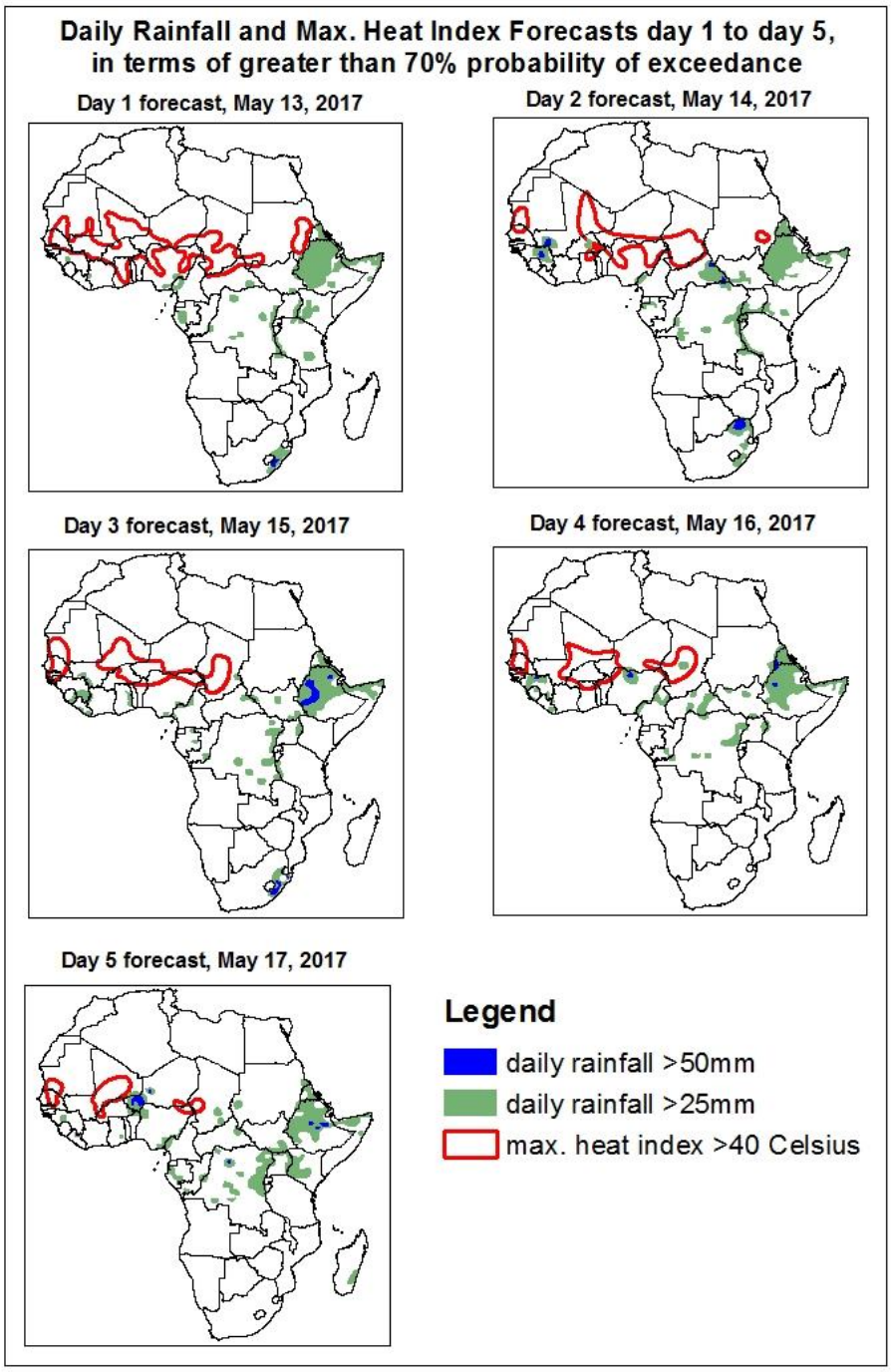
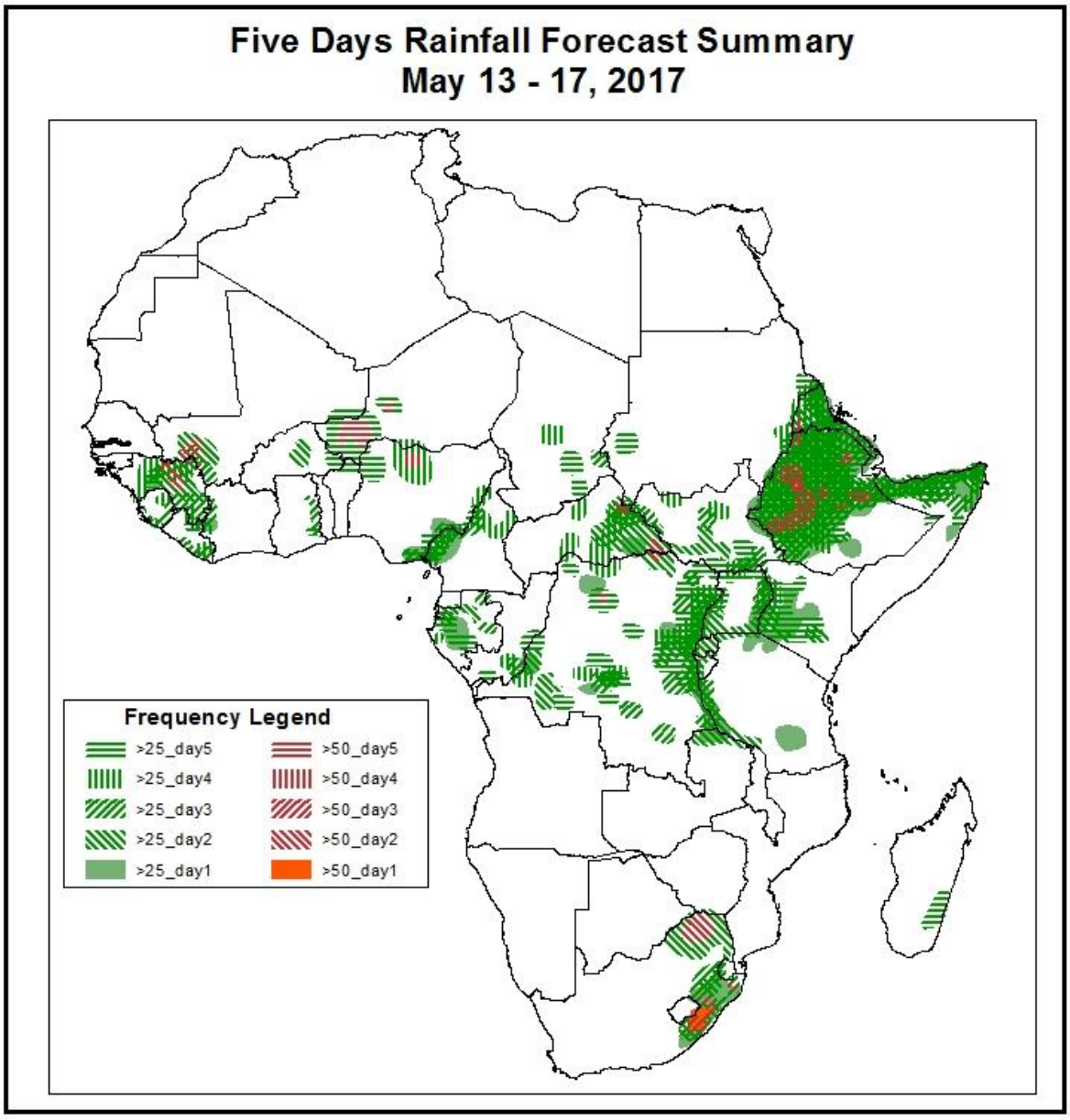
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

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

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: May 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.



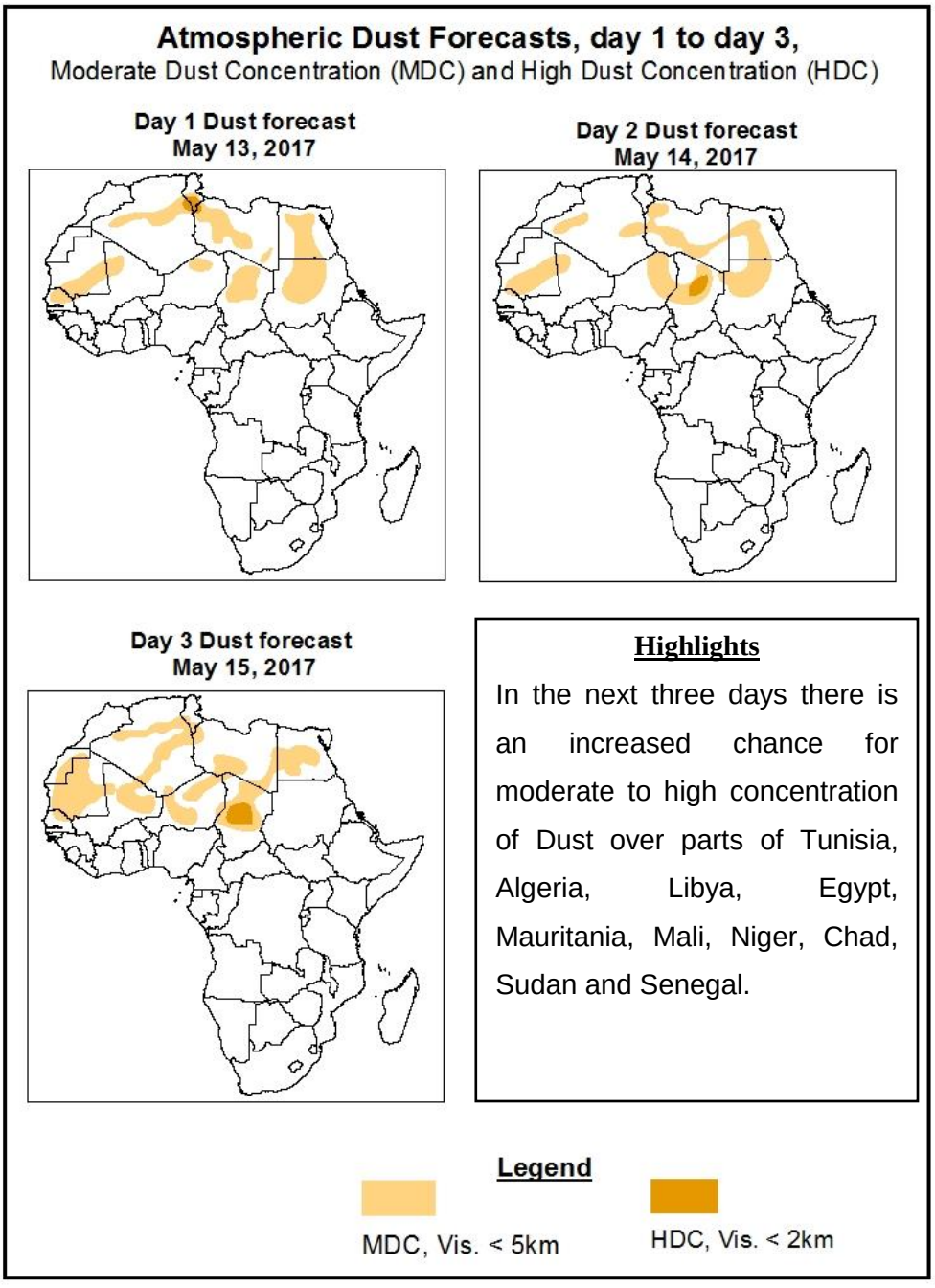


Highlights

In the next five days, lower level wind convergences across 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, Eritrea, Ethiopia, Rwanda and local areas of Mali, Niger, Sierra Leone, Liberia, Cote d'Ivoire, Ghana, Nigeria, Cameroon, Gabon, Congo, CAR, DRC, South Sudan, Somalia, Uganda, Kenya, Burundi, Tanzania, Zambia and South Africa.

1.2. Atmospheric Dust Concentration Forecasts (valid: May 12 – 14, 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 13 – 17, 2017*

The Azores High Pressure system over the North Atlantic Ocean is expected to intensify with its value of the central pressure increasing from 1021hPa to 1031hPa during the next 96 hours and weaken to 1030hPa 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 1021hPa to 1016hPa during the next 72 hours and intensify to 1029hPa during the remaining 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 1037hPa to 1033hPa during the next 48 hours, intensify to 1037hPa during the next 96 hours and weaken to 1034hPa 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, Western Sahara, Mauritania, Mali, Niger, Chad, Sudan and Senegal.

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

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, Eritrea, Ethiopia, Rwanda and local areas of Mali, Niger, Sierra Leone, Liberia, Cote d'Ivoire, Ghana, Nigeria, Cameroon, Gabon, Congo, CAR, DRC, South Sudan, Somalia, Uganda, Kenya, Burundi, Tanzania, Zambia and South Africa.

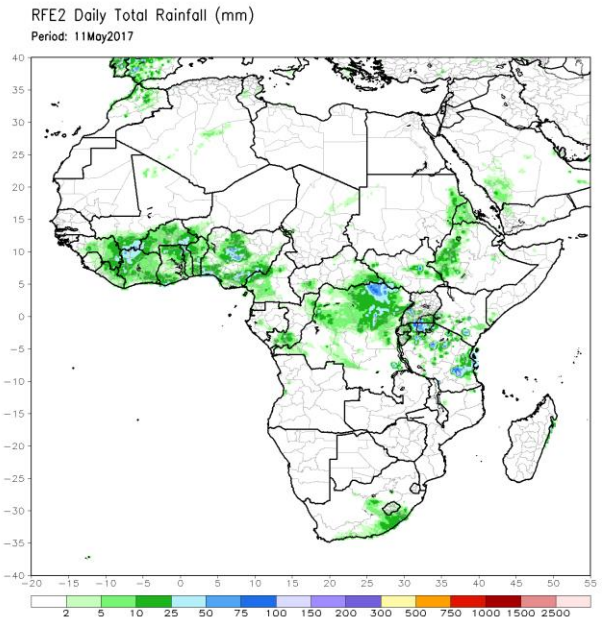
2.0. Previous and Current Day Weather over Africa

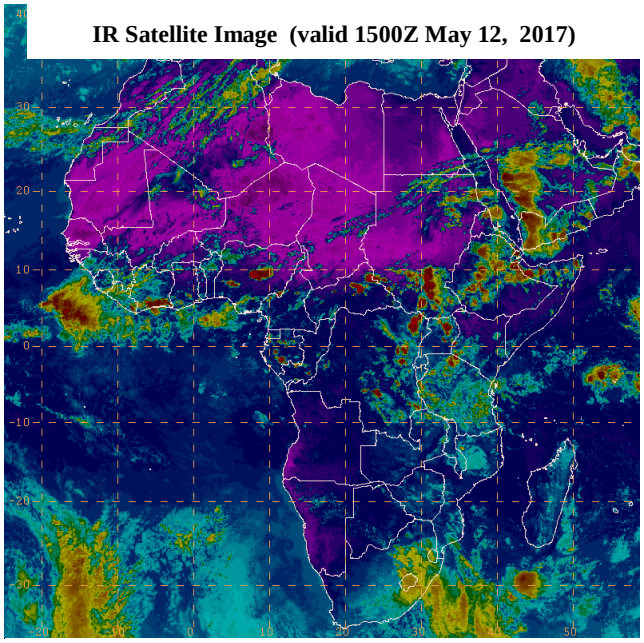
2.1. Weather assessment for the previous day (May 11, 2017)

Light to moderate rainfall was observed over portions of Morocco, Mali, Burkina Faso, Guinea, Ghana, Togo, Benin, Nigeria, Cameroon, Congo, CAR, DRC, South Sudan, Ethiopia, Uganda, Kenya, Tanzania, Malawi, South Africa and Madagascar.

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

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





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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