

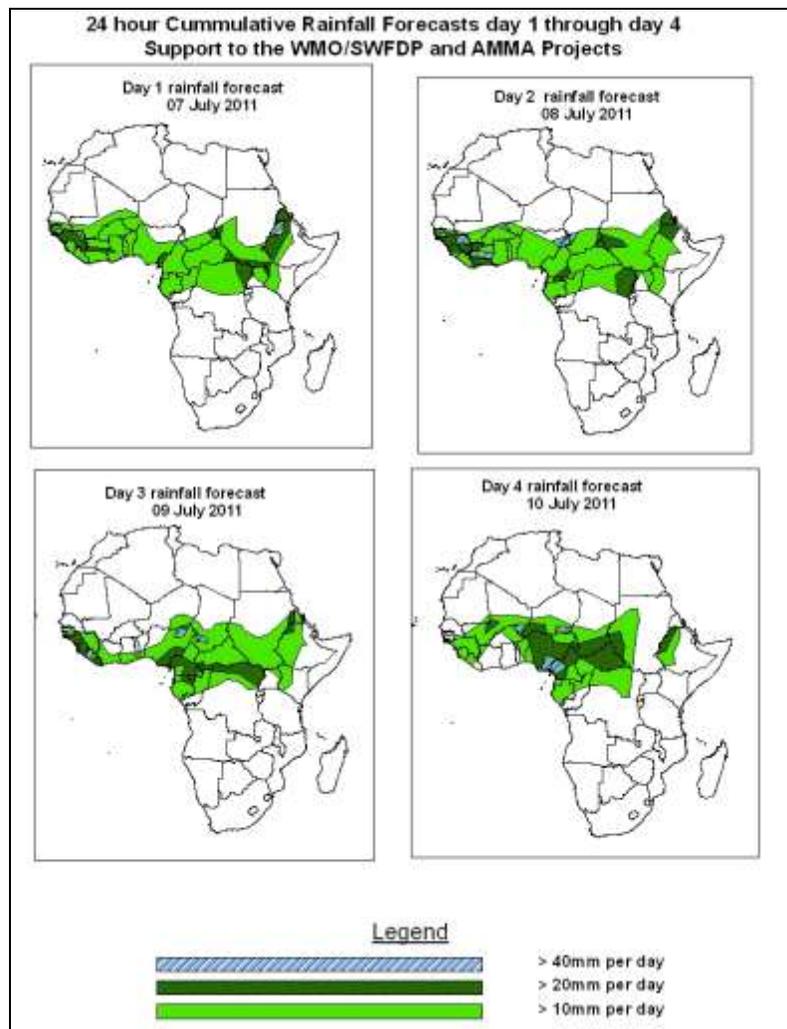


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 07 July– 06Z of 10 July 2011, (Issued at 10:15Z of 06 July 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 western and central parts of the Gulf of Guinea and parts of central African region due to westward propagating wave and its associated thunderstorm activity. Western Eritrea, western Ethiopia, southern Sudan and northern DRC are also expected to receive moderate to heavy rainfall due to strong cross equatorial flow and its associated convergence in the Horn of Africa.

1.2. Models Comparison and Discussion-Valid from 00Z of 06 July 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 1007mb during the forecast period. On the other hand, the heat low over central African region and Sudan is expected to remain 1005mb during the forecast period. The Iberian Peninsula is expected to have pressure values varying from 995 to 998hpa during the forecast period. The East African ridge across southeast and East Africa is expected to strengthen through 48 to 96 hours.

The St. Helena High pressure system over southeast Atlantic Ocean is expected to have central pressure value of 1036hpa during 24 to 48 hrs and tends to weaken progressively to 1032hpa in 72hours and 1028hpa by 96hours. The Mascarene high pressure system over southwest Indian Ocean is expected to maintain central pressure value of 1024hpa through 24 to 48 hours and tends to intensify to 1028hpa in 72hours and 1032hpa by 96hours.

At the 850hpa level, the GFS model tends to maintain abundant moisture influx into eastern parts of the Gulf of Guinea countries throughout the forecast period. A lower tropospheric cyclonic circulation is expected to form over western parts of West Africa and is expected to move westwards 72 to 96 hours. Moreover, the seasonal southeasterly moist flow from the Indian Ocean across East Africa, turning into southwesterly flow as it passes northern DRC and 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 700mb level, an easterly wave with its associated convective activity is expected to propagate between western Nigeria and the west coast of West Africa through 24 to 96 hours.

At 500hpa, easterly winds with moderate intensity (10 to 20knots) 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 Burkina-Faso, Mali, Guinea, Guinea-Bissau, Senegal and Mauritania, during the forecast period.

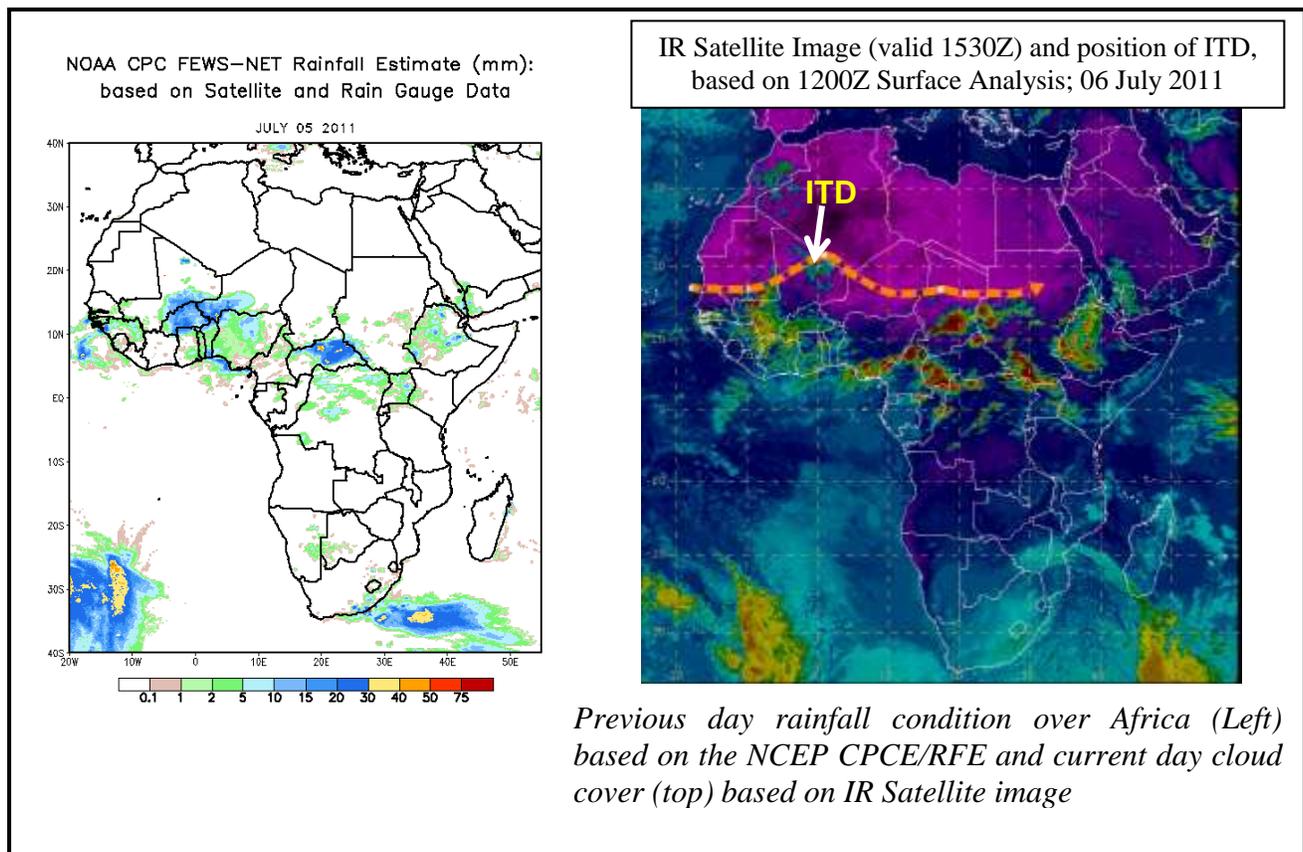
A zone of strong wind (>130Kts) at 200hpa level associated with the Sub Tropical westerly Jet is expected in the southern hemisphere across Atlantic and Indian Ocean Swaziland and south Africa through 24 to 48hours and tend to weaken to (>110Kts) in 72hours and back to (>130Kts) by 96 hours.

In the next four days, there is an increased chance for heavy rainfall over western and central parts of the Gulf of Guinea and parts of central African region due to westward propagating wave and its associated thunderstorm activity. Western Eritrea, western Ethiopia, southern Sudan and northern DRC are also expected to receive moderate to heavy rainfall due to strong cross equatorial flow and its associated convergence in the Horn of Africa.

2.0. Previous and Current Day Weather Discussion over Africa (05 July -06 July 2011)

2.1. Weather assessment for the previous day (05 July 2011): During the previous day, light to moderate rainfall was observed over Guinea-Bissau, Guinea, western Mali, Burkina Faso, southern Niger, CAR and part of Kenya

2.2. Weather assessment for the current day (06 July 2011): Intense clouds are observed over Mali, northern Cote d'Ivoire, southern Nigeria, part of Cameroon, southern Chad and Sudan, CAR, western Ethiopia, part of DRC and Uganda.



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