

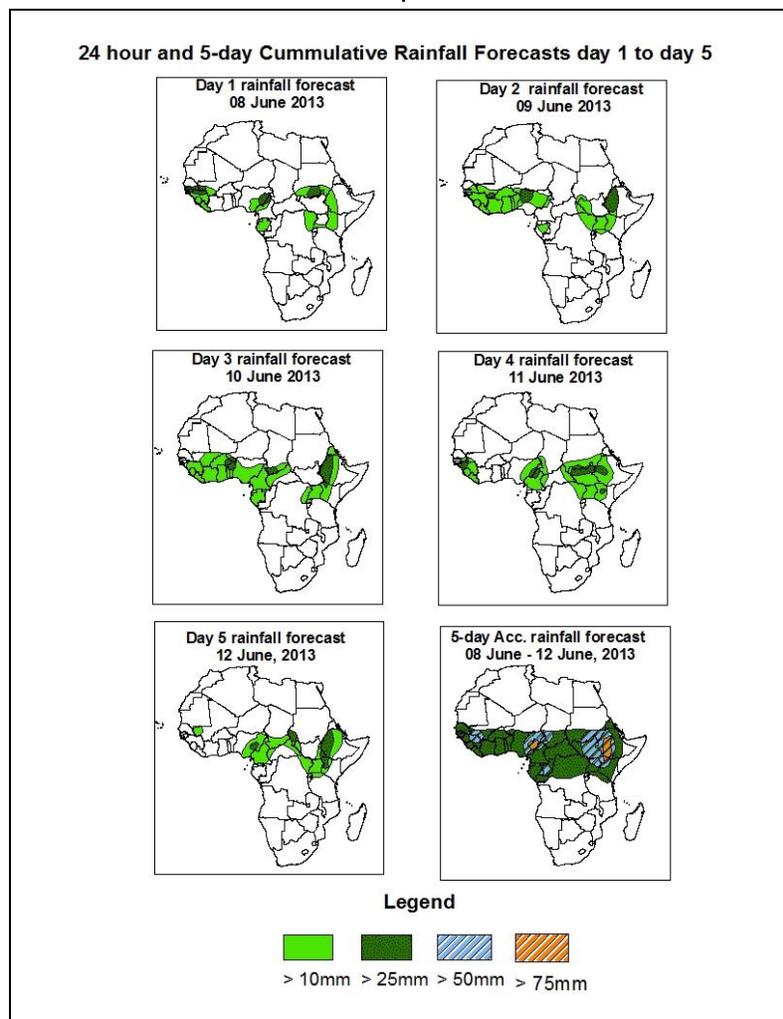


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 08 June – 06Z of 12 June, 2013. (Issued at 1830Z of 07 June 2013)

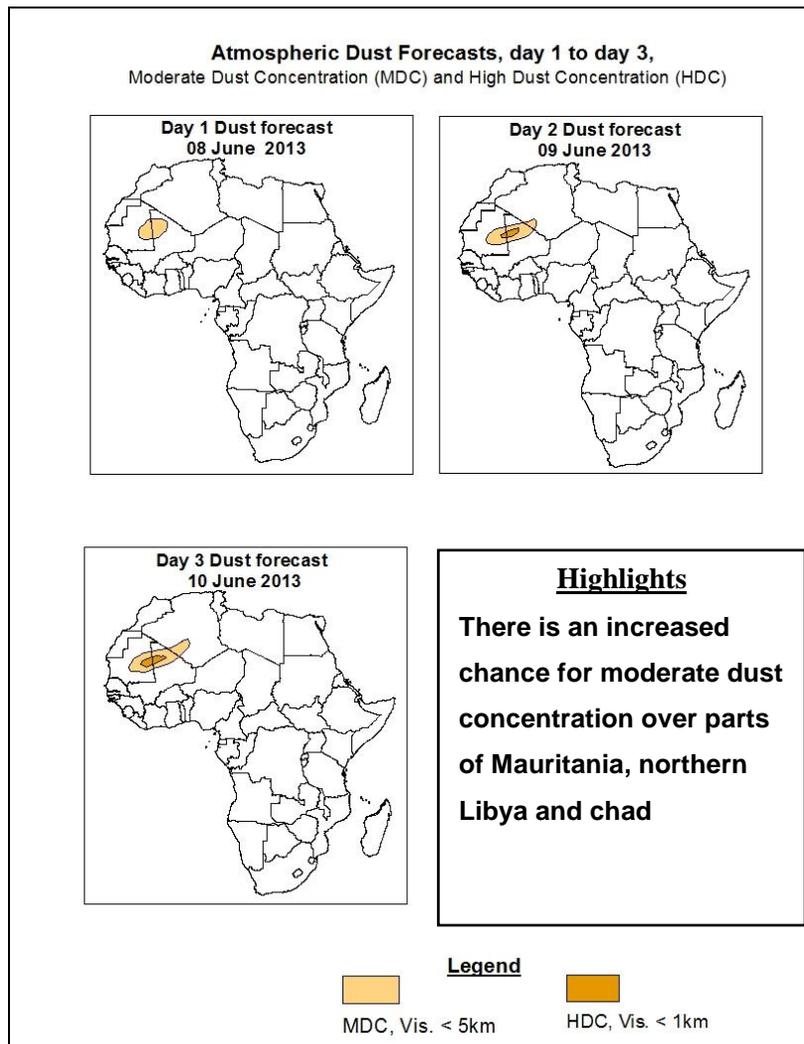
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of 75% probability of precipitation (POP) exceeded, based on the NCEP, UK Met Office and the ECMWF NWP outputs, the NCEP global ensemble forecasts system (GEFS) and expert assessment.



Summary

In the next five days, the monsoon flow across West Africa and the adjacent Central Africa regions, the seasonal wind convergence in Congo Air Boundary (CAB) region, and strong cross equatorial flow, with its associated convergence over the Horn Africa are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over countries along the Gulf of Guinea, Central Africa Republic (CAR), Southern Chad, southern Sudan, western Ethiopia, western Kenya and Northern DRC



1.2. Model Discussion: Valid from 00Z of 07 June 2013

Model comparison (Valid from 00Z;07 June, 2013) shows all the three models are in general agreement in terms of depicting positions of the northern and southern hemisphere sub-tropical highs, while they showed slight differences in depicting their intensity.

The Azores High Pressure System over Northeast Atlantic Ocean is expected to weaken through 24 to 120 hours. Its central pressure value is expected to decrease from about 1033hpa to 1024hpa according to the GFS model, 1033hpa to 1026hpa according to the ECMWF model and 1031hpa to 1024hpa according to the UKMET model through 24 to 120 hours.

The St. Helena High Pressure System over southeast Atlantic Ocean is expected to fluctuate during the forecast period with central pressure values likely to vary between 1028hpa to 1030hpa according to the GFS model, 1026hpa to 1031 according to ECMWF model and 1027hpa to 1031hpa according to the UKMET model.

The Central values of the Mascarene high pressure system over southwestern Indian Ocean are also expected to vary between 1021hpa to 1033hpa according to the GFS model, 1020hpa to 1034hpa according to thew ECMWF model and 1023hpa to 1035hpa according to the UKMET model during the forecast period.

The heat lows over the central Sahel and neighboring areas are expected to deepen slightly through to 72hours and tend to fill up thereafter. The lowest central pressure value is expected to decrease from 1004hpa to 1002hpa through 24 to 72 hours according to the GFS model, from 1004hpa to 1003hpa according to the ECMWF model and from 1005hpa to 1003hpa according to the UKMET model. The seasonal lows across Sudan and the neighboring areas are also expected to remain weak with central pressure values varying from 1003hpa to 1008hpa according to the GFS and UKMET models.

At the 850hpa level, broad zonal wind convergence is expected to dominate the flow across central parts of the Sahel South of latitude 15°N, and Meridional wind convergence over Sudan, eastern DRC and Ethiopia. Moist southwesterly to westerly flow and its associated convergence over western Ethiopia is expected to maintain moderate to heavy rainfall in the region.

At 700hpa level, very strong and broad subtropical anticyclones in the Northern and Southern hemispheres are expected to persist and maintain northeasterly trajectory of winds during the forecast period.

At 500hpa level, wind speed associated with mid-tropospheric easterly jet exceeds 30kts over Chad, Niger, northern Nigeria, Bukina Faso, CIV, Liberia, Senegal and Mali with the zone of maximum wind shifting westwards as well as covering broader areas during the forecast period.

In the next five days, the monsoon flow across West Africa and the adjacent Central Africa regions, the seasonal wind convergence in Congo Air Boundary (CAB) region, and strong cross equatorial flow, with its associated convergence over the Horn Africa are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over countries along the Gulf of Guinea, Central Africa Republic (CAR), Southern Chad, southern Sudan, western Ethiopia, western Kenya and Northern DRC

2.0. Previous and Current Day Weather Discussion over Africa (06 June 2013 – 07 June 2013)

2.1. Weather assessment for the previous day (06 June 2013)

During the previous day, moderate to locally heavy rainfall was observed over southern Nigeria and places along the Gulf of Guinea.

2.2. Weather assessment for the current day (07 June, 2013)

Intense clouds were observed across the coastal regions of the Gulf of Guinea and part of central Africa and southern Sudan. The ITD is located at an average position of latitude 17°N extending from Mauritania to Sudan.

