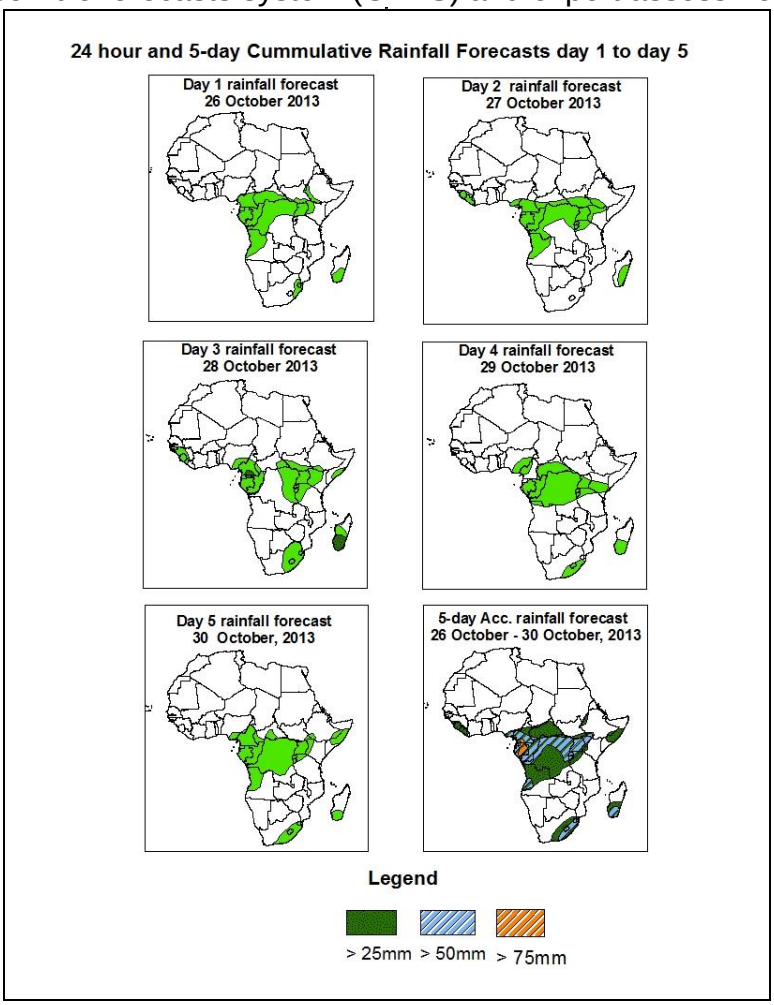
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 29 October – 06Z of 02 November, 2013. (Issued at 1700Z of 29 October 2013)

1.1. Twenty Four Hour Cumulative Rainfall Forecasts

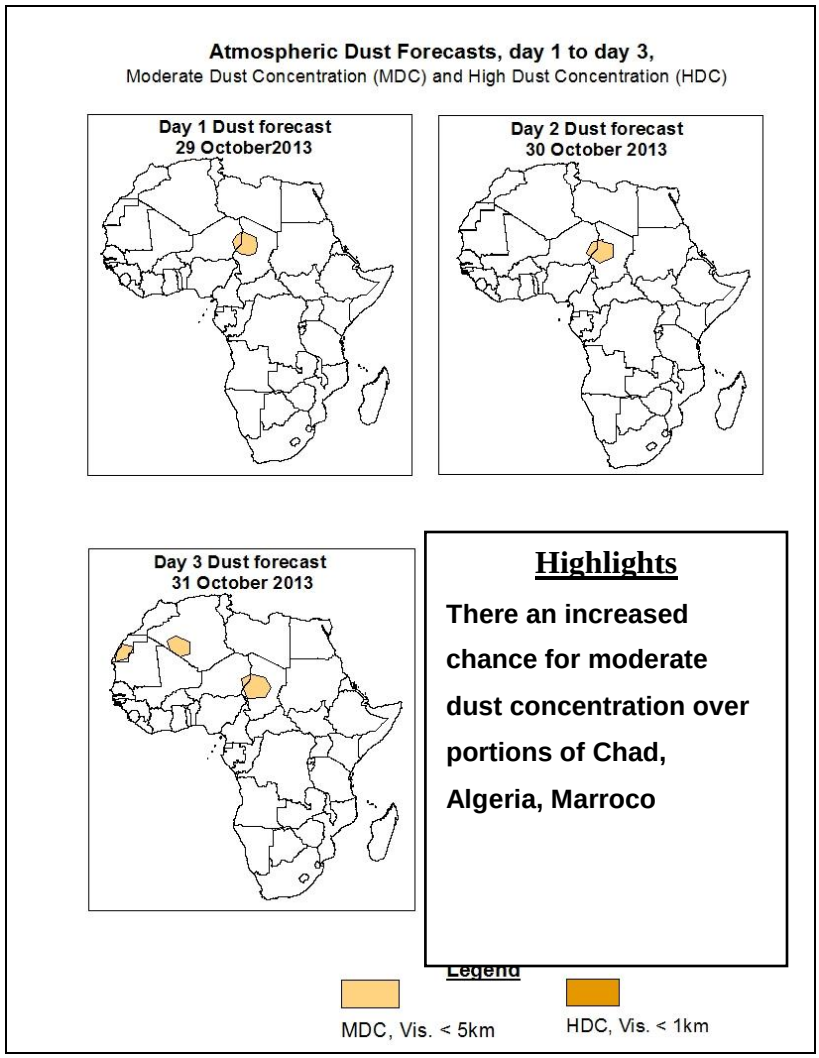
The forecasts are expressed in terms of 75% probability of precipitation (POP) exceeded, based on the NCEP, UK Met Office and the ECMWF NWP outputs, the NCEP global ensemble forecasts system (GEFS) and expert assessment.



Summary

In the next five days, a low level-wind convergence over Gabon, Congo, DRC, seasonal wind convergence over the Lake Victoria region and Angola, moist cross-equatorial flow and its associated convergence over Horn of Africa, and interaction between mid-latitude and tropical weather systems across Southeast Africa are expected to enhance rainfall in their respective regions. Hence, there is an increased chance for heavy rainfall over parts southern Cameroon, Equatorial Guinea, Gabon, Congo, Angola, portions of DRC, the Lake Victoria region, Ethiopia and Somalia, and eastern South Africa Lesotho, Swaziland and southern Madagascar.

1.2. Atmospheric Dust Forecasts: Valid 29 - 31 October 2013



1.2. Model Discussion: Valid from 00Z of 28 October 2013

Model comparison (Valid from 00Z:28 October 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 St. Helena High Pressure System over southeast Atlantic Ocean is expected to intensify gradually during the forecast period. Its central pressure value is expected to increase from about 1024hpa to 1029hpa according to the ECMWF model, from 1025hpa to 1032hpa according to GFS model and from 1024hpa to 1032hpa according to the UKMET model.

The Mascarene high pressure system over southwestern Indian Ocean is expected to weaken through 24 to 72 hours. The central pressure value of this high pressure system is expected to decrease from 1032hpa to 1025hpa according to the ECMWF model, from 1032hpa to 1025hpa according to the GFS model and from about 1032hpa to 1027hpa according to the UKMET model.

At 850hpa, moist cross-equatorial flow and its associated convergence is expected to dominate the flow over the Horn of Africa through 24 to 120 hours. Seasonal wind convergence near the Lake Victoria, DRC, Guinea area, Cameroon, Gabon, Congo, Mozambique Channel, Angola and South Africa is expected remain active during the forecast period. Interaction between mid-latitude and tropical weather systems is expected to enhance rainfall over Southeast Africa.

At 500hpa, a trough associated with mid-latitude frontal system is expected to weaken while shifting between North and Northeast Africa through 24 to 120 hours. A mid-latitude cyclone and its associated trough is expected to propagate across southern Africa countries while remaining during the forecast period.

At 200hpa level, the sub-tropical Westerly Jet (with >90kts wind speed), extending between northern Morocco, and Egypt, across Mali, Niger, Chad Libya and Egypt through 24 to 48 hours, and it tends to weakening though 72 to 120hours.

2.0. Previous and Current Day Weather Discussion over Africa

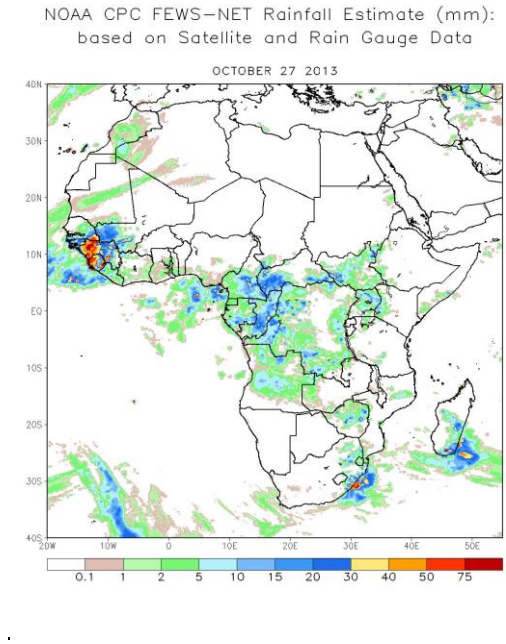
(27 October 2013 – 28 October 2013)

2.1. Weather assessment for the previous day (27 October 2013)

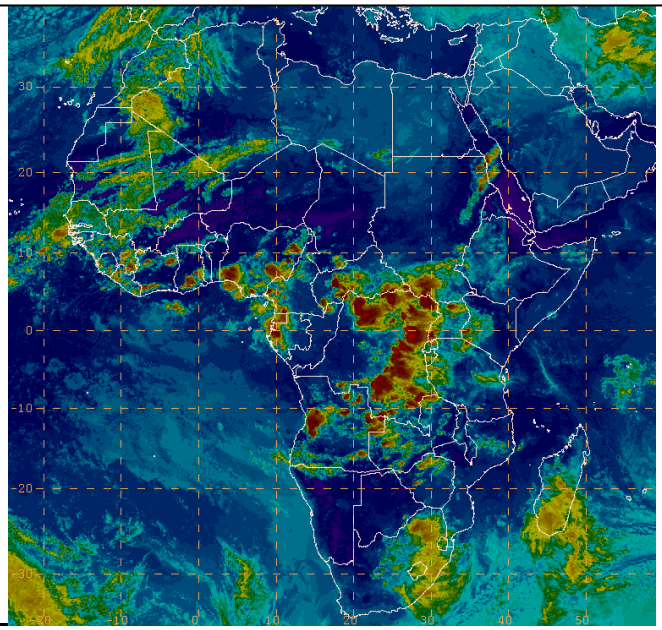
During the previous day, moderate to locally heavy rainfall was observed over Guinea, Cameroon, CAR, and South of South Sudan, DRC, Uganda, western Kenya, local areas in Ethiopia, Angola, portions of Zambia, and local areas in Botswana Zimbabwe and Southern Africa.

2.2. Weather assessment for the current day (28 October 2013)

Intense clouds were observed over Cote D'Ivoire, Ghana and Nigeria, Gabon, South Sudan, C.R.A, D.R.C and Angola.



IR Satellite Image (valid 15520Z of 28 October 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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