

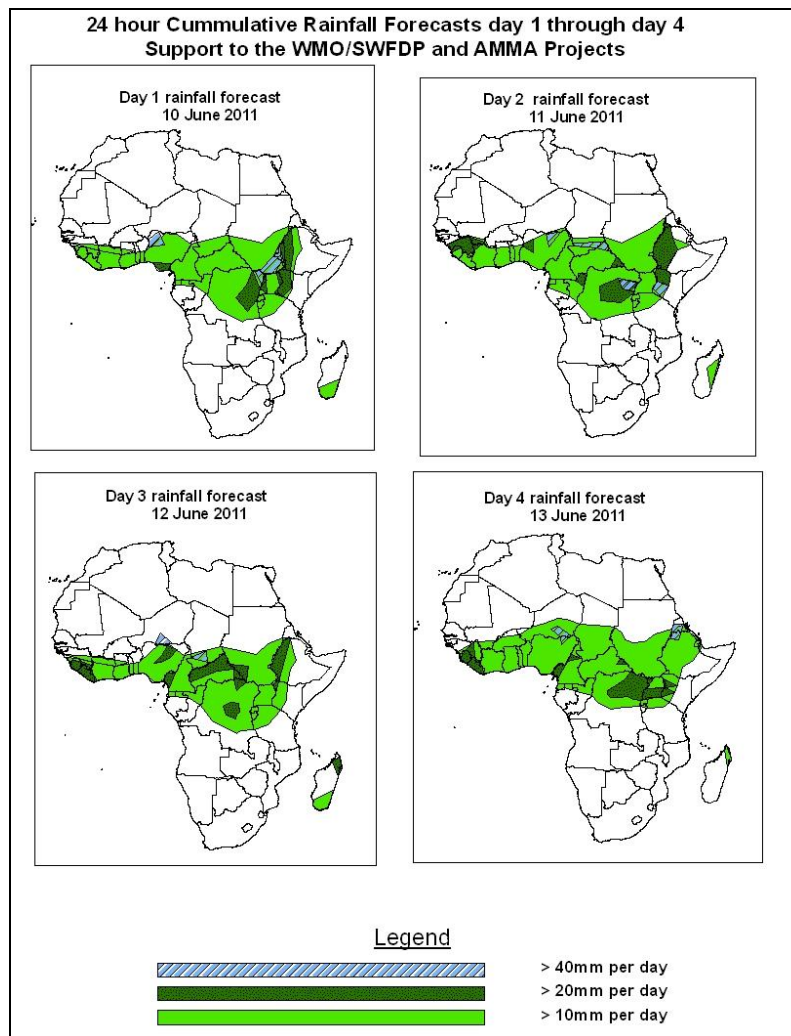


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 10 June– 06Z of 13 June 2011, (Issued at 11:00 Z of 09 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 northeastern DRC, parts of Uganda, western Kenya, southeastern Sudan, Rwanda and Burundi, due to active lower tropospheric convergence in the CAB region. Moreover, moist cross equatorial flow across the Horn of Africa is expected to maintain moderate to heavy rainfall over western Ethiopia. Localized heavy rains are also expected over Nigeria and across the southwest coast of West Africa.

1.2. Models Comparison and Discussion-Valid from 00Z of 09 June 2011

According to the GFS, ECMWF and UKMET models, the east-west oriented trough, associated with heat lows across the Sahel region, Sudan and Iberian Peninsula is expected to have pressure values varying from 998 and 1007hpa during the forecast period. On the other hand, the East African ridge is expected to remain active across East Africa with its northern extent reaching the latitudes of Ethiopia during the forecast period.

The St. Helena High pressure system over southeast Atlantic Ocean is expected to maintain a central pressure value of 1024hpa through 24 hours and intensifying to 1028hpa in 48 hours and back to 1024hpa through 72 to 96 hours. The Mascarene high pressure system over the southwest Indian Ocean is expected to maintain central pressure value of 1024hpa in 24 and tends to intensify to 1028hpa in 48 to 72 hours and to weaken to 1020hpa by 96 hours.

At the 850hpa level, the GFS model maintains strong convergence in the northern parts of CAB region between westerly winds from the Atlantic Ocean and easterly winds from the Indian Ocean through 24 to 48 hours. Moreover, the seasonal southeasterly moist wind from Indian Ocean across East Africa turning into southwesterly flow as it passes across the Horn of Africa, partly converging into Ethiopia. On the other hand, dry northeasterly winds are expected to continue dominating the flow over northern and portions of central Sudan. The seasonal convergence between moist winds from the Atlantic Ocean and dry winds from northern Africa is expected to be more active over central and eastern parts of the Gulf of Guinea and along the southwest coast of West Africa., .

At the 700hPa level, zone of strong easterly flow is expected to propagate across the Gulf of Guinea between Nigeria and the west coast of West Africa through 24 to 96 hours. Southeasterly winds from the Indian Ocean across southern DRC are also expected to reach the western equatorial regions through 48 to 96 hours.

At 500hpa, easterly winds with moderate intensity (10 to 25knots) are expected to dominate the flow over 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 Chad, Niger, Nigeria, Burkina-Faso, Benin and Mali during the forecast period.

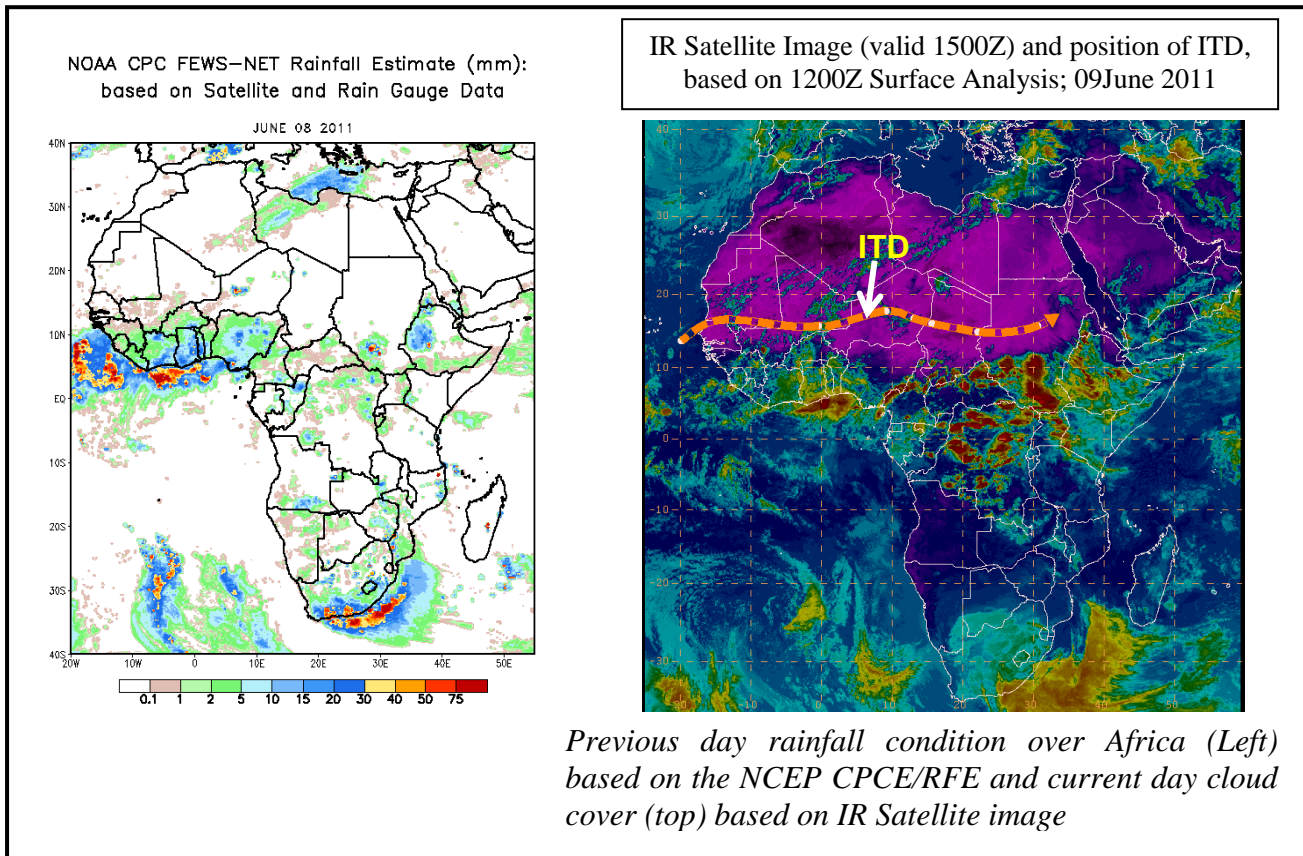
A zone of strong wind (>90Kts) at 200hpa level associated with the Sub Tropical westerly Jet is expected to propagate eastwards across Algeria, Tunisia, Libya and Mediterranean during the forecast period. On the other hand, strong winds (>110Kts) associated with the Sub-Tropical Westerly Jet is expected in the southern hemisphere across Atlantic and Indian Ocean, Southern Africa , Namibia and Lesotho through 24 to 48 hours and tends to intensifying to (>130Kts) in 72 hours and back to (>110Kts) by 96 hours.

In the next four days, there is an increased chance for heavy rainfall over northeastern DRC, parts of Uganda, western Kenya, southeastern Sudan, Rwanda and Burundi, due to active lower tropospheric convergence in the CAB region. Moreover, moist cross equatorial flow across the Horn of Africa is expected to maintain moderate to heavy rainfall over western Ethiopia. Localized heavy rains are also expected over Nigeria and across the southwest coast of West Africa.

2.0. Previous and Current Day Weather Discussion over Africa (08 – 09 June 2011)

2.1. Weather assessment for the previous day (08 June 2011): During the previous day, a combination of moderate and heavy rainfall was observed along the coast of Gulf of Guinea, parts of Sudan, parts of Ethiopia and Southern Africa.

2.2. Weather assessment for the current day (09 June 2011): Intense clouds are observed over southern Ghana, parts of Nigeria, Central Africa Region, and Ethiopia.



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