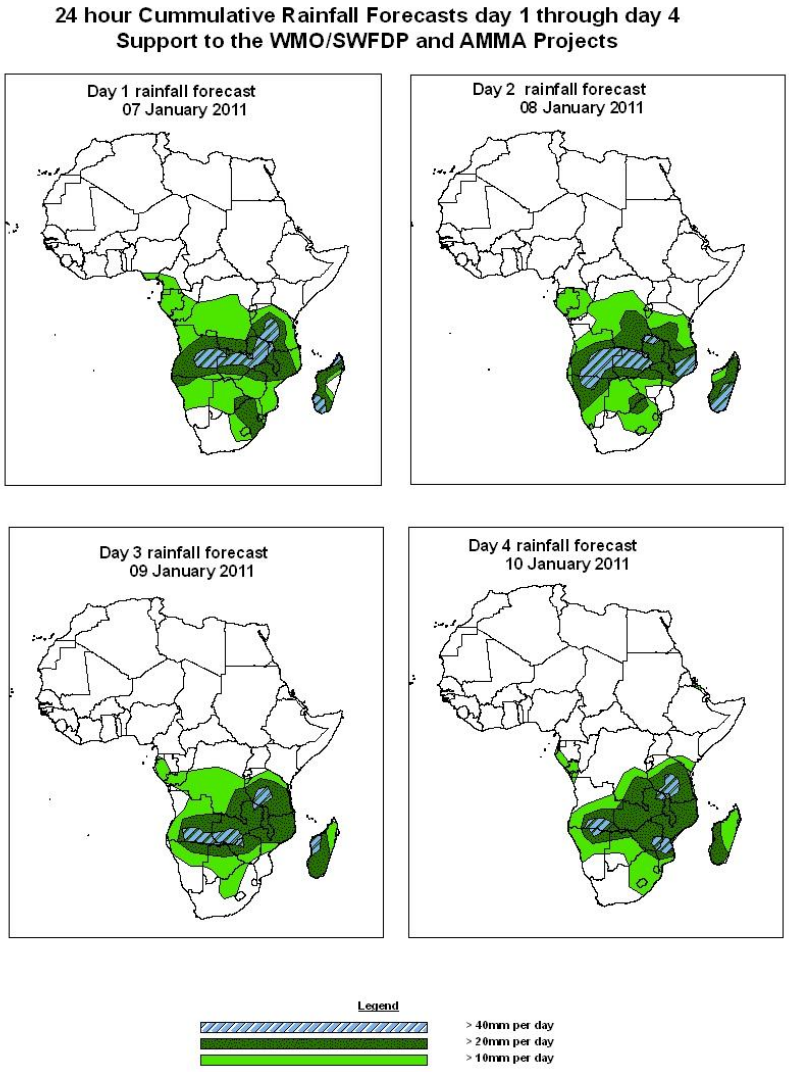
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 07 JANUARY – 06Z of 10 January 2011, (Issued at 14:00Z of 06 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 Zambia, Tanzania, Malawi, Angola, Mozambique, South Africa, Zimbabwe and Madagascar.

1.2. Models Comparison and Discussion-Valid from 00Z of 6 JANUARY 2011.

According to the GFS, ECMWF and UKMET models a trough along west coast of the Gulf of Guinea and southwestern Angola extending to Namibia is expected to persist during the next 24 to 96 hours. A cut off low along the Mozambique coast is expected to extend to Zambia, Botswana and parts of Namibia in the next 24 to 72 hours. Also the models are indicating a cut off low over northern DRC and southern Sudan that is expected to persist in the next 72 hours. Another cut of low over western Tanzania and DRC is expected to move slightly northwards over DRC in the next 48 hours. Another trough across Botswana, eastern Namibia and western parts of South Africa is expected to extend to Zimbabwe and move southwards in the next 24 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 intensify slightly in the next 24 to 72 hours and extends a ridge to the east coast of South Africa. On the other hand the Mascarene high pressure system is expected to remain generally weak.

At 850hPa level, The GFS model indicates Convergence line over northern DRC extending to western Tanzania in the next 24 hours is expected to persist during the next 96 hours. Another convergence over Zambia is expected to extend to Botswana and South Africa in the next 48 to 72 hours. Another convergence line over southern Mozambique is expected to extend to western Madagascar during the next 48 hours.

At 700hPa level, cyclonic convergence over northern Angola and western DRC is expected to extend to Lake Victoria in the next 48 hours and then become weak. A convergence line along southern Tanzania and Mozambique is expected to become strong and extends along the Mozambique/Tanzania coast line during the next 24 to 72hours. Also the GFS model indicates another cyclonic convergence over southern Mozambique which is expected to extend to north of Madagascar in the next 48 hours and then become weak in 96 hours.

At 500hPa, the GFS model is indicating a retrogressing trough over South Africa and parts of Botswana in the next 48 to 72. The trough is likely to become more organized into a cyclonic circulation during the next 72 hours.

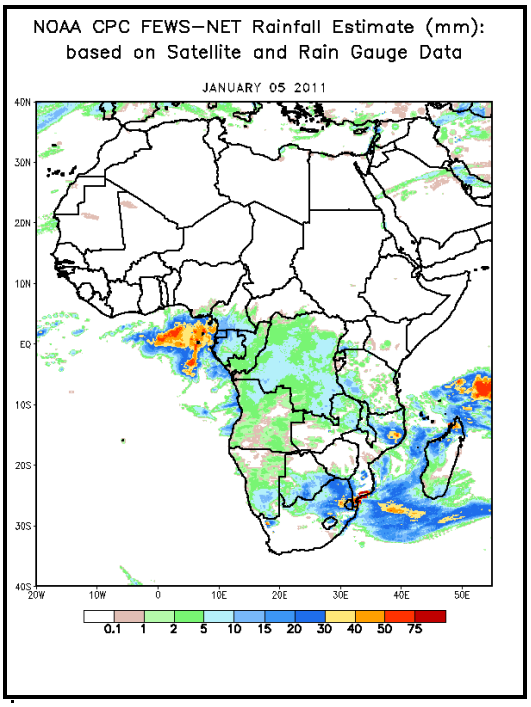
At 200hPa, zone of strong wind (>50Kts) associated with the Sub Tropical westerly Jet in the southern Hemisphere is currently weak and expected to persist during the next 96 hours.

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 Zambia, Tanzania, Malawi, Angola, Mozambique, South Africa, Zimbabwe and Madagascar.

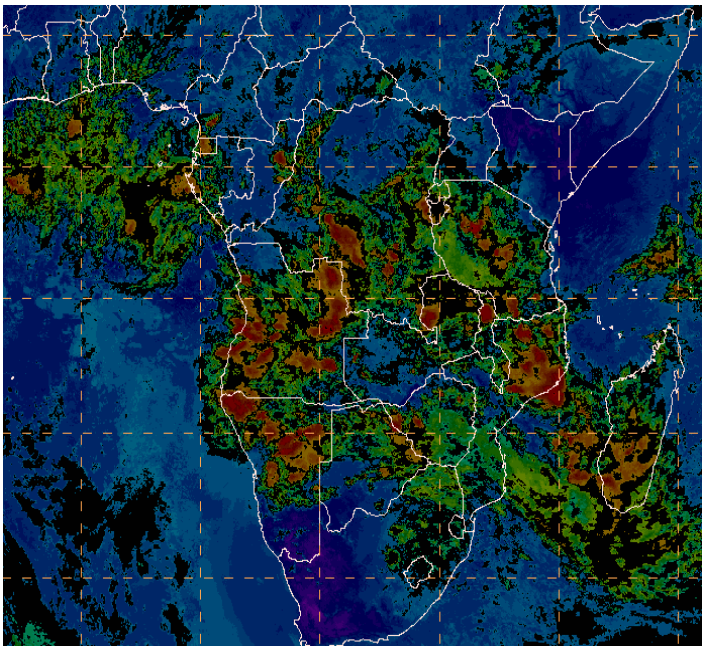
2.0. Previous and Current Day Weather Discussion over Africa (05 January 2011 – 06 January 2011)

2.1. Weather assessment for the previous day (05 January 2011):
During the previous day, moderate rainfall was observed over Mozambique and South Africa.

2.2. Weather assessment for the current day (06 January 2011): Intense clouds are observed over Tanzania, DRC, Angola, Namibia, Botswana, Zimbabwe, Mozambique, South Africa and Madagascar.



IR Satellite Image, Valid , January 06, 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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