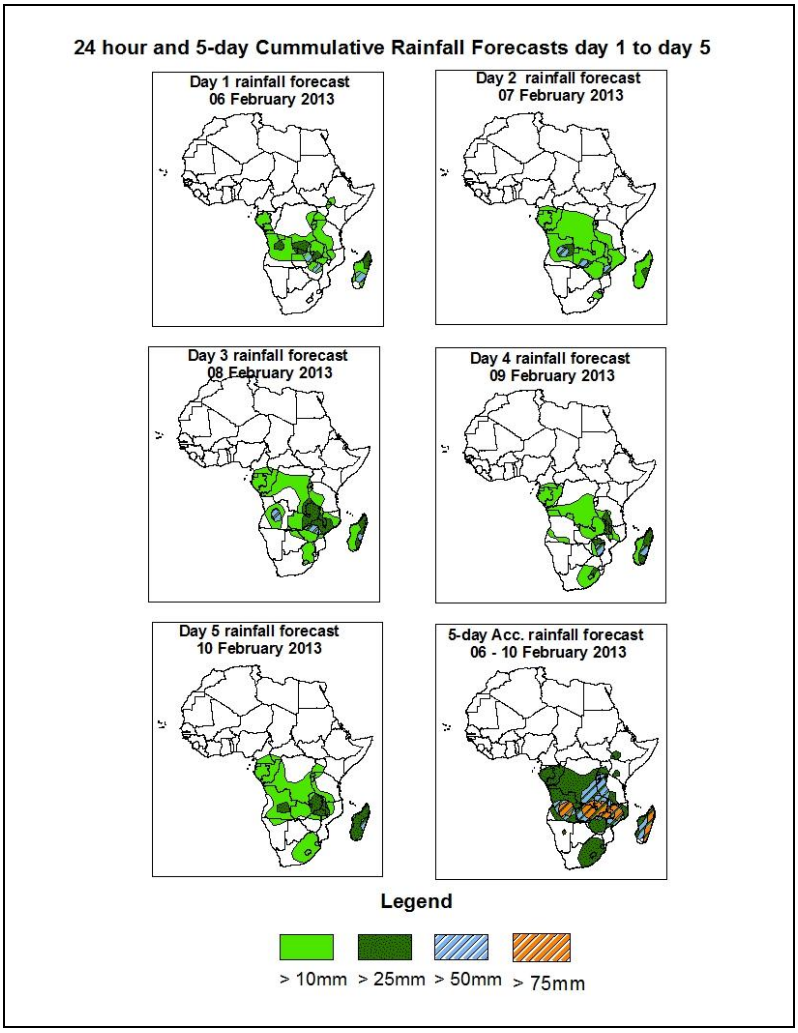
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 06 February – 06Z of 10 February 2013. (Issued at 19:30Z of 05 February 2013)

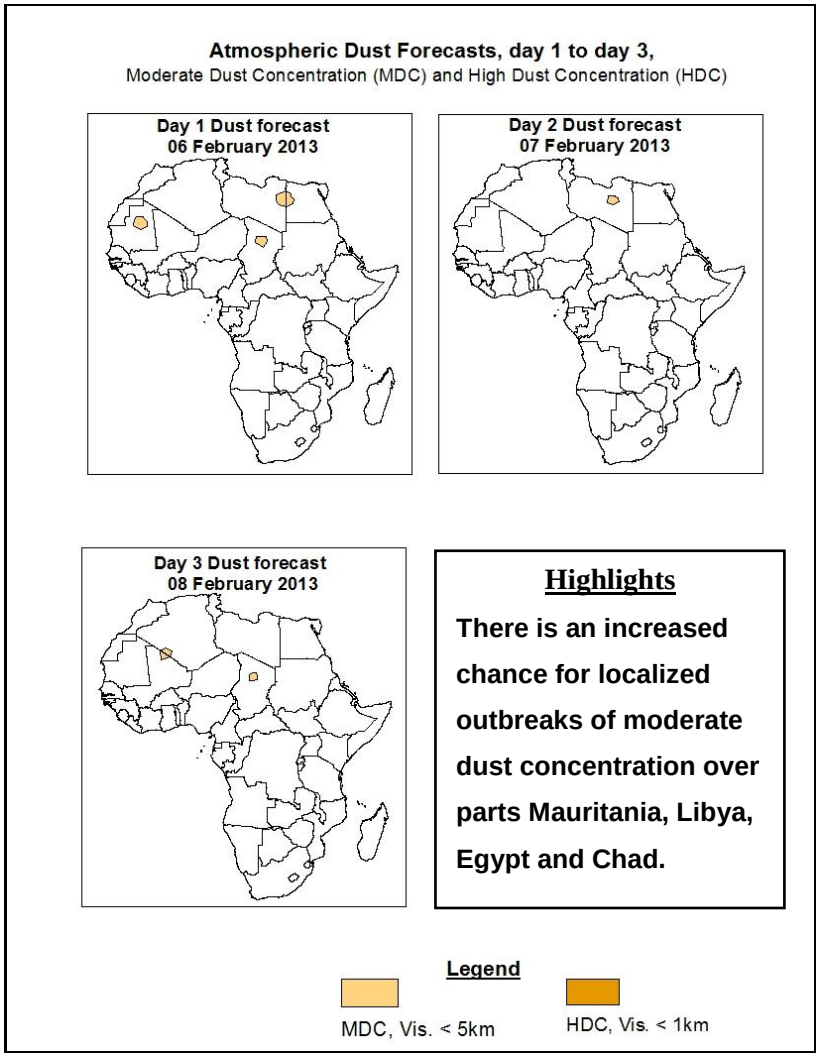
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, moderate low level convergence over DRC, Angola, Zambia, Zimbabwe, Malawi and central region of Mozambique, a southerly flow over South Africa and the neighboring countries are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over local areas over parts of central region of Mozambique, Zambia, Zimbabwe, Malawi, parts of the central region of Angola, Madagascar and eastern region of South Africa.



1.2. Model Discussion: Valid from 00Z of 05 February 2013

Model comparison (Valid from 00Z; 05 February 2013) shows all the three models are in general agreement in terms of depicting eastward movement of the Mascarene and St Helena high pressure systems during the forecast period. However, the models show slight differences in terms of central pressure values.

In the next five days the St. Helena High Pressure System over southeast Atlantic Ocean is expected to deepen slightly throughout the forecast period. The central pressure value is expected to decrease from about 1028hpa to 1019hpa according to the GFS, from about 1027hpa to 1020hpa according to the ECMWF model, and from about 1028hpa to 1018hpa according to the UKMET model.

The Mascarene high pressure system over southwestern Indian Ocean is also expected to deepen slightly throughout 24 to 72 hours, while shifting smoothly eastwards. Its central pressure value is expected to decrease from about 1016hpa to 1012hpa, according to the GFS model, from about 1019hpa to 1015hpa according to ECMWF model and from about 1020hpa to 1012hpa according to the UKMET model. The Mascarene High Pressure System is expected to re-strengthen slightly towards end of forecast period.

The seasonal lows across DRC, South Sudan and the neighboring areas is expected to deepen slightly throughout the forecast period, with the central pressure values decreasing from about 1006hpa to 1002hpa according to the GFS model, from about 1007hpa to 1003hpa according to the ECMWF and from about 1006hpa to 1003hpa according to the UKMET model.

At the 850hpa level, the seasonal lower level wind convergence near the CAB region is expected to remain with moderate to poor convergence conditions through 24 to 120 hours. Moderate low level convergence is also expected to prevail active over parts of DRC, Angola, Zambia, Zimbabwe, Malawi and central region of Mozambique, throughout the forecast period.

At 500hpa, a trough in the mid-latitude trough is expected dominate the flow over northern countries of Africa and Mediterranean Sea through 24 to 72 hours and an eastward propagation is expected to dominate the flow over the previously mentioned areas towards end of the forecast period. A southerly flow is expected to prevail over South Africa and the neighboring countries through most periods of the coming five days.

At 200hpa, the northern hemisphere sub-tropical westerly jet is expected to remain active through the forecast period; the core wind speed occasionally will exceed 130kts over Libya, Egypt and Mediterranean Sea.

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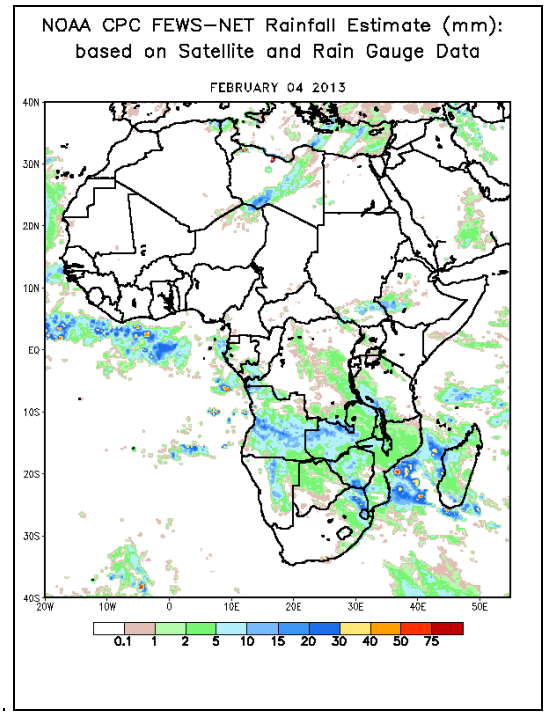
2.0. Previous and Current Day Weather Discussion over Africa (04 February 2013 – 05 February 2013)

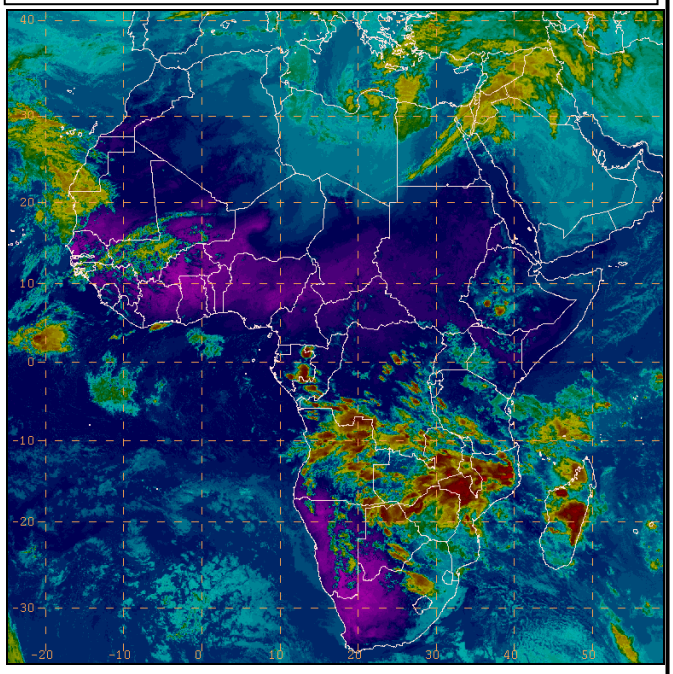
2.1. Weather assessment for the previous day (04 February 2013)

During the previous day, moderate to locally heavy rainfall was observed over parts of Angola, Zambia, Zimbabwe and the eastern region of South Africa.

2.2. Weather assessment for the current day (05 February 2013)

Intense clouds are observed over Mozambique, Zambia, Angola, Malawi and 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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