

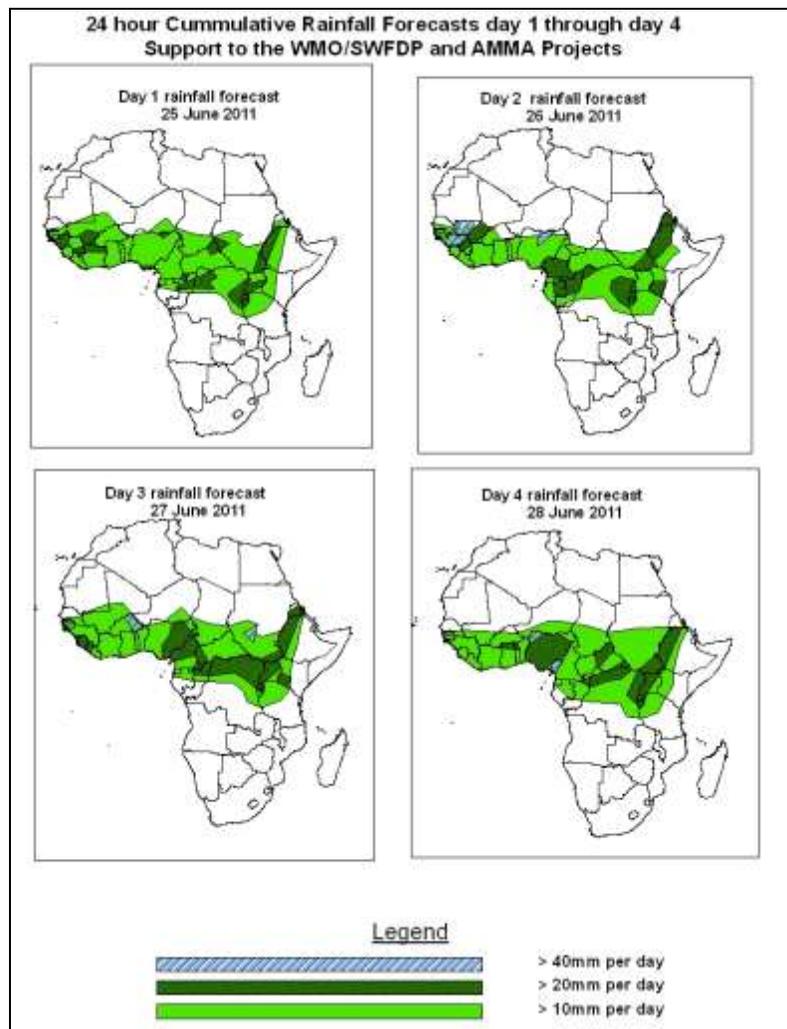


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 25 June– 06Z of 28 June 2011, (Issued at 10:30Z of 24 June 2011)

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 next four days, there is an increased chance for heavy rainfall over Guinea Bissau, Guinea, Sierra Leone, Liberia, Ghana, Burkina-Faso, Nigeria, Cameroon, Congo, Ruanda, Burundi parts of CAR and southern Chad due to active easterly wave activity and its associated westward propagating storms. The seasonal cross-equatorial flow across East Africa is expected to continue enhancing rainfall over parts of eastern Sudan and western Ethiopia. Moderate to heavy rainfall is also expected in the vicinity of Lake Victoria due to combined effect of active CAB and localized weather systems.

1.2. Models Comparison and Discussion-Valid from 00Z of 24 June 2011

According to the GFS, ECMWF and UKMET models, the monsoon trough with its associated heat lows across the Sahel region is expected to maintain its east-west orientation during the forecast period. The central pressure value along its western end (near Mauritania and Mali) varies from 1002mb to 1008mb during the forecast period. On the other hand, the heat low over the central African region and Sudan is expected to have a central pressure of 1005mb during the forecast period. On the other hand, the East African ridge across southeast and East Africa is expected to maintain its intensity during the forecast period.

The St. Helena High pressure system over the southeast Atlantic Ocean is expected to maintain a central pressure value of 1032hpa through 24 to 72 hours and tends to intensify to 1036hpa by 96 hours. The Mascarene high pressure system over the southwest Indian Ocean is expected to maintain a central pressure value of 1020hpa during the forecast period.

At the 850hpa level, the GFS model tends to maintain abundant moisture influx into West Africa from the Atlantic Ocean. This moist air is expected to converge across the Gulf of Guinea and southern Sahel areas. Moreover, the seasonal southeasterly moist flow from the Indian Ocean across East Africa, turning into a southwesterly flow as it passes Sudan, is expected to converge over parts of Sudan and western Ethiopia during the forecast period. On the other hand, dry northeasterly winds are expected to continue dominating the flow over northern and portions of central Sudan.

At the 700hPa level, a zone of strong northeasterly winds with its associated easterly wave is expected to propagate across the Gulf of Guinea region between Chad and the west coast of West Africa during the forecast period.

At 500hpa, easterly winds with moderate intensity (10 to 25 knots) are expected to dominate the flow over western Sudan, central African and the Gulf of Guinea and southern Sahel region, with the stronger winds associated with the African easterly Jet are expected over Mali, Guinea, southern Mauritania, Sierra Leone and southern Niger during the forecast period.

A zone of strong wind (>130Kts) at 200hpa level associated with the Sub Tropical westerly Jet is expected in the southern hemisphere across Indian Ocean during the forecast period.

In the next four days, there is an increased chance for heavy rainfall over Guinea Bissau, Guinea, Sierra Leone, Liberia, Ghana, Burkina-Faso, Nigeria, Cameroon, Congo, Ruanda, Burundi parts of CAR and southern Chad due to active easterly wave activity and its associated westward propagating storms. The seasonal cross-equatorial flow across East Africa is expected to continue enhancing rainfall over parts of eastern Sudan and western Ethiopia. Moderate to heavy rainfall is also expected in the vicinity of Lake Victoria due to combined effect of active CAB and localized weather systems.

2.0. Previous and Current Day Weather Discussion over Africa (23 – 24 June 2011)

2.1. Weather assessment for the previous day (23 June 2011): During the previous day, a combination of moderate and heavy rainfall was observed over Mali, Liberia, Cote D'Ivoire, Ghana, part of Nigeria, southern Sudan, part of Ethiopia and part of DRC.

2.2. Weather assessment for the current day (24 June 2011): Intense clouds are observed over Guinea-Bissau, Sierra Leone, Liberia, D'Ivoire, Ghana, Benin, Togo, parts of Central African Republic and western Ethiopia.

