

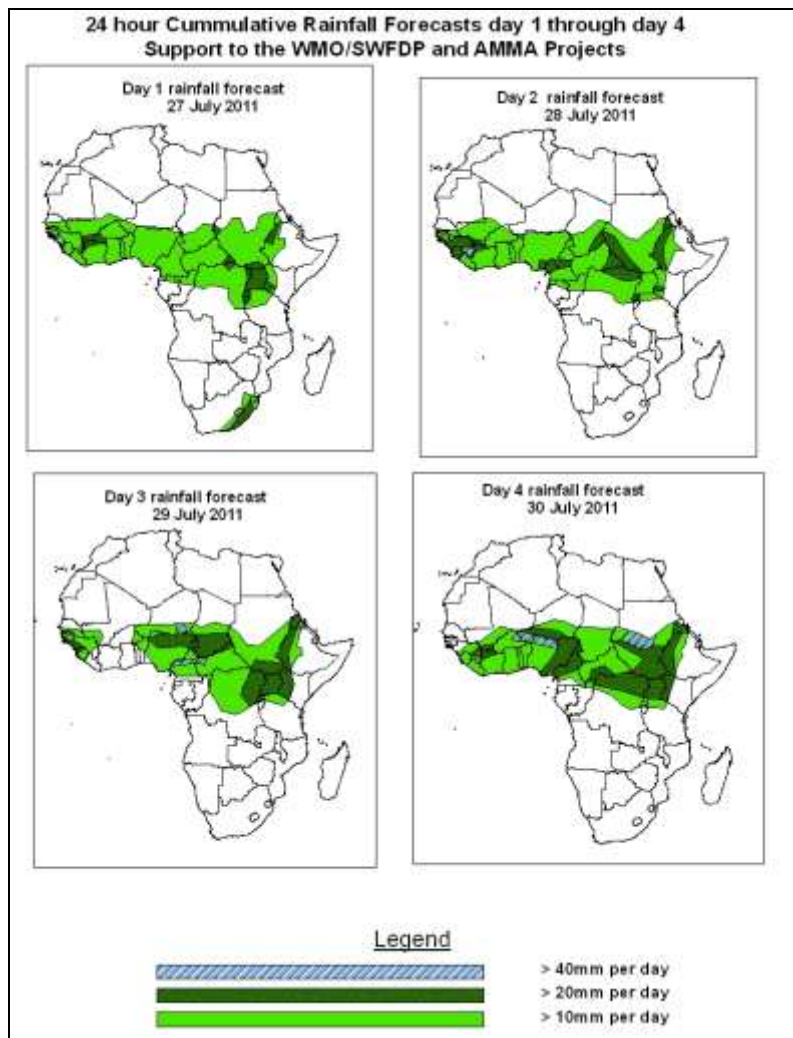


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 27 July– 06Z of 30 July 2011, (Issued at 10:00Z of 26 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, enhanced rainfall is expected over parts of western and central Africa due to westward propagating waves and their associated convective activity. Hence, there is an increased chance for heavy rainfall over Sierra Leone, Liberia, Guinea, eastern Burkina Faso, northern Nigeria and southern Chad. The active meridional convergence in the CAB region and the seasonal monsoon flow is also expected to maintain moderate to heavy rains over parts of northern DRC, Uganda, western Kenya, Sudan and Ethiopia.

1.2. Models Comparison and Discussion-Valid from 00Z of 26 July 2011

According to the NCEP/WRF, 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 of the heat low near Mali varies between 1003 to 1008mb during the forecast period according to GFS, UKMET and ECMWF model. The heat low over Sudan maintains a central pressure value of 1005mb during the forecast period according to the GFS model. The East African ridge across southeast and East Africa is expected to weaken gradually during the forecast period.

The St. Helena High pressure system over the southeast Atlantic Ocean is expected to maintain a central pressure value of 1028 through 24 to 96 hours. The Mascarene high pressure system over the southwest Indian Ocean is expected to weaken progressively, with its central pressure value changing from 1028hpa in 24 hours to 1024 in 48 to 72 hours and 1020hpa by 96 hours.

At the 850hpa level, a cyclonic circulation over Mauritania and western Mali is expected to move westwards across southern Senegal through 24 to 48 hours. Another strong lower tropospheric convergence over the border between Chad and Niger is expected to move towards Mauritania across Burkina Faso and Mali during the forecast period. The seasonal convergence in the CAB region is expected to remain active during the forecast period. The southwesterly flow across the Gulf of Guinea is expected to dominate the flow over central African countries and parts of the GHA region throughout the forecast period.

At the 700mb level, an easterly wave is expected to propagate across Burkina Faso, across Guinea, southern Mali and Senegal during the forecast period.

At 500hpa, easterly winds with moderate intensity (10 to 25knots) 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 in the region extending between Senegal and northern Chad, across Niger, Mali, Guinea, Burkina-Faso and southern Mauritania.

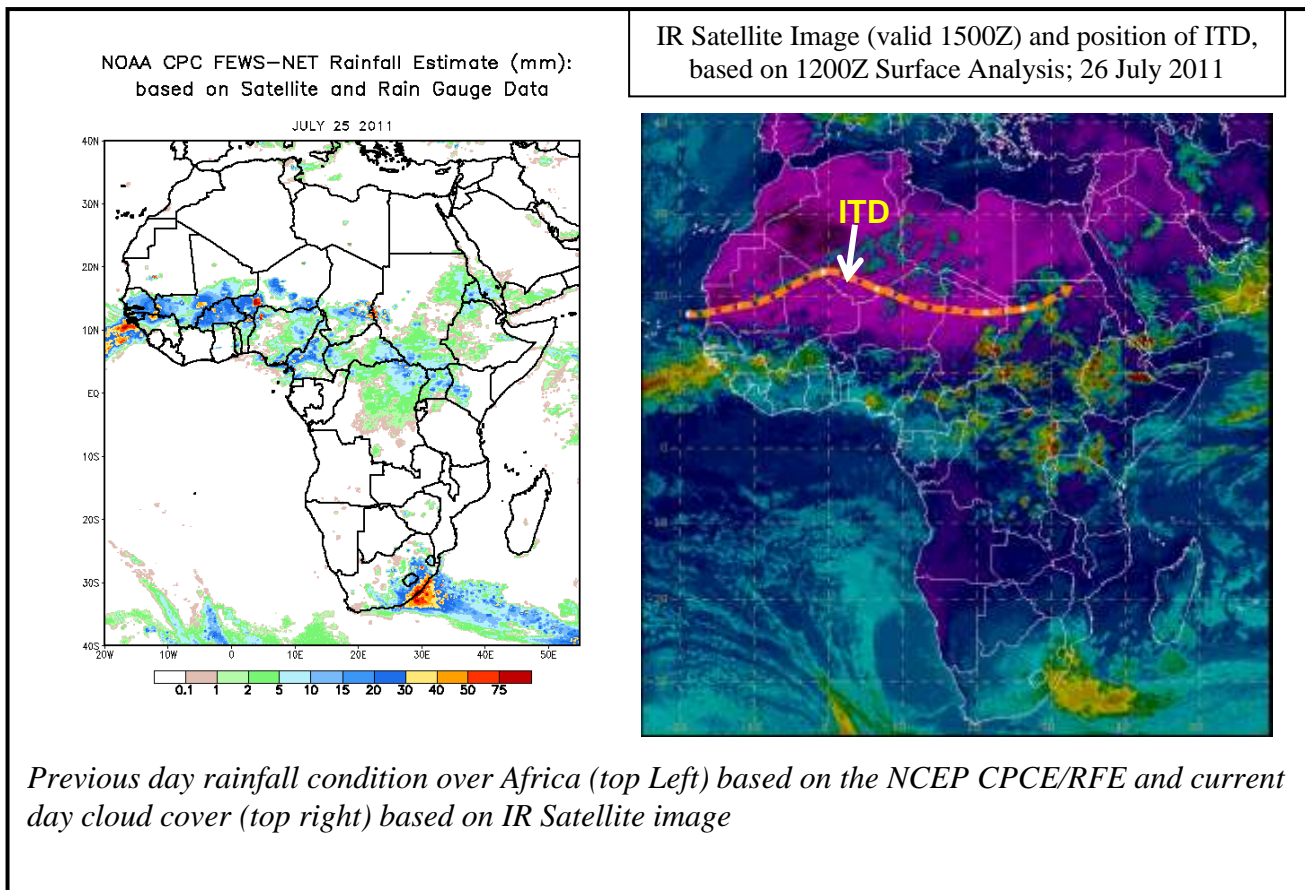
A zone of strong wind (>150Kts) at 200hpa level associated with the Sub Tropical westerly Jet in the southern hemisphere is expected to propagate between southeast Atlantic Ocean and southwest Indian Ocean across South Africa through 24 hours and it tends to weaken progressively to (>130Kts) in 48 to 72hours and to (>90Kts) through 96hrs.

In the next four days, enhanced rainfall is expected over parts of western and central Africa due to westward propagating waves and their associated convective activity. Hence, there is an increased chance for heavy rainfall over Sierra Leone, Liberia, Guinea, eastern Burkina Faso, northern Nigeria and southern Chad. The active meridional convergence in the CAB region and the seasonal monsoon flow is also expected to maintain moderate to heavy rains over parts of northern DRC, Uganda, western Kenya, Sudan and Ethiopia.

2.0. Previous and Current Day Weather Discussion over Africa (25 July - 26 July 2011)

2.1. Weather assessment for the previous day (25 July 2011): During the previous day, moderate to heavy rainfall was observed over Guinea, Guinea-Bissau, Mali, Burkina Faso, western Niger, northern Cameroon, northern DRC, and Uganda.

2.2. Weather assessment for the current day (26 July 2011): Locally intense clouds are observed over west Guinea-Bissau, Central Africa Region, part of DRC, Chad, Sudan and west Ethiopia.



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