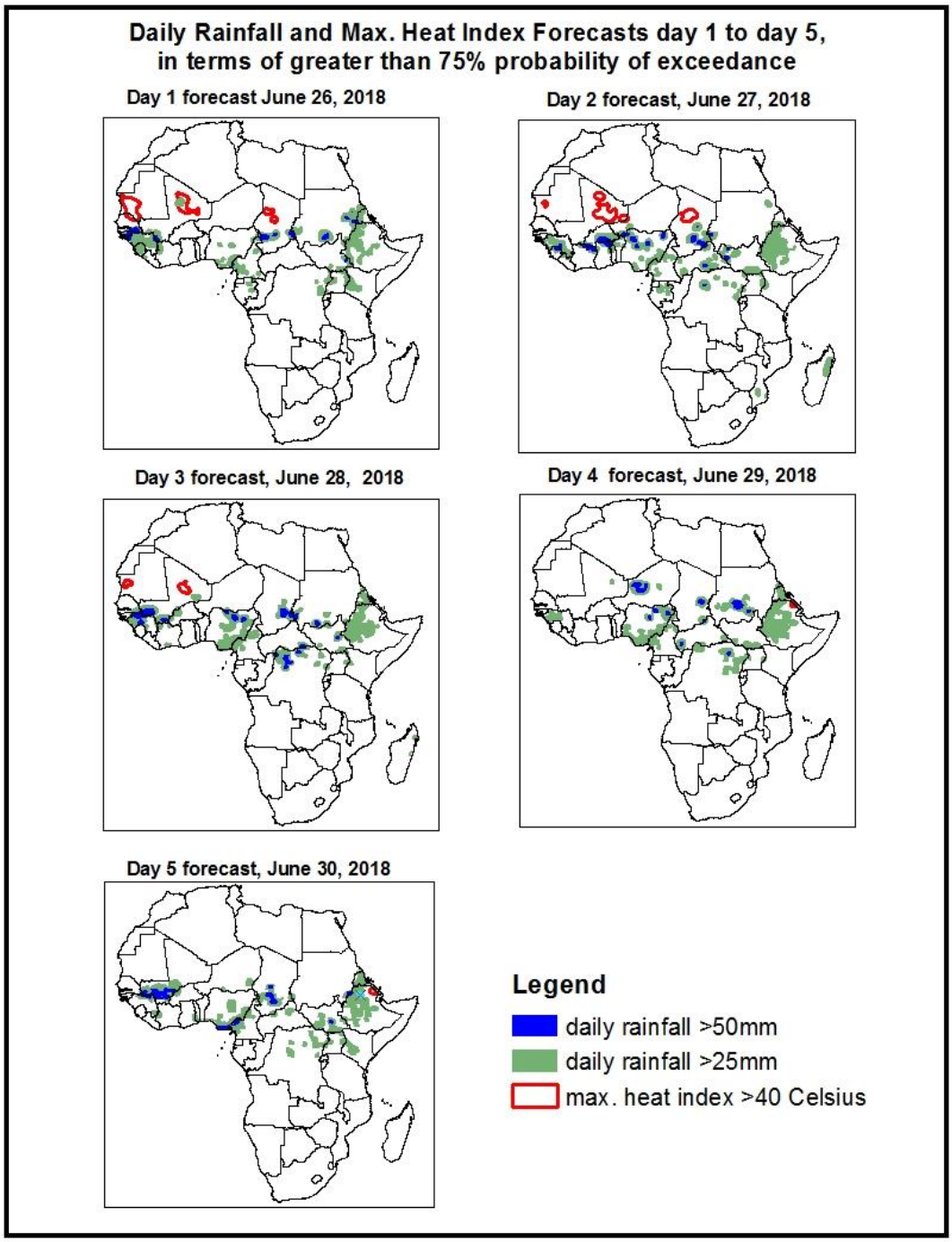
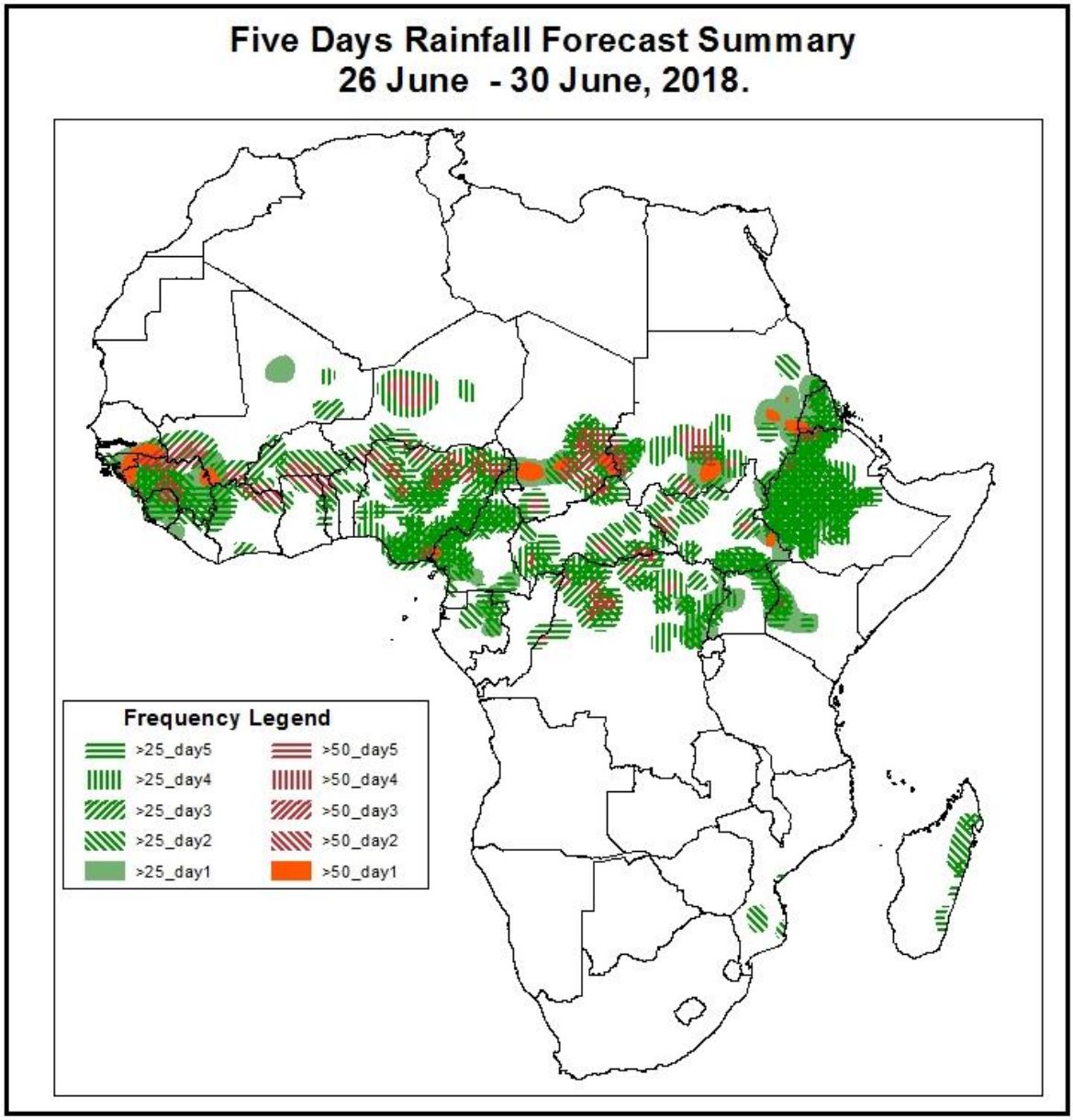
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on June 25, 2018)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: June 26, – June 30, 2018)

The forecasts are expressed in terms of high probability of precipitation (POP) and high probability of maximum heat index, based on the NCEP/GFS and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



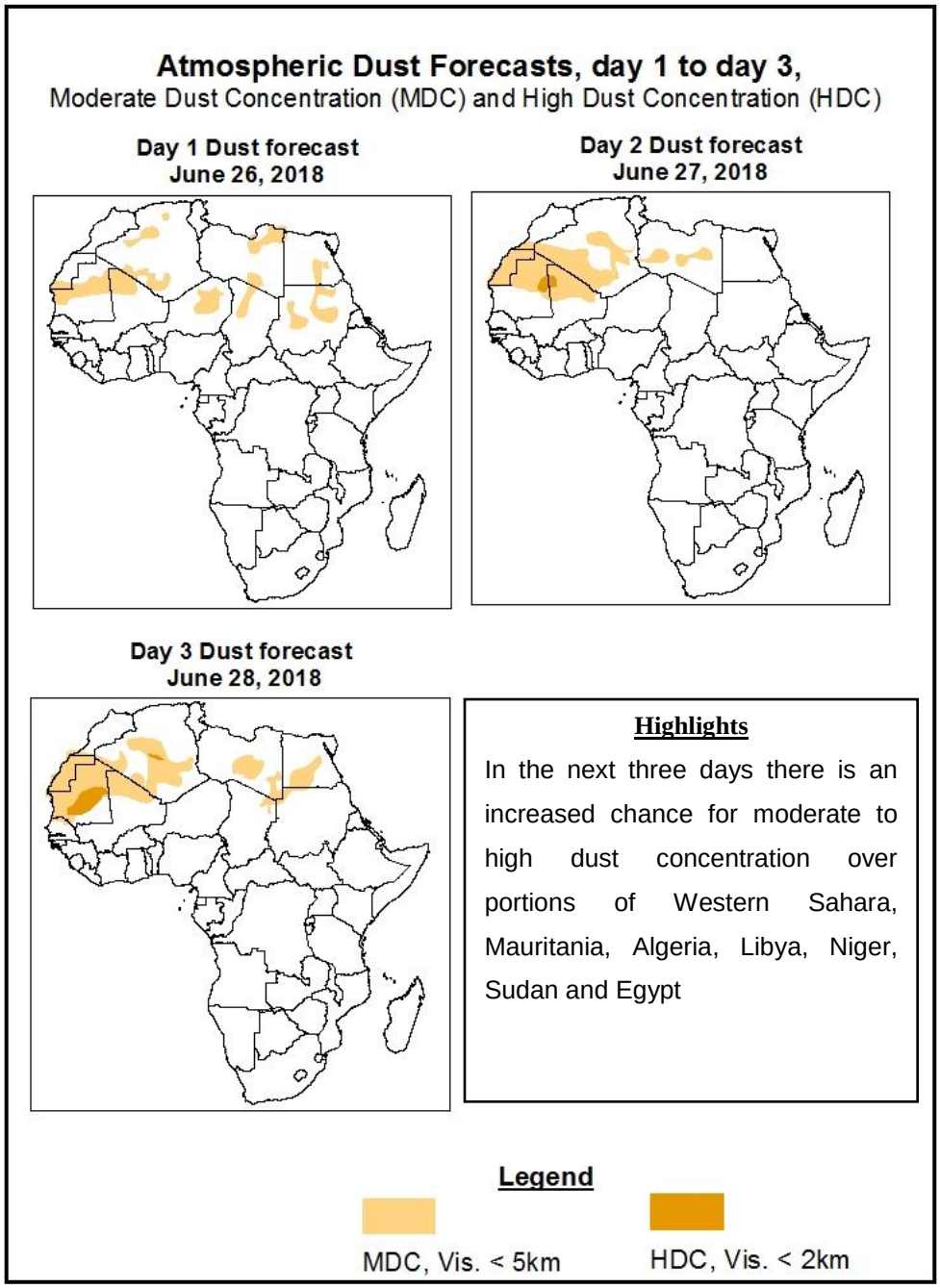


Highlights

In the next five days, areas of anomalous lower-level convergence and upper level divergence over parts of East Africa, Central Africa and Gulf of Guinea Countries are expected to enhance rainfall in these regions, while areas of anomalous lower-level divergence over Central Africa are expected to suppress rainfall during the forecast period. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Senegal, Mali, Guinea, Sierra Leone, Ivory Coast, Ghana, Burkina Faso, Niger, Nigeria, Cameroon, Chad, Gabon, CAR, DRC, Sudan, South Sudan, Uganda, Kenya, Eritrea, Ethiopia and Madagascar.

1.2. Atmospheric Dust Concentration Forecasts (valid: June 26 – June 28, 2018)

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: June 26– June 30, 2018*

The Azores High Pressure system over the North Atlantic Ocean is expected to intensify during the forecast period. The central pressure increased from 1020hPa to 1033hPa in the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to intensify on the second day and then quasi stationary in the subsequent days during the forecast period. The central pressure value increased from 1024hPa to 1025hPa in the forecast period.

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The Mascarene High Pressure system over the Southwest Indian Ocean is expected to intensify in first three days and then weaken in the subsequent days of the forecast period The central pressure value increased from 1029hPa to 1033hPa and decreased to 1031hPa in the forecast period.

At 925hPa, dry strong northeasterly to easterly wind is expected to prevail across northern Africa and portions of the Sahel region.

At 850hPa, in West Africa, it is expected that the Inter Tropical Convergence Zone will oscillate above the Gulf of Guinea countries while the area of wind convergence remain active in Chad and Sudan.

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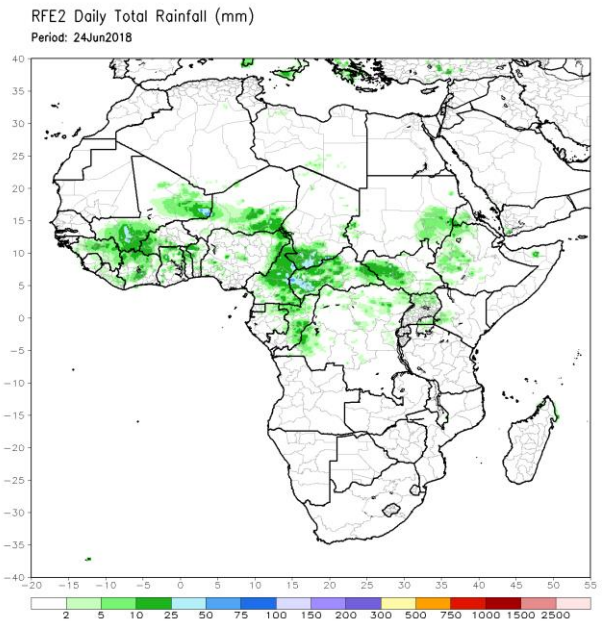
2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (June 24, 2018)

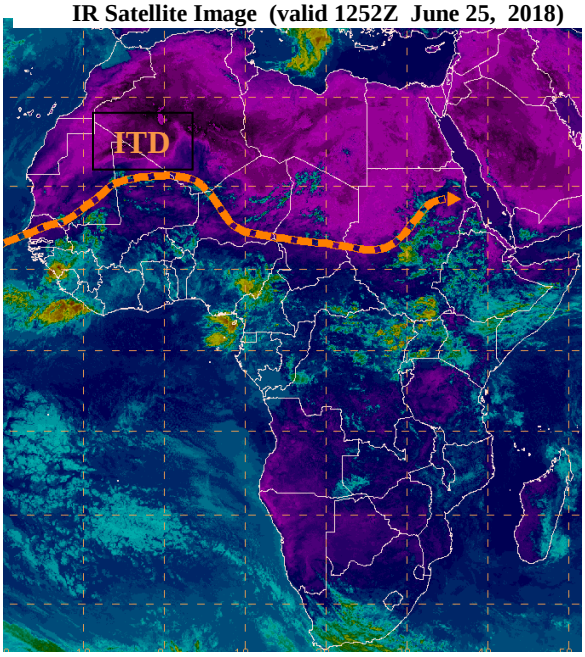
Moderate to locally heavy rainfall was observed over parts of Mali, Ivory Coast, Burkina Faso, Niger, Ghana, Chad, CAR, and South Sudan.

2.2. Weather assessment for the current day (June 25, 2018)

Intense convective clouds are observed over parts of Sierra Leon, Nigeria, DRC, Sudan and South Sudan.



IR Satellite Image (valid 1252Z June 25, 2018)



Previous day rainfall condition over Africa (Left) based on the NCEP CPCE/RFE and current day cloud cover and ITD (right) based on IR Satellite image and 925hPa wind.

Authors: ***Nicholas Jacob Eigege*** (Nigerian Meteorological Agency — NiMet) / CPC-African Desk; *nicholas.jacob@noaa.gov*