

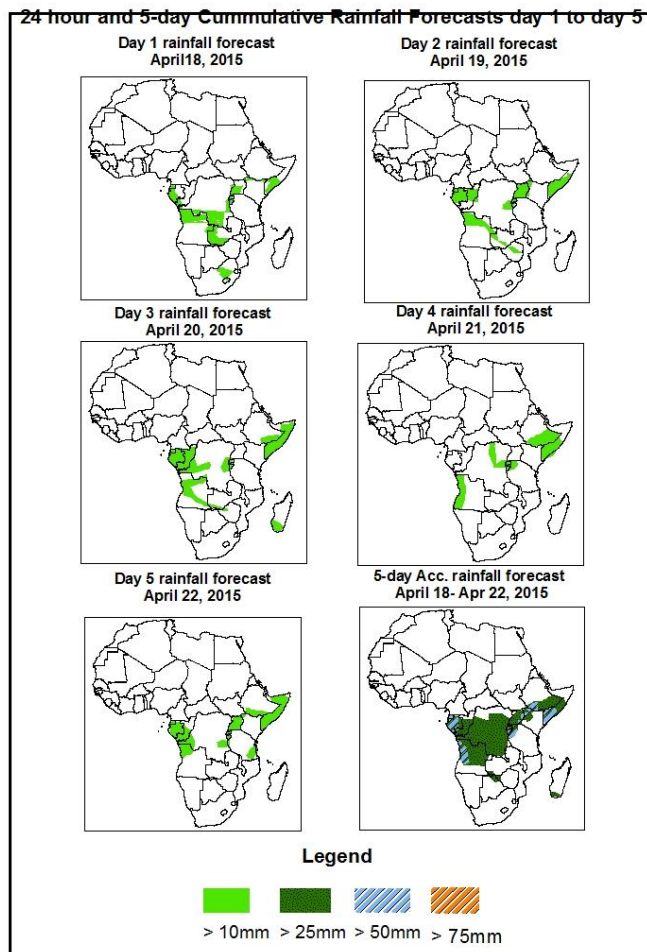


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall Forecast: Valid 06Z of April 18 – 06Z of April 22, 2015. (Issued at 1600Z of April 17, 2015)

1.1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of 75% probability of precipitation (POP) exceeded, based on the NCEP/GFS and the NCEP global ensemble forecasts system (GEFS) and expert assessment.

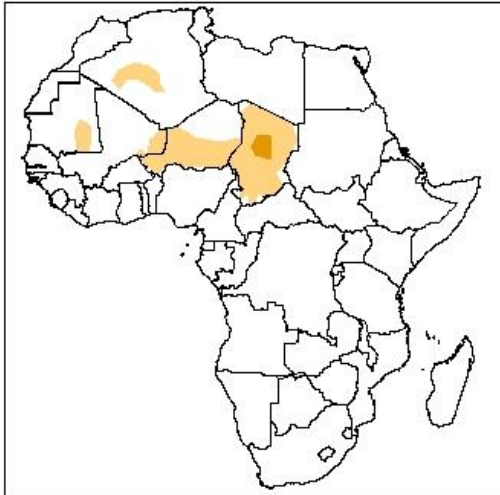


Summary

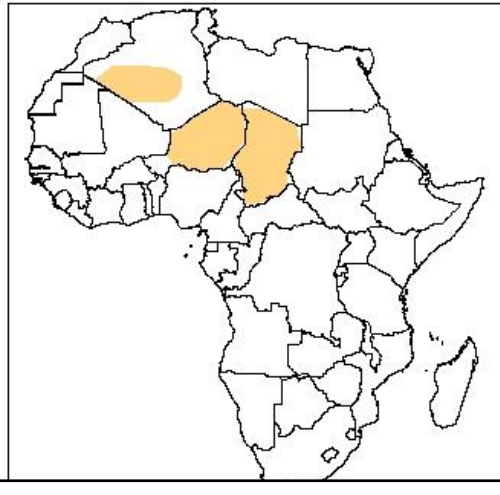
In the next five days, lower-level wind convergence over Nigeria, CAR, Cameroon, Chad, South Sudan, Sudan and Ethiopia is expected to enhance rainfall in these regions. There is an increased chance for heavy rainfall over Equatorial Guinea, Congo Brazzaville, Gabon, Somalia, Kenya, some parts of Angola, Somalia, Southern Ethiopia and some parts of DRC.

Atmospheric Dust Forecasts, day 1 to day 3,
Moderate Dust Concentration (MDC) and High Dust Concentration (HDC)

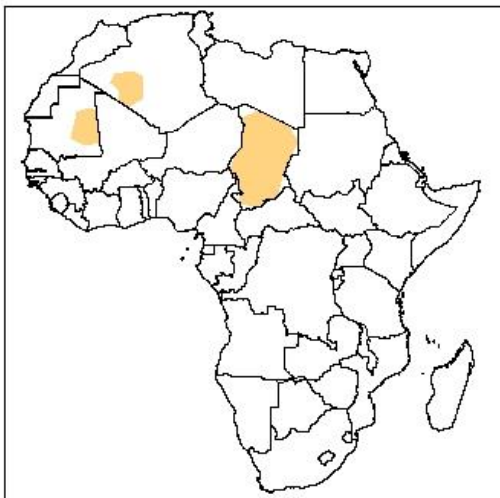
Day 1 Dust forecast
April 18, 2015



Day 2 Dust forecast
April 19, 2015



Day 3 Dust forecast
April 20, 2015



Highlights

There is an increased chance for moderate to high dust concentration over some parts of the Sahel, and North Africa countries, with highest dust concentration expected over some parts of Chad, Algeria and Niger.

Legend



MDC, Vis. < 5km



HDC, Vis. < 1km

1.2. Model Discussion: Valid from 06Z of April 17, 2015

The Azores high pressure system over the Northeast Atlantic Ocean is expected to intensify from a central pressure value of 1028hpa in 24 hours to 1032hpa in 120hours, according to the GFS model.

The Arabian High Pressure system is expected to remain constant at a central pressure value of 1019hpa during the forecast period, according to the GFS model.

The central pressure value of the Mascarene high pressure system over the southwestern Indian Ocean is expected to weaken from a value of 1035hpa in 24hours to a value of 1024hpa in 120 hours, according to the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to weaken from a central pressure value of 1027hpa in 24 hours to 1024hpa in 120 hours, according to the GFS model.

At 925Hpa level, easterly wind (>25kts) is expected to prevail across much of the African countries through 24 to 120 hours while the intensity of the wind tends to weaken across the North central, Northeastern regions of Africa, while remaining moderately strong across Northwestern Africa towards end of the forecast period.

At 850Hpa level, easterly wind is expected to prevail across much of African countries while wind convergence is expected to remain active in Cameroon, CAR, Ethiopia, South Sudan, Sudan and Chad during the forecast period.

At 700hpa level, a trough associated with mid-latitude frontal system is expected to prevail across North and Northeast Africa. Wind divergence over west and southern African countries, easterly wind flow over East and Central African countries is expected to prevail during the forecast period, according to the GFS model.

At 500Hpa level, a trough associated with mid-latitude frontal system is expected to prevail across Northeast Africa. Easterly wind over east and central Africa, westerly wind over north and southern African countries will prevail in the region during the forecast period, according to the GFS model.

In the next five days, lower-level wind convergence over Nigeria, CAR, Cameroon, Chad, South Sudan, Sudan and Ethiopia is expected to enhance rainfall in these regions. There is an increased chance for heavy rainfall over Equatorial Guinea, Congo Brazzaville, Gabon, Somalia, Kenya, some parts of Angola, Somalia, Southern Ethiopia and some parts of DRC.

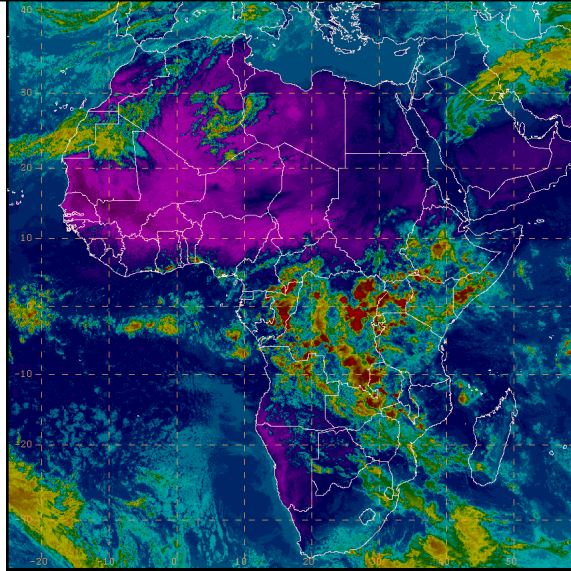
2.0. Current Day Weather Discussion over Africa

(April 17, 2015)

2.1. Weather assessment for the current day (April 17, 2015)

Intense convective deep clouds are observed over DRC, Congo Brazzaville, Rwanda, CAR, Somalia and Ethiopia and

IR Satellite Image (valid 1500Z of April 17, 2015)



Previous day rainfall condition over Africa (top Left) based on the NCEP CPCE/RFE and current day cloud cover (top right) based on IR Satellite image

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