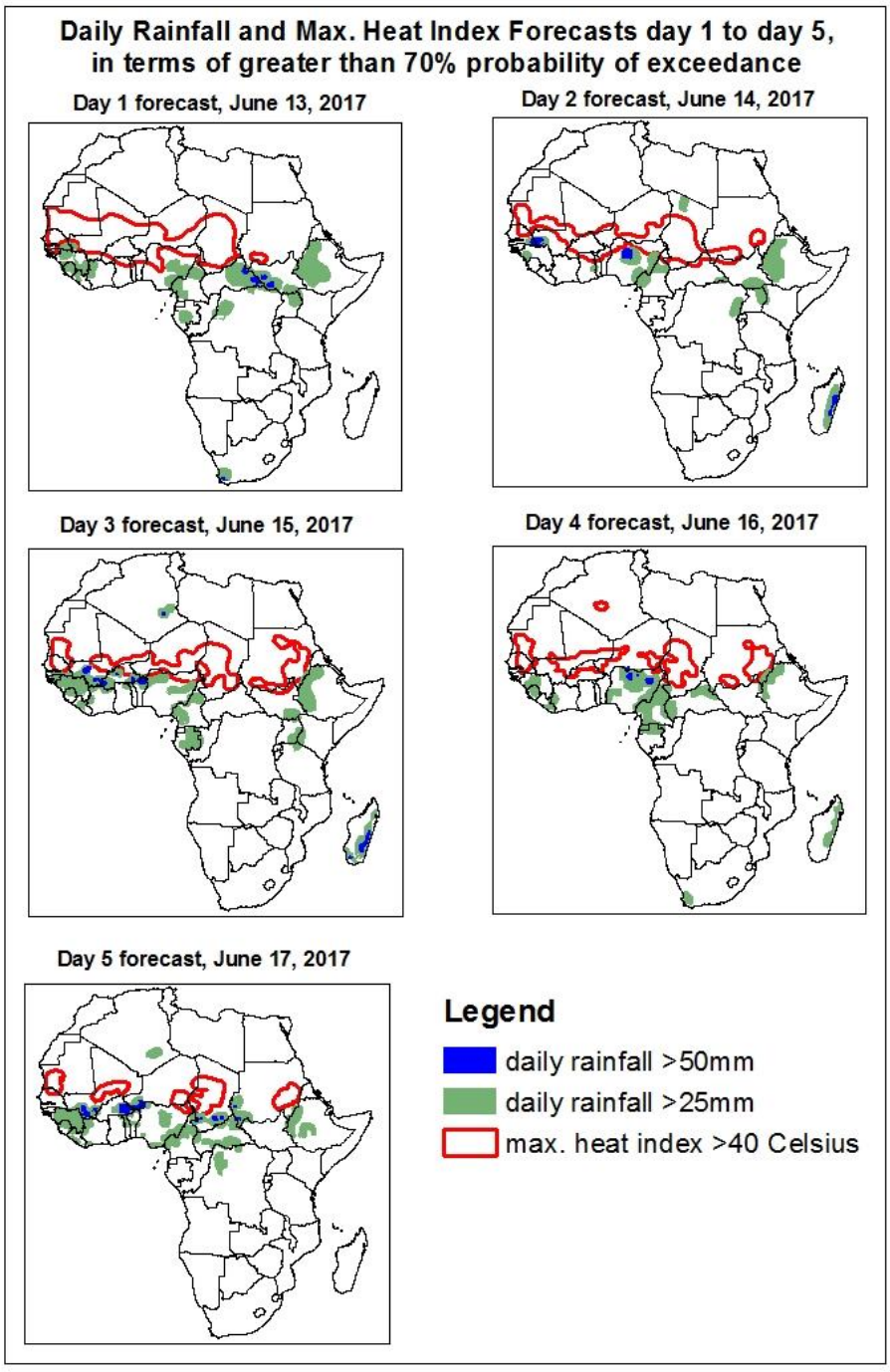
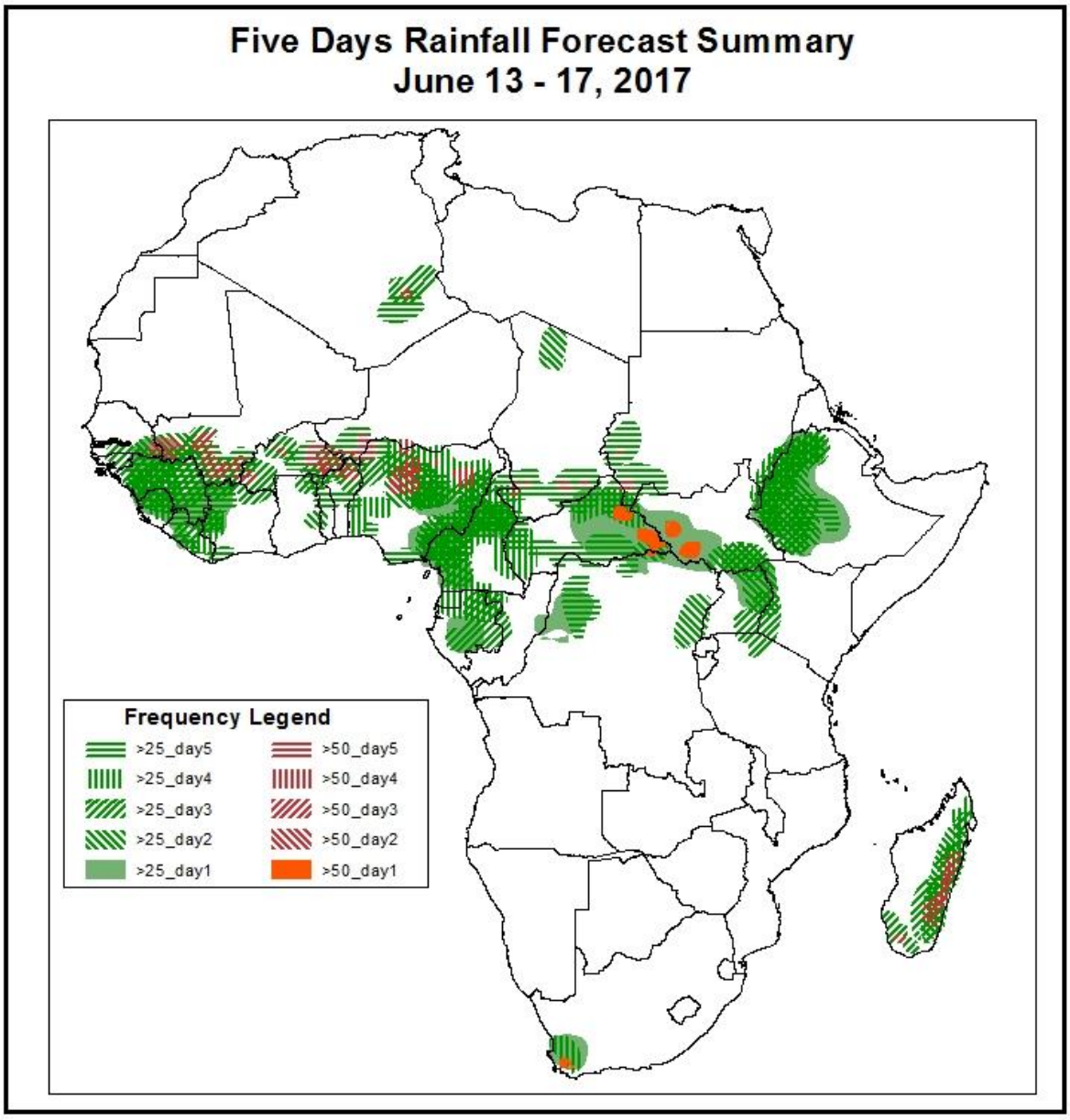
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on June 12, 2017)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: June 13– 17, 2017)

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



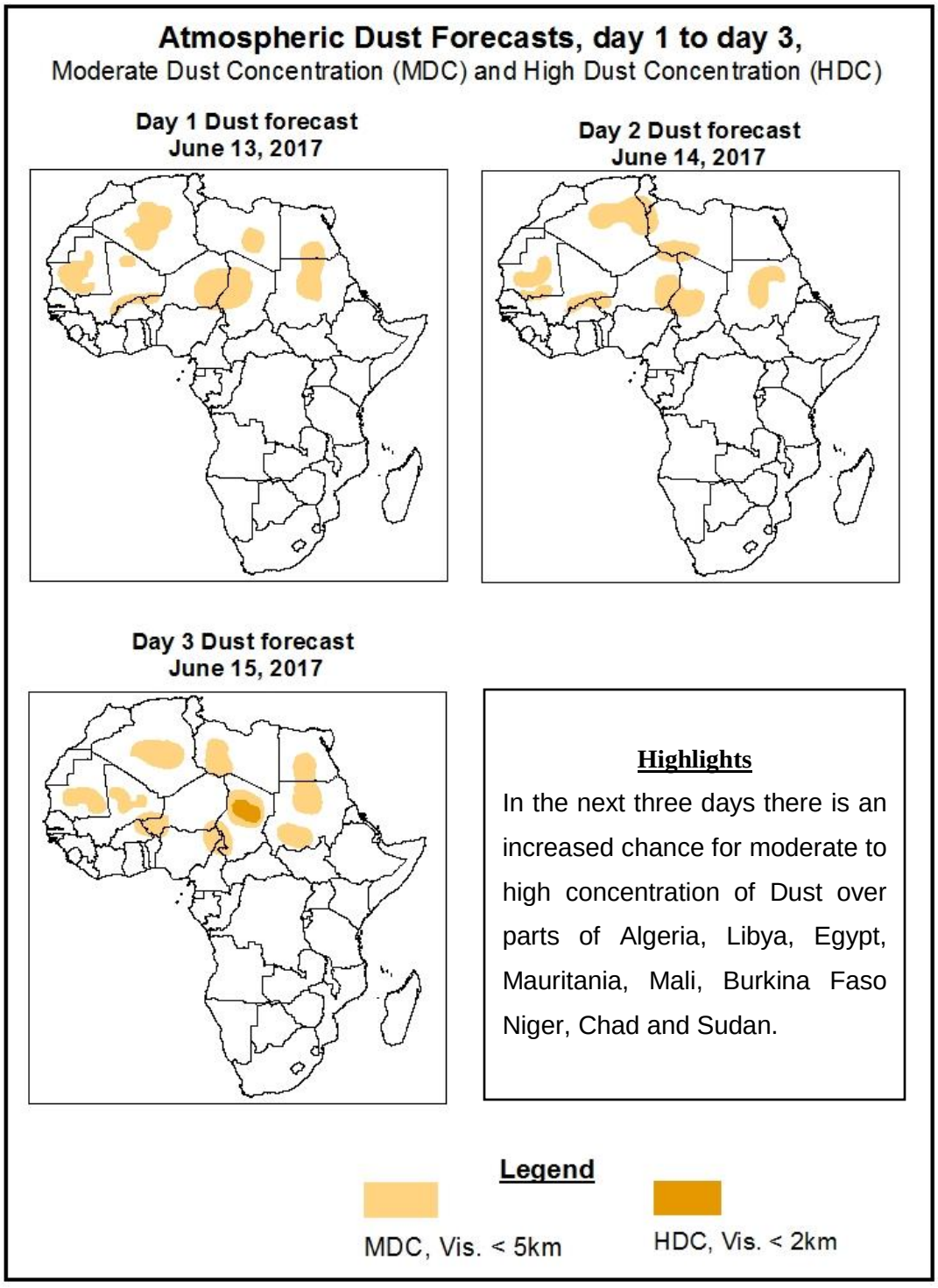


Highlights

In the next five days, lower level wind convergences across West, Central Africa countries and portions of the Greater Horn of Africa are expected to enhance rainfall in their respective regions. Frontal system is expected to enhance rainfall across parts of South Africa. Therefore, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Guinea, Sierra Leone, Liberia, Gabon and local areas of Algeria, Senegal, Mali, Burkina Faso, Niger, Chad, Sudan, Cote d'Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon, CAR, DRC, South Sudan, Ethiopia, Uganda, Kenya, South Africa and Madagascar.

1.2. Atmospheric Dust Concentration Forecasts (valid: June 13 –15, 2017)

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 13 – 17, 2017*

The Azores High Pressure system over the North Atlantic Ocean is expected to weaken with its value of the central pressure decreasing from 1026hPa to 1025hPa during the forecast period.

The St. Helena High Pressure system over the Southeast of the Atlantic Ocean is expected to intensify with its value of the central pressure increasing from 1025hPa to 1026hPa during the forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean will remain quasi-stationary during the forecast period with its value of the central pressure being 1034hPa.

At 925hPa, strong dry Northeasterly to westerly winds may lead from light to moderate dust concentration over parts of Tunisia, Algeria, Libya, Egypt, Mauritania, Mali, Burkina Faso, Niger, Chad and Sudan.

At 850hPa level, lower level wind convergences are expected to prevail over Mali, Burkina Faso, Niger, Chad, Sudan, Sierra Leone, Cote d'Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon, CAR, DRC, Ethiopia Uganda and Madagascar.

In the next five days, lower level wind convergences across West, Central Africa countries and portions of the Greater Horn of Africa are expected to enhance rainfall in their respective regions. Frontal system is expected to enhance rainfall across parts of South Africa. Therefore, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Guinea, Sierra Leone, Liberia, Gabon and local areas of Algeria, Senegal, Mali, Burkina Faso, Niger, Chad, Sudan, Cote d'Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon, CAR, DRC, South Sudan, Ethiopia, Uganda, Kenya, South Africa and Madagascar.

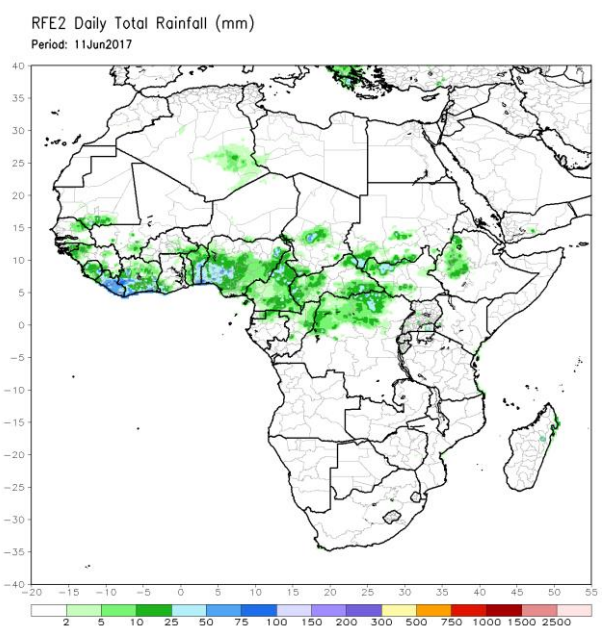
2.0. Previous and Current Day Weather over Africa

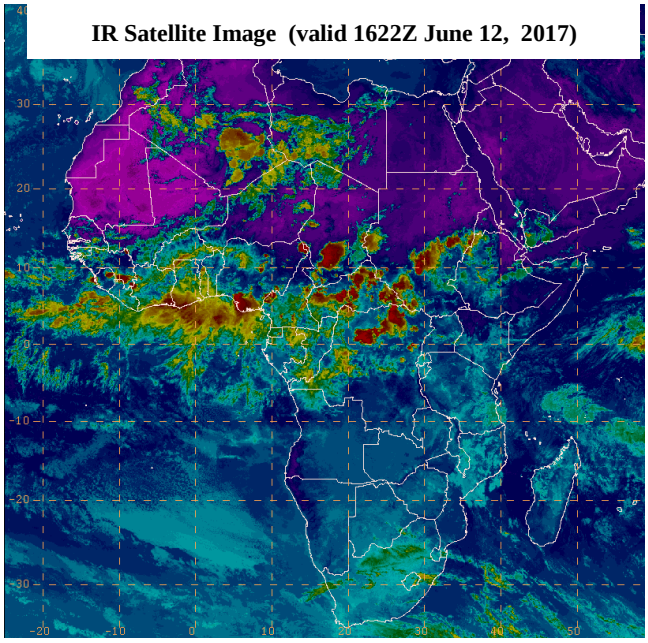
2.1. Weather assessment for the previous day (June 11, 2017)

Light to moderate rainfall was observed over portions of Chad, Sudan, Guinea, Sierra Leone, Liberia, Cote d'Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon, CAR, DRC, South Sudan, Ethiopia, Uganda and Madagascar.

2.2. Weather assessment for the current day (June 12, 2017)

Intense convective clouds are observed over portions of Niger, Sudan, Guinea, Sierra Leone, Nigeria, Cameroon, CAR, DRC, South Sudan and Ethiopia.





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

Authors: ***Bakari MANGANE*** (Mali – MM)/ (CPC-African Desk);
Bakari.mangane@noaa.gov