

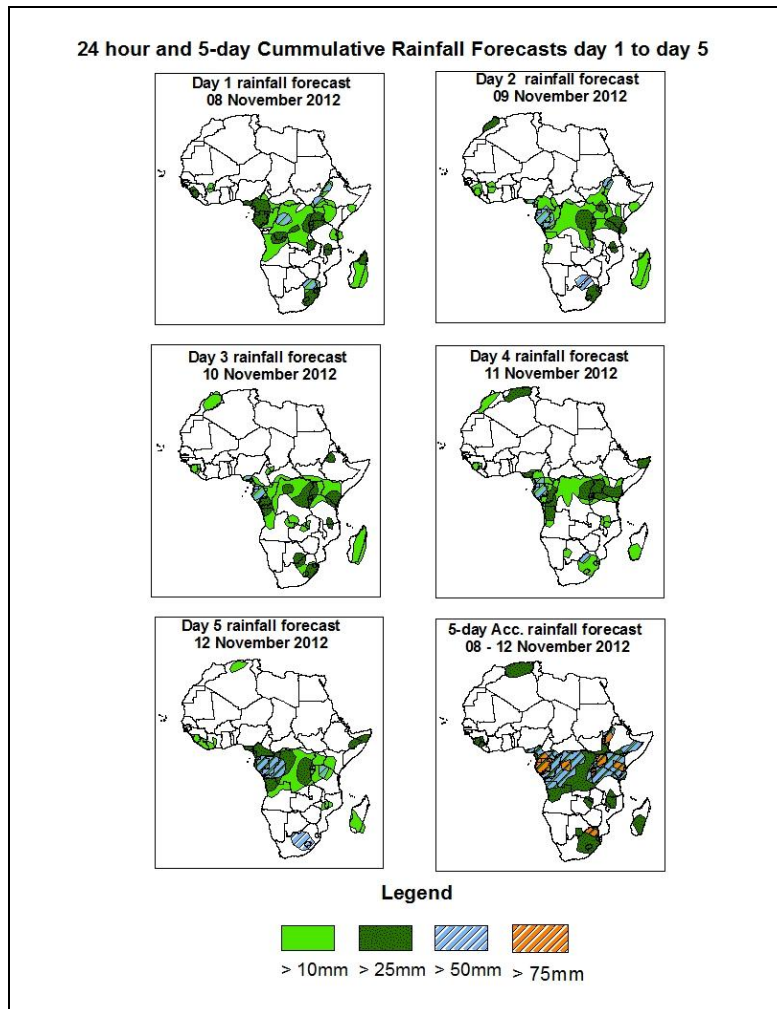


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 08 November – 06Z of 12 November 2012. (Issued at 14:00Z of 07 November 2012)

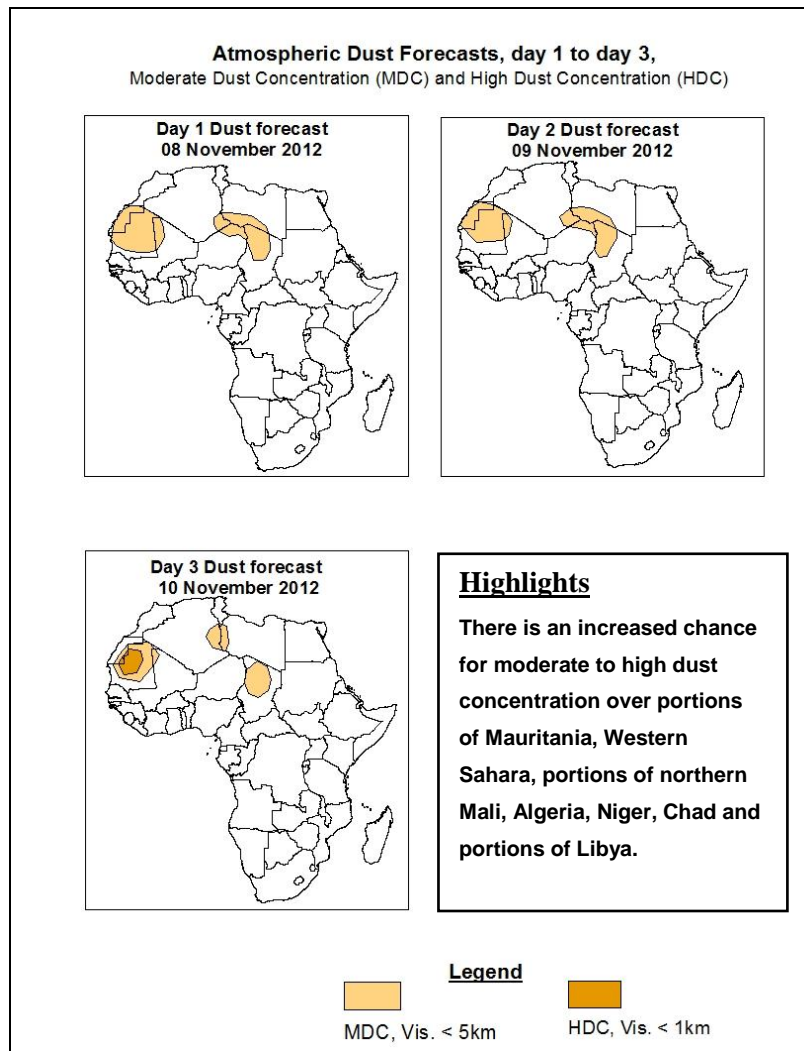
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, seasonal low level wind convergences in the Congo Air Boundary (CAB) region, a lower level wind convergence across western parts of Equatorial Africa, localized wind convergences over Angola, interaction between mid-latitude and tropical systems across Southeast Africa and westward propagating cyclonic circulation near Madagascar are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for heavy rainfall over southern Cameroon, Gabon, Congo, Equatorial Guinea, western Angola, eastern DRC, Uganda, Rwanda, Burundi, portions of Kenya, western and northern Tanzania, portions of Ethiopia and eastern South Africa.



1.2. Model Discussion: Valid from 00Z of 07 November 2012

Model comparison (Valid from 00Z; 07 November 2012) shows all the three models are in general agreement in terms of depicting the eastward movement of the southern hemisphere high pressure systems (St. Helena and Mascarene). However, the models show differences in terms of central pressure values.

The St. Helena High pressure system over southeast Atlantic Ocean is expected to maintain central pressure value of 1027hpa, according to the ECMWF model, central pressure value of 1028hpa according to the UKMET and GFS models, before it shifts eastward to become the Mascarene high pressure system. A new St. Helena high pressure system is expected to develop with its central pressure value increasing from 1021 to 1025hpa, according to the ECMWF model, from 1021hpa to 1024hpa according

to the UKMET model and from 1022hpa to 1024hpa according to the GFS model through 48 to 96 hours.

The newly developing Mascarene high pressure system over southwestern Indian Ocean is expected to strengthen gradually with its central pressure value increasing from 1022hpa to 1025hpa, according to the ECMWF model, from 1023hpa to 1024hpa according to the UKMET model, and from 1020hpa to 1024hpa according to the GFS model, through 48 to 120 hours.

The seasonal lows across the southern African countries are expected to deepen gradually with their central pressure value decreasing from about 1007hpa to about 1005hpa according to the ECMWF, UKMET and GFS models through 24 to 72 hours, and the lows tend to fill up towards end of the forecast period.

At the 850hpa level, the seasonal lower level wind convergence is expected to remain active in the region between Southwest Ethiopia and northern Zambia, across South Sudan, Uganda, western Kenya, Tanzania as well as eastern DRC through 24 to 96 hours, and the convergence tends to weaken slightly towards end of the forecast period. Lower level wind convergence is expected to dominate the flow near Congo and Gabon through 48 to 120 hours. Localized wind convergences are also expected to dominate the flow over Angola and Namibia during the forecast period. A mid-latitude frontal system is expected to interact with tropical systems across Southeast Africa including Madagascar. A cyclonic circulation and its associated deep convection is expected to propagate westwards across Southwest Indian Ocean towards Northeast Madagascar through 24 to 120 hours.

At 500hpa, a trough in the mid-latitude westerlies is expected to remain deep across Egypt through 24 to 120 hours. A trough associated with mid-latitude frontal system is also expected to propagate across the Mozambique Channel and Madagascar during the forecast period.

At 200hpa, the northern hemisphere sub-tropical westerly jet is expected to remain weak within the extent of the African domain, while a core of strong wind, associated

with the southern hemisphere sub-tropical westerly jet is expected to propagate across South Africa during the forecast period.

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2.0. Previous and Current Day Weather Discussion over Africa

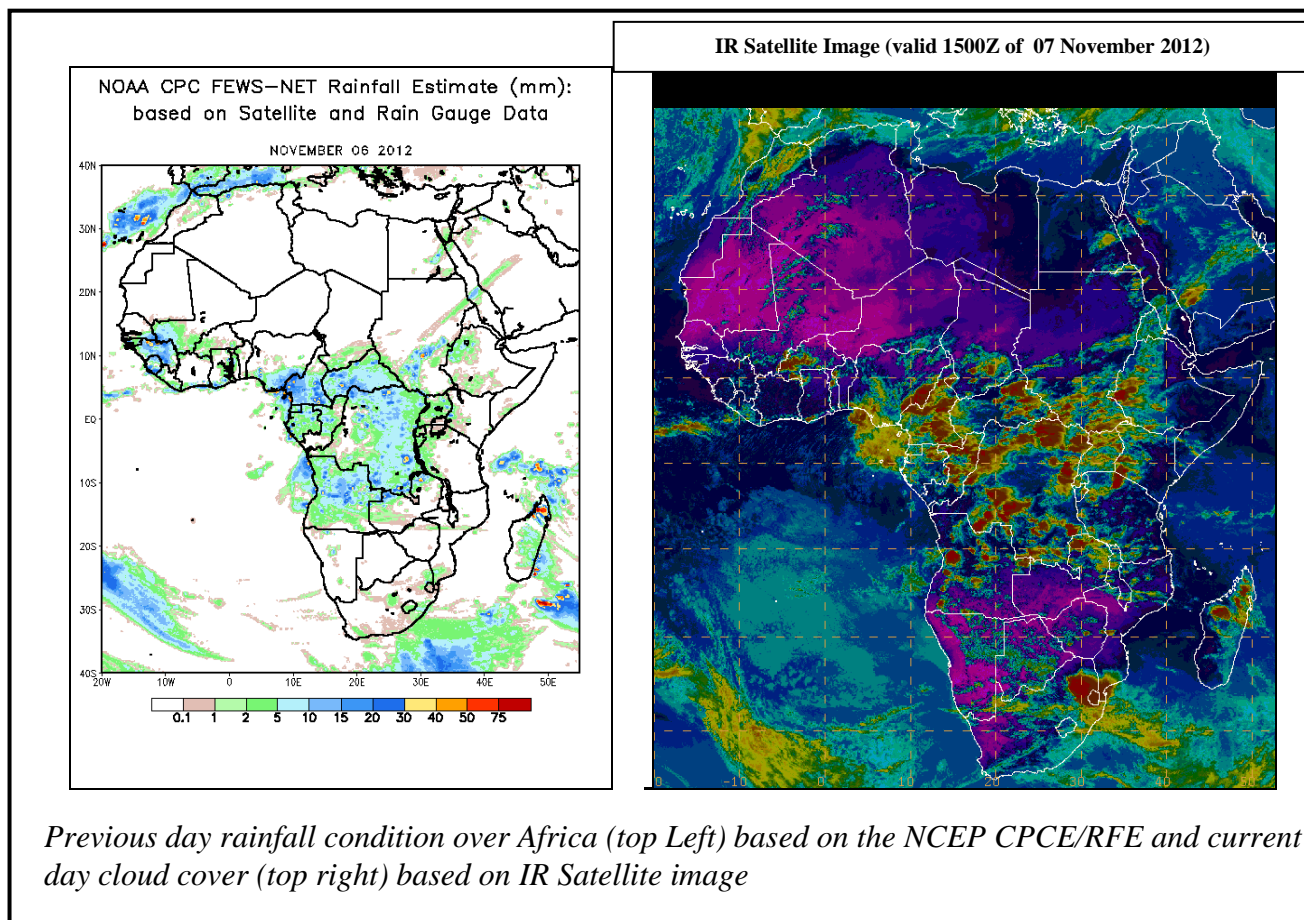
(06 November 2012 – 07 November 2012)

2.1. Weather assessment for the previous day (06 November 2012)

During the previous day, moderate to locally heavy rainfall was observed over parts of Burkina Faso, Ghana, Cameroon, Sudan, Guinea Conakry, Zambia, South Africa, DRC, Angola, much of Uganda, Kenya and Tanzania.

2.2. Weather assessment for the current day (07 November 2012)

Intense clouds are observed across the Gulf of Guinea countries, Sudan, South Sudan, CAR, DRC, Gabon, Angola, South Africa, Cameroon and northern Zambia.



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