



Forecast Guidance for Africa

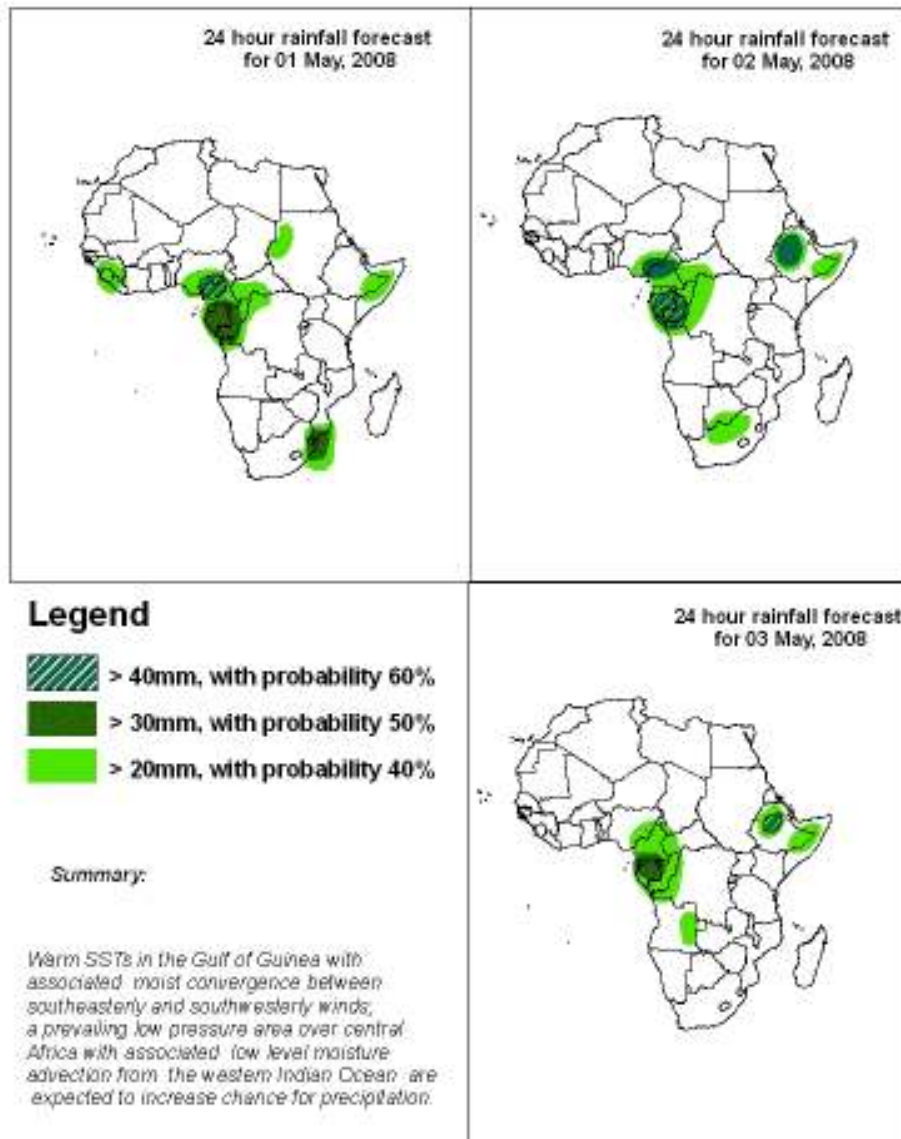
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

FORECAST DISCUSSION 14H00 EST, 30 APRIL 2008

Valid: 00Z, 01-03 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; 30 April 2008): The UKMET model persistently underestimates the values of PMSL in comparison to the ECMWF and GFS models.

2.1. Flow at 850hPa

T+24h, an anticyclonic flow pattern is expected to dominate over a large part of North Africa with a trough over Morocco and 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 causing moisture advection inland along the coast of Somalia. 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 northwestern and 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. A general low pressure area is expected to prevail over the Sahel, Central and Eastern Africa. A southeasterly flow is expected to dominate over Tanzania and northern Mozambique. Convergence activity is expected to occur off the coasts of Gabon due to Southeasterlies emanating from the Indian Ocean and Northeasterlies from the anticyclonic circulation over North Africa. 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 northwestern and eastern Namibia and a trough over central and southern Madagascar.

T+72h, an anticyclonic flow pattern is expected to prevail over a large part of North Africa. 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. An equatorial low pressure is expected to continue dominating along the coast of Somalia and Kenya and northeast Madagascar providing moisture from the Indian Ocean. An anticyclonic flow pattern is expected to continue dominating over a large part of southern Africa with a low pressure over southwestern Angola, Namibia and northwestern South Africa, and a trough over southern Madagascar.

2.2. Flow at 500hPa

T+24h, a trough is expected to dominate over the red sea and the extreme northeast of Egypt and Sudan. An extensive anticyclonic circulation is expected to dominate from the North Africa to latitude 20°S with a low pressure in the Gulf of Guinea, while a trough is expected to dominate south of latitude 20°S.

T+48, an extensive anticyclonic flow pattern is expected to dominate almost over all Africa, except over the eastern part of Gulf of Guinea, South Africa and southern Madagascar where a low pressure and trough are expected to dominate, respectively.

T+72h, a trough is expected to dominate over Libya and Egypt while an extensive anticyclonic circulation is expected to dominate from the remaining part of North Africa to southern Africa with isolated convergence in the Gulf of Guinea, a low pressure area over southern Namibia, southern Botswana and western South Africa, and a trough over southern Madagascar .

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 northern Morocco and northern Algeria. An upper level divergent flow pattern is expected to dominate over eastern Gabon while an anticyclonic circulation is expected to dominate over central Africa and off the coast of Somalia across northern Madagascar. A westerly flow pattern is expected to dominate over a large part of southern Africa with an upper level trough over southern South Africa and Madagascar.

T+48h, an upper level westerly jet stream is expected to prevail over North Africa. An upper level ridge is expected to dominate over western and eastern Africa above the Equator and an anticyclonic circulation system is expected to prevail over central Africa. A westerly flow pattern is expected to prevail over a large part of southern Africa with an upper level trough over South Africa and an anticyclonic circulation over southern South Africa.

T+72h, an upper level westerly jet stream is expected to prevail over North Africa with a divergent flow pattern off the coast of Gabon. The Anticyclonic circulation over Central Africa as well as the ridge over eastern Africa are expected to prevail. A westerly flow pattern is expected to continue dominating over a large part of southern Africa with embedded side by side low pressure area over South Africa, a high pressure center to the south and an upper level trough over southern Madagascar.

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