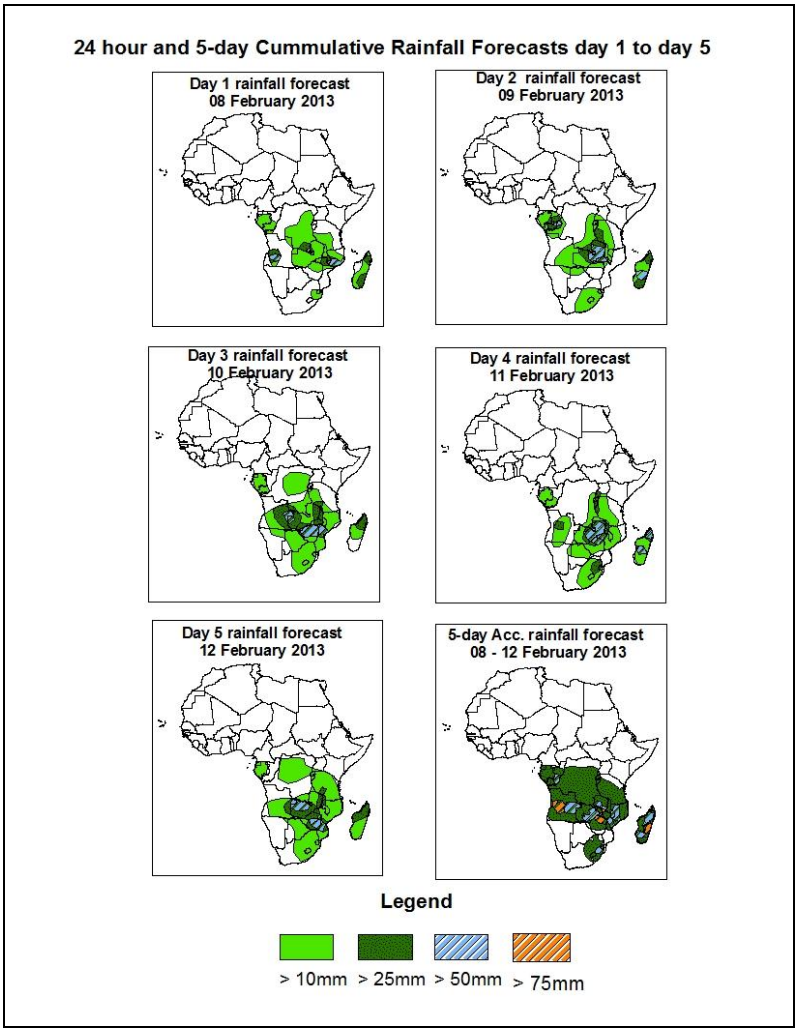
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 08 February – 06Z of 12 February 2013. (Issued at 19:30Z of 07 February 2013)

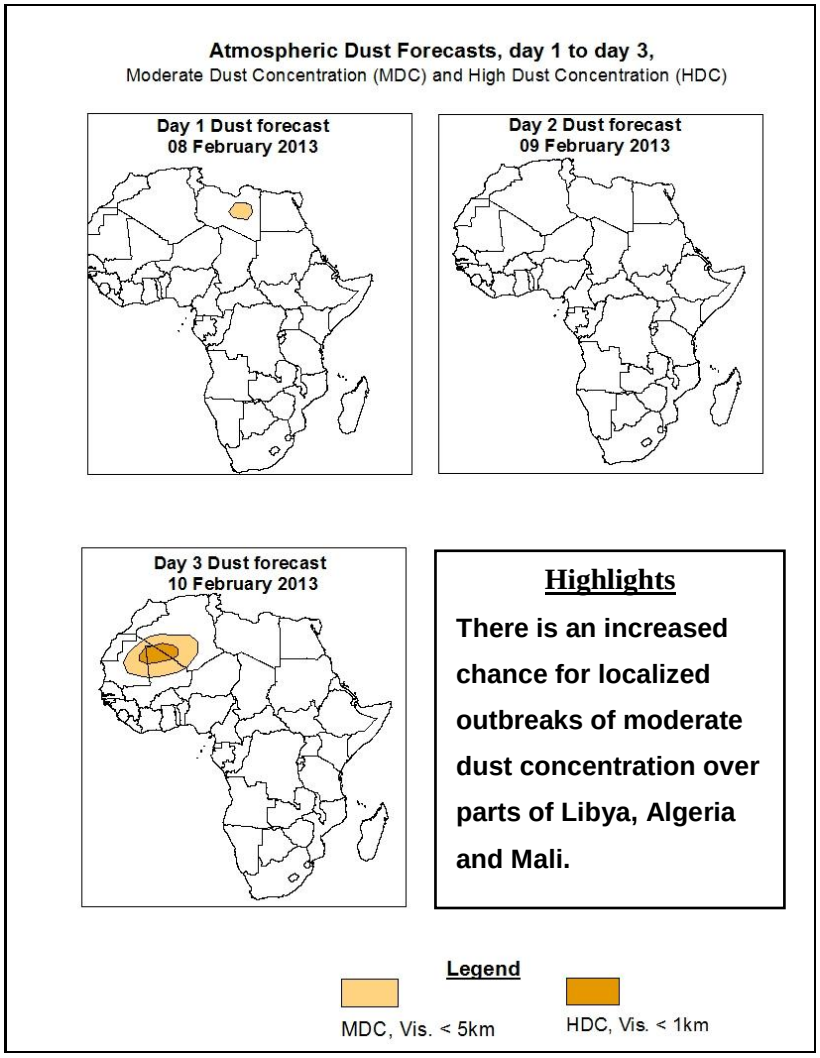
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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 line over parts of Angola, Zambia, Zimbabwe, Malawi, Namibia, South Africa and central region of Mozambique and an Eastwards flow over South Africa and the neighboring countries are expected to enhance rainfall in their respective regions. Thus, there is an increased chance of localized moderate to heavy rainfall over parts of Angola, Zambia, Zimbabwe, and Malawi, Madagascar, Namibia, South Africa and central regions of Mozambique.



1.2. Model Discussion: Valid from 00Z of 07 February 2013

Model comparison (Valid from 00Z; 07 February 2013) shows that all the three models are general in 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 weaken slightly through 24 to 48 hours. The central pressure value is expected to decrease from about 1022hpa to 1016hpa according to the GFS model, from about 1025hpa to 1019hpa according to the ECMWF model, and from about 1020hpa to 1019hpa according to the UKMET model.

The Mascarene high pressure system over southwestern Indian Ocean is also expected to intensify throughout the forecasting period, while shifting smoothly eastwards. Its central pressure value is expected to increase from about 1012hpa to 1029hpa, according to the GFS model, from about 1016hpa to 1028hpa according to ECMWF model and from about 1012hpa to 1029hpa according to the UKMET model.

The seasonal lows across DRC, South Sudan and the neighboring areas and Southern Africa are expected to deepen slightly throughout the forecast period, from 1006hpa to 1003hpa in total agreement with all models.

At the 850hpa level, the seasonal lower level wind convergence near the CAB region is expected to remain with moderate to poor convergence conditions throughout the forecast period. However, moderate low level convergence line is expected to form and remain nearly active over parts of Angola, Zambia, Zimbabwe, Malawi, Namibia, South Africa and central region of Mozambique, throughout the forecast period.

At 500hpa, a trough in the mid-latitude is expected to dominate the flow over northern countries of Africa and Mediterranean Sea through 24 to 48 hours and an eastward propagation is expected to dominate the flow over the previously mentioned areas towards end of the forecast period. An Eastward 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

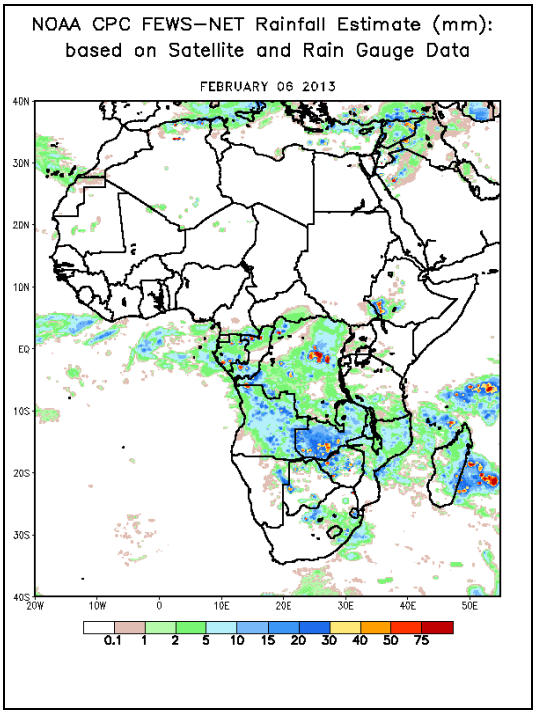
(06 February 2013 – 07 February 2013)

2.1. Weather assessment for the previous day (06 February 2013)

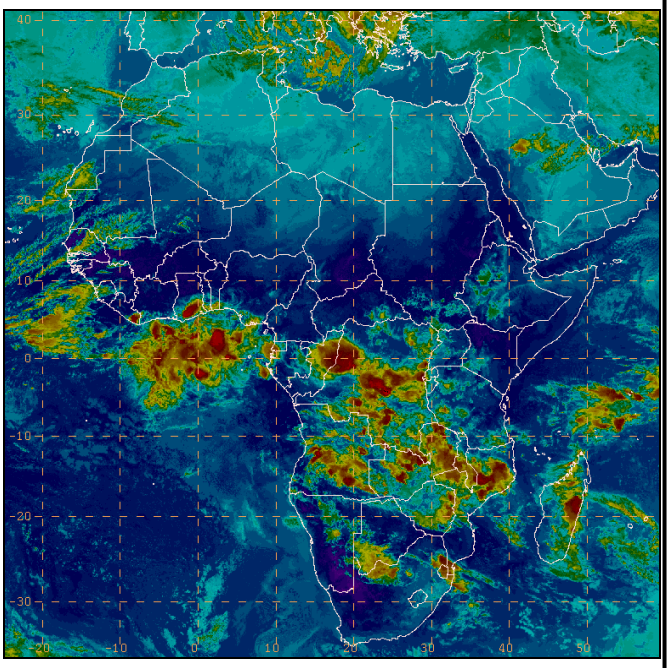
During the previous day, moderate to localized heavy rainfall was observed over parts of Mozambique, eastern Zambia, Malawi, North eastern Zimbabwe, parts of South Africa and Madagascar.

2.2. Weather assessment for the current day (07 February 2013)

Intense clouds are observed over Mozambique, Angola, DRC Congo, Gabon and Madagascar.



IR Satellite Image (valid 1900Z of 07 February 2013)



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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