

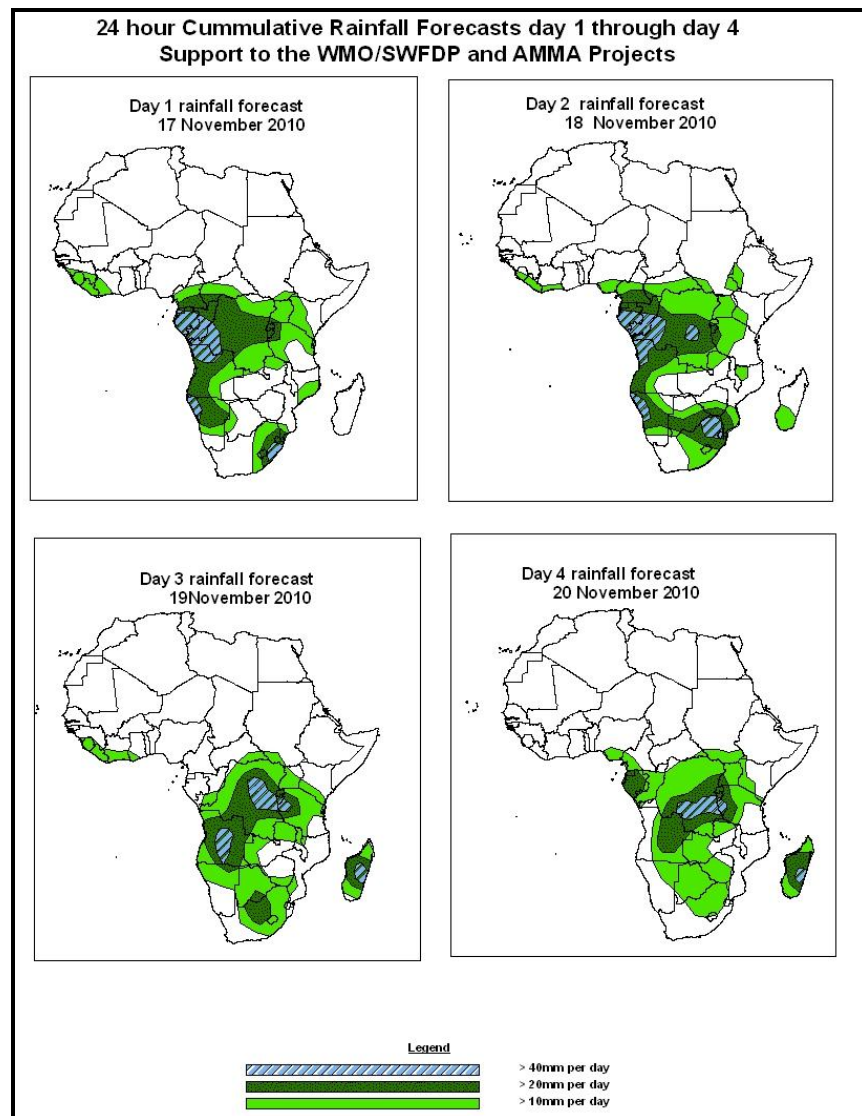


# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

## 1.0. Rainfall Forecast: Valid, 06Z of 17 NOVEMBER – 06Z of 20 NOVEMBER 2010, (Issued at 14:00Z of 16 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 along the west coast of Gabon, Angola and Namibia, DRC, East Africa and Southern Africa with chances of locally heavy rainfall over Angola, Gabon, Congo, DRC, Burundi, Tanzania, Namibia, Madagascar and South Africa.

## **1.2. Models Comparison and Discussion-Valid from 00Z of 16 NOVEMBER 2010.**

A cut off low over Chad and Sudan at central pressure 1005hPa is expected to fill-up slightly in the next 48 to 72hours. A trough over Zambia extending to west coast of South Africa is expected to deepen and become a cut off low over Botswana and Zambia during the next 48 to 72hours. Another trough over east DRC is expected to become a cut off low and move to the central DRC in the next 48hours. Also a trough extending along the coast of Gabon to Namibia is expected to deepen and extends further to west coast of South Africa in the next 24 hours. The trough is also likely to influence the weather over western parts of Botswana and Zambia in the next 72hours.

The seasonal low pressure system (Meridional component of the ITCZ) over DRC is expected to deepen in the next 24 hours and extend a trough to Botswana.

The southern hemisphere High pressure system (St. Helena) is at central pressure 1024hPa and the models are predicting a likelihood of slightly weakening in the next 48 hours. According to GFS, ECMWF and UKMET models the St. Helena high pressure system is expected to extend a ridge over the east coast of South Africa in the next 24 hours. On the other hand, Mascarene high pressure is expected to remain weak.

At 850hPa level, The GFS model is indicating a convergence line from south Sudan to Chad during the next 24 to 48 hours. The convergence line is expected to move to south Ethiopia in 72hours and then become weak convergence. Another area of convergence is indicated along the coast of Angola to Namibia extending to Botswana in the next 24 hours. A convergence line over Gabon extending to western DRC and Angola is expected to move over east DRC in the next 48 hours and then become weak. Another convergence line from the Lake Victoria region extends to northeast Zambia in the next 48 hours. The convergence is expected to become stronger in the next 72 hours and extends to western Tanzania as well as Uganda.

At 700hPa level, a strong cyclonic convergence over Gabon and Angola is expected to extend to western DRC across Congo during the next 24 to 48 hours. Another convergence line over the coast of Angola is expected to extend to Botswana in the next 24 hours and then move over Namibia coastline. Another convergence line over

south Sudan extending to southern parts of Central Africa Republic is expected to persist during the next 24 to 72 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 48 hours. The wind speed associated with the Jet is 70 Kts.

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

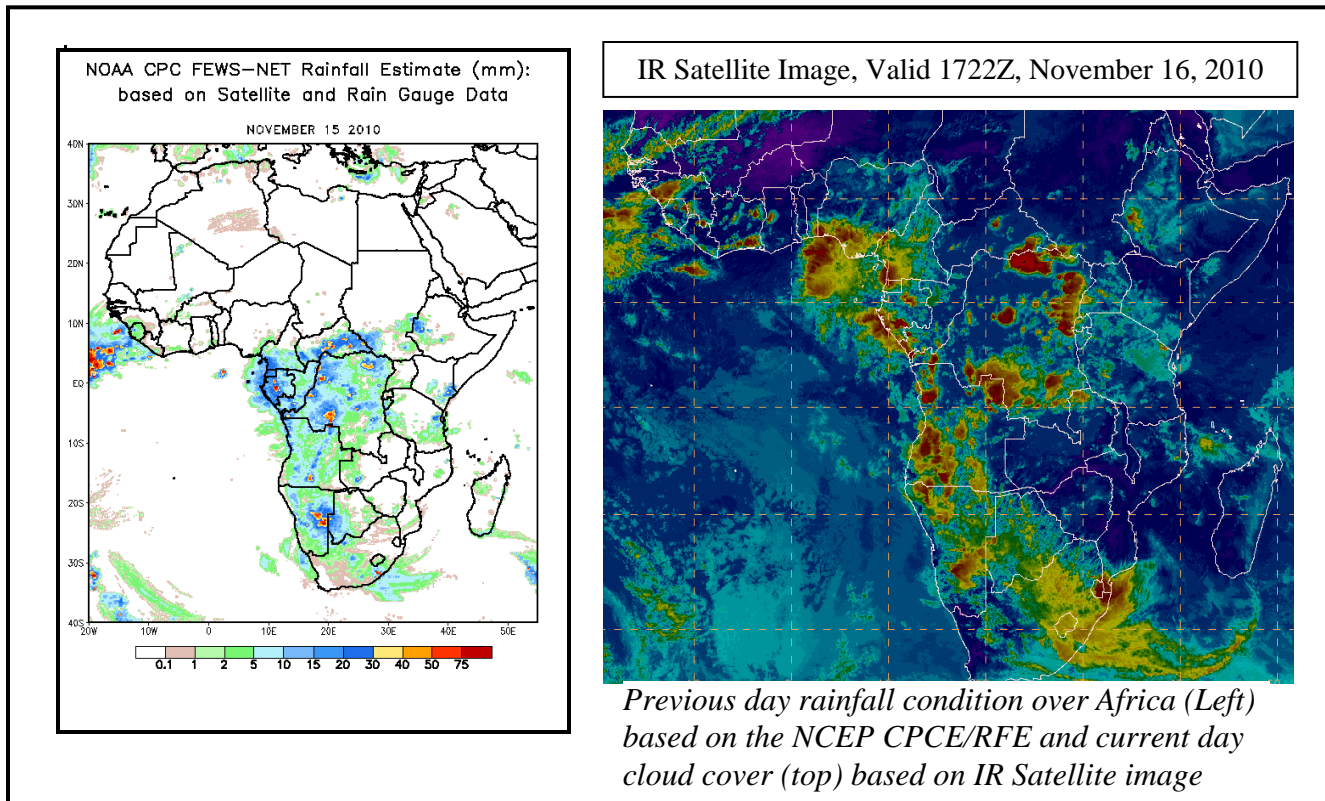
## 2.0. Previous and Current Day Weather Discussion over Africa (15 November 2010 – 16 November 2010)

### 2.1. Weather assessment for the previous day (15 November 2010):

During the previous day, locally moderate rainfall was observed over Gabon, Central Africa Republic, Namibia and Angola.

### 2.2. Weather assessment for the current day (16 November 2010):

Intense clouds are observed over DRC, Angola, Gabon, Nigeria, Namibia and Swaziland.



**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)

-----  
**Disclaimer:** *This bulletin is for training purposes only and should be used as guidance. NOAA does not make forecasts for areas outside of the United States.*