



Forecast Guidance for Africa

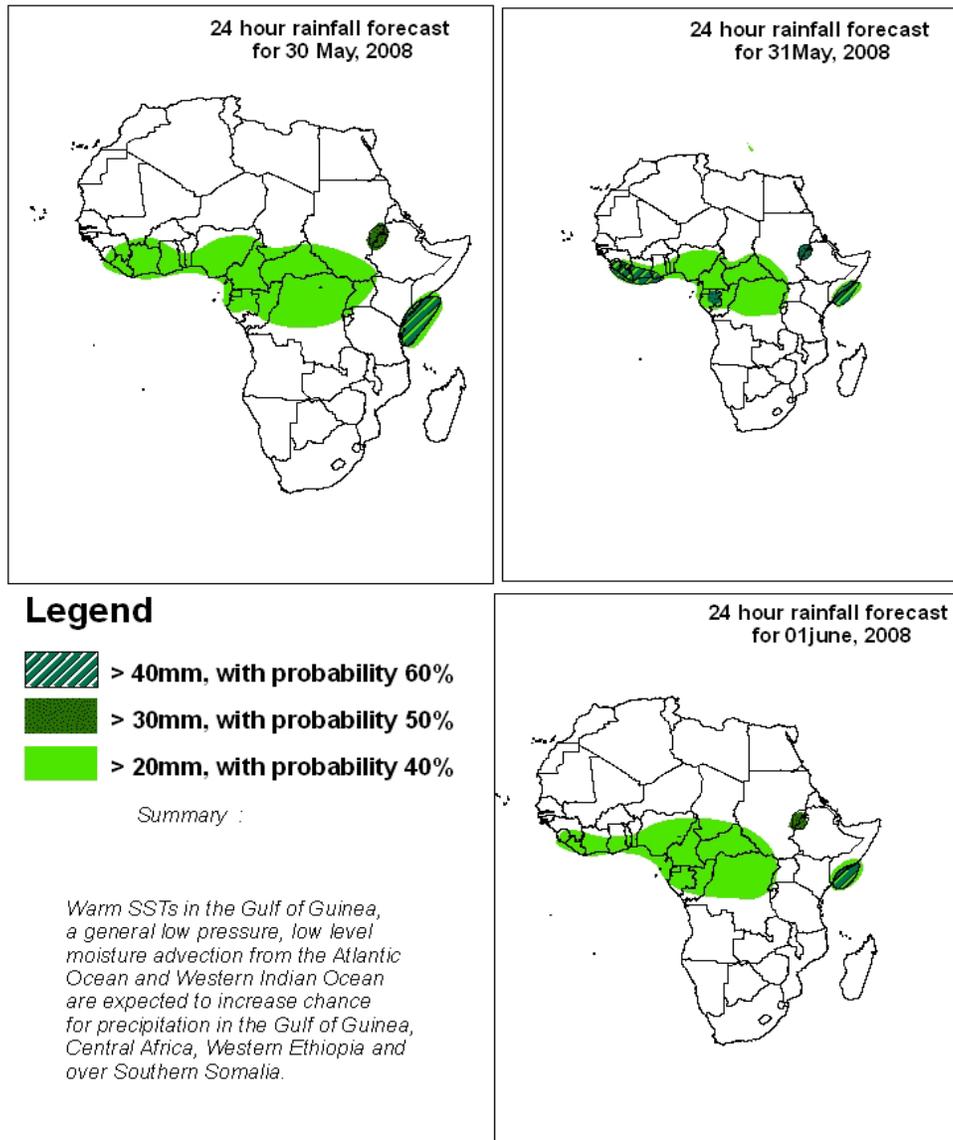
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

FORECAST DISCUSSION 14H00 EST, 29 MAY 2008

Valid: 00Z, 30 May-01 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; 29 May 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, an anticyclonic flow pattern is expected to dominate over Morocco, northern Algeria and Tunisia with northerlies over Egypt, while a general low pressure area is expected to dominate over the Sahel including Central Africa. An anticyclonic circulation is expected to dominate over the Equatorial western Indian Ocean causing southeasterlies over the coasts of Kenya and Tanzania and southwesterlies along the coast of Somalia. An anticyclonic flow pattern is expected to dominate over a large part of Southern Africa with a shallow trough lying in the Mozambique Channel and a trough over southwestern Namibia and South Africa.

T+48h, an anticyclonic flow pattern is expected to dominate over Western Sahara, eastern Algeria, Tunisia, Libya and Egypt with a trough in between over Morocco and western Algeria. A general low pressure area is expected to prevail over the Sahel including Central Africa while an anticyclonic circulation system is expected to prevail over the Equatorial western Indian Ocean. A low pressure area/trough system is expected to dominate off the coast of Angola, southern Namibia and over South Africa, 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 the eastern side of North Africa (over Libya and Egypt) with a trough to the west over Morocco and Algeria while a general low pressure area is expected to prevail over the Sahel including Central Africa. An anticyclonic circulation system is expected to prevail over the Equatorial western Indian Ocean allowing moisture transportation inland by southeasterlies over the coasts of Kenya and Tanzania. A low pressure center is expected to dominate along the coast of southern Angola, Namibia and western South Africa, while a trough is expected to dominate over southeastern coast of South Africa into southern Madagascar. An anticyclonic flow pattern is expected to dominate over the remaining part of Southern Africa.

2.2. Flow at 500hPa

T+24h, an extensive anticyclonic flow pattern is expected to dominate over North Africa from latitude 10°S with a trough over Egypt and a low pressure center off the coast of Somalia. Northwesterlies are expected to dominate over Namibia and South Africa due to a trough in the Atlantic Ocean over southwestern coast of South Africa. A low pressure center is expected to dominate over Central and southern Madagascar stretching into Central Mozambique.

T+48h, an extensive anticyclonic flow pattern is expected to prevail over North Africa from latitude 10°S with troughs off the coast of Morocco and over Egypt, and a low pressure system over Sierra Leone and Liberia and over the tip of Somalia. Northwesterlies are expected to prevail over Namibia, Botswana and South Africa due to a prevailing trough in the Atlantic Ocean over southwestern coast of South Africa. A low pressure

center is expected to prevail over southern Madagascar stretching into northern Mozambique.

T+72h, an anticyclonic flow pattern is expected to prevail over a large part of Africa north of the Equator with a trough over Morocco and a low pressure off the coast of Guinea and Sierra Leone and another one over the tip of Somalia. An anticyclonic flow pattern is also expected to dominate over a large part of Southern Africa (over Angola, Zambia, northern Namibia, northern Botswana, Zambia and central Mozambique) while a westerly flow pattern is expected to dominate over South Africa with two trough systems, one over southwestern coast of South Africa in the Atlantic Ocean and the other over Madagascar stretching northwards into Mozambique in the Indian Ocean.

2.3. Flow at 200hPa

T+24h, a westerly flow pattern is expected to dominate over a large part of North Africa with an embedded trough over southeastern Algeria while an upper level anticyclonic flow pattern is expected to dominate over the Sahel including Central and Eastern Africa with a divergent flow pattern over southern Cote D'Ivoire . A westerly flow pattern is also expected to dominate over a large part of Southern Africa with an upper level trough over southwestern tip of South Africa in the Atlantic Ocean and another one over Madagascar in the western Indian Ocean.

T+48h, a westerly flow pattern is expected to prevail over a large part of North Africa with an embedded trough over northern Niger. An upper level anticyclonic flow pattern is expected to prevail over the Sahel including Central and Eastern Africa. Westerlies are expected to prevail over a large part of Southern Africa with an upper level high pressure center over eastern Angola and southern Zambia and two upper level troughs, one over southwestern tip of South Africa and the other over eastern Madagascar.

T+72h, a westerly flow pattern is expected to prevail over a large part of North Africa with an embedded trough over Morocco. An upper level anticyclonic flow pattern is expected to prevail over the Sahel including Central and Eastern Africa with a divergent flow pattern over central Nigeria and over Sudan/Ethiopia border. An upper level anticyclonic flow pattern with a center over northern Zimbabwe is expected to dominate over a large part of Southern Africa (over Angola, Zambia, Zimbabwe and northern Mozambique) including Tanzania while westerlies are expected to prevail over South Africa with two upper level troughs, one over southwestern tip of South Africa and the other over eastern Madagascar.

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