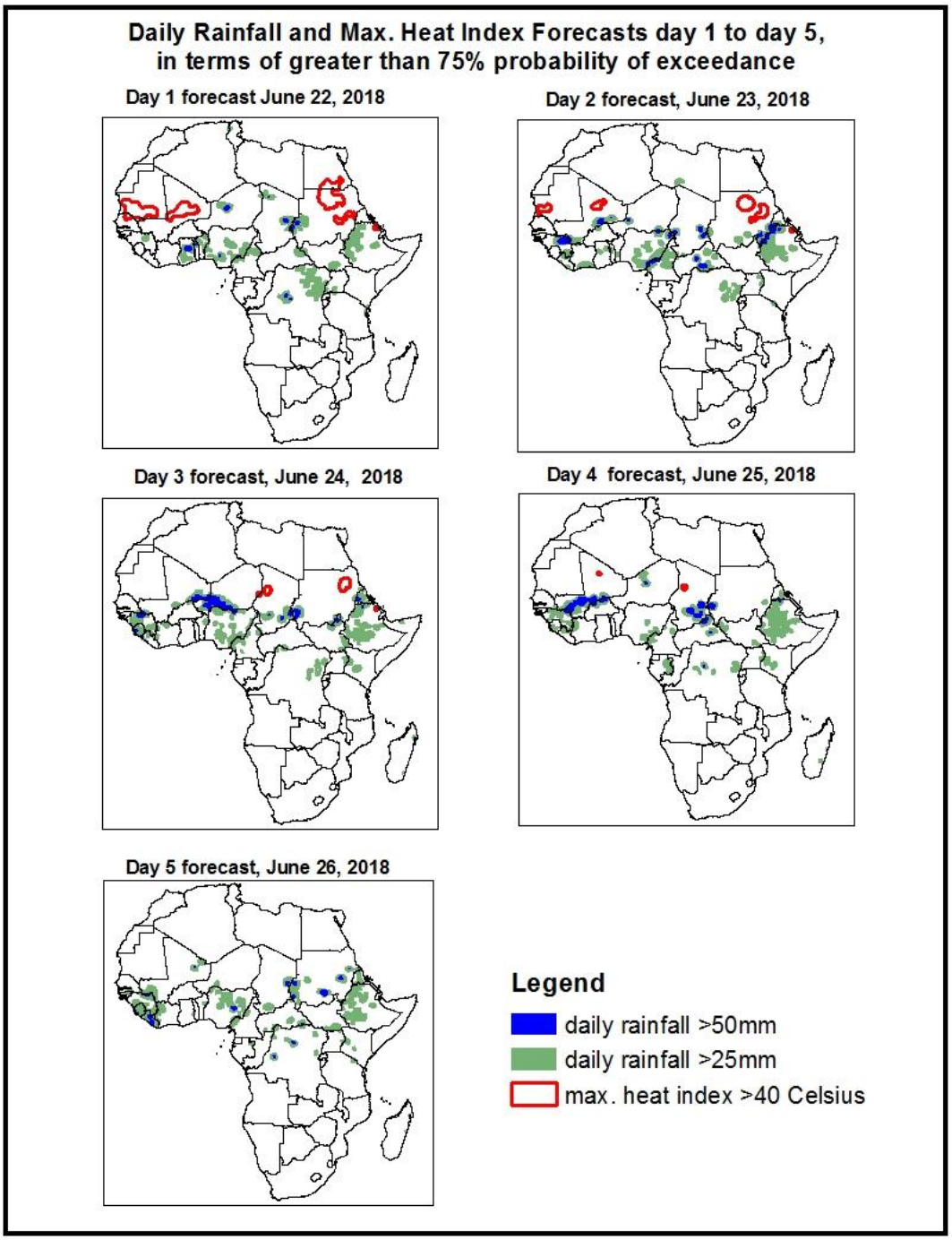
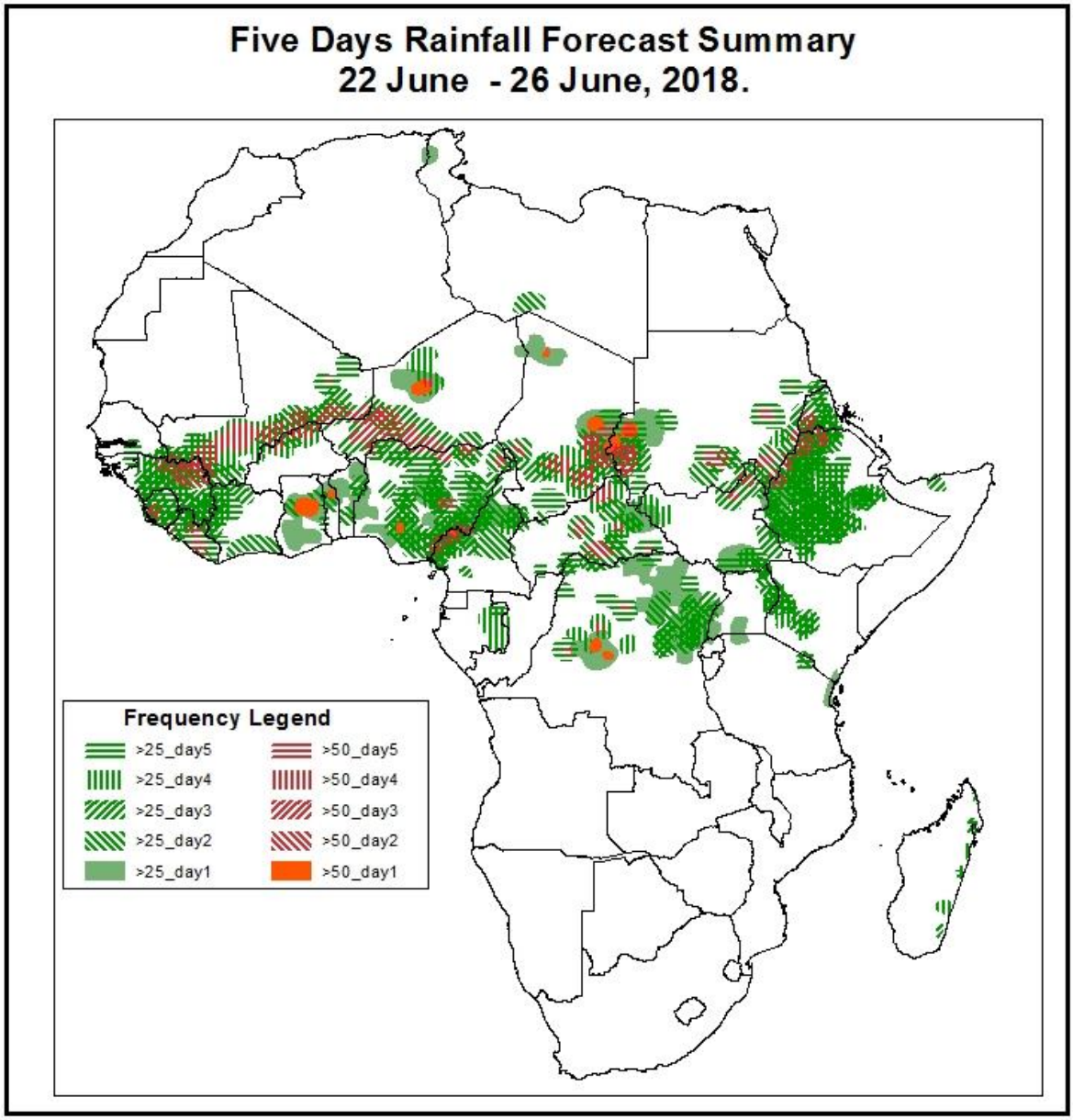
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on June 21, 2018)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: June 22, – June 26, 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.



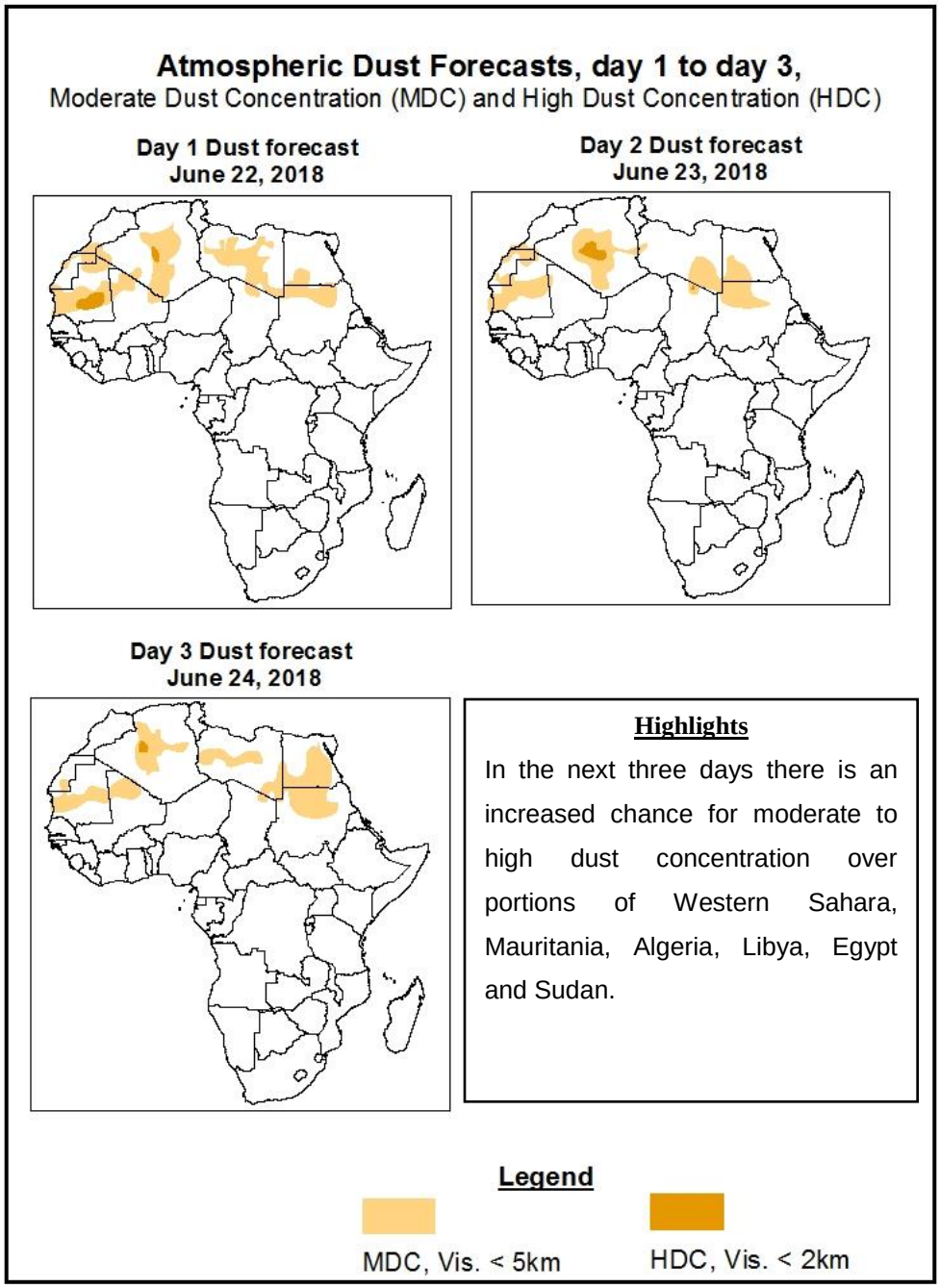


Highlights

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. On the other hand, areas of anomalous lower-level divergence over the Central African region 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 Mali, Guinea, Liberia, Ivory Coast, Burkina Faso, Ghana, Togo, Benin, Niger, Nigeria, Cameroon, Chad, Gabon, CAR, DRC, Sudan, South Sudan, Uganda, Kenya, and Ethiopia.

1.2. Atmospheric Dust Concentration Forecasts (valid: June 22 – June 24, 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 22– June 26, 2018*

The Azores High Pressure system over the North Atlantic Ocean is expected to weaken during the forecast period. The central pressure decreased from 1028hPa to 1020hPa within the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to be quasi stationary in the first two days and then weaken during the forecast period. The central pressure value is 1026hPa and then decreased to 1024hPa during the forecast period.

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The Mascarene High Pressure system over the Southwest Indian Ocean is expected to intensify in the first two days of the forecast period and the remained quasi stationary within the forecast period. The central pressure value increased from 1026hPa to 1027 hPa.

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 Uganda and Sudan.

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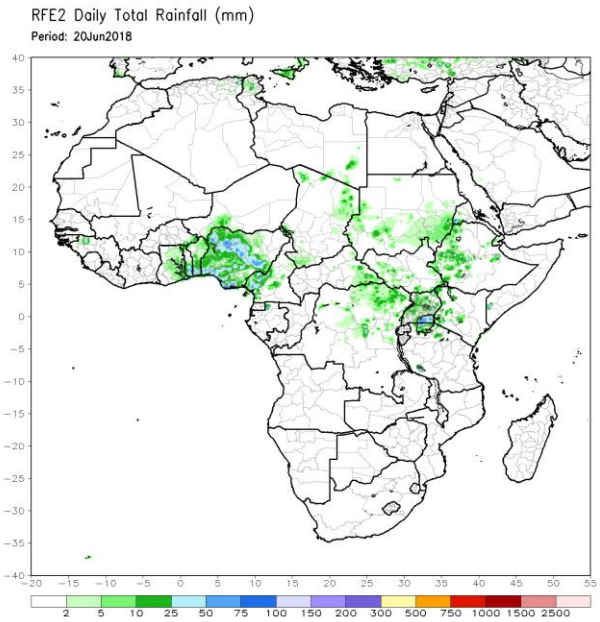
2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (June 20, 2018)

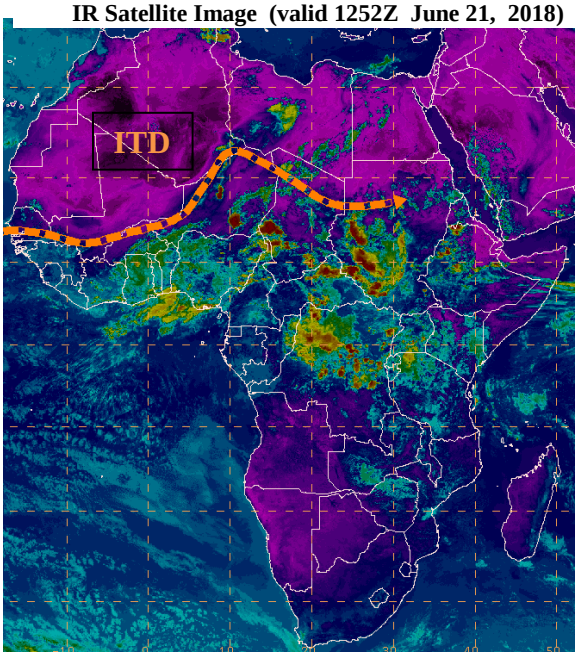
Moderate to locally heavy rainfall was observed over parts of Guinea, Togo, Benin, Nigeria, Cameroon, Gabon, DRC, Uganda, Kenya, Eritrea and Ethiopia.

2.2. Weather assessment for the current day (June 21, 2018)

Intense convective clouds are observed over parts of Ghana, Niger, Chad, CAR, DRC, Uganda, Sudan, South Sudan and Ethiopia.



IR Satellite Image (valid 1252Z June 21, 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.

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