



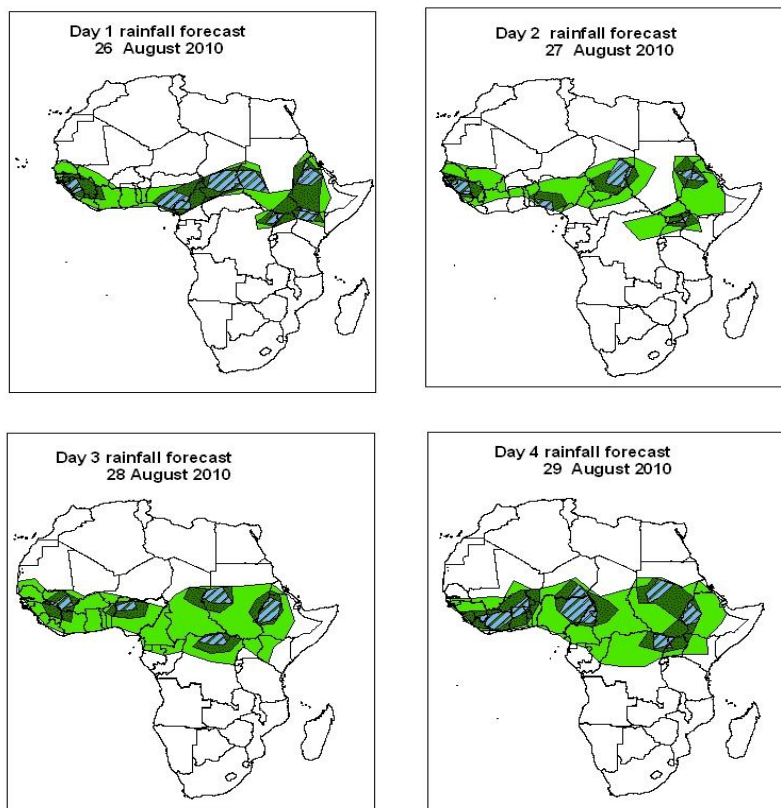
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 26 August – 06Z of 29 August 2010, (Issued at 14:00EST of 25 August 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.

24 hour Cummulative Rainfall Forecasts day 1 through day 4
Support to the WMO/SWFDP and AMMA Projects



Summary

In the coming four days, the westward propagating meso-scale convective systems and the active West African Monsoon are expected to maintain the moderate to heavy rains across many parts of the western and central African countries. Especially, there is an increased chance for rainfall to exceed 40mm per day in the vicinity of Guinea Conakry, Sierra Leone, Liberia, and parts of Mali, Niger, Nigeria and Chad. The moderate to heavy rainfall activity is also expected to continue across Ethiopia and parts of Sudan, Central African Republic and DRC.

1.2. Models Comparison and Discussion - Valid from 00Z of 24 August 2010

A low pressure system situated over northern Mali is expected to shift southwestward while deepening. Its central pressure value is expected to change from 1008mb to 1002hPa on the GFS model through 24 to 96 hours. Another low pressure system over Niger is expected to move westward. Its central pressure value is expected to change between 1008 to 1004hPa through 24 to 48 hours on the GFS model. A third low pressure system situated over eastern Chad is expected to move westward while deepening. Its central pressure value is expected to change from 1008 to 1004hPa through 24 to 72hours and 1004 to 1006hPa through 72 to 96hours on the GFS model. Another low pressure system located over central Sudan is expected to move westward while deepening. Its central pressure is expected to change from 1006 to 1004hPa through 24 to 72hours.

The Azores high-pressure system is expected to relax through 24 to 72 hours. With the weakening of this system, its associated ridge is also expected to continue retreating from northern African countries. The St. Helena high pressure system is expected to weaken, with its central pressure value decreasing from 1024mb to 1020mb through 24 to 48 hours.

At 850hpa, a cyclonic situated over eastern Mali is expected to move towards western Mali through 24 to 96 hours. Another cyclonic circulation over eastern Niger is expected to move towards western Mali through 24 to 48hours followed by another cyclonic circulation over Chad. The lower level convergence associated with the Congo Air Boundary (CAB) is expected to remain active across Southwestern DRC, Uganda and Ethiopia through 24 to 72 hours. Localized zones of lower level wind convergence are expected over Angola, Namibia, Kenya, Somalia and Sudan through 24 to 96 hours.

AT 700Hpa, a stationary trough associated with the easterly wave is expected to dominate the flow over southern Mali.

At 500hpa, zones of strong wind in excess of 30Kts, which are associated with the African Easterly Jet, are expected in southern Mali, Chad and Nigeria.

At 200hPa, zone of strong wind (>50Kts) is expected to dominate the flow in the vicinity of Tunisia and the adjoining areas of Mediterranean region.

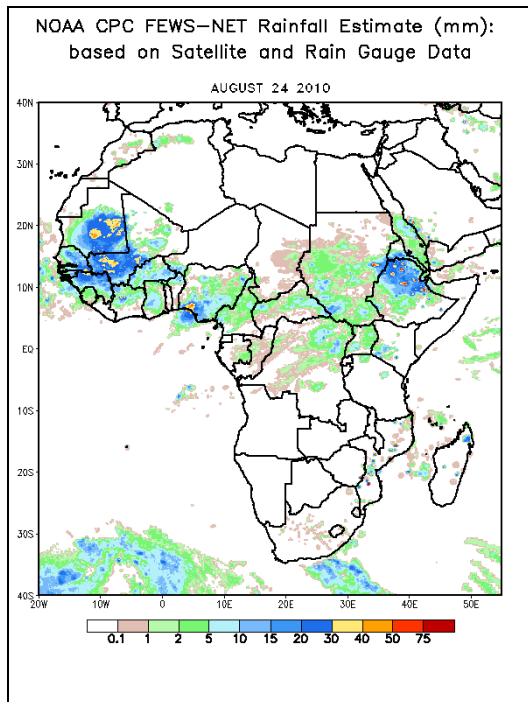
Strong easterly winds (>35Kts) associated with the Tropical Easterly Jet are also expected across Ethiopia, Sudan, Chad, Niger.

In the coming four days, the westward propagating meso-scale convective systems and the active West African Monsoon are expected to maintain the moderate to heavy rains across many parts of the western and central African countries. Especially, there is an increased chance for rainfall to exceed 40mm per day in the vicinity of Guinea Conakry, Sierra Leone, Liberia, and parts of Mali, Niger, Nigeria and Chad. The moderate to heavy rainfall activity is also expected to continue across Ethiopia and parts of Sudan, Central African Republic and DRC.

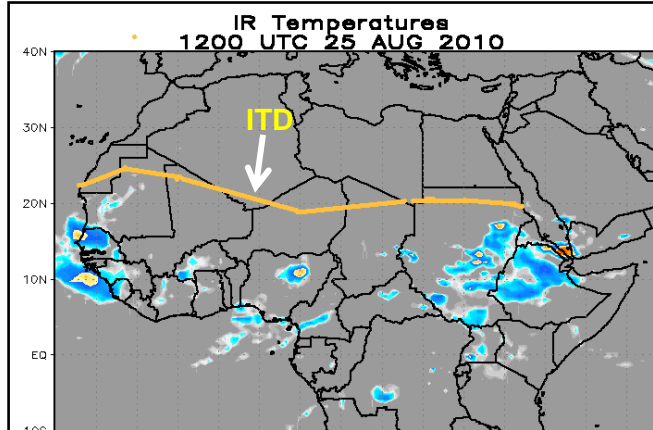
2.0. Previous and Current Day Weather Discussion over Africa (24 August 2010 – 25 August 2010)

2.1. Weather assessment for the previous day (24 August 2010): During the previous day, moderate to heavy rainfall was observed over parts of Mauritania, Mali, Senegal, Nigeria and Ethiopia.

2.2. Weather assessment for the current day (25 August 2010): Convective clouds are observed over much of the Gulf of Guinea, central African and the Horn of Africa countries, with the intense clouds observed over Mauritania, Senegal, Nigeria, Sudan and Ethiopia.



IR Satellite Image, Valid 1200Z, August 25, 2010
and position of ITD (based on 1200Z observation)



*Previous day rainfall condition over Africa (Left)
based on the NCEP CPCE/RFE and current day
cloud cover (top) based on IR Satellite image*

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Disclaimer: *This bulletin is for training purposes only and should be used as guidance. NOAA does not make forecasts for areas outside of the United States.*