



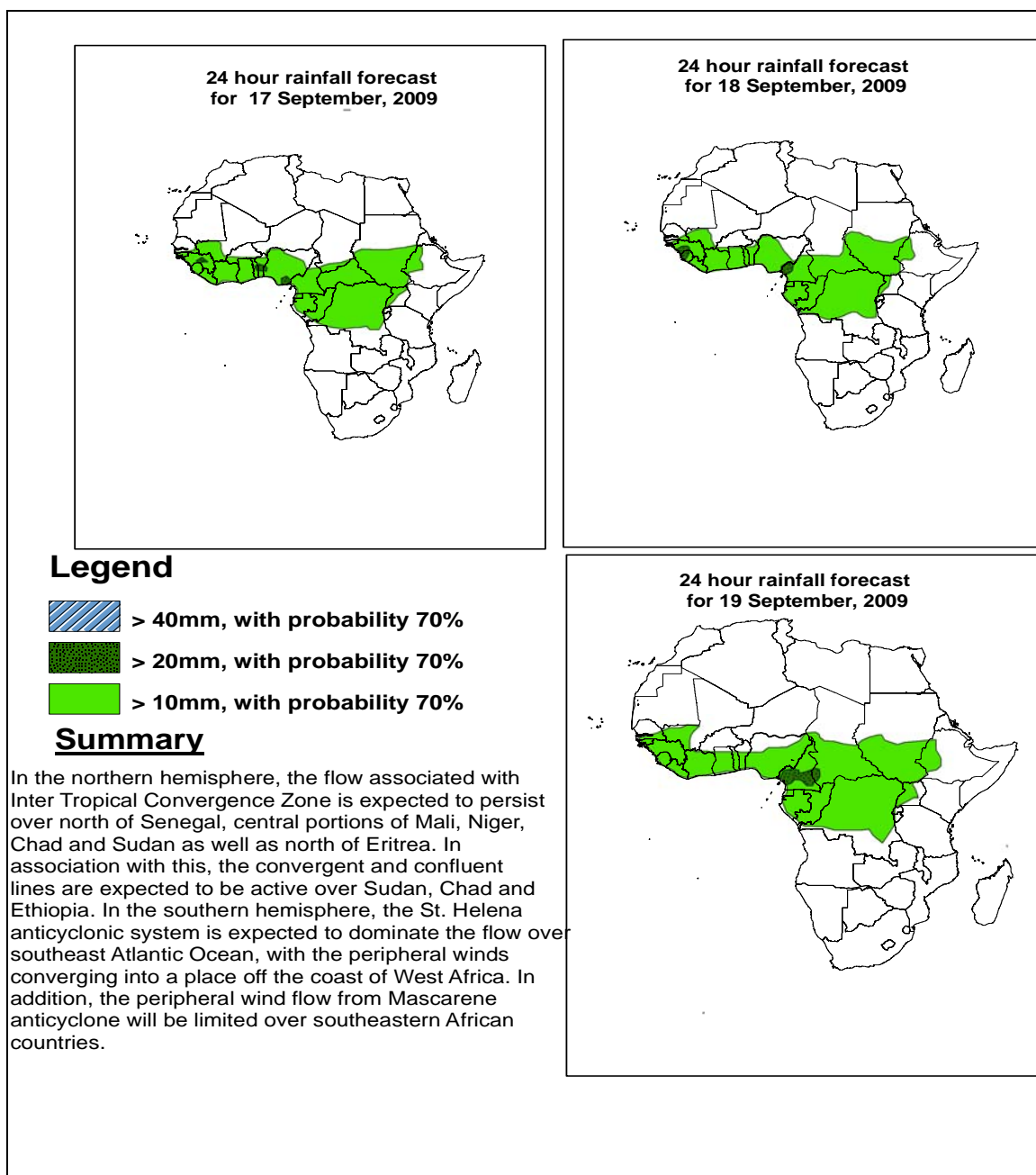
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative.

FORECAST DISCUSSION 14H00 EST, 16 SEPTEMBER, 2009

Valid: 00Z 17 SEPTEMBER – 19 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; 16 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 (15 September 2009): During the previous day, moderate to heavy rainfall events were observed over Mali, Burkina Faso, Ghana, Nigeria, Central Africa, Rep., southern Sudan and western Ethiopia.

2.1.1. Current day condition (14 September 2009): deep clouds are observed over central Africa, Dem. Rep. of the Congo, Mali and southeastern Chad.

2.2.1 Flow at 850hPa

T+24h: In the northern hemisphere, the flow associated with Inter Tropical Convergence Zone 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 convergent and confluent lines are expected to be active over Sudan, Chad and Ethiopia. In the southern hemisphere, the St. Helena anticyclonic system is expected to dominate the flow over southeast Atlantic Ocean, with the peripheral winds converging into a place off the coast of West Africa. In addition, the peripheral wind flow from Mascarene anticyclone will be limited over southeastern African countries.

T+48h: In the northern hemisphere, the localized convergence and confluence line are expected to persist across Sudan and Ethiopia. In the southern hemisphere, the east-west oriented ridges of the subtropical anticyclones are expected to expand slightly across southeast Atlantic and southwest Indian oceans, with peripheral winds converging over eastern and southern African countries.

T+72h: In the northern hemisphere, the localized convergence and confluence line are expected to persist across Sudan, and Ethiopia, with slightly expanding to Nigeria and Chad. In the southern hemisphere, the sub-tropical ridge is expected to fill up slightly with the peripheral winds still 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 the Gulf of Guinea countries.

T+48h: The easterly wave is expected to move westward while slightly weakening.

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

2.2.3 Flow at 500hPa

T+24h: A mid tropospheric trough line in the easterlies is expected to extend between Cote D'Ivoire and Burkina Faso.

T+48h: The mid-tropospheric trough is expected to move slightly towards the western coast of Africa while slightly weakening.

T+72h: The mid-tropospheric trough is expected to move further westward, crossing the coast of West Africa.

2.2.4 Flow at 200hPa

T+24h: The flow associated with the upper tropospheric anticyclonic flow is expected to be dominant over much of the tropical Africa regions, while, the easterly flow persists across eastern African countries.

T+48h: The flow associated with the upper tropospheric anticyclonic flow is expected to persist over much of the tropical African regions, while, the easterly flow persists over eastern African countries.

T+72h: The upper tropospheric anticyclonic flow is expected to persist over regions of tropical African countries.

Authors:

Chali Debele (National Meteorological Agency of Ethiopia and African desk)

Mamadou Savadogo (Direction de la MET Burkina and African Desk)

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