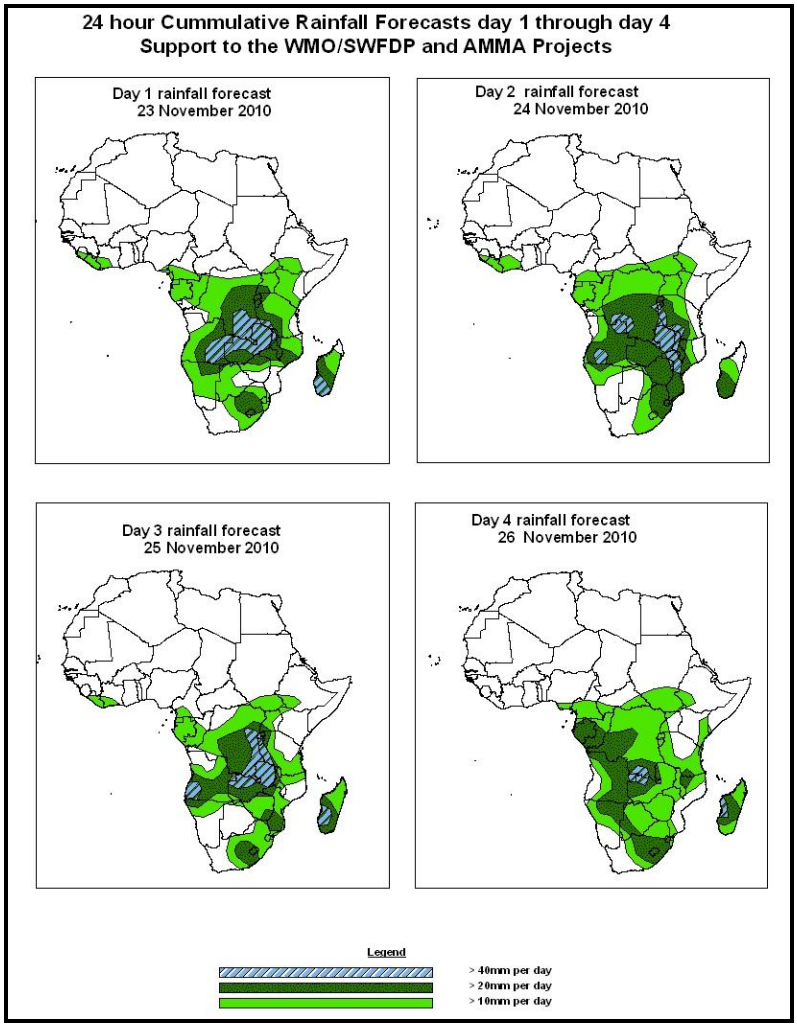
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 23 NOVEMBER – 06Z of 26 NOVEMBER 2010, (Issued at 14:00Z of 22 NOVEMBER 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 DRC with chances of locally heavy rainfall over Zambia, DRC, Tanzania, Burundi, Rwanda, Angola, Malawi, Mozambique and Madagascar.

1.2. Models Comparison and Discussion-Valid from 00Z of 22 NOVEMBER 2010.

The GFS and UKMET models indicate a trough from Burkina Faso to Sudan across Nigeria and Central Africa Republic in the next 24 to 48 hours. During the next 72 hours the trough is expected to become a weak and broad cut off low extending to North DRC. The ECMWF is indicating a cut off low over the same area beginning in the next 24 hours. Another cut off low over Angola, Zambia, Botswana and Zimbabwe is expected to move to east Angola, Zambia and Botswana in the 72hours. The UKMET model is indicating another cut off low system over south east Sudan in the next 24 hours.

The seasonal low pressure system (Meridional component of the ITCZ) is limited over DRC as a cut off low and likely to remain unchanged during the next 48 hours.

According to the GFS and ECMWF models, the southern hemisphere High pressure system (St. Helena) is at central pressure 1028hPa and is expected to extend a ridge to the eastern parts of South Africa in the next 48 hours. On the other hand, the UKMET model is indicating a likelihood of intensification for the St. Helena in the next 48 to 72 hours. The Mascarene high pressure is expected to remain generally weak.

At 850hPa level, The GFS model is indicating a convergence line over south Sudan that is expected to extend to Cameroon across Central Africa Republic in the next 48 hours. Another convergence line over Angola, Zambia and DRC is expected to be limited to east Angola and western Zambia in the next 72hours. Another convergence line over DRC and Lake Victoria is expected to weaken slightly in the next 96hours.

At 700hPa level, a cyclonic convergence over Angola is expected to persist for the next 72hours and then become weak. Another cyclonic convergence over southern DRC and Zambia is expected to persist during the next 72 hours and then disappear. A convergence line extending from east Namibia to southeast of South Africa is expected to deepen in the next 48 hours.

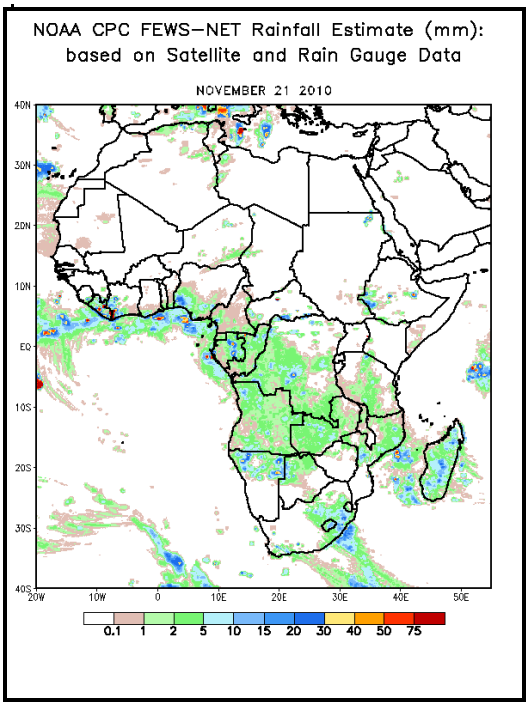
At 200hPa, zone of strong wind (>50Kts) associated with the Sub Tropical westerly Jet in the southern Hemisphere is expected to move across the southern tip of South Africa in the next 96 hours. Wind speed is expected to be in the range of 90 to 110 Kts.

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

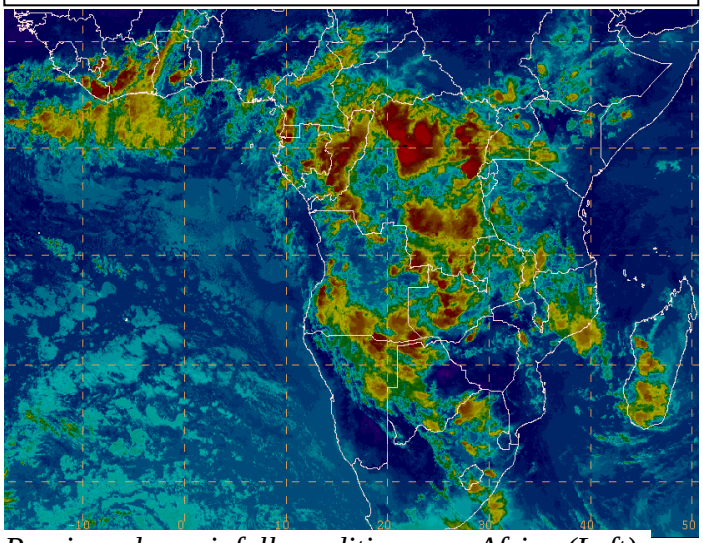
2.0. Previous and Current Day Weather Discussion over Africa (21 November 2010 – 22 November 2010)

2.1. Weather assessment for the previous day (21 November 2010):
During the previous day, locally moderate rainfall was observed over Liberia and southwest Cote D'Ivoire.

2.2. Weather assessment for the current day (22 November 2010): Intense clouds are observed over DRC, Congo, Angola, Zambia, Namibia, Botswana, Cote D'Ivoire and Ghana.



IR Satellite Image, Valid1800, November 22, 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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