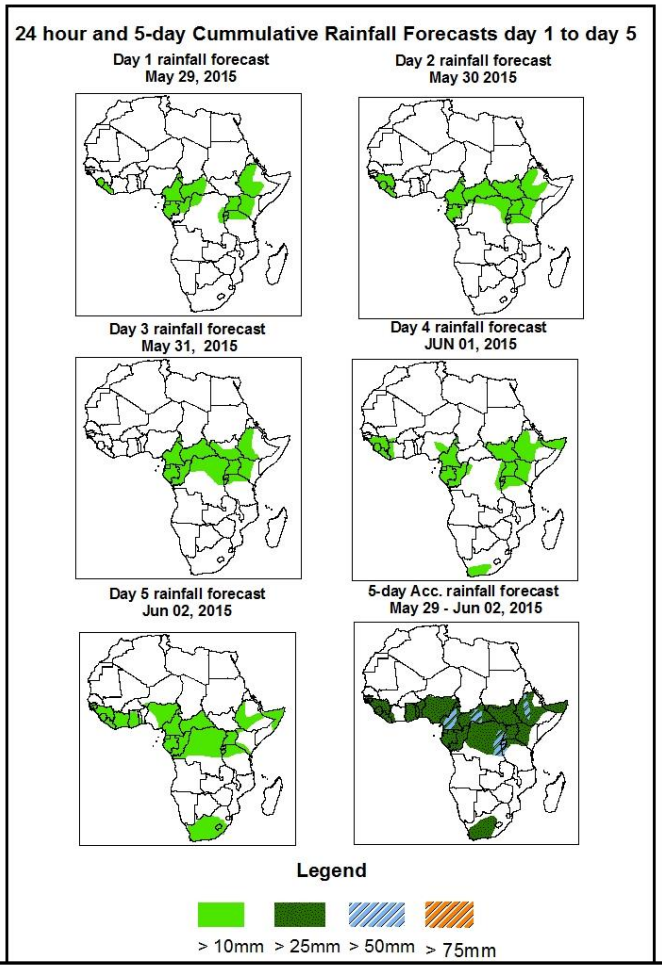
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall Forecast: Valid 06Z of May 29 – 06Z of Jun 02, 2015. (Issued at 1630Z of May 28, 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.



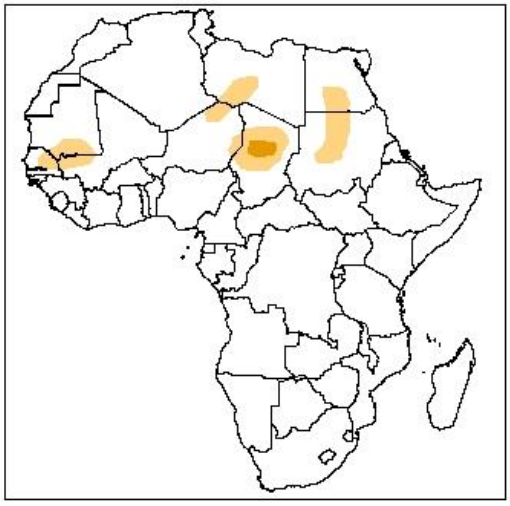
Summary

In the next five days, lower level wind convergence over Mali, Nigeria, Southern Chad, Cameroon, Sudan, and Ethiopia, is expected to enhance rainfall in these regions. There is an increased a chance for heavy rainfall over Cameroon, CAR, DRC, Rwanda, Burundi and Ethiopia.

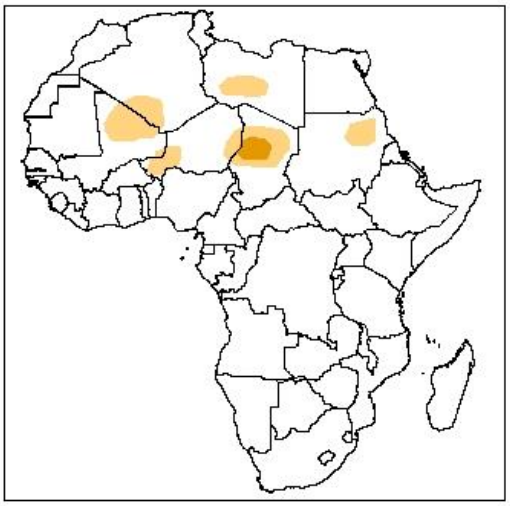
Atmospheric Dust Forecasts, day 1 to day 3,

Moderate Dust Concentration (MDC) and High Dust Concentration (HDC)

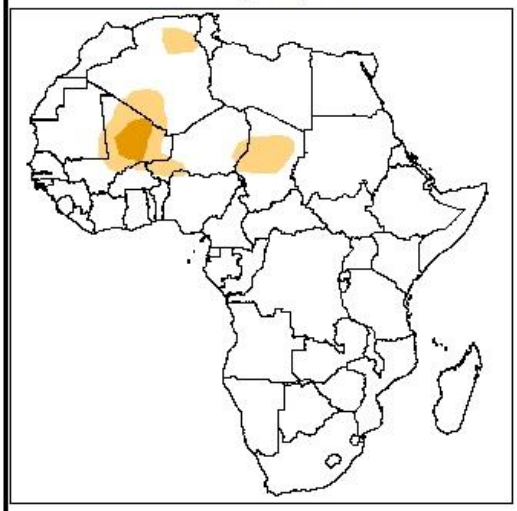
Day 1 Dust forecast
May 29, 2015



Day 2 Dust forecast
May 30, 2015



Day 3 Dust forecast
May 31, 2015



Highlights

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

Legend

MDC, Vis. < 5km

HDC, Vis. < 1km

1.2. Model Discussion: Valid from 06Z of May 29, 2015

The Azores high pressure system over the Northeast Atlantic Ocean is expected to weaken from a central pressure value of 1028hpa in 24hours to 1024hpa in 120hours, according to the GFS model.

The central pressure value of the Mascarene high pressure system over the Southwestern Indian Ocean is expected to intensify from central pressure value of 1028hpa in 24 hours to 1034hpa in 120hours, according to the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to Intensify from a central pressure value of 1026hpa in 24hours to 1037hpa in96 hours, according to the GFS model.

At 925Hpa level North-easterly wind (>20kts) is expected to prevail across Northern African countries and Southwesterly wind over East, Central and west African Countries, and Southeasterly wind over Southern 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 Countries towards end of the forecast period, according to the GFS model.

At 850Hpa level, North-Easterly wind over North African countries, Southwesterly wind over East, Central and West African countries, and Southeasterly wind over Southern African Countries is expected to prevail across in these Region, While wind convergence is expected to remain active in Mali, Nigeria, Cameroon, Southern Chad, Sudan and Ethiopia during the forecast period, according to the GFS model.

At 700hpa level, a trough associated with mid-latitude frontal system is expected to prevail across North and Northeast African countries. Easterly wind over west, East and Central African countries, Southeasterly winds over Southern African countries, is expected to prevail across in these Regions, during the forecast period, according to the GFS model.

At 500Hpa level, a trough associated with mid-latitude frontal system is expected to pre vail across North and Northeast African countries. Easterly and South Easterly wind over West, Central, Eastern and Southern African countries, is expected to prevail across in these regions, While wind convergence is expected to remain active in South Africa, during the forecast period, according to the GFS model.

In the next five days, lower level wind convergence over Mali, Nigeria, Southern Chad, Cameroon, Sudan, and Ethiopia, is expected to enhance rainfall in these regions. There is an increased a chance for heavy rainfall over Cameroon, CAR, DRC, Rwanda, Burundi and Ethiopia.

2.0. Previous and Current Day Weather Discussion over Africa

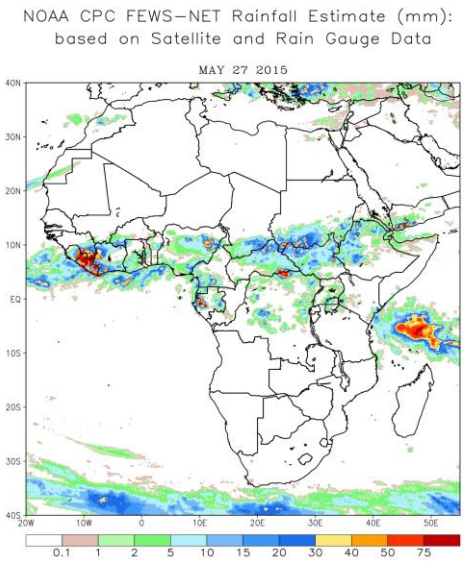
(May 27, 2015 – May 28, 2015)

2.1. Weather assessment for the previous day (May 27, 2015)

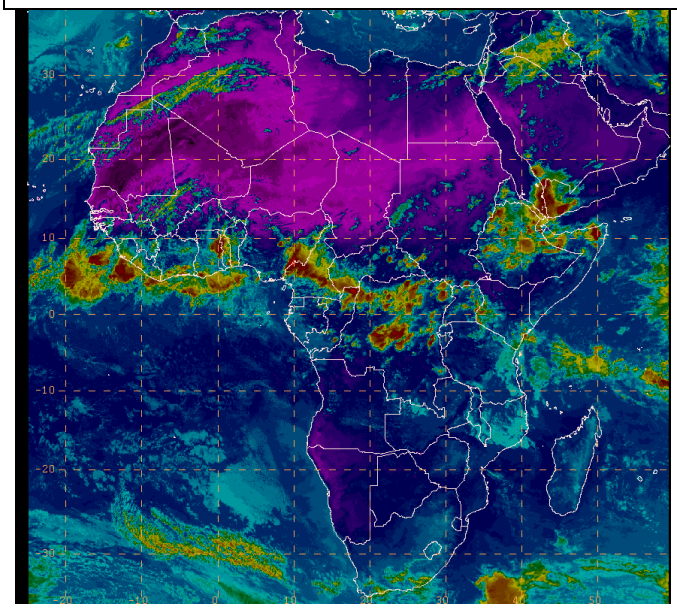
Moderate to heavy rainfall were observed across Guinea, Liberia, Serra Leon, ivory Coast, Togo, Ghana, Nigeria, CAR, Southern Chad, DRC, Sudan, South Sudan and Ethiopia,

2.2. Weather assessment for the current day (May 28, 2015)

Intense convective deep clouds are observed over Togo, Benin, Nigeria, CAR, Cameroon, DRC, South Sudan, Sudan, Somalia and Ethiopia.



IR Satellite Image (valid 1530Z of May 28, 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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