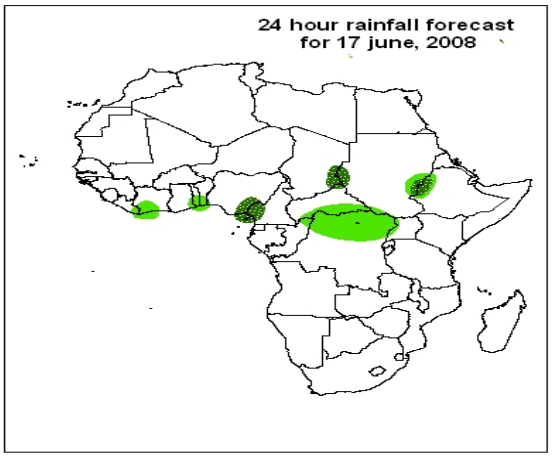
Forecast Guidance for Africa

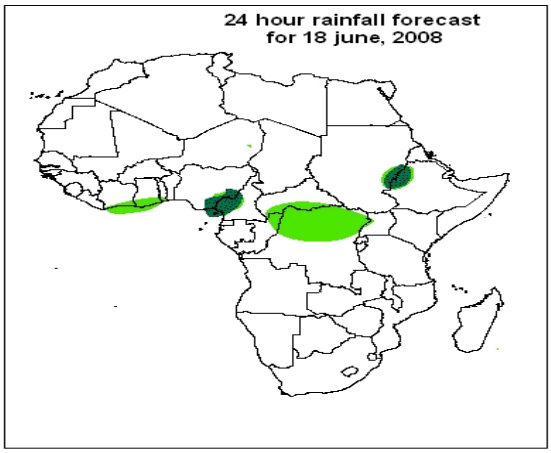
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

FORECAST DISCUSSION 14H00 EST, 16 JUNE 2008
Valid: 00Z 17- 19 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.





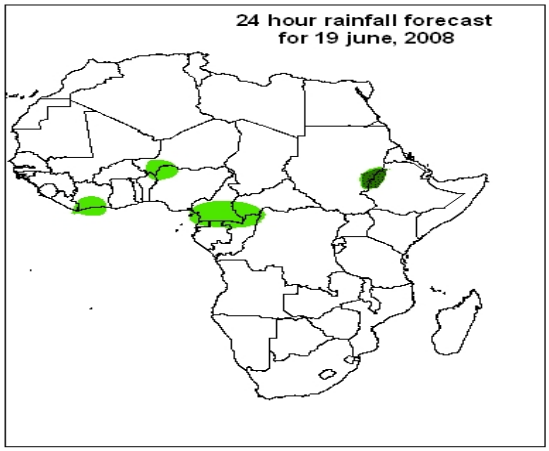
Legend

> 30mm, with probability 50%

> 20mm, with probability 40%

Summary

Moisture advection from Atlantic Ocean and isolated velocity convergence are expected to increase chance for precipitation over southwestern Niger, southeastern Chad , along coasts of Cote d'Ivoire, Togo and Benin, north eastern DRC, northen Congo and Cameroon.While a low level moisture advection from the western Indian Ocean and localised conver gence over western Ethiopia are expected to increase chance for precipitation over western Ethiopia.



2. Model discussion

Model comparison (Valid from 00Z; 16 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^oN and 10^oS) Continental Africa.

2.1. Flow at 850hPa

T+24h, an anticyclonic flow pattern is expected to dominate over a large part par of North Africa while a cyclonic flow pattern is expected to dominate over Morocco and a large part of West Africa from the coast of Senegal to western Chad. Southeasterlies are expected to dominate over the coasts of Tanzania and Kenya while southwesterlies are expected to dominate along the coast of Somalia. A closed cyclonic circulation is expected to dominate over southwestern Angola and along the western part of Namibia and South Africa while an anticyclonic flow pattern is expected to dominate over the remaining part of southern Africa and sustain southeasterlies towards the Gulf of Guinea where they are expected to turn into southwesterlies.

T+48h, an anticyclonic flow pattern is expected to prevail over a large part of North Africa while a cyclonic flow pattern is expected to prevail over Morocco, Mali, Burkina Faso, Guinea, Liberia and Cote D'Ivoire with isolated convergence over Chad, Sudan and northeastern DRC. Southeasterlies are expected to prevail over the coasts of Kenya and Tanzania with a confluence flow pattern over northeastern Tanzania while southwesterlies are expected to prevail along the coast of Somalia. A cyclonic flow pattern is expected to prevail over southwestern Angola, western Namibia and northwestern South Africa and an anticyclonic flow pattern is expected over northeastern coast of South Africa and dominate over the remaining part of Southern Africa with southeasterlies from eastern coast of Madagascar through Mozambique, all the way to the Gulf of Guinea where they are expected to turn into southwesterlies.

T+72h, an anticyclonic flow pattern is expected to dominate over a large part of North Africa with an exception of northern Algeria and off the coast of Western Sahara where a cyclonic flow pattern is expected to develop. Isolated convergence is expected to occur over Niger, Chad and Sudan in the Sahel while southeasterlies are expected to prevail over the coast of Kenya and Tanzania and southwesterlies to prevail along the coast of Somalia. A cyclonic flow pattern is expected to prevail over the southwest part of Southern Africa (southwestern Angola, Namibia and western South Africa) while an anticyclonic flow pattern is expected to prevail over the remaining part of Southern Africa sustaining southeasterlies towards the Gulf of Guinea.

2.2. Flow at 500hPa

T+24h, an extensive anticyclonic flow pattern is expected to prevail over a large part of the Africa continent from North Africa to southern Africa with an exception of a trough over Morocco, eastern Ethiopia and along the coast of Somalia; while a cyclonic circulation flow pattern is expected to dominate over the extreme part of Southern Africa including west southern Angola and Namibia.

T+48h, an extensive anticyclonic flow pattern is expected to prevail over a large part of the African continent with a trough over eastern Ethiopia and Somalia; while a cyclonic circulation flow pattern is expected to dominate over Southern Africa including Angola, Namibia, southern Zambia, Botswana and over western Zimbabwe.

T+72h, an extensive anticyclonic flow pattern is expected to prevail over a large part of the African continent with a trough over eastern Ethiopia and Somalia; while a cyclonic circulation system pattern is expected to dominate over Kenya and Tanzania. Westerlies are expected to dominate over Namibia, and Botswana. A cyclonic system is expected to dominate over the tip of Southern Africa.

2.3. Flow at 200hPa

T+24h, an upper level anticyclonic flow pattern is expected to dominate over a large part of Africa with a trough from north western DRC, through Uganda to Somalia; while a westerly flow pattern is expected to dominate over the remaining part of Southern Africa.

T+48h, an upper level anticyclonic flow pattern is expected to dominate over Africa and over the Subtropical region up to 20S latitude (including Sahel, Central Africa) with a cyclonic flow pattern over Uganda, Kenya, northern Ethiopia and Somalia ; while a westerly flow pattern is expected to dominate over the remaining part of southern Africa.

T+72h, an upper level anticyclonic flow pattern is expected to dominate from north Africa through the Subtropical region to latitude 20S (including Sahel, Central and eastern Africa) with a trough over Uganda, eastern Ethiopia and Somalia; while a westerly flow pattern is expected to dominate over the remaining part of southern Africa.

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