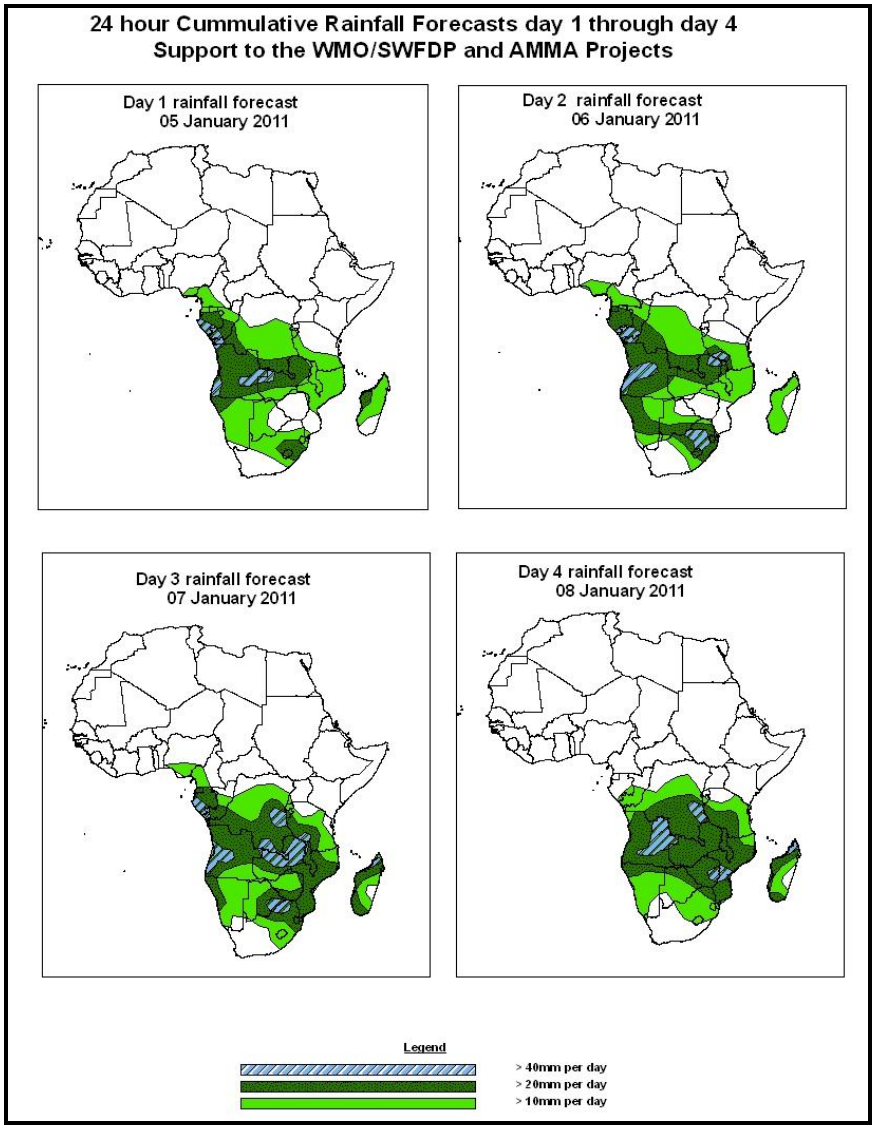
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 07Z of 05 JANUARY – 06Z of 08January 2011, (Issued at 14:00Z of 04 January 2011)

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 DRC with chances of locally heavy rainfall over Angola, South Africa, Zambia, Tanzania, Congo, Gabon, DRC, Mozambique, Zimbabwe and Madagascar.

1.2. Models Comparison and Discussion-Valid from 00Z of 4 JANUARY 2011.

According to the GFS, ECMWF and UKMET models a trough along the Gulf of guinea and Angola extending to Namibia coast is expected to persist during the next 24 to 96 hours. Another trough along the coast of Mozambique is expected to extend to Zambia and Botswana in the next 48 hours. Also the models are indicating a cut off low over southern Sudan to DRC is expected to moving to southern Tanzania and later extending to Zambia and Malawi in the next 24 to72 hours. Another cut of low over west coast of South Africa and Botswana is expected to extend to Zambia in the next 72 hours. Another cut off low over northwestern Madagascar is expected to extend to Mozambique coast in the next 48 to 72 hours.

The seasonal low pressure system (Meridional component of the ITCZ) is expected to be active over the southern parts of the Continent and DRC.

According to the GFS, ECMWF and UKMET models, St. Helena High pressure system over southern hemisphere is expected to remain generally weak. Also Mascarene high pressure system is expected to remain generally weak.

At 850hPa level, The GFS model indicates Convergence line over Congo and western DRC extending to Gabon and Cameroon in the next 48 hours and then become limited over Congo and DRC. Another convergence over DRC is expected to extend to Tanzania in the next 48 to 72 hours. A convergence line over Malawi and Zambia is expected to persist and extends to Zimbabwe, Botswana and South Africa during the next 48 to 72 hours. Another cyclonic convergence over South Africa is expected to extend to southern Mozambique in the next 48 to 72 hours.

At 700hPa level, convergence over northeast Angola is expected to extend to Zambia across DRC in the next 72 to 96 hours. Another convergence line along southern Tanzania and Zambia is expected to extend to Malawi in the next 24 hours and later to Mozambique coast line. In the next 24 hours the GFS model indicates another convergence line southern Mozambique which is expected to become cyclonic during the next 48 hours and move to Botswana and South Africa.

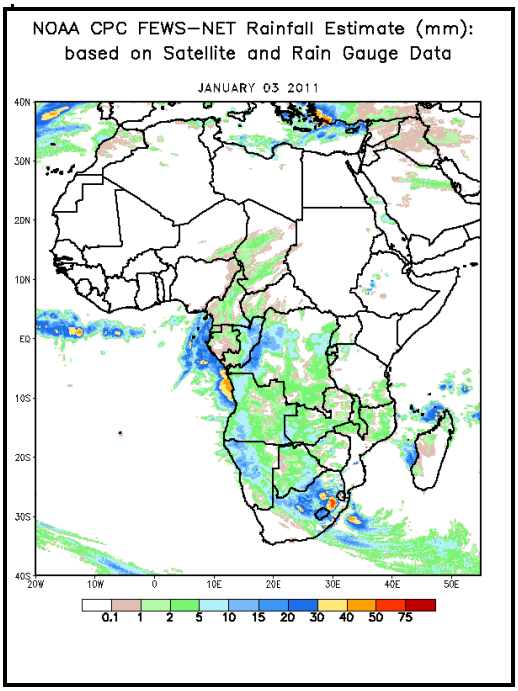
At 200hPa, zone of strong wind (>50Kts) associated with the Sub Tropical westerly Jet in the southern Hemisphere is currently weak and expected to persist during the next 96 hours.

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

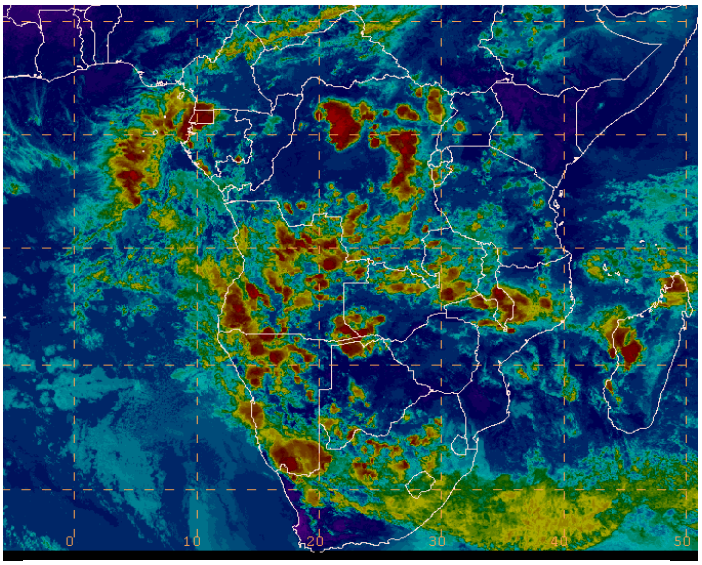
2.0. Previous and Current Day Weather Discussion over Africa (03 January 2011 – 04 January 2011)

2.1. Weather assessment for the previous day (03 January 2011):
During the previous day, moderate to heavy rainfall was observed over South Africa.

2.2. Weather assessment for the current day (04 January 2011): Intense clouds are observed over Angola, Namibia, Equatorial Guinea, DRC, South Africa and Madagascar.



IR Satellite Image, Valid , January 04, 2011



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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