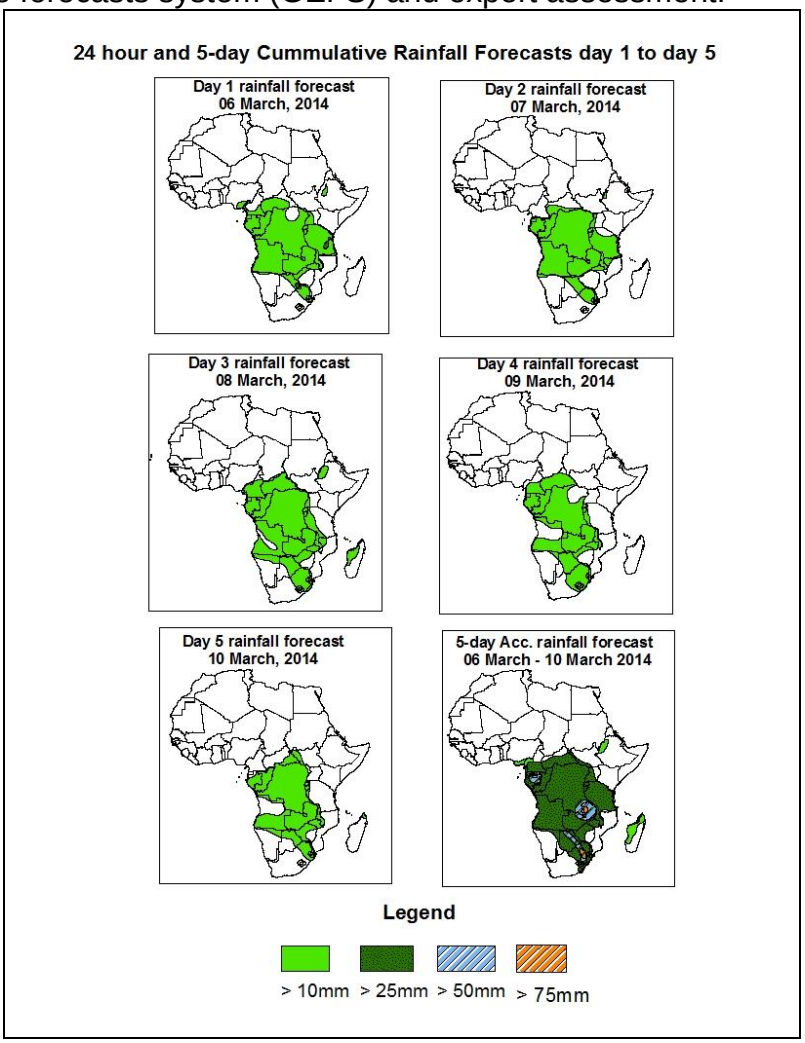
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 06 March – 06Z of 10 March, 2014. (Issued at 1600Z of 05 March 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 UK Met Office NWP outputs, and the NCEP global ensemble forecasts system (GEFS) and expert assessment.



Summary

In the coming five days, lower-tropospheric wind convergences across the gulf of guinea, Central and few southern Africa countries are expected to persist and hence continued moderate rains parts over Angola, Cameroon, Gabon, Equatorial Guinea, parts of Central Africa Republic, Botswana, Congo Brazzaville, Namibia, Zambia, DRC, Madagascar, Parts of South Africa, South Sudan, and even parts of South Africa.

1.2. Atmospheric Dust Forecasts: Valid 06 March – 08 March 2014

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

Day 1 Dust forecast
06 March, 2014

Day 2 Dust forecast
07 March, 2014

Day 3 Dust forecast
08 March, 2014

Highlights

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

Legend

MDC, Vis. < 5km

HDC, Vis. < 1km

1.3. Model Discussion: Valid from 00Z of 05 March 2014

Model comparison (GFS and UKMET Valid from 00Z: 05 March 2014) shows general agreement in terms of depicting positions of the northern and southern hemisphere sub-tropical highs, while they showed slight differences in depicting their intensity.

The St. Helena High Pressure System is expected to maintain its central pressure value between 1033Hpa and 1028Hpa but remain much south. This will result in continued dry conditions over, parts of Eastern South Africa and Namibia for most part of the forecast period. However increased rains are expected over Angola with some occasional rains expected over Namibia and Parts of South Africa.

According to both the GFS and UKMET model, the Mascarene high pressure is expected to maintain it central pressure values between 1028Hpa and 1024Hpa and over the channel but quite south. This will result increase rains over Botswana and continued dry conditions over most part over Zimbabwe, Uganda, and Tanzania. The low pressure systems over the ocean will result in reduced rains over Mozambique and Malawi.

At 850hpa level, Moderate to strong convergence is expected to persist throughout the forecast period over Democratic Republic of Congo (DRC), Cameroon, Central Africa Republic (CAR), Namibia, Zambia, Uganda, Congo Brazzaville, Gabon, Botswana, Angola and parts of South Africa.

At 500hpa level, troughs associated with mid-latitude frontal system over Algeria and propagating eastward are expected to result in some tropical, extra-tropical interactions with light rains expected over Chad, South Sudan and Ethiopia.

At 200hpa level, the sub-tropical Westerly Jet mainly (with wind speed >70 knots and <110 knots), extending between Mauritania, Algeria, Libya and Egypt, and across, Mali, Niger, Chad, persist during the forecast period. In the south, the sub-tropical westerly Jet (with 70 knots wind speed) is expected over South Africa and Indian Ocean.

In the coming five days, lower-tropospheric wind convergences across the gulf of guinea, Central and southern Africa countries are expected to persist and hence continued moderate rains parts over Angola, Cameroon, Gabon, Equatorial Guinea, parts of Central Africa Republic, Botswana, Congo Brazzaville, Namibia, Zambia, DRC, Madagascar, Parts of South Africa, South Sudan, and even parts of South Africa.

2.0. Previous and Current Day Weather Discussion over Africa

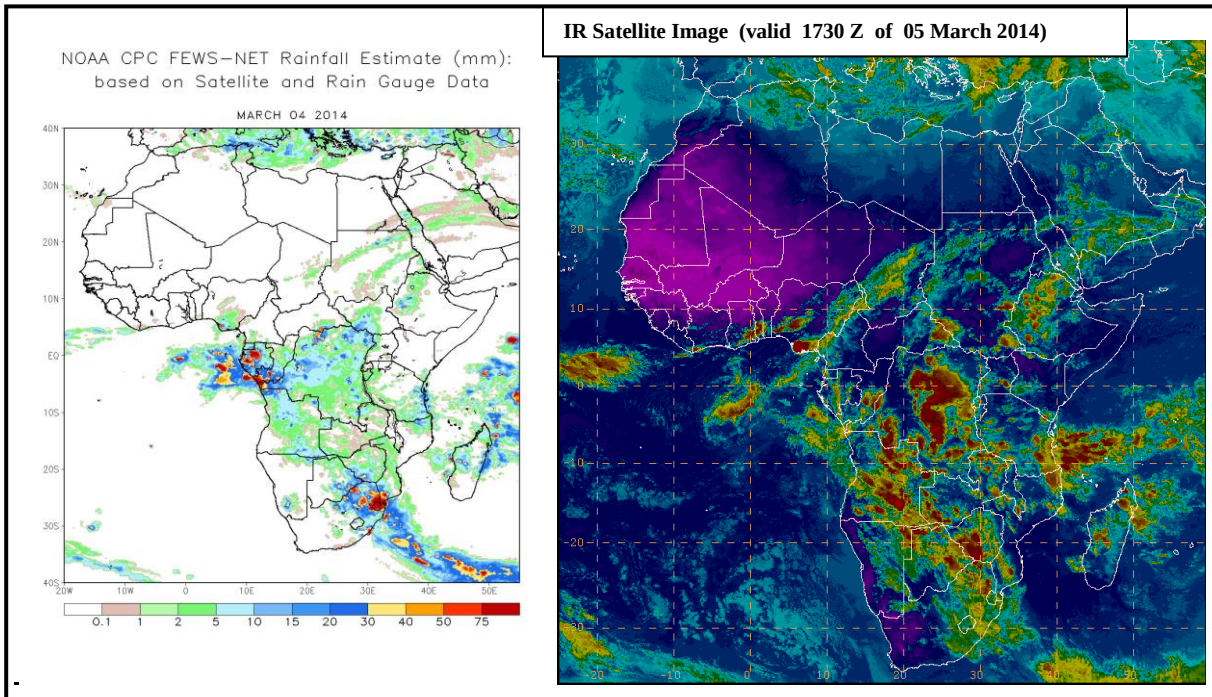
(04 March 2014 – 05 March 2014)

2.1. Weather assessment for the previous day (04 March 2014)

During the previous day, moderate rainfall was observed over local areas in Congo Brazzaville, Gabon, Angola, DRC, Namibia, Botswana, Zimbabwe, South Africa, Tanzania, South Sudan, Mozambique Channel, and Madagascar.

2.2. Weather assessment for the current day (05 March 2014)

Intense clouds are observed over parts of Gulf of Guinea, Central and Southern African countries as well as 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

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