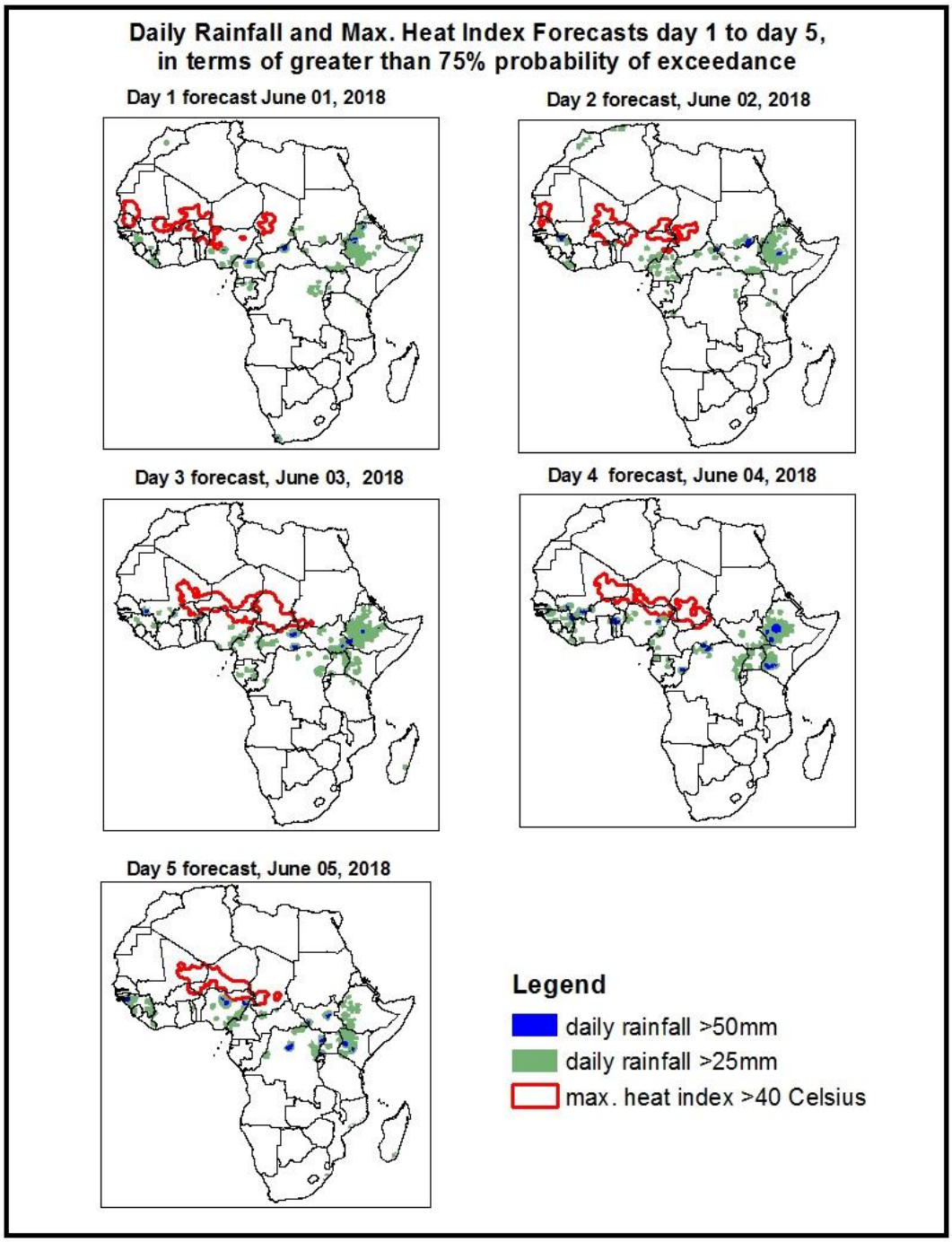
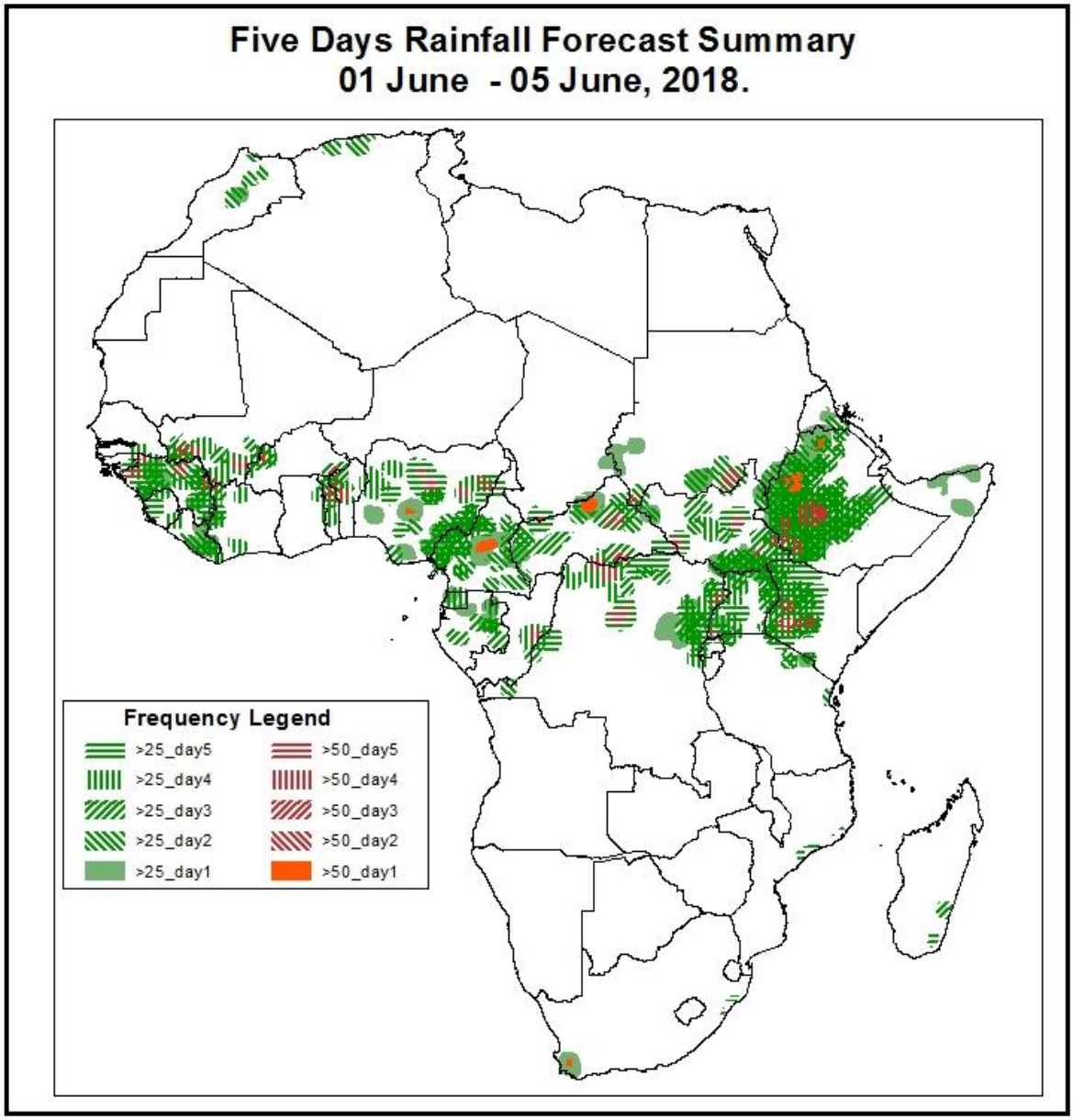
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on May 31, 2018)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: June 01, – June 05, 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.



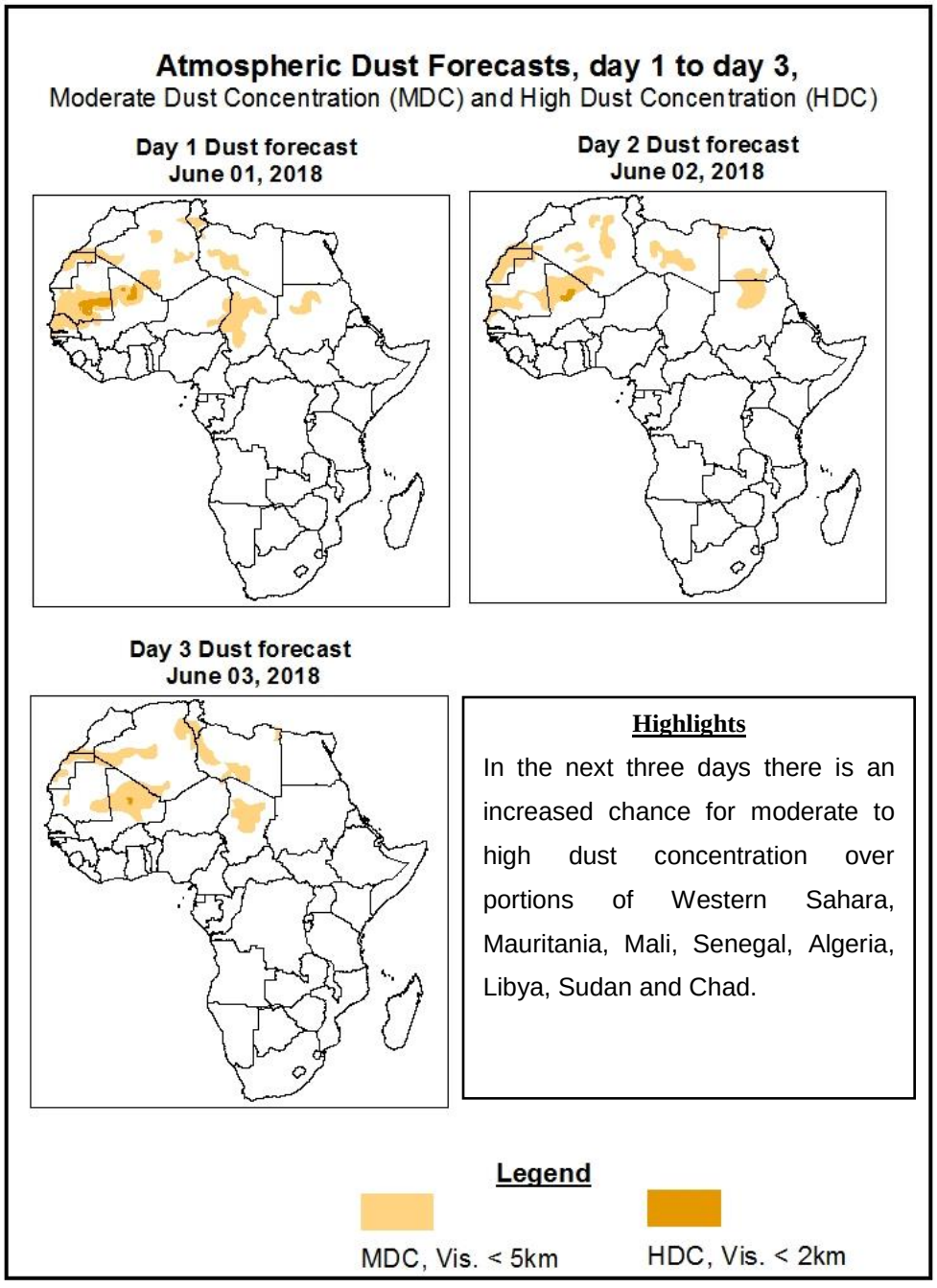


Highlights

In the next five days, lower-level convergence across part of countries from the Horn of Africa to the limit of Benin and Western part of Gulf of Guinea are expected to enhance rainfall in the western part of Gulf of Guinea and at the level of the band of countries located between the horn of Africa and the limit of Benin. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Guinea, Sierra Leone, Liberia, Mali, Burkina Faso, Togo, Benin, Nigeria, Cameroon, Gabon, Equatorial Guinea, Congo, CAR, DRC, Sudan, South Sudan, Uganda, Kenya and Ethiopia.

1.2. Atmospheric Dust Concentration Forecasts (valid: June 01 – June 03, 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 01– June 05, 2018*

The Azores High Pressure system over the North Atlantic Ocean is expected to weaken during the forecast period. The central pressure values ranges from about 1027 hPa to 1023 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 1027 hPa to 1038 hPa during the forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to intensify during the forecast period. The central pressure values ranges from about 1026 hPa to 1038 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, South Sudan and southern part of Chad, during the forecast period.

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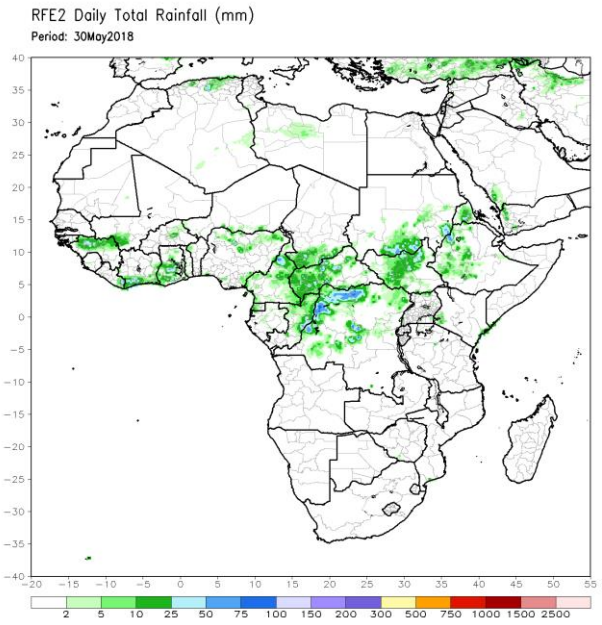
2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (May 30, 2018)

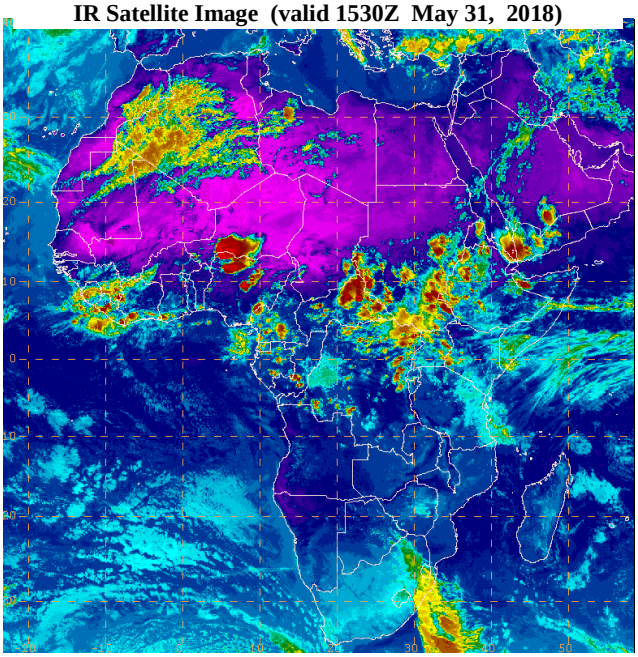
Moderate to locally heavy rainfall was observed over parts of Algeria, Guinea, Liberia, Ivory Coast, Ghana, Nigeria, Cameroon, Equatorial Guinea, Congo, Chad, CAR, DRC, Sudan, South Sudan, Ethiopia and Eritrea.

2.2. Weather assessment for the current day (May 31, 2018)

Intense convective clouds are observed over across most parts of Central Africa.



IR Satellite Image (valid 1530Z May 31, 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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