

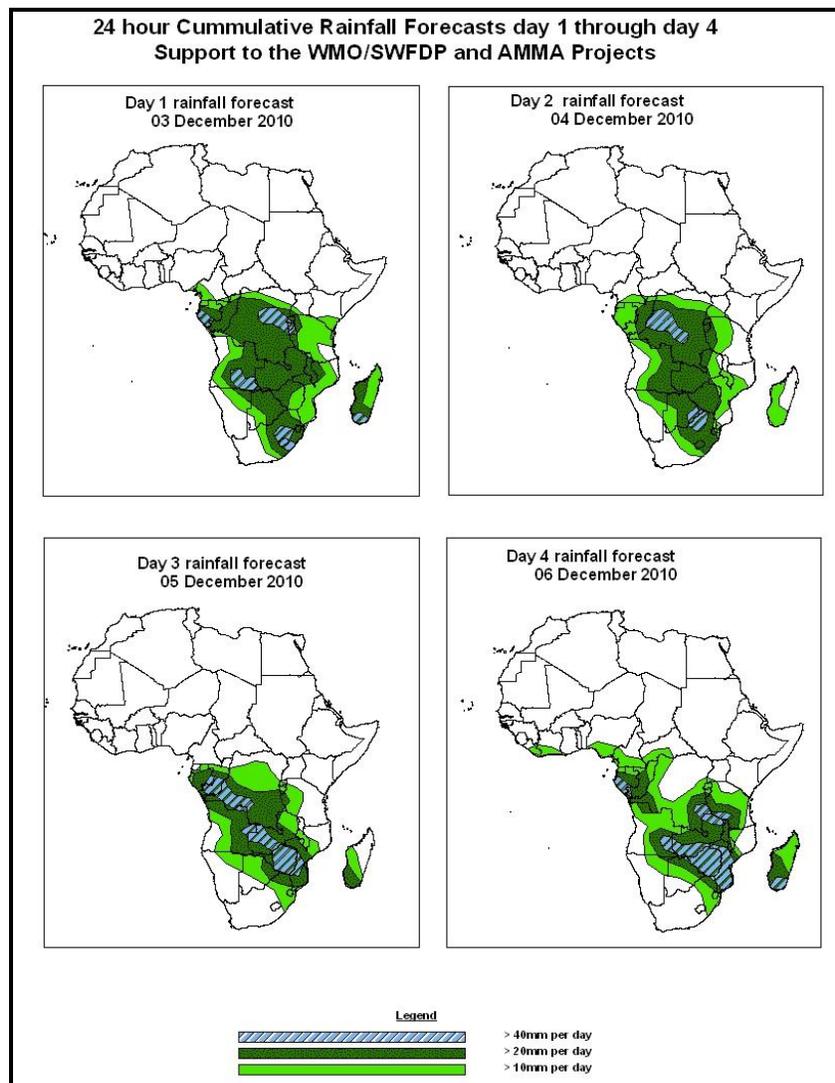


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 03 DECEMBER – 06Z of 06 DECEMBER 2010, (Issued at 14:00Z of 02 DECEMBER 2010)

1.1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of 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 coming four days, there is an increased chance for rainfall to exceed 20mm per day over DRC, parts of East Africa, Southern Africa and Congo with chances of locally heavy rainfall over Mozambique, Zimbabwe, Zambia, Tanzania, Burundi, DRC, Angola Congo and Madagascar.

1.2. Models Comparison and Discussion-Valid from 00Z of 02 DECEMBER 2010.

The GFS, ECMWF and UKMET models indicate a cut off low from southern Chad, Sudan to northern DRC across Central Africa Republic in the next 24 hours. The cut off low is expected to persist during the forecast period. A broad trough over South Africa, south Angola and Namibia across Botswana is expected to extend to the east of South Africa Zimbabwe and Mozambique in the next 48 to 72 hours. Another trough is expected to develop over DRC and Tanzania border in the next 24 to 48 hours according to GFS and UKMET models. The ECMWF is indicating a cut off low over eastern Tanzania and parts of northern Mozambique during the entire forecast period.

The seasonal low pressure system (Meridional component of the ITCZ) is diffused and occasionally expected to move to the eastern DRC.

According to the GFS, ECMWF and UKMET models, the southern hemisphere High pressure system (St. Helena) is expected to be intensifying slightly during the next 72 to 96 hours. Also the Mascarene high pressure is expected to remain generally weak.

At 850hPa level, The GFS model is indicating a cyclonic convergence over DRC during the next 24 hours .The convergence is expected to move to Tanzania and extend to Zambia in the next 48 to 72 hours. Another cyclonic convergence over Angola is expected persist and extend southwards in the next 72 to 96 hours. A weak Convergence line over Zambia and Zimbabwe is expected to move to Malawi and Zimbabwe extending to Mozambique in the next 72 to 96 hours.

At 700hPa level, cyclonic convergence over DRC is expected to move southwards and extends to northern Zambia and parts of Angola in the next 72 hours. A cyclonic Convergence over Angola is expected to move to Botswana/Namibia border in 48 hours and later extends to western Zambia. Another Convergence line over Botswana and South Africa is expected to extend to become weak during the next 48 hours and later move to Mozambique.

At 200hPa, zone of strong wind (>50Kts) associated with the Sub Tropical westerly Jet in the southern Hemisphere is expected to move off the east coast of South Africa with the wind speed in the range of 90 to 110 Kts.

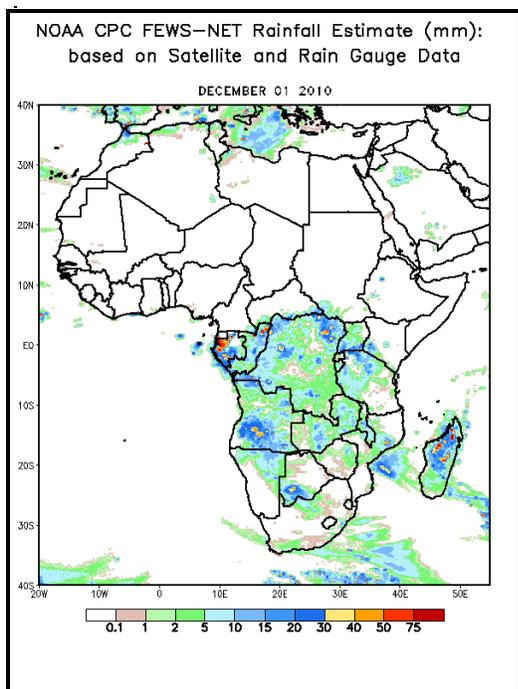
In the coming four days, there is an increased chance for rainfall to exceed 20mm per day over DRC, parts of East Africa, Southern Africa and Congo with chances of locally heavy rainfall over Mozambique, Zimbabwe, Zambia, Tanzania, Burundi, DRC, Angola Congo and Madagascar.

2.0. Previous and Current Day Weather Discussion over Africa (01 December 2010 – 02 December 2010)

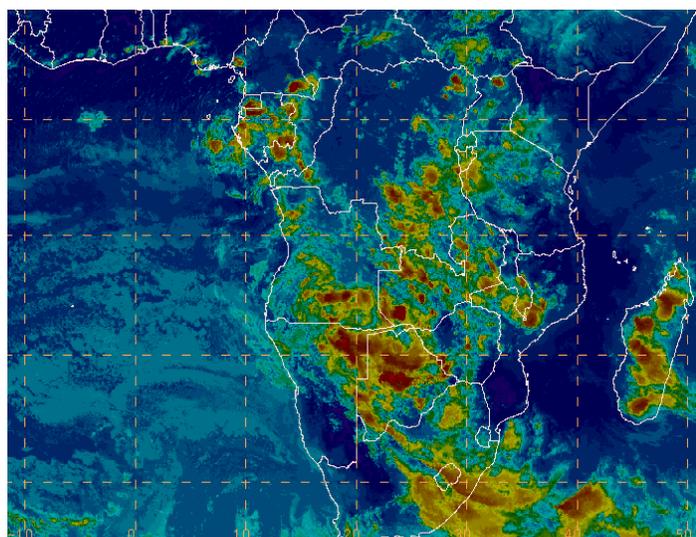
2.1. Weather assessment for the previous day (01 December 2010):

During the previous day, locally heavy rainfall was observed over Gabon and Madagascar.

2.2. Weather assessment for the current day (02 December 2010): Intense clouds are observed over Angola, DRC, Gabon, Botswana, Namibia and Madagascar.



IR Satellite Image, Valid 1800, December 02, 2010



Previous day rainfall condition over Africa (Left) based on the NCEP CPCE/RFE and current day cloud cover (top) based on IR Satellite image

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