

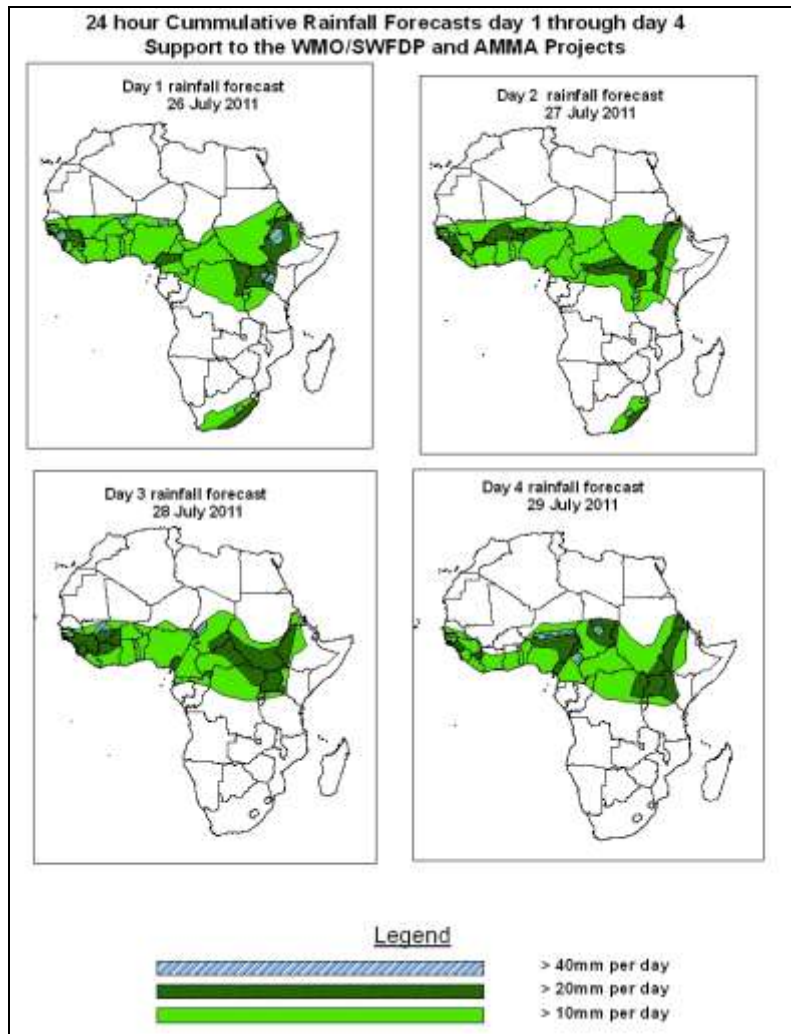


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 26 July– 06Z of 29 July 2011, (Issued at 11:00Z of 25 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 southern Mali, Sierra Leone, Liberia, Guinea, Burkina Faso, northern Nigeria and portions of 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, southeast Sudan and Ethiopia.

1.2. Models Comparison and Discussion-Valid from 00Z of 25 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 is expected to increase from 1002 to 1006mb through 24 to 96 hours according to the GFS and UKMET models, and from 1004mb to 1007mb according to the ECMWF model. The central pressure value of the heat low over Sudan is expected to increase from 1005mb to 1009mb through 24 to 72 hours according to the GFS model. The East African ridge across southeast and East Africa is expected to weaken gradually through 48 to 96 hours.

The St. Helena High pressure system over southeast Atlantic Ocean is expected to weaken through 24 to 96 hours, with its central pressure value decreasing from 1032hpa in 24 hours to 1028hpa in 48 to 96 hours, according to the GFS model. The Mascarene high pressure system over southwest Indian Ocean is expected to weaken, with its central pressure value changing from 1028hpa in 48 hours to 1024 in 72 hours.

At the 850hpa level, a cyclonic circulation over northern Mali is expected to move westwards across southern Mauritania and Senegal through 48 to 72 hours, leaving the West Africa coast by 90 hours. Another strong lower tropospheric convergence over Chad is expected to move towards northern Mali across Niger during the forecast period. The seasonal convergence in CAB region is expected to remain active during the forecast period. The seasonal cross equatorial flow across East and Southeast Africa is expected to be more of meridional as the Mascarene anticyclone remains in the vicinity of the Mozambique Channel through 24 to 72 hours and it tends to weaken through 72 to 96 hours, with the weakening of the Mascarene anticyclone. Moreover, 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 700mb level, an easterly wave near Guinea is expected to leave the West African coast through 24 hours, followed by another wave, which tends to propagate across West Africa through 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, Burkina-Faso and southern Mauritania.

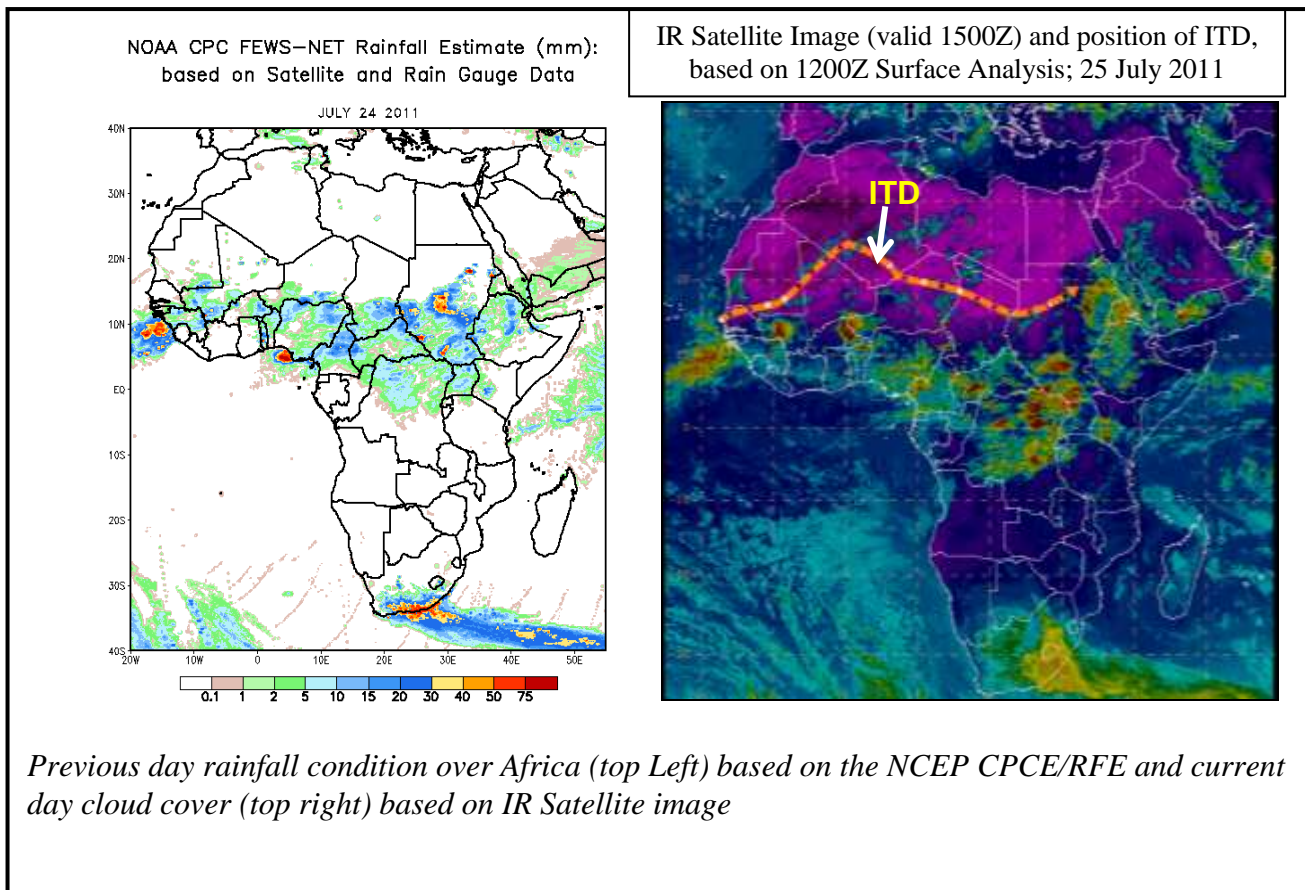
A zone of strong wind (>150Kts) at 200hpa level associated with the Sub Tropical westerly Jet in the southern hemisphere is expected to propagate between southeast Atlantic Ocean and southwest Indian Ocean across South Africa through 24 hours and it tends to weaken to (>130Kts) by through 48 to 96 hours.

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 southern Mali, Sierra Leone, Liberia, Guinea, Burkina Faso, northern Nigeria and portions of 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, southeast Sudan and Ethiopia.

2.0. Previous and Current Day Weather Discussion over Africa (24 July - 25 July 2011)

2.1. Weather assessment for the previous day (24 July 2011): During the previous day, moderate to heavy rainfall was observed over portions of Guinea, Nigeria, northern Cameroon, Sudan, Cote D'Ivoire, northern DRC, Uganda, Sudan and Ethiopia.

2.2. Weather assessment for the current day (25 July 2011): Locally intense clouds are observed over west Mali, southern Niger, part of Nigeria, Cameroon, CAR, Sudan, DRC, and west Ethiopia.



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