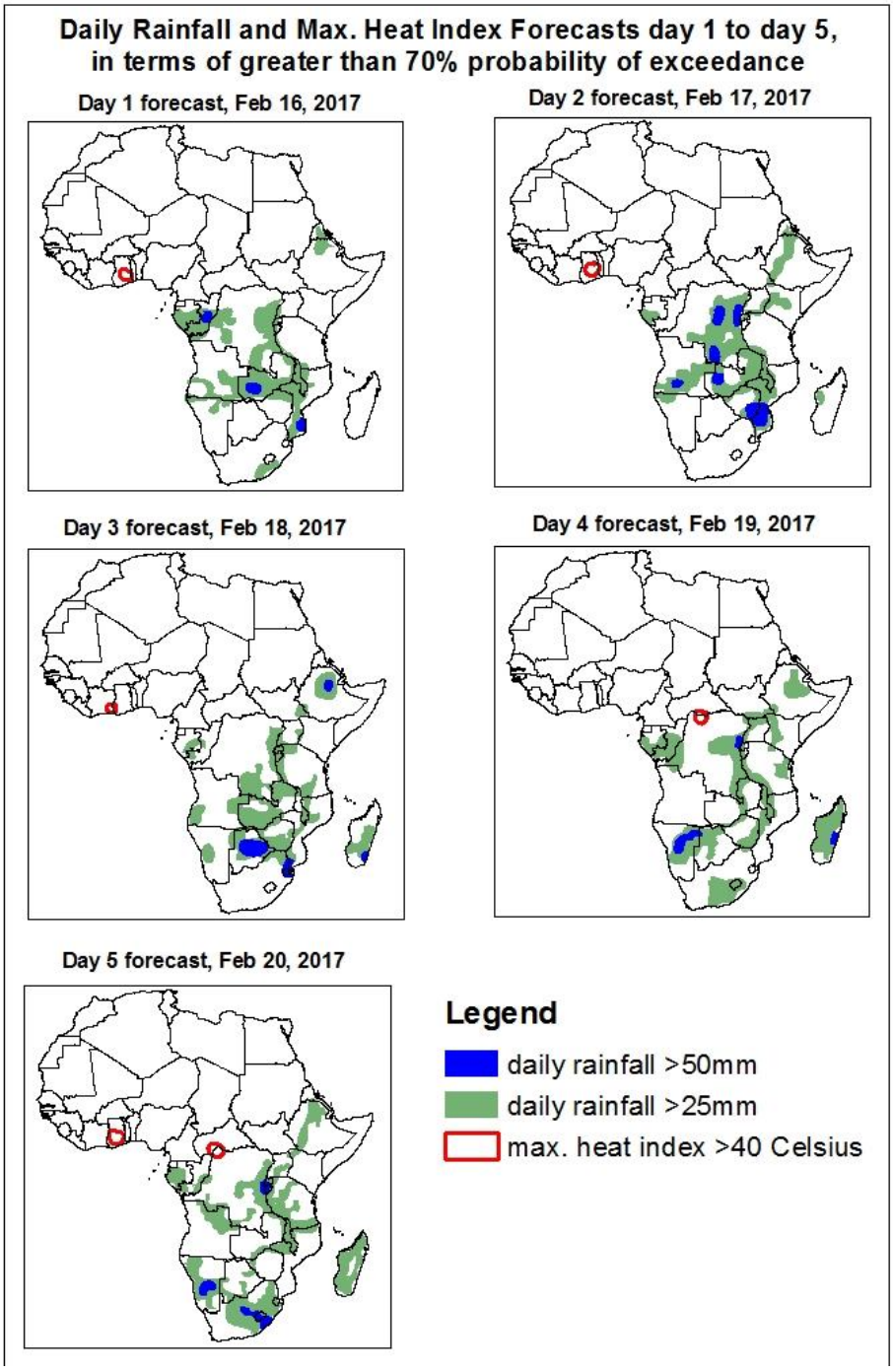
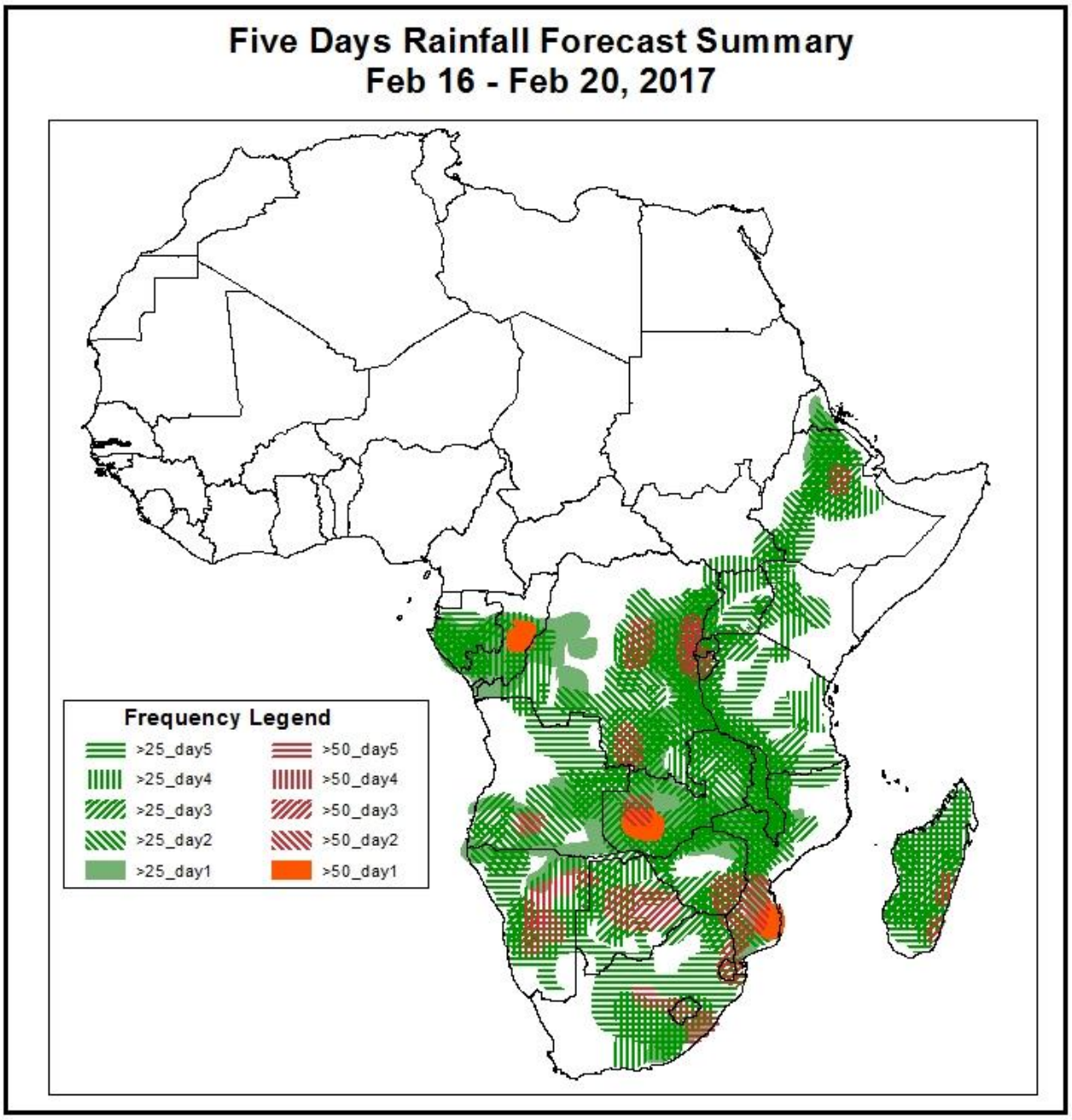
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on Feb 15, 2017)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Feb 16– Feb 20, 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.



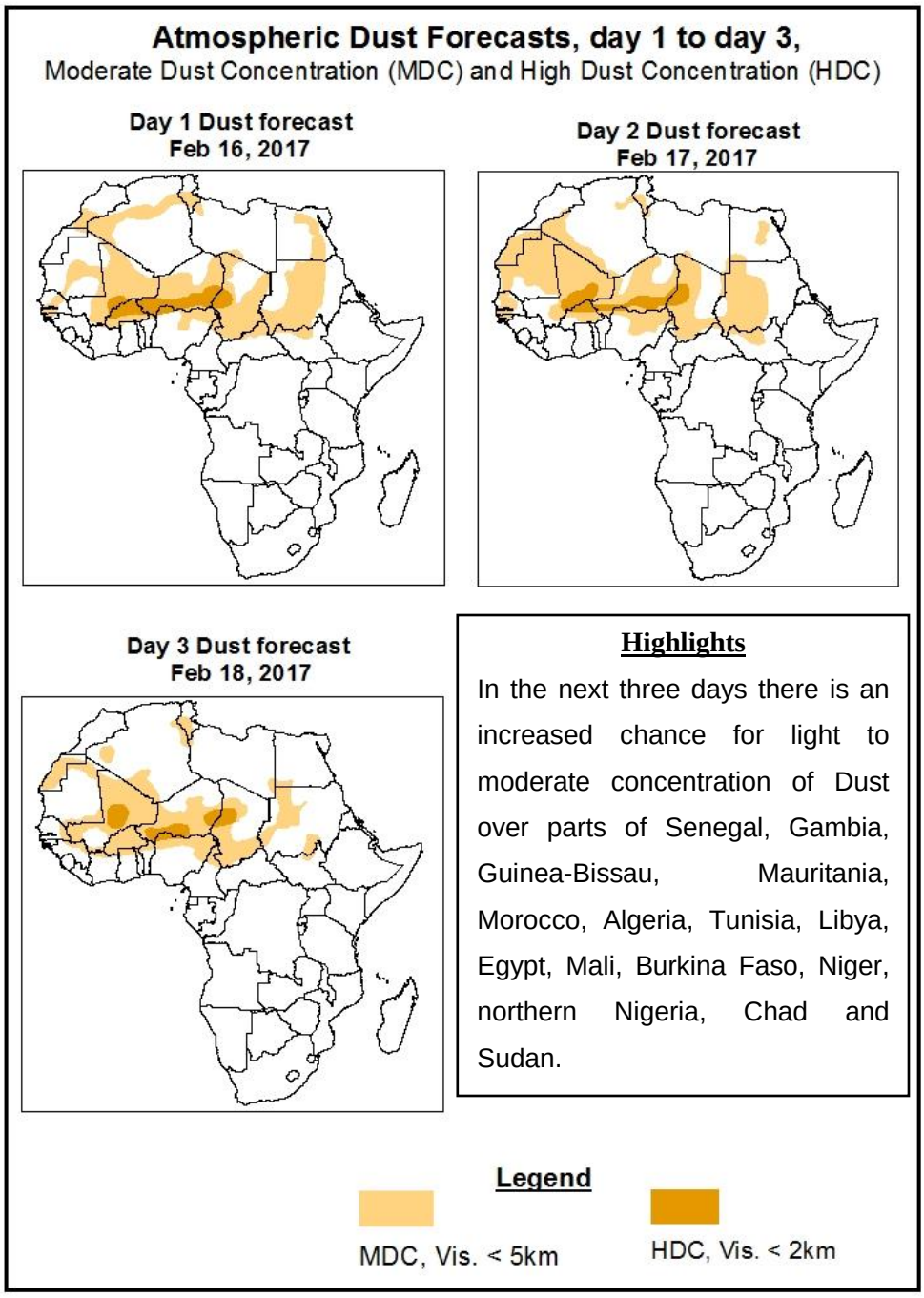


Highlights

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 light to moderate rainfall over portions of Eritrea, Ethiopia, Gabon, Congo, Rwanda, Burundi, Angola, Zambia, Malawi, Mozambique, Namibia, Botswana, Zimbabwe, Lesotho, Swaziland and Madagascar, local areas of South Sudan, DRC, Uganda, Kenya, Tanzania and South Africa.

1.2. Atmospheric Dust Concentration Forecasts (valid: Feb 16 – Feb 18, 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: Feb 16 – Feb 20, 2017*

The Azores High Pressure system over the North Atlantic Ocean is expected to weaken with its value of the central pressure decreasing from 1038hPa to 1032hPa in the next 72 hours and intensify from 1032 to 1033hPa in the next 24 hours and weaken to 1032hPa during the remaining 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 1022hPa to 1030hPa during the 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 1032hPa to 1038hPa in the next 96 hours and weaken to 1036hPa during the remaining forecast period.

At 925hPa, strong dry Northeasterly to Easterly winds may lead from light to moderate dust concentration over parts of Senegal, Gambia, Guinea-Bissau, Mauritania, Morocco, Algeria, Tunisia, Libya, Egypt, Mali, Burkina Faso, Niger, northern Nigeria, Chad and Sudan.

At 850hPa level, lower level wind convergences are expected to prevail over Cameroon, Gabon, Congo, CAR, DRC, Rwanda, Burundi, Uganda, Angola, Zambia, Mozambique, Namibia, Botswana, Zimbabwe and South Africa.

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 light to moderate rainfall over portions of Eritrea, Ethiopia, Gabon, Congo, Rwanda, Burundi, Angola, Zambia, Malawi, Mozambique, Namibia, Botswana, Zimbabwe, Lesotho, Swaziland and Madagascar, local areas of South Sudan, DRC, Uganda, Kenya, Tanzania and South Africa.

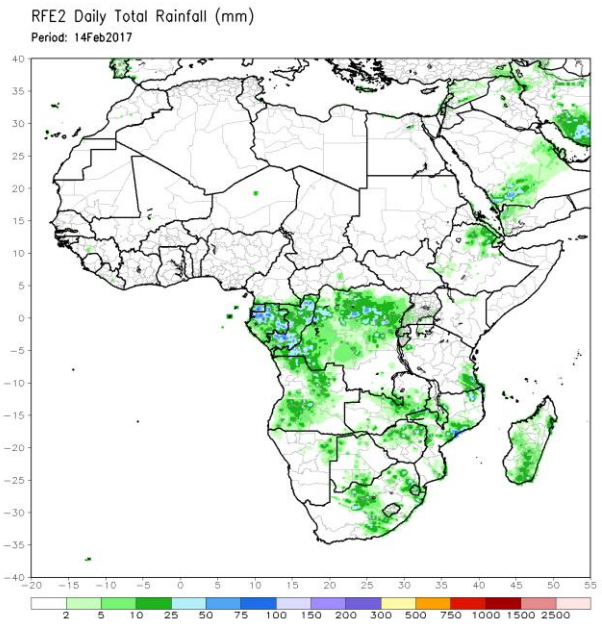
2.0. Previous and Current Day Weather over Africa

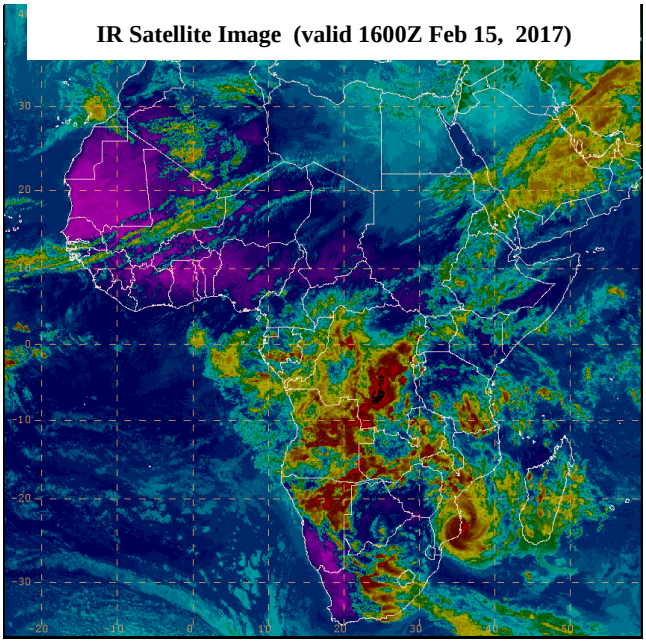
2.1. Weather assessment for the previous day (Feb 14, 2017)

Light to moderate rainfall was observed over portions of Egypt, Equatorial Guinea, Gabon, Congo, DRC, Ethiopia, Rwanda, Tanzania, Angola, Zambia, Mozambique, Zimbabwe, South Africa, Swaziland and Madagascar.

2.2. Weather assessment for the current day (Feb 15, 2017)

Intense convective clouds are observed over portions of Ethiopia, Equatorial Guinea, Gabon, Congo, DRC, Uganda, Rwanda, Burundi, Tanzania, Angola, Zambia, Malawi, Mozambique, Namibia, Botswana, Zimbabwe, South Africa, Lesotho 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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