



Forecast Guidance for Africa

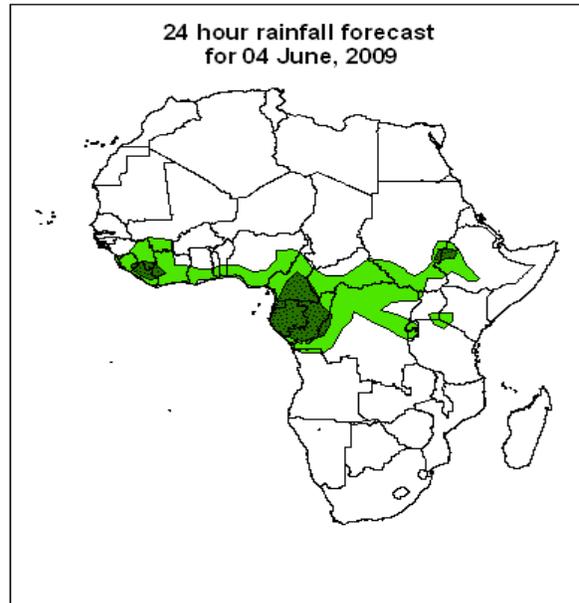
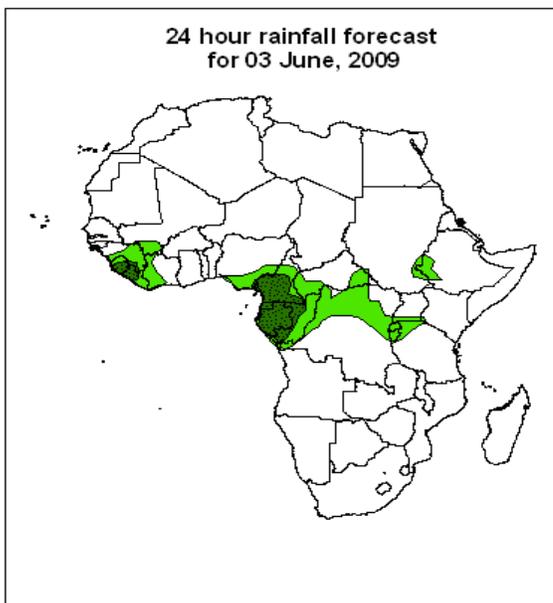
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative.

FORECAST DISCUSSION 14H00 EST, 02 JUNE, 2009

Valid: 00Z 03 JUNE – 05 JUNE, 2009

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.

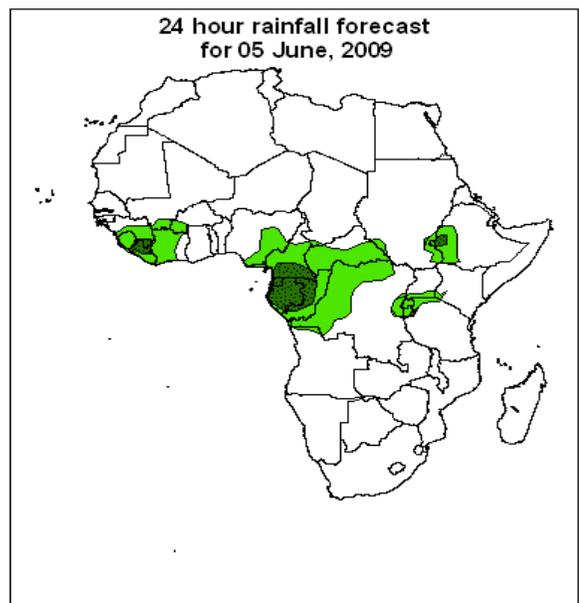


Legend

-  africa_countries_new
-  > 20mm, with probability 70%
-  > 10mm, with probability 70%

Summary

The sub-tropical ridge system with its peripheral dry winds is expected to continue influencing the flow over Northern and Northwestern Africa, while the persistent monsoonal cross equatorial flow is expected to influence eastern Africa and the horn of Africa region. Localized convection and confluences lines over Gulf of Guinea extending into the Congo basin, in association with moisture flux from southwest Indian and Southeast Atlantic oceans are expected to enhance chance for precipitation.



2. Model discussion

Model comparison (Valid from 00Z; 02 June, 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. Flow at 850hPa

T+24h: In the northern hemisphere, the sub-tropical anti-cyclonic system with its peripheral dry winds is expected to continue influencing the flow over Northern and Northwestern Africa; while the persistent monsoonal cross equatorial flow is expected to influence eastern Africa and the horn of Africa region. Troughs associated with the westerly wave are expected over northeast Atlantic Ocean and Central Mediterranean sea. Localized convergence and confluent lines are expected over the Gulf of Guinea region, Cameroun, Central African Republic, northern DR Congo, southern Sudan and western Ethiopia. In the southern hemisphere, the sub-tropical anti-cyclonic system is expected to influence flow over much of southern Africa and over the Atlantic Ocean, it extends northwards up to the Gulf of Guinea. Troughs associated with the westerly wave are expected over southeastern Atlantic and southwestern Indian Oceans.

T+48h: In the northern hemisphere, no significant changes are expected in the main features affecting the flow over Northern Africa; however the sub-tropical ridge is expected to expand westwards. Localized convergence and confluent lines are expected to maintain their previous day positions. In the southern hemisphere, the flow is expected to be more similar to the previous day; however the mid-latitude troughs over the oceans are expected to move slightly eastwards.

T+72h: In the northern hemisphere, the sub-tropical anti-cyclonic system is expected to contract and weaken; while the trough over northeast Atlantic is expected to extend towards Morocco, Western Sahara and northern Algeria. The localized convergence and confluent lines are expected to maintain their previous day positions. In southern Africa, the significant features are expected to maintain their previous day position; however the trough associated with the westerly wave over South Africa is expected to extend northwards up to 25°S latitude, separating the anti-cyclonic systems.

2.2. Flow at 500hPa

T+24h: In the northern hemisphere, feeble troughs associated with the westerly wave are expected over North Africa, creating a disturbed flow pattern of the westerlies. Another trough is expected over the Gulf of Aden region. In the southern hemisphere, a trough associated with the westerly wave is expected to extend northwards close to the Equator across the continent and eastern Atlantic; coupled with the development of cyclonic systems over southwest Indian Ocean, are expected to create a disturbed flow pattern of the westerlies; otherwise a general zonal flow pattern of the westerlies is expected.

T+48h: In the northern hemisphere the flow is expected to be more similar to the previous day; however the troughs associated with the westerly waves are expected to be more enhanced creating more disturbances in the flow of the westerlies. In the southern hemisphere, the troughs associated with the westerly wave are expected to be suppressed and the flow of the westerlies expected to take a more zonal pattern.

T+72h: In the northern hemisphere three way troughs associated with the westerly wave are expected over northeast Atlantic, Mediterranean Sea and over the Arabian Peninsula, creating a wave flow pattern over Northern Africa. In the southern hemisphere, the flow is expected to be more similar to the previous day.

2.3. Flow at 200hPa

T+24h: In the northern hemisphere, feeble troughs associated with the westerly wave are expected over northern Africa creating disturbances in the flow of the westerlies. In the southern hemisphere, a feeble troughs associated with the westerly wave are expected over south eastern Atlantic and southwestern Indian Ocean creating some disturbances of the westerlies, but a generally zonal flow pattern of the westerlies is expected.

T+48h: The flow is expected to be similar to that of the previous day in both the northern and southern hemispheres.

T+72h: The flow is expected to be similar to that of the previous day in the northern hemisphere, but the troughs over northeast Atlantic and Mediterranean sea are expected to be more enhanced, creating a more disturbed flow pattern of the westerlies. In the southern hemisphere, the westerly flow is expected to take a zonal pattern.

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