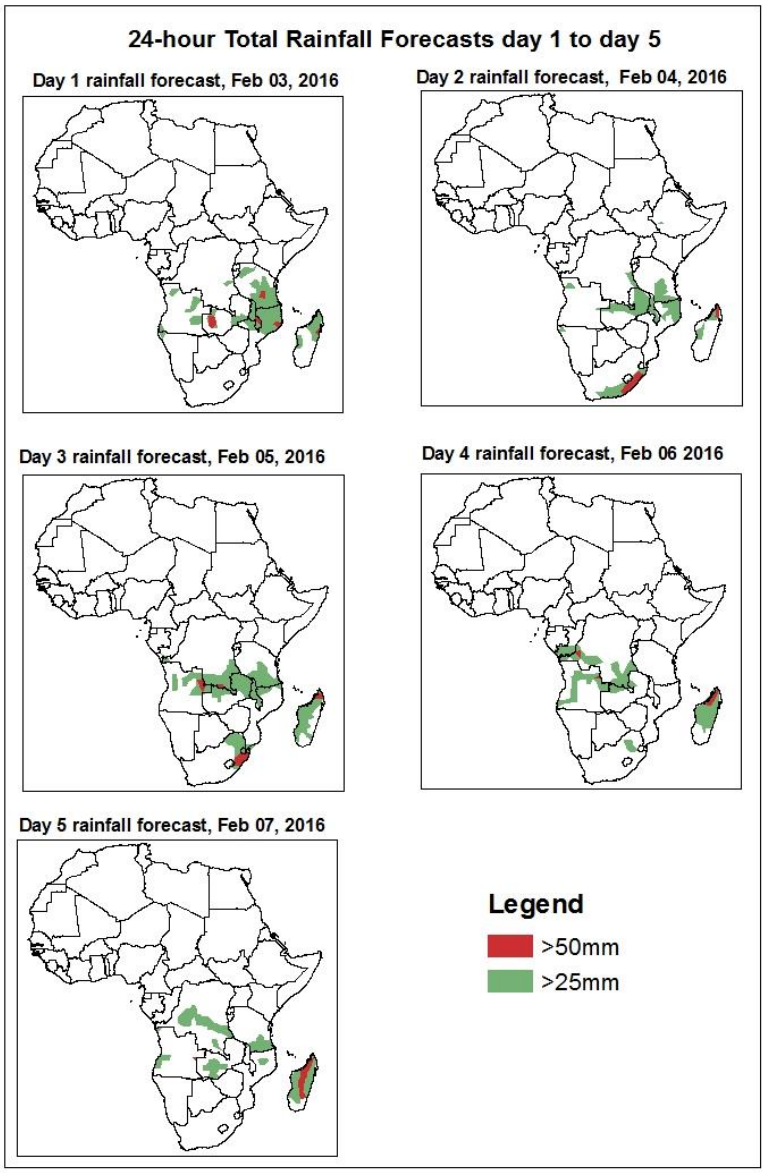
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

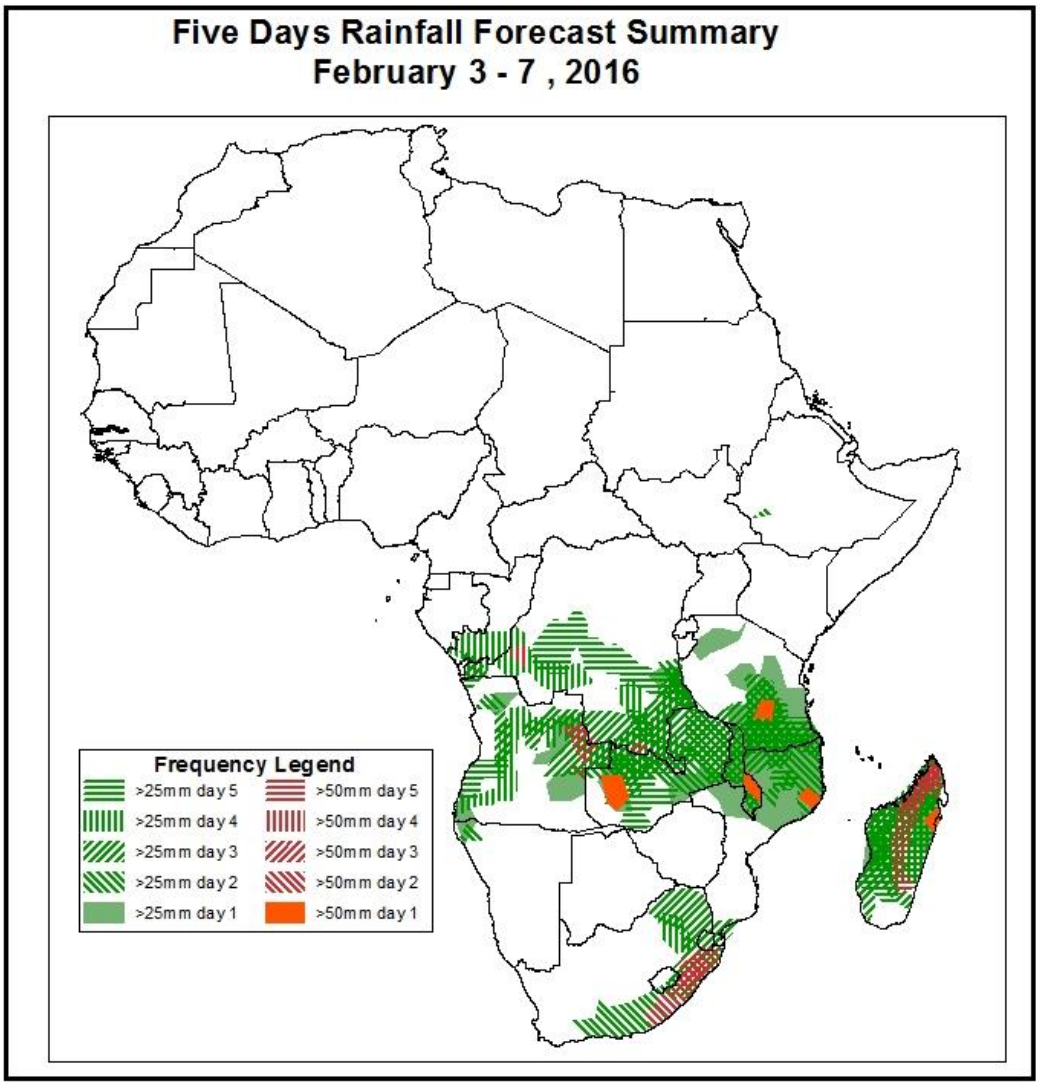
1. Rainfall and Dust Concentration Forecasts

Valid: 06Z of Feb 03, 2016 - 06Z of Feb 07, 2016. (Issued on February 02, 2016)

1.1. 24-hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of high probability of precipitation (POP), based on the NCEP/GFS, ECMWF and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.





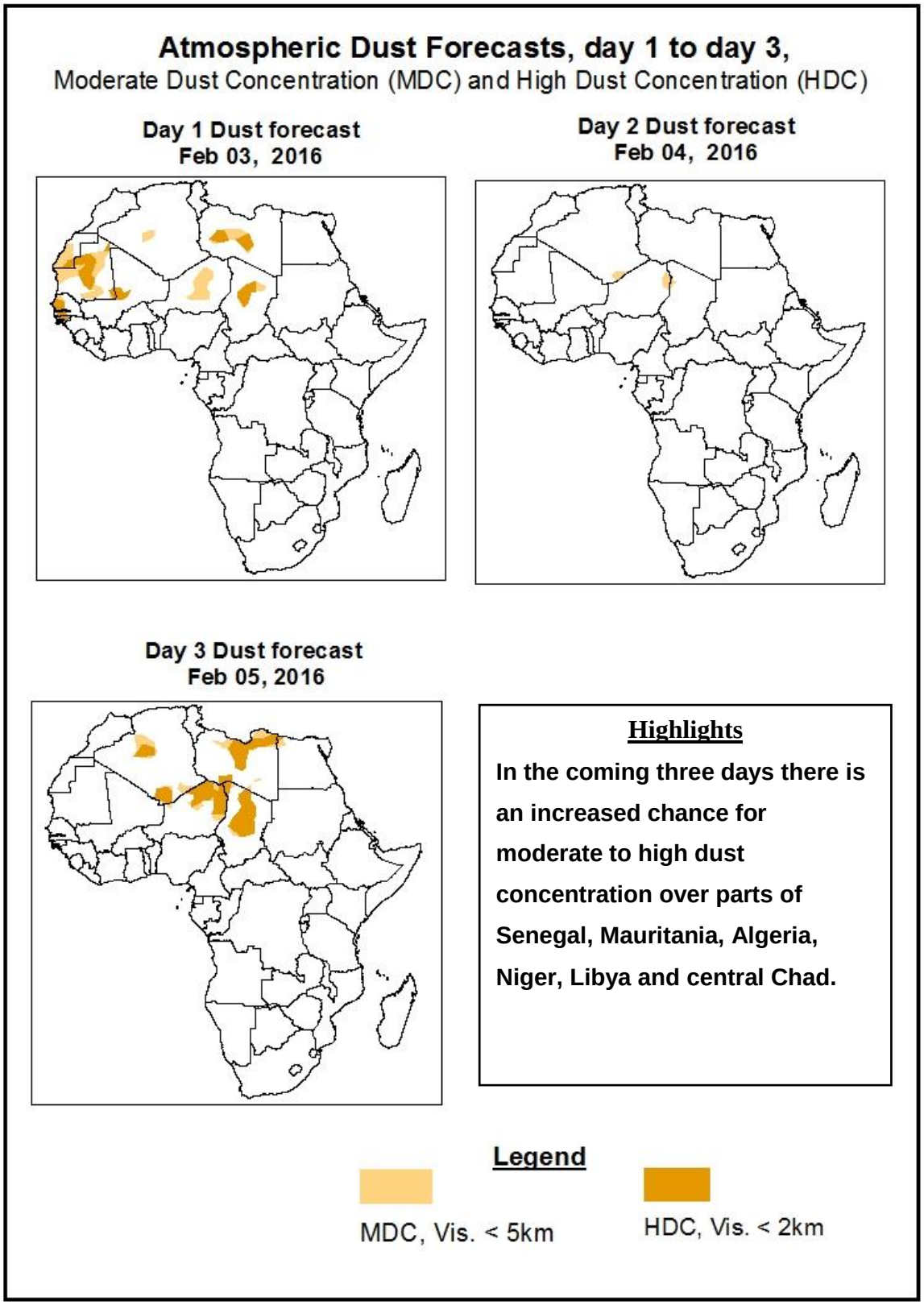
Highlights

In the coming five days, there is an increased chance for two or more days of moderate to heavy rainfall over many places in Zambia, Angola, southern DRC, southern Tanzania, Malawi, Comoros Island, northern Mozambique and northern Madagascar with high probability of heavy rainfall over parts of northern Madagascar, western Zambia, northern Mozambique and southern Tanzania.

1.2. Atmospheric Dust Concentration Forecasts

Valid: 12Z of Feb 03 – 12Z of Feb 05, 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 03 – Feb 07, 2016

Azores high pressure system is expected to weaken in to 1036Hpa In 24 hours' time from its central value of 1037Hpa and intensify in to 1042Hpa in 48 hours' time. This high pressure system is also expected to weaken in to 1038Hpa, in to 1033Hpa and in to 1032Hpa in 72, 96 and 120 hours' time respectively. In the coming three days there is an increased chance for dust concentration over parts of Senegal, Mauritania, Algeria, Niger, Libya and central Chad with high probability of visibility less than 2km over central Chad, Mauritania and Algeria.

The Arabian high pressure system is expected to weaken in to 1020Hpa in 24 hours' time from its central value of 1024Hpa and intensify back to 1027Hpa in 48 hours' time This high pressure system is expected to attain its central value for about 24 hours and weaken back in to 1026Hpa and in to 1025Hpa in 96 and 120 hours' time respectively.

The interaction of sub-tropical low pressure system is expected to weaken this high pressure system and to pull ITCZ north word.

The St Helena high pressure system over South East Atlantic Ocean is expected to weaken in to 1022Hpa in 24 hours' time from its central value of 1027Hpa and intensify back in to 1023Hpa, in to 1025Hpa and in to 1026Hpa in 48, 72 and 96 hours' time respectively.

The Mascarene high pressure system over Southwest Indian Ocean is expected to weaken in to 1028Hpa and in to 1026Hpa in 24 and 48 hours' time from the central value of 1030Hpa and intensify back in to 1025Hpa and in to 1026Hpa in 72 and 96 hours' time respectively. By the end of the forecast period, this high pressure system is expected to attain 1027Hpa.

Both Mascarene and St Helena high pressure systems are expected to approach the coastal areas of South Africa and hence cumulative moisture supposed to incur in to South Africa is expected to decrease from the climatically expected amount.

In the coming five days, there is an increased chance for two or more days of moderate to heavy rainfall over many places in Zambia, Angola, southern DRC, southern Tanzania, Malawi, Comoros Island, northern Mozambique and northern Madagascar with high probability of heavy rainfall over parts of northern Madagascar, western Zambia, northern Mozambique and southern Tanzania.

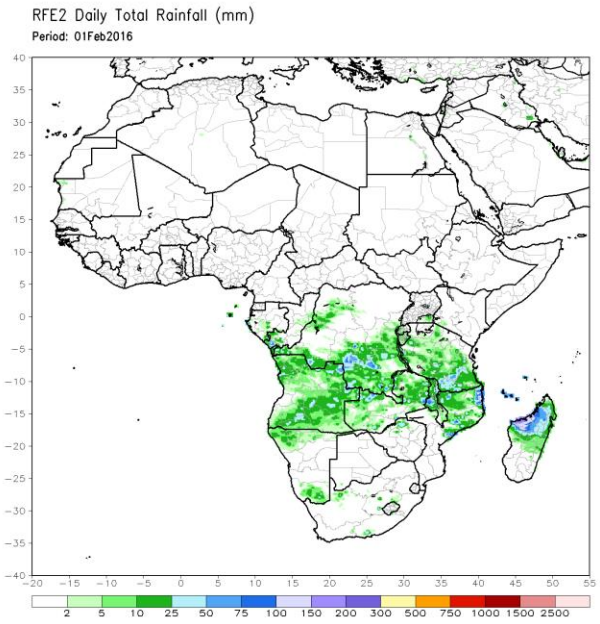
2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (February 01, 2016)

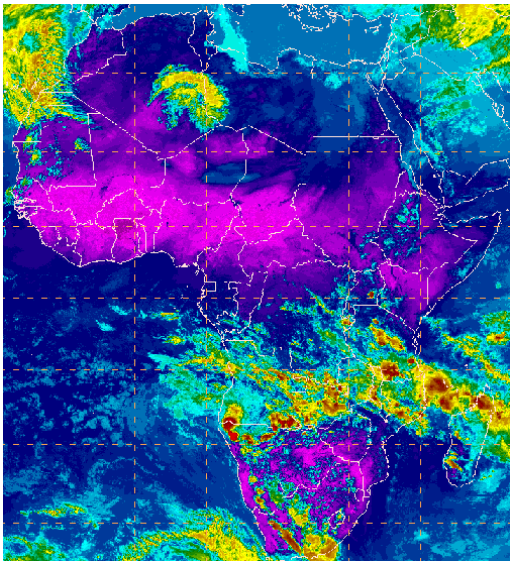
Moderate to heavy rainfall was observed over southern DRC, eastern Angola, southern Tanzania, northern Mozambique, eastern Zambia, Malawi and northern Madagascar.

2.2. Weather assessment for the current day (February 02, 2015)

Intense convective clouds are observed across southern Uganda, southern part of South Africa, central and southern Tanzania, Zambia, Malawi, southern Angola, northern Mozambique and northern Madagascar.



IR Satellite Image (valid 1430z February 02, 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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