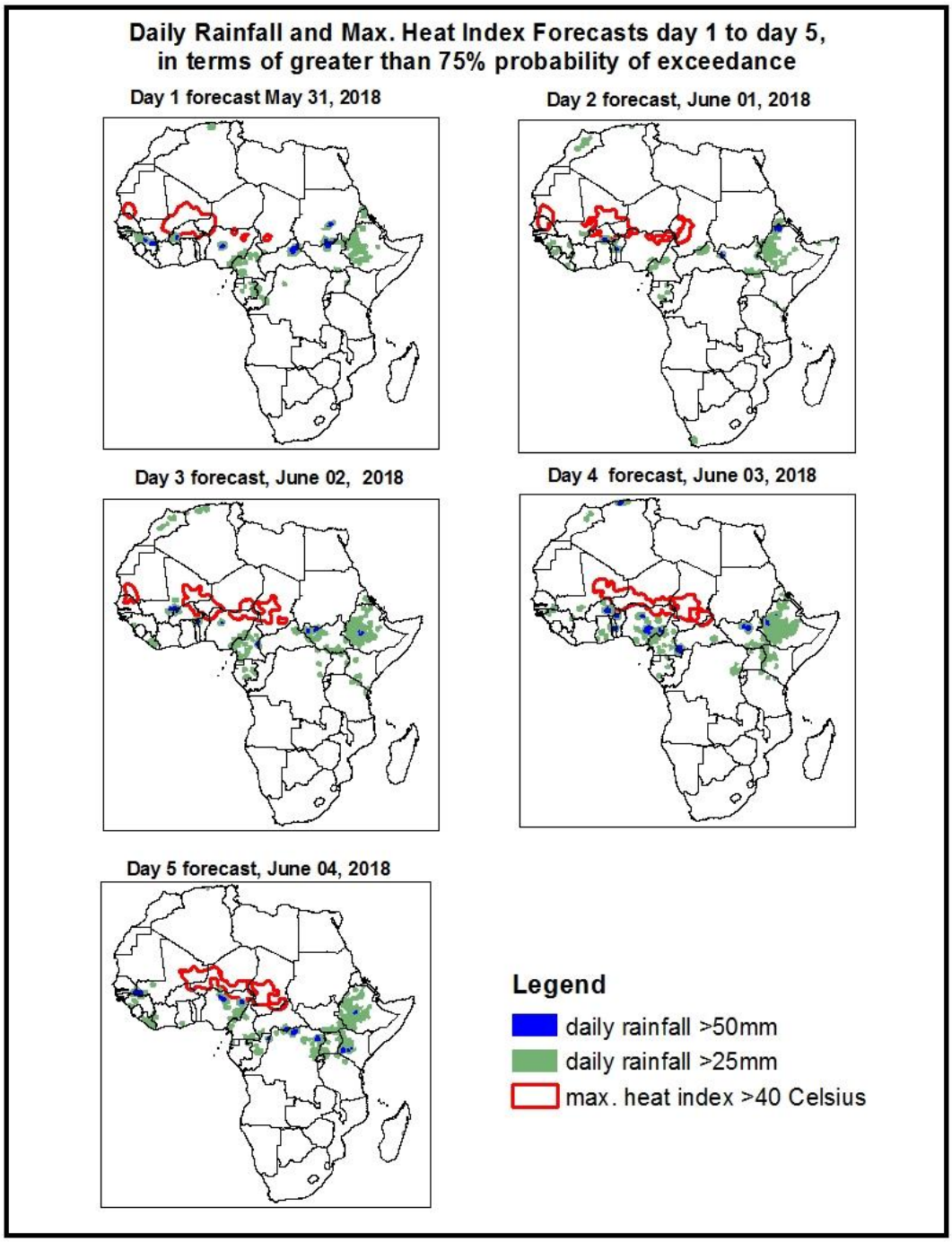
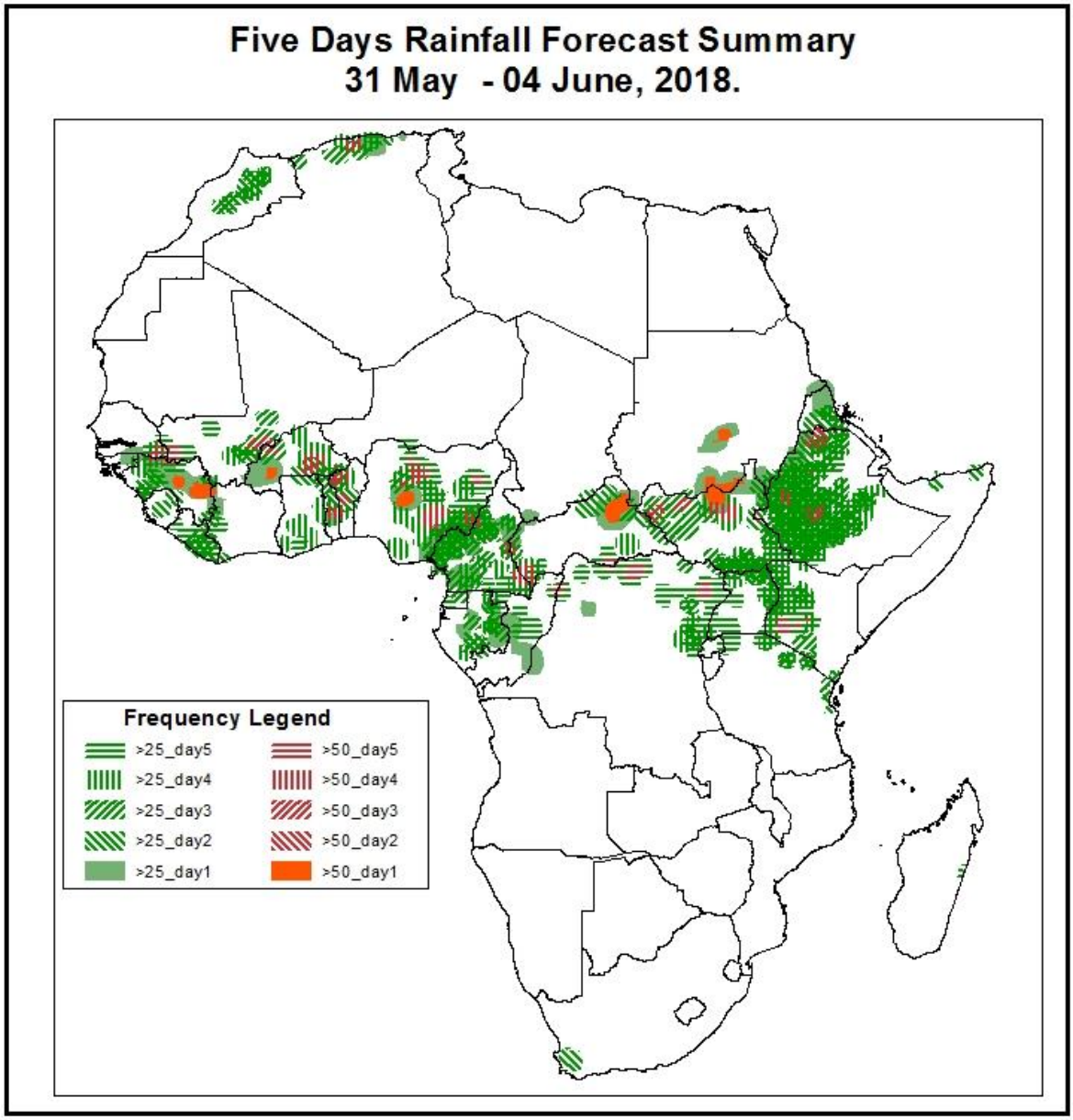
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on May 30, 2018)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: May 31, – June 04, 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.



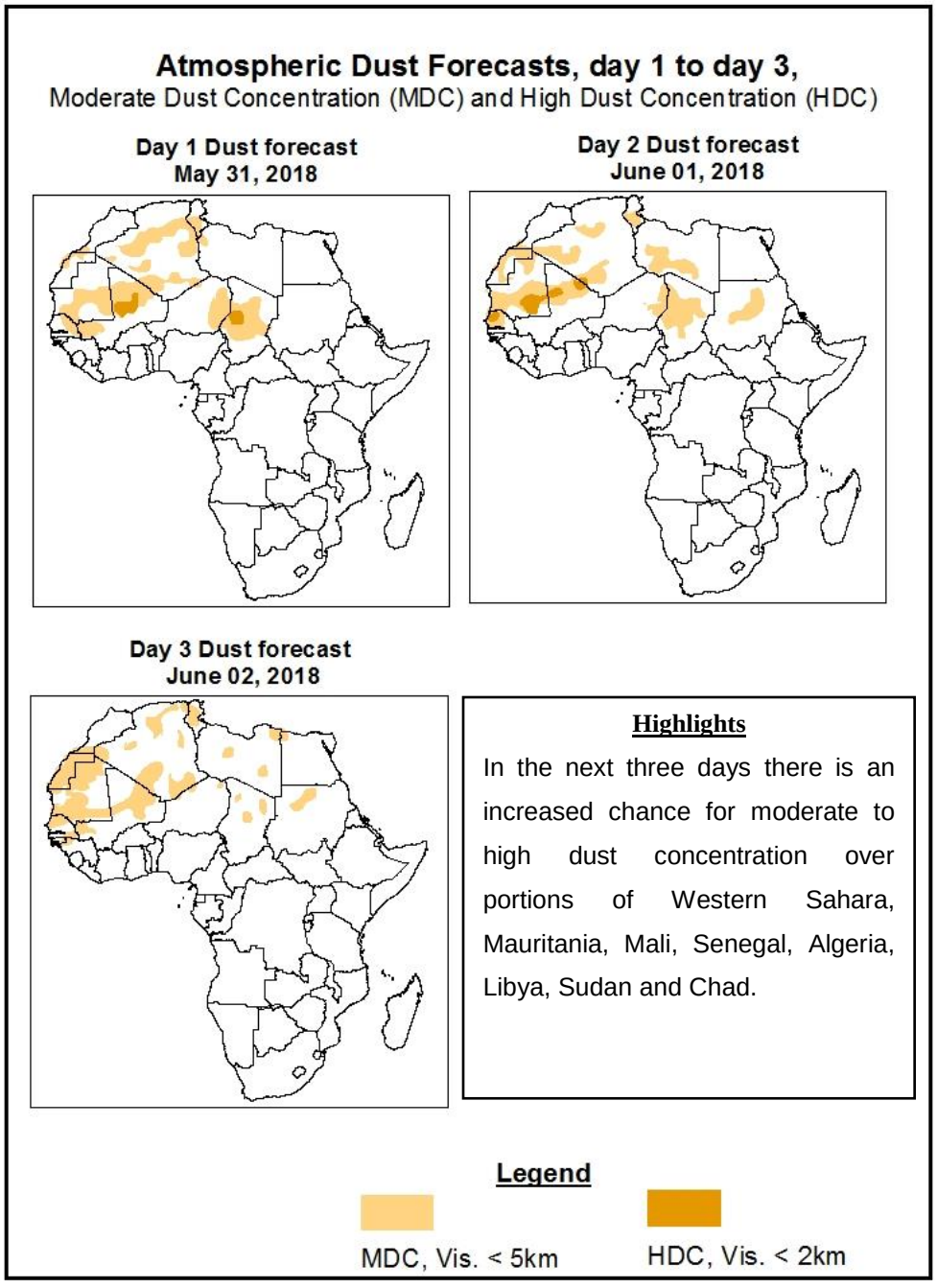


Highlights

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 Morocco, Algeria, Senegal, Guinea, Sierra Leone, Liberia, Mali, Burkina Faso, Ghana, Togo, Benin, Nigeria, Cameroon, Gabon, Equatorial Guinea, Congo, CAR, DRC, Sudan, South Sudan, Uganda, Kenya, Ethiopia and Eritrea.

1.2. Atmospheric Dust Concentration Forecasts (valid: May 31 – June 02, 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: May 31– June 04, 2018*

The Azores High Pressure system over the North Atlantic Ocean is expected to intensify in the first three days and then weaken in the last two days of the forecast period. The central pressure values increases from about 1024 hPa to 1028 hPa and decreases to 1024hPa during the forecast period.

The St. Helena High Pressure system over the Southeast 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 1028 hPa to 1026 hPa and increases to 1030 hPa during the forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to weaken in the first two days and then intensify in the last three days of the forecast period. The central pressure values decreases from about 1028 hPa 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 South Sudan and Uganda during the forecast period.

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 Morocco, Algeria, Senegal, Guinea, Sierra Leone, Liberia, Mali, Burkina Faso, Ghana, Togo, Benin, Nigeria, Cameroon, Gabon, Equatorial Guinea, Congo, CAR, DRC, Sudan, South Sudan, Uganda, Kenya, Ethiopia and Eritrea.

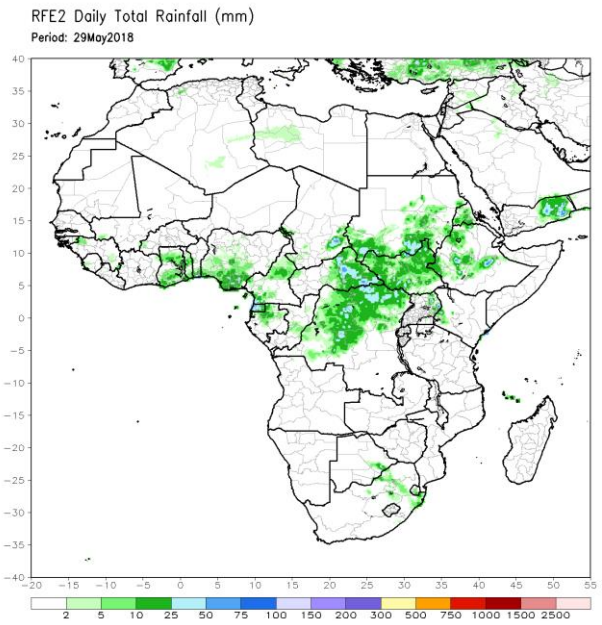
2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (May 29, 2018)

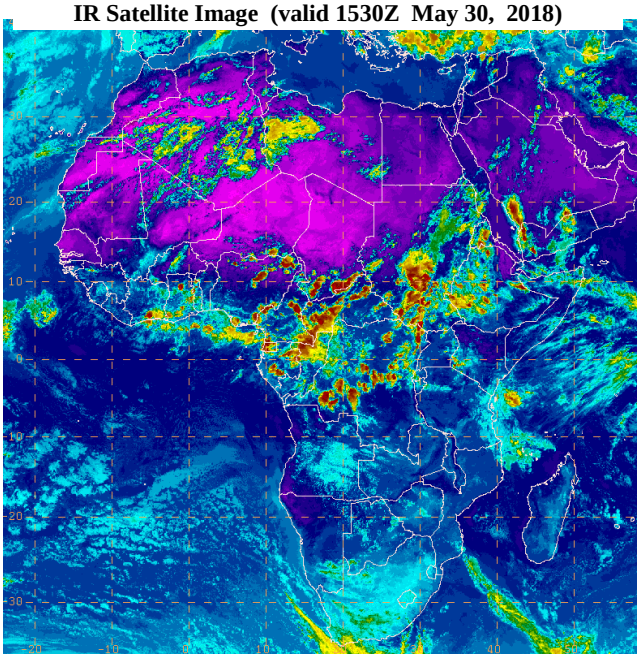
Moderate to locally heavy rainfall was observed over parts of Ghana, Togo, Benin, Nigeria, Cameroon, Gabon, Equatorial Guinea, Chad, CAR, DRC, Sudan, South Sudan, Uganda, Kenya, Ethiopia and Eritrea.

2.2. Weather assessment for the current day (May 30, 2018)

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



IR Satellite Image (valid 1530Z May 30, 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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