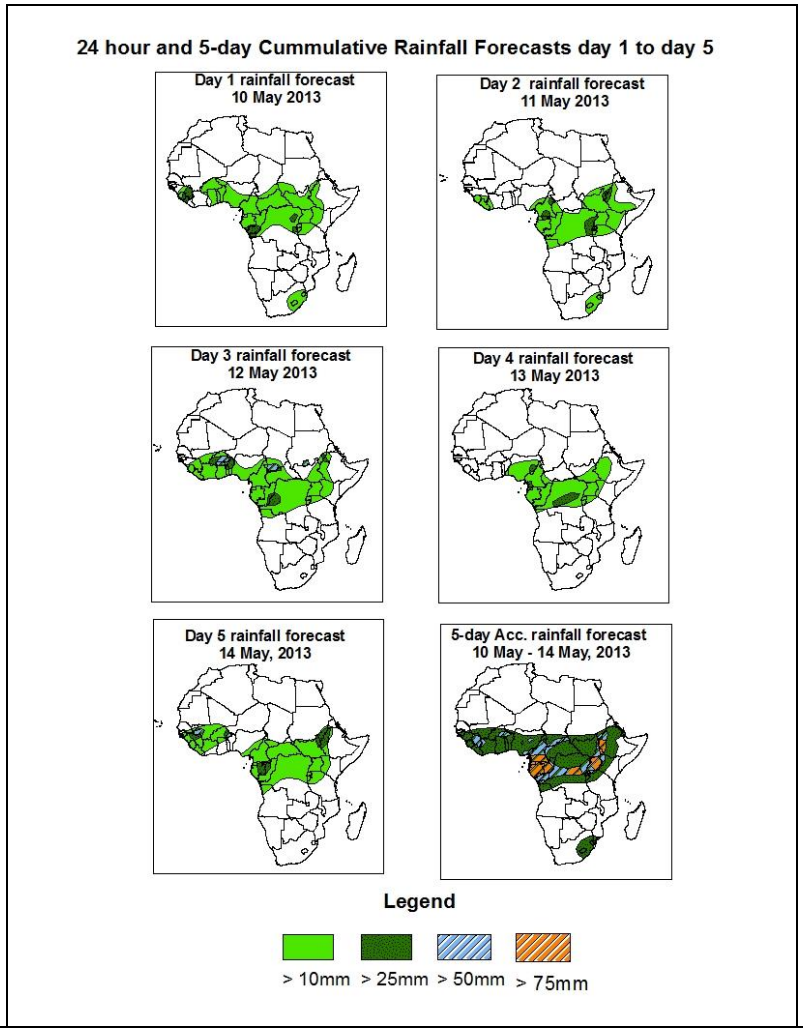
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 10 May – 06Z of 14 May, 2013. (Issued at 1815Z of 09 May 2013)

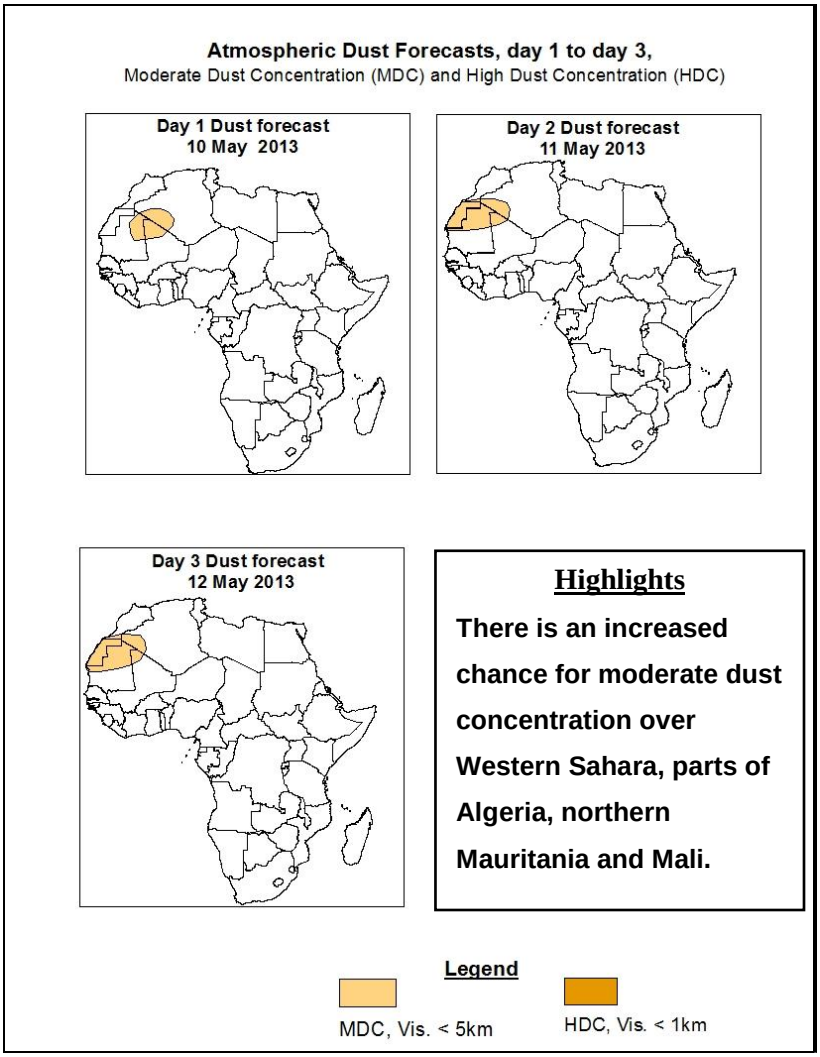
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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 moist cross equatorial flow across East Africa and its associated convergence over South Sudan and western Ethiopia, seasonal convergence near the Congo Air Boundary (CAB), and the West African Monsoon flow from the Atlantic Ocean and its associated convergence are expected to enhance rainfall in their respective regions. Hence, there is an increased chance for moderate to heavy rainfall over eastern Guinea, southern Burkina Faso, local areas in Nigeria, Cameroon, Equatorial Guinea, Gabon, Congo, portions of southern Chad, central and eastern DRC, western Kenya and western Ethiopia.



1.2. Model Discussion: Valid from 00Z of 9 May 2013

Model comparison (Valid from 00Z; 9 May, 2013) shows all the three models are in general agreement in terms of depicting positions of the southern hemisphere sub-tropical highs, while they showed slight differences in depicting their intensity.

The St. Helena High Pressure System over southeast Atlantic Ocean is expected to maintain its moderate intensity while shifting eastwards through 24 to 72 hours. Its central pressure value is expected to vary between 1024hpa to 1025hpa according to the GFS model, 1022hpa to 1024hpa according to the ECMWF model and from about 1022hpa to 1025hpa according to the UKMET model.

The Mascarene high pressure system over southwestern Indian Ocean is also expected to intensify while shifting eastwards through 24 to 120 hours. Its central pressure value

is expected to increase from about 1026hpa to 1030hpa, according to the GFS model, from about 1026hpa to 1029hpa according to the ECMWF model and from about 1027hpa to 1030hpa according to the UKMET model.

The heat lows over the central Sahel and neighboring areas are expected to weaken slightly, with their central values ranging from about 1006hpa to 1007hpa according to the GFS model, from about 1008hpa to 1009hpa according to the ECMWF model from about 1007hpa to 1008hpa according to the UKMET model. The seasonal lows across South Sudan and the neighboring areas are expected to deepen slightly with central pressure values becoming as low as 10001hpa according to the GFS model, as low as 1003hpa according to the ECMWF model and as low as 1004hpa according to the UKMET model.

At the 850hpa level, the seasonal wind convergence associated with the West African monsoon flow is expected to remain active over central and eastern Gulf of Guinea and the neighboring areas of the Sahel region. The lower level-wind convergence associated with the moist cross equatorial from the Indian Ocean is expected to remain active across South Sudan and Ethiopia. The lower level wind convergences near the Congo boundary region are expected to become more active towards end of the forecast period.

In the next five days, the moist cross equatorial flow across East Africa and its associated convergence over South Sudan and western Ethiopia, seasonal convergence near the Congo Air Boundary (CAB), and the West African Monsoon flow from the Atlantic Ocean and its associated convergence are expected to enhance rainfall in their respective regions. Hence, there is an increased chance for moderate to heavy rainfall over eastern Guinea, southern Burkina Faso, local areas in Nigeria, Cameroon, Equatorial Guinea, Gabon, Congo, portions of southern Chad, central and eastern DRC, western Kenya and western Ethiopia.

2.0. Previous and Current Day Weather Discussion over Africa

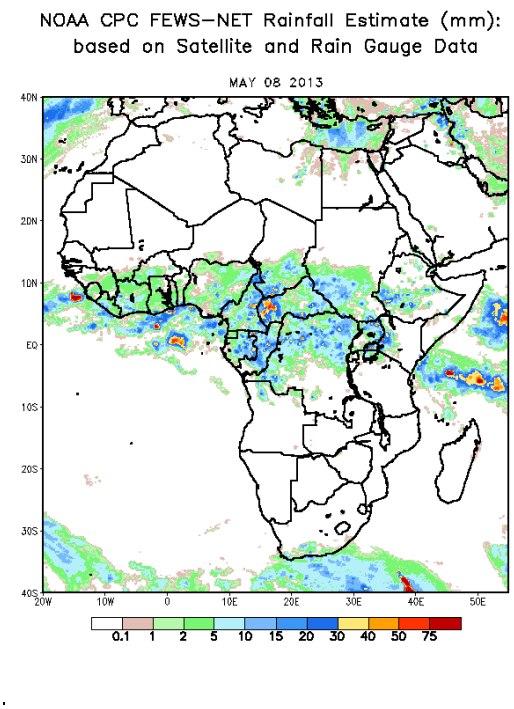
(08 May 2013 – 09 May 2013)

2.1. Weather assessment for the previous day (08 May 2013)

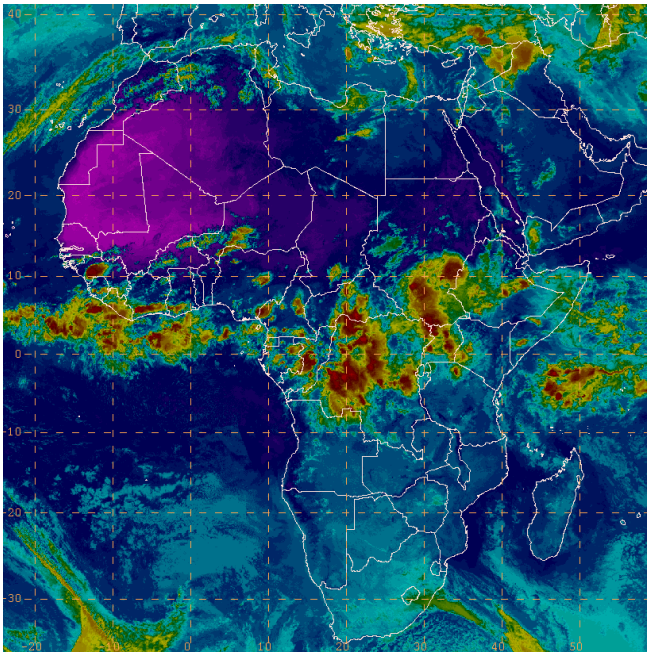
During the previous day, moderate to localized heavy rainfall was observed over parts of Liberia, Code d'Ivoire, Nigeria, Chad, Cameroon, Gabon, CAR, DRC, southern Sudan, Uganda, Kenya and Ethiopia.

2.2. Weather assessment for the current day (09 May, 2013)

Intense patches of clouds are observed over parts of Guainía, Liberia, Code d'Ivoire, Nigeria, Niger, Chad, Cameroon, Gabon, Congo, CAR, DRC, southern Sudan, Uganda, Kenya and Ethiopia



IR Satellite Image (valid 1800Z of 09 May 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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