

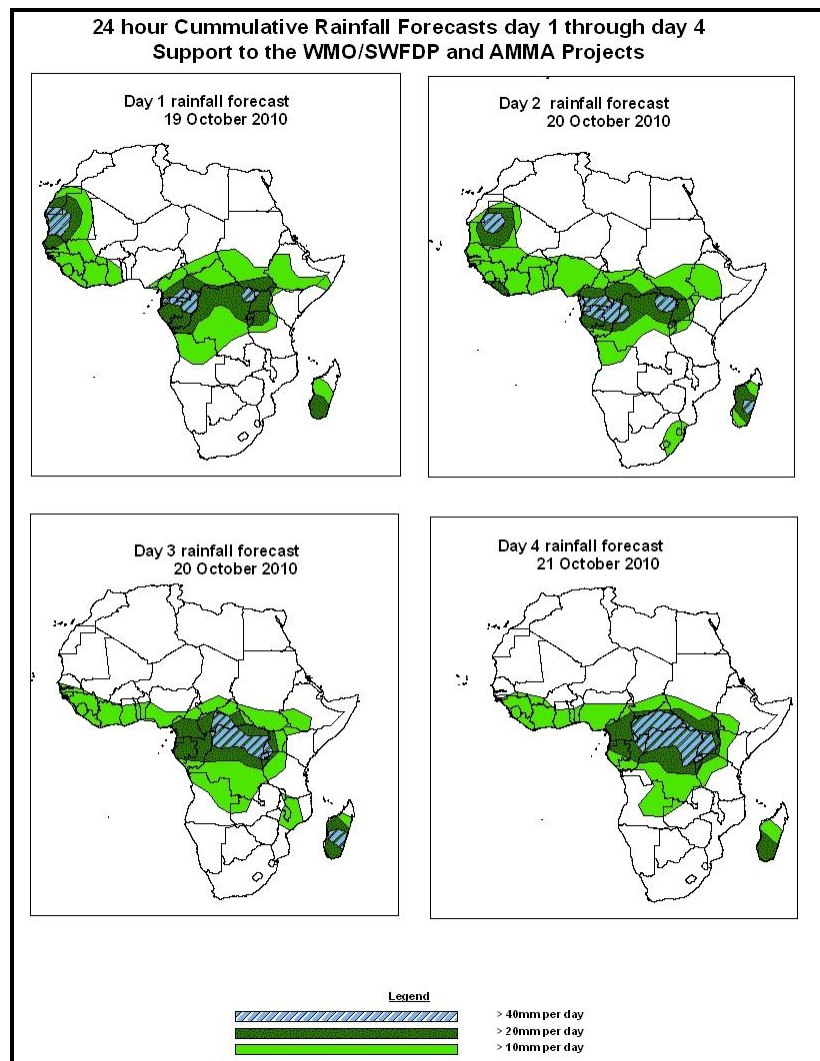


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 19 OCTOBER – 06Z of 21 OCTOBER 2010, (Issued at 14:00Z of 18 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 Central Africa, parts of the Gulf of Guinea Countries and CAB region with chances of locally heavy rainfall over DRC, Rwanda, Burundi and western Uganda. Also Western Sahara, Mauritania, Congo, Gabon and parts of Cameroon are expected to experience moderate to heavy rainfall during the next 24 to 96hours. Locally moderate rainfall is likely to occur over central and eastern parts of Madagascar during the next 48 to 72hours.

1.2. Models Comparison and Discussion-Valid from 00Z of 18 OCTOBER 2010

A cut off low pressure system over the boarder of Chad and Niger is expected to fill-up slightly in the next 48hours and then merge with another cut off low pressure system situated over Sudan to form a weak trough. The trough over Sudan is expected to fill up slightly from 1006 to 1007hPa during 72 to 96hours. According to GFS and UKMET models the seasonal low pressure system (Meridional component of the ITCZ) over DRC is relatively weak at 1010hPa and remains diffused over DRC at least for the next 48hours. However, the system is expected to move slightly eastwards during the 72hour cycle and extend a weak trough over Rwanda, Burundi and western parts of Tanzania with a cut off low pressure over western parts of Zambia and eastern Angola.

The southern hemisphere High pressure system (St Helena) is weak at a central pressure of 1021hPa and situated southwest of South Africa. The Mascarene high pressure is generally weak and remains displaced eastwards. The East African Ridge remains weak along the east African coast with its north extent limited to the border of Tanzania and Kenya.

At 850hPa level, a convergence line over southern parts of Niger extending to southern Chad and northern Nigeria is expected to persist during the next 24 to 72hours. Another convergence line is situated over the Gulf of Guinea and Gabon. This line of convergence is expected to move north towards the Central Africa Republic in 48 to 72hours and begin to weaken. A convergence line along the border of Sudan and Ethiopia is expected to weaken and extend further into central Sudan during the next 48hours. A weak convergence line over DRC extending to northern Angola is expected to become strong during the next 48hours and move slightly eastwards to the Lake Victoria region.

At 700hPa level, a localized cyclonic system is active over Gabon and parts of Central Africa Republic. This system is expected to move over Equatorial Guinea and become weak during the next 48 to 72hours. The Convergence line situated over DRC is expected to move slightly north to Central African Republic and likely to become stronger during the next 72 to 96hours. Another convergence line is along the border of Sudan and Ethiopia and is expected to shift towards southern Sudan in 72hours. The Near Equatorial Trough (NET) over the East African coast is still not well positioned for the region. However, a weak and localized line of convergence associated with a weak

through is expected to develop over the coast along the Tanzania and Kenya border and extend to Lake Victoria during the next 48 to 72hours.

At 500hpa, the African Easterly Jet is expected to remain weak with its associated wind speeds remaining below 25Kts in many areas of western and central African regions.

At 200hPa, zone of strong wind (>50Kts) is inclined further north. The strength of the Sub Tropical westerly Jet is expected to be 70 to 90Kts during this period over southern Algeria. The TEJ related strong winds are expected to remain weak (<25Kts) across much of the tropical African region during the forecast period.

In the coming four days, there is an increased chance for rainfall to exceed 20mm per day over Central Africa, parts of the Gulf of Guinea Countries and CAB region with chances of locally heavy rainfall over DRC, Rwanda, Burundi and western Uganda. Also Western Sahara, Mauritania, Congo, Gabon and parts of Cameroon are expected to experience moderate to heavy rainfall during the next 24 to 96hours. Locally moderate rainfall is likely to occur over central and eastern parts of Madagascar during the next 48 to 72hours.

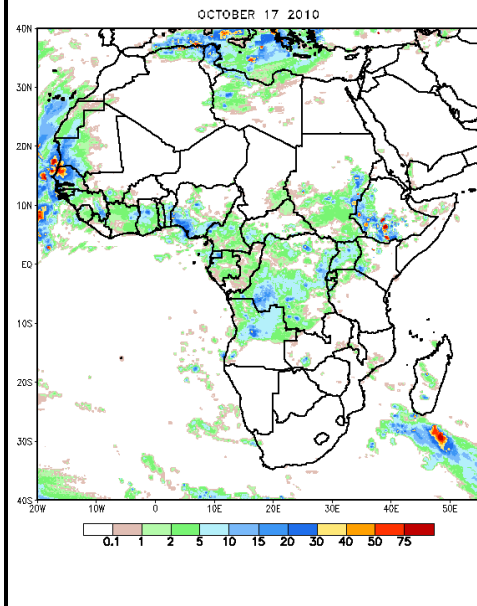
2.0. Previous and Current Day Weather Discussion over Africa (17 – 18 October 2010)

2.1. Weather assessment for the previous day (17 October 2010):

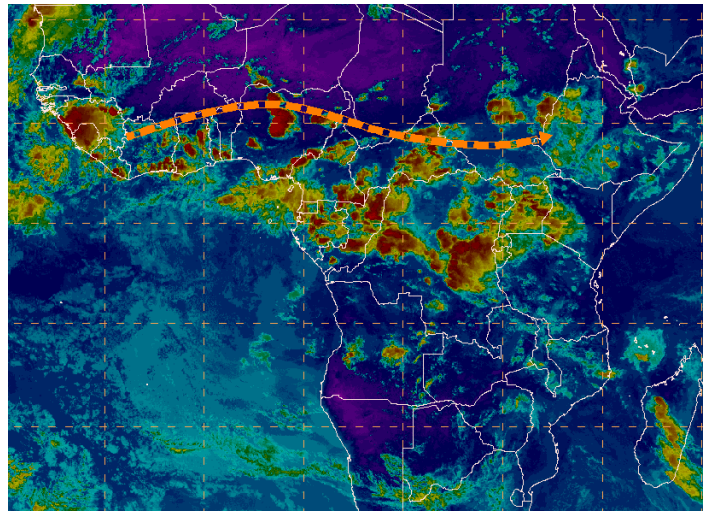
During the previous day, locally heavy rainfall was observed over Senegal, Guinea-Bissau and southwestern Ethiopia. Also moderate rainfall is indicated over DRC and south coast of Gulf of Guinea countries.

2.2. Weather assessment for the current day (18 October 2010): Intense clouds are observed over the central African countries, the CAB region, western parts of East Africa Countries and Gulf of Guinea countries.

NOAA CPC FEWS—NET Rainfall Estimate (mm):
based on Satellite and Rain Gauge Data



IR Satellite Image, Valid 1652Z, October 18, 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*

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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.*