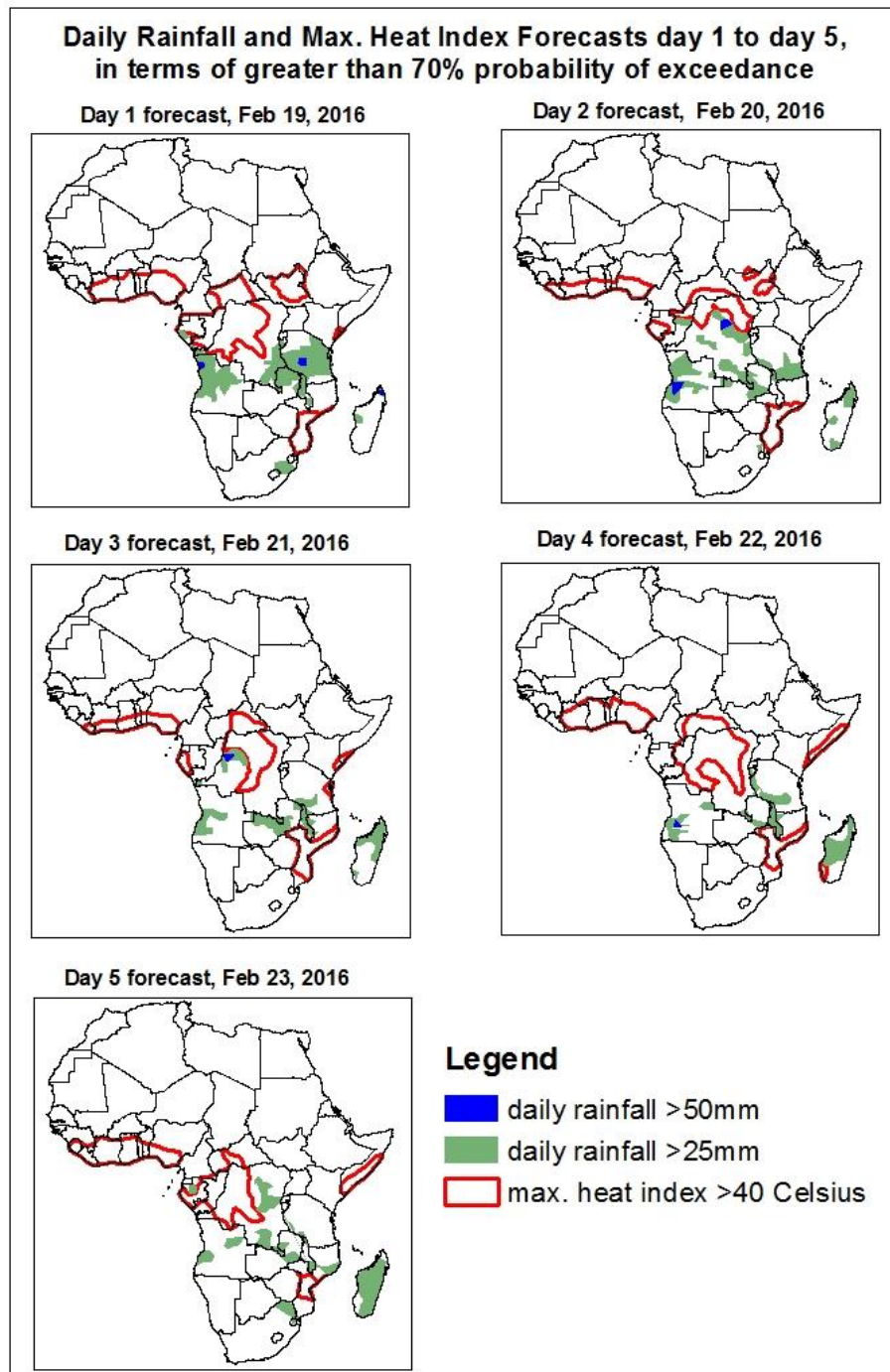


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

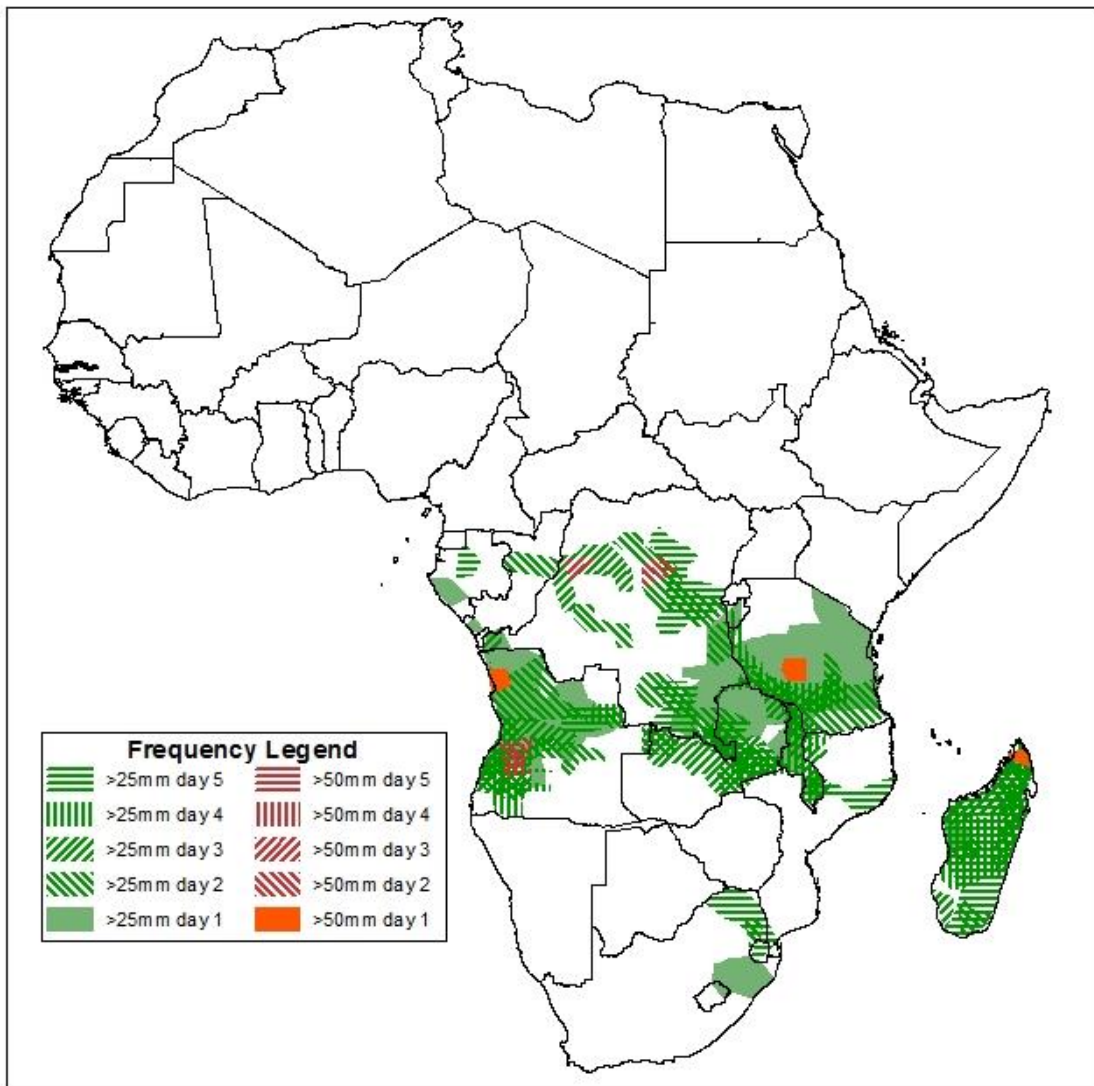
1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on February 18, 2016)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Feb 19 – Feb 23, 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 19 - 23 , 2016

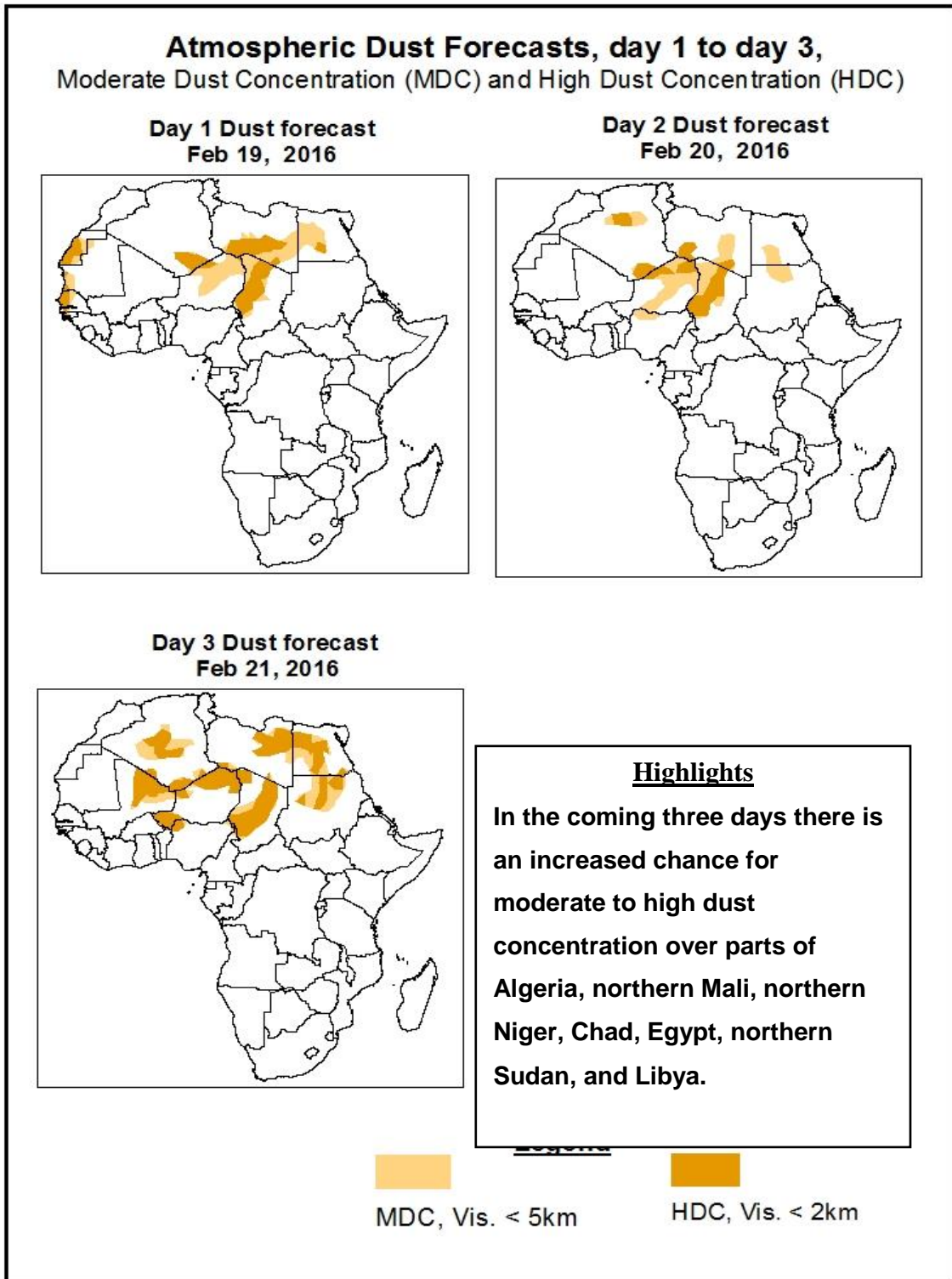


Highlights

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

1.2. Atmospheric Dust Concentration Forecasts (valid: Feb 19 – Feb 21, 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 19 – Feb 23, 2016

The extension Azores high pressure system over Northeast Atlantic Ocean is expected to intensify in to 1026Hpa, into 1027Hpa and in to 1032Hpa in 24, 48 and 72 hours' time from the central value of 1025Hpa. This pressure system is also expected to weaken in to 1029Hpa and in to 1025Hpa in 96 and 120 hours. Following the intensification of this pressure system in the coming three days there is an increased chance for moderate to high dust concentration over parts of Algeria, northern Mali, northern Niger, Chad, Egypt, northern Sudan, and Libya.

The Arabian high pressure system is also expected to intensify from 1026Hpa to 1029Hpa in the next 24Hrs, while in the next 72Hrs this pressure system is expected to weaken from 1029Hpa to 1025Hpa further intensification is again expected from 1025Hpa to 1040Hpa in the next 120Hrs.

The Mascarene high pressure system over Southwest Indian Ocean is expected to intensify with its central pressure value increasing from 1026hPa in 24 hours to 1035hPa in 120 hours. The St Helena high is expected to weaken from a central value of 1034Hpa to 1022Hpa in the next 96 Hours.

At 925HPa 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 850HPa 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 CAR during the forecast period. 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 western Angola, southern DRC, Rwanda, Burundi, southern Tanzania, portions of Zambia, eastern South Africa, Swaziland and Madagascar.

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

2.0. Previous and Current Day Weather over Africa

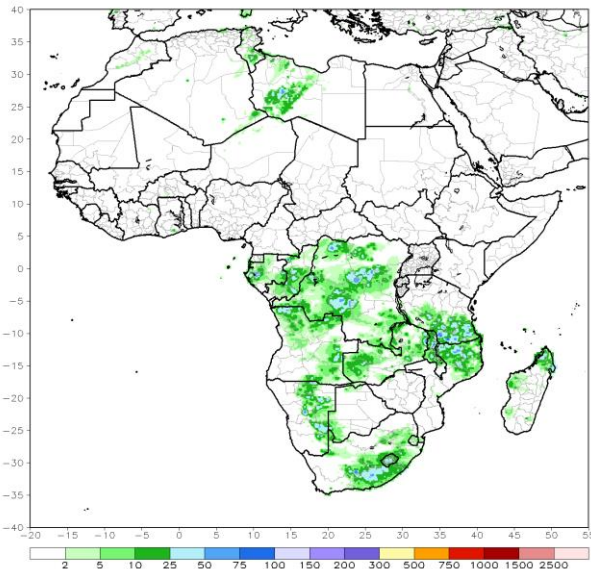
2.1. *Weather assessment for the previous day* (February 17, 2016)

Moderate to locally heavy rainfall was observed over portions of West Libya, southern, Central DRC, Central Congo, Southern Tanzania, SE South Africa and Northern Mozambique..

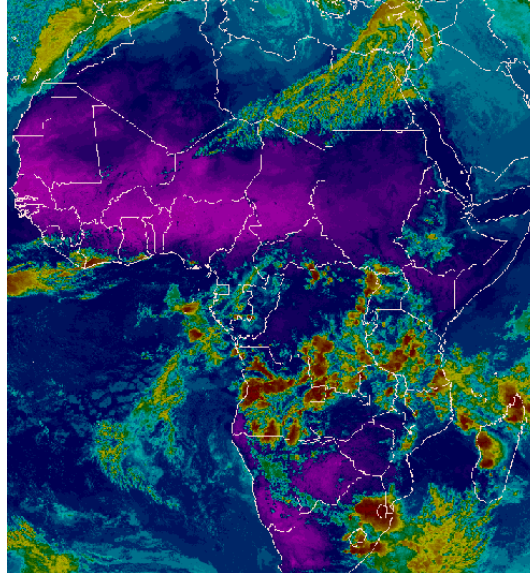
2.2. *Weather assessment for the current day* (February 18, 2015)

Intense convective clouds are observed across Southern DRC, Western Angola, southern, DRC, Central Tanzania, western Madagascar and Swaziland.

RFE2 Daily Total Rainfall (mm)
Period: 17Feb2016



IR Satellite Image (valid 1530z February 18, 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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