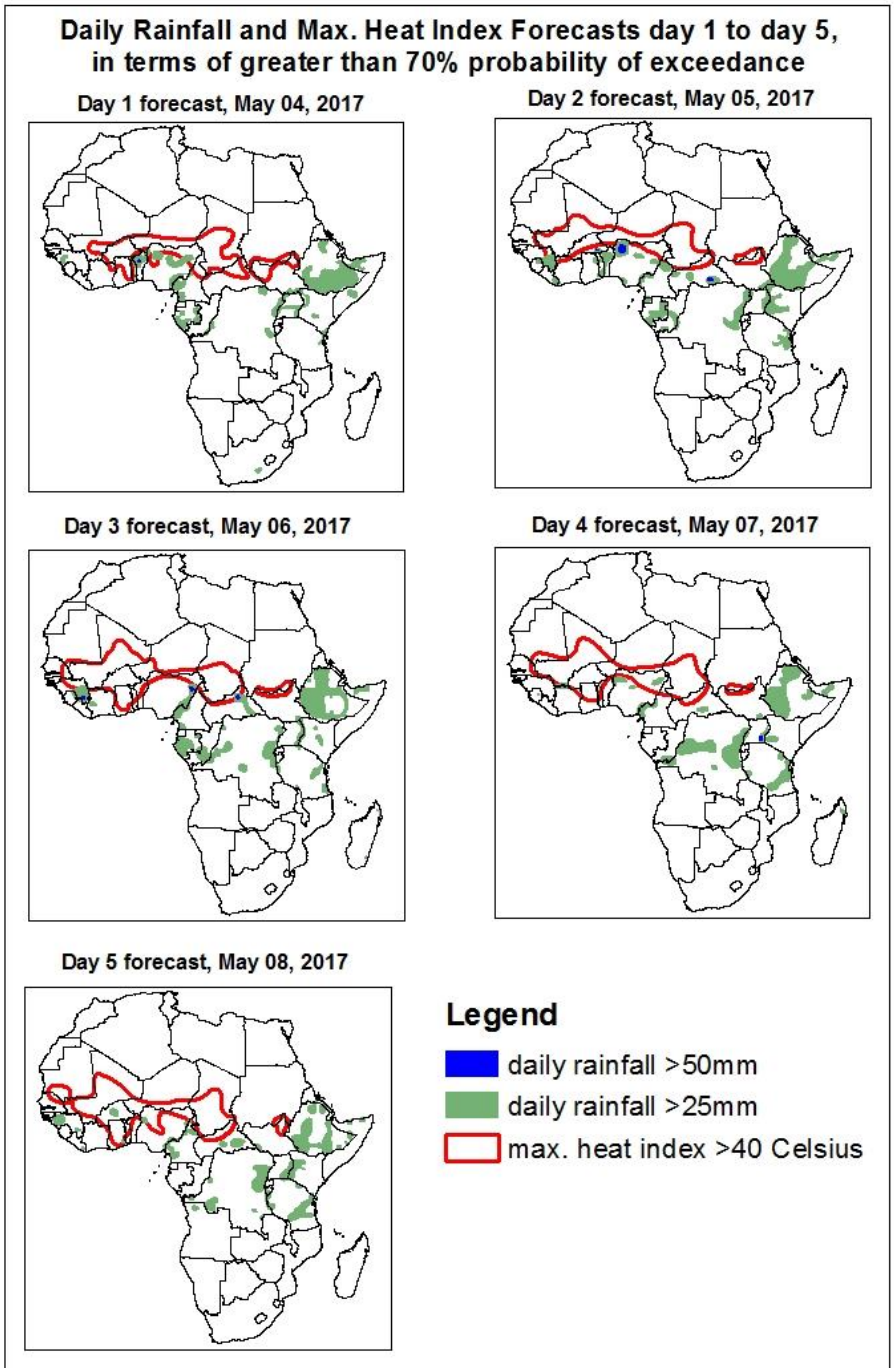
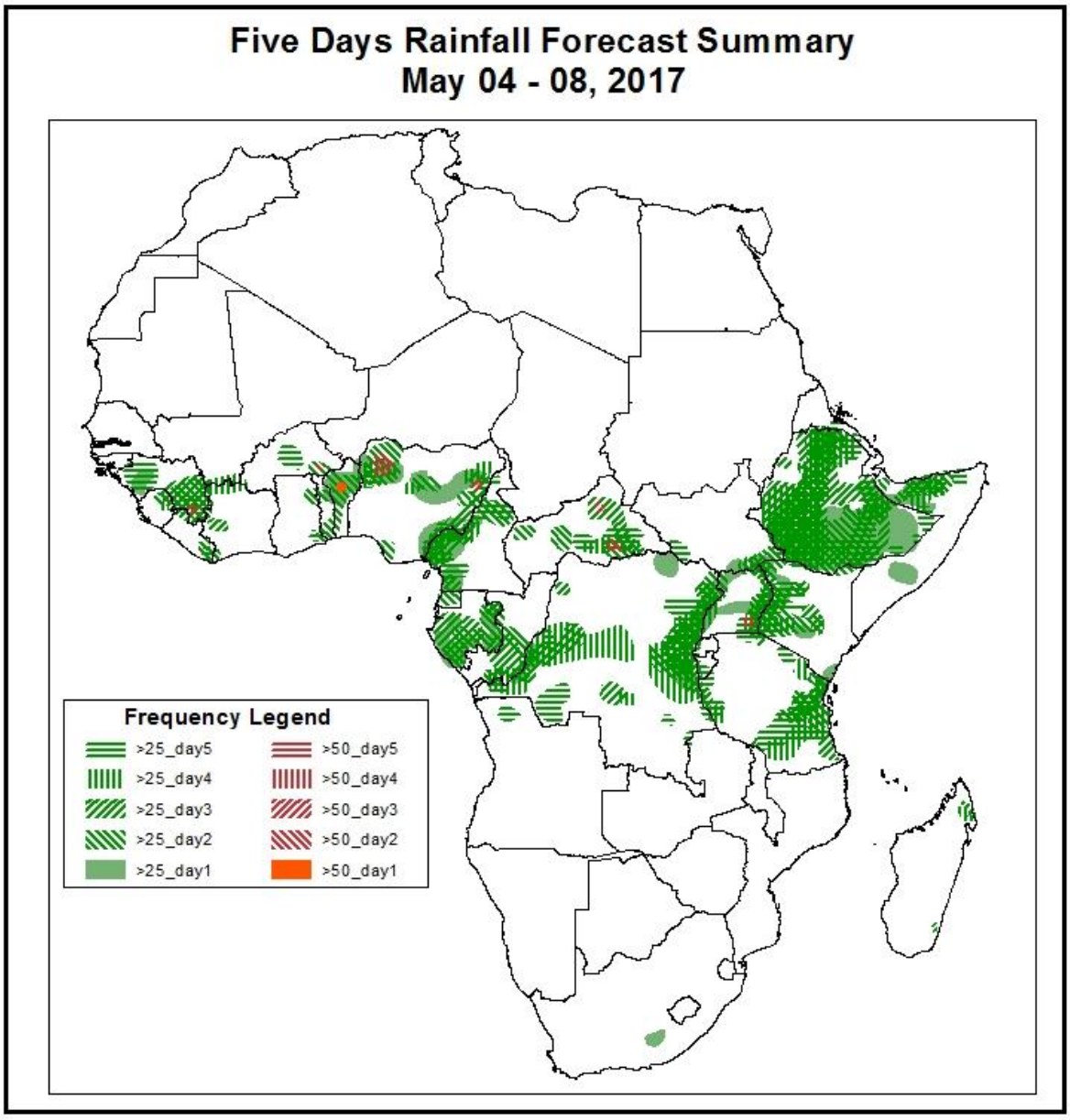
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on May 03, 2017)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: May 04 – 08, 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.



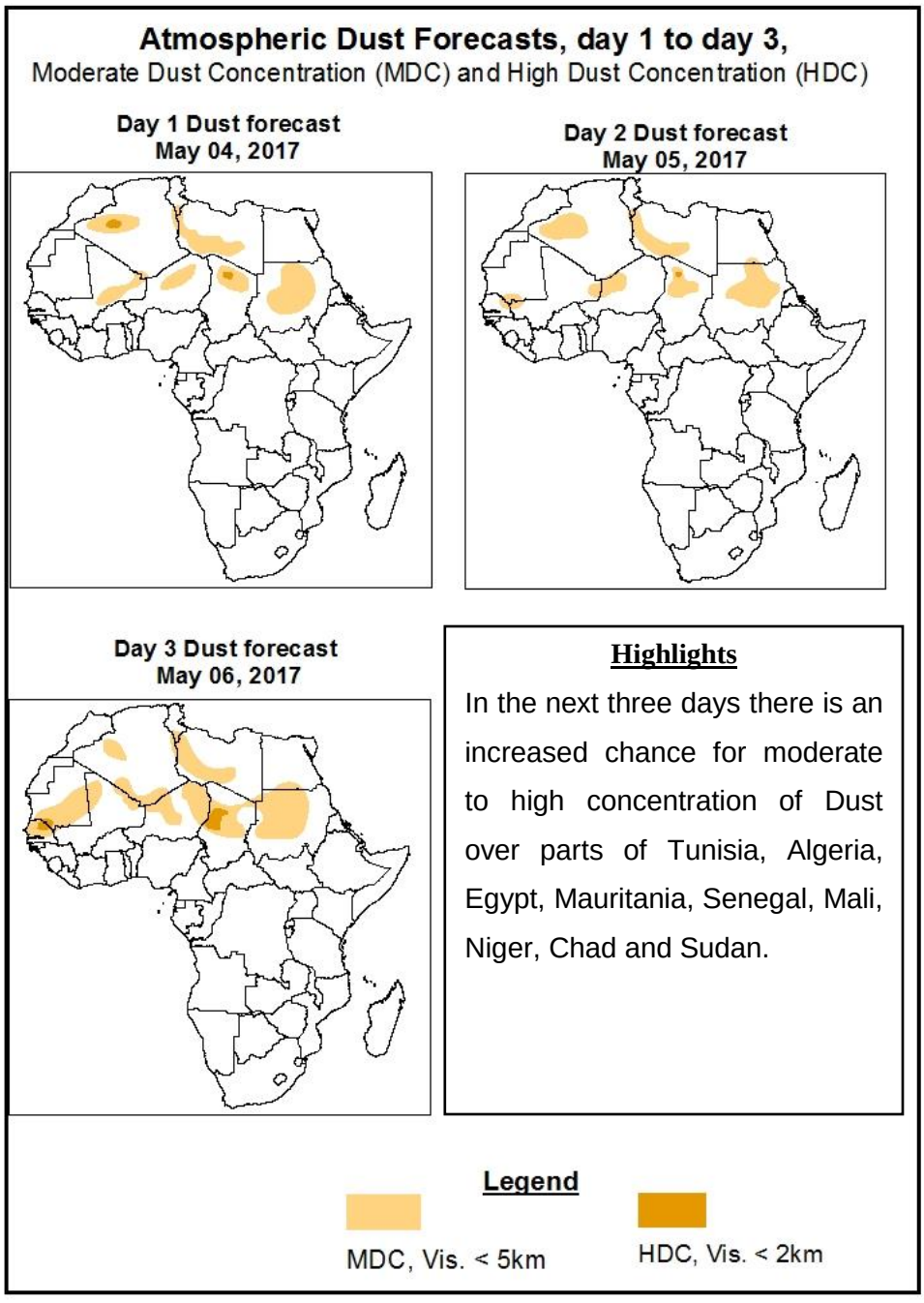


Highlights

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, Benin, Cameroon, Equatorial Guinea, Gabon, Ethiopia, Kenya and local areas of Liberia, Togo, Nigeria, Congo, CAR, DRC, South Sudan, Somalia, Uganda, Burundi and Tanzania.

1.2. Atmospheric Dust Concentration Forecasts (valid: May 04 – 06, 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 04 – 08, 2017*

The Azores High Pressure system over the North Atlantic Ocean is expected to intensify with its value of the central pressure increasing from 1024hPa to 1028hPa during the next 96 hours and weaken to 1024hPa 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 1033hPa to 1022hPa 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 1038hPa to 1032hPa during the next 72 hours and intensify to 1033hPa during the remaining forecast period.

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

At 850hPa level, lower level wind convergences are expected to prevail over Cameroon, CAR, DRC, South Sudan, Ethiopia, Somalia, Uganda, Kenya, Rwanda, Tanzania, Mozambique, South Africa and Madagascar.

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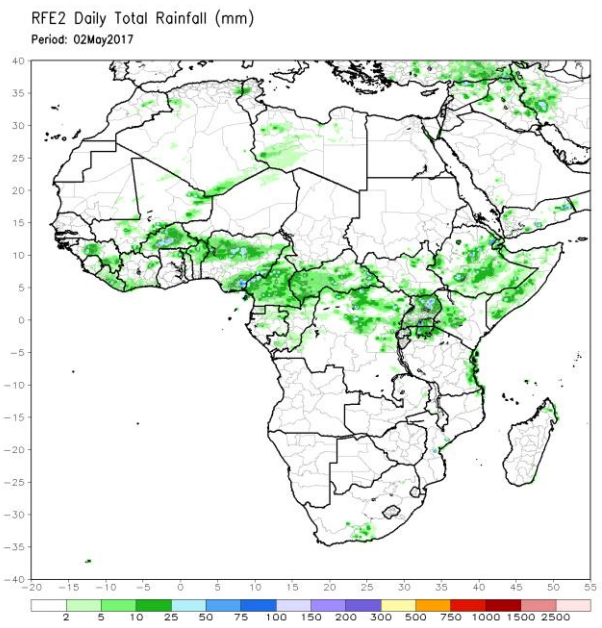
2.0. Previous and Current Day Weather over Africa

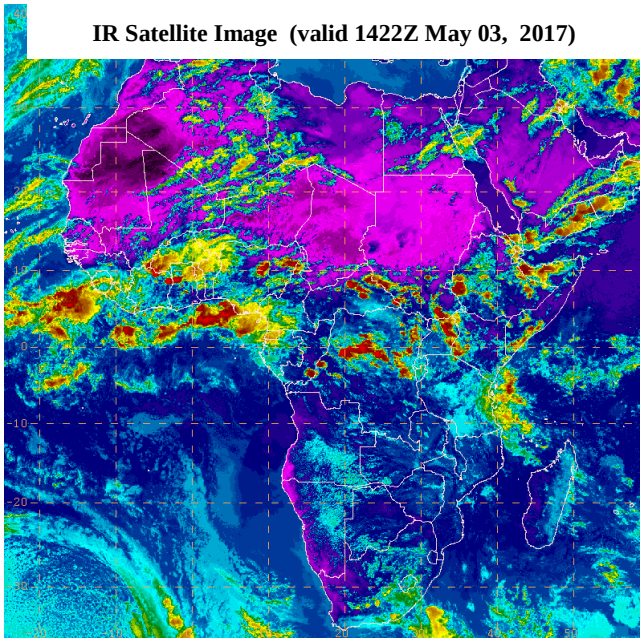
2.1. Weather assessment for the previous day (May 02, 2017)

Light to moderate rainfall was observed over portions of Mali, Burkina Faso, Guinea, Liberia, Cote d'Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon, CAR, DRC, South Sudan, Ethiopia, Somalia, Uganda, Kenya, Tanzania and Mozambique.

2.2. Weather assessment for the current day (May 03, 2017)

Intense convective clouds are observed over portions of Mali, Burkina Faso, Guinea, Sierra Leone, Liberia, Cote d'Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon, Equatorial Guinea, Gabon, Congo, CAR, DRC, South Sudan, Uganda, Ethiopia, Somalia, Uganda, Kenya, and Tanzania.





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: ***Elyes OTHMEN*** (Tunisia – INM)/ (CPC-African Desk);
elyes.othmen@noaa.gov