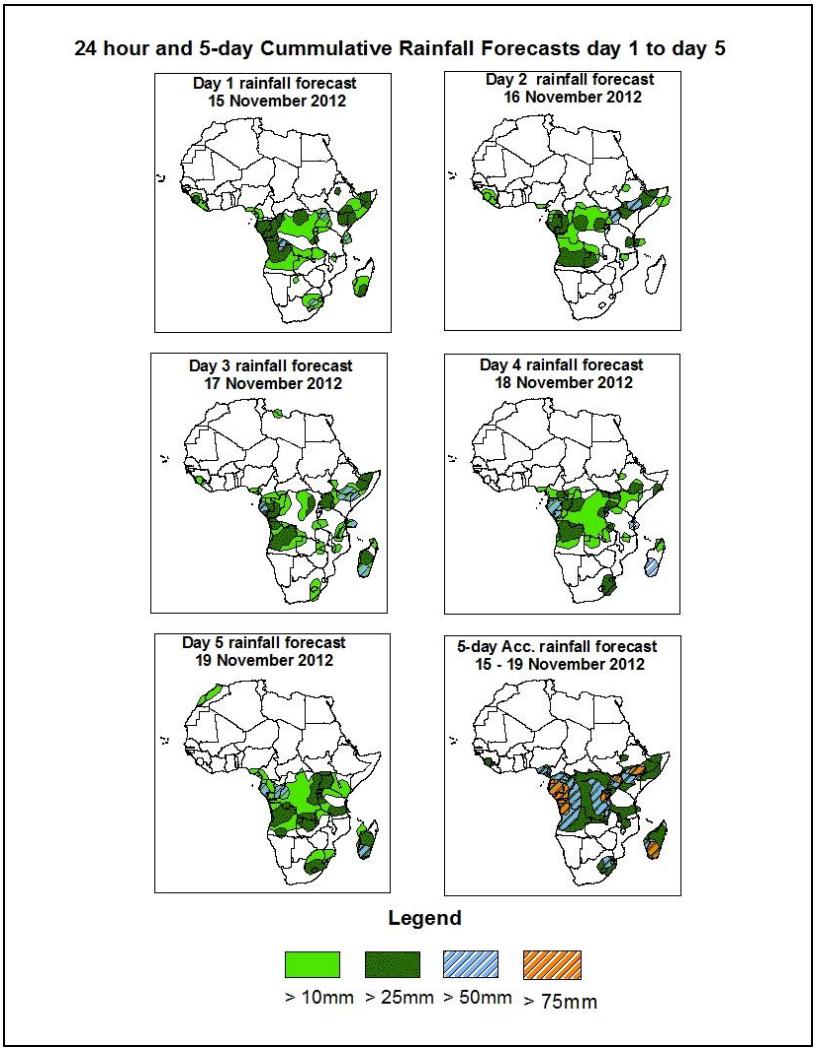
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 15 November – 06Z of 19 November 2012. (Issued at 15:30Z of 14 November 2012)

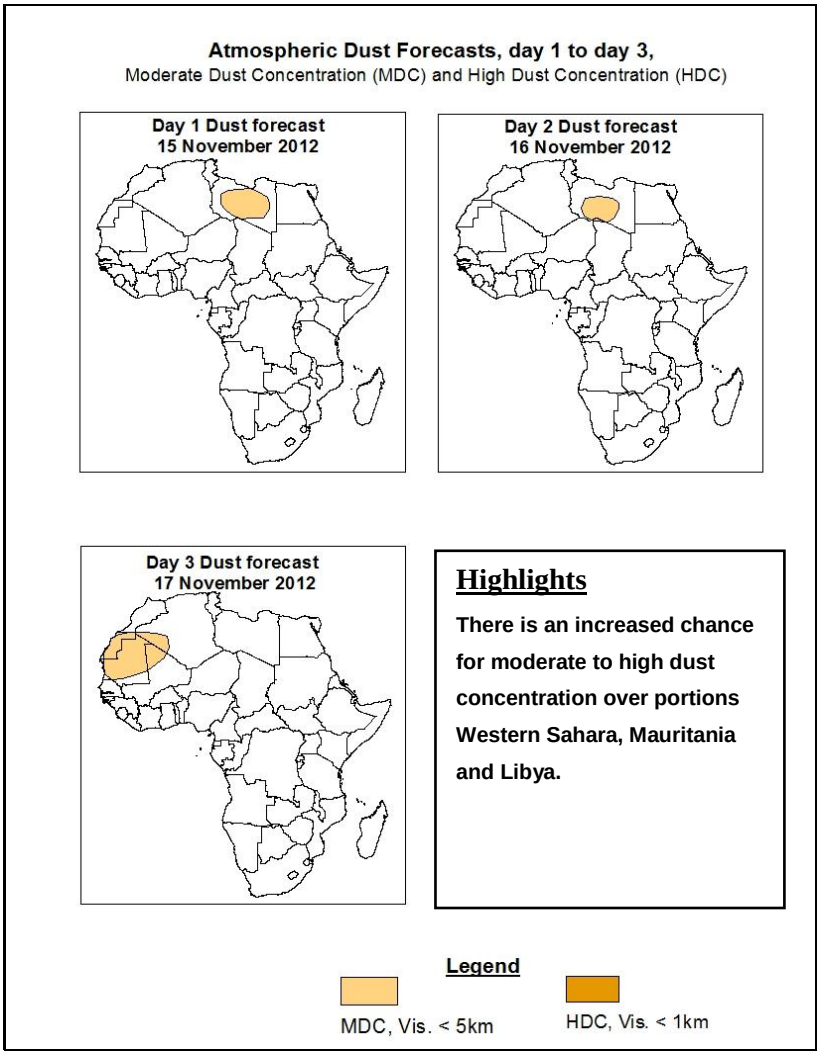
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, strong lower level wind convergence across the Horn of Africa, a lower level wind convergence across western parts of Equatorial Africa, including Angola, and eastward propagating trough near Madagascar are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for heavy rainfall over Gabon, Congo, Equatorial Guinea, western Angola, local areas in the Congo Basin region, Southern Ethiopia and Madagascar.



1.2. Model Discussion: Valid from 00Z of 14 November 2012

Model comparison (Valid from 00Z; 14 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 maintain mean seas level pressure value of 1021hpa through 24 to 96 hours according to the ECMWF model, while its central pressure is expected to increase lightly from about 1021hpa to 1022hpa through 24 to 96 hours according to the GFS and UKMET models.

The Mascarene high pressure system over southwestern Indian Ocean is expected to strengthen slightly through 24 to 72 hours, with its central pressure value increasing from 1022hpa to 1024hpa according to the ECMWF, the GFS and UKMET models. This high pressure system is expected to relax towards end of the forecast period.

The seasonal lows across the southern African countries are expected to deepen slightly during the forecast period, with the central pressure value decreasing from about 1010hpa to 1008hpa according to the ECMWF model, fro, 1009hpa to 1005hpa according to the GFS model, and from 1009hpa to 1008hpa according to the UKMET model.

At the 850hpa level, a lower level wind convergence across the Horn of Africa is expected to remain active through 24 to 72 hours. In contrast, the seasonal wind convergence over the Congo Basin is expected to remain more or less weak through 24 to 72 hours, and is expected to re-strengthen towards end of the forecast period. Wind convergences are expected to dominate the flow over western Equatorial Africa, including western Angola.

At 500hpa, a trough in the mid-latitude westerlies is expected to propagate across the Mediterranean Sea and the neighboring areas of North Africa during the forecast period. A trough associated with mid-latitude frontal system is expected to remain deep over Mozambique Channel and Madagascar during the forecast period.

At 200hpa, the northern hemisphere sub-tropical westerly jet is expected to remain strong North Africa, with the core wind speed exceeding 90kts.

In the next five days, strong lower level wind convergence across the Horn of Africa, a lower level wind convergence across western parts of Equatorial Africa, including Angola, and eastward propagating trough near Madagascar are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for heavy rainfall over Gabon, Congo, Equatorial Guinea, western Angola, local areas in the Congo Basin region, Southern Ethiopia and Madagascar.

2.0. Previous and Current Day Weather Discussion over Africa

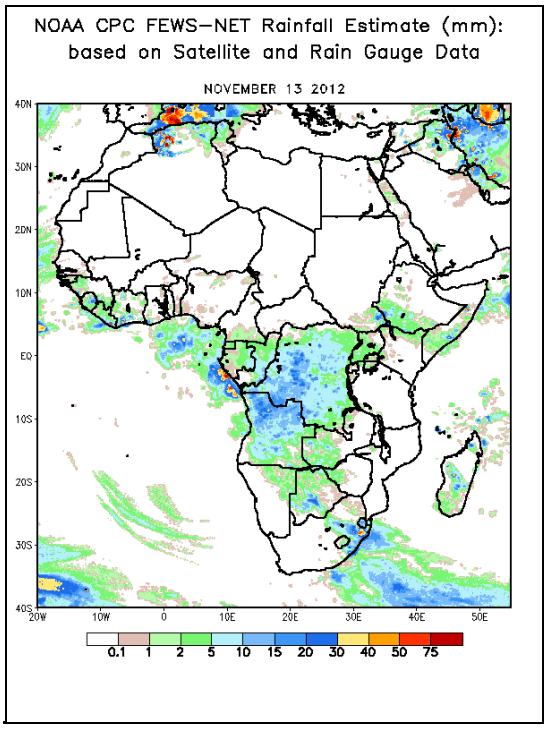
(13 November 2012 – 14 November 2012)

2.1. Weather assessment for the previous day (13 November 2012)

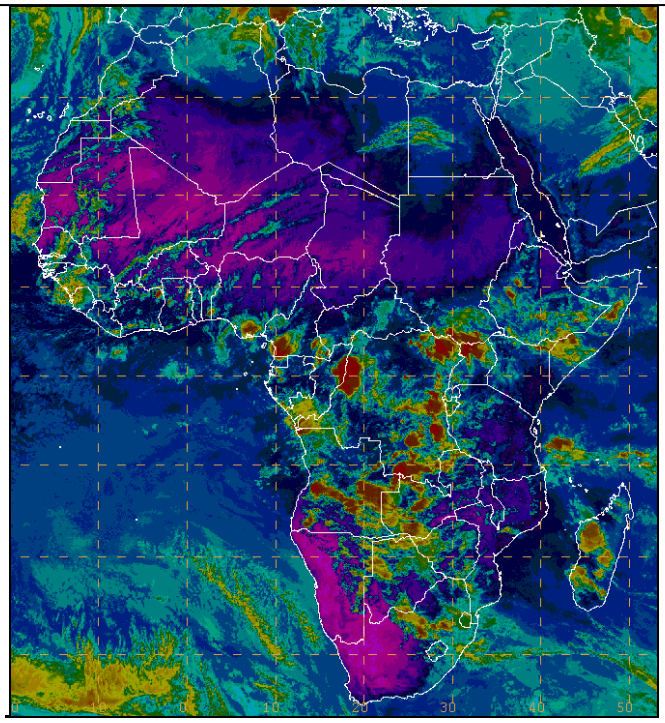
During the previous day, moderate to locally heavy rainfall was observed over parts of Cameroon, Gabon, CAR, Congo, DRC and eastern South Africa.

2.2. Weather assessment for the current day (14 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 14 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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