



## Forecast Guidance for Africa

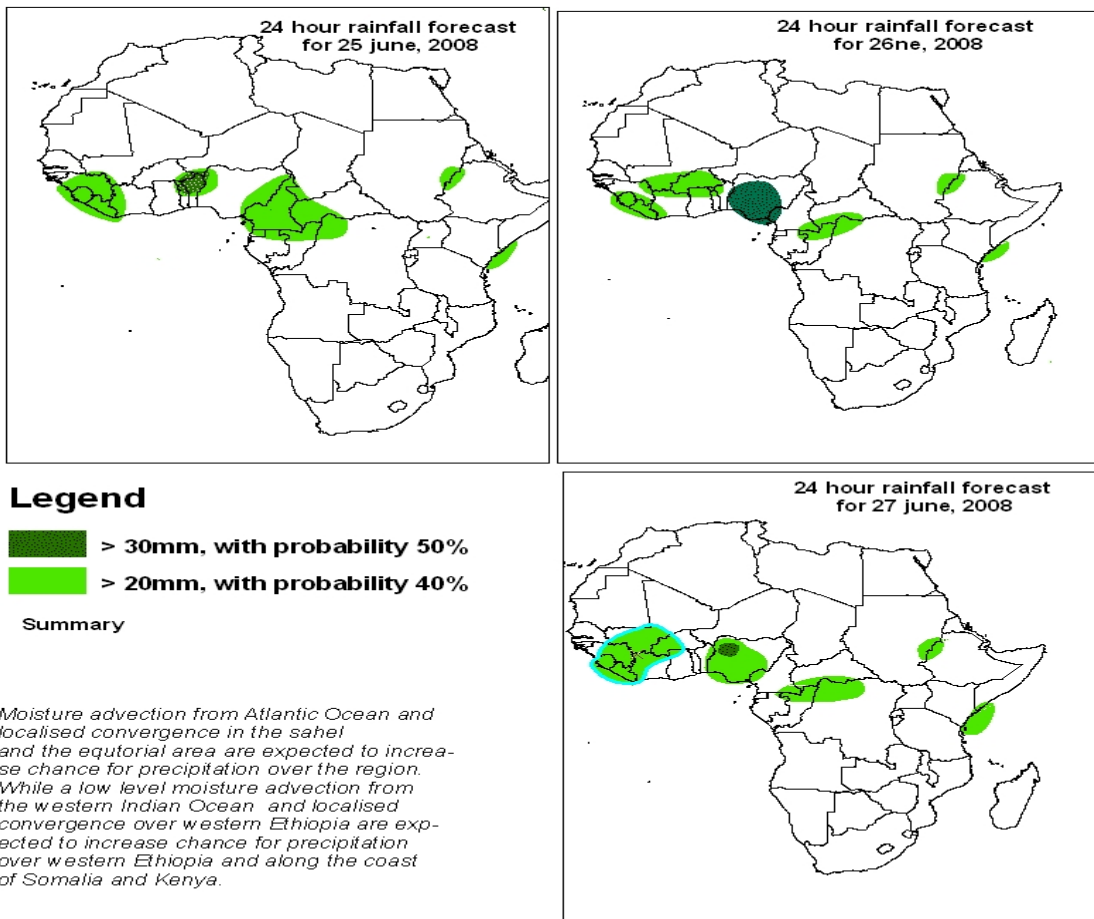
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

**FORECAST DISCUSSION 14H00 EST, 24 JUNE 2008**

**Valid: 00Z 25- 27 JUNE, 2008**

### 1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of probability of precipitation (POP) exceedance 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; 24 June 2008): all the three models are in agreement especially with respect to the positioning of large scale features, although UK model gives lower values as always in the Equatorial (10°N and 10°S) Continental Africa.*

### **2.1. Flow at 850hPa**

850 hpa:

T+24h, an anticyclonic flow pattern is expected to dominate over a large part of north Africa with a ridge over the northwestern part resulting into north easterlies, that converge over the general low pressure area of the Sahel and central Africa, with south easterlies emanating from an anticyclone centered over southern Africa. Troughs to the west east of southern Africa embedded in the westerlies influence a large part of the southern oceans, with south easterlies from the southern Indian Ocean turning into southwesterlies along the coast of eastern Africa.

T+48h, two anticyclonic circulation patterns are expected to prevail over a large part of the African continent from North to southern Africa separated over the Sahel and central by a general low pressure area by the northern easterlies Africa converge with south easterlies over southern Africa. Southeasterlies from the southern western Indian Ocean are expected to turn into south westerlies along the coast of Somalia. Westerlies are expected to dominate over the tip of southern Africa along with a cyclonic system over southern Madagascar.

T+72h, the flow system is expected to be very similar to that of the previous day with the exception that the anticyclone over southern Africa will relax, thus allowing the cyclonic flow over southern Madagascar to expand and develop into a trough.

### **2.2. Flow at 500hPa**

T+24h, an axis of anticyclones is expected to straddle over north Africa from Morocco through northern Chad and Sudan to Eritrea with a trough to the north over northern Libya and Egypt. An anticyclonic flow system is expected to be centered over southern Africa with westerly flow to its south.

T+48h, the trough over Libya and Egypt is will expand southwards to Sudan, while the westerly flow south of Madagascar will be cut off into a cyclonic flow

T+72h, the trough over Libya and Egypt will continue expanding westwards to eastern Algeria while the cut off over south western Indian Ocean will relax and extend to Madagascar and Mozambique.

### **2.3. Flow at 200hPa**

T+24h, a large part of continent is dominated by anticyclonic flow patterns on either side of the equator with easterlies over the near equatorial latitudes, while waves and trough over Libya in the west over eastern Africa are embedded in the westerlies pole ward of the subtropical anticyclones.

T+48h, flow is expected to be similar to the (T+24h) flow pattern but the trough over Libya has narrowed and moved westward, while the trough in eastern Africa has also widened to western Tanzania shrinking the anticyclonic system centered over DRC.

T+72h, the flow is expected to be similar to the (T+24h) flow pattern but the trough of Libya has been moved further to the west into eastern Algeria and the anticyclonic system over Egypt and Sudan has moved southwest up to northern Chad; and the trough over eastern Africa is extend westwards into DRC.

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