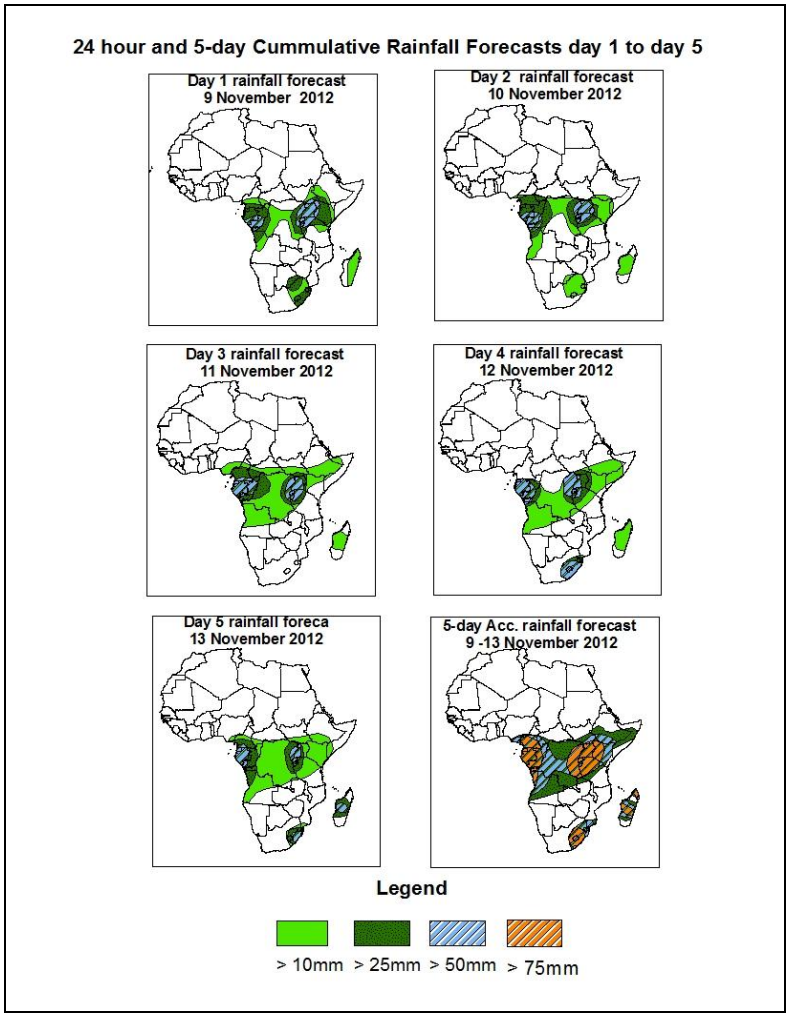
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 09 November – 06Z of 13 November 2012. (Issued at 15:30Z of 08 November 2012)

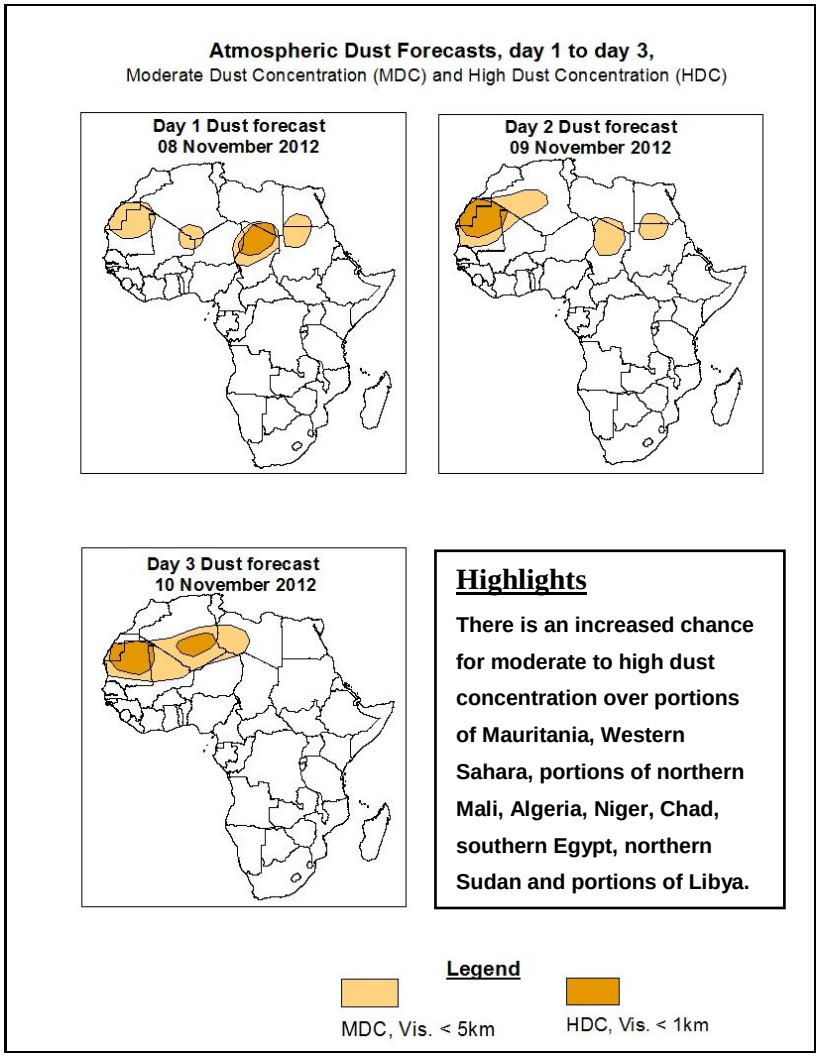
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, Interactions between mid-latitude and tropical systems across Northeast and Southeast Africa, seasonal low level wind convergences in the Congo Air Boundary (CAB) region, a lower level wind convergence across western parts of Equatorial Africa, including Angola, 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, eastern South Africa and Madagascar.



1.2. Model Discussion: Valid from 00Z of 08 November 2012

Model comparison (Valid from 00Z; 08 November 2012) shows all the three models are in general agreement in terms of depicting weaker 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 72 hours, with its central pressure value increasing from 1022hpa to 1026hpa according to the ECMWF and UKMET models, and from 1022hpa to 1025hpa according to the GFS model. This high pressure system tends to weaken through 96 to 120 hours, with its central pressure value decreasing back to 1022hpa, according to the ECMWF model, decreasing to central pressure value of 1025hpa

according to the UKMET model to central pressure value of 1020hpa according to the GFS model.

The Mascarene high pressure system over southwestern Indian Ocean is expected to strengthen gradually with its central pressure value increasing from 1020hpa to about 1024hpa, according to the ECMWF and GFS models and increasing from 1020hpa to 1025hpa according to the UKMET model through 24 to 120 hours.

The seasonal lows across the southern African countries are expected to fill up gradually with their central pressure value increasing from about 1004hpa to about 1009hpa according the ECMWF, from 1005hpa to 1008hpa according to the UKMET model, and from 1003hpa to 1009hpa according to the GFS model.

At the 850hpa level, a deep trough in mid-latitude westerly flow is expected to interact with tropical systems across Northeast Africa, including Ethiopia during the forecast period. A lower level cyclonic circulation is expected to deepen over the Mozambique Channel, dominating the flow over the neighboring areas of Southeast Africa including Madagascar. 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 120 hours. Lower level wind convergence is expected to dominate the flow near Congo, Gabon, Equatorial Guinea and Angola through 24 to 120 hours. A mid-latitude frontal system is expected to dominate the flow over eastern South Africa. 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 96hours. 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 re-strengthen across the Mediterranean Sea and the neighboring areas of North Africa. 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.

In the next five days, Interactions between mid-latitude and tropical systems across Northeast and Southeast Africa, seasonal low level wind convergences in the Congo Air Boundary (CAB) region, a lower level wind convergence across western parts of Equatorial Africa, including Angola, 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, eastern South Africa and Madagascar.

2.0. Previous and Current Day Weather Discussion over Africa

(07 November 2012 – 08 November 2012)

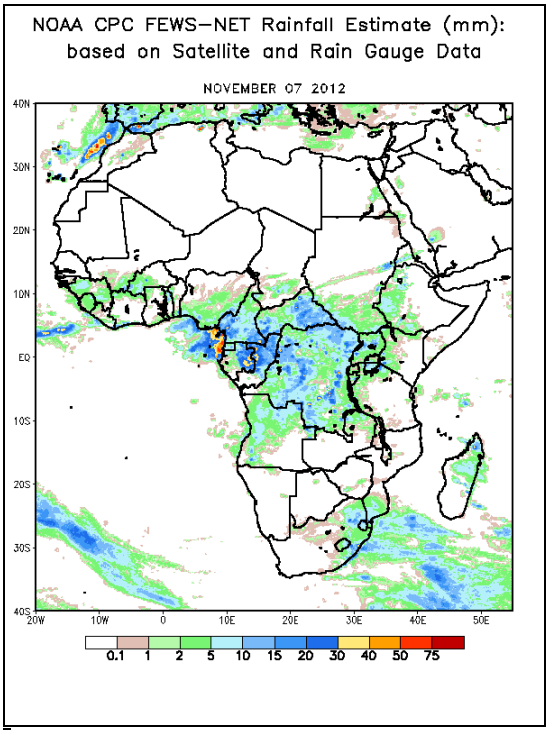
2.1. Weather assessment for the previous day (07 November 2012)

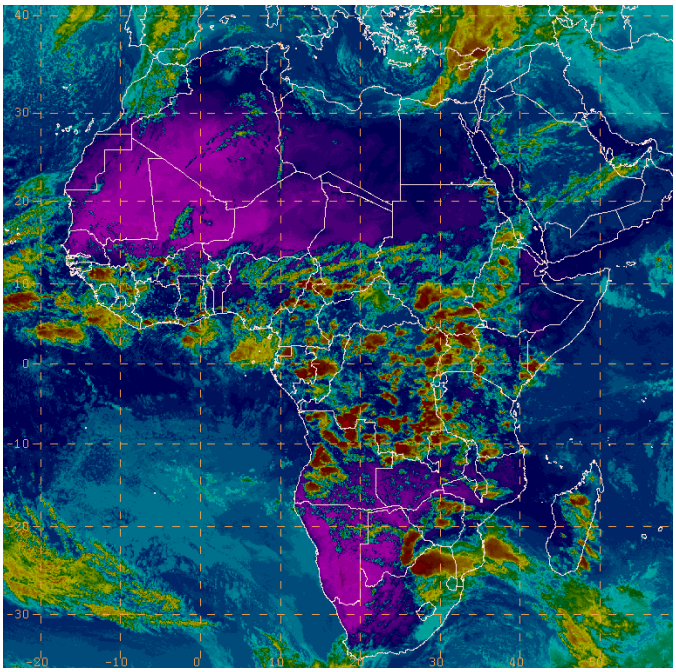
During the previous day, moderate to locally heavy rainfall was observed over parts of Cameroon, Gabon, CAR, Congo, DRC and eastern South Africa.

2.2. Weather assessment for the current day (08 November 2012)

Intense clouds are observed across the Gulf of Guinea countries, many parts of Central African region, portions of the Horn of Africa and Southeast Africa..

IR Satellite Image (valid 1500Z of 08 November 2012)





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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