

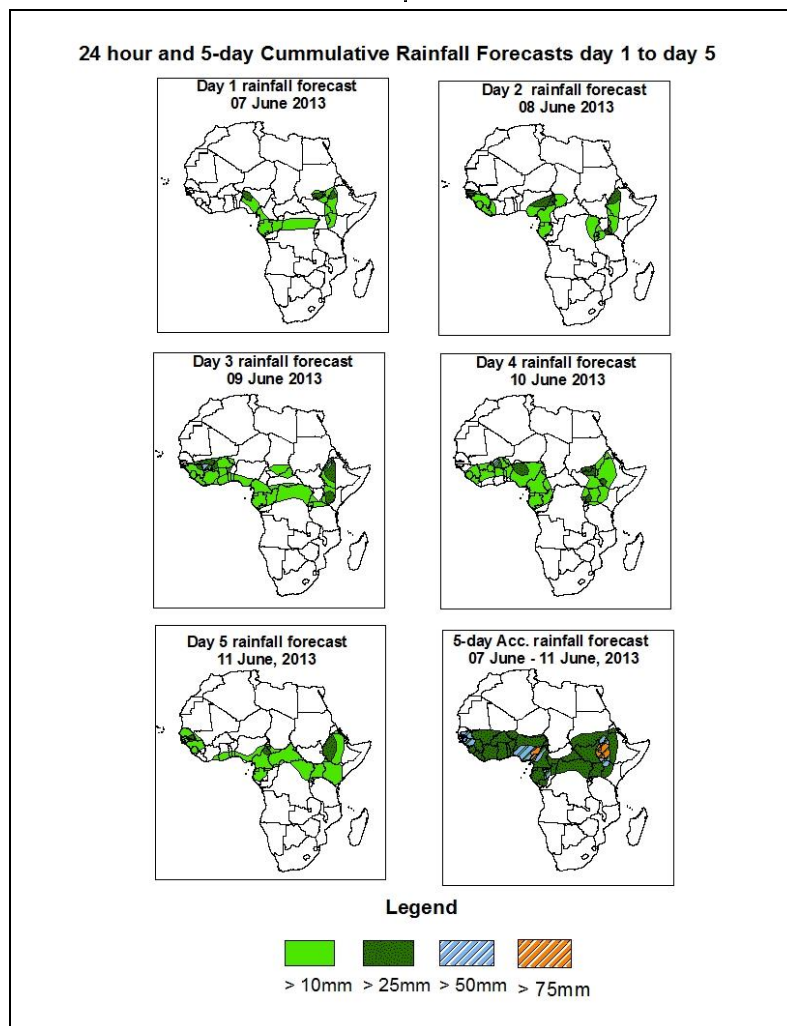


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 06 June – 06Z of 10 June, 2013. (Issued at 1830Z of 05 June 2013)

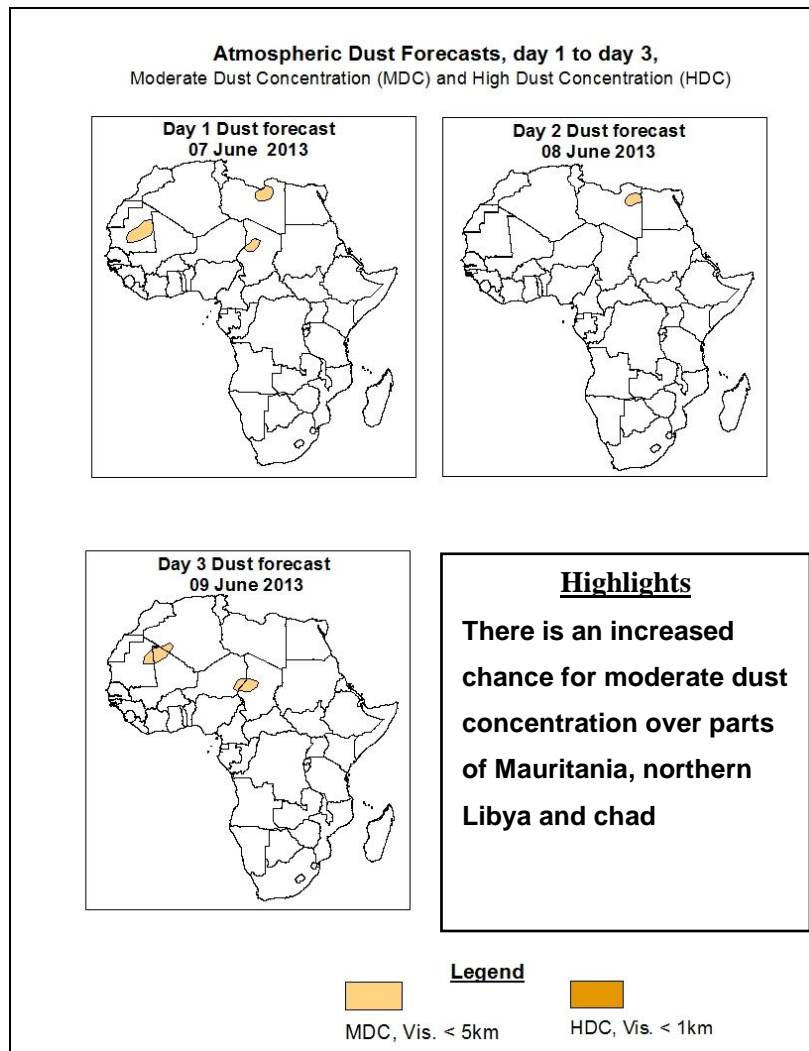
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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 areas of 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 Guinea, Guinea-Bissau, Sierra Leone, northern Nigeria, southern Chad, Gabon, eastern DRC, southern Sudan, western Kenya and western Ethiopia.



1.2. Model Discussion: Valid from 00Z of 06 June 2013

Model comparison (Valid from 00Z;06 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 intensify through 24 to 48 hours and thereafter weaken from 72 to 120 hours. Its central pressure value is expected to increase from about 1031hpa to 1033hpa through 24 to 48 hours and decrease from 1032hpa to 1024hpa through 72 to 120 hours according to the GFS model. Increase from 1031hpa to 1033hpa through 24 to 48 hours and a decrease thereafter is expected according to the ECMWF model and increase from

1032hpa to 1034hpa through 24 to 72 hours according to the UKMET model and a decrease thereafter.

The St. Helena High Pressure System over southeast Atlantic Ocean is expected to weaken gradually through 24 to 96hours. Its central pressure value is expected decrease from about 1031hpa to 1026hpa according to the GFS model, from 1030hpa 1027hpa according to the ECMWF model and from 1030 to 1026hpa according to the UKMET model.

The Mascarene high pressure system over southwestern Indian Ocean is expected to maintain moderate intensity during the forecast period. Its central pressure value is expected to vary between 1019hpa to 1032hpa according to the GFS model, between 1020hpa 1034hpa according to the ECMWF model and from 1019hpa to 1036hpa according to the UKMET model

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 1006hpa to 1003hpa through 24 to 72 hours according to the GFS model, from 1008hpa to 1006hpa according to the ECMWF model and from 1006hpa to 1004hpa 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 1004hpa to 1005hpa according to the GFS model, and from about 1002hpa to 1004hpa according to the UKMET model.

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, a feeble trough in easterly flow is expected to propagate westwards across the Gulf of Guinea coast.

At 500hpa level, wind speed associated with mid-tropospheric easterly jet exceeds 30kts over many places across the Gulf of Guinea, southern Sahel, central Africa and Sudan, with the zone of maximum wind shifting westwards as well as covering broader areas during the forecast period.

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2.0. Previous and Current Day Weather Discussion over Africa (05 June 2013 – 06 June 2013)

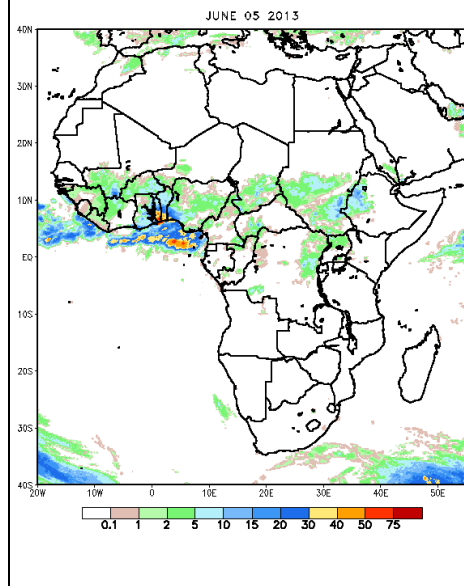
2.1. Weather assessment for the previous day (05 June 2013)

During the previous day, moderate to locally heavy rainfall was observed over Togo, Benin republic and the coast of Nigeria.

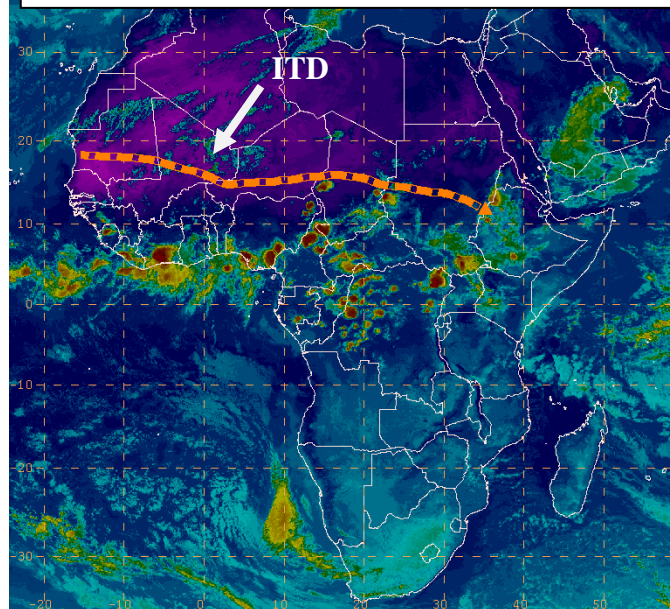
2.2. Weather assessment for the current day (06 June, 2013)

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 16°N extending from Mauritania to Sudan.

NOAA CPC FEWS—NET Rainfall Estimate (mm):
based on Satellite and Rain Gauge Data



IR Satellite Image (valid 1800Z of 06 June 2013)



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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