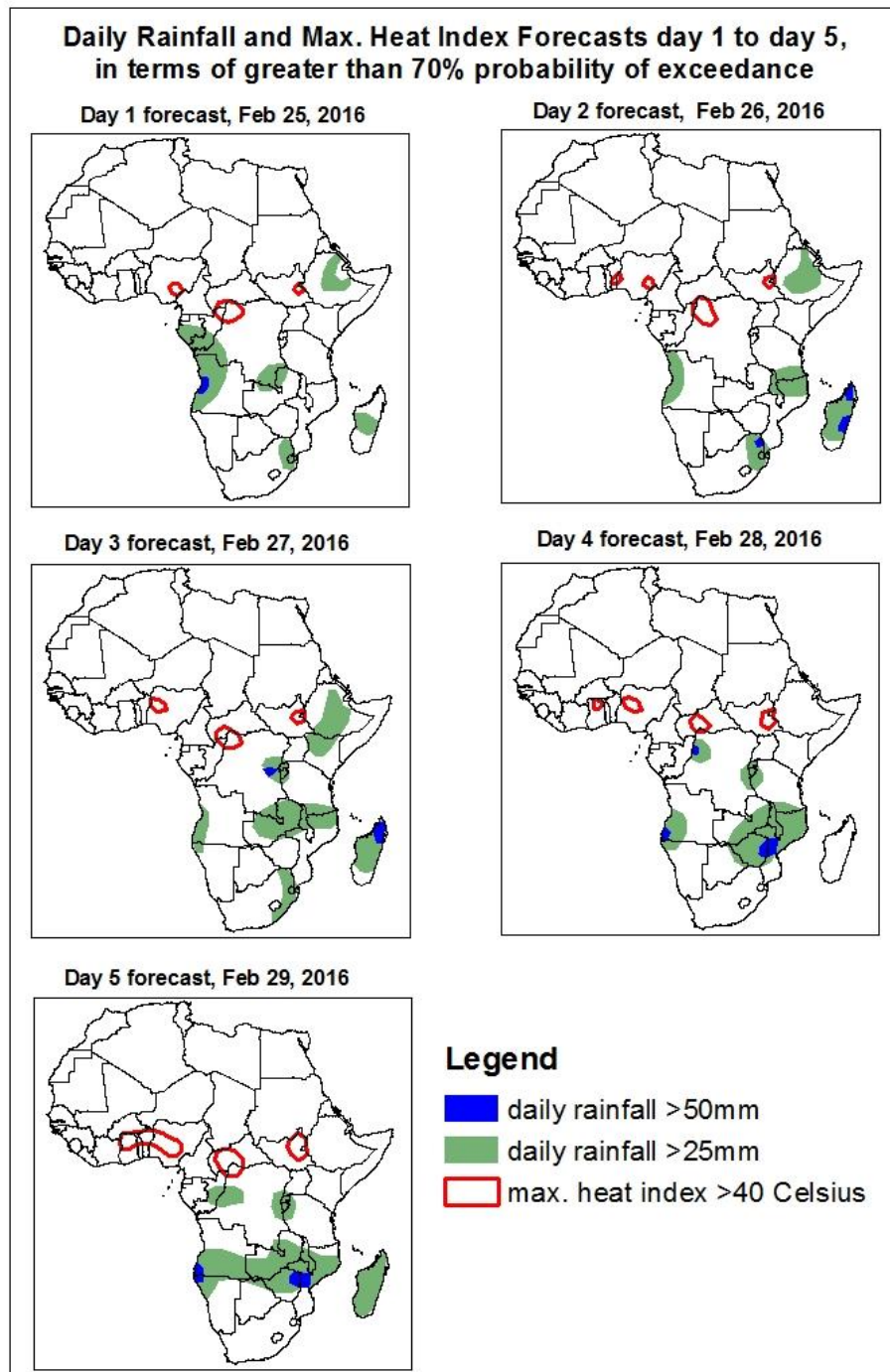


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

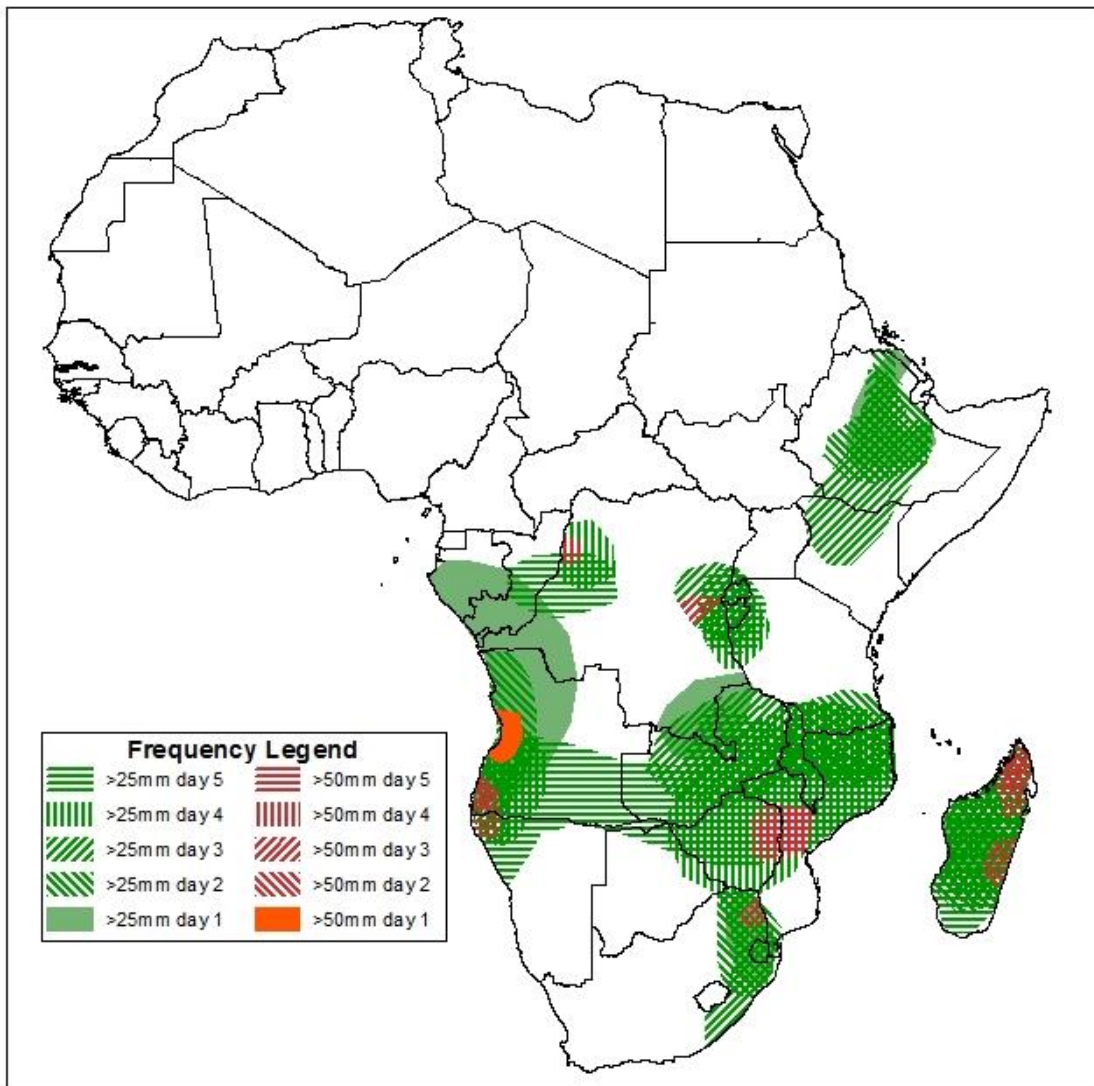
1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on February 24, 2016)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Feb 25 – Feb 29, 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 25 - 29 , 2016

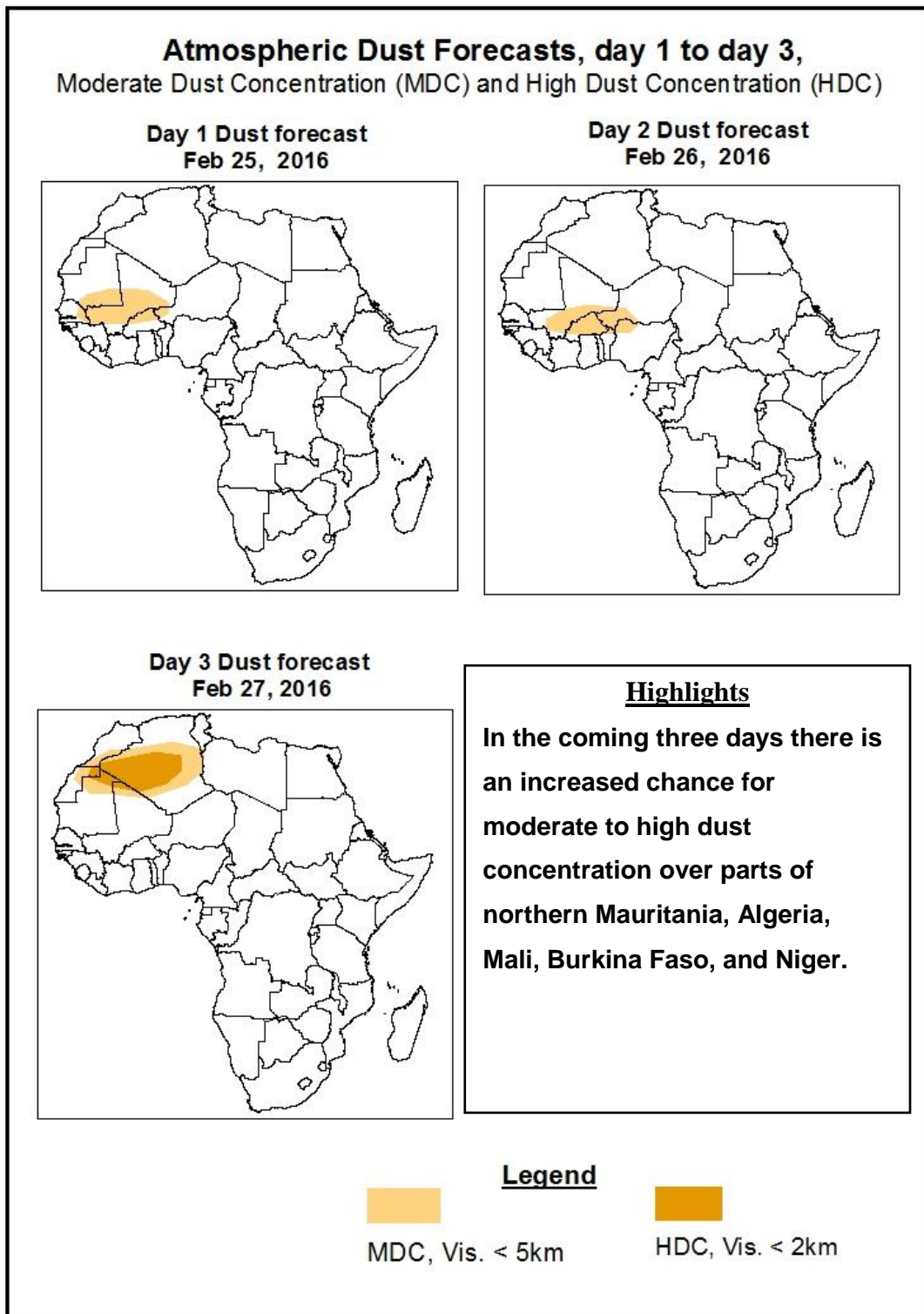


Highlights

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

1.2. Atmospheric Dust Concentration Forecasts (valid: Feb 25 – Feb 27, 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 25 – Feb 29, 2016

The Azores high pressure system over Northeast Atlantic is expected to weaken gradually, with its central pressure value decreasing from about 1039 hPa to 1034 hPa during the forecast period.

The St. Helena High pressure system over the Southeast Atlantic Ocean is expected to intensify slightly, with its central pressure value increasing from about 1019 hPa to 1023 hPa during the forecast period.

The Mascarene high pressure system over the Southwest Indian Ocean is expected to intensify gradually, while shifting eastwards. Its central pressure value is expected to increase from about 1025 hPa in 24 hours to 1030 hPa in 120 hours.

At 925 hPa level, strong dry northeasterly to easterly flow is expected to prevail across the central and western Sahel countries, leading to increased chance for moderate to high dust concentration through 24 to 72 hours.

At 850 hPa level, a mid-latitude cyclonic circulation is expected to prevail across the northern portions of Arabian Peninsula, with its associated trough extending southwards into the Greater Horn of Africa, leading to increased rainfall activity over Ethiopia through 72 hours. An area of cyclonic circulation and its associated trough is expected to prevail over the Mozambique Channel and the neighboring areas during the forecast period, resulting in moderate to locally heavy rainfall over portions of Southeastern Africa. Seasonal wind convergences are expected to enhance rainfall over portions of DRC, the Lake Victoria region, and Angola.

At 500 hPa level, a deep trough associated with mid-latitude cyclonic circulation is expected to prevail over the Arabian Peninsula and the neighboring areas of Northeast Africa through 24 to 48 hours.

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

There is also an increased chance for maximum heat index values to exceed 40°C portions of portions of Ghana, northern Togo, northern Benin, parts of Nigeria, portions of CAR, parts of northern DRC, eastern South Sudan and local areas in southwestern Ethiopia.

2.0. Previous and Current Day Weather over Africa

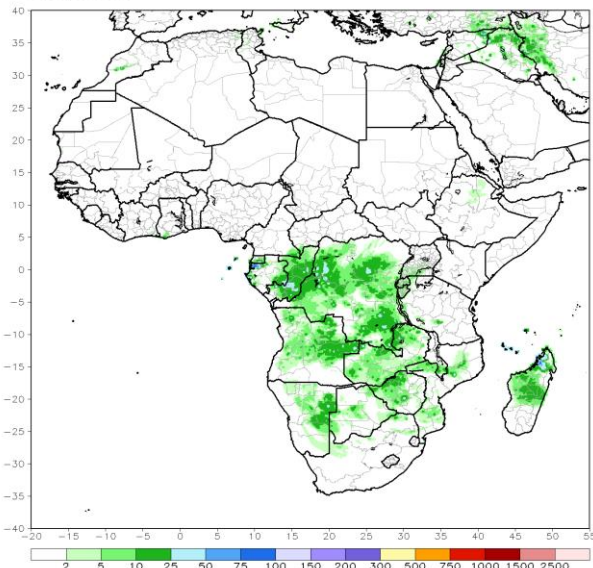
2.1. *Weather assessment for the previous day* (February 23, 2016)

Moderate to locally heavy rainfall was observed over portions of central DRC, northern Madagascar, northern Zambia, eastern Namibia, central Congo, eastern Angola and northern Zimbabwe.

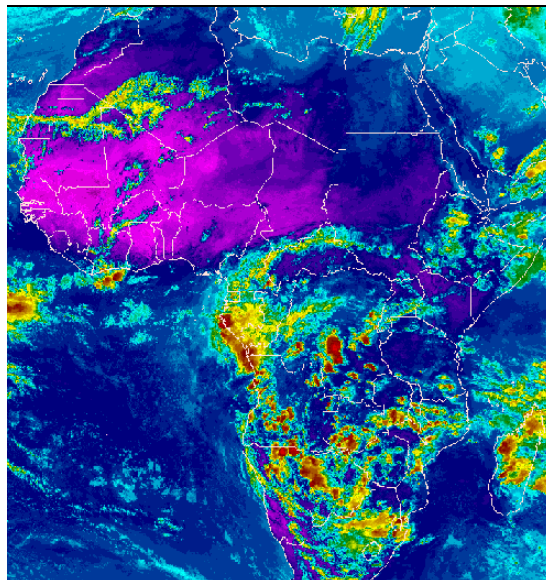
2.2. *Weather assessment for the current day* (February 24, 2016)

Intense convective clouds are observed across portions of central DRC, northern Namibia, Swaziland, northern Ethiopia, Gabon, Zambia and northern Madagascar.

RFE2 Daily Total Rainfall (mm)
Period: 23Feb2016



IR Satellite Image (valid 1530z February 24, 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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