

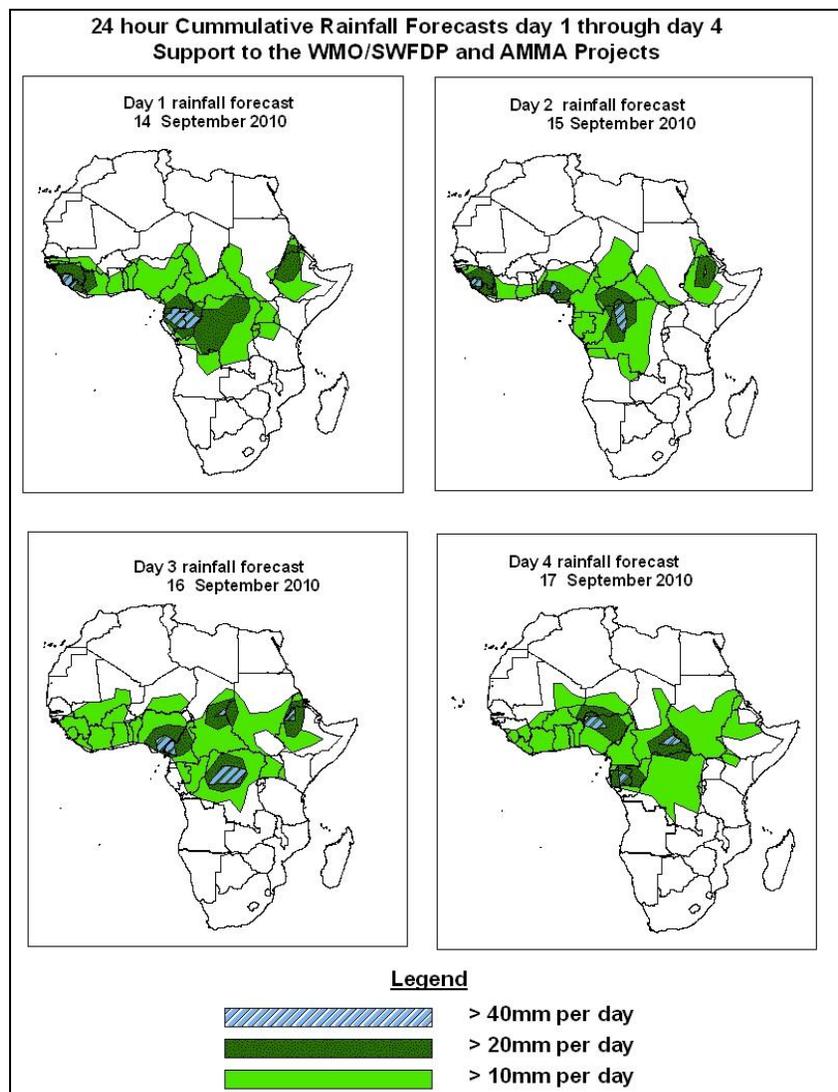


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 14 SEPTEMBER – 06Z of 17 SEPTEMBER 2010, (Issued at 14:00EST of 13 SEPTEMBER 2010)

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 coming four days, the westward propagating convection systems and the abundant moisture available from the Atlantic Ocean is expected to continue maintaining the moderate to heavy rainfall in parts of central and West African countries. Especially, there is an increased chance for rainfall to exceed 20mm per day in parts of Guinea, Cote-d'Ivoire, southern Niger and Nigeria. Parts of Ethiopia, southern Sudan, parts of western central DRC and Congo are also expected to receive fair to moderate rainfall.

1.2. Models Comparison and Discussion-Valid from 00Z of 13 September 2010

A low pressure system situated over central Mali is expected to move towards western Mauritania, while slightly deepening. Its central pressure value is expected to change from 1007 to 1005hPa through 24 to 48hours according to the GFS model. A second low pressure system located over western Niger is expected to move towards central Mali while deepening. Its central pressure value is expected to change between 1008 to 1004hPa through 24 to 72hours according to the GFS model and 1007 to 1006hPa on the UKEMET model. Another low pressure system situated over central Chad is expected to move towards western Chad. Its central pressure value is expected to change from 1006 to 1007hPa through 24 to 48hours on the GFS model and 1005 to 1006hPa on the on the UKMET model. A low pressure system located over northern Sudan is expected to move towards western Chad while deepening. Its central pressure value is expected to change from 1005 to 1004hPa on the GFS model through 24 to 48hours. Another pressure system situated over southern Sudan is expected to move towards central Chad while deepening. Its central pressure value of 1010 to 1008hPa through 48 to 72hours on the GFS model and 1009 to 1007hPa on the UKMET model. The seasonal low pressure system located over southern DRC is expected to change from central pressure value of 1009 to 1008hPa according to the GFS model, 1010 to 109hPa according to the ECMWF model and 1009 to 1006hPa according to the UKMET model. A weak high pressure system situated over Cote-d'Ivoire and Cameroun is expected to maintain position and its central pressure value of 1014hpa through 72 to 96hours. In general, the Inter-Tropical Front (ITF) is expected to remain between 18°N and 20°N latitudes across West African countries west of the Prime Meridian, while it is expected to stay between 17°N and 19°N latitudes east of the Prime Meridian.

The Azores high-pressure system is expected to relax from central pressure value of 1030hPa in 24 hours to a value of 1027hPa in 96hour, while extending its ridge over northern African countries. The St. Helena high, situated over southern Atlantic Ocean is expected to intensify slightly from central pressure values of 1032 to 1033hPa through 24 to 48hours and relax from central pressure value of 1033 to 1032hPa through 72 to 96hours. The Mascarene high pressure system is also expected to relax from central pressure value of 1029 to 1025hPa through 24 to 48hours and to intensify from central pressure value of 1025 to 1028hPa through 72 to 96hours.

At 850hpa, a cyclonic circulation situated over western Niger is expected to move towards central Mali through 24 to 72hours and continue moving towards Eastern Mauritania through 48 to 72hours. Another cyclonic circulation located over western Chad is expected to move towards central Niger and continue moving towards northern Mali through 24 to 72hours. A cyclonic circulation is expected to shift between Chad, Niger and Nigeria (across Lake Chad), while weakening gradually through 24 to 48 hours. Another cyclonic circulation over northern Sudan is expected to move towards western Chad while slightly weakening. The convergence associated with the CAB is expected to weaken gradually in the region between eastern Namibia, Angola, DRC, Uganda and southwest Ethiopia through 48 to 96 hours.

At 700Hpa, a trough associated with the African easterly wave is expected to move between the longitudes of Sudan and Central African Republic through 24 to 72 hours. This trough is expected to propagate across Cote-d'Ivoire, Burkina Faso and continue to move towards eastern Guinea and southern Mali through 72 to 96hours.

At 500hpa, wind speeds associated with the African Easterly Jet are expected to exceed 30Kts in the vicinity of southern Niger, Burkina Faso and southern Mali, while the core of the jet is propagating westwards through 24 to 72 hours.

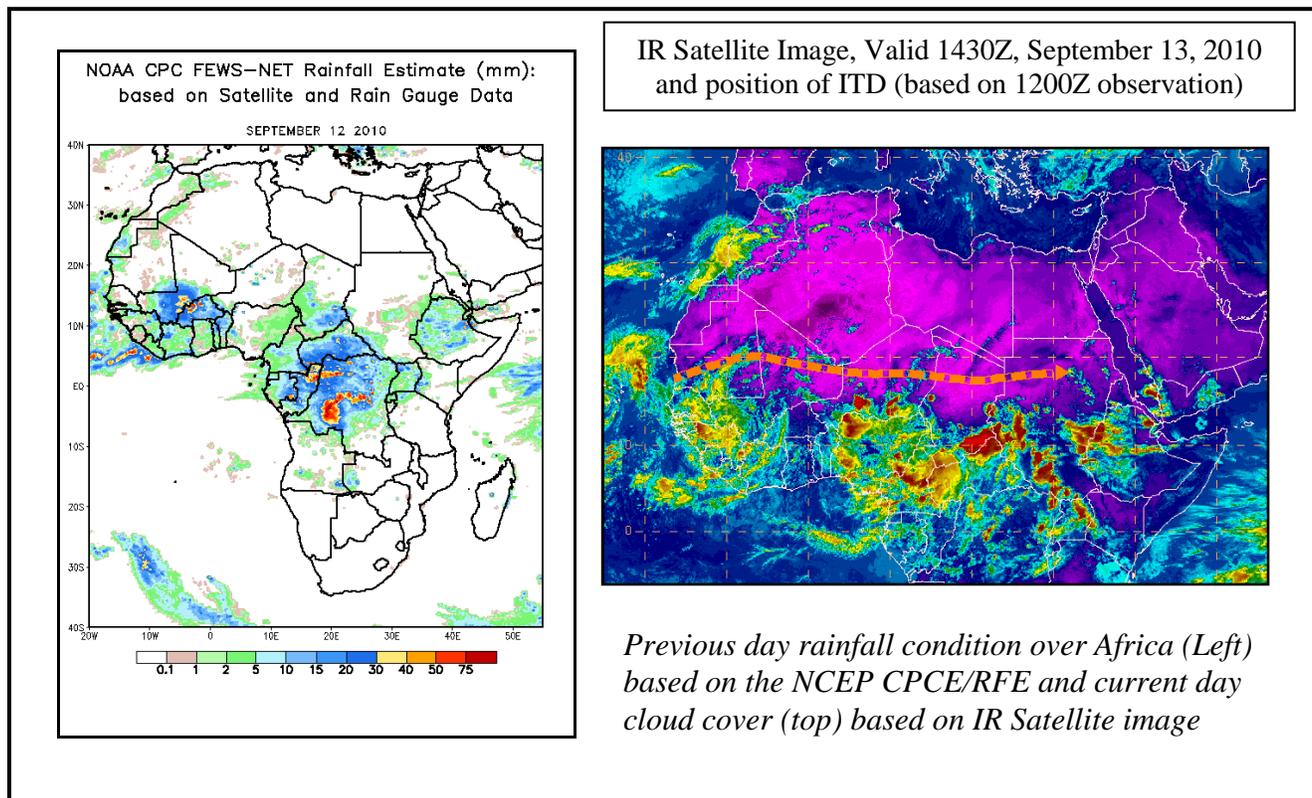
At 200hPa, zone of strong wind (>50Kts) is expected to dominate the flow in the vicinity of central and eastern Mediterranean Sea and the adjoining areas of northern Africa. Meanwhile, strong upper tropospheric easterly wind (>35Kts) is expected to dominate the flow across southern Ethiopia, northwestern Sudan through 24 to 48hours.

In the coming four days, the westward propagating convection systems and the abundant moisture available from the Atlantic Ocean is expected to continue maintaining the moderate to heavy rainfall in parts of central and West African countries. Especially, there is an increased chance for rainfall to exceed 20mm per day in parts of Guinea, Cote-d'Ivoire, southern Niger and Nigeria. Parts of Ethiopia, southern Sudan, parts of western central DRC and Congo are also expected to receive fair to moderate rainfall.

2.0. Previous and Current Day Weather Discussion over Africa (08 - 09 September 2010)

2.1. Weather assessment for the previous day (12 September 2010): During the previous day, moderate to heavy rainfall was observed over, central Mali, Burkina Faso, southern Chad, Central African Republic, Congo, DRC, Uganda and Ethiopia.

2.2. Weather assessment for the current day (14 September 2010): Intense clouds are observed over southern Mauritania, Senegal, Guinea, Sierra Leone, Liberia, southern Mali, southern Niger, Nigeria, Cameroon, CAR, southern Sudan and parts of Ethiopia.



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