

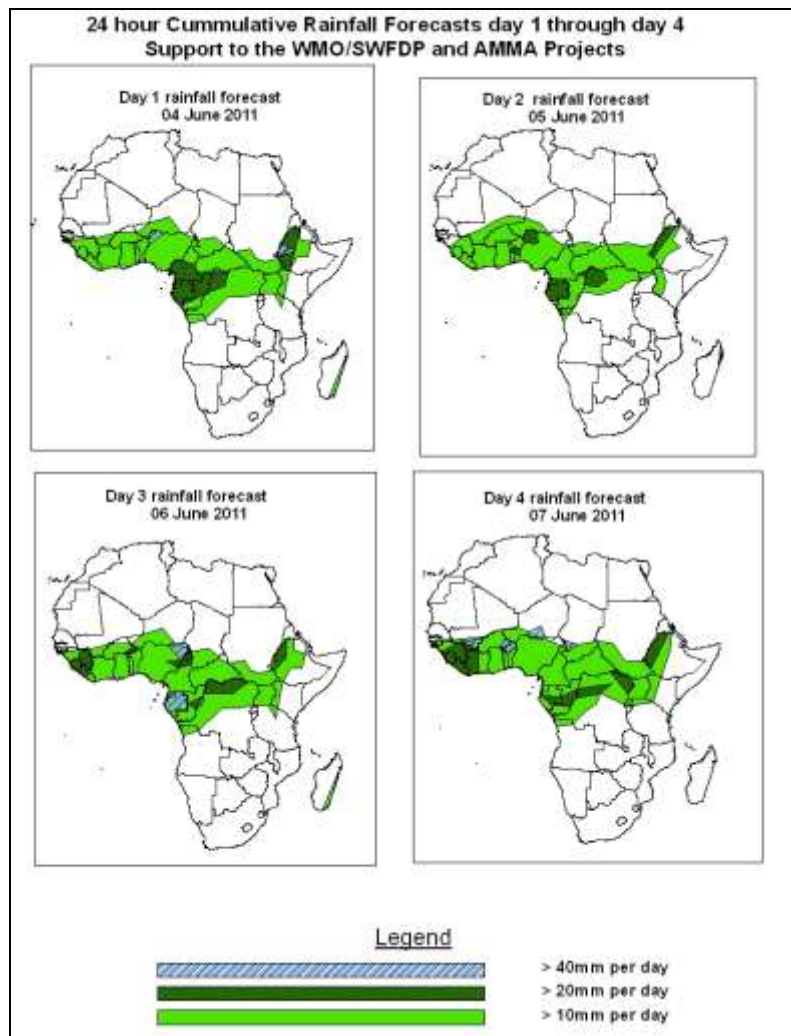


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 04 June– 07Z of 06 June 2011, (Issued at 10:00 Z of 03 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, the strong cross equatorial flow across East Africa and the prevailing easterly flow between Sudan and western equatorial Africa is expected continue enhancing rainfall over Cameroon, Gabon, Congo and northern DRC and western Ethiopia. Moist winds from the Atlantic Ocean and westward propagating storms across West Africa are expected to elevate the chances of heavy rainfall over portions of Nigeria, Liberia and Sierra Leone. Locally heavy rainfall is also expected to continue over the Lake Victoria region.

1.2. Models Comparison and Discussion-Valid from 00Z of 03 June May 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 1000 and 1008hpa 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 in 24 hours and tends to intensify progressively to 1028hpa in 48 hours, 1032hpa in 72 and 96 hours. The Mascarene high pressure system over the southwest Indian Ocean is expected to maintain central pressure value of 1020hpa in 24 and 48 hours and tends to intensify to 1024hpa in 72 hours and 1028hpa by 96 hours.

At the 850hpa level, the GFS model maintains strong moist cross-equatorial flow East Africa. This flow will diverge over Sudan, with part of it converging across western Ethiopia, while the other part flows towards western and central equatorial region. On the other hand, dry northeasterly winds are expected to continue dominating the flow over northern and 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. The north-south oriented convergence in the CAB region is expected to remain active in the vicinity of Lake Victoria during the forecast period.

At the 700hPa level, Strong northeasterly to easterly winds are expected to dominate the flow between Sudan and coastal West Africa across the Gulf of Guinea region, with zone of strong easterlies is expected to propagate across West Africa through 24 to 96 hours.

At 500hpa, easterly winds with moderate intensity (10 to 20knots) 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 eastern Burkina-Faso and Chad through 96 hours.

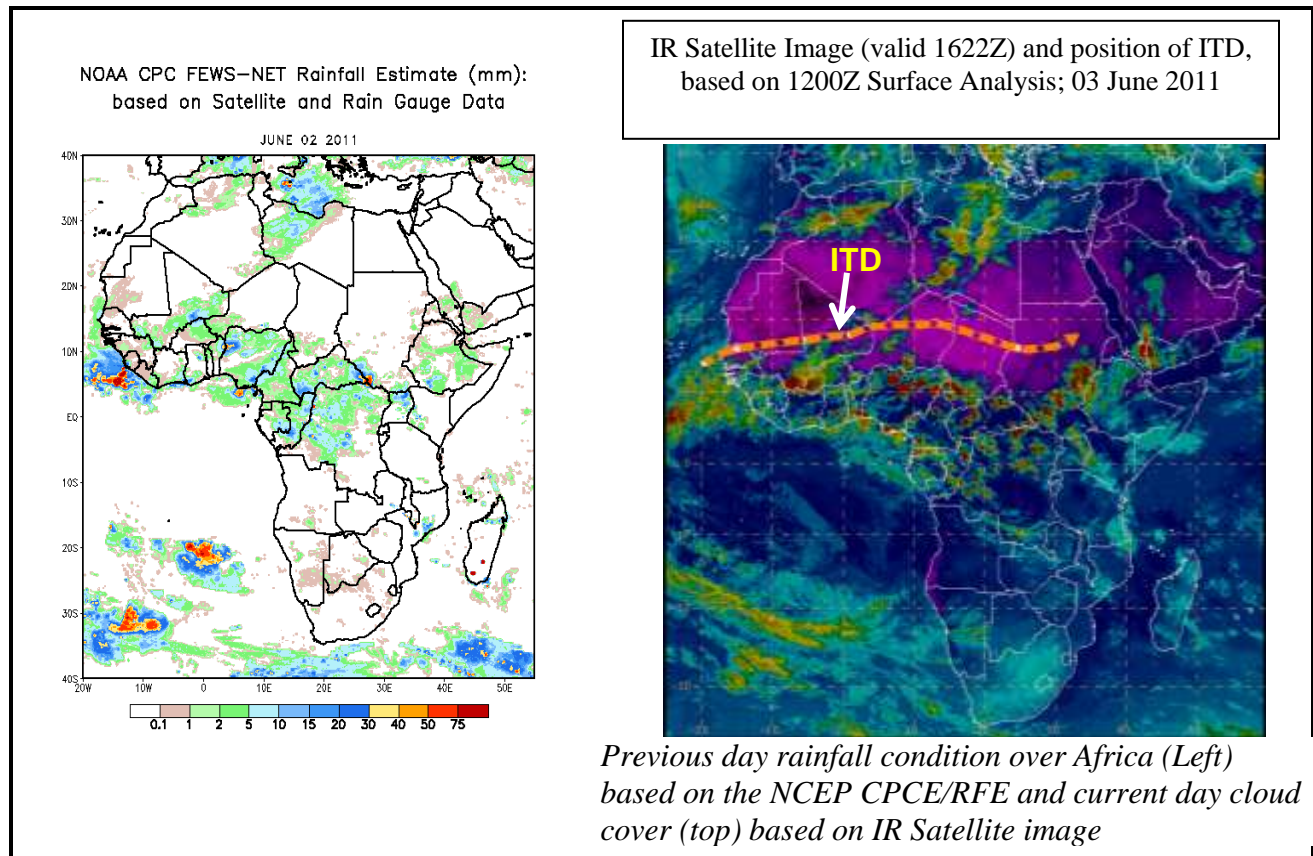
A zone of strong wind (>70Kts) at 200hpa level associated with the Sub Tropical westerly Jet is expected to propagate eastwards across Morocco, Algeria and mid-east through 24 to 48 hours and tend to intensifying to (>90Kts) in 72 hours and back to (>70Kts) by 96 hours. On the other hand, strong winds (>110Kts) associated with the Sub-Tropical Westerly Jet is expected in the southern hemisphere across Atlantic and Indian Ocean, Southern Africa, Botswana and Swaziland through 24 hours and tends to intensifying to (>130Kts) in 48 and weaken to (>110Kts) in 72 hours and intensifying to (>130Kts) by 96 hours.

In the next four days, the strong cross equatorial flow across East Africa and the prevailing easterly flow between Sudan and western equatorial Africa is expected continue enhancing rainfall over Cameroon, Gabon, Congo and northern DRC and western Ethiopia. Moist winds from the Atlantic Ocean and westward propagating storms across West Africa are expected to elevate the chances of heavy rainfall over portions of Nigeria, Liberia and Sierra Leone. Locally heavy rainfall is also expected to continue over the Lake Victoria region.

2.0. Previous and Current Day Weather Discussion over Africa (02 May –03 June 2011)

2.1. Weather assessment for the previous day (02 May 2011): During the previous day, a combination of moderate and heavy rainfall was observed over, southern Liberia and Sierra Leone, Cameroon, CAR, Congo and parts of DRC and Ethiopia.

2.2. Weather assessment for the current day (03 June 2011): Intense clouds are observed over western Guinea, southern Mali and Burkina-Faso, central African countries and parts of Sudan and Ethiopia.



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