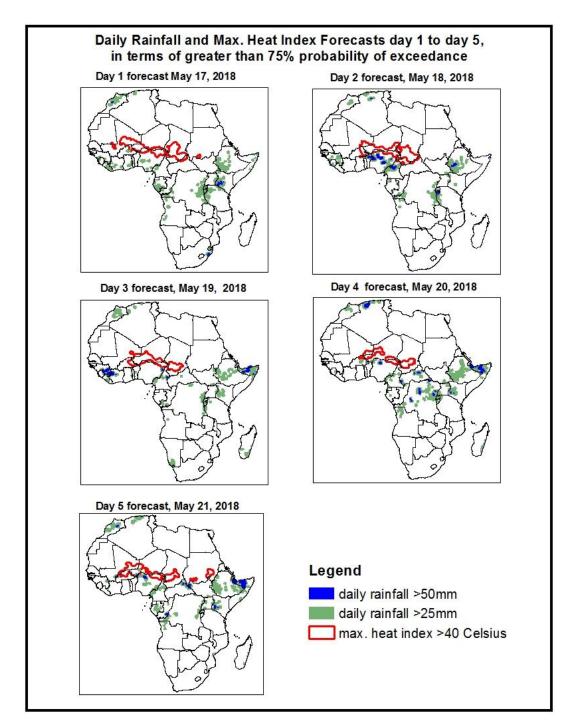
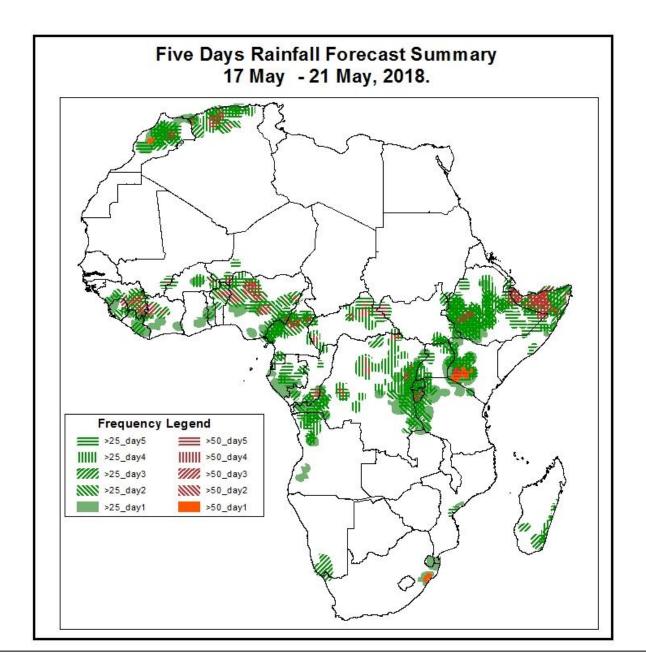
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

## 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on May 16, 2018)

#### 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: May 17, – May 21, 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.

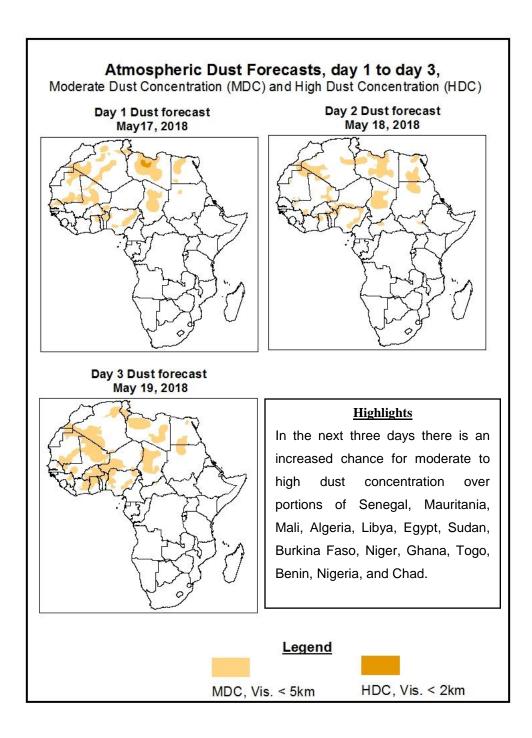




## <u>Highlights</u>

In the next five days, lower-level convergence across part of Gulf of Guinea countries and eastern Africa and lower-level wind divergence over part of the central Africa are expected to enhance rainfall in the western and eastern part of Africa then a reduction of rainfall over the Central Africa. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Morocco, Algeria, Guinea, Sierra Leone, Liberia, Ivory Coast, Burkina Faso, Togo, Benin, Nigeria, Cameroon, Equatorial Guinea, Gabon, Congo, Angola, DRC, CAR, South Sudan, Uganda, Rwanda, Burundi, Tanzania, Kenya, Ethiopia, Somalia, Djibouti and South Africa.

**1.2.** Atmospheric Dust Concentration Forecasts (valid: May 17 – May 19, 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: May 17- May 21, 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 1029 hPa to 1026 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 1028 hPa to 1032 hPa and decreases to 1022 hPa during the forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to intensify in the first three days and then weaken in the last two days of the forecast period. The central pressure values increases from about 1025 hPa to 1033 hPa and decreases to 1031 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 above the Gulf of Guinea countries and a enhance monsoon entrance while the area of wind convergence remain active in The Uganda and the eastern part of South Sudan during the forecast period. A southeastern flow with its associated lower-level divergence is expected to prevail across the southern portions of the Mozambique Channel and southern Madagascar.

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# 2.0. Previous and Current Day Weather over Africa

## 2.1. Weather assessment for the previous day (May 15, 2018)

Moderate to locally heavy rainfall was observed over parts of Guinea, Mali, Liberia, Ivory Coast, Burkina Faso, Niger, Nigeria, Gabon, Congo, Angola, CAR, DRC, South Sudan, Uganda, Kenya, Tanzania, Ethiopia, Somalia, Mozambique, South Africa and Zimbabwe.

### 2.2. Weather assessment for the current day (May 16, 2018)

Intense convective clouds are observed over across most parts of the central and the horn of Africa.

