

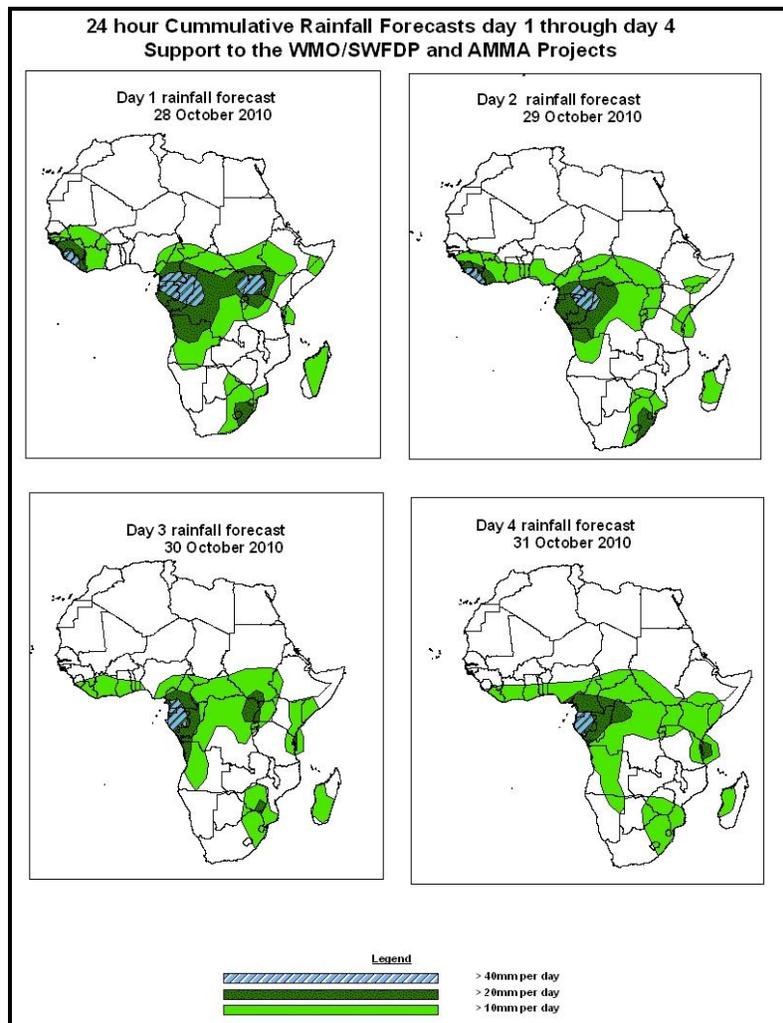


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 28 OCTOBER – 06Z of 31 OCTOBER 2010, (Issued at 14:00Z of 27 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 eastern parts of the Gulf of Guinea countries, CAB region, and East African region, with chances of locally heavy rainfall over Congo, Gabon, Eq. Guinea, Cameroon, DRC and Uganda. Also moderate to heavy rainfall is Likely over Liberia, Sierra Leone and the east coast of Tanzania. Pockets of moderate rainfall are likely to occur locally along the South Africa east coast and over the Botswana and South Africa border.

1.2. Models Comparison and Discussion-Valid from 00Z of 27 OCTOBER 2010

The GFS and UKMET models indicate a broad area of a cut off low across Chad to Sudan while the ECMWF still maintains a trough from Mali across the same region. A low pressure over the Indian Ocean is in the vicinity of the East Africa coastline. Another cut off low pressure system moved from Angola / Botswana border into Botswana and is expected to maintain a trough in the next 48 to 72 hours.

The seasonal low pressure system (Meridional component of the ITCZ) over DRC is expected to move over the western DRC and Congo during the next 48 hours according to GFS, UKMET and ECMWF models. Also an extension of a trough to Zambia from this system is expected in the next 48 hours. 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 eastern Botswana extending to Zimbabwe and South Africa.

The southern hemisphere High pressure system (St. Helena) extends a weak ridge towards the southeast of South Africa. The East African ridge is likely to be weakening and retreat southwards according to the GFS, ECMWF and UKMET model predictions. The Mascarene high pressure is very weak and remains displaced eastwards.

At 850hPa level, a convergence line over border of Chad and Cameroon is expected to weaken slightly in the next 24 hours. A cyclonic convergence over southern Ethiopia/Sudan border is expected to move slightly southwards and becomes weak towards the end of the forecast period. Another convergence line over South Africa is expected to move eastwards in the next 24 to 48 hours and exit along the east coast according to the GFS Model.

At 700hPa level, a convergence line over Central Africa Republic and Cameroon south extends to south east Nigeria in the next 24 hours. A convergence line over Botswana is expected to persist during the next 24 to 48 hours. Over East Africa, the Near Equatorial Trough (NET) is expected to extend to northeastern Tanzania in the next 24 to 96 hours with likelihood of eastward propagating cyclonic convergence.

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 during the next 24 to 72 hours. 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 eastern parts of the Gulf of Guinea countries, CAB region, and East African region, with chances of locally heavy rainfall over, Congo, Gabon, Eq. Guinea, Cameroon, DRC and Uganda. Also moderate to heavy rainfall is Likely over Liberia, Sierra Leone and the east coast of Tanzania. Pockets of moderate rainfall are likely to occur locally along the South Africa east coast and over the Botswana and South Africa border.

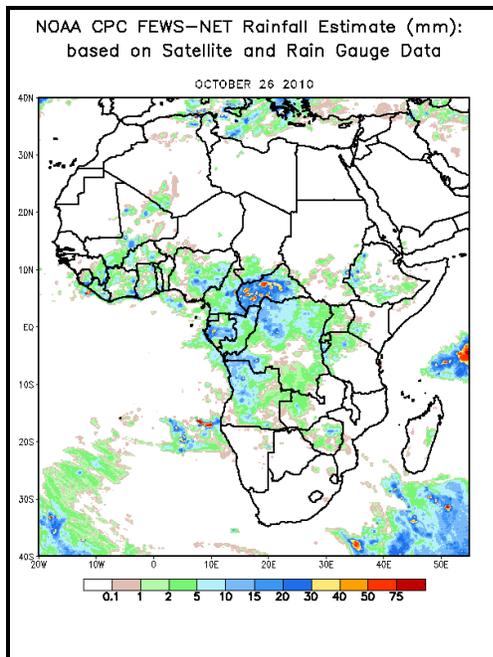
2.0. Previous and Current Day Weather Discussion over Africa (26 – 27 October 2010)

2.1. Weather assessment for the previous day (26 October 2010):

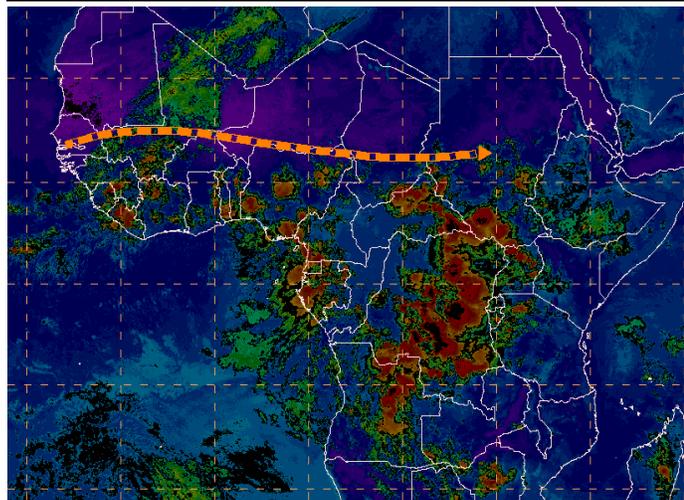
During the previous day, locally heavy rainfall was observed over Central Africa Republic and Gabon.

2.2. Weather assessment for the current day (27 October 2010):

Intense clouds are observed over DRC, Central Africa Republic, Southern Sudan and Angola.



IR Satellite Image, Valid 1722Z, October 27, 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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