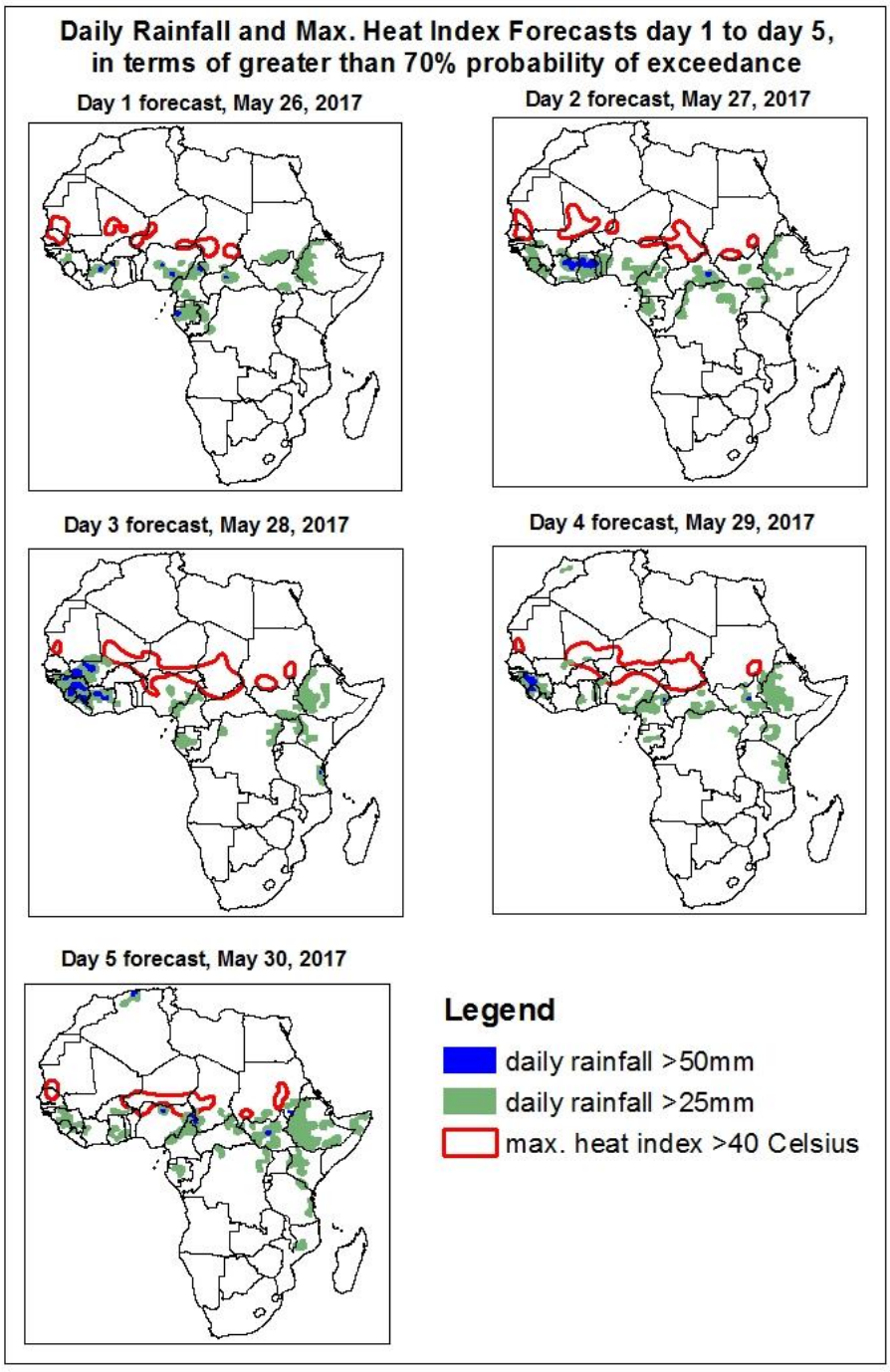
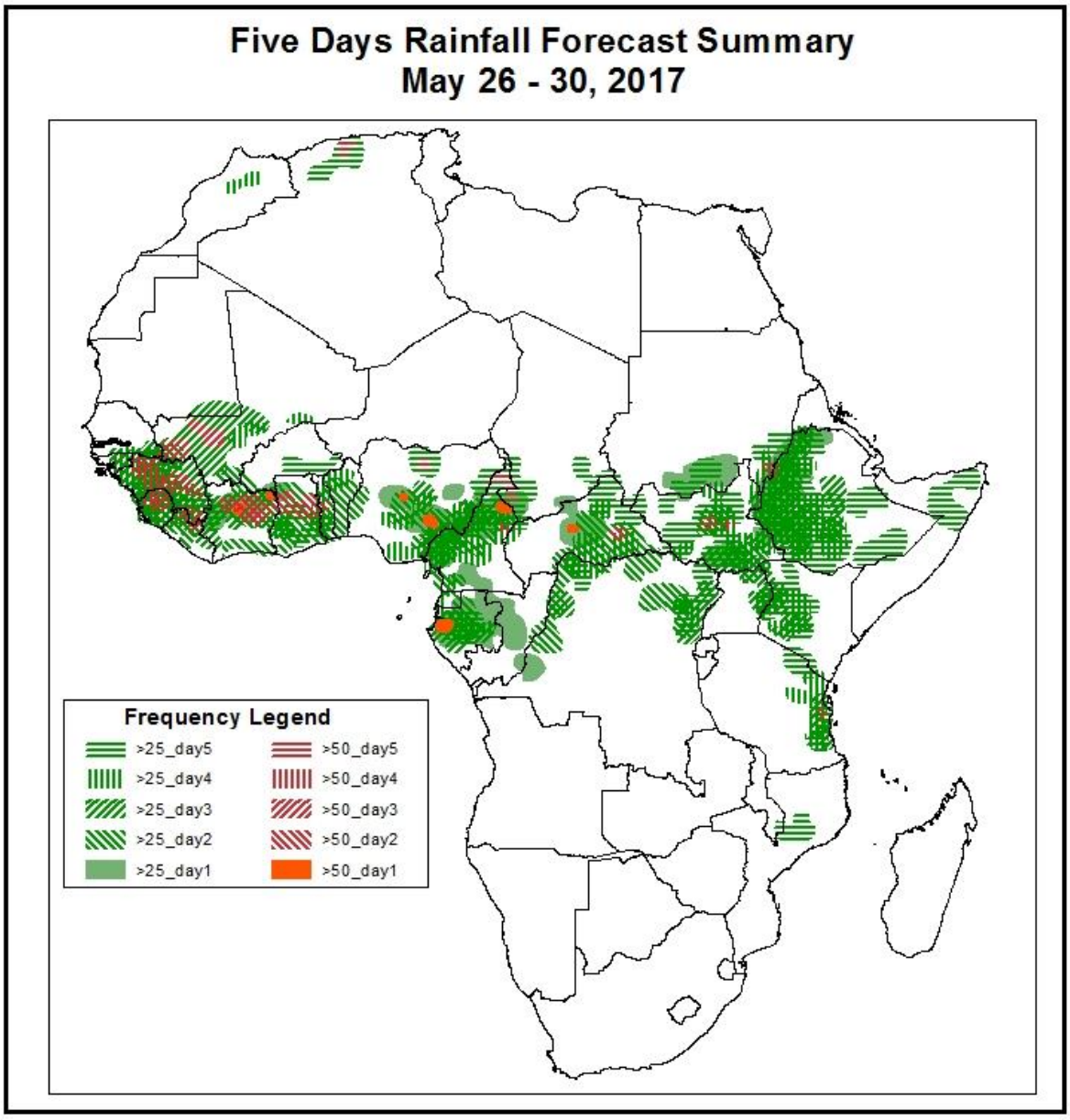
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on May 25, 2017)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: May 26 –30, 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.



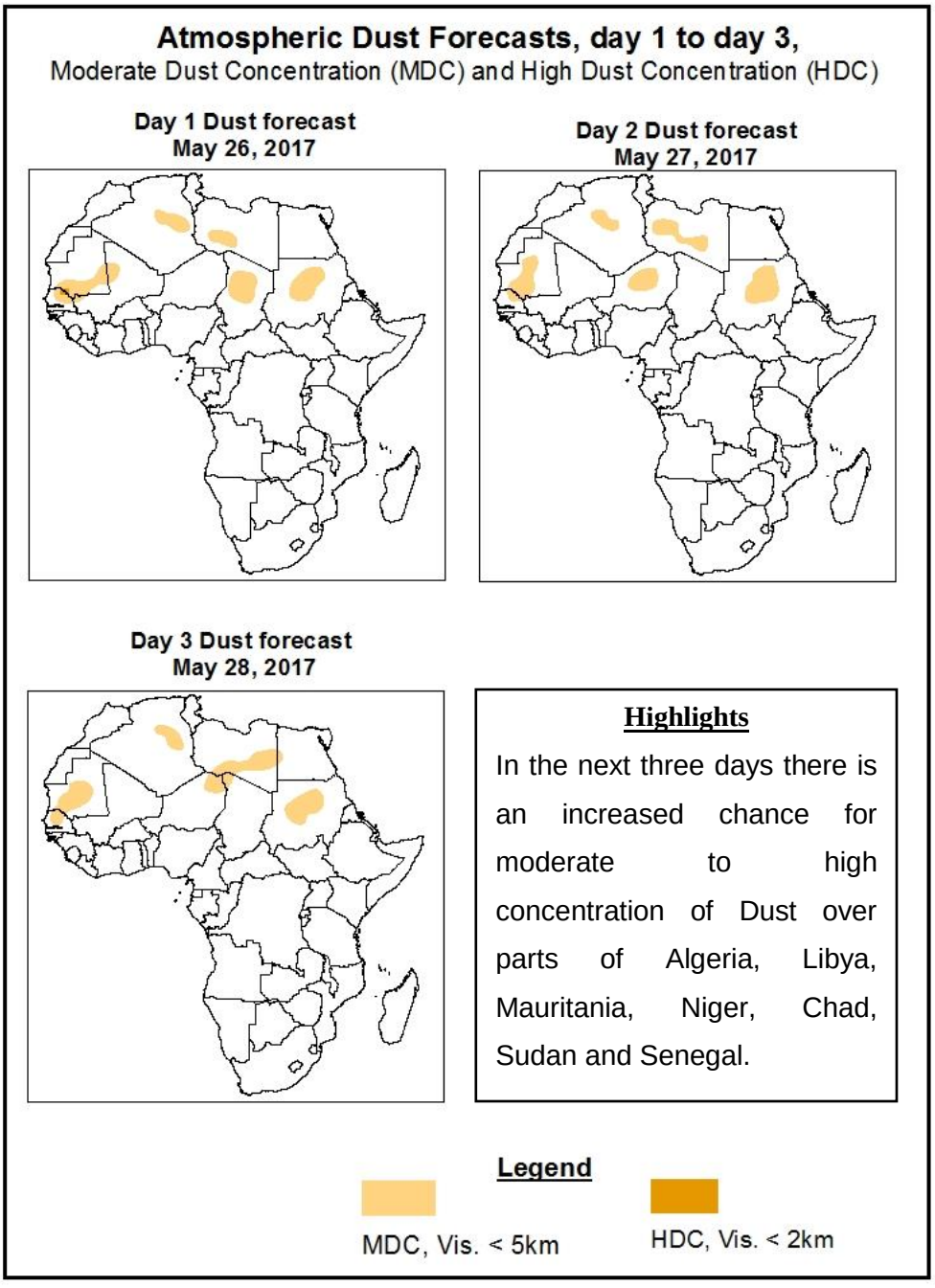


Highlights

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

1.2. Atmospheric Dust Concentration Forecasts (valid: May 26 – 30, 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: May 26 – 30, 2017*

The Azores High Pressure system over the North Atlantic Ocean is expected to weaken with its value of the central pressure decreasing from 1024hPa to 1023hPa during the next 72 hours and intensify to 1027hPa during the remaining forecast period.

The St. Helena High Pressure system over the Southeast of the Atlantic Ocean is expected to weaken with its value of the central pressure decreasing from 1034hPa to 1026hPa during the forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to weaken with its value of the central pressure decreasing from 1027hPa to 1027hPa during the next 96 hours and intensify to 1031hPa during the remaining forecast period.

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

At 850hPa level, lower level wind convergences are expected to prevail over Mali, Niger, Chad, Sudan, Eritrea, Guinea, Cote d'Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon, Congo, CAR, DRC, South Sudan, Ethiopia, Somalia, Uganda, Kenya and Tanzania.

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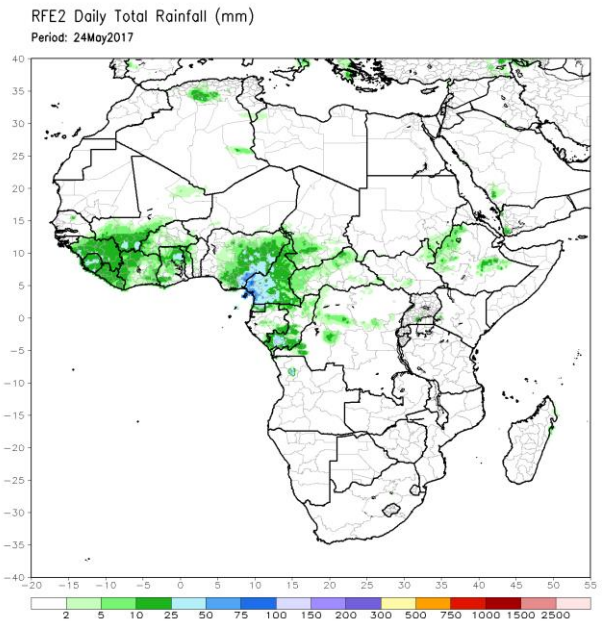
2.0. Previous and Current Day Weather over Africa

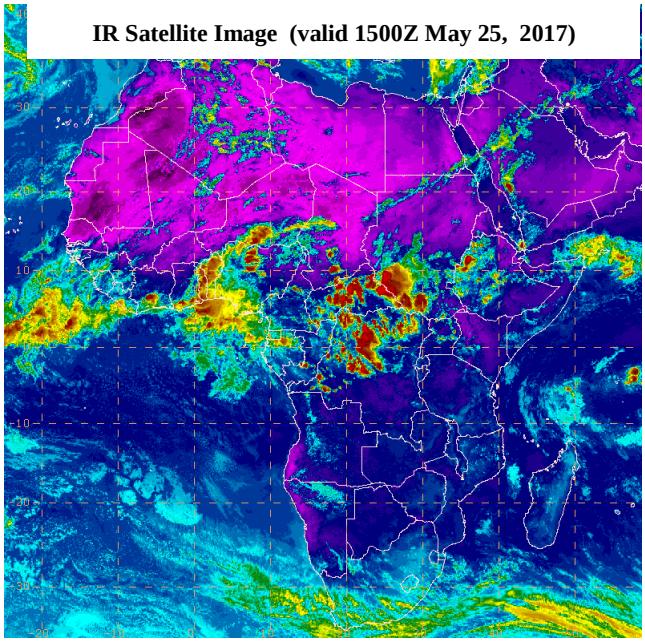
2.1. Weather assessment for the previous day (May 24, 2017)

Light to moderate rainfall was observed over portions of Algeria, Mali, Chad, Guinea, Sierra Leone, Cote d'Ivoire, Ghana, Nigeria, Cameroon, Equatorial Guinea, Gabon, Congo, Ethiopia and Angola.

2.2. Weather assessment for the current day (May 25, 2017)

Intense convective clouds are observed over portions of Niger, Chad, Sudan, Liberia, Cote d'Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon, Equatorial Guinea, Gabon, Congo, 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.

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