

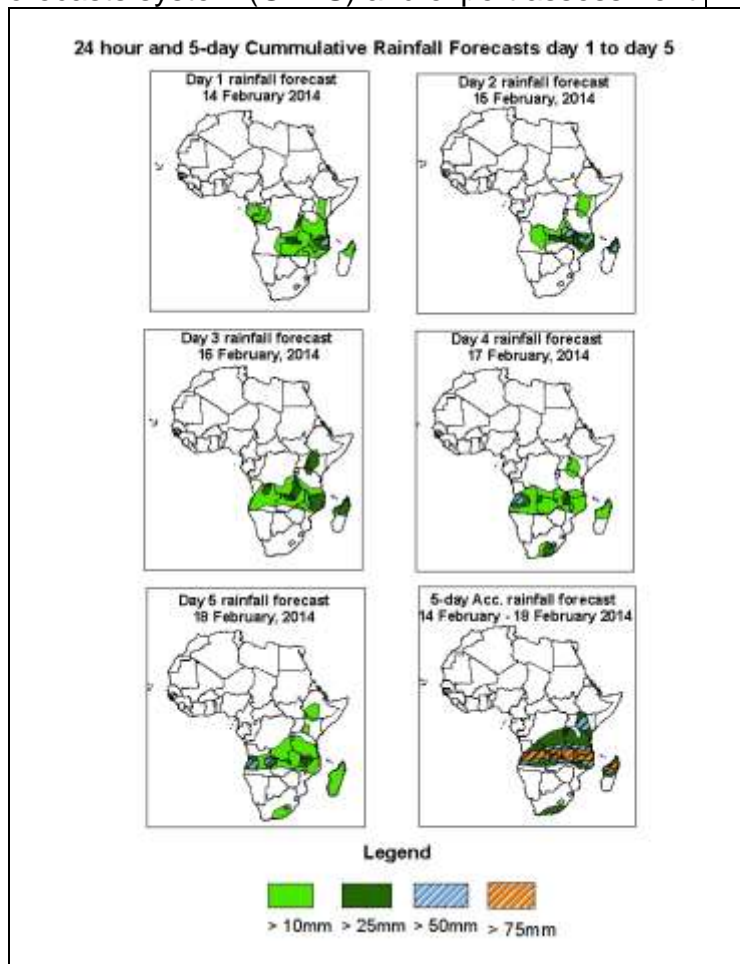


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 14 February – 06Z of 18 February, 2014. (Issued at 1600Z of 13 February 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.

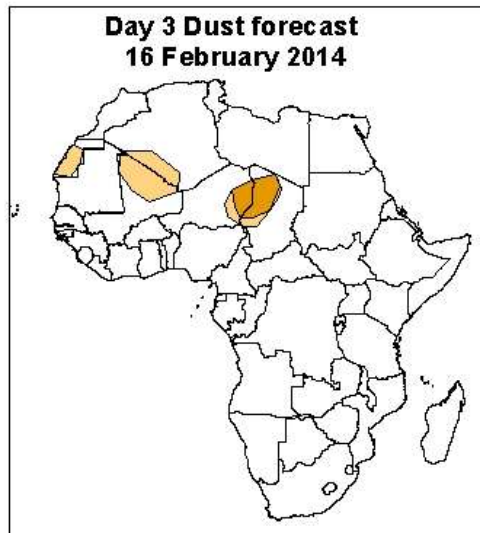
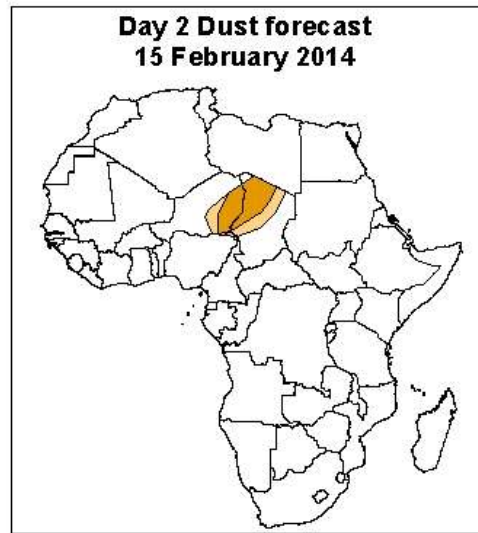
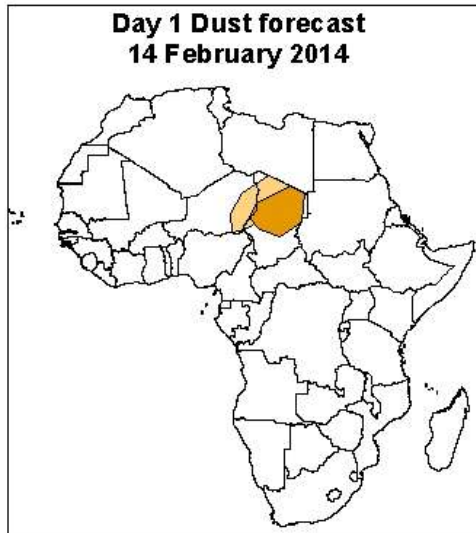


Summary

In the coming five days, lower-tropospheric wind convergences across the northern part of the southern Africa countries are expected to enhance rainfall in the region. As a result of this, there is an increased chance for moderate to heavy rainfall over parts of Angola, southern DRC, Zambia, Malawi, northern Mozambique, southern Tanzania and northern Madagascar.

1.2. Atmospheric Dust Forecasts: Valid 14 February - 16 February 2014

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



Highlights

There is an increased chance for moderate to high dust concentration over Western Sahara, northern Malawi, southern Algeria, eastern Niger, and Chad.

Legend



MDC, Vis. < 5km



HDC, Vis. < 1km

1.3. Model Discussion: Valid from 00Z of 13 February 2014

Model comparison (GFS and UKMET Valid from 00Z: 13 February 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 continue intensifying with its central pressure value increasing from 1018 Hpa to 1028 Hpa, according to the GFS model, and its central pressure is expected to increase from about 1019hpa to 1029hpa according to the UKMET model.

According to both the GFS model and the UKMET model, the Mascarene high pressure is expected to intensify with its central pressure value changing from 1016 Hpa to 1025 Hpa but slightly relax towards the end of the forecast period.

At 850hpa level, Moderate to strong convergence is expected over Democratic Republic of Congo (DRC), Congo Brazzaville, Gabon, Namibia, Uganda, Kenya, Zambia, Angola, Tanzania, Malawi, Mozambique, and Madagascar.

At 500hpa level, interaction between mid-latitude and tropical system is expected to remain minimal, both over the northern and southern hemisphere sub-tropical areas.

At 200hpa level, the sub-tropical Westerly Jet mainly (with wind speed >70 knots and <150 knots), extending between Senegal, Mauritania, Algeria, and Egypt, and across, Mali, Algeria, Niger, Chad and Libya persist during the forecast period. In the south, the sub-tropical westerly Jet (with 90-110 kts wind speed) is expected on rare occasions over Indian Ocean.

In the coming five days, lower-tropospheric wind convergences across the northern part of the southern Africa countries are expected to enhance rainfall in the region. As a result of this, there is an increased chance for moderate to heavy rainfall over parts of Angola, southern DRC, Zambia, Malawi, northern Mozambique, southern Tanzania and northern Madagascar.

2.0. Previous and Current Day Weather Discussion over Africa

(12 February 2014 – 13 February 2014)

2.1. Weather assessment for the previous day (12 February 2014)

During the previous day, moderate to heavy rainfall was observed over Gabon, Congo Brazzaville, DRC, Zambia, Tanzania, Mozambique, Malawi, Zimbabwe, Madagascar and Namibia.

2.2. Weather assessment for the current day (13 February 2014)

Intense clouds were observed over local areas in the Gulf of Guinea region, parts of Central, Eastern and Southern Africa.

