

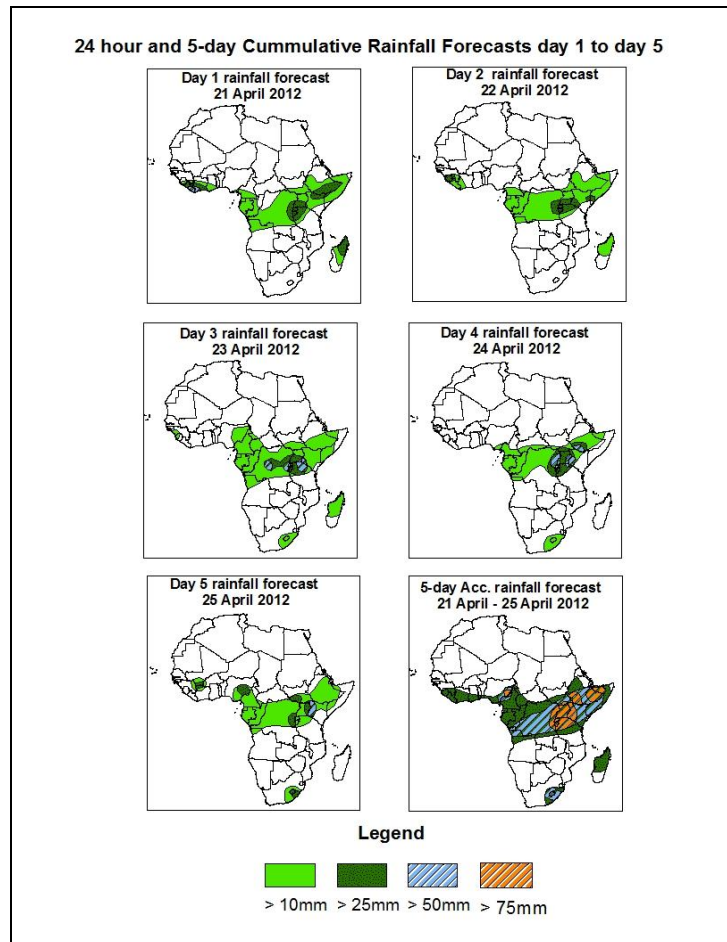


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 21 April – 06Z of 25 April 2012, (Issued at 15:00Z of 20 April 2012)

1.1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of 75% 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.

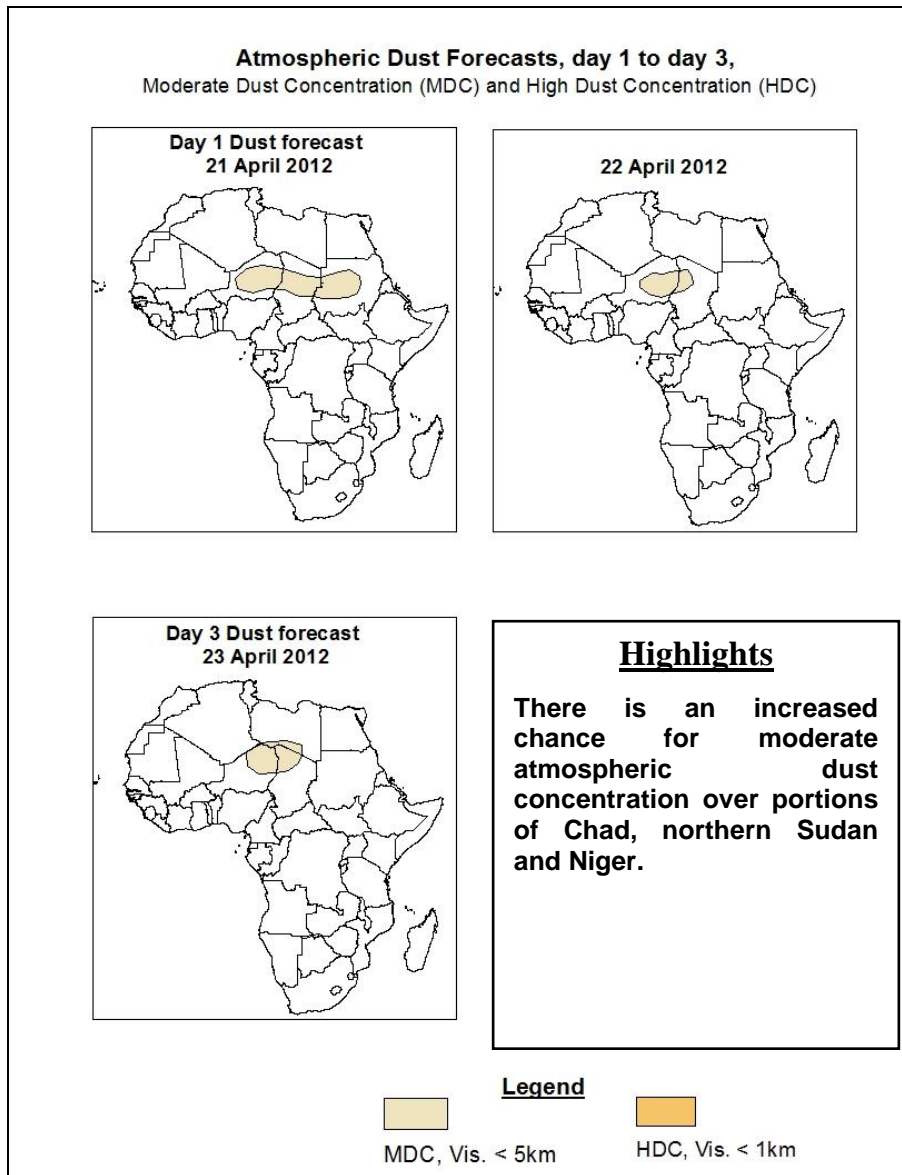


Summary

In the next five days, localized lower level convergences in the Gulf of Guinea and western equatorial Africa regions, convergences associated with Congo Air Mass, seasonal wind convergences in southern Ethiopia and Somalia, and interactions between mid-latitude and tropical systems across southeastern Africa are expected to enhance rainfall across their respective regions. In general, there is an increased chance for heavy rainfall over portions of southern Ethiopia, eastern DRC, Uganda, Kenya portions of Tanzania, Rwanda and Burundi.

1.2. Atmospheric Dust Forecasts: Valid 21 – 23 April 2012

The NCEP/GFS, the UK Met Office, the ECMWF and the NCEP/WRF outputs are used to identify areas with high probability of dust concentration.



1.3. Model Discussion: Valid from 00Z of 20 April 2012

According to the GFS, ECMWF and UKMET models an east-west oriented trough and its associated heat lows are expected to prevail in the region between southern Mali and Sudan.

A low near northwestern Nigeria is expected to maintain central pressure value of 1007mb through 24 to 72 hours, and it tends to deepen to mean sea level pressure value of 1004mb towards end of the forecast period. The central pressure value of a low over central Chad tends to decrease slightly from 1004mb in 24 hours to 1002mb in 72 hours, and it tends to increase back to mean sea level pressure value of 1004mb towards end of the forecast period. The low across Sudan and South Sudan Republic is also expected to fill up slightly, with its central pressure value increasing from 1002mb to 1003mb through 24 to 48 hours, and its central pressure value tends to decrease back to 1002mb towards end of the forecast period.

The St. Helena High pressure system over southeast Atlantic Ocean is expected to intensify, with its central pressure value increasing from 1031mb in 24 hours to 1036mb in 72 hours. The high tends to weaken progressively into mean sea level pressure value of 1031mb towards end of the forecast period

The Mascarene high pressure system over southwestern Indian Ocean is expected to shift eastwards (from about 37°E in 48 hours to about 100°E in 120hours) position, while giving way to the interactions between mid-latitude and tropical systems across the Mozambique Channel during the forecast period. Its central pressure value is expected to increase from 1025mb to 1031mb through 24 to 120 hours.

At 925hpa level, zone of moderate and dry northerly wind (25 to 35kts) is expected to prevail over parts of Niger, Chad and Sudan through 24 to 72 hours.

At the 850hpa level, a lower tropospheric wind convergence associated with the West African Monsoon is expected to remain active across eastern Gulf of Guinea region through during the forecast period, and it tends to weaken across western portions of the Gulf of Guinea with an anticyclonic circulation building over West Africa. Seasonal lower level convergences are expected to remain active over southern Sudan, Ethiopia

and Somalia throughout the forecast period. The convergence associated with the meridional arm of the ITCZ is expected remain active across eastern DRC and the Lake Victoria region during the forecast period. Lower level convergences are also expected to dominate the flow over western parts of equatorial Africa, extending southwards into northern Angola.

At 500hpa level, the wavy pattern in the mid-tropospheric flow across northern Africa and the neighboring areas tends to become zonal during the forecast period. A deep mid-latitude trough is expected propagate towards the west coast of southern Africa during the forecast period.

At 200mb, the Sub-Tropical Westerly Jet across northeastern Atlantic Ocean, North Africa and eastern Egypt is expected to remain weak, with wind speed values below 100kts towards end of the forecast period.

In the next five days, localized lower level convergences in the Gulf of Guinea and western equatorial Africa regions, convergences associated with Congo Air Mass, seasonal wind convergences in southern Ethiopia and Somalia, and interactions between mid-latitude and tropical systems across southeastern Africa are expected to enhance rainfall across their respective regions. In general, there is an increased chance for heavy rainfall over portions of southern Ethiopia, eastern DRC, Uganda, Kenya portions of Tanzania, Rwanda and Burundi.

There is an increased chance for moderate atmospheric dust concentration over portions of Chad, northern Sudan and Niger.

2.0. Previous and Current Day Weather Discussion over Africa

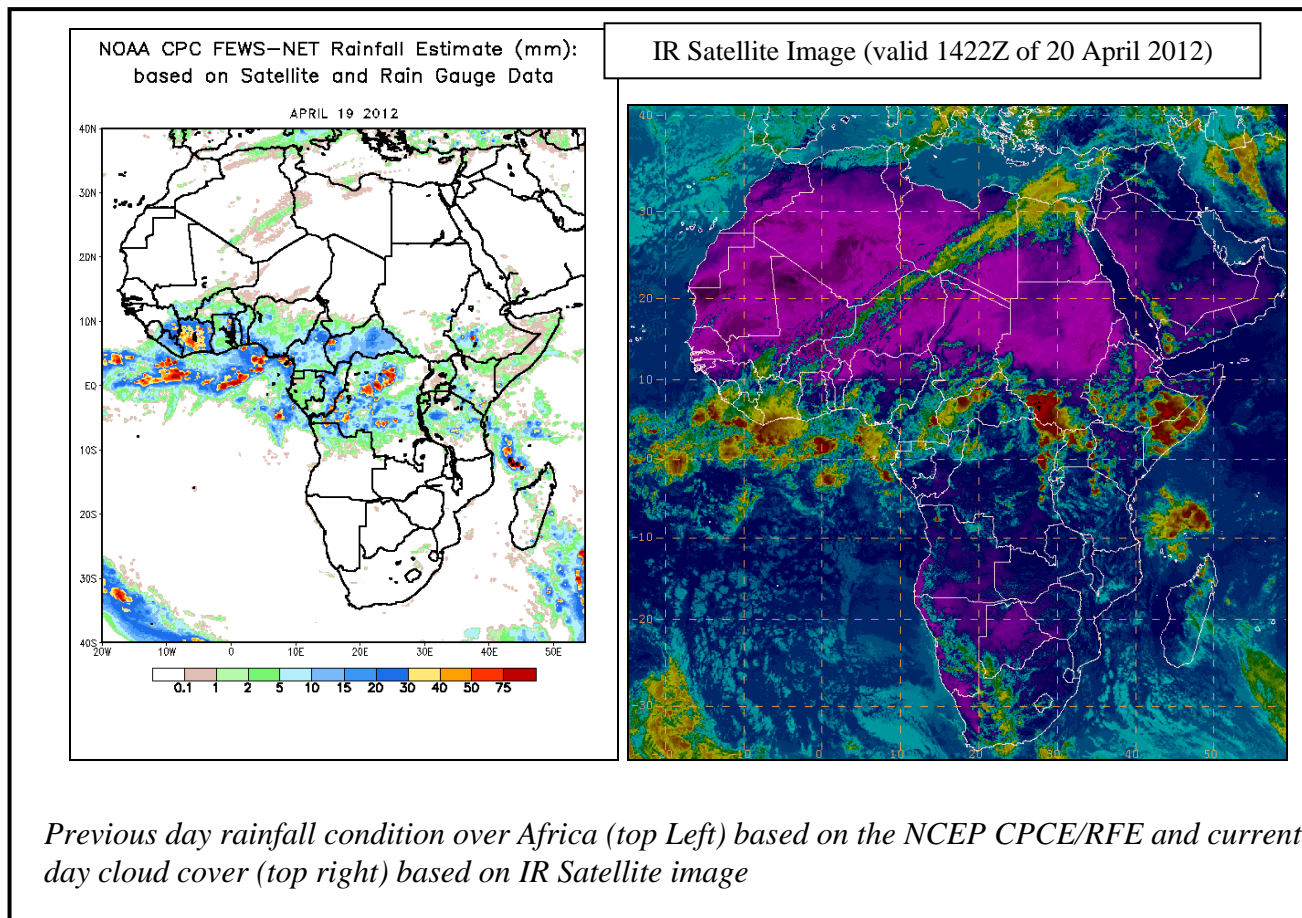
(20 April – 21 April 2012)

2.1. Weather assessment for the previous day (19 April 2012)

During the previous day, moderate to locally heavy rainfall was observed across portions of eastern Guinea, Liberia, Cote d'Ivoire, Benin, Nigeria, Cameroon, CAR, Congo, DRC, northwestern Angola, portions of Ethiopia, Kenya and Tanzania.

2.2. Weather assessment for the current day (20 April 2012)

Intense clouds are observed across portions of the Gulf of Guinea region, central African countries and the Greater Horn of Africa countries.



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