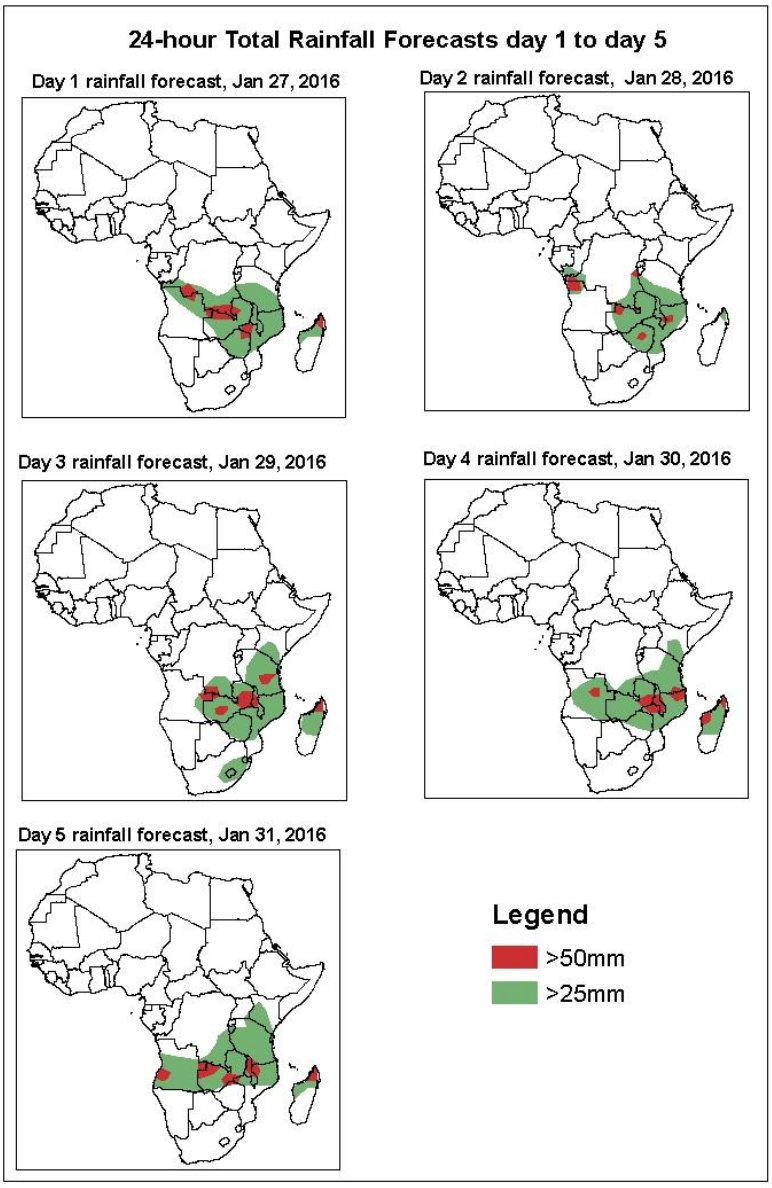
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

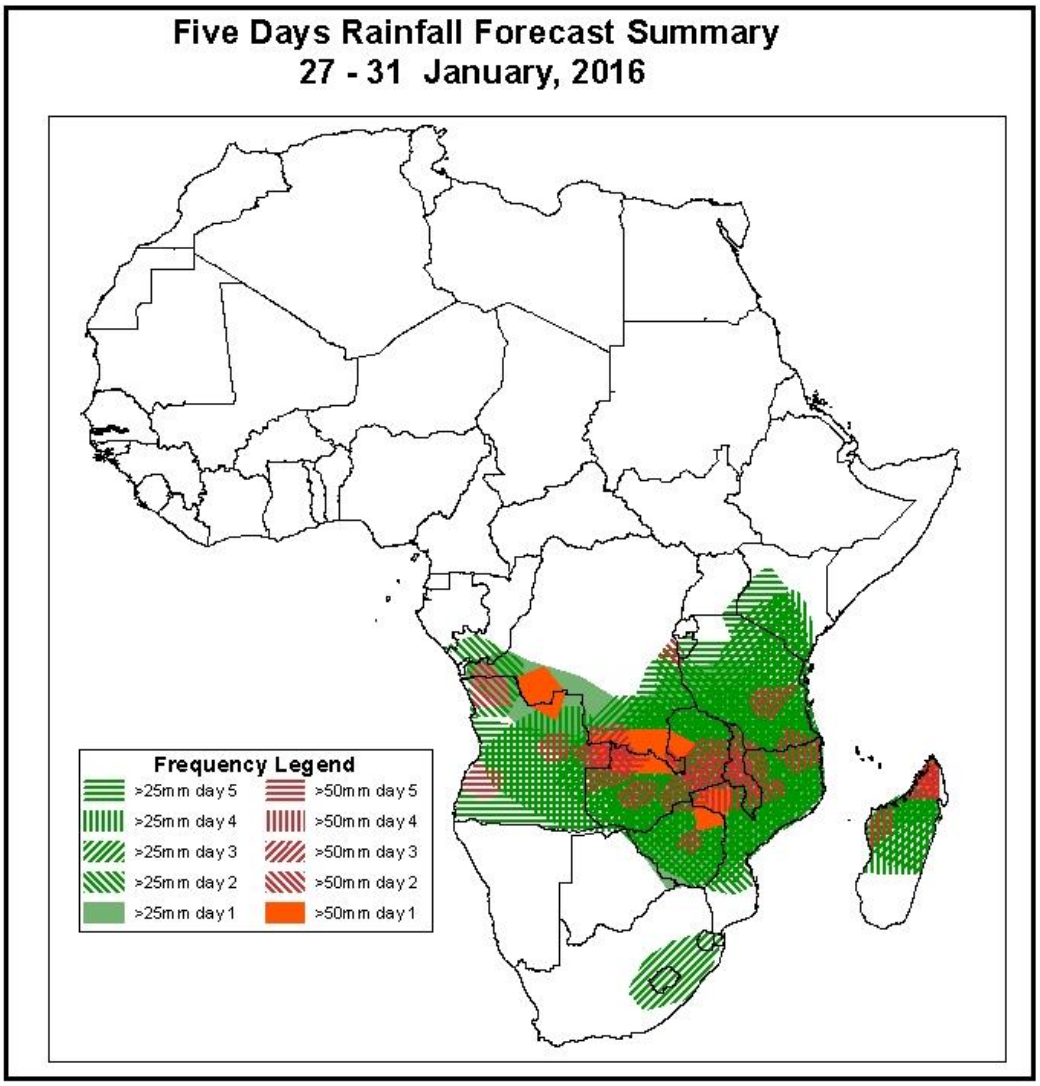
1. Rainfall and Dust Concentration Forecasts

Valid: 06Z of Jan 27 - 06Z of Jan 31, 2016. (Issued on January 26, 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.





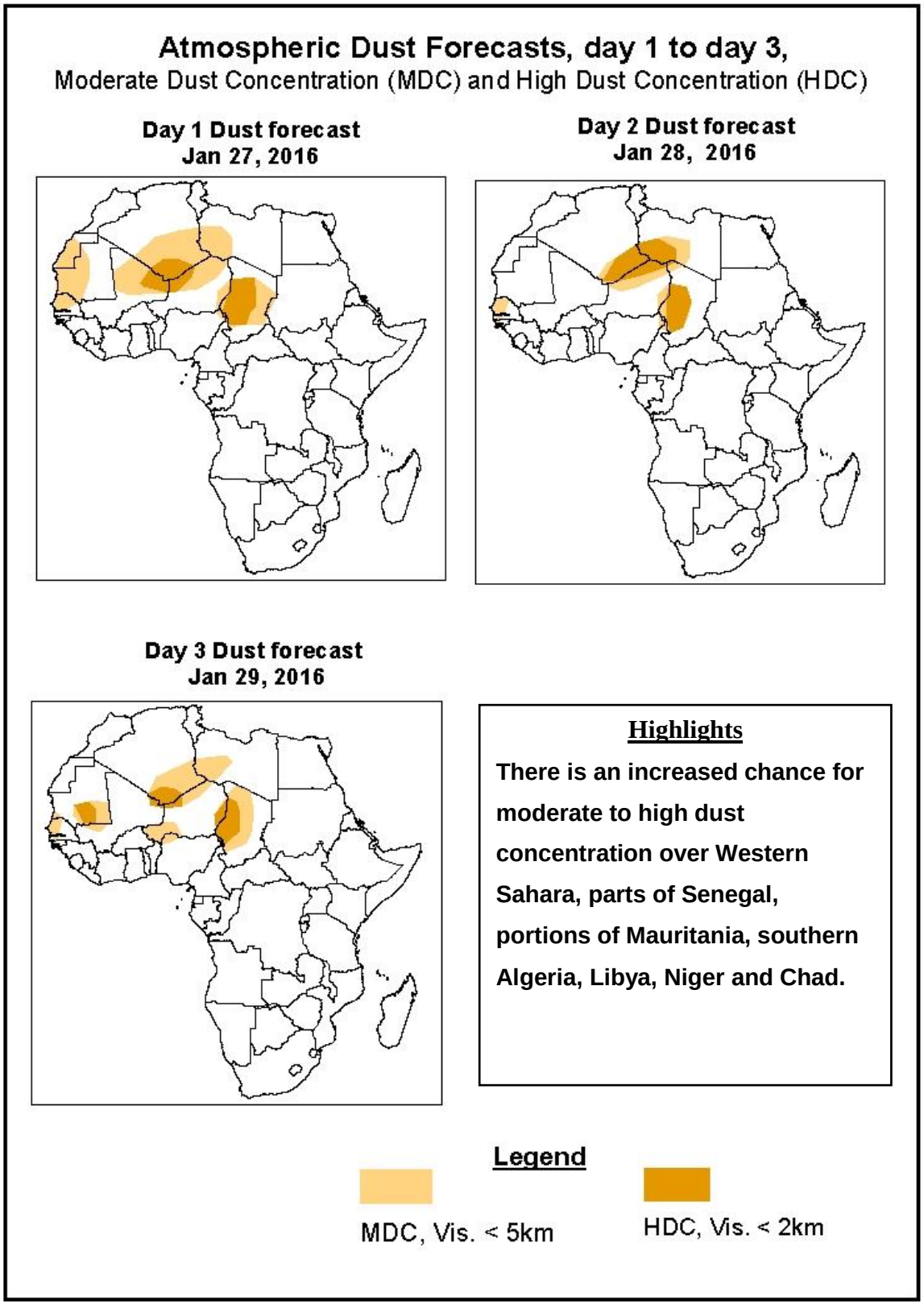
Highlights

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

1.2. Atmospheric Dust Concentration Forecasts

Valid: 12Z of Jan 27 – 12Z of Jan 29, 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: 27 - 31 January, 2016

A high pressure system with its associated ridge is expected to prevail northern Africa, the Mediterranean Sea and the neighboring areas of southern Europe, while slightly weakening during the forecast period. Its central pressure value is expected to decrease from about 1035 hPa in 24 hours to 1033 hPa in 120 hours.

The St Helena high pressure system over Southeast Atlantic Ocean is expected to weaken gradually, with its central pressure value decreasing from about 1024 hPa to 1020 hPa through 24 to 72 hours, while shifting eastwards. Another high pressure system is expected to build up in the region toward end of 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 72 hours.

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

At 850 hPa level, an area of wind convergence between easterlies from the Indian Ocean and westerlies from the Congo Basin is expected to remain active across Tanzania and the neighboring areas during the forecast period. Zonal wind convergence is expected to prevail in the region between eastern Angola and northern Mozambique, across Zambia and southern Malawi, which is expected to enhance rainfall in the region.

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

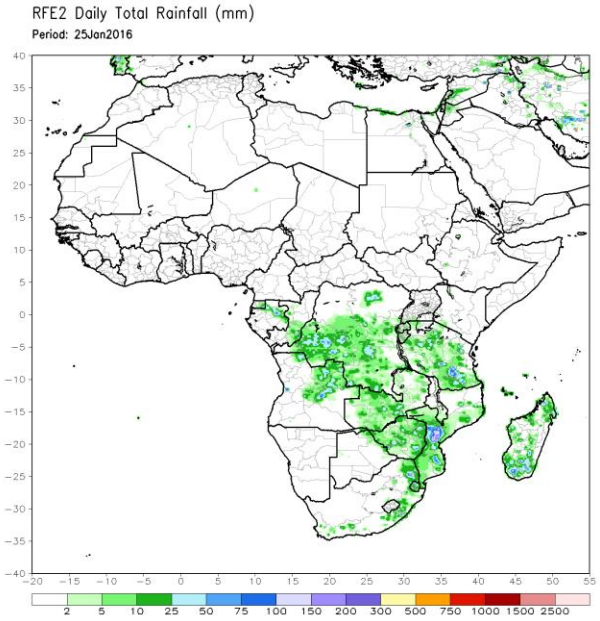
2.0. Previous and Current Day Weather over Africa

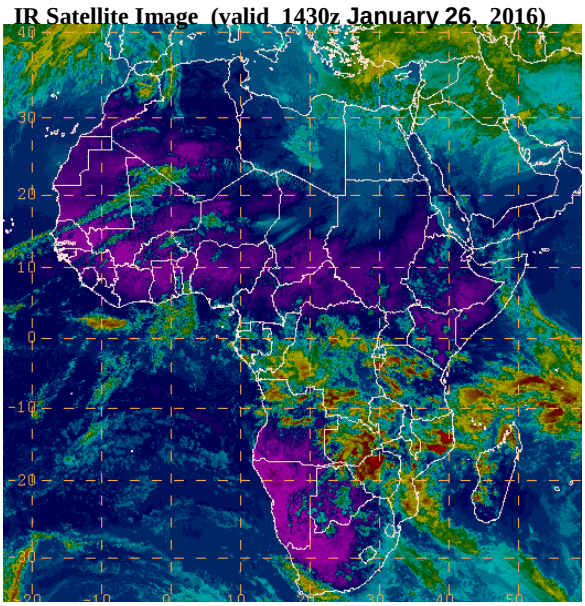
2.1. Weather assessment for the previous day (January 25, 2016)

Moderate to locally heavy rainfall was observed over parts of northern Gabon, central and southern DRC, northeastern Angola, Tanzania, western Zambia, Zimbabwe, eastern South Africa, Mozambique, and Madagascar.

2.2. Weather assessment for the current day (January 26, 2015)

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





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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