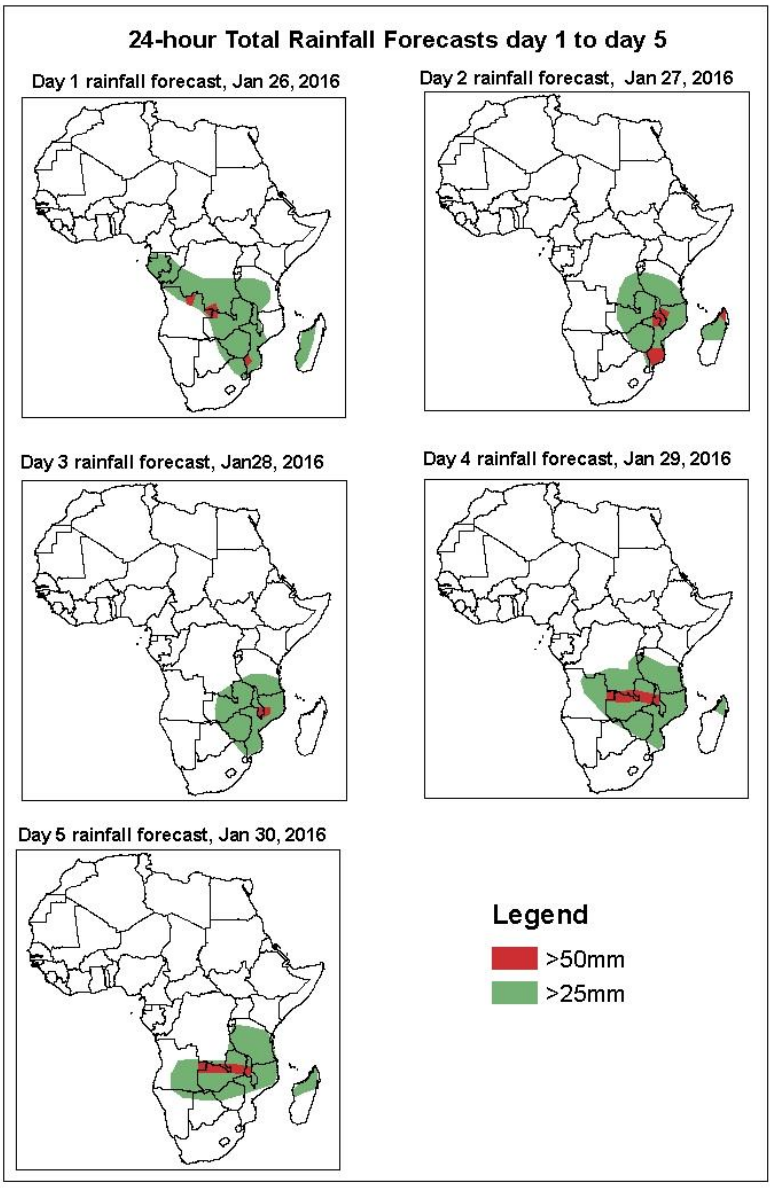
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

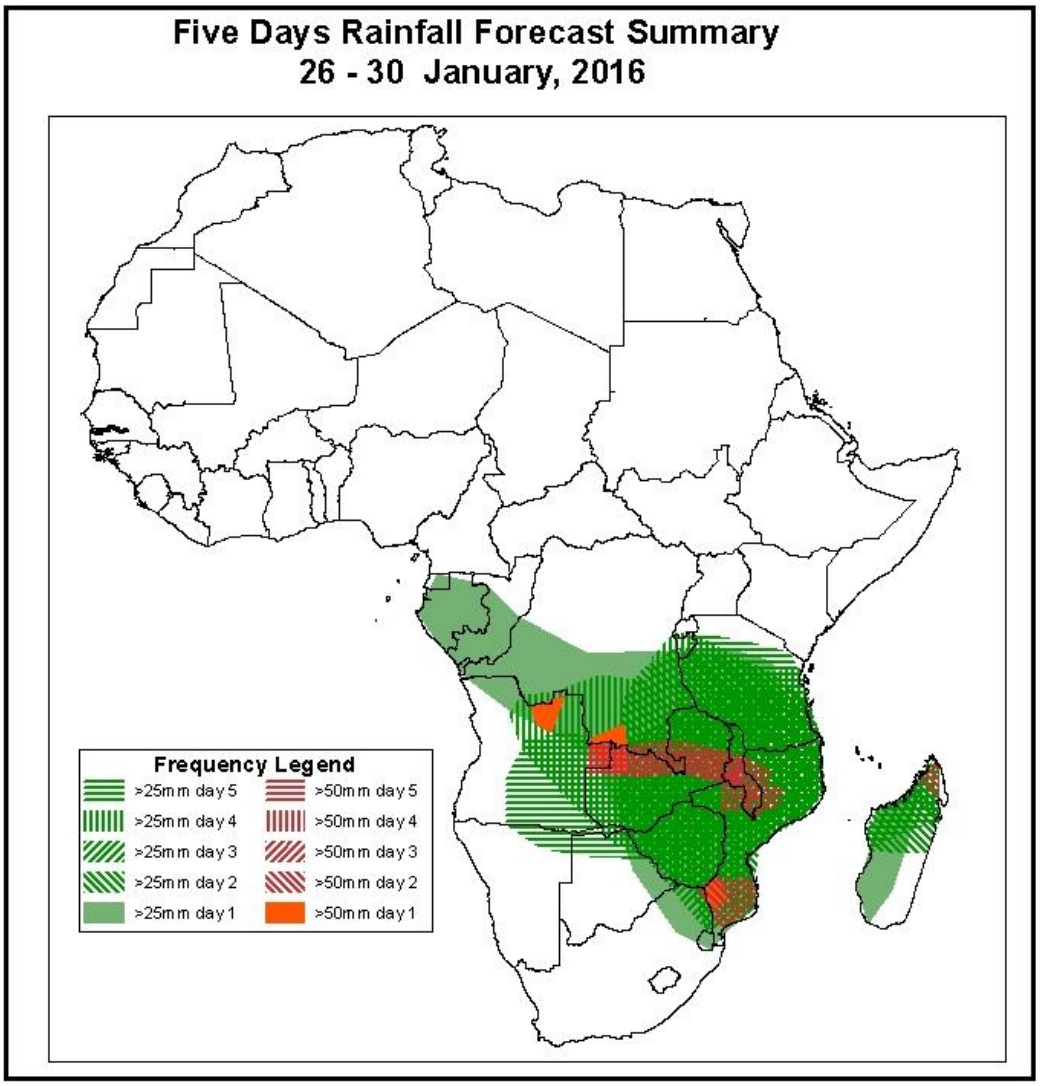
1. Rainfall and Dust Concentration Forecasts

Valid: 06Z of Jan 26 - 06Z of Jan 30, 2016. (Issued on January 25, 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.





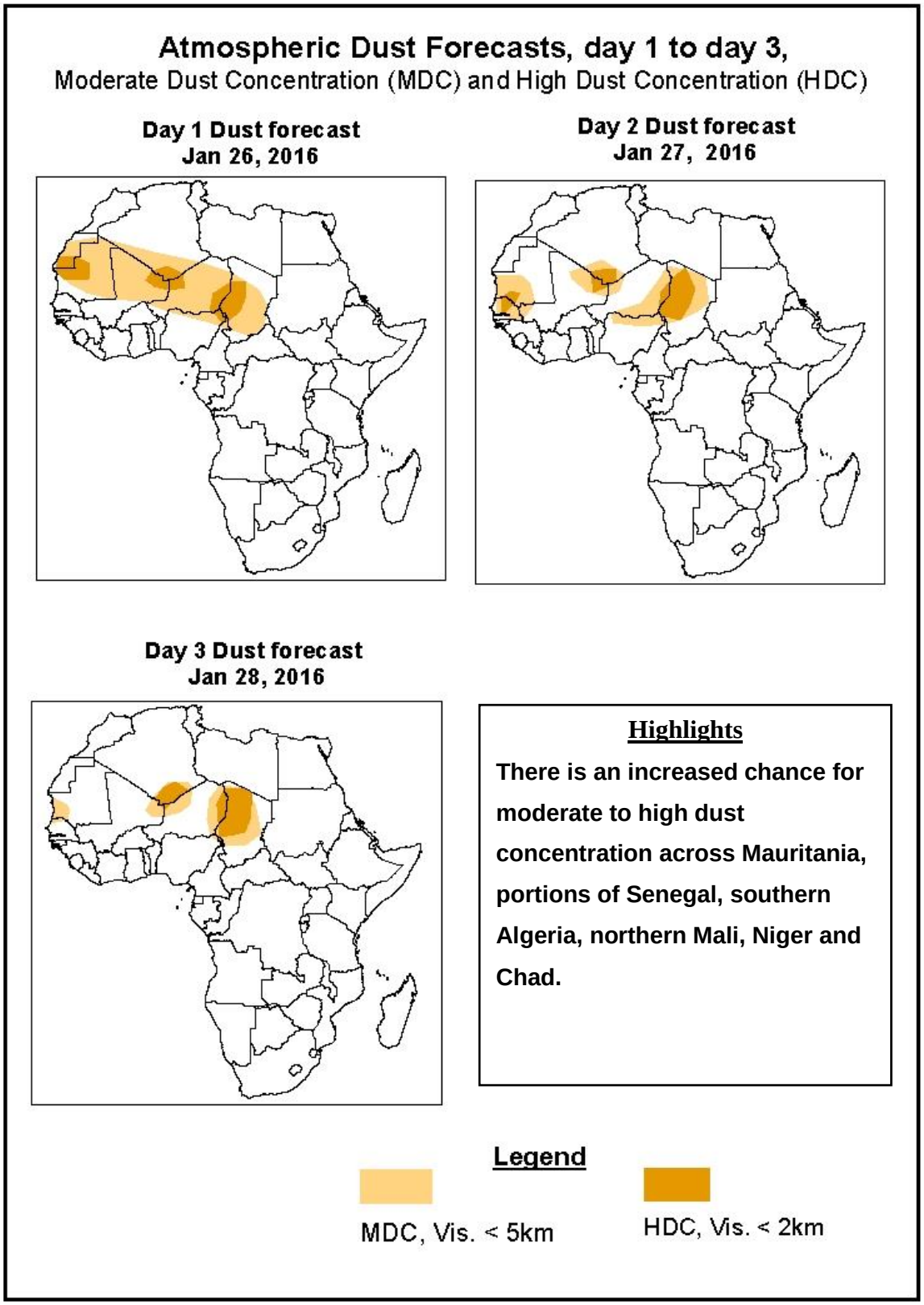
Highlights

In the coming five days, there is an increased chance for two or more days of moderate to heavy rainfall over parts of eastern Angola, southern and southern DRC, Tanzania, Zambia, Zimbabwe, Malawi, Mozambique and portions of Madagascar.

1.2. Atmospheric Dust Concentration Forecasts

Valid: 12Z of Jan 26 – 12Z of Jan 28, 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: 26 - 30 January, 2016

A high pressure system with its associated ridge is expected to prevail in the region between Northeast Africa and the Middle East, while intensifying during the first half of the forecast period. Its central pressure value is expected to increase from about 1033hPa in 24 hours to 1037 hPa in 72 hours.

The St Helena high pressure system over Southeast Atlantic Ocean is expected to intensify gradually, with its central pressure value increasing from about 1023 hPa to 1027 hPa during the forecast period.

The Mascarene high pressure system over Southwest Indian Ocean is expected to intensify while shifting eastwards, with its central value increasing from about 1031 hPa to 1036 hPa through 24 to 120 hours.

At 925 hPa level, a broad area of strong dry northeasterly to easterly flow is expected to prevail over much of Sahel region and the neighboring areas, leading to an increased chance for widespread atmospheric dust concentration in the region.

At 850 hPa level, seasonal lower-level wind convergences are expected to prevail across southern DRC, Zambia, Zimbabwe, Tanzania, Malawi and Mozambique resulting in moderate to locally heavy rainfall in the region. On the other hand, lower-level anti-cyclonic flow is expected to prevail over Namibia and South Africa resulting in suppressed rainfall in the region during the forecast period.

In the coming five days, there is an increased chance for two or more days of moderate to heavy rainfall over parts of eastern Angola, southern and southern DRC, Tanzania, Zambia, Zimbabwe, Malawi, Mozambique and portions of Madagascar.

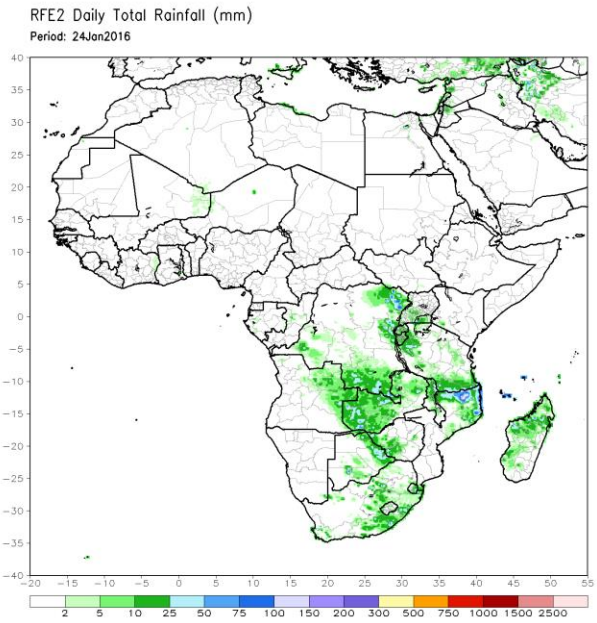
2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (January 24, 2016)

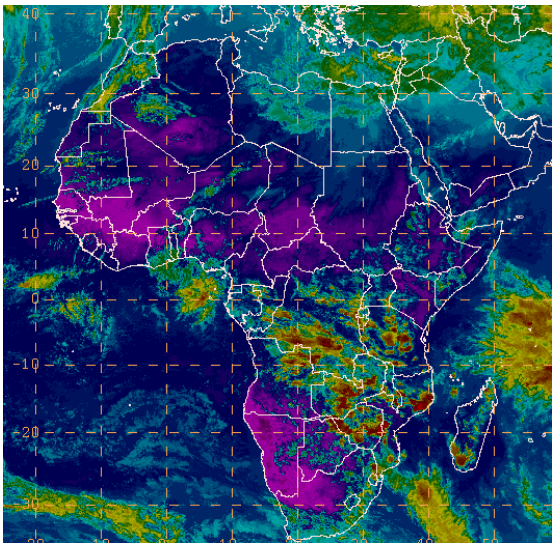
Moderate to heavy rainfall was observed over portions of eastern and southern DRC, Rwanda, Burundi, parts of eastern Angola, western and northern Zambia, local areas in Zimbabwe and Botswana, portions of South Africa, local areas in Tanzania, portions of northern Mozambique, and parts of Madagascar.

2.2. Weather assessment for the current day (January 25, 2015)

Intense convective clouds are observed across portions of DRC, northeastern Angola, parts of Tanzania, Zambia, Zimbabwe, and Mozambique.



IR Satellite Image (valid 1430z January 25, 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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