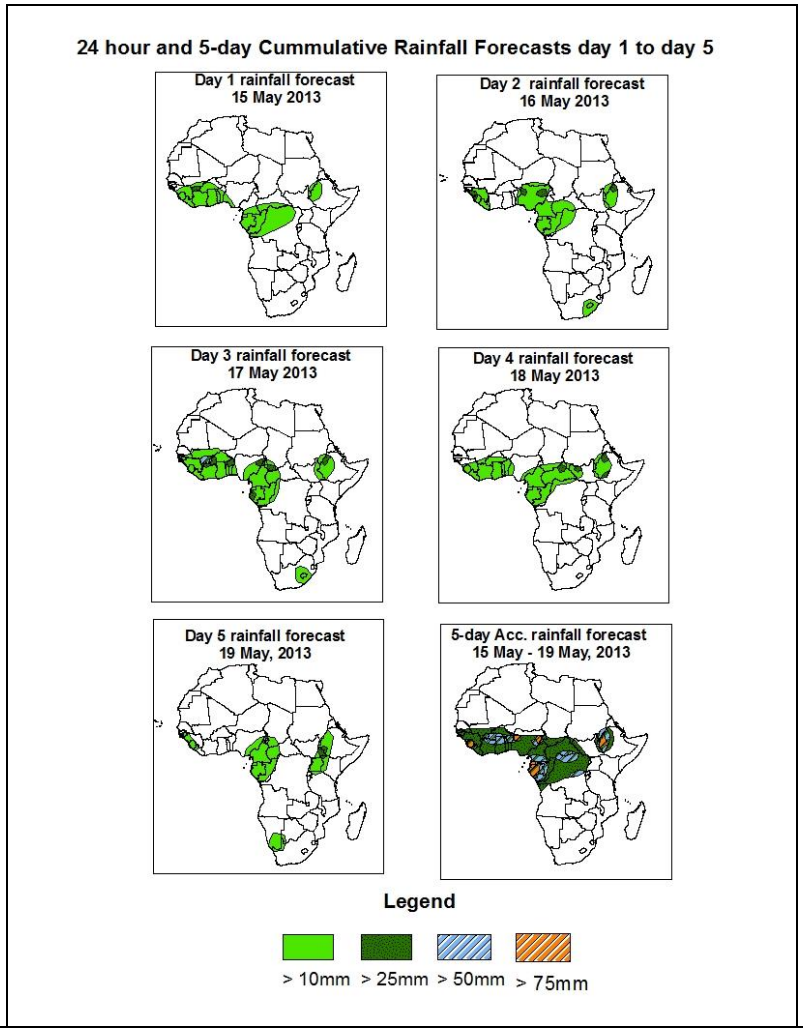
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 15 May – 06Z of 19 May, 2013. (Issued at 1515Z of 14 May 2013)

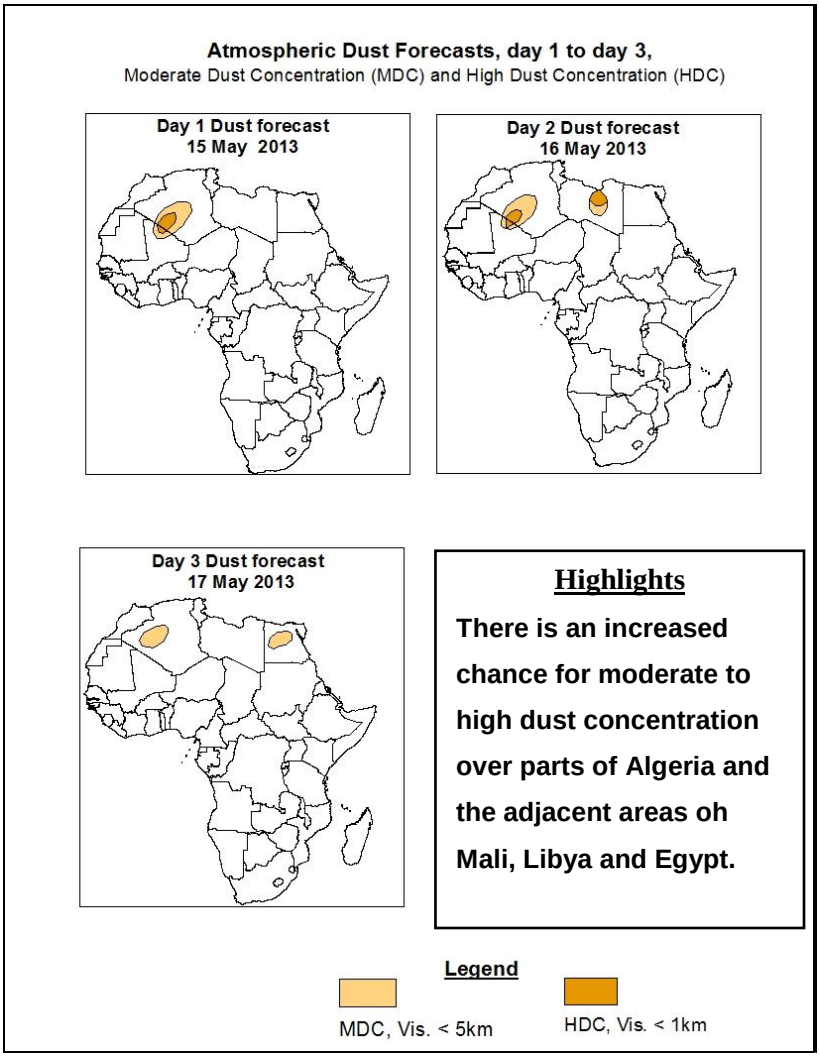
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, moist southeasterly flow from the southern Indian Ocean and its associated convergence over western parts of equatorial Africa, and the West African Monsoon flow from the Atlantic Ocean and its associated convergence over the Gulf of Guinea region, seasonal lower-level wind convergences over Ethiopia are expected to enhance rainfall in their respective regions. Hence, there is an increased chance for moderate to heavy rainfall over Sierra Leone, Liberia, local areas in Cote D'Ivoire, southern Mali and southern Burkina Faso, Cameroon, Gabon, local areas in DRC and parts of Ethiopia.



1.2. Model Discussion: Valid from 00Z of 14 May 2013

Model comparison (Valid from 00Z; 13 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 remain moderate to intense while shifting eastwards through 24 to 96 hours. Its central pressure value is expected to vary between 1028hpa to 1029hpa according to the GFS and the ECMWF models, and between 1029hpa to 1030hpa according to the UKMET model.

The Mascarene high pressure system over southwestern Indian Ocean is expected to weaken slightly while shifting eastwards through 24 to 96 hours. Its central pressure

value is expected to decrease from about 1028hpa to 1026hpa, according to the GFS model, from about 1030hpa to 1028hpa according to the ECMWF model and from 1029hpa to 1028hpa according to the UKMET model.

The heat lows over the central Sahel and neighboring areas are expected to deepen slightly, with their central values decreasing from about 1007hpa to 1005hpa according to the GFS model, from about 1010hpa to 1006hpa according to the ECMWF model and from about 1007hpa to 1005hpa according to the UKMET model. The seasonal lows across South Sudan and the neighboring areas are expected to remain moderate with central pressure values ranging from about 1004hpa to 1005hpa according to the GFS and UKMET models.

At the 850hpa level, the seasonal wind convergence associated with the West African monsoon flow is expected to become more active over the Gulf of Guinea region. The lower level-wind convergence associated with the moist cross equatorial from the Indian Ocean is expected to remain active over western parts of Equatorial Africa. Seasonal wind convergences are also expected to remain active over Ethiopia. The lower level wind convergences near the Congo boundary region are expected to remain weak during the forecast period.

At 500hpa level, a trough associated with the mid-latitude frontal system is expected to dominate the flow over Northeast Africa to include Sudan, South Sudan and Ethiopia through the first half of the forecast period.

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2.0. Previous and Current Day Weather Discussion over Africa

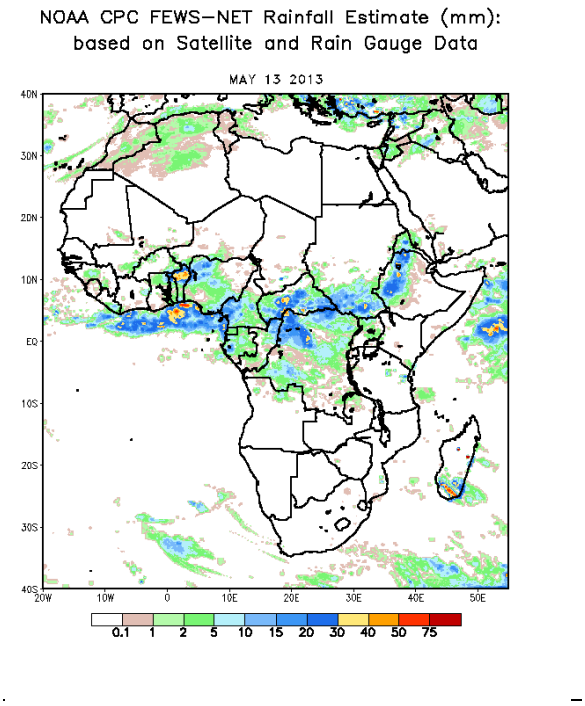
(13 May 2013 – 14 May 2013)

2.1. Weather assessment for the previous day (13 May 2013)

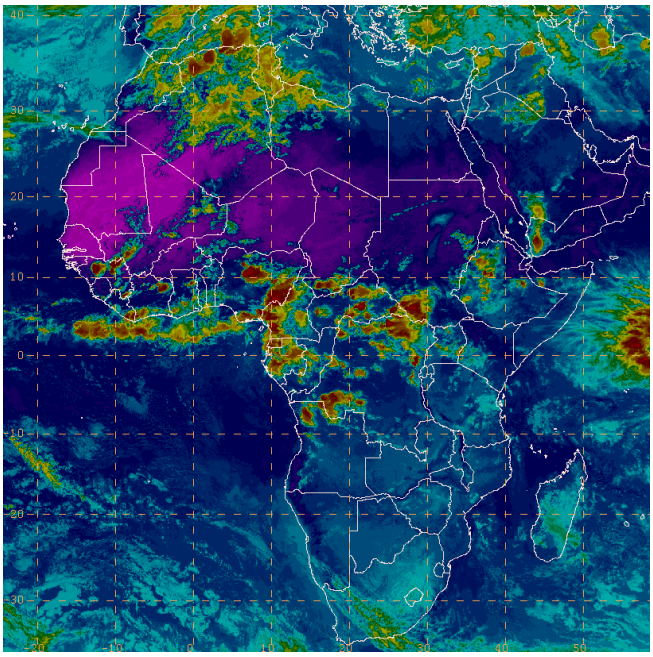
During the previous day, moderate to localized heavy rainfall was observed over parts of Benin, Nigeria, Cameroon, CAR, DRC, southern Sudan and Ethiopia.

2.2. Weather assessment for the current day (14 May, 2013)

Intense patches of clouds are observed over parts of Guinea, Code d'Ivoire, Nigeria, Cameroon, Gabon, Southern Chad, CAR, DRC, southern Sudan, and Ethiopia.



IR Satellite Image (valid 1530Z of 14 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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