



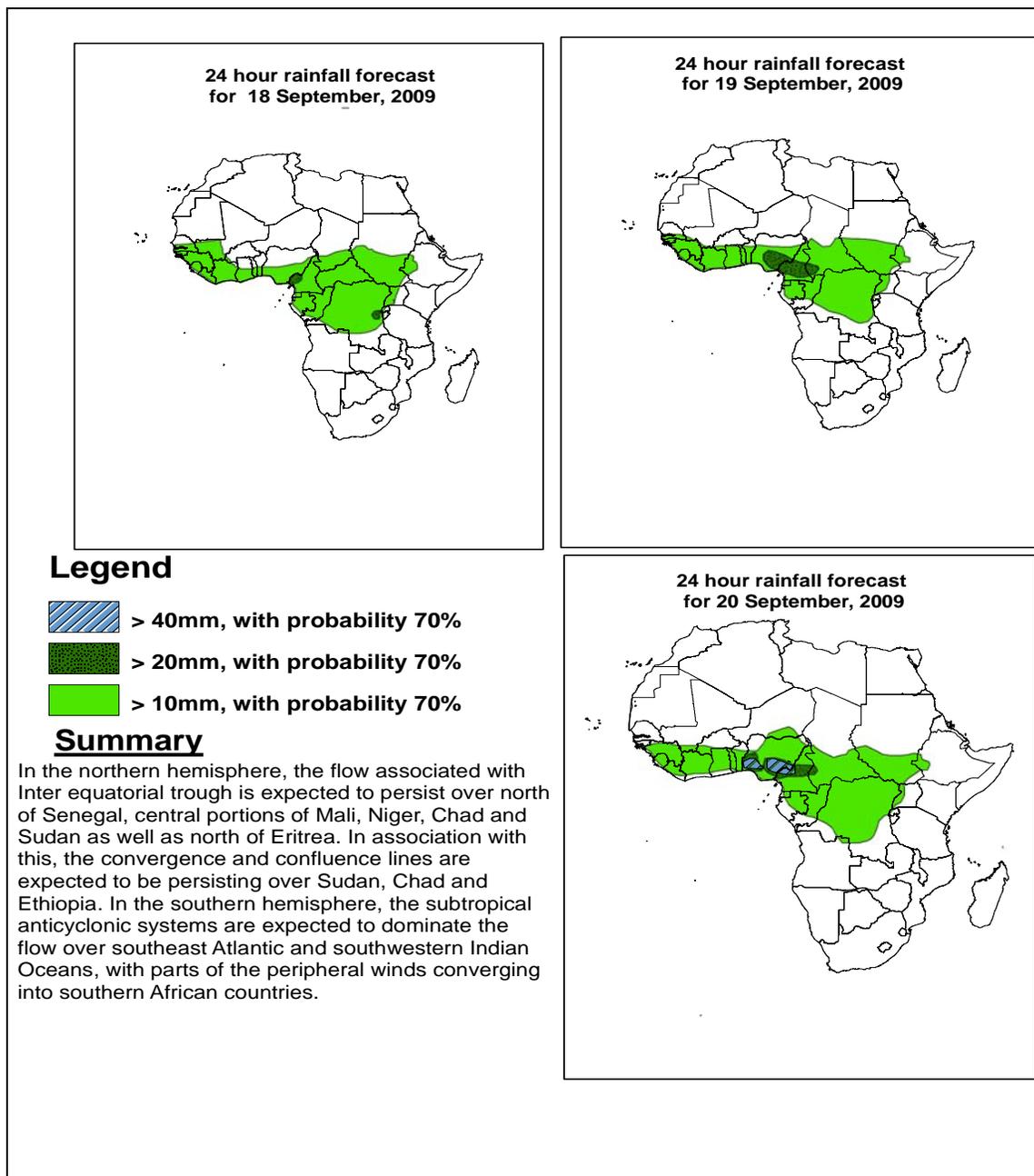
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative.

FORECAST DISCUSSION 14H00 EST, 17 SEPTEMBER, 2009

Valid: 00Z 18 SEPTEMBER – 20 SEPTEMBER, 2009

1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of probability of precipitation (POP) exceedence based on the NCEP, UK Met Office and the ECMWF NWP outputs, the NCEP global ensemble forecasts system (GEFS), and expert assessment.



2. Model discussion

Model comparison (Valid from 00Z; 17 SEPTEMBER, 2009): all the three models are in general agreement especially with respect to the positioning of large scale features, however, the UK model tends to give lower values than both the GFS and ECMWF models especially in the Equatorial region (10°S and 10°N).

2.1. Weather assessment for the previous day (16 September 2009): During the previous day, moderate to heavy rainfall events were observed over eastern Senegal, eastern Sudan, Central Africa Rep., Congo, Benin, Togo, Burkina Faso, Ghana and western Ethiopia.

2.1.1. Current day condition (17 September 2009): deep clouds are observed over Sudan, central Africa, Dem. Rep. of the Congo, Uganda, Congo and Cameroon.

2.2.1 Flow at 850hPa

T+24h: In the northern hemisphere, the flow associated with Inter equatorial trough is expected to persist over north of Senegal, central portions of Mali, Niger, Chad and Sudan as well as north of Eritrea. In association with this, the convergence and confluence lines are expected to be persisting over Sudan, Chad and Ethiopia. In the southern hemisphere, the subtropical anticyclonic systems are expected to dominate the flow over southeast Atlantic and southwestern Indian Oceans, with parts of the peripheral winds converging into southern African countries.

T+48h: In the northern hemisphere, the localized convergence and confluence line are expected to persist across Ethiopia, while a deep convergence is developing over eastern Nigeria. In the southern hemisphere, the St. Helena anticyclone is expected to intensify slightly over southeast Atlantic Ocean, with its peripheral winds extending to converge across south and central African countries.

T+72h: In the northern hemisphere, the deep convergence over Nigeria is expected to shift slightly to the west while localized convergence and confluence lines are expected to persist over Sudan and Ethiopia. In the southern hemisphere, the sub-tropical ridge is expected to fill up slightly with the peripheral winds feeding moisture towards central and southern African countries.

2.2.2 Flow at 700hPa

T+24h: A trough associated with the easterly wave is expected to dominate the flow over southern Sudan.

T+48h: The easterly wave is expected to move towards Chad while slightly deepening.

T+72h: The easterly wave is expected move further to the west, with the trough axis reaching Nigeria.

2.2.3 Flow at 500hPa

T+24h: A mid tropospheric easterlies flow is expected to dominate tropical African countries, while with an axis of a weak trough in the easterlies located over western end of the Central African Republic..

T+48h: The mid-tropospheric trough is expected to move towards Cameroon.

T+72h: The axis of the trough is expected to extend towards Nigeria.

2.2.4 Flow at 200hPa

T+24h: The flow associated with the upper tropospheric anticyclonic flow is expected to dominate the flow over the tropical Africa regions, south of the equator and north of 10°N, while the upper level easterly flow is expected to persist in the region between equator and the 10°N latitude.

T+48h: Central and western tropical regions of Africa are expected to be dominated by an upper level easterly flow.

T+72h: The flow associated with the upper tropospheric anticyclonic flow is expected to be dominant over much of the tropical African regions, while, the easterly flow is limited over eastern African countries.

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