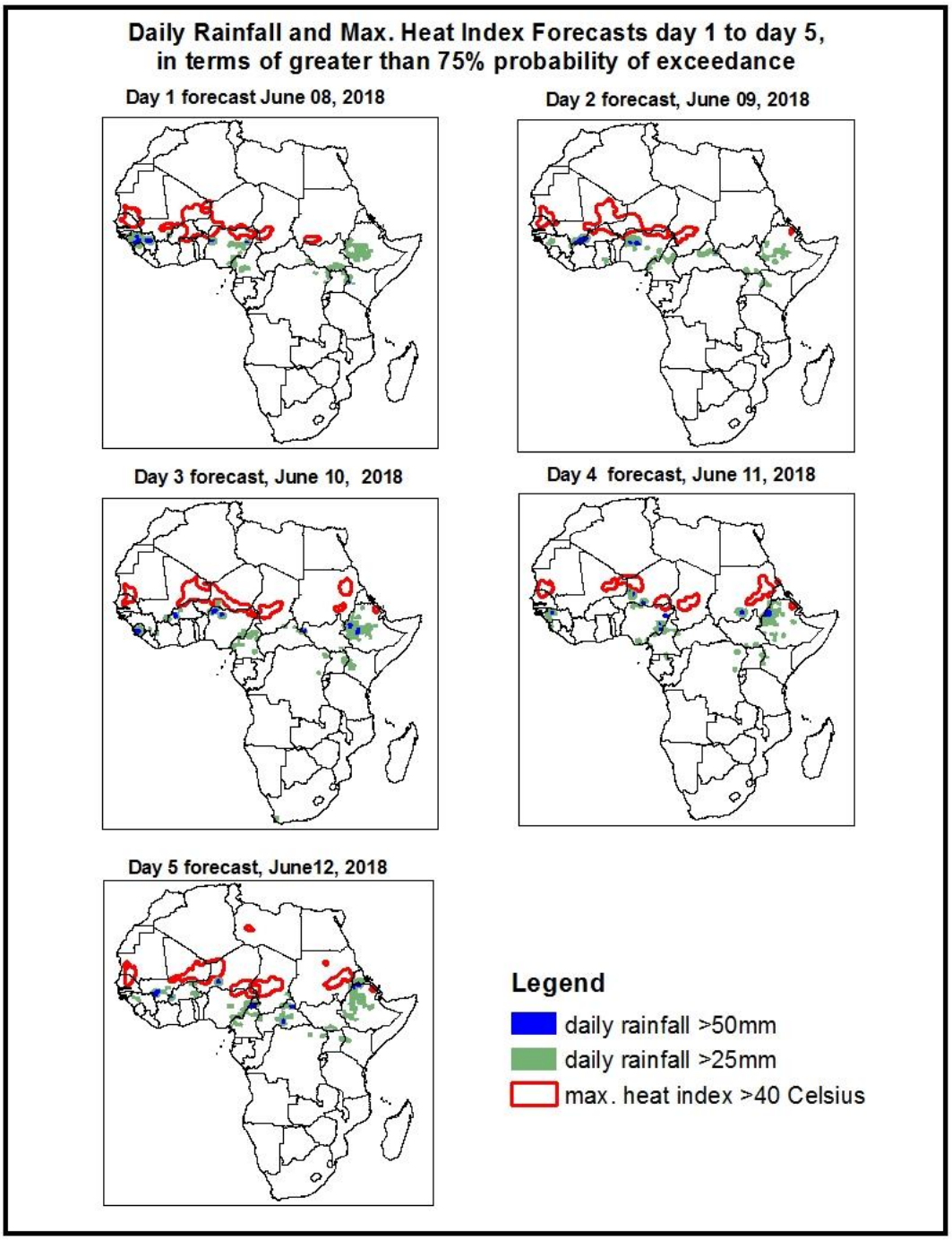
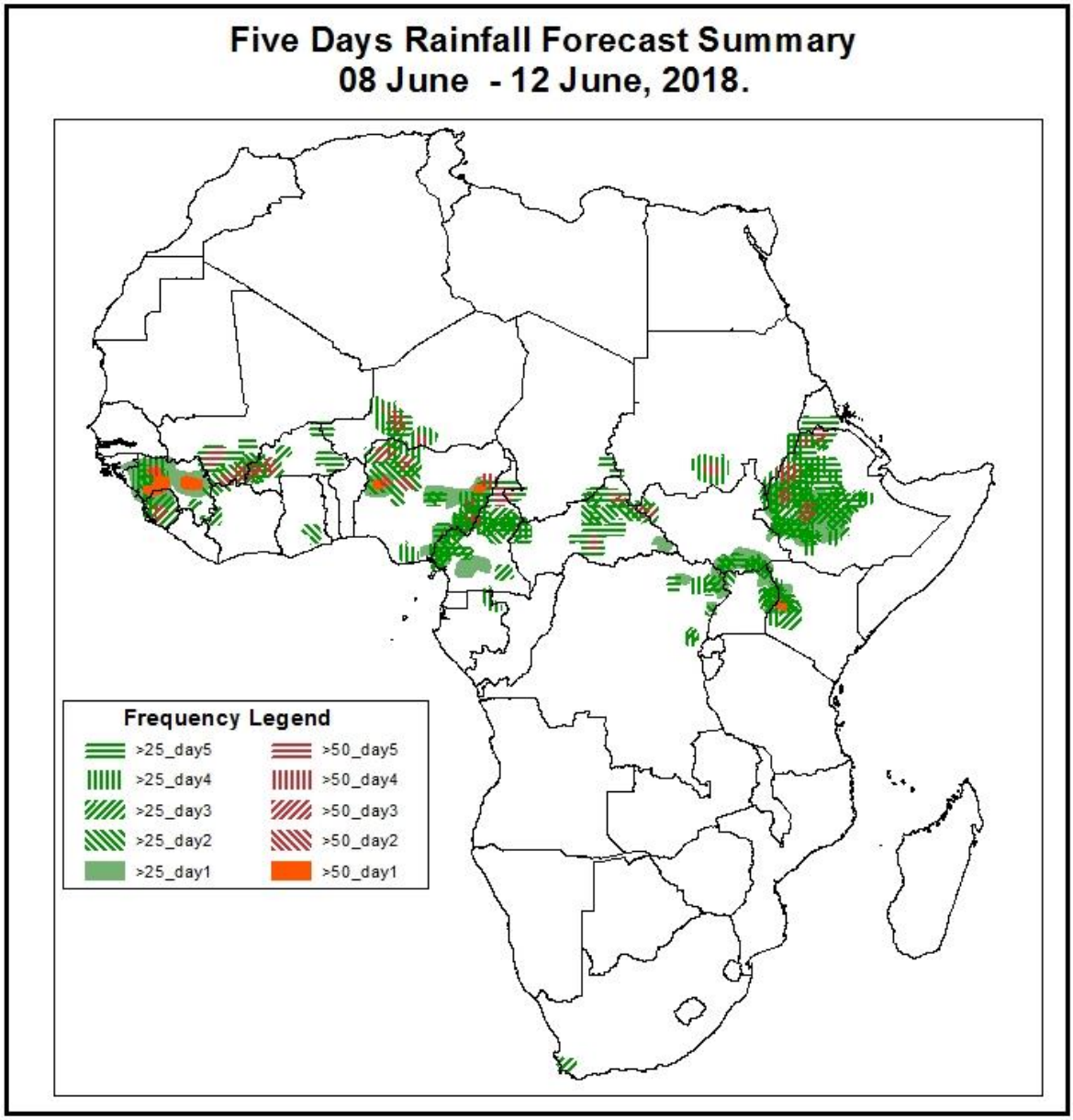
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on June 07, 2018)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: June 08, – June 12, 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.



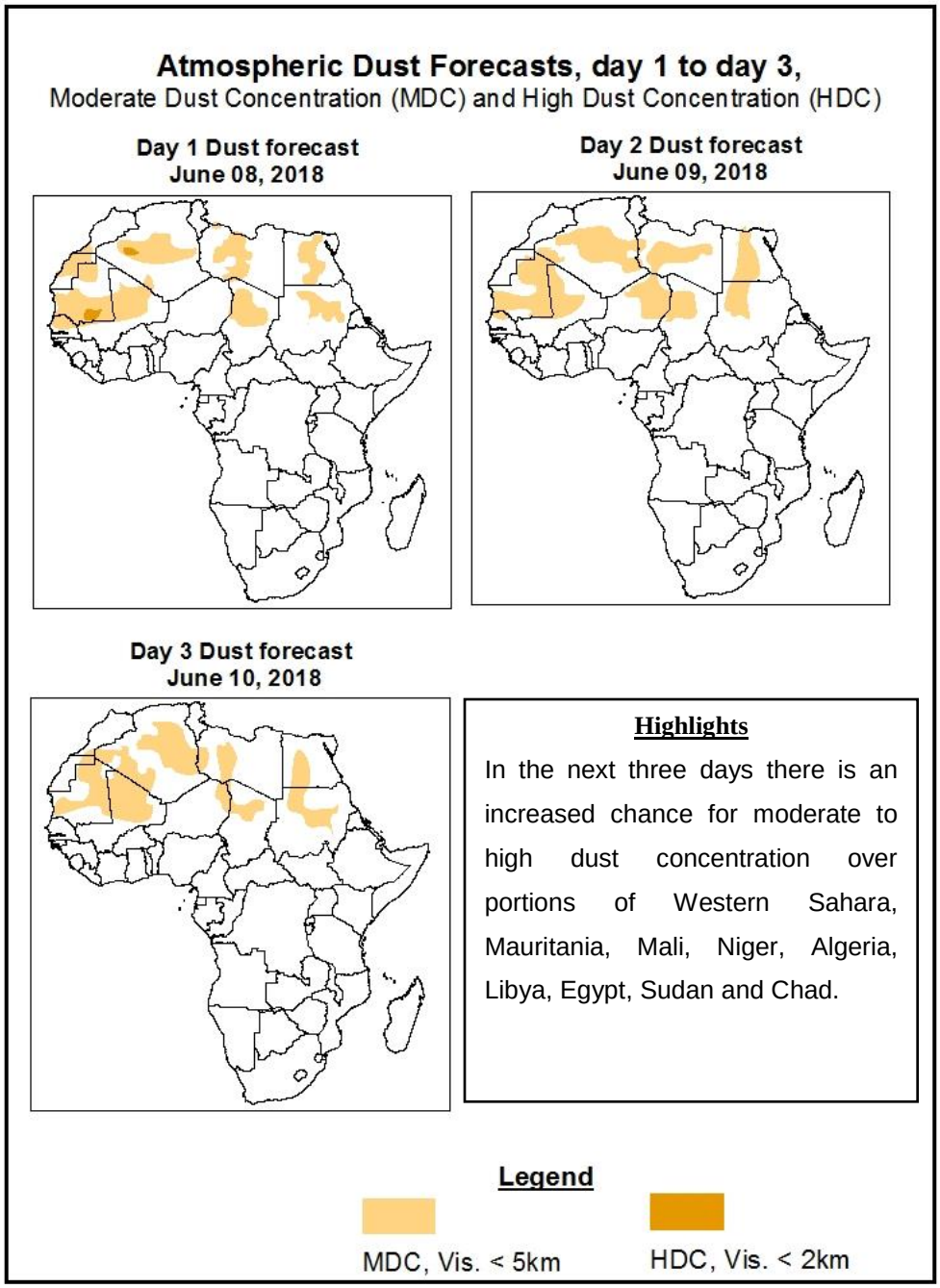


Highlights

In the next five days, areas of anomalous lower-level convergence in East Africa and Western part of Gulf of Guinea are expected to enhance rainfall in the western part of Gulf of Guinea and East Africa. While areas of anomalous lower-level divergence over the Gulf of Guinea and Central African region are expected to suppress rainfall. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Guinea, Sierra Leone, Mali, Burkina Faso, Niger, Nigeria, Cameroon, CAR, Sudan, South Sudan Kenya and Ethiopia.

1.2. Atmospheric Dust Concentration Forecasts (valid: June 08 – June 10, 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 08– June 12, 2018*

The Azores High Pressure system over the North Atlantic Ocean is expected to weaken in the first three days and then intensify in the last two days of the forecast period. The central pressure values decreases from about 1027hPa to 1025 hPa and increases to 1027 hPa during the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to intensify during the forecast period. The central pressure values ranges from about 1025hPa to 1032 hPa during the forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to weaken in the first three days and then intensify in the last two days of the forecast period. The central pressure values decreases from about 1027hPa to 1025 hPa and increases to 1034 hPa during 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 the oscillation of the Inter Tropical Convergence Zone above the Gulf of Guinea countries while the area of wind convergence remain active in Uganda and South Sudan during the forecast period.

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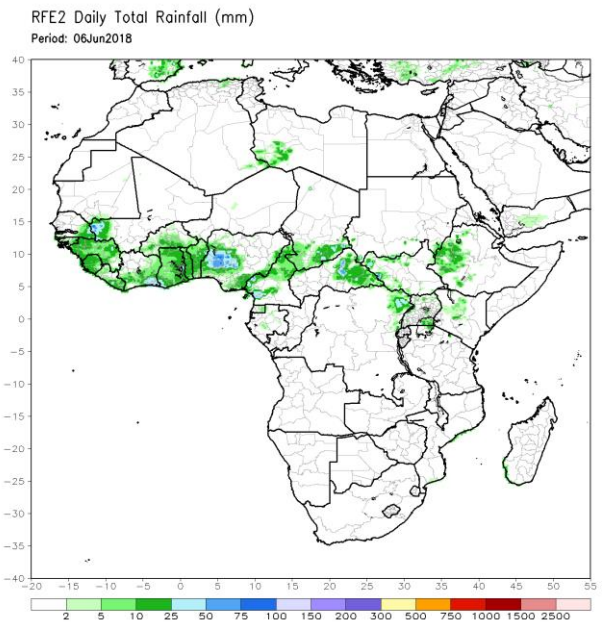
2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (June 06, 2018)

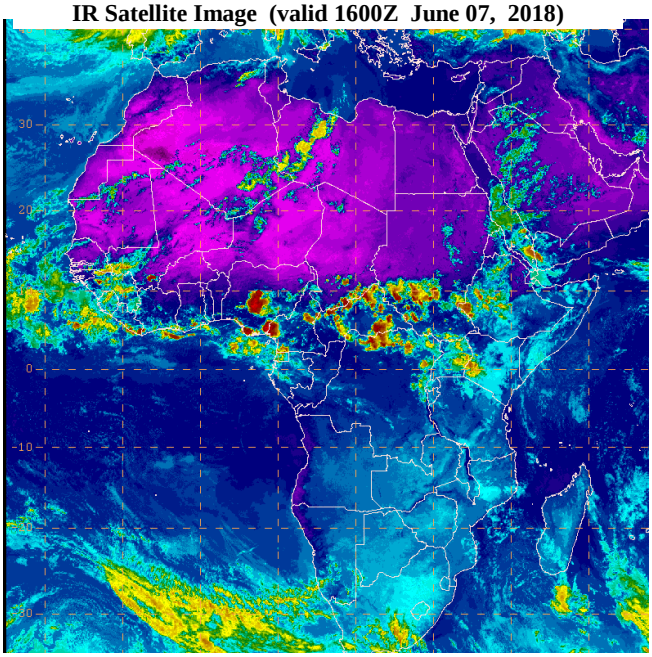
Moderate to locally heavy rainfall was observed over parts of Senegal, Mali, Guinea, Sierra Leone, Liberia, Ivory Coast, Burkina Faso, Ghana,Togo,Benin,Nigeria, Cameroon, CAR, DRC, Sudan, South Sudan, Kenya, Uganda and Ethiopia.

2.2. Weather assessment for the current day (June 07, 2018)

Intense convective clouds are observed over parts of the Gulf of Guinea and across Central Africa.



IR Satellite Image (valid 1600Z June 07, 2018)



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

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