

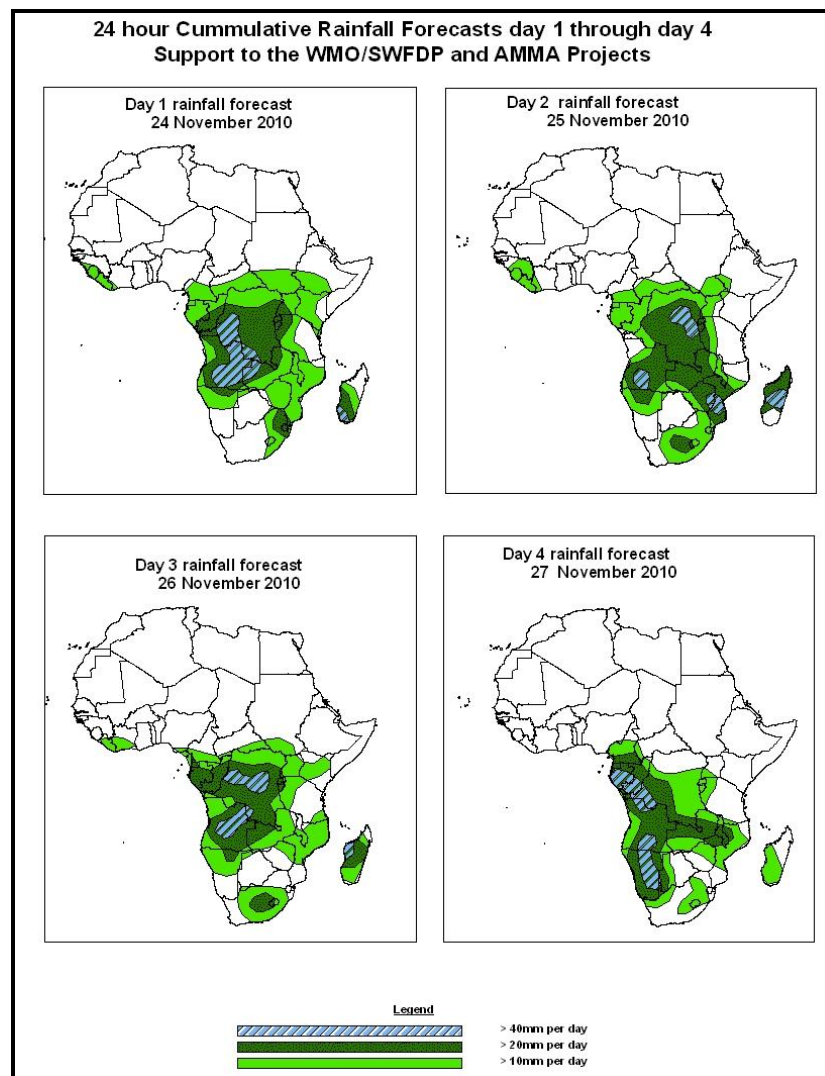


## NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

### 1.0. Rainfall Forecast: Valid, 06Z of 24 NOVEMBER – 06Z of 27 NOVEMBER 2010, (Issued at 14:00Z of 23 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 DRC, Southern Africa and East Africa with chances of locally heavy rainfall over DRC, Zambia, Angola, Namibia, Congo, Gabon, Mozambique and Madagascar.

## **1.2. Models Comparison and Discussion-Valid from 00Z of 23 NOVEMBER 2010.**

The GFS, ECMWF and UKMET models indicates a cut off low from Chad to Sudan across Central Africa Republic in the next 24 to 48 hours. During the next 72 to 96 hours the cut off low is expected to deepen and extending to parts of Senegal, Ghana and Nigeria. Another cut off low over Angola, Zambia, Botswana and Zimbabwe is expected to move to south of Angola in the 72hours. ECMWF model is indicating another cut off low system over Botswana that is expected to move to the Namibia coast during the next 48 hours and later to the west coast of South Africa.

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 to 72hours.

According to the GFS, ECMWF and UKMET models, the southern hemisphere High pressure system (St. Helena) is expected to extend a ridge to the eastern parts of South Africa in the next 24 hours. Moreover, the UKMET model is indicating a likelihood of intensification for the St. Helena from 1028hPa to 1032hPa during the next 24 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 24 to 48 hours. The convergence is expected to extend further to south Nigeria and become weak in the next 72 hours. Another convergence line over Angola and Zambia is expected to become strong and move to the Angola/Namibia border area in the next 72 to 96 hours. Another convergence line over Zimbabwe and Mozambique is expected to weaken slightly in the next 72 hours.

At 700hPa level, a cyclonic convergence over Angola and Zambia is expected to persist for the entire forecast period. A strong convergence line over northern DRC is expected to persist for the next 48 hours and then become weak. A convergence line extending from Sudan to Central Africa is expected to weaken 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 to the east across the southern tip of

South Africa in the next 72 hours. Wind speed is expected to be in the range of 90 to 110 Kts.

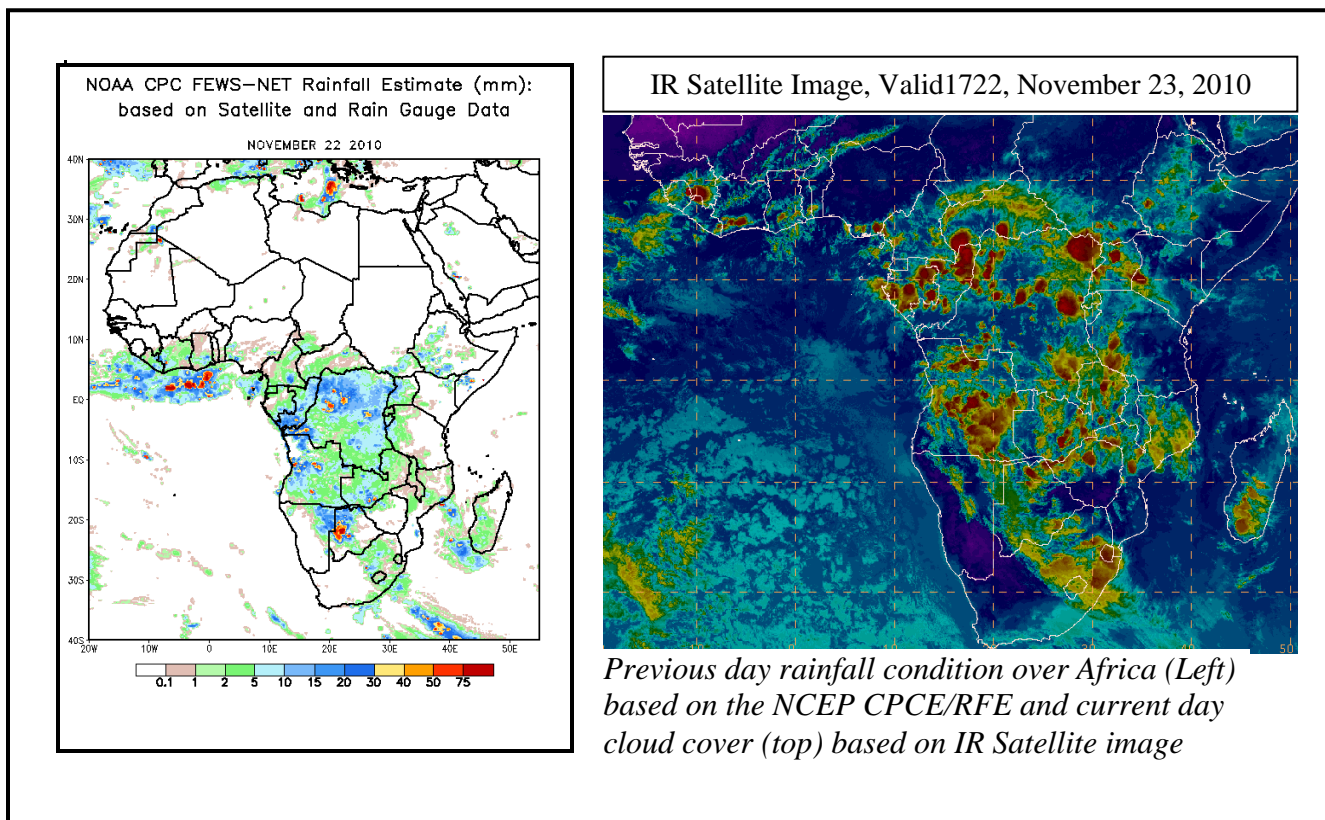
In the coming four days, there is an increased chance for rainfall to exceed 20mm per day over DRC, Southern Africa and East Africa with chances of locally heavy rainfall over DRC, Zambia, Angola, Namibia, Congo, Gabon, Mozambique and Madagascar.

## **2.0. Previous and Current Day Weather Discussion over Africa (22 November 2010 – 23 November 2010)**

### **2.1. Weather assessment for the previous day (22 November 2010):**

During the previous day, locally heavy to moderate rainfall was observed over Botswana, DRC and Angola.

### **2.2. Weather assessment for the current day (23 November 2010):** Intense clouds are observed over DRC, Tanzania, Uganda, Congo, Angola, Gabon Zambia, Guinea, Lesotho and South Africa.



**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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