

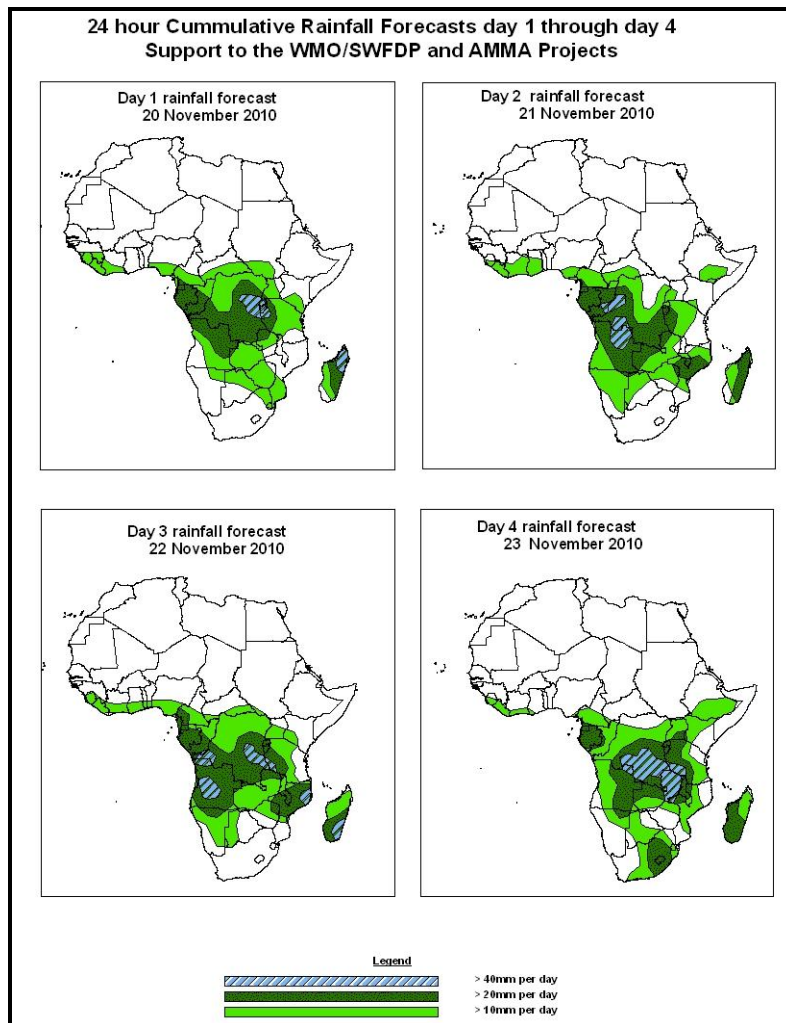


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 20 NOVEMBER – 06Z of 21 NOVEMBER 2010, (Issued at 14:00Z of 19NOVEMBER 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 East Africa, DRC, Gabon, Angola, and Southern Africa with chances of locally heavy rainfall over Tanzania, Burundi, Rwanda, Angola, Congo, DRC, Zambia, Mozambique and Madagascar.

1.2. Models Comparison and Discussion-Valid from 00Z of 19 NOVEMBER 2010.

The GFS and UKMET models indicates a cut off low over Chad and Sudan at central pressure 1006hPa that is expected to move to south Sudan and extends to northern parts of Africa Central Republic in the next 48 hours. Beyond 72 hours the cut off low will be limited to Burkina Faso and Sudan. The ECMWF is indicating the trough from Togo to Sudan in the next 24 hours. A trough over South Africa is expected to extend to southern Zambia across Botswana in the next 48 hours. The UKMET model is indicating a cut off low pressure system over western Tanzania and DRC in the next 24hours with likelihood to persist during the next 72hours. Also ECMWF model indicates a cut off low over Zambia and Botswana area in the next 24 hours.

The seasonal low pressure system (Meridional component of the ITCZ) over DRC is extending from Angola to South Africa and becoming a cut off low over DRC and western Tanzania in the next 48 hours. The cut off low is expected to move to western DRC in the next 96 hours.

According to the GFS and UKMET models, the southern hemisphere High pressure system (St. Helena) is at central pressure 1028hPa and the models are predicting a likelihood of intensification to 1032hPa in the next 48 hours. On the other hand, Mascarene high pressure is expected to remain generally weak.

At 850hPa level, The GFS model is indicating a cyclonic convergence from south Sudan and western Ethiopia to Central Africa Republic during the next 24 hours and later weakening and move to Sudan and Central Africa Republic. A convergence line over Gabon and Congo is expected to move to DRC and Lake Victoria region in the next 48 to 96 hours. Another convergence line across Zambia, Botswana and western DRC is expected to extend to Zimbabwe and South Africa in the next 48 to 72hours. Another convergence line from the Lake Victoria region is expected to weaken and move to western Tanzania during the next 96hours. Another convergence line over Madagascar is expected to influence the weather over the Island in the next 24 hours.

At 700hPa level, a strong cyclonic convergence over northern Angola is expected to persist for the next 48hours and then move to Zambia. Also another convergence line over Botswana extending to South Africa is expected to move to Namibia the next

hours. A convergence over DRC and Lake Victoria region is expected to move to southern DRC in the next 72 hours. Another cyclonic convergence is expected over Mozambique in the next 24 to 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 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 East Africa, DRC, Gabon, Angola, and Southern Africa with chances of locally heavy rainfall over Tanzania, Burundi, Rwanda, Angola, Congo, DRC, Zambia, Mozambique and Madagascar.

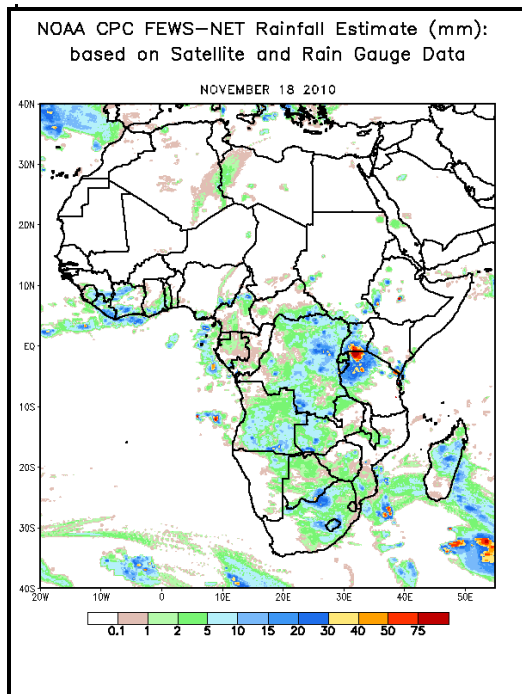
2.0. Previous and Current Day Weather Discussion over Africa (18 November 2010 – 19 November 2010)

2.1. Weather assessment for the previous day (18 November 2010):

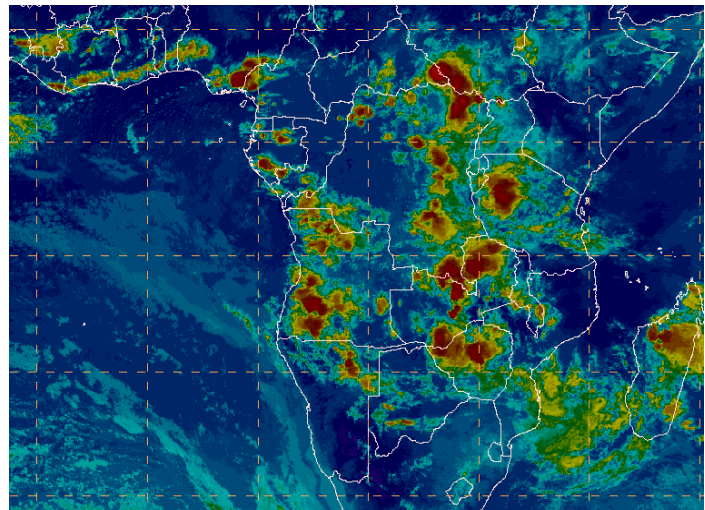
During the previous day, locally moderate rainfall was observed over Tanzania.

2.2. Weather assessment for the current day (19 November 2010):

Intense clouds are observed over Tanzania, DRC, Angola, Botswana, Zimbabwe, Zambia, Madagascar, south Sudan and part of the Central Africa Republic.



IR Satellite Image, Valid 1722Z, November 19, 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

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

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

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