

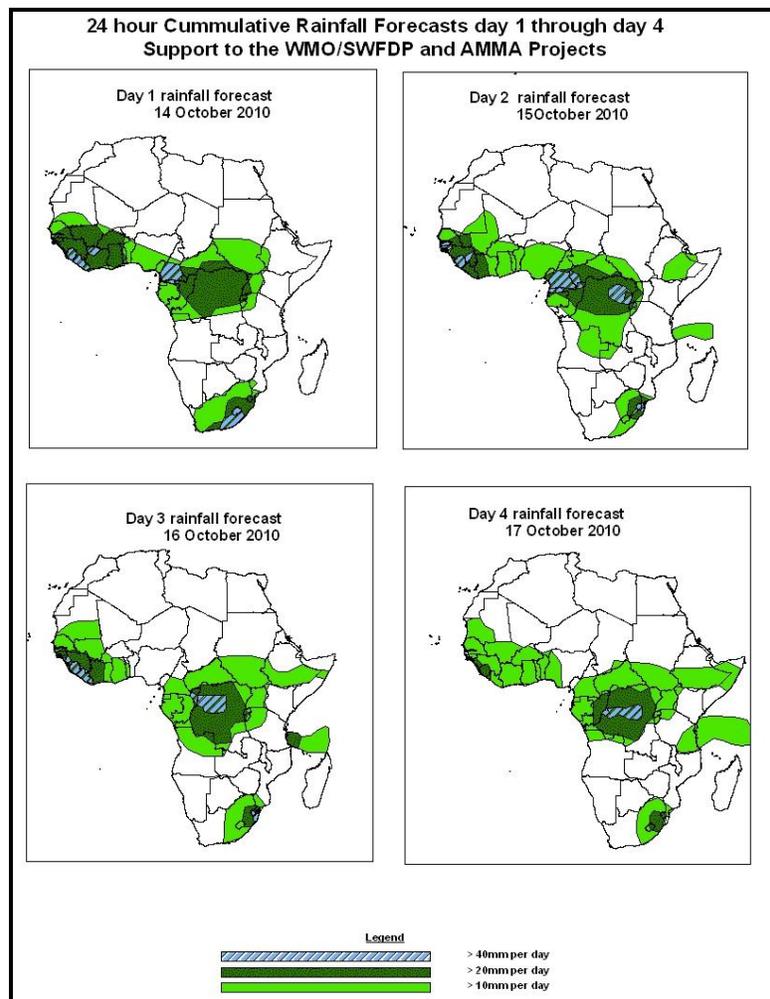


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 14 OCTOBER – 06Z of 17 OCTOBER 2010, (Issued at 14:00Z of 13 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 parts of West Africa coast and Central Africa countries with chances of locally heavy rainfall over Sierra Leone, Liberia and northern parts of Cote D'Ivoire. Cameroon together with the border regions of Congo and Central African Republic are also likely experience moderate to heavy rainfall. Over South Africa, Lesotho and Swaziland heavy rainfall is likely. Over parts of DRC, Rwanda and Burundi rainfall in excess of 20mm is also expected during the next 72 hours. The east coast of Tanzania is likely to experience some rainfall exceeding 20mm per day during the forecast period.

1.2. Models Comparison and Discussion-Valid from 00Z of 13 OCTOBER 2010

A cut off low pressure system situated over Sudan has central pressure of 1005hPa and 1004hPa according to GFS and UKMET models respectively. The ECMWF model indicates a central pressure of 1008hPa for this system in the next 24hours. A weak trough over Mauritania is expected to deepen slightly from 1011hPa to 1010hPa in the next 96hours. Another Cut off low over Chad and Niger extending a trough towards Mali is expected to deepen in 72 to 96hours. The seasonal low pressure system (Meridional component of the ITCZ) over DRC is at 1006hPa and extending a trough to the Lake Victoria region, Rwanda and Burundi countries during the next 48hours. This system is likely to retreat westwards over DRC during the 96hours cycle.

The southern hemisphere High pressure system (St Helena) is expected to weaken in the next 24hours from central pressure of 1032 to 1025hPa. Over the Indian Ocean, the Mascarene high pressure is generally weak and remains displaced eastwards. Therefore the East African Ridge is expected to remain very weak during the forecast period and its north extent will be limited to northern parts of Tanzania and occasionally up to southern parts of Kenya as predicted by GFS, ECMWF and UKMET modes.

At 850hPa, a cyclonic convergence over Guinea, Sierra Leone and Liberia is expected to persist during the next 24 to 48hours. This convergence is expected to move off the west coast in the next 72hours. The models indicate localized convergences over southwest Niger, Northern Nigeria and across southern Chad in 24 to 48hours. Another convergence line over Cameroon has extended to Equatorial Guinea and Congo during the past 24hours and it is expected to weaken gradually beyond 72hours. The convergence line over eastern DRC is expected to become more organized over the Lake Victoria Region and eastern parts of DRC in 24 to 48hours and then start to retreat westwards over DRC in phase with the weakening St Helen High pressure system.

At 700Hpa, a trough system associated with convergence line is active over eastern DRC extending southwards. Another trough is expected to develop over the west coast of Guinea in the next 72hours. A trough over Cameroon has already weakened into a convergence line over the region. The Near Equatorial Trough (NET) over the East African coast is gradually getting organized allowing easterly wind flow pattern towards parts of coastal Tanzania in 24 to 48hours. This pattern is likely to move gradually northwards along the East African coastline in 48 to 96 hours.

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 Jet is expected to be 70 to 90Kts during this period over Northern Mali. On the other hand, the TEJ related strong winds are expected to remain weak (25Kts) across much of the tropical African region during the forecast period.

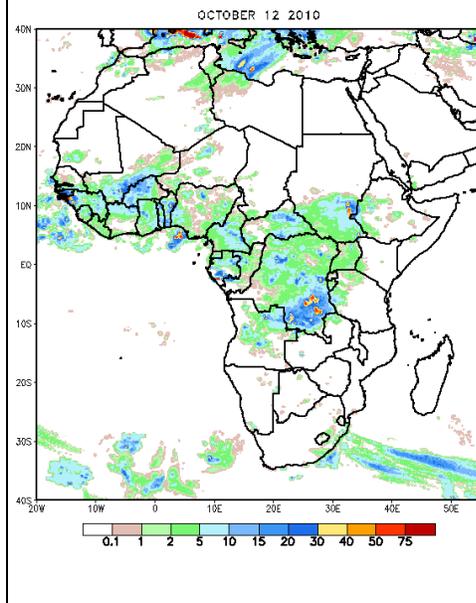
In the coming four days, there is an increased chance for rainfall to exceed 20mm per day over parts of West Africa coast and Central Africa countries with chances of locally heavy rainfall over Sierra Leone, Liberia and northern parts of Cote D'Ivoire. Cameroon together with the border regions of Congo and Central African Republic are also likely experience moderate to heavy rainfall. Over South Africa, Lesotho and Swaziland heavy rainfall is likely. Over parts of DRC, Rwanda and Burundi rainfall in excess of 20mm is also expected during the next 24 72hours. The east coast of Tanzania is likely to experience some rainfall exceeding 20mm per day during the forecast period.

2.0. Previous and Current Day Weather Discussion over Africa (12 October – 13 October 2010)

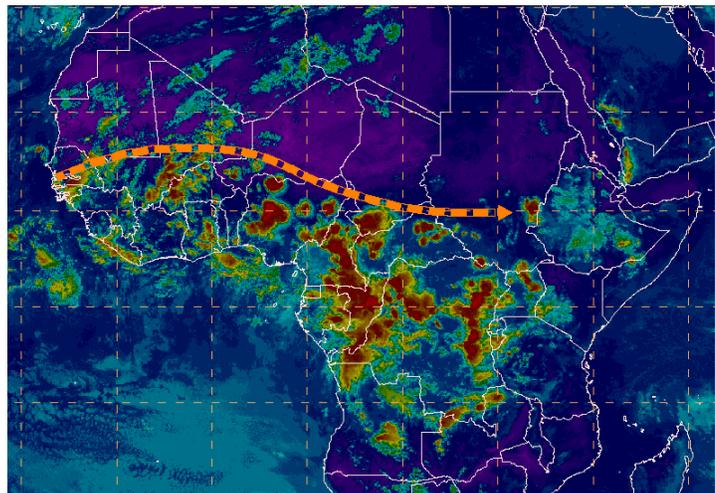
2.1. Weather assessment for the previous day (12 October 2010): During the previous day, moderate to locally heavy rainfall was observed over southeast parts of DRC and Gulf of Guinea Countries and few areas over Central Africa countries.

2.2. Weather assessment for the current day (13 October 2010): Intense clouds are observed over the central African countries, the CAB region and Gulf of Guinea and southern Sahel countries.

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



IR Satellite Image, Valid 1652Z, October 13, 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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