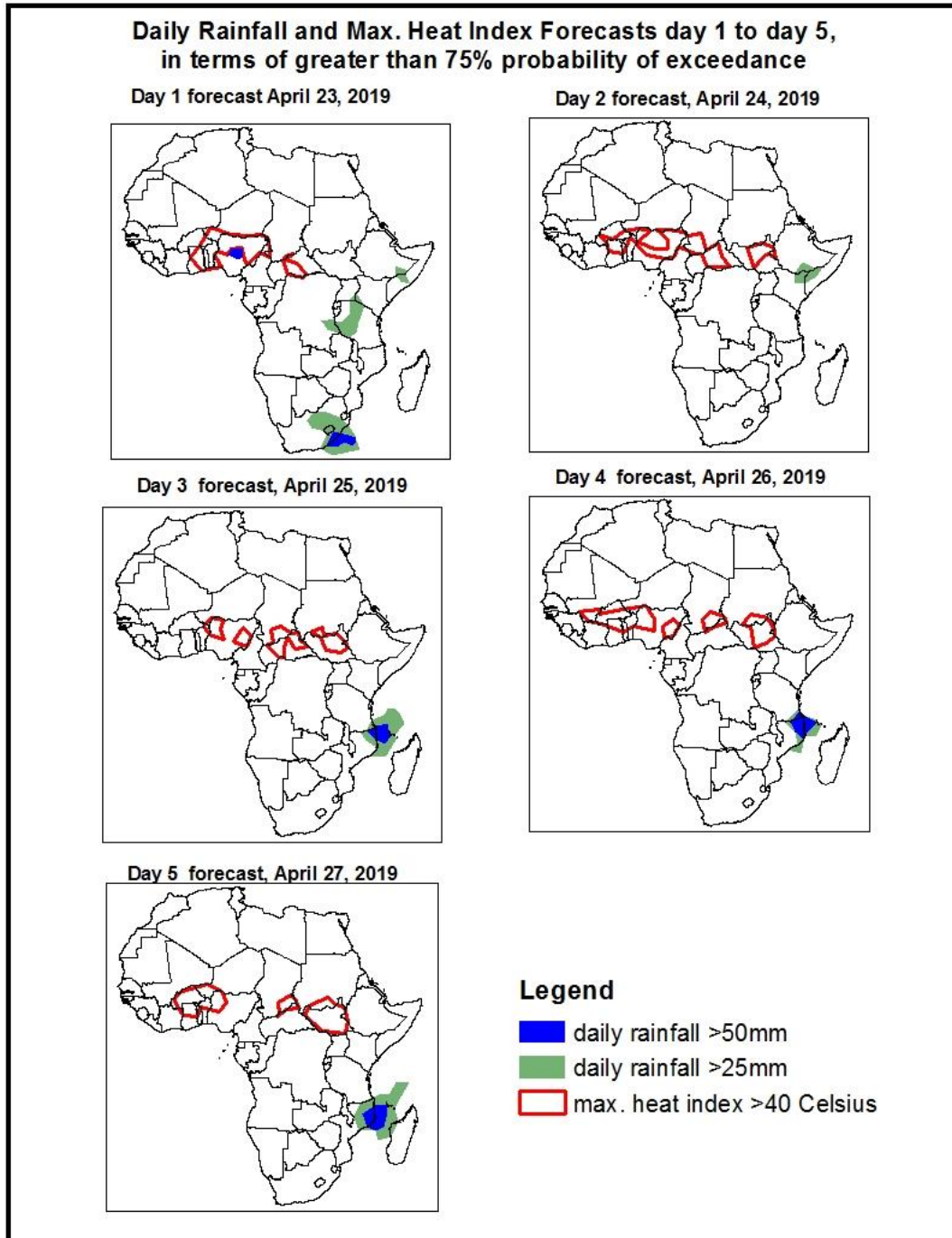


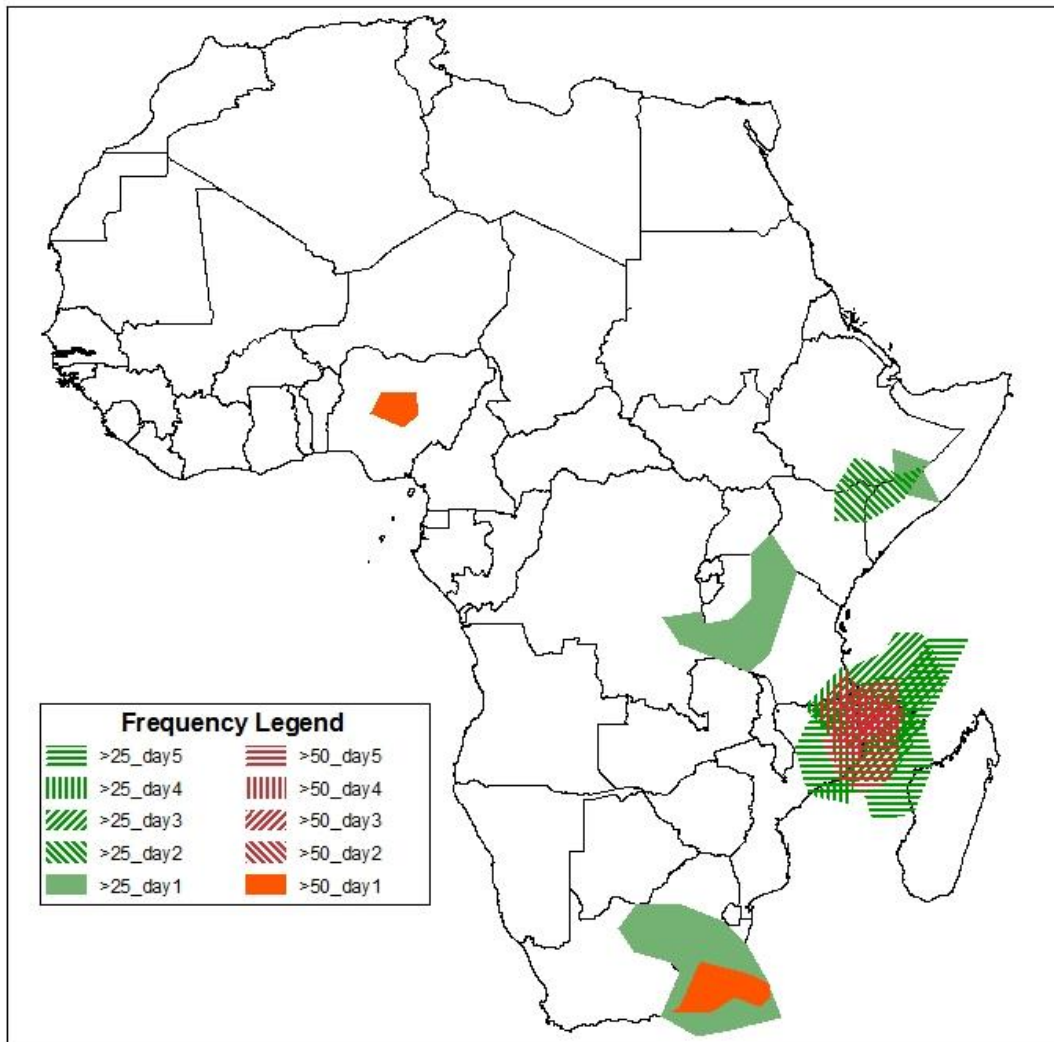
1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on April 22, 2019)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: 23 – 27 April, 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 23 - Apr 27, 2019

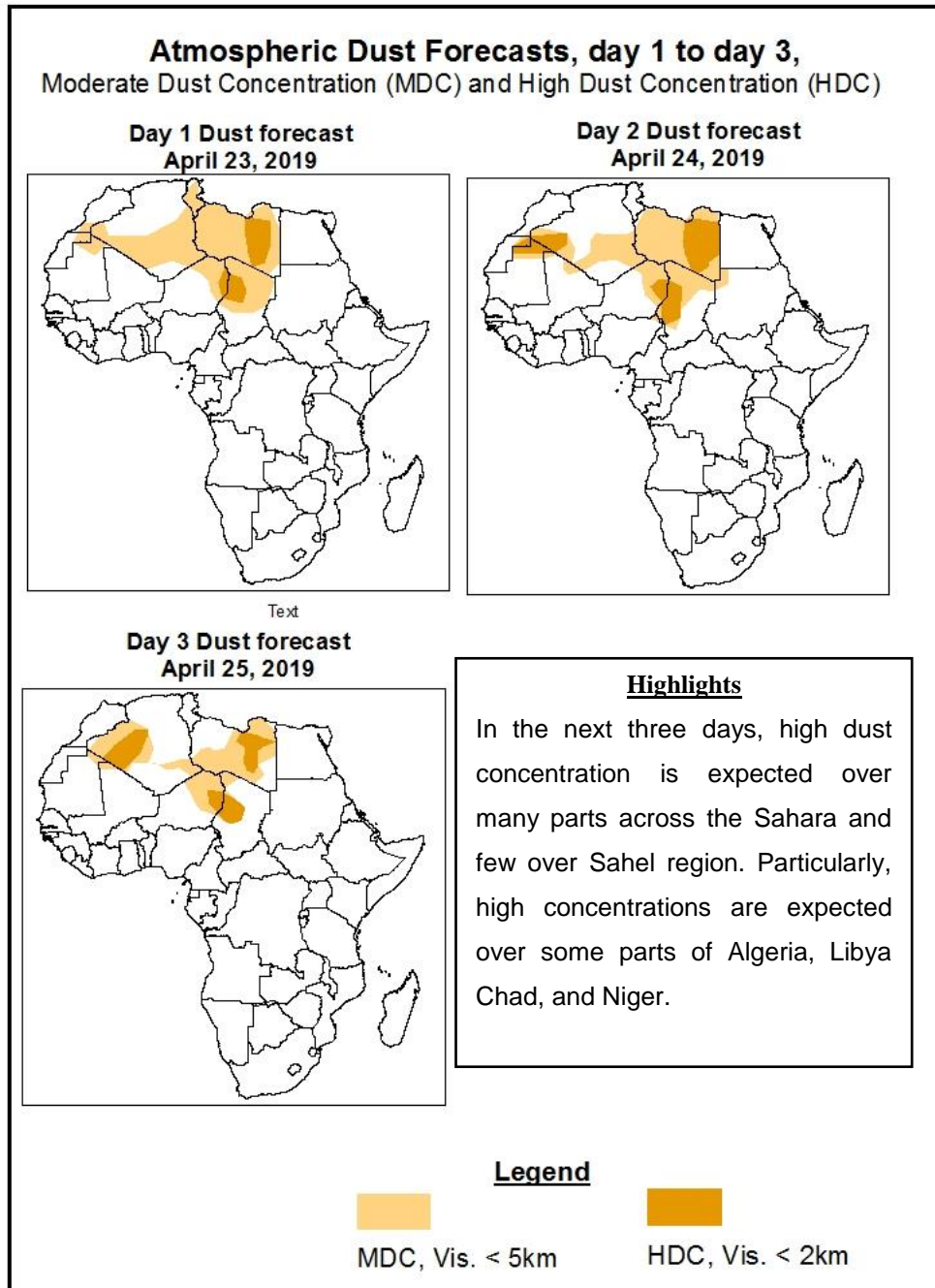


Highlights

- Very isolated moderate to enhanced precipitation is expected over few areas of the Gulf of Guinea, particularly over Nigeria.
- Less pronounced lower-level wind convergences are likely to reduce precipitation significantly over many parts of central Africa. However, the convergence is still significant over central Tanzania towards Lake Victoria Basin (LVB) keeping significant precipitation over there. Otherwise, the tropical depression is expected to cause heavy precipitation along parts of Tanzania and Mozambique coastal areas. A frontal system is expected to keep enhanced precipitation over South Africa.
- At least 25mm for two or more days is likely over few areas of the Gulf of Guinea, some parts of central Tanzania and LVB, south coast of Tanzania and northern coast of Mozambique as well as South Africa).
- There is an increased chance for daily maximum heat index to exceed 40°C across portions of the Sahel region and CAR.

1.2. Atmospheric Dust Concentration Forecasts (valid: 23 – 25 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: 23 – 27 April 2019

Throughout the forecast period, the Azores High Pressure system over the North of Atlantic is expected to continue intensifying from 1025hPa to 1029hPa at the end of the period while steadily migrate towards East. It's influence on African weather is minimal, rather.

Throughout the forecast period, the St. Helena High Pressure system over Southeast Atlantic Ocean is expected to migrate steadily towards east. At first is expected to only slightly intensify from 1027hPa to 1028hPa but likely to relax from mid towards the end of the period. Due to its location and evolution, its influence on southern Africa weather is minimal. However, the frontal system is likely to influence significant precipitation over South Africa.

The passage of the frontal low is expected to keep the Mascarene High Pressure system over Southwest Indian Ocean far to the east during the first half of the period. However, it is likely to rebuild behind this front from mid towards the end of the forecast period. Even more significant, in the Southwest Indian Ocean is the development of the tropical depression just north of Madagascar which is likely to propagate southwestwards affecting southern Tanzania and northern Mozambique.

At 925hPa, strong wind speeds (>35) over Libya are likely to trigger high dust concentrations over there. Meanwhile, strong winds are also likely to develop over Chad towards the end of the forecast period. Over the Sahel and the Gulf of Guinea, Monsoon winds are likely to maintain their influence over the area, characterized by isolated moderate to enhanced precipitation. Over the central Africa the low level convergence is likely to continue triggering enhanced to heavy precipitation over there. On the other hand, a cyclonic flow with tight gradient, associated with a tropical depression is expected to travel southwestwards before hitting southern Tanzania and northern Mozambique.

850hPa wind pattern indicates weak convergent wind patterns over central Africa (DRC and CAR) and South Sudan. Only slight to moderate precipitation is likely. More prominent convergence is likely over Lake Victoria Basin (LVB), central Tanzania as well as coastal Tanzania due to the influence of the expected tropical depression. These areas are likely to receive enhanced to heavy precipitation during the period.

At 700hPa, easterly to northeasterly wind pattern is expected to continue dominate over the Sahel and Gulf of Guinea. Convective activities over these areas, if any, are likely to be propagated generally towards southwest. Quite significant cyclonic flow travelling from northern Madagascar to southern Tanzania and northern Mozambique is also evident at this level.

Being mainly easterly, 500hPa wind pattern is expected to help propagating activities towards west over most of the areas expected to feature significant convection, particularly in the Sahel and Gulf of Guinea regions.

During the Subtropical Westerly Jet at 200hPa is expected to be weak, with most of the times having winds less than 130kts. Also, no significant bending (trough) is expected and therefore only minimally influencing weather over north and northeast Africa..

Very isolated moderate to enhanced precipitation is expected over few areas of the Gulf of Guinea, particularly over Nigeria. Less pronounced lower-level wind convergences are likely to reduce precipitation significantly over many parts of central Africa. However, the convergence is still significant over central Tanzania towards Lake Victoria Basin (LVB) keeping significant precipitation over there. Otherwise, the tropical depression is expected to cause heavy precipitation along parts of Tanzania and Mozambique coastal areas. A frontal system is expected to keep enhanced precipitation over South Africa. At least 25mm for two or more days is likely over few areas of the Gulf of Guinea, some parts of central Tanzania and LVB, south coast of Tanzania and northern coast of Mozambique as well as South Africa). There is an increased chance for daily maximum heat index to exceed 40oC across portions of the Sahel region and CAR.

2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (April 21, 2019)

Daily rainfall totals exceeding 25mm is observed over some areas of central DRC, Lake Victoria Basin (LVB) and South Africa.

2.2. Weather assessment for the current day (April 22, 2019)

Deep convective clouds are observed over the western DRC. Otherwise significant isolated convective clouds are seen over Cameroon.

