



Forecast Guidance for Africa

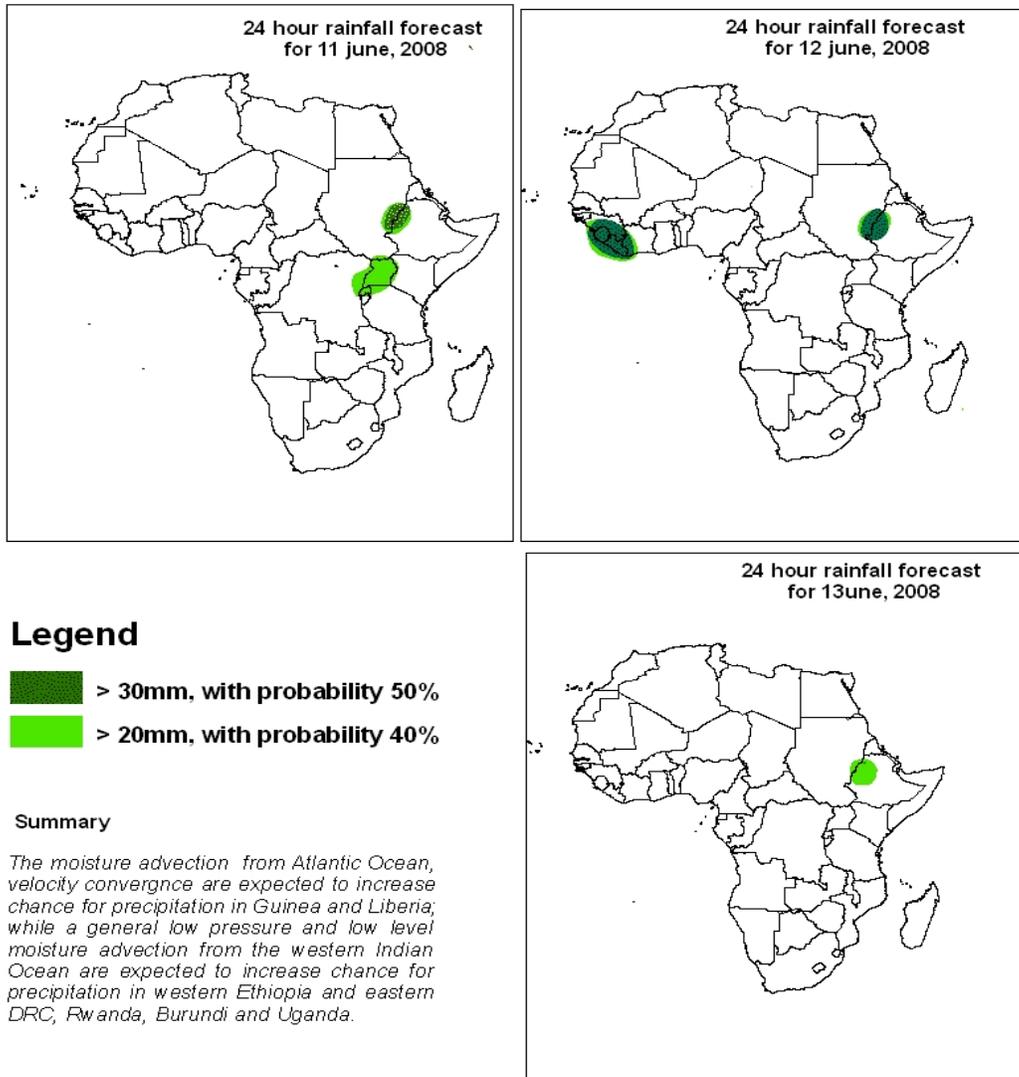
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

FORECAST DISCUSSION 14H00 EST, 10 JUNE 2008

Valid: 00Z 11 - 13 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; 10 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

T+24h, a cyclonic flow pattern is expected to dominate over Western Sahara, Morocco, northwestern Algeria and over Tunisia while an anticyclonic flow pattern is expected to dominate over the remaining part of North Africa. Isolated convergence is expected to dominate over the Sahel and over the Lake Victoria basin while a Southeasterly/Southwesterly flow pattern is expected to dominate over the Equatorial western Indian Ocean creating southerlies over the coasts of Tanzania and Kenya and southwesterlies along the coast of Somalia. An anticyclonic flow pattern is expected to dominate over a large part of southern Africa with a cyclonic flow system over southwestern Namibia and South Africa.

T+48h, a cyclonic flow pattern is expected to dominate over a large part of North Africa with a small anticyclonic flow circulation over eastern Egypt. Isolated convergence activities are expected to occur over Niger, Nigeria, Chad and Ethiopia while southerlies are expected to prevail over the coasts of Kenya and Tanzania and southerlies to prevail along the coast of Somalia. A cyclonic flow pattern is expected to dominate over South Africa and southern Mozambique, while an anticyclonic flow pattern is expected to dominate over the remaining part of Southern Africa.

T+72h, an anticyclonic flow pattern is expected to prevail over southern Algeria, eastern Libya and western Ethiopia while a cyclonic flow circulation is expected to dominate over the remaining part of North Africa. Isolated converge activities are expected to take place over West Africa (over Mali, Burkina Faso and Chad), northern Sudan and northeastern DRC while southeasterlies are expected to replace southerlies over the coasts of Kenya and Tanzania and southwesterlies to prevail along the coast of Somalia. An anticyclonic flow pattern is expected to prevail over all of Southern Africa.

2.2. Flow at 500hPa

T+24h, a trough is expected to dominate over Morocco. An extensive anticyclonic flow pattern is expected to dominate over a large part of Africa from North Africa to southern Africa with an exception of the eastern coastline from Somalia, southwestern Kenya, Madagascar and western Indian Ocean, to the southwestern tip of South Africa where a cyclonic flow pattern is expected to dominate.

T+48h, an extensive anticyclonic flow pattern is expected to prevail over the Africa continent with a cyclonic flow pattern over eastern Ethiopia, Somalia, Kenya, Madagascar and while westerlies are expected to dominate the extreme part of Southern Africa.

T+72h, an anticyclonic flow pattern is expected to prevail over a large part of Africa from North Africa to southern Africa. A cyclonic flow pattern is expected to dominate over eastern Ethiopia, Somalia, Kenya, southwestern Tanzania, Madagascar and to surround the extreme part of Southern Africa.

2.3. Flow at 200hPa

T+24h, an upper level anticyclonic flow pattern is expected to dominate over Africa north of the Equator with an associated divergent flow pattern over Burkina Faso and an upper level trough off the coast of Morocco. Similarly, an upper level anticyclonic flow pattern is expected to dominate south of the Equator from Angola, through Zambia, all the way to Northern Madagascar, while an upper level trough is expected to develop in the Atlantic Ocean and create northwesterlies over southern Namibia and South Africa.

T+48h, an upper level anticyclonic flow pattern is expected to prevail over Africa north of the Equator with a divergent flow pattern off the coast of Guinea. The upper level anticyclonic flow pattern over northern Mozambique is expected to migrate eastwards and extend its influence from the Equator to about latitude 20°S while, a westerly flow pattern is expected to dominate over Namibia, Botswana, South Africa and southern Mozambique with an embedded trough over South Africa.

T+72h, an extensive upper level anticyclonic flow pattern is expected to dominate over a large part of continental Africa, from North Africa to latitude 20°S, while a westerly flow pattern is expected to dominate southwards of latitude 20°S.

Authors:

1. Arlindo Meque (“Instituto Nacional de Meteorologia” (INAM), Mozambique and African Desk).

2. Hilaire Elenga (Direction de la Meteorologie Nationale du Congo Brazzaville and African Desk)