

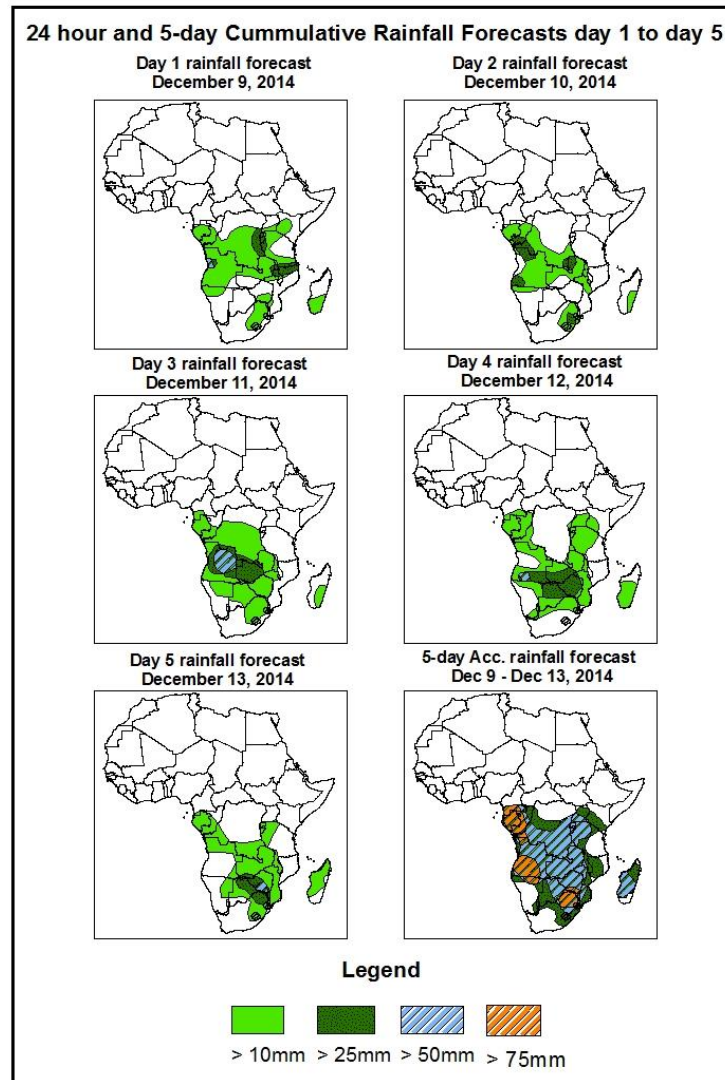


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall Forecast: Valid 06Z of December 09 – 06Z of December 13, 2014. (Issued at 1800Z of December 08, 2014)

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/GFS and the NCEP global ensemble forecasts system (GEFS) and expert assessment.

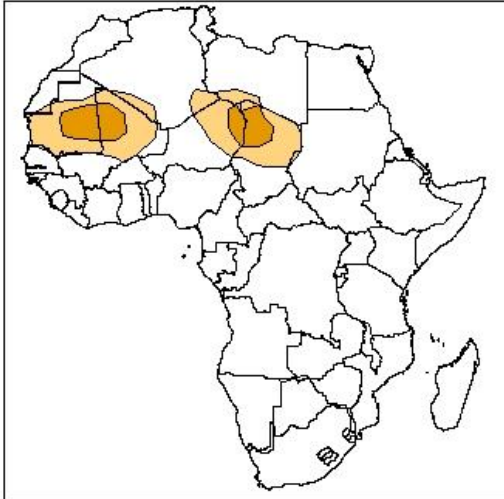


Summary

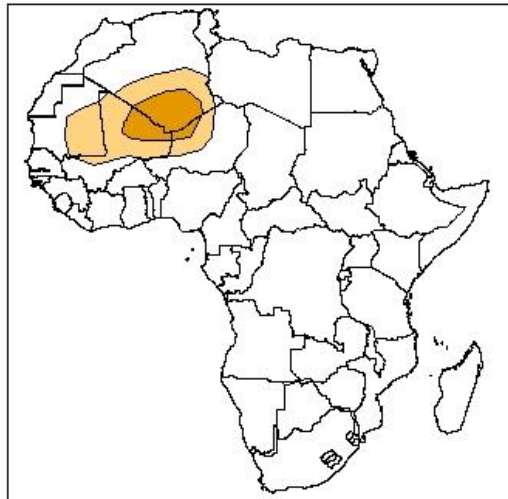
In the next five days, westward propagating convective systems across the Equatorial Africa region, lower-level wind convergence over Rwanda, Burundi and DRC, a cyclonic circulation over Angola and Namibia, a mid-latitude trough in the Mozambique Channel, are expected to enhance rainfall in their respective regions. Thus there is a high possibility of heavy rainfall over the following areas of Gabon, Equatorial Guinea, Congo Brazzaville, Angola, Northern Namibia and Zimbabwe.

Atmospheric Dust Forecasts, day 1 to day 3,
Moderate Dust Concentration (MDC) and High Dust Concentration (HDC)

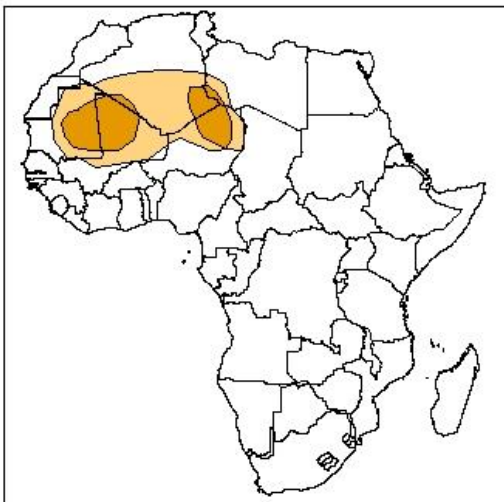
Day 1 Dust forecast
December 9, 2014



Day 2 Dust forecast
December 10, 2014



Day 3 Dust forecast
December 11, 2014



Highlights

There is an increased chance for moderate to high dust concentration over portions of Mauritania, Algeria, Mali, Chad, Libya and Niger.

Legend



MDC, Vis. < 5km



HDC, Vis. < 1km

1.2. Model Discussion: Valid from 00Z of December 8, 2014

The Azores high pressure system over the Northeast Atlantic Ocean is expected to weaken gradually with its central pressure value decreasing from about 1038hpa in 24 hours to 1036hpa in 120hours, according to the GFS model.

The Arabian High Pressure system is expected to maintain central pressure value of 1023hpa during the forecast period.

The central pressure value of the Mascarene high pressure system over the southwestern Indian Ocean is expected to decrease slightly from 1033hpa to 1032hpa through 24 to 120hours while shifting eastwards, according to the GFS model.

The central pressure value of the St Helena high pressure system, over the Southeast Atlantic Ocean, is expected to increase slightly from 1022hpa to 1024hpa through 24 to 120hours, according to the GFS model.

At 925Hpa level, dry northeasterly wind (>25kts) is expected to prevail across portions of Mauritania, Senegal, Southern Algeria Mali, Niger, and Chad through 24 to 120 hours. This will extend to Eastern Sahel including Sudan towards the end of the forecast period.

At 850Hpa level, seasonal wind convergences are expected to remain active over DRC, Eastern Angola and Zambia. A mid-latitude trough is expected to remain over the Mozambique Channel during the forecast period, according to the GFS model.

At 700hpa level, a cyclonic circulation is expected over Angola and Namibia, whereas northeasterly to easterly flow is expected to prevail across DRC and much of East Africa.

In the next five days, westward propagating convective systems across the Equatorial Africa region, lower-level wind convergence over Rwanda, Burundi and DRC, a cyclonic circulation over Angola and Namibia, a mid-latitude trough in the Mozambique Channel, are expected to enhance rainfall in their respective regions. Thus there is a high

possibility of heavy rainfall over the following areas of Gabon, Equatorial Guinea, Congo
Brazzaville, Angola, Northern Namibia and Zimbabwe.

2.0. Previous and Current Day Weather Discussion over Africa

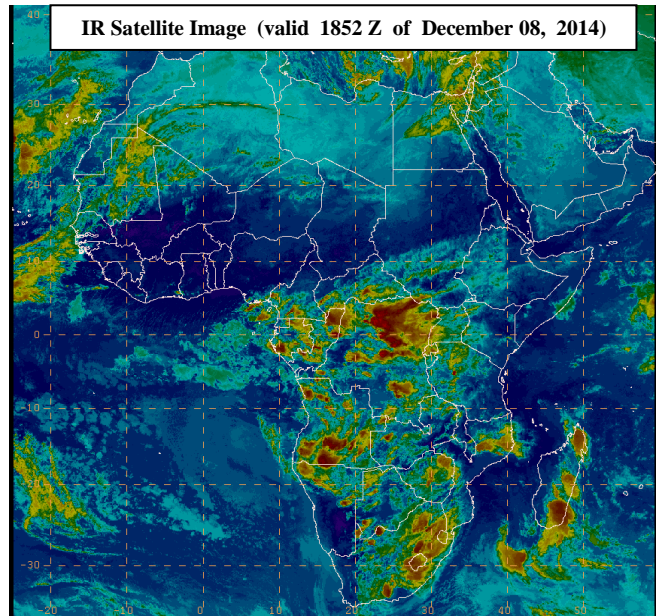
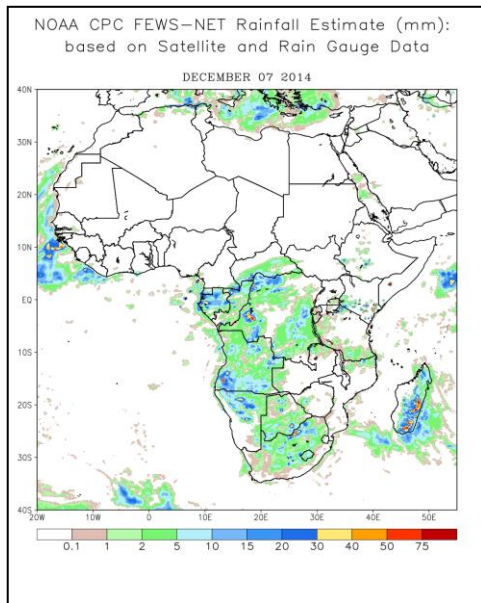
(December 07, 2014 – December 08, 2014)

2.1. Weather assessment for the previous day (December 07, 2014)

During the previous day, moderate to locally heavy rainfall was observed over portions of Angola, DRC, Gabon, Namibia, South Africa, Madagascar and some local areas of Kenya and Ethiopia

2.2. Weather assessment for the current day (December 08, 2014)

Intense convective deep clouds are observed across portions of DRC, Congo Brazzaville, Gabon, Angola, Zambia, Mozambique, Northern Namibia, Madagascar and South Africa.



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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