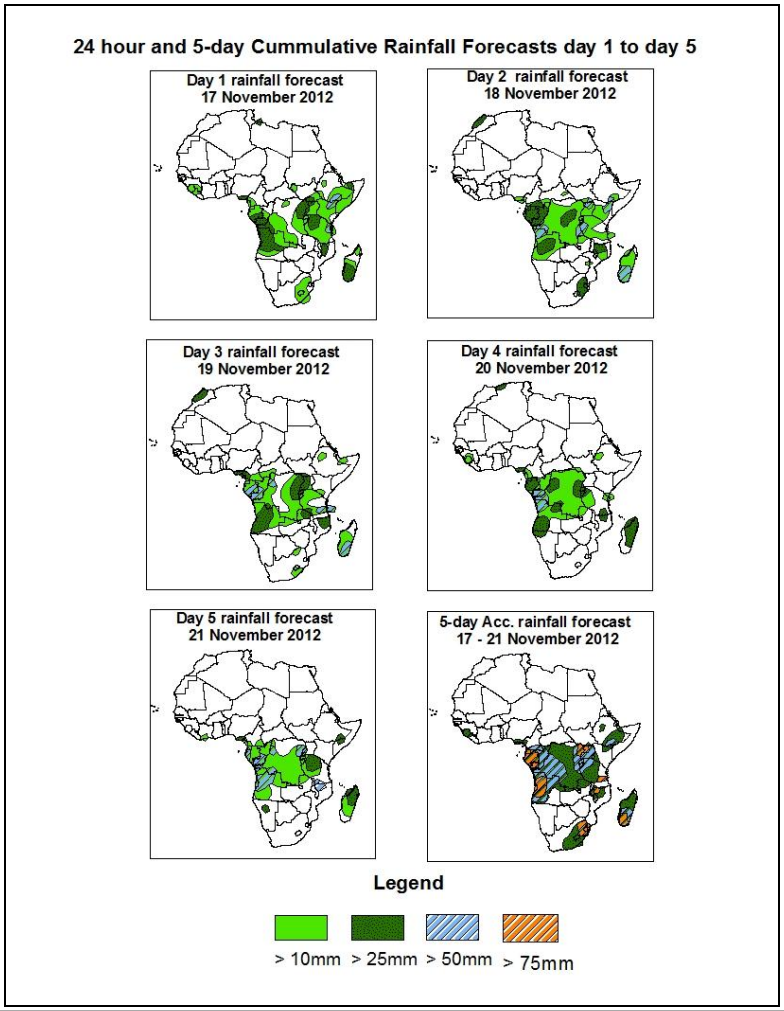
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 17 November – 06Z of 21 November 2012. (Issued at 15:30Z of 16 November 2012)

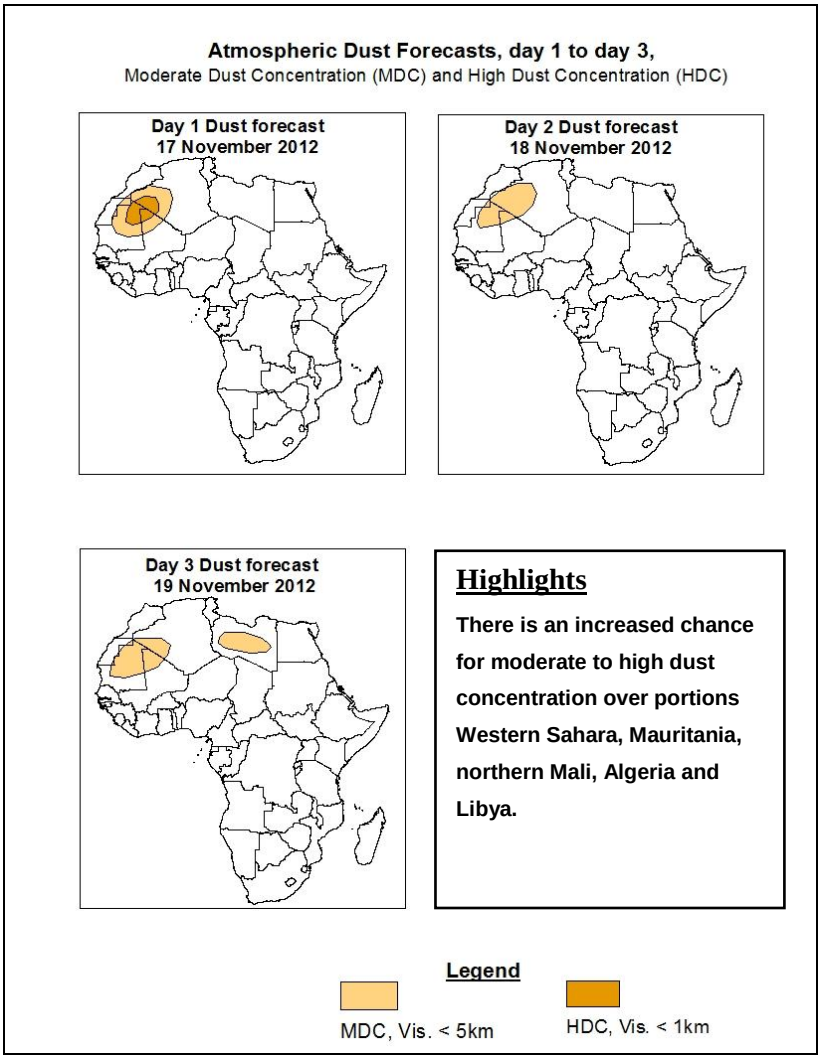
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, moist easterlies and their associated convergence the Horn of Africa, active seasonal wind convergence in the Congo Basin, a lower level wind convergence across western parts of Equatorial Africa, including Angola, and eastward propagating trough across Southeast Africa, including eastern South Africa, Mozambique and 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, eastern DRC, Uganda, parts of Tanzania and Kenya, northern Mozambique, eastern South Africa and Madagascar.



1.2. Model Discussion: Valid from 00Z of 16 November 2012

Model comparison (Valid from 00Z; 15 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 weaken through 24 to 72 hours, with its central pressure value decreasing from 1022hpa to 1021 according to the ECMWF and UKMET models, decreasing from 1022hpa to 1020hpa according to the GFS model. This same high pressure system is expected to re-strengthen, with its central value increasing to 1028hpa according to the ECMWF model and to central pressure value of 1027hpa according to the ECMWF models towards end of the forecast period.

The Mascarene high pressure system over southwestern Indian Ocean is expected to weaken through 24 to 120 hours, with its central pressure value decreasing from about 1024hpa to 1022hpa according to the ECMWF and the UKMET models, and from about 1024 to 1019hpa according to the and GFS model.

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 1007hpa according to the ECMWF model, from 1009hpa to 1005hpa according to the GFS model, and from 1009hpa to 1006hpa according to the UKMET model.

At the 850hpa level, the seasonal lower level wind convergence is expected to re-strengthen gradually over the Congo basin through 24 to 120 hours. Wind convergences are also expected to remain active across western Equatorial Africa including western Angola. A lower level cyclonic circulation flow is expected to dominate the flow over Southeast Africa, the Mozambique Channel and Madagascar.

At 500hpa, two troughs in the mid-latitude westerlies are expected to propagate across 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 1200kts over North central Africa towards end of the forecast period.

In the next five days, moist easterlies and their associated convergence the Horn of Africa, active seasonal wind convergence in the Congo Basin, a lower level wind convergence across western parts of Equatorial Africa, including Angola, and eastward propagating trough across Southeast Africa, including eastern South Africa, Mozambique and 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, eastern DRC, Uganda, parts of Tanzania and Kenya, northern Mozambique, eastern South Africa and Madagascar.

2.0. Previous and Current Day Weather Discussion over Africa

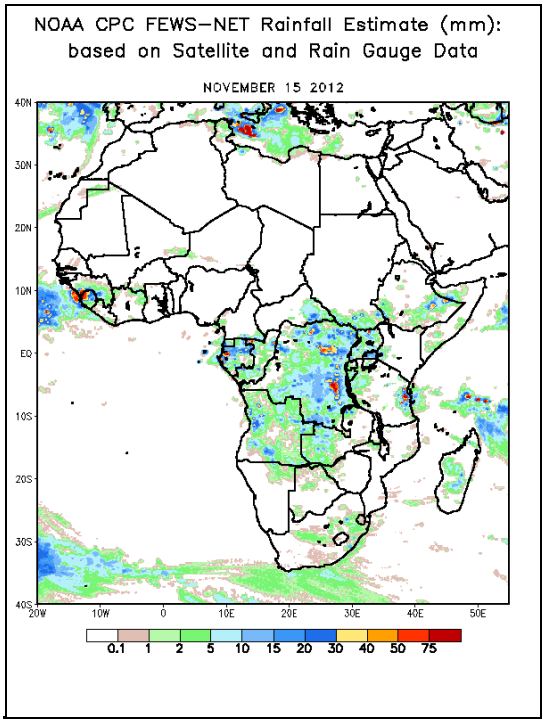
(15 November 2012 – 16 November 2012)

2.1. Weather assessment for the previous day (15 November 2012)

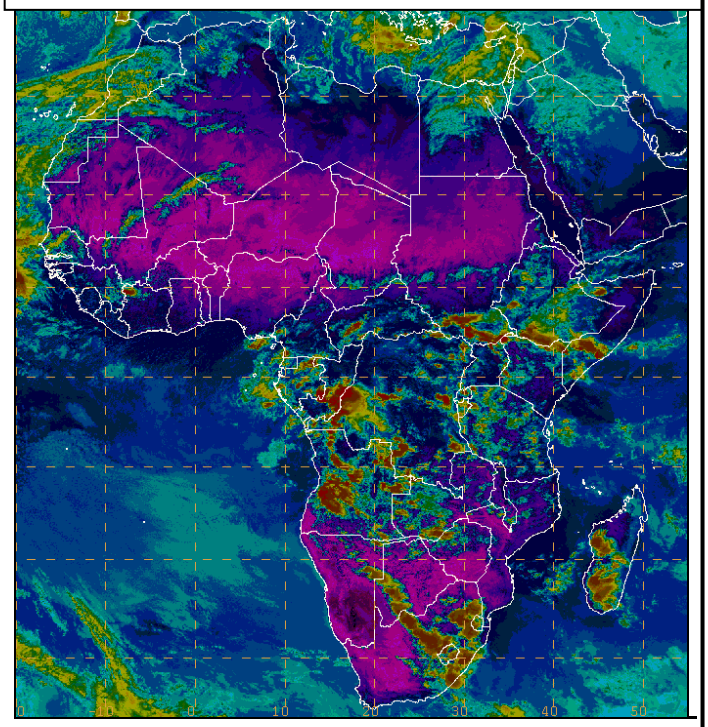
During the previous day, moderate to locally heavy rainfall was observed over parts of Cameroon, Gabon, CAR, Congo, DRC and eastern South Africa.

2.2. Weather assessment for the current day (16 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 16 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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