

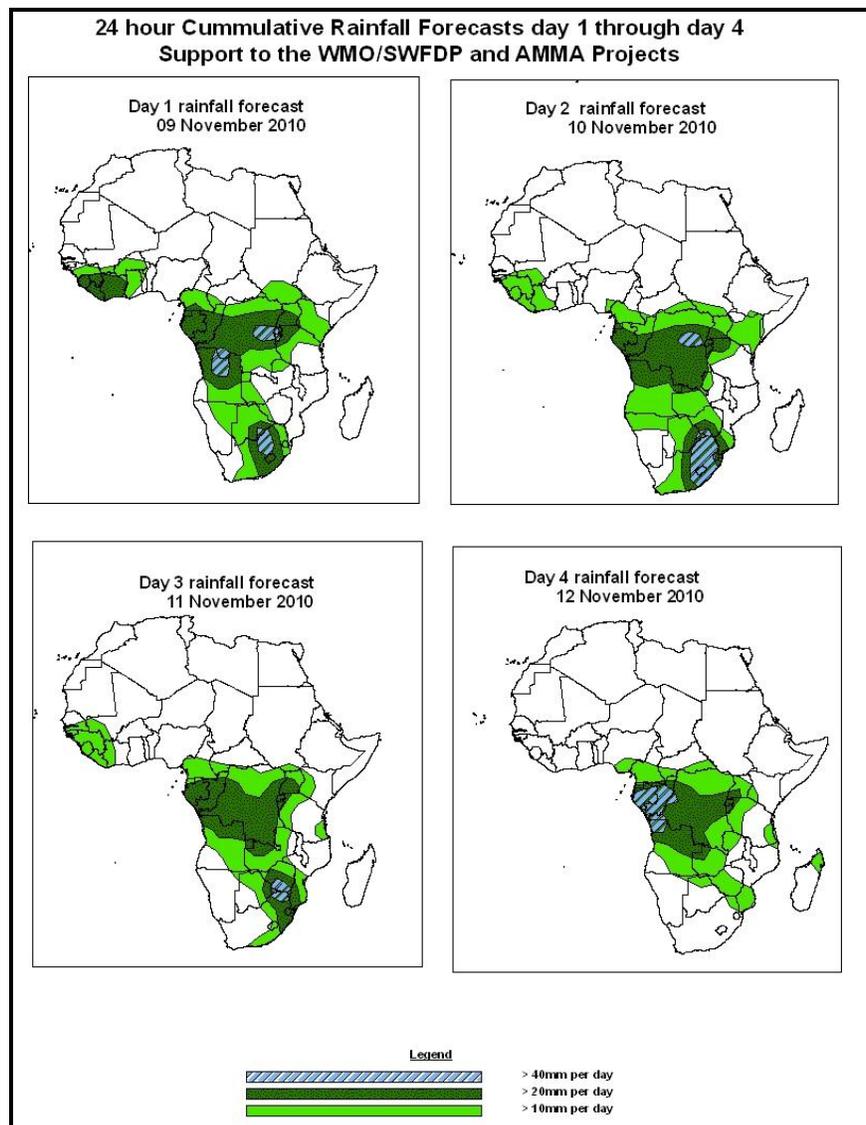


# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

## 1.0. Rainfall Forecast: Valid, 06Z of 09 NOVEMBER – 06Z of 12 NOVEMBER 2010, (Issued at 14:00Z of 08 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 eastern parts Gulf of Guinea countries, DRC, CAB region and Southern Africa with chances of locally heavy rainfall over DRC, Angola, Gabon, Congo, South Africa, Lesotho, Swaziland and Zimbabwe.

## **1.2. Models Comparison and Discussion-Valid from 00Z of 08 NOVEMBER 2010**

A cut off low over Chad and Sudan is expected to extend a trough over Burkina Faso in the next 72 hours and later over Central Africa republic. All the three models, GFS, ECMWF and UKMET are in agreement on this prediction. The GFS and UKMET models are indicating a trough over South Africa extending to Botswana. In the next 48 hours the trough is expected to become a cut off low and extends further to Zimbabwe and southern Mozambique. A trough is expected over Zambia, Angola and Botswana in the next 72 hours.

The seasonal low pressure system (Meridional component of the ITCZ) over western DRC is expected to weaken slightly according to the UKMET model, while the GFS model indicates persistence for the system in the next 24 to 96 hours.

The southern hemisphere High pressure system (St. Helena) is expected to extend a ridge over the east coast of South Africa in the next 24 hours and then retreat westwards. On the other hand, Mascarene high pressure is expected to intensify slightly between 48 and 72 hours from central pressure of 1023 to 1026hPa.

At 850hPa level, a convergence line extending from Congo to DRC is expected to persist during the next 96 hours. Another convergence line over Angola extending to South Africa across Botswana is expected to be limited over Botswana in the next 72 hours. A weak convergence line over Zambia is expected to merge with another convergence line extending from Lake Victoria to south Angola across Zambia in the next 72 hours. Also another convergence line is expected to develop southeast of Sudan towards the end of the forecast period.

At 700hPa level, a convergence line over DRC is expected to move over south of Congo in the next 48 hours and then disappear. Another convergence line from south Angola extends to east of South Africa across Botswana in the next 24 hours. The convergence line is expected to move slightly towards Namibia in the next 72 hours. Another convergence line extends northeast Tanzania to Central DRC across Rwanda and Burundi and then weakens slightly.

At 500hPa level, a trough is expected to move across South Africa from the west coast to the east during the next 24 to 96 hours.

At 200hPa, zone of strong wind (>50Kts) associated with the Sub Tropical westerly Jet over the southern Hemisphere is expected to become stronger and move across South Africa in the next 48 hours. The wind speed associated with the Jet is expected to be in the order of 130 to 150Kts during the time.

In the coming four days, there is an increased chance for rainfall to exceed 20mm per day over eastern parts Gulf of Guinea countries, DRC, CAB region and Southern Africa with chances of locally heavy rainfall over DRC, Angola, Gabon, Congo, South Africa, Lesotho, Swaziland and Zimbabwe.

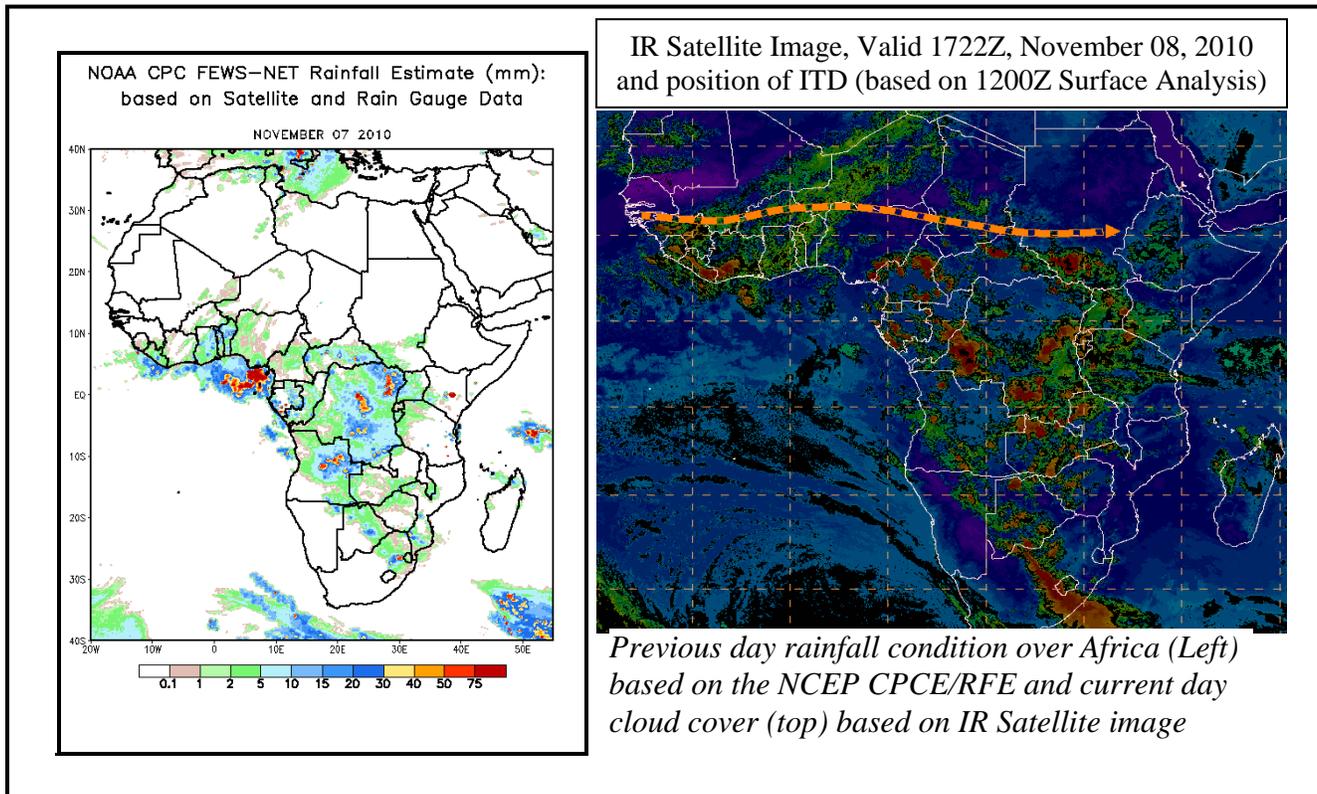
## 2.0. Previous and Current Day Weather Discussion over Africa (07 November 2010 – 08 November 2010)

### 2.1. Weather assessment for the previous day (07 November 2010):

During the previous day, locally moderate rainfall was observed over DRC, Angola, South Africa and central Kenya.

### 2.2. Weather assessment for the current day (08 November 2010):

Intense clouds are observed over DRC, South Africa, northern Zambia, Cameroon, Liberia, Cote D'Ivoire and southern Sudan.



**Author(s):** Samwel Mbuya (Tanzania Meteorological Agency) / CPC-African Desk), [samwel.mbuya@noaa.gov](mailto:samwel.mbuya@noaa.gov)

Omar Gouled Allaleh (Djibouti Meteorological Office / CPC-African Desk), [omar.allaleh@noaa.gov](mailto:omar.allaleh@noaa.gov)

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