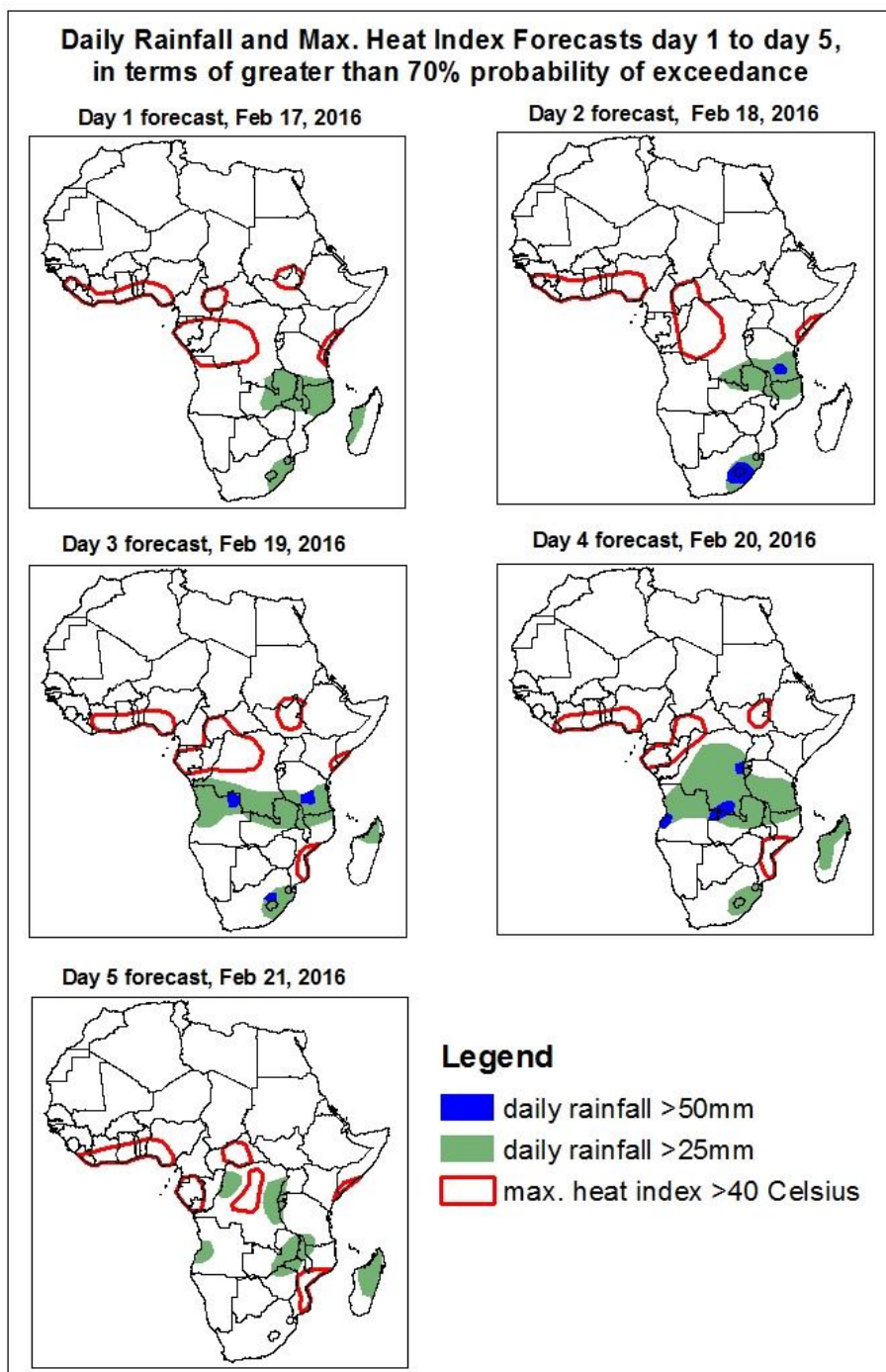


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

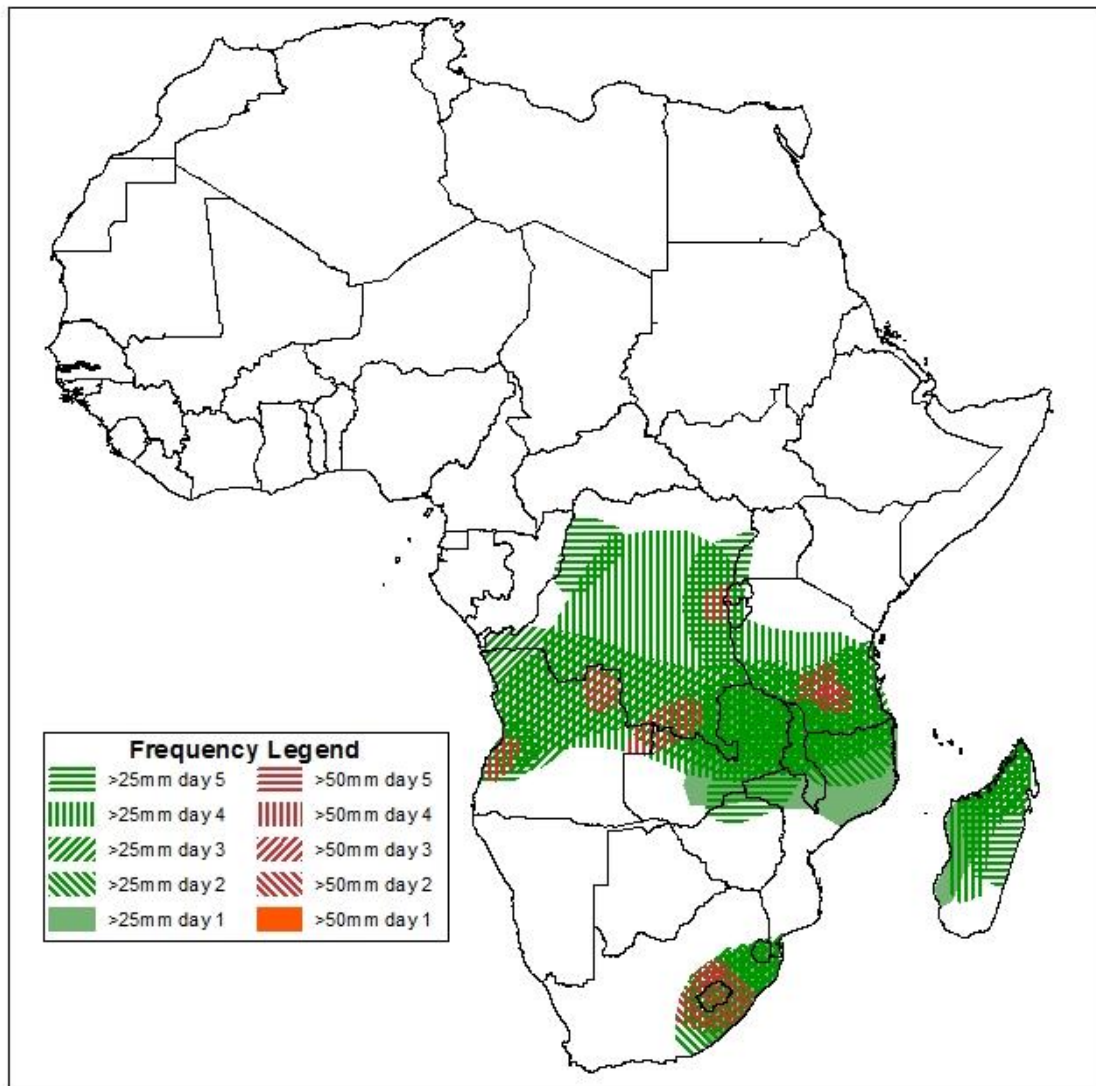
1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on February 16, 2016)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Feb 17 – Feb 21, 2016)

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.



Five Days Rainfall Forecast Summary February 17 - 21 , 2016

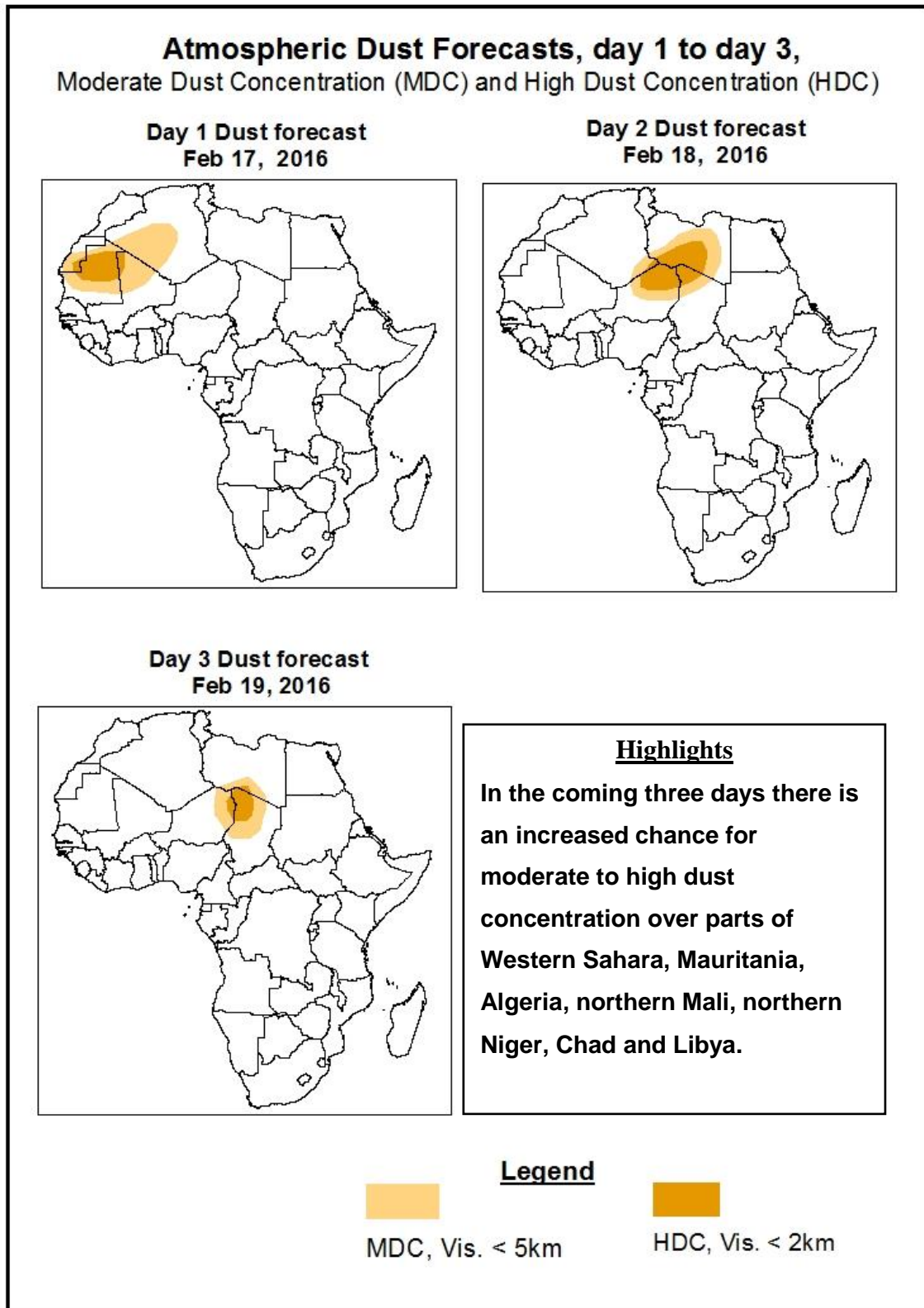


Highlights

In the coming five days, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Angola and DRC, Rwanda, Burundi, southern Tanzania, northern Mozambique, portions of Zambia, eastern South Africa, Lesotho, Swaziland and portions of Madagascar.

1.2. Atmospheric Dust Concentration Forecasts (valid: Feb 17 – Feb 19, 2016)

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 17 – Feb 21, 2016

The Azores high pressure system over Northeast Atlantic Ocean is expected to weaken gradually, with its central pressure value decreasing from about 1049 hPa in 24 hours to 1036 hPa in 120 hours.

The central pressure value associated with the St. Helena high pressure system is expected to increase from 1028 hPa to 1036 hPa through 48 hours, and the high pressure system is expected to weaken gradually towards end of the forecast period, with its central pressure value decreasing to 1029 hPa in 120 hours.

The Mascarene high pressure system over Southwest Indian Ocean is expected to maintain an average central pressure value of 1027 hPa during the forecast period.

At 925 hPa level, strong dry northeasterly to easterly flow is expected to prevail across many places in the Sahel countries and Northeast Africa, which may lead to increase in atmospheric dust concentration in some areas.

At 850 hPa level, southeasterly to easterly flow from the Indian Ocean, with its associated convergence across the northern portions of Southeastern Africa is expected to enhance rainfall in the region. Seasonal wind convergences are expected to remain active across DRC and the neighboring areas of the Lake Victoria region during the forecast period. Cyclonic circulation over parts of Angola is also expected to enhance rainfall in the region. Interactions between mid-latitude and tropical system across South Africa is expected to enhance rainfall across the eastern parts of South Africa, Lesotho and Swaziland.

In the coming five days, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Angola and DRC, Rwanda, Burundi, southern Tanzania, northern Mozambique, portions of Zambia, eastern South Africa, Lesotho, Swaziland and portions of Madagascar.

There is also an increased chance for maximum heat index values to exceed 40°C along the Gulf of Guinea coast, parts of northern DRC, western CAR, portions of South Sudan Republic and portions of costal East Africa.

2.0. Previous and Current Day Weather over Africa

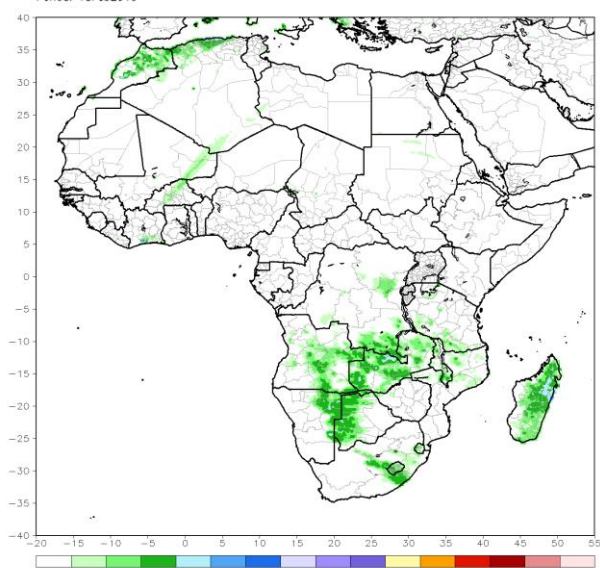
2.1. *Weather assessment for the previous day* (February 15, 2016)

Moderate to locally heavy rainfall was observed over portions of Angola, eastern Namibia, western Botswana, Zambia, local areas in DRC, portions of South Africa, and Madagascar.

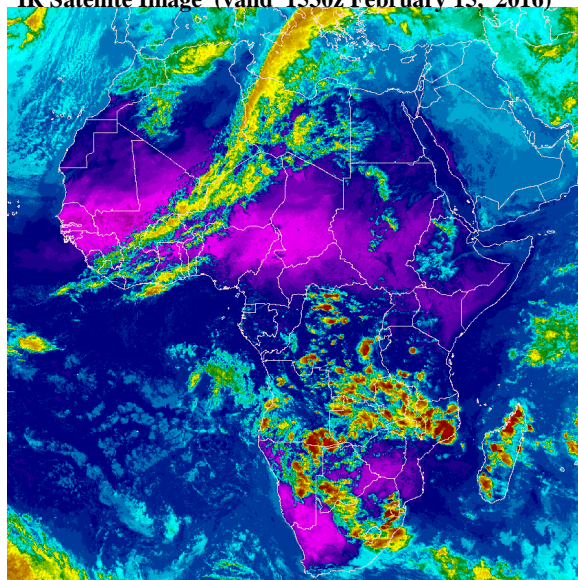
2.2. *Weather assessment for the current day* (February 16, 2015)

Intense convective clouds are observed across DRC, Angola, Namibia, Zambia, portions of Botswana, southern Tanzania, Malawi, South Africa and Madagascar.

RFE2 Daily Total Rainfall (mm)
Period: 15Feb2016



IR Satellite Image (valid 1530z February 15, 2016)



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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