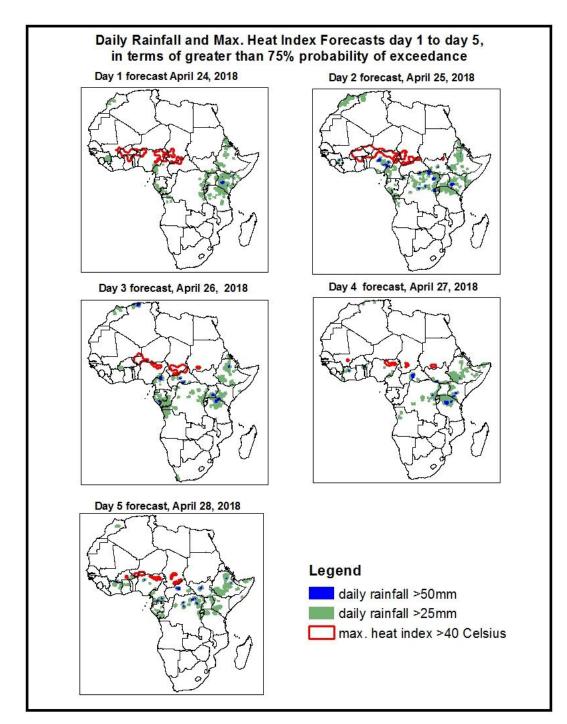
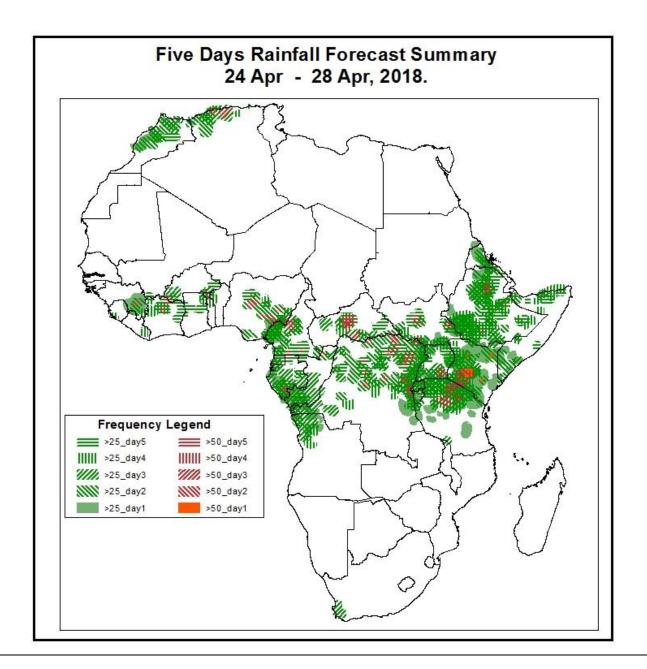
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

## 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on April 23, 2018)

#### 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Apr 24, – Apr 28, 2018)

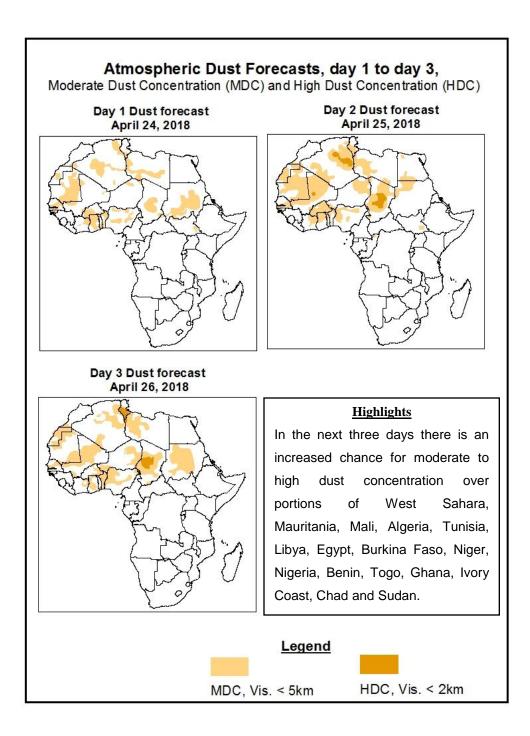
The forecasts are expressed in terms of high probability of precipitation (POP) and high probability of maximum heat index, based on the NCEP/GFS and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.





# <u>Highlights</u>

In the next five days, lower-level convergence across Tanzania and Uganda, lowerlevel wind divergence near Madagascar, and a low monsoon entrance in West Africa are expected to enhance rainfall in the in eastern part of Africa then a reduction of rainfall in the southern and western part. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Morocco, Algeria, Guinea, Ivory Coast, Ghana, Togo, Nigeria, Cameroon, Equatorial Guinea, Gabon, Congo, DRC, CAR, Angola, Burundi, Rwanda, Tanzania, Uganda, Kenya, South Sudan, Somalia, Ethiopia and Eritrea. **1.2.** Atmospheric Dust Concentration Forecasts (valid: Apr 24 – Apr 26, 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 24 – Apr 28, 2018

The Azores High Pressure system over the North Atlantic Ocean is expected to intensify during the forecast period. The central pressure values ranges from about 1030 hPa to 1033 hPa during the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to weaken during the forecast period. The central pressure values ranges from about 1031 hPa to 1026 hPa during the forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to intensify during the forecast period. The central pressure values ranges from about 1020 hPa to 1025 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, in West Africa, it is expected the oscillation of the Inter Tropical Convergence Zone in the extreme northern part of the Gulf of Guinea countries and a low monsoon entrance while the area of wind convergence remain active the northern portions of Tanzania during the forecast period. A southern flow with its associated lower-level divergence is expected to prevail across the northern portions of the Mozambique Channel and northern Madagascar.

In the next five days, lower-level convergence across Tanzania and Uganda, lowerlevel wind divergence near Madagascar, and a low monsoon entrance in West Africa are expected to enhance rainfall in the in eastern part of Africa then a reduction of rainfall in the southern and western part. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Morocco, Algeria, Guinea, Ivory Coast, Ghana, Togo, Nigeria, Cameroon, Equatorial Guinea, Gabon, Congo, DRC, CAR, Angola, Burundi, Rwanda, Tanzania, Uganda, Kenya, South Sudan, Somalia, Ethiopia and Eritrea.

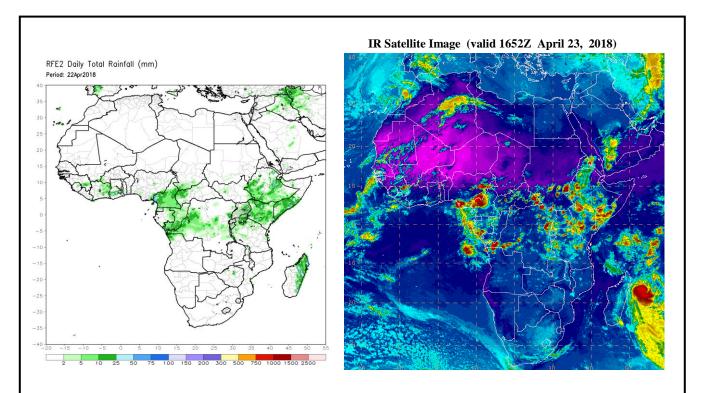
## 2.0. Previous and Current Day Weather over Africa

## 2.1. Weather assessment for the previous day (April 22, 2018)

Moderate to locally heavy rainfall was observed over parts of Guinea, Ivory Coast, Ghana, Cameroon, CAR, DRC, Congo, Tanzania, Kenya, Uganda, Ethiopia, Somalia and Madagascar.

## 2.2. Weather assessment for the current day (April 23, 2018)

Intense convective clouds are observed over across most parts of East Africa.



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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