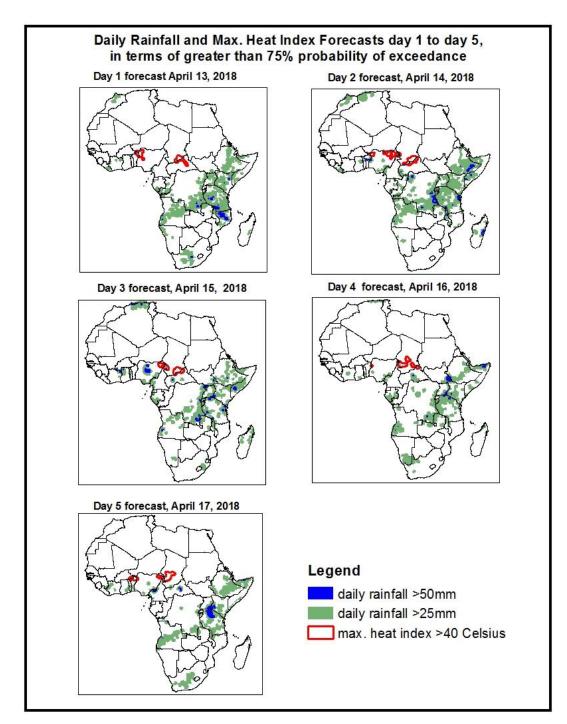
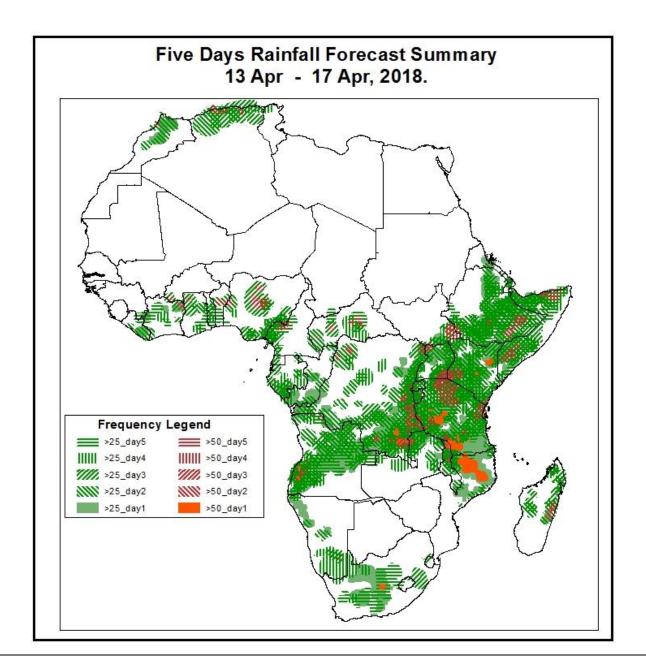
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

# 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on April 12, 2018)

### 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Apr 13, – Apr 17, 2018)

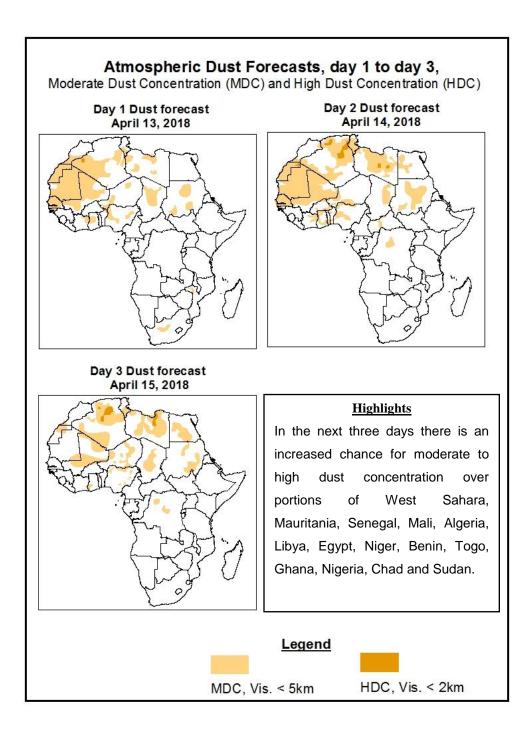
The forecasts are expressed in terms of high probability of precipitation (POP) and high probability of maximum heat index, based on the NCEP/GFS and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.





# <u>Highlights</u>

In the next five days, lower-level convergence across Zambia and Tanzania, and lower-level wind convergence near Madagascar, and local wind convergence across parts of northern Benin, Ghana and Cote d'Ivoire 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 Morocco, Algeria, Liberia, Cote d'Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon, Gabon, Congo, DRC, CAR, Angola, Namibia, Zambia, Burundi, Rwanda, South Africa, Mozambique, Malawi, Tanzania, Ethiopia, Djibouti, Kenya, Somalia, South Sudan, Uganda and Madagascar. **1.2.** Atmospheric Dust Concentration Forecasts (valid: Apr 13, – Apr 15, 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: Apr 13 – Apr 17, 2018

The Azores High Pressure system over the North Atlantic Ocean is expected to weaken during the forecast period. The central pressure values ranges from about 1027 hPa to 1019 hPa during the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to intensify in the first two days and then weaken in the last three days of the forecast period. The central pressure values increases from about 1024 hPa to 1026 hPa and decreases to 1018 hPa during the forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to weaken during the forecast period. The central pressure values ranges from about 1033 hPa to 1024 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 part of Benin and the northern portions of Zambia 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.

In the next five days, lower-level convergence across Zambia and Tanzania, and lower-level wind convergence near Madagascar, and local wind convergence across parts of northern Benin, Ghana and Cote d'Ivoire 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 Morocco, Algeria, Liberia, Cote d'Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon, Gabon, Congo, DRC, CAR, Angola, Namibia, Zambia, Burundi, Rwanda, South Africa, Mozambique, Malawi, Tanzania, Ethiopia, Djibouti, Kenya, Somalia, South Sudan, Uganda and Madagascar.

# 2.0. Previous and Current Day Weather over Africa

# 2.1. Weather assessment for the previous day (April 11, 2018)

Moderate to locally heavy rainfall was observed over parts of Cote d'Ivoire, Burkina Faso, Cameroon, Congo, Angola, Namibia, DRC, CAR, Zambia, Kenya, Mozambique, Malawi, Ethiopia, Somalia, Uganda, Rwanda, Burundi and Tanzania.

# 2.2. Weather assessment for the current day (April 12, 2018)

Intense convective clouds are observed over across the central parts of DRC. Intense clouds.

