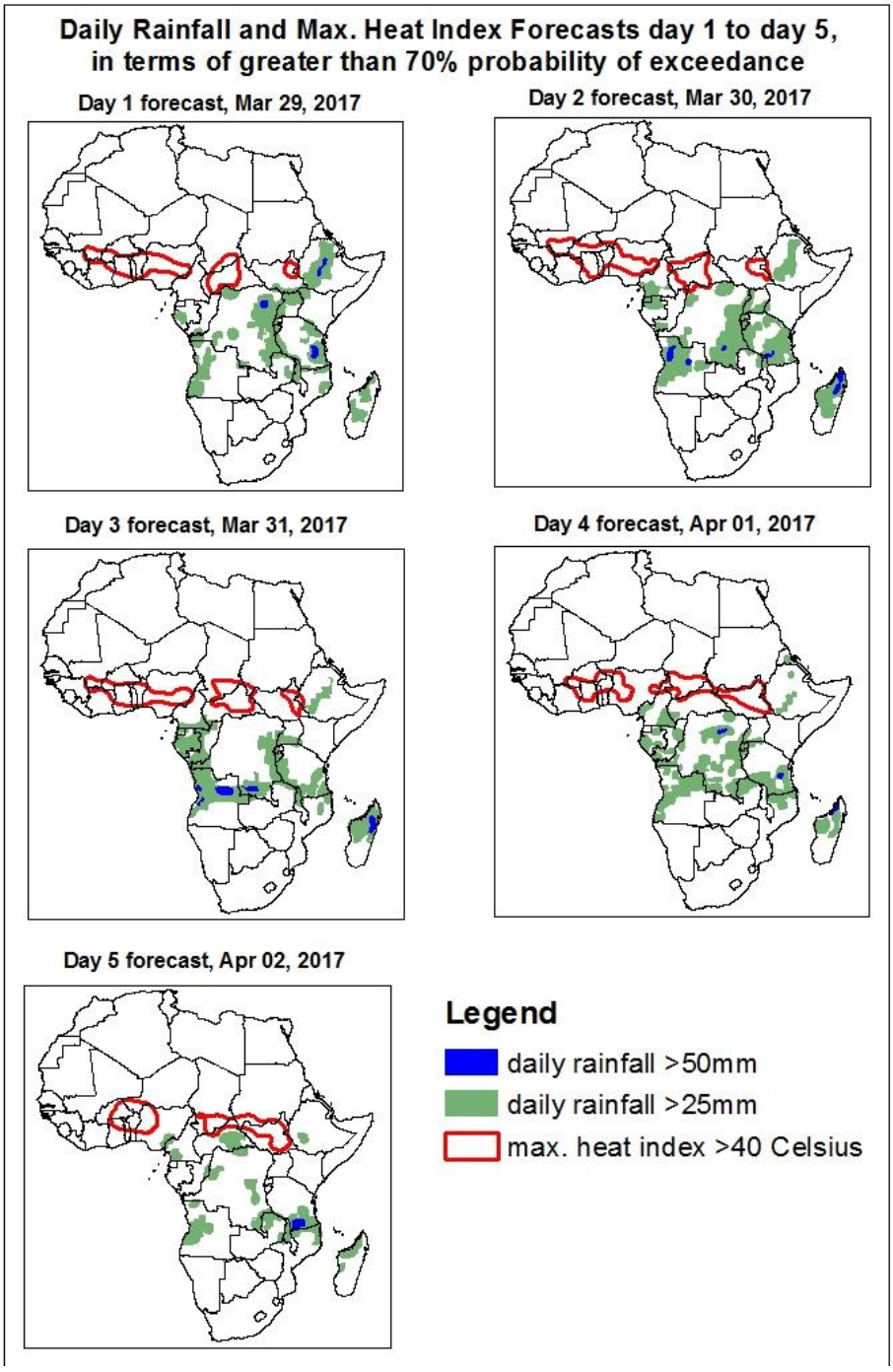
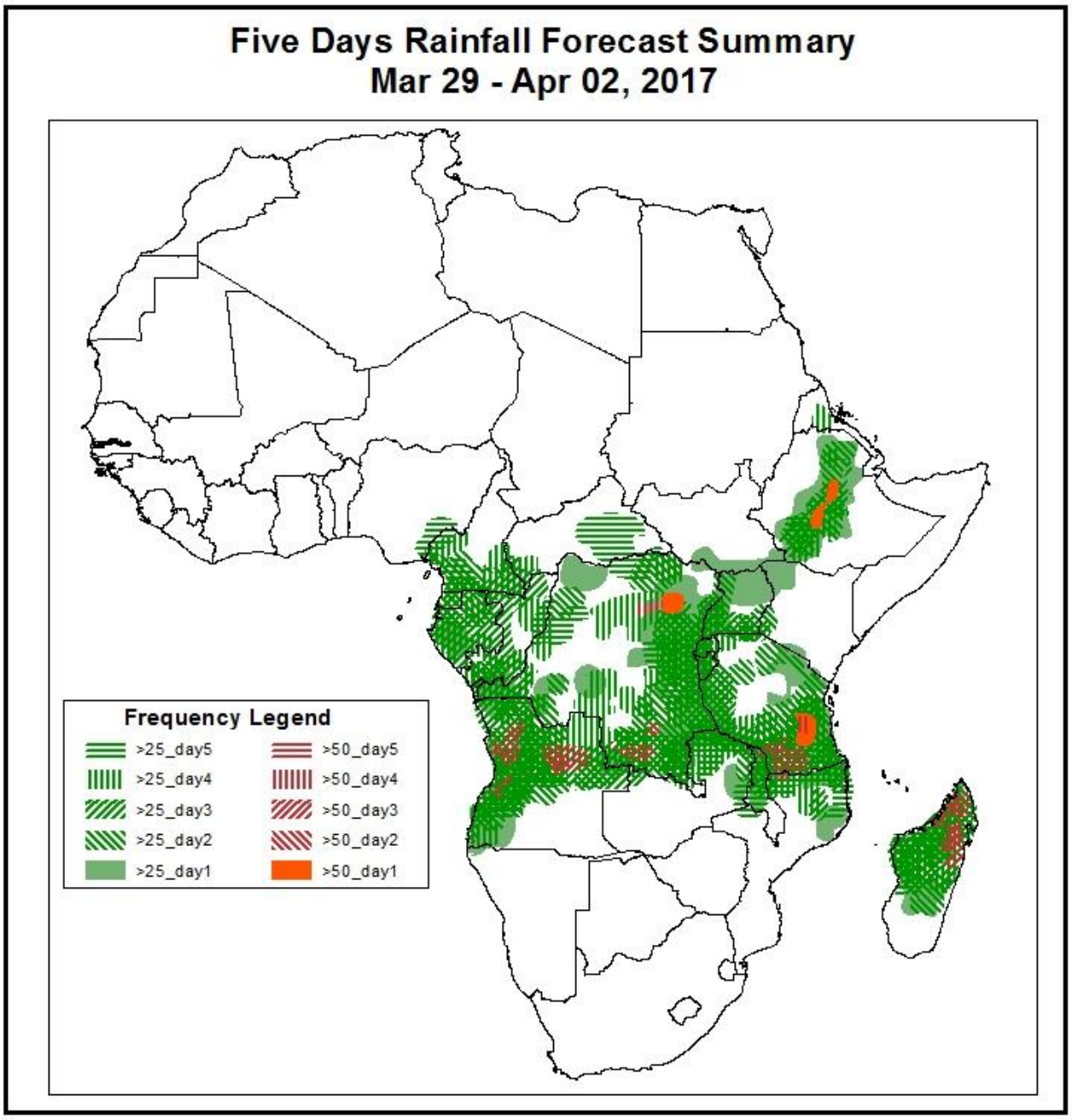
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on Mar 28, 2017)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Mar 29 – Apr 02, 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.



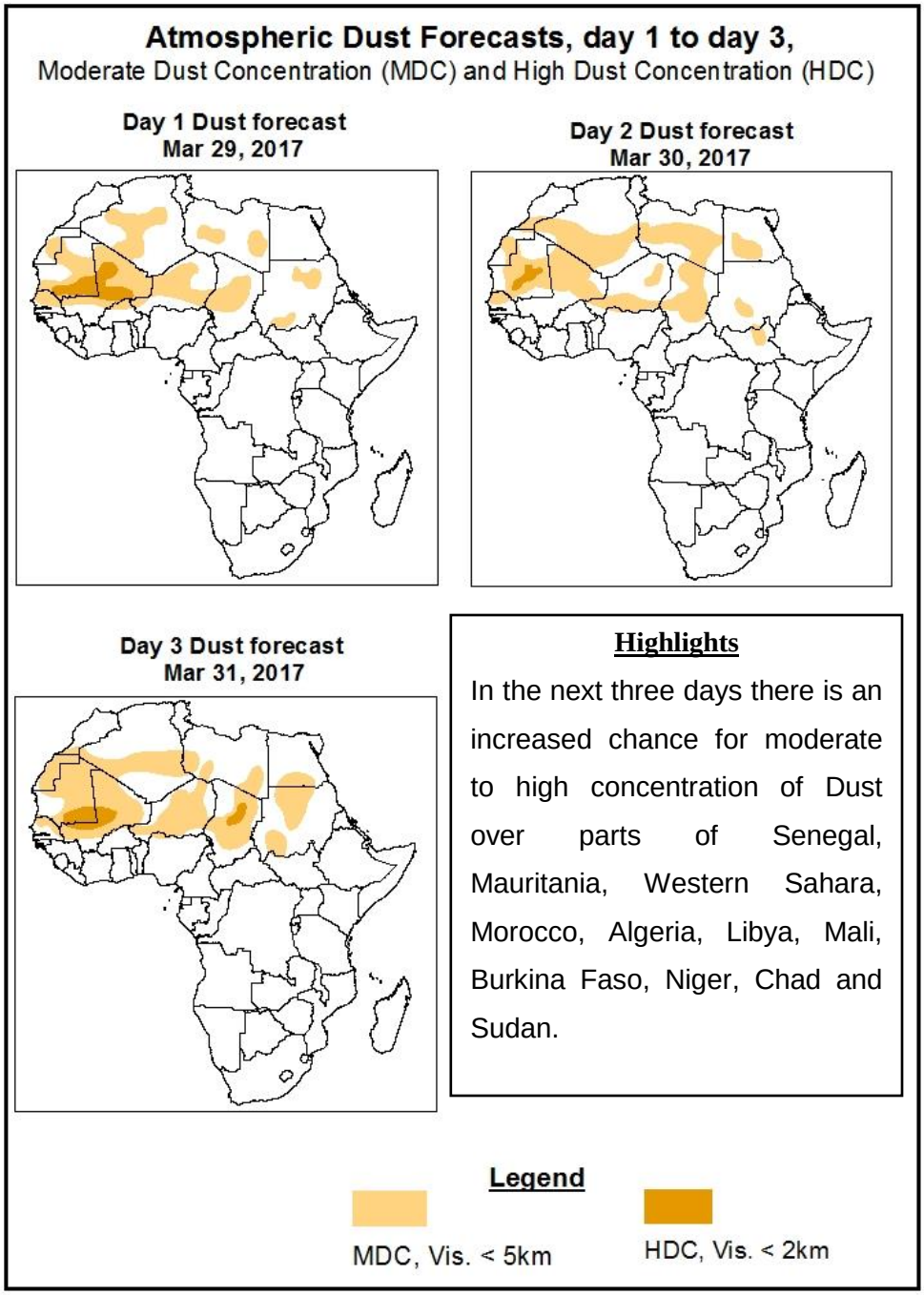


Highlights

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 Gabon, Congo, DRC, Ethiopia, Uganda, Burundi, Rwanda, Tanzania, Angola and Madagascar, local areas of Cameroon, Zambia, Malawi, Namibia and Mozambique.

1.2. Atmospheric Dust Concentration Forecasts (valid: Mar 29 – 31, 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: Mar 29 – Apr 02, 2017*

The Azores High Pressure system over the North Atlantic Ocean is expected to weaken with its value of the central pressure decreasing from 1029hPa to 1026hPa in the next 72 hours, intensify to 1027hPa in the next 96 hours and weaken to 1026hPa, 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 1032hPa to 1029hPa in the next 72 hours, intensify to 1030hPa in the next 96 hours and weaken to 1028hPa during the remaining forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to intensify with its value of the central pressure increasing from 1027hPa to 1030hPa in the next 96 hours and weaken to 1029hPa during the remaining forecast period.

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

At 850hPa level, lower level wind convergences are expected to prevail over Cameroon, CAR, DRC, South Sudan, Uganda, Tanzania, Namibia, Botswana, Mozambique, 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 Gabon, Congo, DRC, Ethiopia, Uganda, Burundi, Rwanda, Tanzania, Angola and Madagascar, local areas of Cameroon, Zambia, Malawi, Namibia and Mozambique.

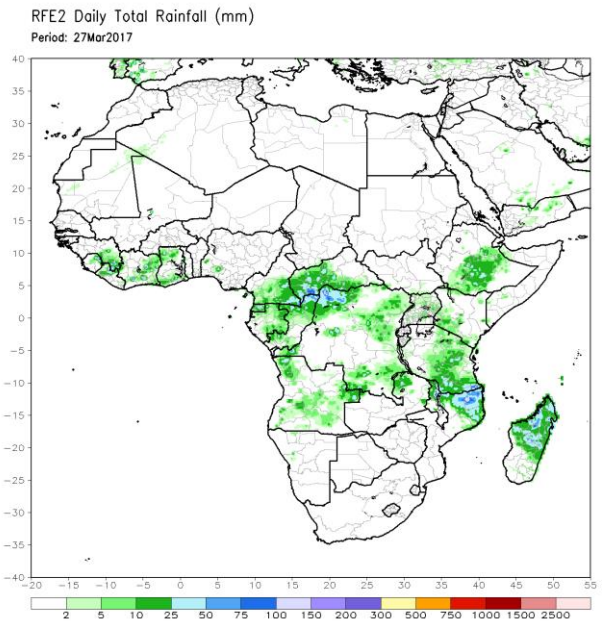
2.0. Previous and Current Day Weather over Africa

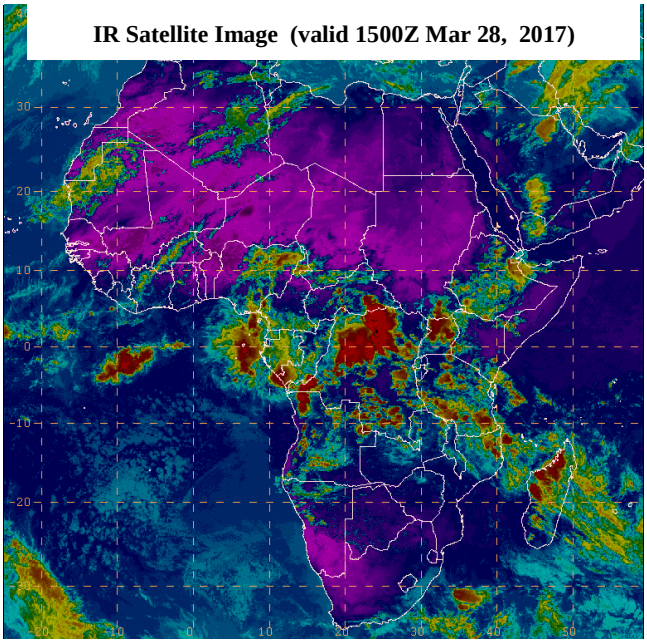
2.1. Weather assessment for the previous day (Mar 27, 2017)

Light to moderate rainfall was observed over portions of Guinea, Sierra Leone, Cote d'Ivoire, Ghana, Nigeria, Cameroon, Equatorial Guinea, Congo, CAR, DRC, Ethiopia, Tanzania, Angola, Zambia, Malawi, Mozambique and Madagascar.

2.2. Weather assessment for the current day (Mar 28, 2017)

Intense convective clouds are observed over portions of Cote d'Ivoire, Nigeria, Cameroon, Gabon, Congo, CAR, DRC, South Sudan, Ethiopia, Somalia, Uganda, Kenya, Burundi, Rwanda, Tanzania, Angola, Zambia, Malawi, Namibia, Mozambique and Madagascar.





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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