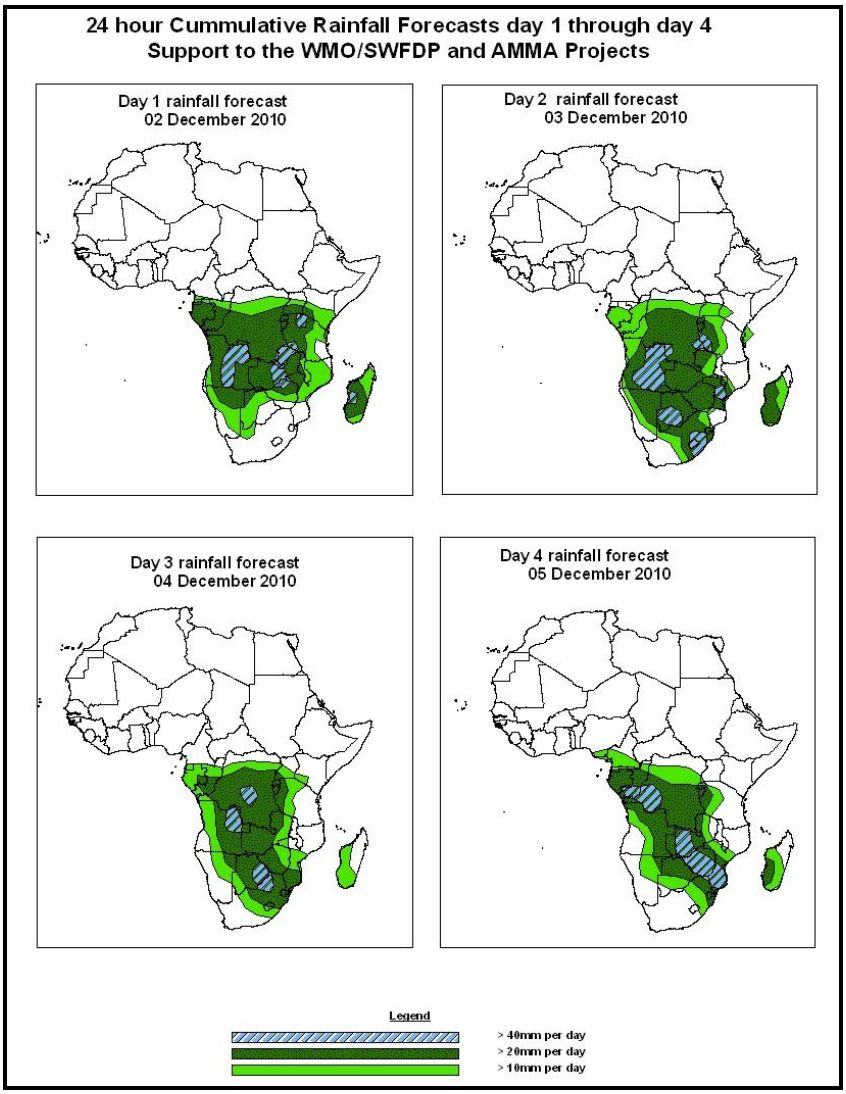
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 02 DECEMBER – 06Z of 05 DECEMBER 2010, (Issued at 14:00Z of 01 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, western parts of East Africa, Congo and Southern Africa with chances of locally heavy rainfall over Angola, Tanzania, DRC, Zambia, Congo, Zimbabwe, Botswana and Mozambique.

1.2. Models Comparison and Discussion-Valid from 00Z of 01 DECEMBER 2010.

The GFS, ECMWF and UKMET models indicate a cut off low from southern Sudan to Central Africa Republic in the next 24 hours. The cut off low is expected to weaken towards the end of the forecast period. A broad cut of low over DRC, south Angola, Namibia and South Africa across Botswana is expected to be limited over South Africa and Angola during the next 48 hours. The cut off low is expected to move to eastern parts of South Africa and Mozambique in the next 72 to 96 hours.

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 gradually expected to be weak during the forecast period. Also the Mascarene high pressure is expected to remain generally weak.

At 850hPa level, The GFS model is indicating a convergence line over DRC during the next 24 hours .The convergence is expected to become strong and extend to Tanzania and Zambia in the next 48 to 72 hours. Another convergence line over south east Angola is expected to become cyclonic convergence and extend to northwest of Botswana in the next 72 to 96 hours. Another Convergence line over Sudan and Central Africa Republic is expected to become weak in 72hours.

At 700hPa level, a convergence line over the Lake Victoria and DRC is expected to extend to western Tanzania during the next 48 to 96 hours. A cyclonic Convergence over eastern Angola is expected to move to southern Angola in the next 48 hours and then extends to Botswana/Angola border in 96 hours. Another Convergence line over Angola coast is expected to extend to Botswana and South Africa during the next 48 hours and later move to the east coast of South Africa and Mozambique.

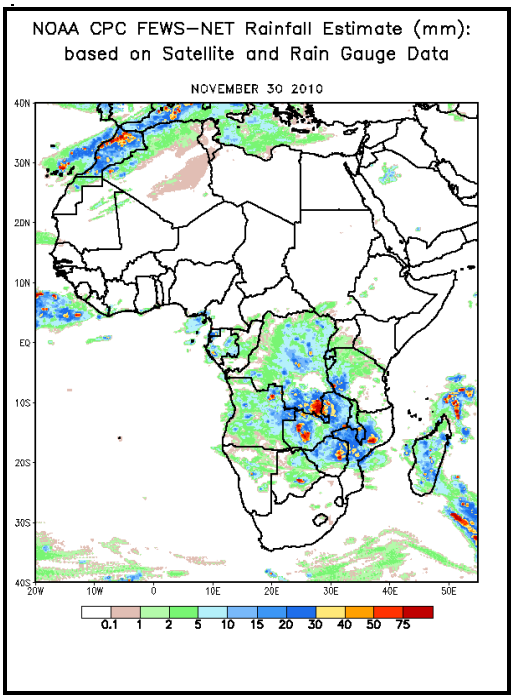
At 200hPa, zone of strong wind (>50Kts) associated with the Sub Tropical westerly Jet in the southern Hemisphere is expected to move off the east coast of South Africa with the wind speed in the range of 90 to 110 Kts.

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

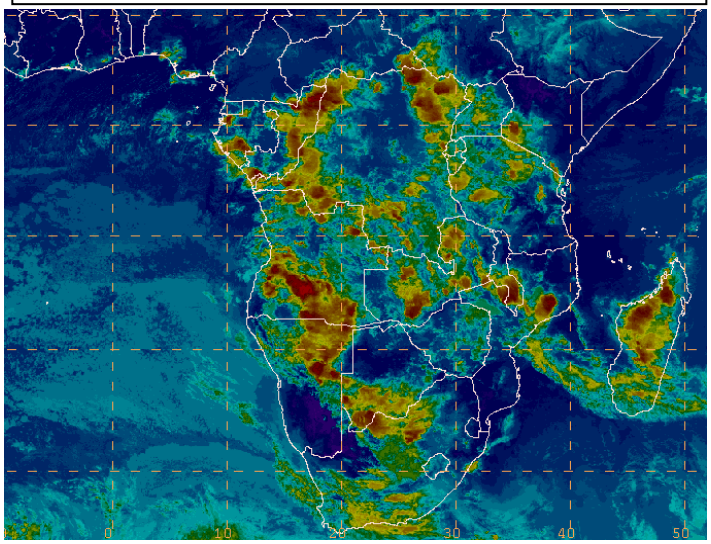
2.0. Previous and Current Day Weather Discussion over Africa (30 November 2010 – 01 December 2010)

2.1. Weather assessment for the previous day (30 November 2010):
During the previous day, locally heavy rainfall was observed over Zambia, DRC Mozambique and Zimbabwe.

2.2. Weather assessment for the current day (01 December 2010): Intense clouds are observed over DRC, Angola, Congo, Zambia, Malawi, Namibia, Mozambique and Botswana.



IR Satellite Image, Valid1800, December 30, 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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