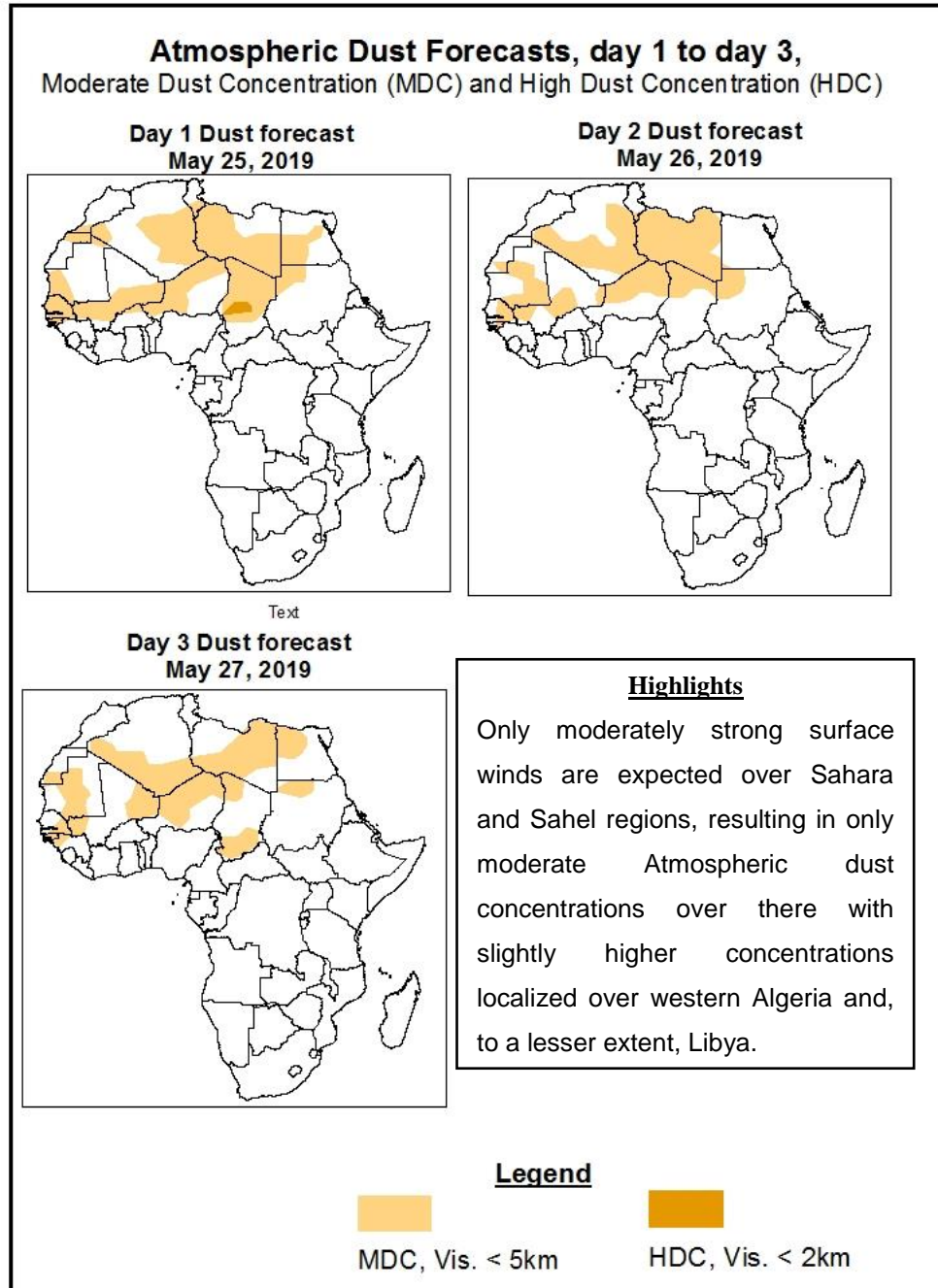


Highlights

- The Monsoon wind pattern over the Gulf of Guinea and southern Sahel region is expected to cause moderate to enhanced precipitation over there.
- Low level converging winds at both 850 and 700hPa levels over the Gulf of Guinea, central Africa, southern parts of the Sahel, GHA (Sudan and South Sudan) and East Africa (coastal areas of Kenya and Somalia) are likely to cause enhanced, occasionally heavy, precipitation.
- At least 25mm for two or more days is likely over some areas in the Gulf of Guinea and central Africa. Few areas along the east African coast (Kenyan and Somali coasts) are also going to experience at least 25mm in two or more days.
- As the rain band is advancing further north, fewer areas of Sahel are likely to feature increased chance for daily maximum heat index to exceed 40°C.

1.2. Atmospheric Dust Concentration Forecasts (valid: May 25 – 27 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 25 – 29 2019

During the forecast period, the Azores High Pressure system over the North of Atlantic is expected to mainly maintain a central pressure of between 1029-1030hPa and stay just west of west Africa. This is expected to keep the ITCZ over southern parts of the Sahel region, maintaining convective precipitation in and around this region.

During the first half of the forecast period, the St. Helena High Pressure system over Southeast Atlantic Ocean is expected to migrate towards east while intensifying from 1020hPa to 1029hPa. In the second half of the period, the frontal low is expected to erode it down to 1025hPa. No appreciable contribution of this system to African weather can be seen.

During the first half of the forecast period, the Mascarene High Pressure system over Southwest Indian Ocean is expected to be intensify from 1026hPa to 1030hPa but then eroded by frontal lows, decreasing its central pressure down to 1024hPa. Minimal influence on precipitation along the east African coastal areas is likely from this system.

At 925hPa level, with the exception of Libya, mainly weak winds are expected over much of the Sahara and Sahel during the forecast period. Only moderate Atmospheric dust concentrations over there becoming enhanced over Libya. On the other hand, the converging Monsoon winds associated are expected to lie and influence precipitation of the Gulf of Guinea towards southern areas of the Sahel region. Frequent moderate to enhanced, with occasional heavy, precipitation is likely over there. Converging, moist southeasterly winds towards East Africa are likely to maintain moderate precipitation, occasionally enhanced over the coastal areas of Kenya and Somalia.

At 850hPa, converging winds over coastal areas of East Africa (Tanzania and Kenya) are likely to maintain moderate to occasionally enhanced precipitation over these areas. Also, converging winds are expected over southern Sahel region, northern parts of the Gulf of Guinea, central Africa (CAR), GHA (Sudan, South Sudan), Uganda and LVB. These areas are likely to feature significant to enhanced precipitation with chances of heavy precipitation over some areas.

At 700hPa, mainly easterly wind pattern is expected to be maintained, converging over much of central Africa, Gulf of Guinea and parts of east Africa as well as Great Horn of Africa. 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 mainly 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 rather weak winds not reaching 130kts. Also, during the period, no bending (trough) is expected and thus decreased precipitation is likely over the GHA.

The Monsoon wind pattern over the Gulf of Guinea and southern Sahel region is expected to cause moderate to enhanced precipitation over there. Low level converging winds at both 850 and 700hPa levels over the Gulf of Guinea, central Africa, southern parts of the Sahel, GHA (Sudan and South Sudan) and East Africa (coastal areas of Kenya and Somalia) are likely to cause enhanced, occasionally heavy, precipitation. At least 25mm for two or more days is likely over some areas in the Gulf of Guinea and central Africa. Few areas along the east African coast (Kenyan and Somali coasts) are also going to experience at least 25mm in two or more days. As the rain band is advancing further north, fewer areas of Sahel are likely to feature increased chance for daily maximum heat index to exceed 40°C.

2.0. Previous and Current Day Weather over Africa

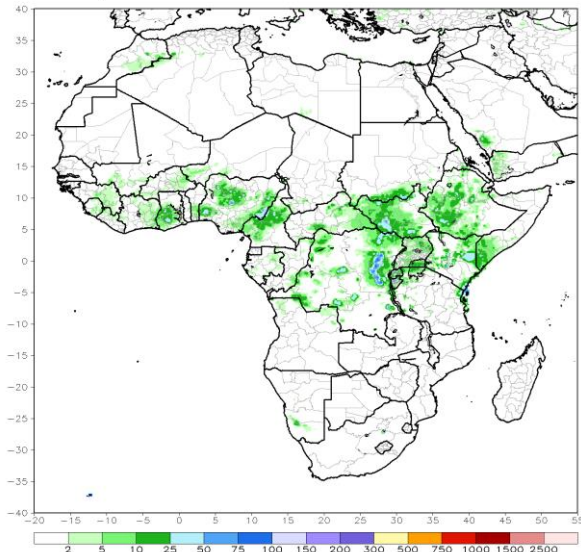
2.1. *Weather assessment for the previous day* (May 23, 2019)

Daily rainfall totals exceeding 25mm have been observed over some areas over the Gulf of Guinea, central and GHA.

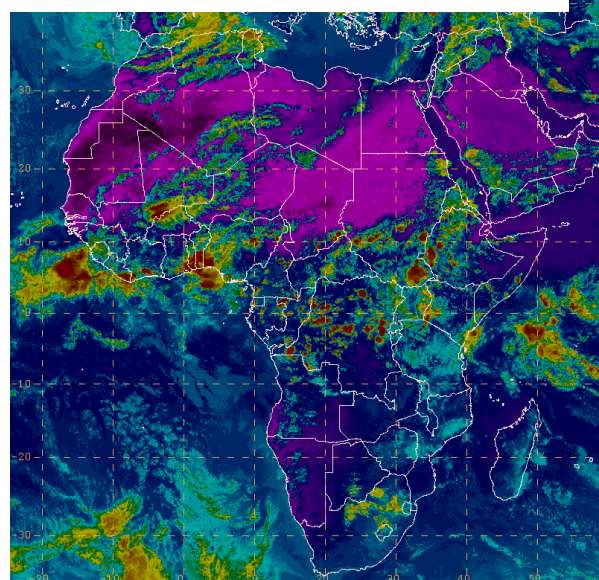
2.2. *Weather assessment for the current day* (May 24, 2019)

Convection clouds are observed over many areas over the Gulf of Guinea, central and GHA. Also in few areas in Sahel region (Mali and Chad).

RFE2 Daily Total Rainfall (mm)
Period: 23May2019



IR Satellite Image (valid 1452 May 24, 2019)



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