

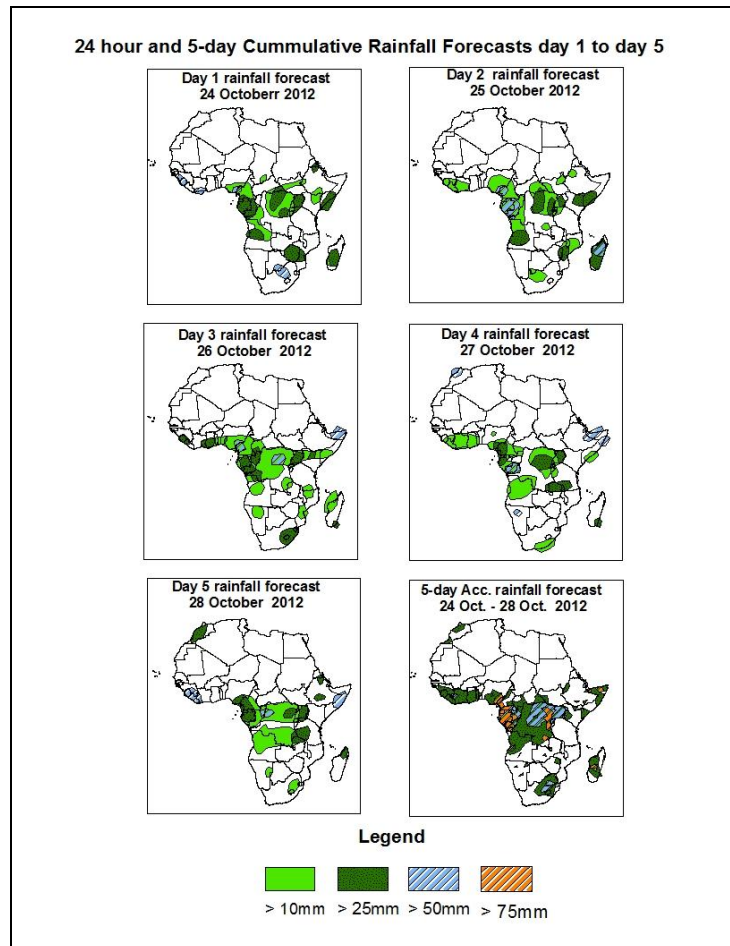


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 24 October – 06Z of 28 October 2012. (Issued at 13:00Z of 23 October 2012)

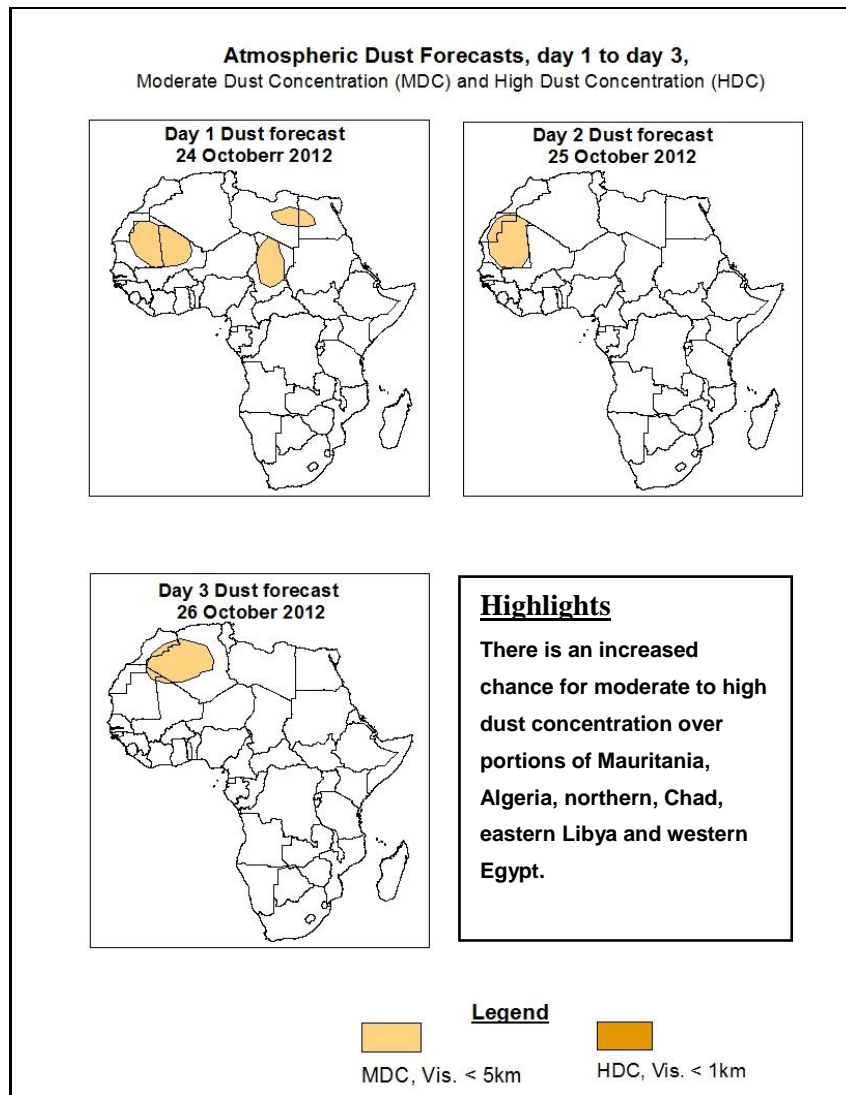
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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 eastern Gulf of Guinea and western Equatorial Africa, a cyclonic circulation over northern Indian Ocean and its propagation towards the Horn of Africa and lower level southerly winds over Madagascar are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for heavy rainfall over southeastern Nigeria, Cameroon, Gabon, Angola, portions of the Lake Victoria region, southern Ethiopia, Somalia, portions of Kenya and Madagascar.



1.2. Model Discussion: Valid from 00Z of 23 October 2012

Model comparison (Valid from 00Z; 23 October 2012) shows all the three models are in general agreement with respect to positioning of synoptic scale features, such as, seasonal lows across Central and Southern Africa countries, the eastward shift of the southern hemisphere sub-tropical high pressure systems (St. Helena and Mascarene), westward propagation of a low pressure system towards the Horn of Africa. However, the models show differences in terms of central pressure values.

The St. Helena High pressure system over southeast Atlantic Ocean is expected to weaken slightly, with its central pressure value decreasing from 1024hpa to 1023hpa through 24 to 96 hours while shifting eastward, according to the ECMWF model. This same high pressure system tends to intensify slightly, with its central pressure value

changing from about 1024hpa to 1025hpa through 24 to 96 hours while shifting eastward according to the GFS and UKMET models.

The Mascarene high pressure system over southwestern Indian Ocean is expected to intensify gradually, from central pressure value of 1031hpa in 24 hours to 1036hpa in 72 hours, according to the ECMWF model, and from 1033hpa to 1036hpa according to the UKMET model, and from 1035hpa to 1037hpa according to GFS model.

The central pressure value of the seasonal lows across the southern African countries is expected to remain about 1008hpa during the forecast period according to the three models. A low pressure system near 62°E longitude over northern Indian Ocean is expected to propagate westward, reaching the Horn of Africa in 72 hours, according to the GFS model. This low pressure appears relatively weak on the ECMWF and UKMET models.

At the 850hpa level, the seasonal low level wind convergence in the CAB region is expected to remain active through 24 to 72 hours, and it tends to shift westward through 96 to 120 hours. Low level wind convergences across eastern Gulf of Guinea and western parts of Equatorial Africa are also expected to remain active during the forecast period. A cyclonic circulation over northern Indian Ocean is expected to propagate towards the Horn of Africa through 24 to 72 hours. Lower level southerlies are expected to dominate the flow over Madagascar through 24 to 48 hours.

At 500hpa, a trough associated with the Northern Hemisphere mid-latitude system is expected to shift eastward across Northeast Africa and the neighboring areas, while weakening during the forecast. A feeble mid latitude trough is also expected to leave the East coast of South Africa through 24 to 72 hours.

At 200hpa, zone of strong winds (>70kts), associated with the northern Hemisphere sub-tropical westerly jet is expected to propagate between Northeast Africa and the Persian Gulf while weakening. In the southern hemisphere, the subtropical westerly jet, with its core of strong winds (>90kts), is expected to propagate between Atlantic Ocean and Indian Ocean while weakening during the forecast period.

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2.0. Previous and Current Day Weather Discussion over Africa

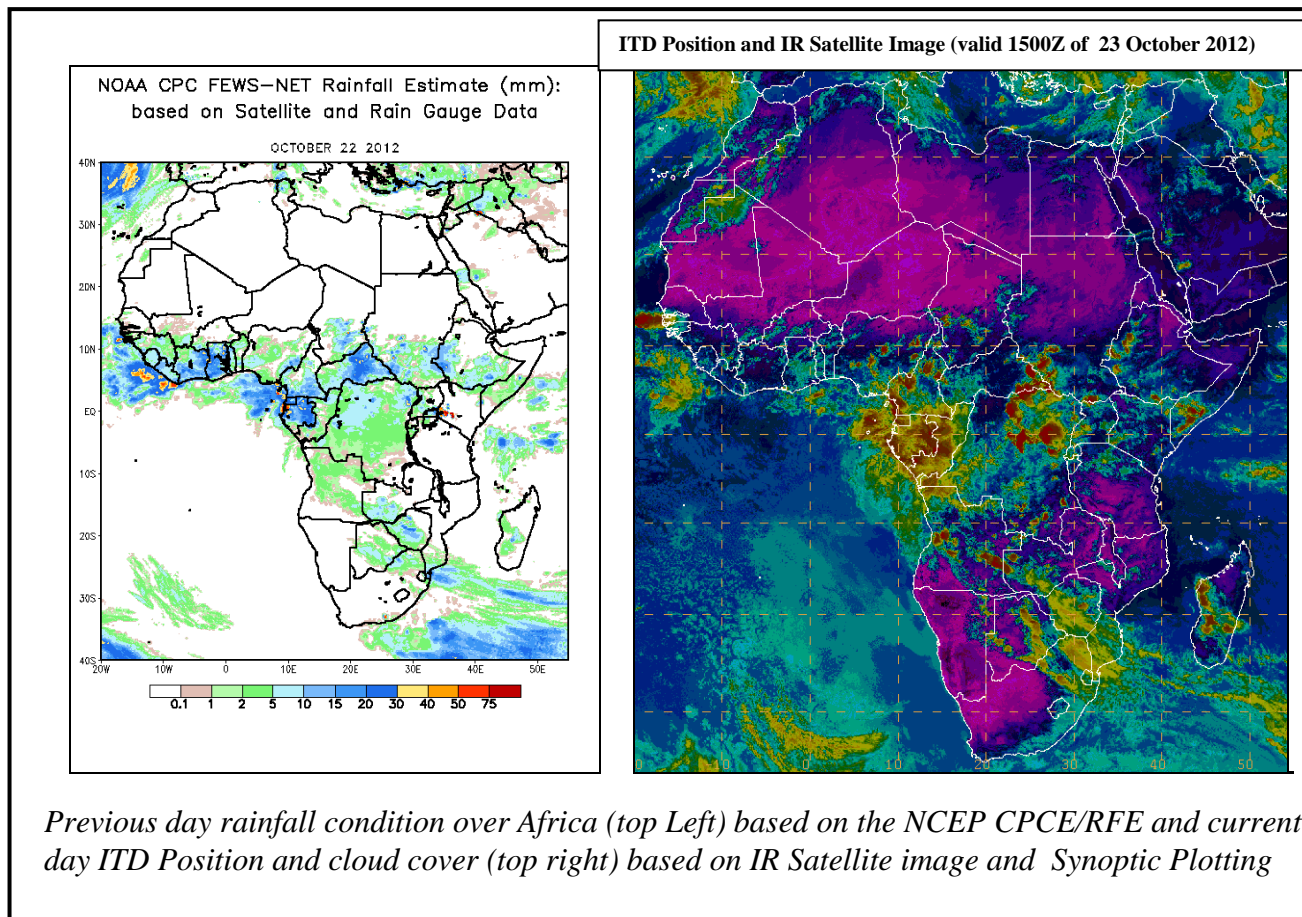
(22 October 2012 – 23 October 2012)

2.1. Weather assessment for the previous day (22 October 2012)

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

2.2. Weather assessment for the current day (23 October 2012)

Convective clouds are observed across parts of Algeria; Libya; 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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