



Forecast Guidance for Africa

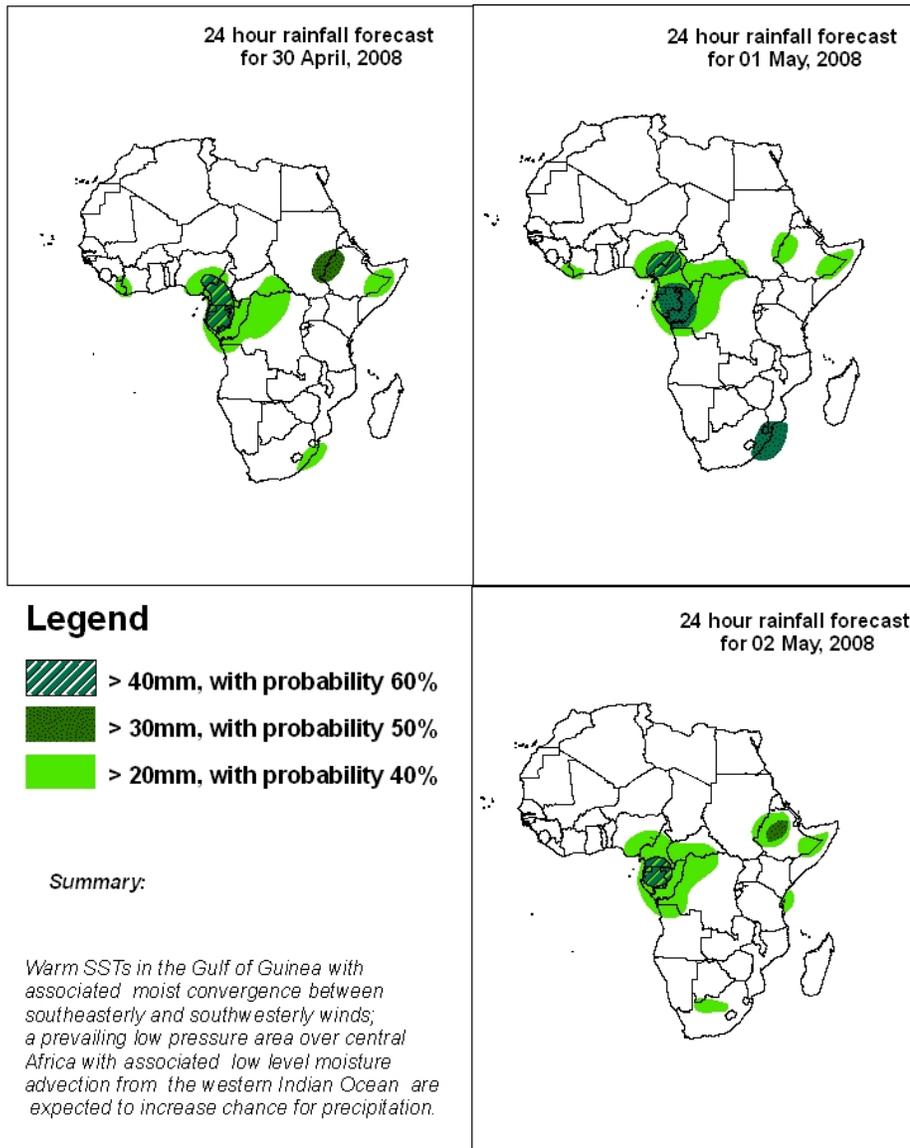
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

FORECAST DISCUSSION 14H00 EST, 29 APRIL 2008

Valid: 00Z, 30APRIL-02 MAY, 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 April 2008): except for the tropical latitudes (i.e, between 10N and 10S) where UK Model gives low pressure values than both ECMWF and GFS, all the three models are in agreement especially with respect to the positioning of large scale features.

2.1. Flow at 850hPa

T+24h, an anticyclonic flow pattern is expected to dominate over a large part of North Africa with a low pressure area over Morocco and northwestern Mauritania. A general low pressure area is expected to dominate over the Sahel, Central and Eastern Africa, causing isolated convergence in the area and a southeasterly flow to dominate along the coast of Tanzania and northern Mozambique. A low pressure is expected to dominate over the equatorial Western Indian Ocean off the coast of Somalia and Kenya and to the northeast of Madagascar. An extensive anticyclonic flow pattern is expected to dominate over a large part of southern Africa, from the Atlantic Ocean to western Indian Ocean with a low pressure area over eastern Namibia and a trough over southern Madagascar.

T+48h, an anticyclonic flow pattern is expected to prevail over a large part of North Africa with a trough area over Morocco. A general low pressure area is expected to prevail over the Sahel, Central and Eastern Africa as well as the southeasterly flow over Tanzania and northern Mozambique. An equatorial low pressure is expected to continue dominating the coasts of Somalia and Kenya including the tip of Madagascar causing moisture advection inland from the Indian Ocean. An extensive anticyclonic flow pattern is expected to prevail over a large part of southern Africa, from the Atlantic Ocean to western Indian Ocean with a low pressure over Namibia and Botswana borders, and a trough over southern Madagascar.

T+72h, an anticyclonic flow pattern is expected to prevail over a large part of North Africa with a trough over northern Morocco. Localized convergence activities are expected to prevail over the Sahel, Central and eastern Africa due to a persistent general low pressure area in these regions and a confluent flow pattern is expected to dominate over southeastern Congo, western DRC and over northwestern Angola. A low pressure area is expected to continue dominating along the coast of Somalia and Kenya providing moisture from the Indian Ocean and a southeasterly flow is expected to prevail over Tanzania and northern Mozambique. An anticyclonic flow pattern is expected to continue dominating over a large part of southern Africa, from the Atlantic Ocean to western Indian Ocean with a low pressure weakness over eastern Namibia and a trough over eastern South Africa in the Indian Ocean.

2.2. Flow at 500hPa

T+24h, a trough is expected to dominate the extreme west of North Africa (over Morocco, northwestern Algeria, Mauritania and Senegal) and another one lying in the Mediterranean sea is expected to influence over northern Libya and Egypt. An extensive anticyclonic circulation is expected to dominate over the remaining part of North Africa as well as Central and eastern Africa and part of Southern Africa (Angola, northern Namibia, Zambia, northern Mozambique and northern Madagascar). An equatorial low pressure is expected to dominate over the Gulf of Guinea influencing all countries around it and an extensive

trough, from the Atlantic Ocean to western Indian Ocean is expected to dominate over the remaining part of southern Africa.

T+48h, an anticyclonic flow pattern is expected to dominate over a large part of Africa, from the North to latitude 20°S with a shallow trough over southern Morocco and western Mauritania and an equatorial low in the Gulf of Guinea while an extensive trough is expected to dominate south of latitude 20°S.

T+72h, an extensive anticyclonic flow pattern is expected to prevail over a large part of Africa, from the North to latitude 20°S with a low pressure area in the Gulf of Guinea and over western Namibia and northwestern South Africa. Side by side trough and ridge lines are expected to dominate western oceanic area of southern Africa while the trough is expected to dominate over eastern South Africa in the Indian Ocean.

2.3. Flow at 200hPa

T+24h, an upper level westerly jet stream is expected to dominate over North and West Africa with an upper level trough over Morocco and northern Mauritania and over northern Libya and Egypt. An upper level divergent flow pattern is expected to dominate over central Cameroon while an anticyclonic circulation is expected to dominate over central and eastern Africa across northern Madagascar. A westerly flow pattern is expected to dominate over southern Africa with an upper level trough over southeastern South Africa.

T+48h, an upper level westerly jet stream is expected to prevail over North Africa with a trough over northern Mali while an upper level divergent flow pattern is expected to dominate over western Congo. An anticyclonic circulation system is expected to prevail over central and eastern Africa including northern Madagascar. A westerly flow pattern is expected to prevail over part of southern Africa with an upper level trough over southern South Africa.

T+72h, an upper level westerly jet stream is expected to prevail over North Africa while a divergent flow pattern is expected to dominate over Central Somalia. An anticyclonic circulation system is expected to prevail over central and eastern Africa. A westerly flow pattern is expected to prevail over part of southern Africa with an upper level trough over South Africa.

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