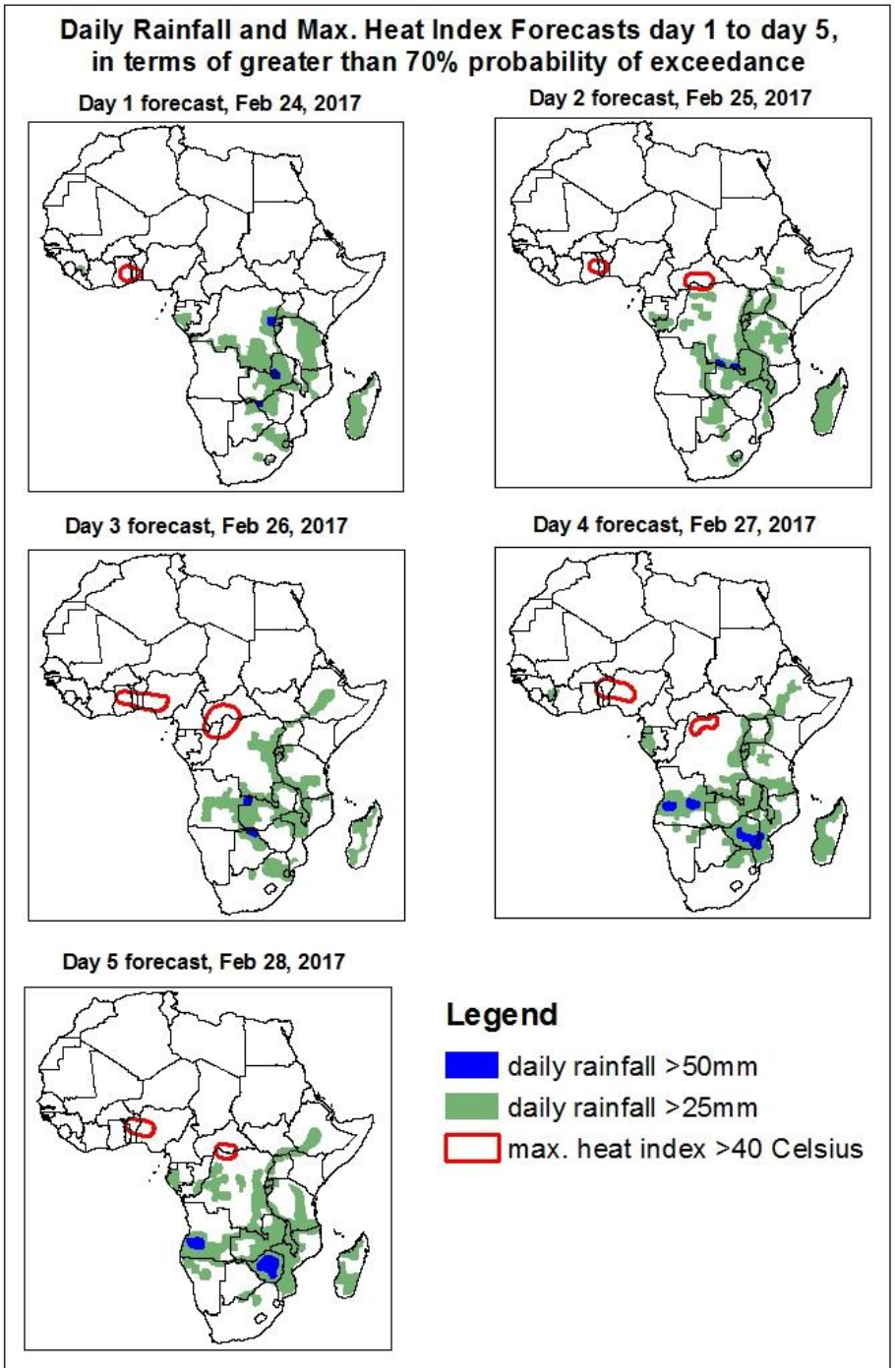
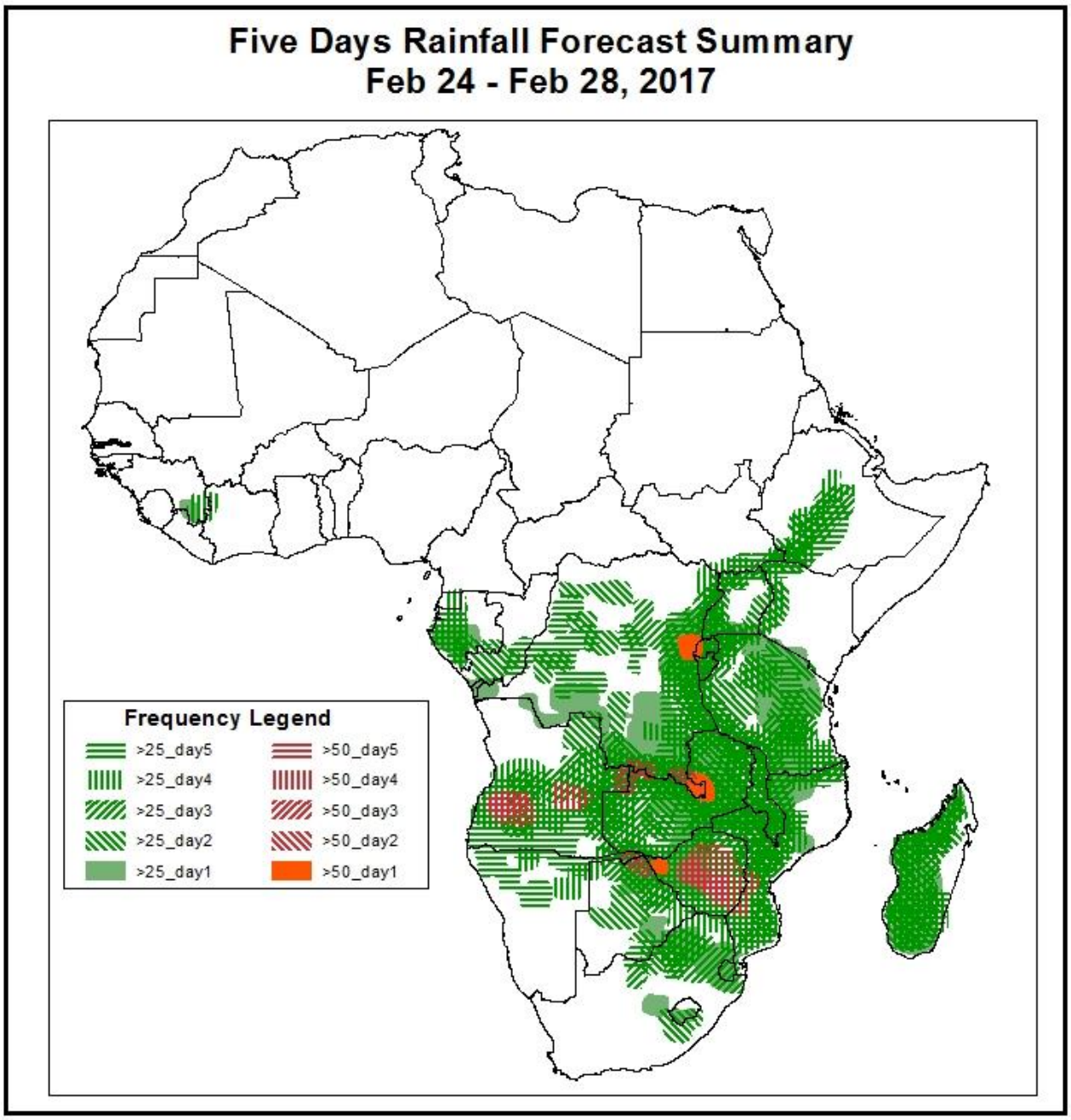
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on Feb 23, 2017)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Feb 24– Feb 28, 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.



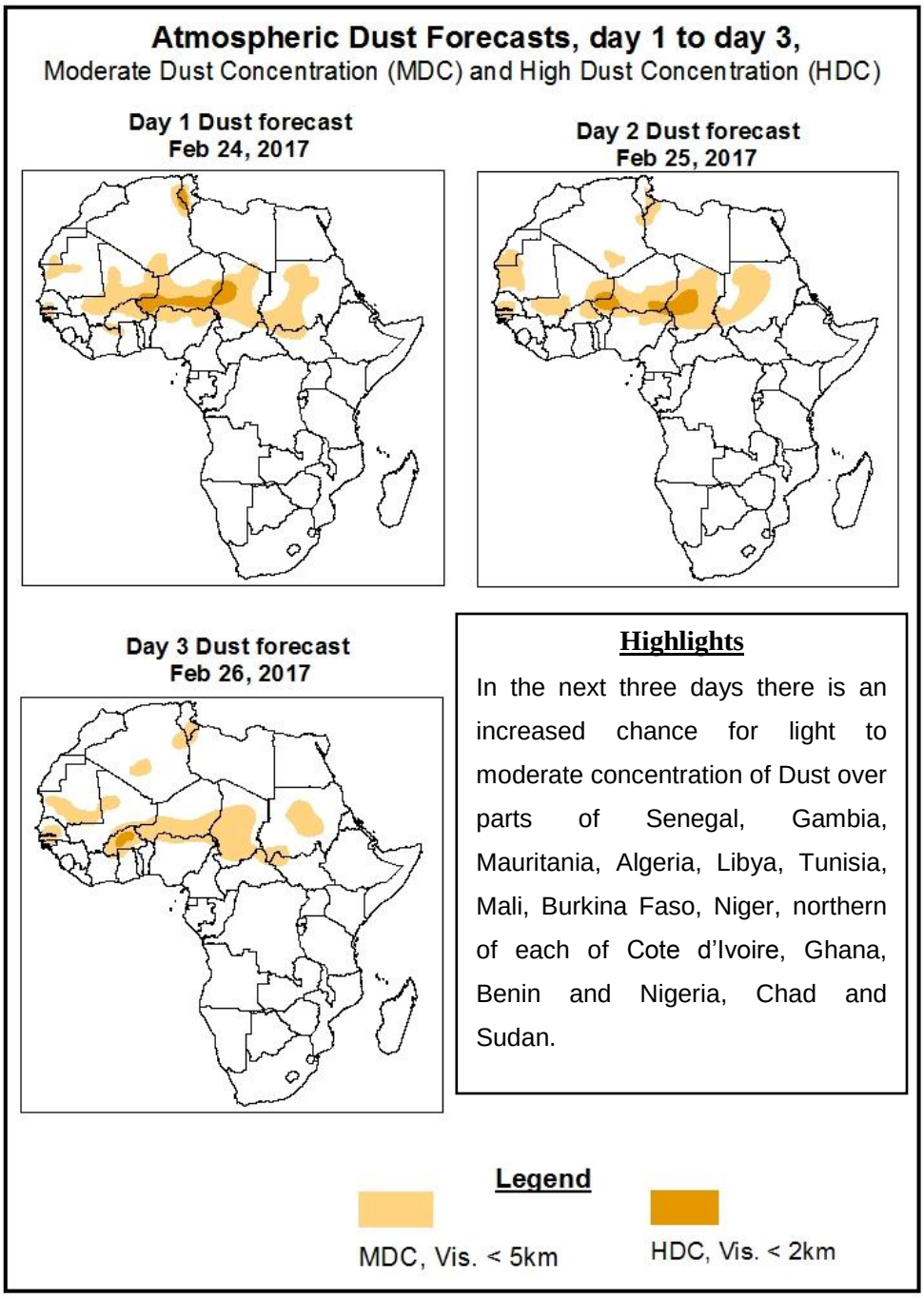


Highlights

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 Gabon, DRC, Uganda, Rwanda, Burundi, Tanzania, Angola, Zambia, Malawi, Mozambique, Botswana, Zimbabwe, Swaziland and Madagascar, local areas of Guinea, Cote d'Ivoire, Ethiopia, Congo, South Sudan, Kenya, Lesotho and South Africa.

1.2. Atmospheric Dust Concentration Forecasts (valid: Feb 24 – Feb 26, 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 24– Feb 28, 2017*

The Azores High Pressure system over the North Atlantic Ocean is expected to intensify with its value of the central pressure increasing from 1025hPa to 1029hPa in the next 96 hours and weaken with its value of the central pressure decreasing to 1025hPa 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 1024hPa to 1027hPa in the next 72 hours and weaken to 1020hPa 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 1026hPa to 1021hPa in the next 96 hours and intensify to 1020hPa 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, Algeria, Tunisia, Libya, Mali, Burkina Faso, Niger, northern of each of Cote d'Ivoire, Ghana, Togo, Benin and Nigeria, Chad and Sudan.

At 850hPa level, lower level wind convergences are expected to prevail over Cameroon, Gabon, Congo, CAR, DRC, Uganda, Angola, Zambia, Namibia, Botswana, Zimbabwe, Malawi, 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 light to moderate rainfall over portions of Gabon, DRC, Uganda, Rwanda, Burundi, Tanzania, Angola, Zambia, Malawi, Mozambique, Botswana, Zimbabwe, Swaziland and Madagascar, local areas of Guinea, Cote d'Ivoire, Ethiopia, Congo, South Sudan, Kenya, Lesotho and South Africa.

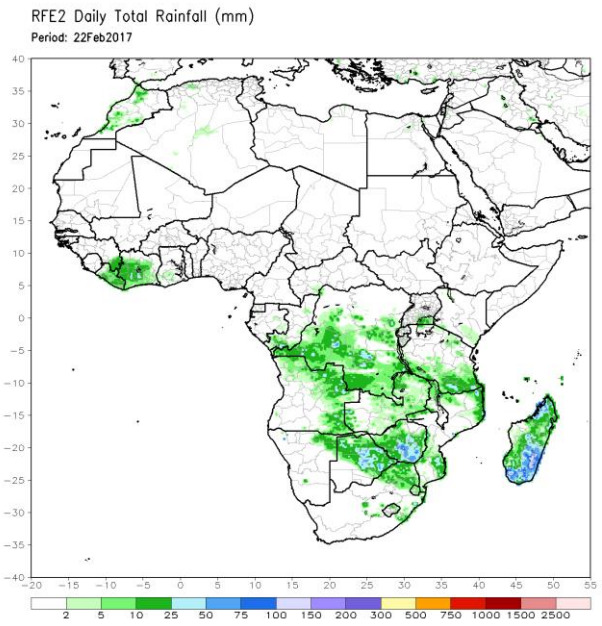
2.0. Previous and Current Day Weather over Africa

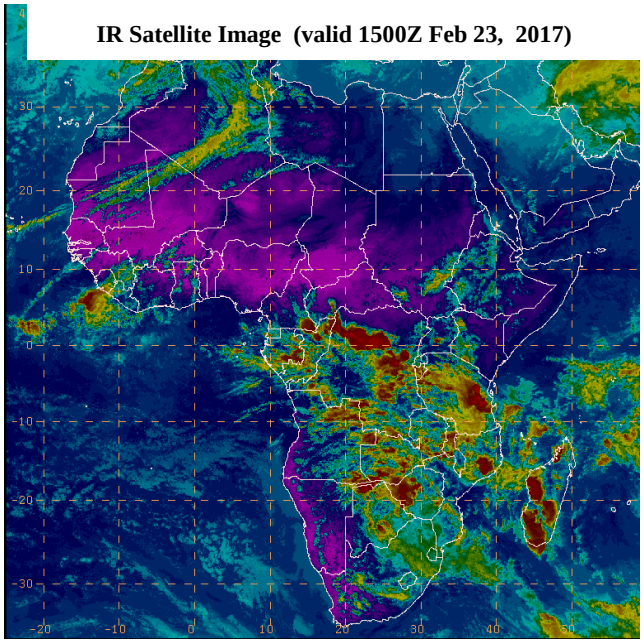
2.1. Weather assessment for the previous day (Feb 22, 2017)

Light to moderate rainfall was observed over portions of Morocco, Cote d'Ivoire, Congo, DRC, Tanzania, Angola, Zambia, Mozambique, Namibia, Botswana, Zimbabwe, South Africa and Madagascar.

2.2. Weather assessment for the current day (Feb 23, 2017)

Intense convective clouds are observed over portions of Sierra Leone, Cameroon, Gabon, Congo, Equatorial Guinea, CAR, DRC, Uganda, Kenya, Rwanda, Burundi, Tanzania, Angola, Zambia, Malawi, Mozambique, Namibia, Botswana, Zimbabwe 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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