

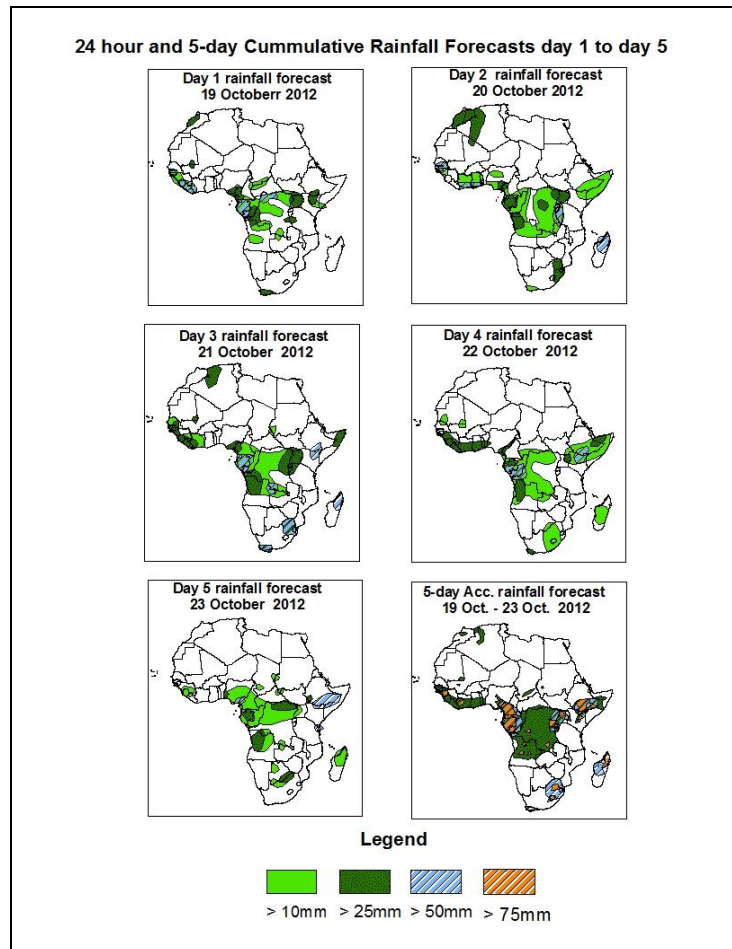


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of October 19th – 06Z of October, 23rd 2012. (Issued at 13:00Z of October, 18th 2012)

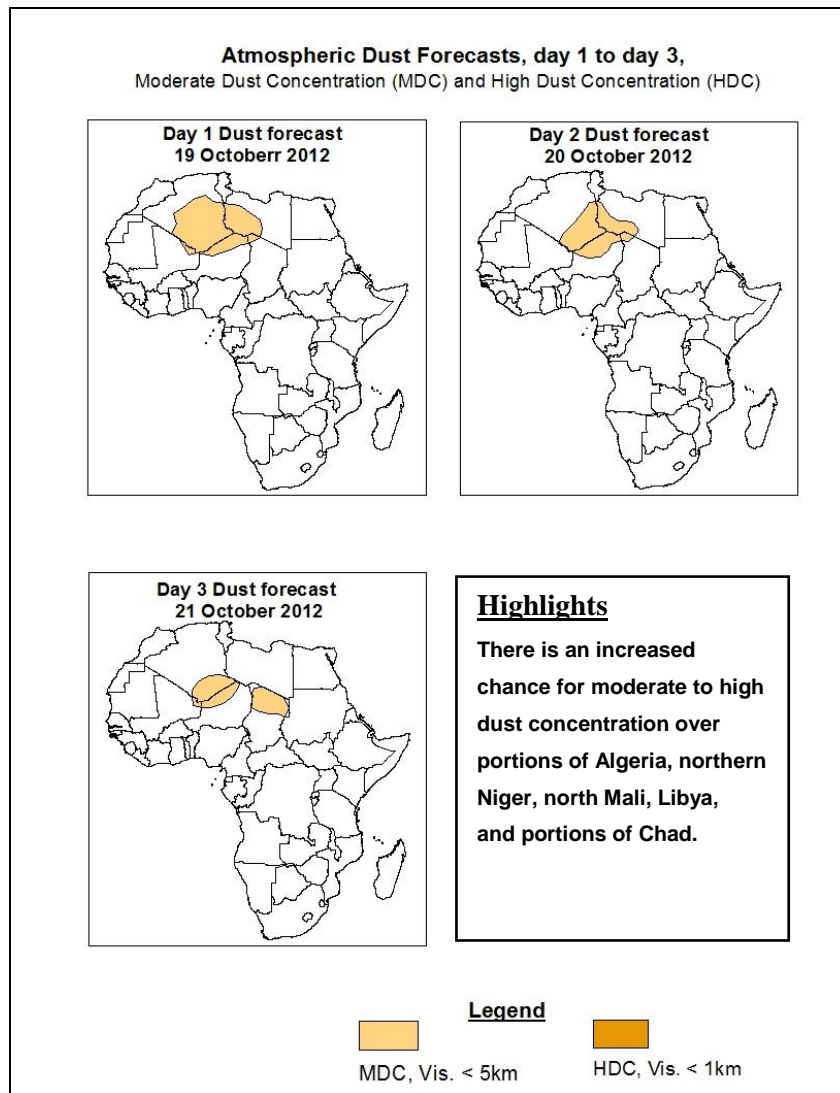
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, the seasonal low level wind convergences near the Congo Air Boundary (CAB) region, persistent lower level wind convergences associated with the monsoon flow over coastal Gulf of Guinea and western Equatorial Africa, lower level moist easterly flow from northern Indian Ocean and its associated convergence over the Horn of Africa, remnants of tropical storm Anais near Madagascar and lower level wind convergences over South Africa are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for heavy rainfall over across coastal Gulf of Guinea countries, southern Cameroon, Gabon, portions of Congo, Angola, the Lake Victoria region, southern Ethiopia, portions of Kenya, eastern South Africa and northern Madagascar.



1.2. Model Discussion: Valid from 00Z of October, 18th 2012.

Model comparison (Valid from 00Z; October, 18th 2012) shows all the three models are in general agreement with respect to positioning of synoptic scale features, such as, seasonal lows across Angola and DRC, the eastward propagating mid-latitude systems across Northeast Africa, and also across southern Africa, and the gradual weakening of the southern hemisphere sub-tropical highs (St. Helena and Mascarene). However, the models show differences in terms of central pressure values.

According to the ECMWF model the St. Helena High pressure system over southeast Atlantic Ocean is expected to weaken gradually, with its MSLP value decreasing from 1037hpa to 1031hpa through 48 to 120 hours. According to the UKMET and GFS models, this same high pressure system is expected to decrease its central pressure value of 1038hpa to 1031hpa in 962 hours.

The Mascarene high pressure system over southwestern Indian Ocean is expected to weaken gradually, from central pressure value of 1033hpa in 24 hours to 1023hpa in 72 hours while shifting eastwards, according to the UKMET model. This high pressure system is expected to weaken, with its central pressure value decreasing from 1033hpa to 1024hpa through 24 to 96 hours according to the ECMWF and GFS models.

The seasonal lows across Angola and DRC tend to fill up gradually, with their pressure values increasing from about 1003mb to 1009mb through 24 to 120 hours, according to the ECMWF model, from 1002hpa 1006hpa according to the UKMET model, and from 1003hpa to 1008hpa according to the GFS model.

At the 850hpa level, a lower level wind convergence is expected to remain more or less active across western parts of Equatorial Africa, near southern Cameroon, Gabon, Congo and northwestern DRC. The north south oriented seasonal wind convergence near the CAB region is expected to remain active through 24 to 48 hours, and to slightly weaken through 72 to 96 hours. The convergence is expected to become active again towards end of the forecast period. Lower level wind convergences, with their interactions with mid-latitude systems are expected to become active through 48 to 72 hours across eastern South Africa and the neighboring areas. Moist easterly winds from the Indian Ocean and their associated convergences across the Horn of Africa are expected to continue enhancing rainfall in the region. Lower level circulations associated with remnants of tropical storm Anais are expected to dominate the flow over Madagascar and the neighboring areas of the Mozambique Channel through 48 to 72 hours.

At 500hpa, a trough associated with the Northern Hemisphere mid-latitude system is expected to remain more or less stationary across Northeast Africa while expanding southwestward into northern Chad during the forecast period. A slow moving mid latitude trough is also expected to dominate the flow over southern Africa 24 to 120 hours.

At 200hpa, zone of strong winds (>70kts), associated with the northern Hemisphere sub-tropical westerly jet is expected to propagate between northeastern Niger/Libya and the Persian Gulf. In the southern hemisphere, the subtropical system is expected to

remain active, with the core of strong winds (>90kts), propagating between South Africa and Indian Oceans during the forecast period.

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2.0. Previous and Current Day Weather Discussion over Africa

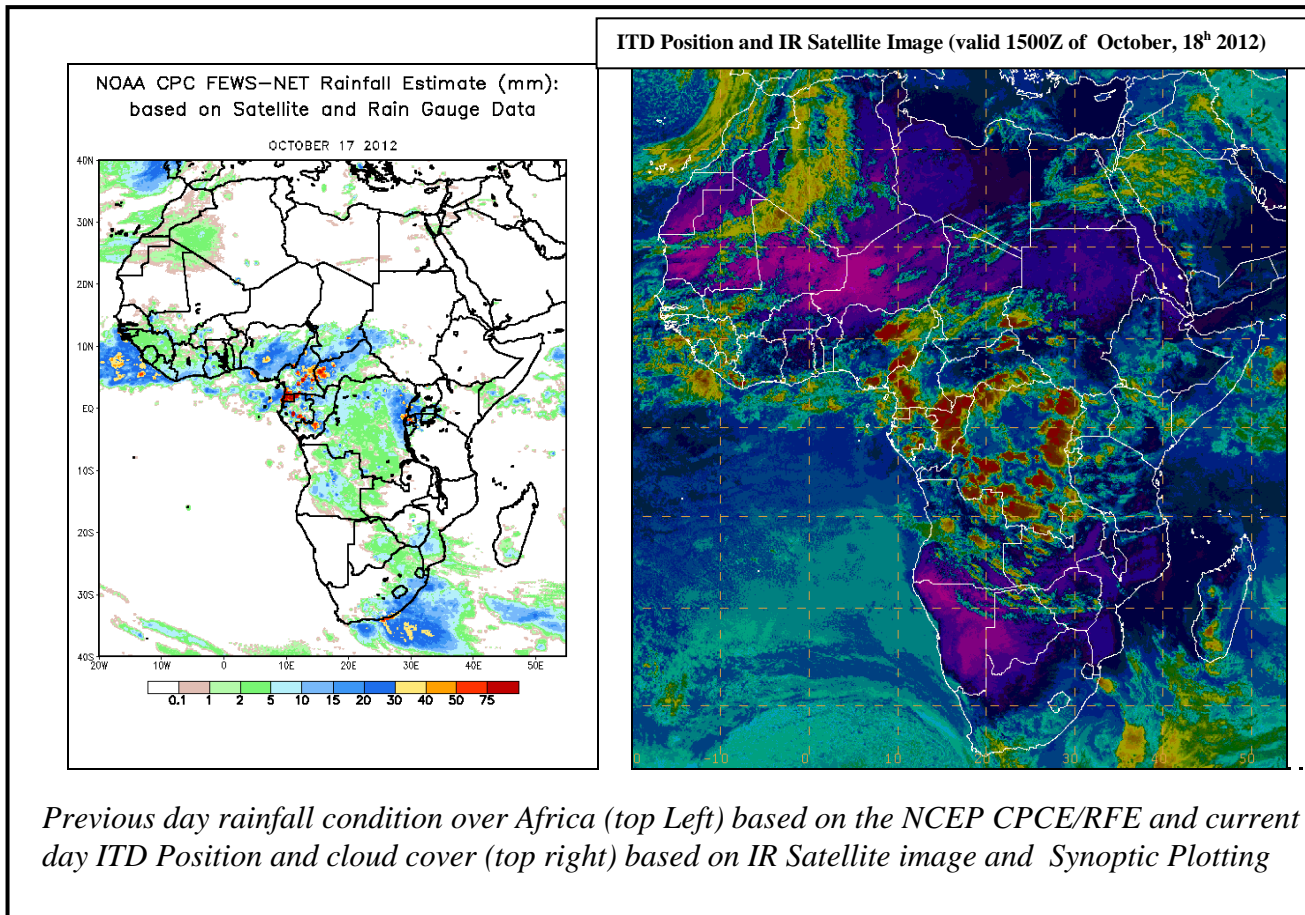
(October, 17th 2012 – October, 18th 2012)

2.1. Weather assessment for the previous day (October, 17^h 2012)

During the previous day, light rains were observed over parts of Mauritania; Mali; Morocco; Algeria; Chad; Congo Brazzaville and South Africa with moderate to heavy rainfall over parts of Togo; Sierra Leone; Nigeria; Gabon; Cameroon; Democratic Republic of Congo; Central African Republic; South Sudan Republic; Ethiopia; Ghana and Angola.

2.2. Weather assessment for the current day (October, 18^h 2012)

Convective clouds are observed across parts of Algeria; Libya; Mali; Mauritania; Nigeria; Chad; Democratic Republic of Congo; Cameroon; Sudan; Congo Brazzaville; South Sudan Republic; Ethiopia; Uganda; Somalia; Malawi; Zimbabwe; Algeria; Libya; Egypt; Sudan; Guinea-Conakry; Sierra Leone; Gambia; Togo; Kenya; Gabon; Angola; South Africa and Central African Republic.



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