

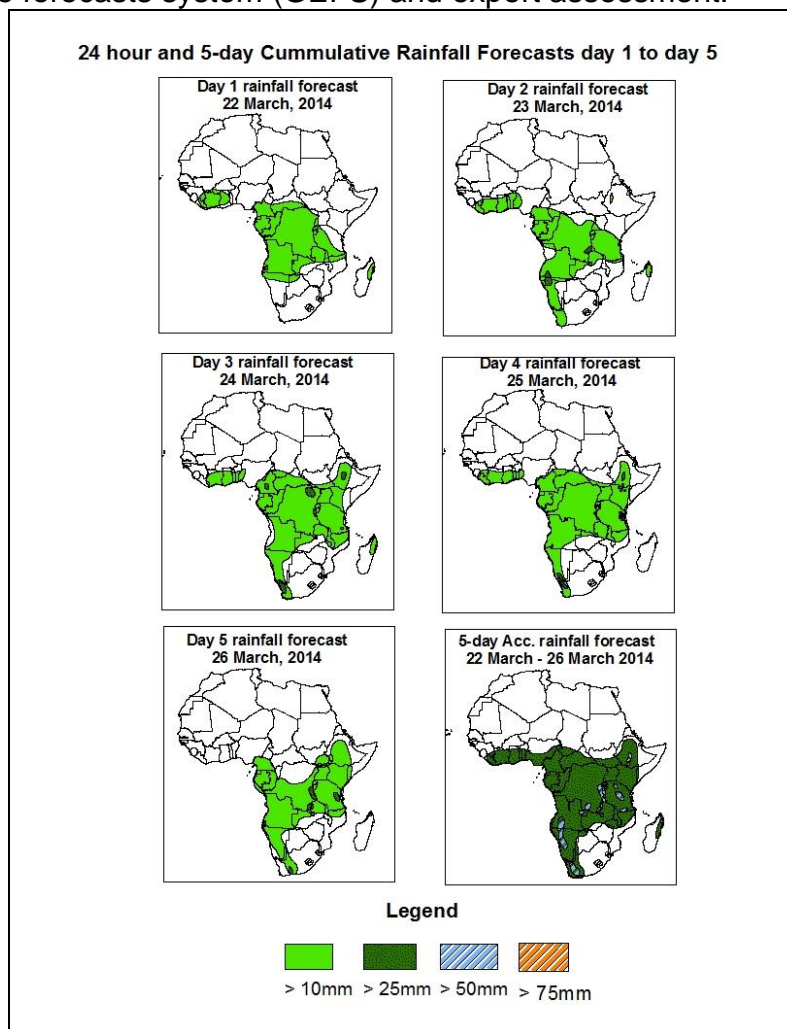


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 22 March – 06Z of 26 March, 2014. (Issued at 1600Z of 21 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, East, Central and South Africa countries are expected to persist and hence continued moderate rains over Angola, Cameroon, Gabon, Equatorial Guinea, Congo Brazzaville, DRC, Central African Republic, Uganda, parts of Bissau Guinea, Liberia, Ivory Coast, Ghana, Togo, Benin, and Nigeria. Continued dry conditions are expected over Zimbabwe, parts of Mozambique, Botswana, and South Africa. However an increase of rains is expected over Namibia, Kenya, Ethiopia and Tanzania towards the end of the forecast period.

1.2. Atmospheric Dust Forecasts: Valid 22 March – 24 March 2014

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

Day 1 Dust forecast
22 March, 2014



Day 2 Dust forecast
23 March, 2014



Day 3 Dust forecast
24 March, 2014



Highlights

**There is an increased
chance for moderate to
high dust concentration
over Niger and Chad.**

Legend



MDC, Vis. < 5km



HDC, Vis. < 1km

1.3. Model Discussion: Valid from 00Z of 22 March 2014

Model comparison (GFS and UKMET Valid from 00Z: 22 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 relax with its central pressure value changing from 1033Hpa to 1028Hpa. This will result in increased rains over Angola and Namibia of the forecast period.

According to both the GFS and UKMET model, the Mascarene High Pressure System is expected to intensify from 1018 Hpa to 1029 Hpa, pushing the rains north and leaving Zimbabwe and Mozambique dry with an increase of the rains in Tanzania and Kenya towards the second half of the period.

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

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 Bissau Guinea, Liberia, Burkina Faso, Ivory Coast, Ghana, Togo, Benin and Nigeria in most part of the forecast period. However the system over Egypt is expected to start building up during the second half of the forecast resulting to increase of rains over South Sudan, South Chad, Kenya and Ethiopia towards the end of the forecast period.

At 200hpa level, the sub-tropical Westerly Jet mainly (with wind speed >70 knots and <150 knots), extending between Mauritania, Algeria, Libya and Egypt, and across, Mali, Niger, Chad, Western Sahara, persist during the forecast period. In the south, the sub-tropical westerly Jet (with speed >70 knots and <90 knots) is expected over South Africa, Indian and Atlantic Ocean.

In the coming five days, lower-tropospheric wind convergences across the gulf of guinea, East, Central and South Africa countries are expected to persist and hence continued moderate rains over Angola, Cameroon, Gabon, Equatorial Guinea, Congo Brazzaville, DRC, Central African Republic, Uganda, parts of Bissau Guinea, Liberia, Ivory Coast, Ghana, Togo, Benin, and Nigeria. Continued dry conditions are expected over Zimbabwe, parts of Mozambique, Botswana, and South Africa. However an increase of rains is expected over Namibia, Kenya, Ethiopia and Tanzania towards the end of the forecast period.

2.0. Previous and Current Day Weather Discussion over Africa **(20 March 2014 – 21 March 2014)**

2.1. Weather assessment for the previous day (20 March 2014)

During the previous day, moderate rainfall was observed over local areas in Angola, DRC, Ivory Coast, Ghana, Togo, Benin, Nigeria, Cameroon, Gabon, Congo Brazzaville, Zambia, Tanzania, Madagascar and parts of North of Mozambique, South Sudan, Central African Republic and Namibia.

2.2. Weather assessment for the current day (21 March 2014)

Intense clouds are observed over parts of Gulf of Guinea, East, Central and Southern Africa countries as well as Madagascar.

