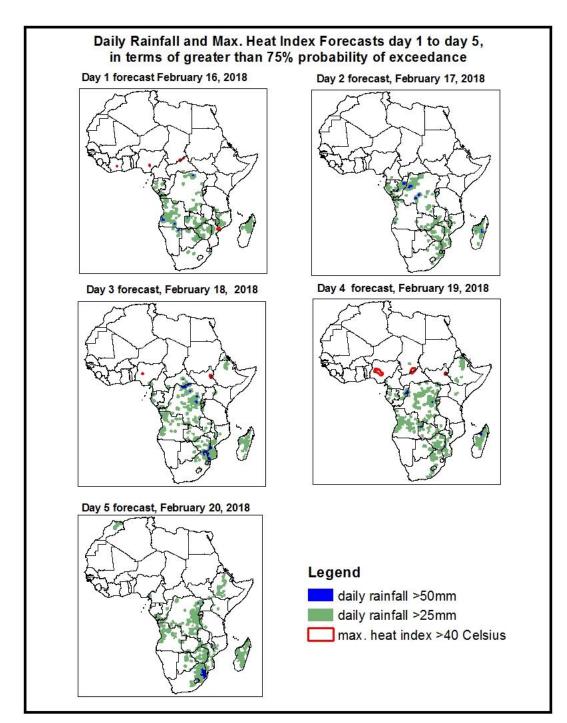
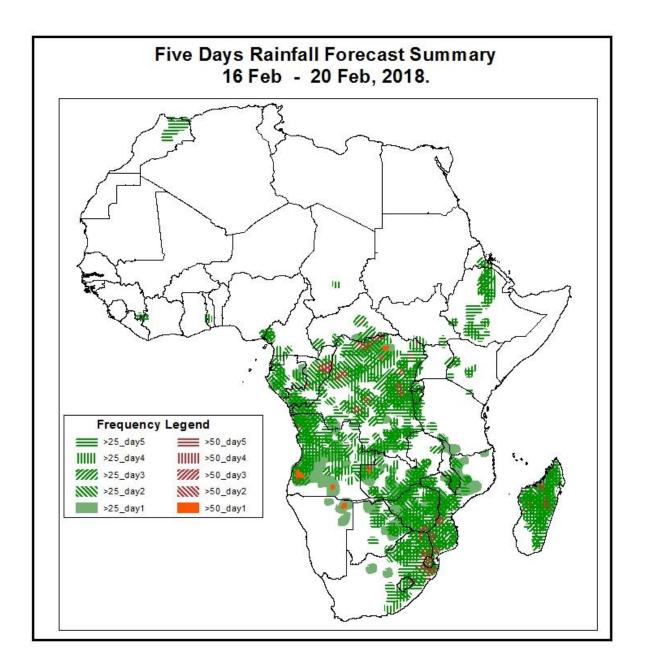
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on February 15, 2018)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Feb 16, - Feb 20, 2018)

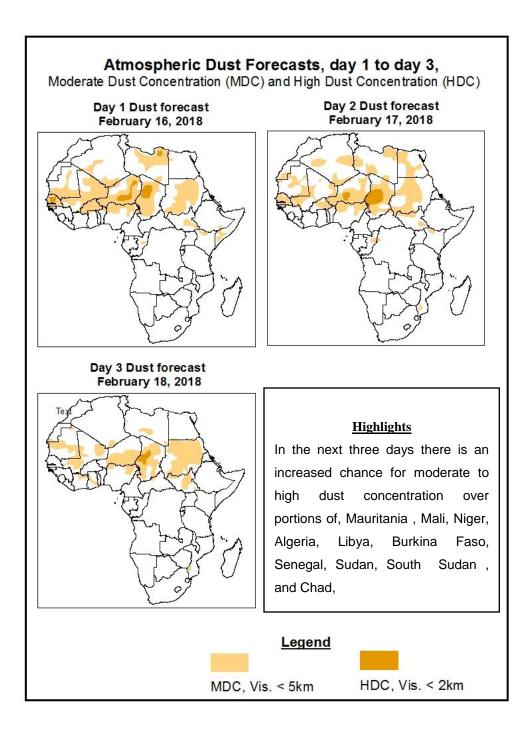
The forecasts are expressed in terms of high probability of precipitation (POP) and high probability of maximum heat index, based on the NCEP/GFS and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.





<u>Highlights</u>

In the next five days, lower-level convergence across the northern parts of southern Africa including Tanzania, and lower-level wind convergence near Madagascar, and local wind convergence across parts of South Africa are expected to enhance rainfall in their respective regions. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Congo, Angola, DRC, Zambia, Zimbabwe, Botswana, Burundi, Rwanda, Lesotho, Swaziland, southern South Africa, Malawi, Tanzania, Mozambique, Western Sahara and Madagascar. **1.2.** Atmospheric Dust Concentration Forecasts (valid: Feb 16, – Feb 18, 2018) 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 16 – Feb 20, 2018

The Azores High Pressure system over the North Atlantic Ocean is expected to move faster eastwards and being replaced by new High pressures. The central pressure values ranges from about 1032 hPa to 1027 hPa during the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to weaken in the first 3 days of the forecast period and then intensify between the third to fifth day. The central pressure values ranges from about 1026 hPa to 1018 hPa during the forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to intensify but moving farther eastward, with its central pressure value increasing from about 1025 hPa to 1029 hPa during the forecast period.

At 925hPa, dry strong northeasterly to easterly wind is expected to prevail across northern Africa and portions of the Sahel region.

At 850hPa, a broad area of wind convergence is expected to remain active across the northern portions of southern Africa during the forecast period. A strong westerly flow with its associated lower-level convergence is expected to prevail across the northern portions of the Mozambique Channel and northern Madagascar.

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2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (February 14, 2018)

Moderate to locally heavy rainfall was observed over parts of Cameroon, Angola, DRC, Namibia, Zambia, Zimbabwe, Botswana, Malawi, Tanzania, South Africa, Mozambique, Lesotho, and Madagascar.

2.2. Weather assessment for the current day (February 15, 2018)

Intense convective clouds are observed over across the northern parts of Southern Africa. Intense clouds.

