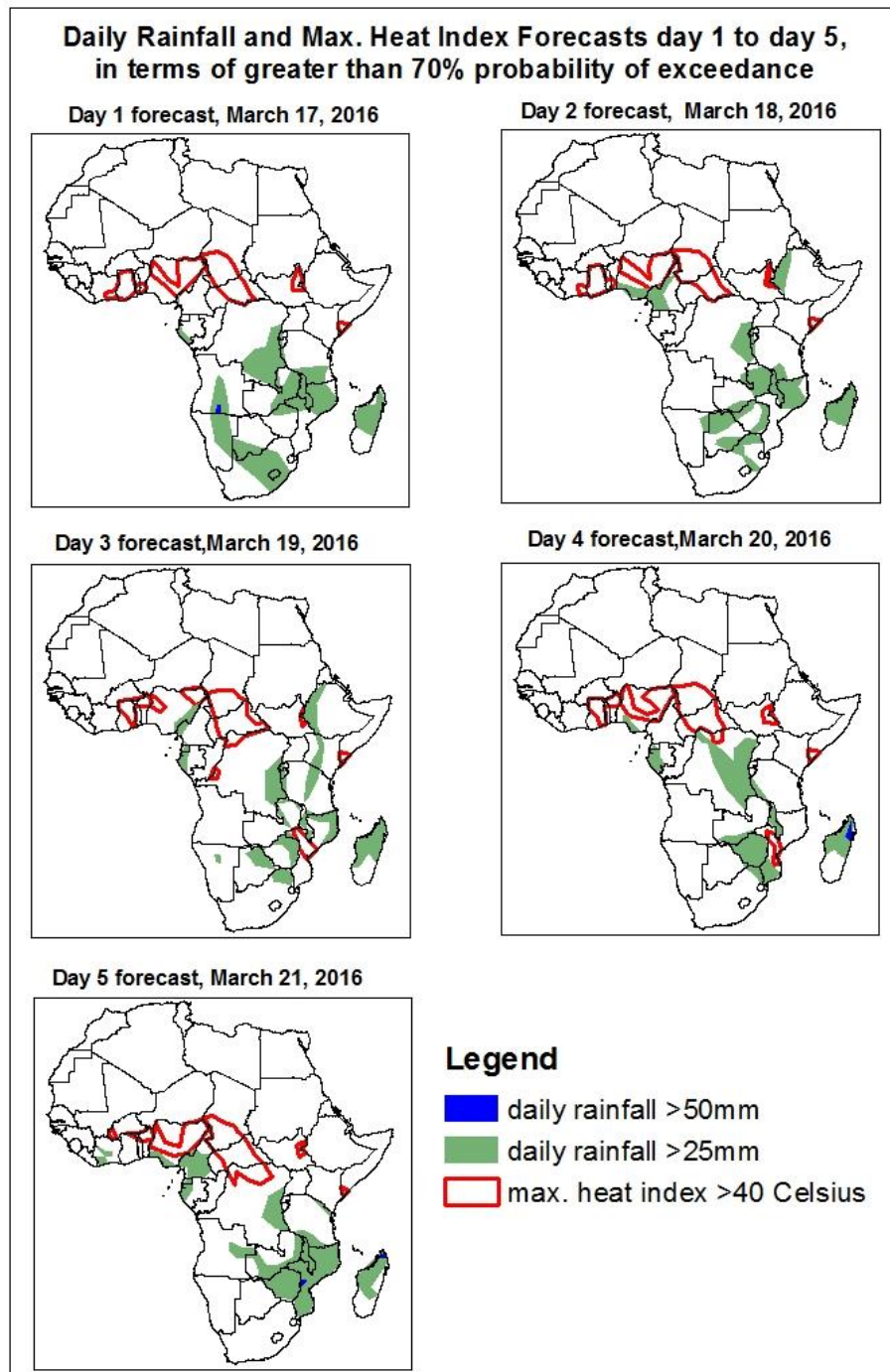


# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

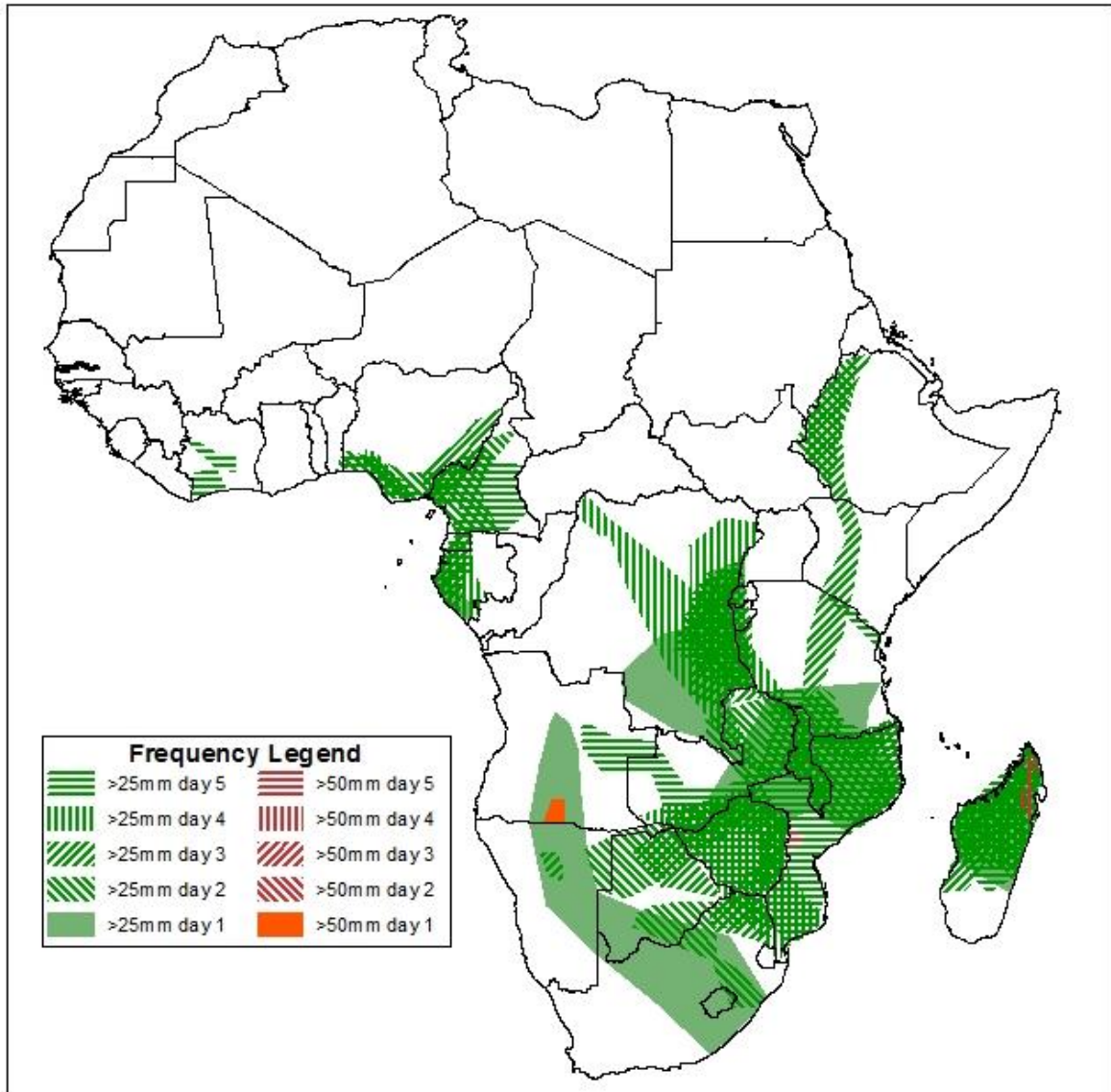
## 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on March 16, 2016)

### 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: March 17 – March 21, 2016)

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



## Five Days Rainfall Forecast Summary March 17 - March 21, 2016

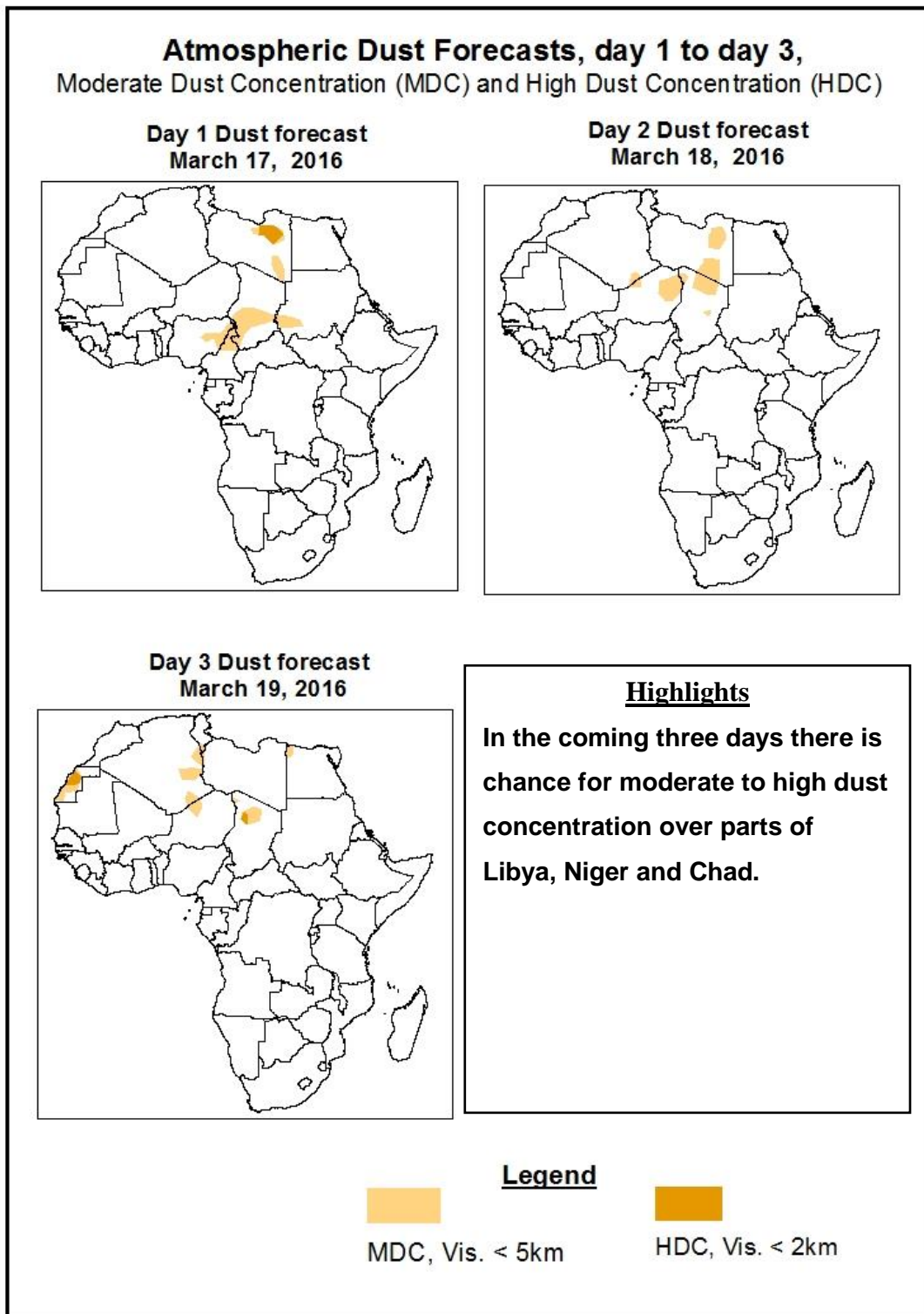


### Highlights

In the coming five days, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Cote d'Ivoire, Nigeria, Cameroon, Gabon, DRC, Western Ethiopia, Angola, Zambia, Tanzania, Namibia, Botswana, Zimbabwe, Northern Mozambique, South Africa and Madagascar.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: Mar 17– March 19, 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: March 17– March 21, 2016**

The central pressure value associated with the Azores high pressure system over Northeast Atlantic is expected to weaken from about 1021Hpa to about 1020Hpa in the next 48Hrs . It is expected to intensify from 1020Hpa to about 1028Hpa during the forecast period.

The St. Helena High pressure system over the Southeast Atlantic Ocean with an initial central pressure value of 1029Hpa is expected to weaken to 1028Hpa in the next 48Hrs. It is expected to intensify to 1029Hpa in 72Hrs and expected to intensify to 1032Hpa during the forecast period.

The Mascarene high pressure system over the Southwest Indian Ocean with an initial central value of 1032hPa is expected to intensify to 1033hPa in the next 24Hrs. It is expected to weaken to 1029Hpa in the next 96Hrs.

At 925HPa level, dry northeasterly to easterly flow is expected to prevail across parts of the Sahel region and Northwest Africa, leading to atmospheric dust concentration in some of these areas.

At 850HPa level, moist westerly flow from the Atlantic Ocean and its associated lower-level convergence is expected to prevail across Gabon, Congo and Angola, warm SST is expected to persist over the eastern Atlantic ocean closer to Angola coast as well as over the southwestern Indian ocean resulting in a weak convergence of the Northerly and Westerly winds and also weak easterly to Southwesterly flow.

In the coming five days, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Cote d'Ivoire, Nigeria, Cameroon, Gabon, DRC, Western Ethiopia, Angola, Zambia, Tanzania, Namibia, Botswana, Zimbabwe, Northern Mozambique, South Africa and Madagascar.

There is also an increased chance for maximum heat index values to exceed 40°C portions of portions Northern Ghana, Togo, Benin, parts of Nigeria, CAR, parts of South Sudan and Mozambique.

## 2.0. Previous and Current Day Weather over Africa

### 2.1. *Weather assessment for the previous day* (March 15, 2016)

Moderate to locally heavy rainfall was observed over portions of Central Benin and Togo, Cameroon, Gabon, Congo, portions of CAR, DRC, Angola, Zambia, Namibia, Northeastern Botswana, Northern Tanzania Northwestern South Africa and Madagascar.

### 2.2. *Weather assessment for the current day* (March 16, 2016)

Intense convective clouds are observed across most parts of Southern Western Nigeria, Cameroon, Southern DRC, Angola, Zambia, Namibia, Botswana, Northern Tanzania and Madagascar.

