

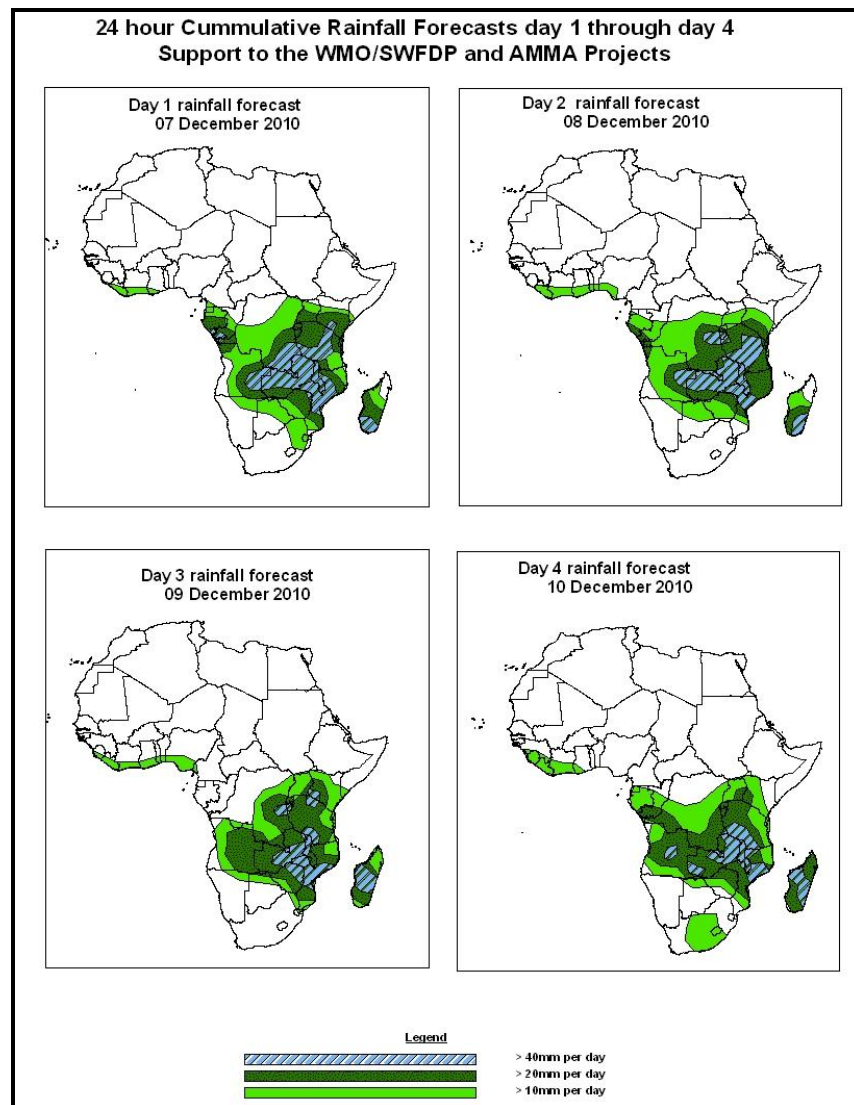


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 07 DECEMBER – 06Z of 10 DECEMBER 2010, (Issued at 14:00Z of 06 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 Southern Africa, East Africa and over Angola and Gabon with chances of locally heavy rainfall over Tanzania, Zambia, Mozambique, Malawi, Zimbabwe, DRC, Burundi, Angola and Madagascar.

1.2. Models Comparison and Discussion-Valid from 00Z of 06 DECEMBER 2010.

The GFS, ECMWF and UKMET models indicate a cut off low from Sudan to Central Africa Republic during the forecast period. Another cut off low over DRC and Tanzania extends to east Tanzania in the next 72 hours. A broad trough over Mozambique extending to Botswana across Zambia and Northern Zimbabwe is expected to become a cut off low in the next 48 hours. The models are indicating that the cut off low will further move to Madagascar and east coast of Mozambique in 72 to 96 hours. Another cut off low over western Zambia and Botswana extending to Namibia is expected to weaken slightly in 72 hours. The UKMET model is indicating a trough over Angola Zambia and Botswana during the next 24 to 72 hours. The trough is expected become a cut off low limited to eastern Angola in 96hours.

The seasonal low pressure system (Meridional component of the ITCZ) is becoming more active over the southern parts of the Continent.

According to the GFS, ECMWF and UKMET models, the southern hemisphere High pressure system (St. Helena) is expected to extend a ridge to the east coast of South Africa in 24 to 48 hours. Also the Mascarene high pressure is expected to remain generally weak.

At 850hPa level, The GFS model is indicating convergence from north DRC and Uganda extending to northern Tanzania during the next 24 hours. The convergence is expected to move to eastern DRC in 48 hours. Another convergence line over Mozambique, Zimbabwe, Zambia and Malawi is expected to persist and move to northern Zambia in 96hours. A cyclonic convergence line over east Angola is expected to move towards the Zambia Boarder in 48 hours.

At 700hPa level, cyclonic convergence along the border of Zambia and Angola is expected to move eastwards in the next 48 hours. A convergence line over east Tanzania extending to northern parts of Mozambique is expected to extend to Zimbabwe in the next 24 hours and later move to southwestern Tanzania and DRC in the next 72 hours. Another convergence line over southeast Congo is expected to move to south DRC in the next 48 hours and then disappear gradually.

At 200hPa, zone of strong wind (>50Kts) associated with the Sub Tropical westerly Jet in the southern Hemisphere is expected persist and move off the east coast of South Africa with the wind speed in the range of 90 to 110 Kts in the next 96 hours.

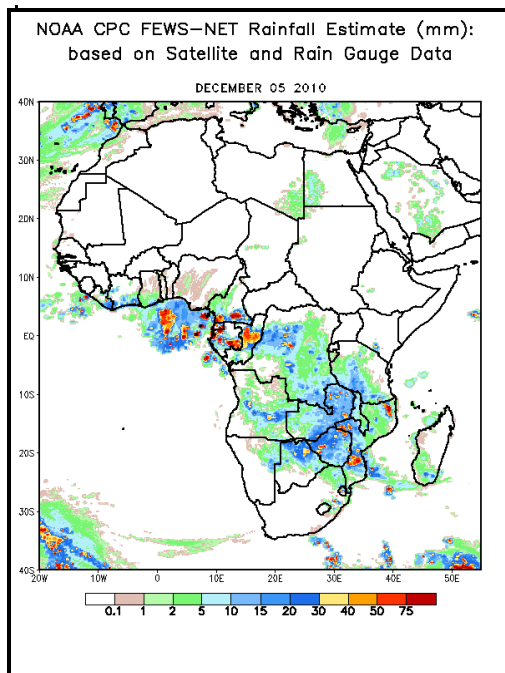
In the coming four days, there is an increased chance for rainfall to exceed 20mm per day over Southern Africa, East Africa and over Angola and Gabon with chances of locally heavy rainfall over Tanzania, Zambia, Mozambique, Malawi, Zimbabwe, DRC, Burundi, Angola and Madagascar.

2.0. Previous and Current Day Weather Discussion over Africa (05 December 2010 – 06 December 2010)

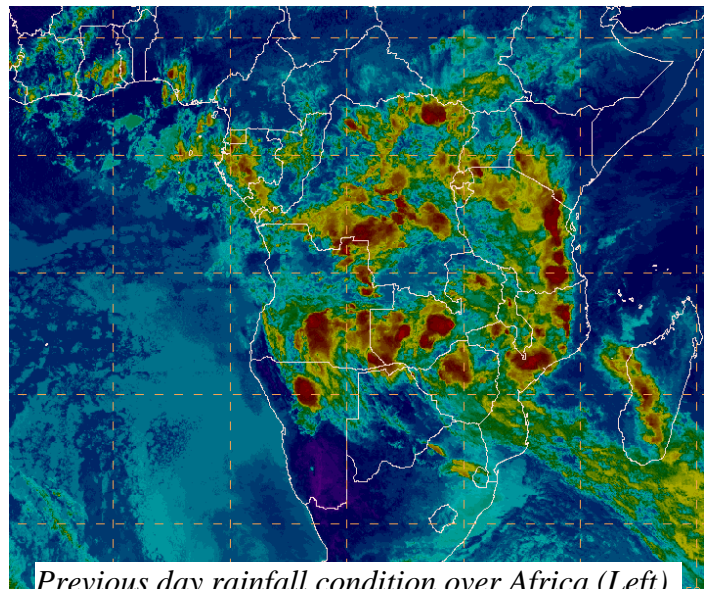
2.1. Weather assessment for the previous day (05 December 2010):

During the previous day, locally heavy rainfall was observed over Mozambique, Congo, Gabon, Cameroon, Zimbabwe and Zambia

2.2. Weather assessment for the current day (06 December 2010): Intense clouds are observed over Zambia, Tanzania, Mozambique, Angola, DRC, Zimbabwe and Namibia.



IR Satellite Image, Valid 1800, December 06, 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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