

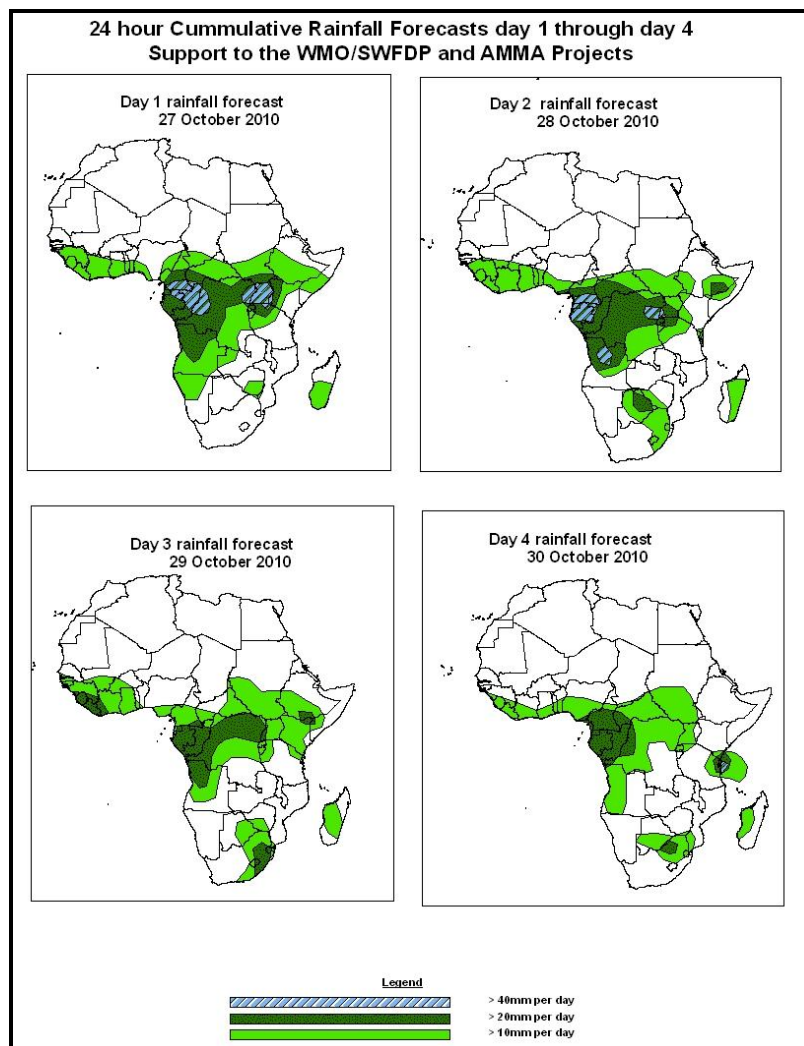


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 27 OCTOBER – 06Z of 30 OCTOBER 2010, (Issued at 14:00Z of 26 OCTOBER 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 the Congo Air Boundary region, eastern parts of the Gulf of Guinea countries and East African region, with chances of locally heavy rainfall over, Congo, Gabon, Eq. Guinea, Cameroon, DRC and Uganda. Also heavy rainfall is Likely over the east coast of Tanzania and locally over northern part of Angola. Pockets of moderate rainfall are likely to occur over the west coast of the Gulf of Guinea countries and along the Botswana and South Africa border.

1.2. Models Comparison and Discussion-Valid from 00Z of 26 OCTOBER 2010

According to the GFS and UKMET models there is a broad area of a cut off low across Chad to Sudan while the ECMWF still maintains a trough across the region. A Cut off low over Angola is expected to move slightly towards the Namibia/Angola border in the next 24 hours and it is likely to weaken beyond 48 hours. A low pressure over the Indian Ocean is still organizing itself and gradually moves over the East Africa coastline in 72 to 96 hours. Another cut off low pressure system over Zambia is expected to move over the Angola / Botswana border in the next 48 hours.

According to GFS, UKMET and ECMWF models, the seasonal low pressure system (Meridional component of the ITCZ) over DRC is expected to be more active over the western DRC and Congo during the next 24 to 48 hours. Also a trough axis extends to Angola from the meridional component of the ITCZ. Over South Africa the influence of a ridge from the St Helena High pressure is still in effect together with a localized convergence line over Botswana extending to South Africa.

The southern hemisphere High pressure system (St. Helena) is at central pressure of 1028hPa and the models are indicating a ridge from St Helena towards southeast of South Africa with further northward extension of the ridge in 24 to 48 hours. The East African ridge is likely to be strengthened by the ridge from St Helena according to the GFS, ECMWF and UKMET model predictions. However, towards the end of the forecast period the East Africa ridge is expected to retreat southwards. The Mascarene high pressure is generally very weak and remains displaced eastwards.

At 850hPa level, a convergence line over southern Ethiopia/Sudan border is expected to merge with another convergence line along the southern border of Chad and Sudan in the next 48 hours. A convergence line over border of Chad and Cameroon is expected to move slightly southwards in the next 24 hours. A cyclonic convergence over Congo and northern Gabon is expected to move lightly to western DRC in 48 to 72 hours and become weak. Another convergence line over southwest of South Africa is expected to move eastwards in the next 48 to 72hours and exit along the east coast according to the GFS Model.

At 700hPa level, a convergence line over south Chad extends to Central Africa Republic and Cameroon in the next 24 to 48 hours. A cyclonic convergence over DRC is

expected to weaken during the next 48 hours. Over eastern part of South Africa a convergence line is expected to develop in the next 48 hours. Over East Africa, the Near Equatorial Trough (NET) is expected to extend to the northeastern part of Tanzania in the next 72 to 96 hours with likelihood of eastward propagating strong cyclonic convergence towards the end of forecast period.

At 200hPa, zone of strong wind (>50Kts) is inclined further north. The Sub Tropical westerly Jet over the southern Hemisphere is expected to be initially stronger over South Africa and then weakens as it moves off the east coast across southern Madagascar. The wind speed associated with the Jet is expected to be in the order of 110 to 130Kts during the forecast period.

In the coming four days, there is an increased chance for rainfall to exceed 20mm per day over the CAB region, eastern parts of the Gulf of Guinea countries and East African region, with chances of locally heavy rainfall over, Congo, Gabon, Eq. Guinea, Cameroon, DRC and Uganda. Also heavy rainfall is Likely over the east coast of Tanzania and locally over northern part of Angola. Pockets of moderate rainfall are likely to occur over the west coast of the Gulf of Guinea countries and along the Botswana and South Africa border.

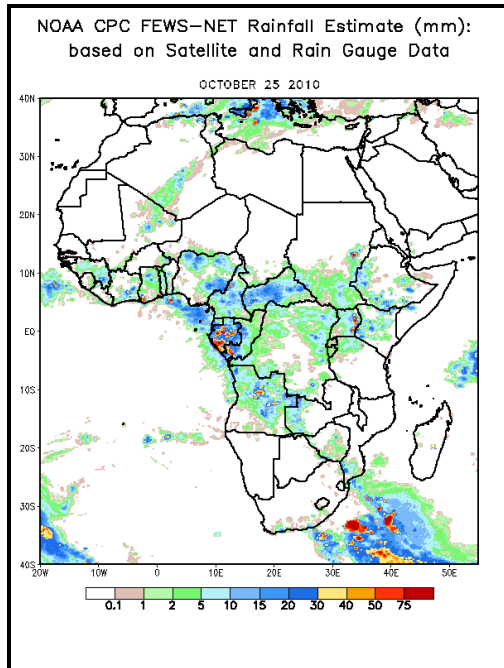
2.0. Previous and Current Day Weather Discussion over Africa (25 – 26 October 2010)

2.1. Weather assessment for the previous day (25 October 2010):

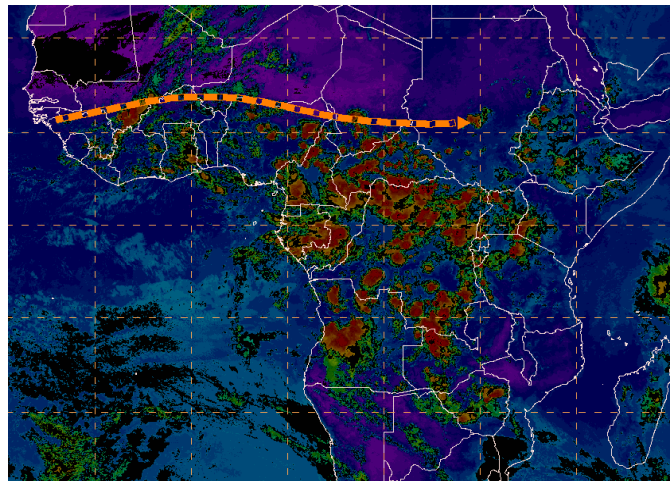
During the previous day, locally heavy rainfall was observed over Gabon, Southwest of Congo and eastern Uganda.

2.2. Weather assessment for the current day (26 October 2010):

Intense clouds are observed over DRC, eastern parts of Lake Victoria basin, Congo, eastern Gabon and over Angola.



IR Satellite Image, Valid 1622Z, October 26, 2010 and
position of ITD (based on 1200Z Surface Analysis)



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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