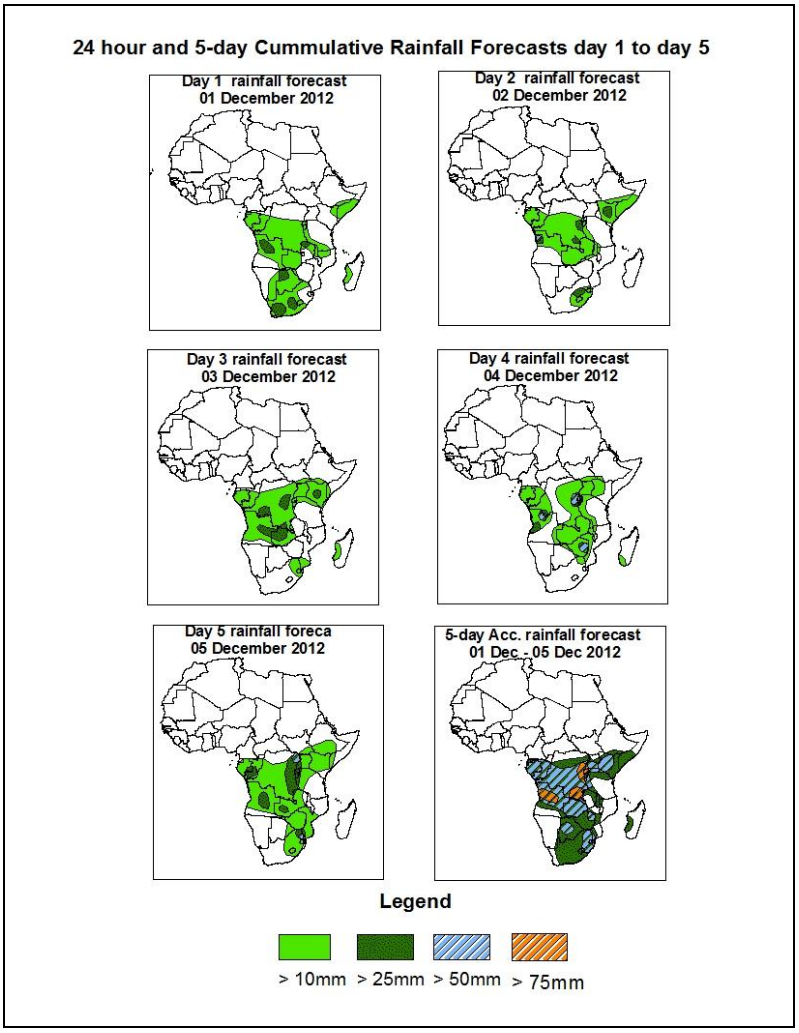
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 01 December – 06Z of 05 December 2012. (Issued at 16:00Z of 30 November 2012)

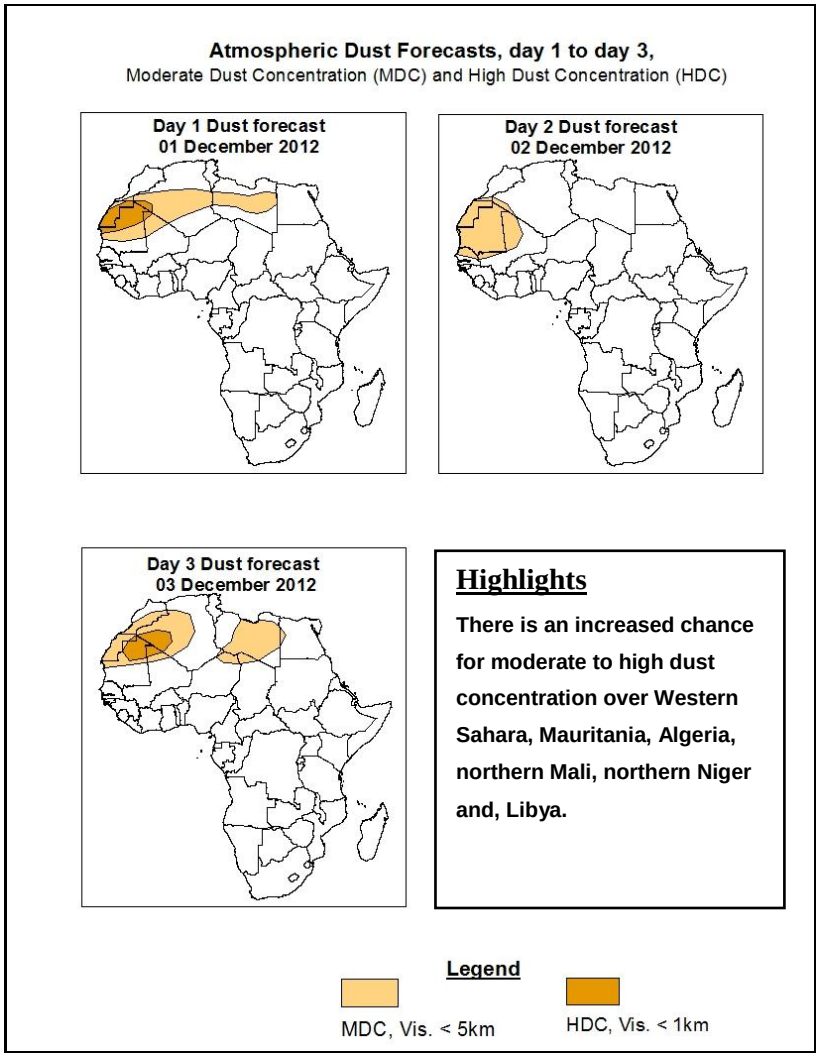
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, localized wind convergences over near Gabon, and across East Africa, lower-level wind convergences over parts of South African countries, and eastward propagating trough across South Africa are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for heavy rainfall over Gabon, parts of Congo, Angola, portions of Botswana, Zambia and DRC, local areas in Uganda, Zimbabwe and South Africa.



1.2. Model Discussion: Valid from 00Z of 30 November 2012

Model comparison (Valid from 00Z; 30 November 2012) shows all the three models are in general agreement in terms of depicting eastward shift 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 strengthen through 24 to 96 hours, with its central pressure value increasing from about 1026hpa to 1030hpa, according to the ECMWF model, from 1028hpa to 1032hpa, according to the UKMET model and, from 1027hpa to 1030hpa, according to the GFS model.

The Mascarene high pressure system over southwestern Indian Ocean is expected to maintain central pressure value of about 1025hpa, according to the ECMWF model, about 1026hpa according to the UKMET model, and about 1025hpa according to the GFS model, through 48 to 120 hours.

The seasonal lows across DRC, South Sudan and the neighboring areas is expected to deepen gradually through 24 to 120 hours, with its central pressure value decreasing from about 1008hpa to 1006hpa, according to the ECMWF model, decreasing from about 1007hpa to 1005hpa according to the UKMET model and from about 1007hpa to 1004hpa, according to the GFS model. A low pressure system is expected to propagate across southern South Africa through 24 to 72 hours, while deepening, with its central pressure value decreasing from about 1008hpa to 1005hpa, according to the ECMWF model, from about 1009hpa to 1005hpa, according to the UKMET model, and from about 1006hpa to 1001hpa according to the GFS model.

At the 850hpa level, the seasonal lower level wind convergence near the CAB region is expected to remain weak through 24 to 72 hours, and expected to re0strengthen towards end of the forecast period. In contrast, lower level wind convergences are expected to remain active across Angola, parts of Zambia and Botswana during the forecast period. Wind convergences are also expected to dominate the flow over Gabon and parts of Kenya.

At 500hpa, a trough in the mid-latitude westerlies is expected dominate the flow over Northwest and North Africa, while a mid-tropospheric anticyclonic flow prevails over Northeast Africa. A mid-latitude trough is also expected to propagate across South Africa during the forecast period.

At 200hpa, the northern hemisphere sub-tropical westerly jet is expected to remain strong across Northeast Africa, with the core wind speed occasionally exceeding 150kts over Mediterranean Sea and coastal North Africa.

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their respective regions. Thus, there is an increased chance for heavy rainfall over Gabon, parts of Congo, Angola, portions of Botswana, Zambia and DRC, local areas in Uganda, Zimbabwe and South Africa.

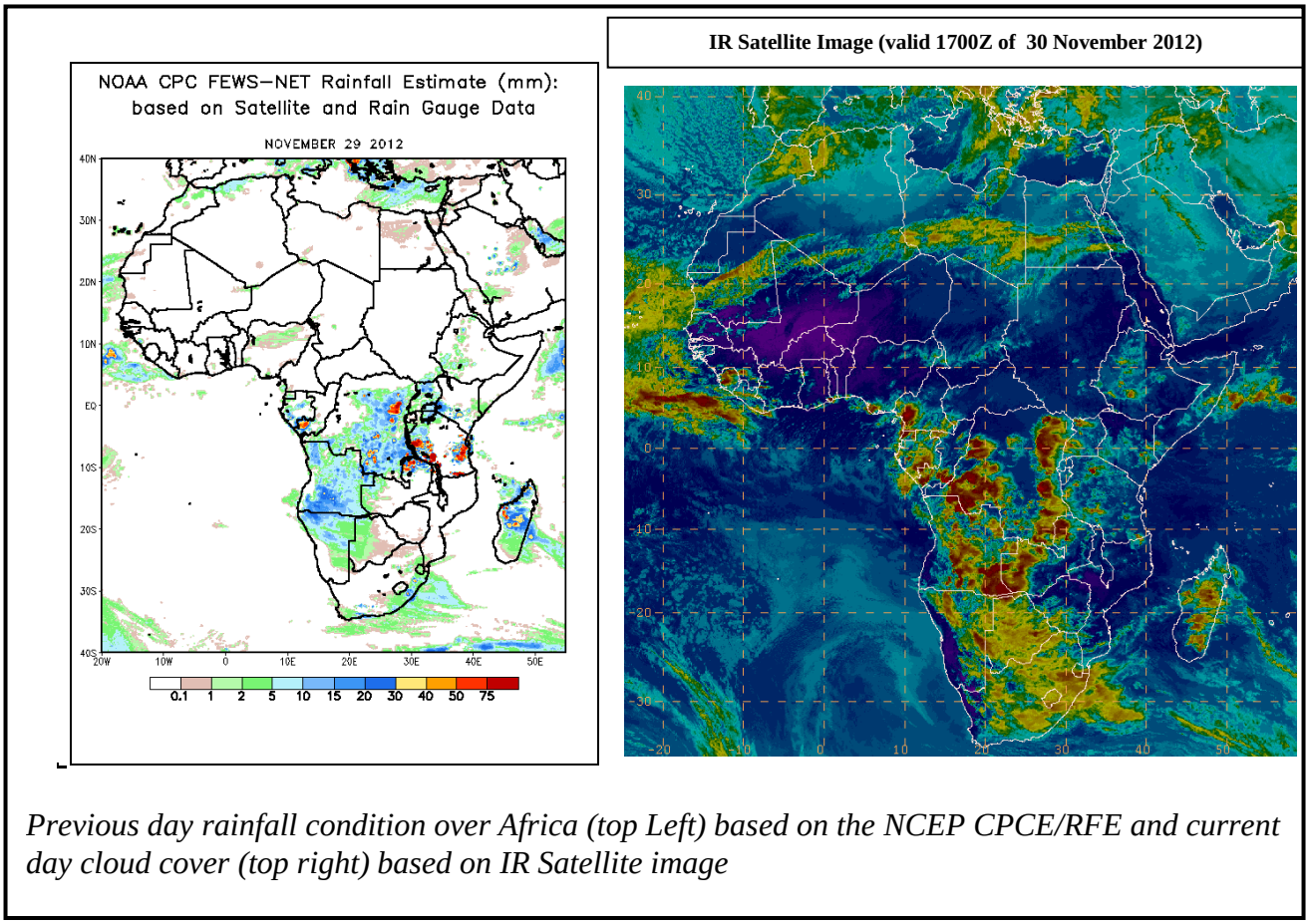
2.0. Previous and Current Day Weather Discussion over Africa (29 November 2012 – 30 November 2012)

2.1. Weather assessment for the previous day (29 November 2012)

During the previous day, moderate to locally heavy rainfall was observed over parts of Congo, DRC, Angola, northern Namibia, Uganda, Tanzania, Kenya and Madagascar.

2.2. Weather assessment for the current day (30 November 2012)

Intense clouds are observed across many parts of Central African region, and portions of Southern Africa countries, including Madagascar.



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