



## Forecast Guidance for Africa

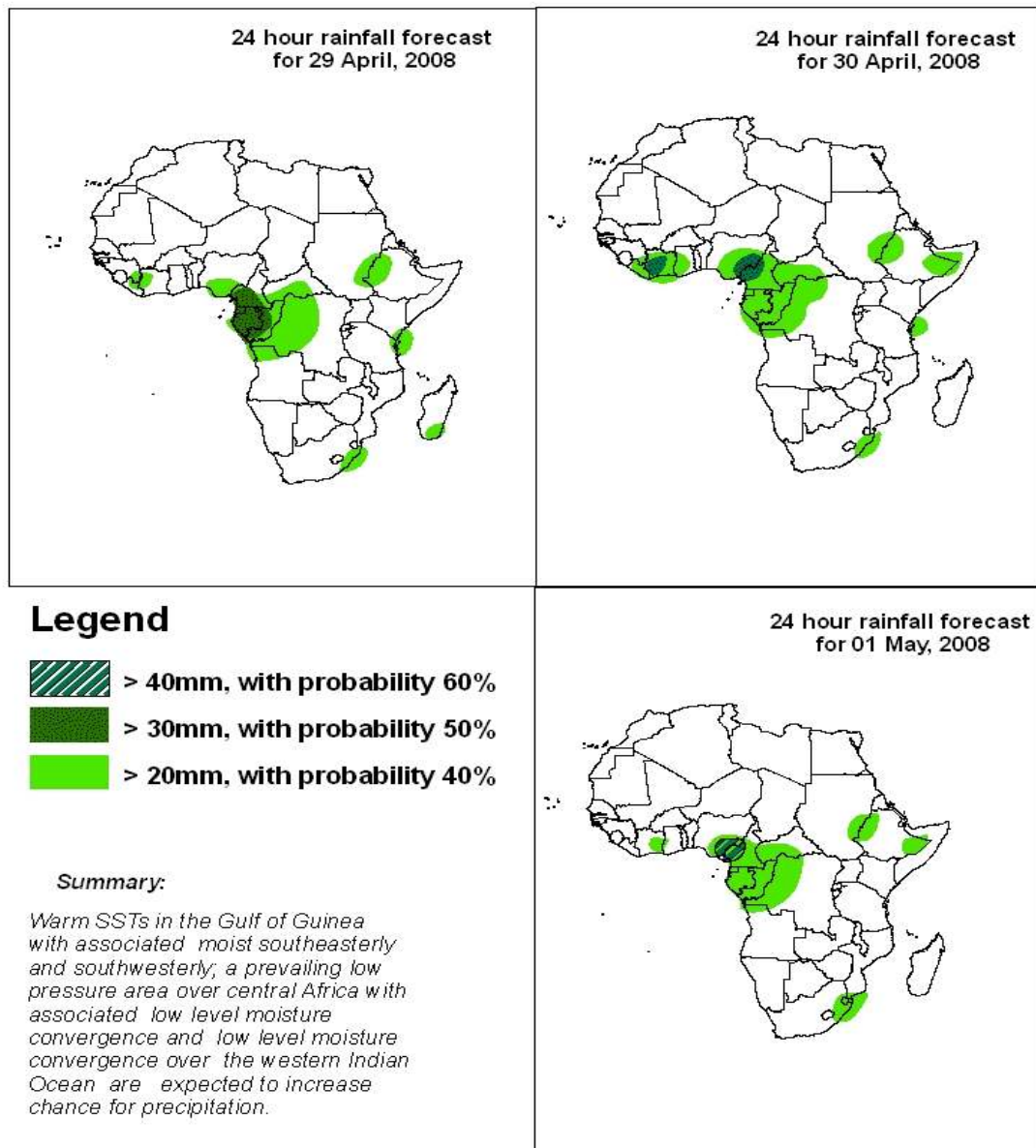
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

**FORECAST DISCUSSION 14H00 EST, 28 APRIL 2008**

**Valid: 00Z, 29APRIL-01 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; 28 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 southern 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 causing moisture advection inland from the Indian Ocean. An extensive anticyclonic flow pattern is expected to dominate over southern Africa, from the Atlantic Ocean to western Indian Ocean with a low pressure area over southern Madagascar and an embedded localized convergence over southern Botswana and northeast South Africa.

T+48h, an anticyclonic flow pattern is expected to prevail over a large part of North Africa with a low pressure area over southern Morocco and northwestern Mauritania. 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 extensive anticyclonic flow pattern is expected to prevail over southern Africa, from the Atlantic Ocean to western Indian Ocean with a trough over southern Madagascar and embedded localized convergence over southern western Namibia.

T+72h, a trough to the west (over northern Morocco, northwestern Algeria, northern Mauritania and northwestern Mali) and a high pressure center to the east are expected to dominate over North Africa. A general low pressure area is expected to dominate over Central and Eastern Africa causing isolated convergence in the area. An extensive anticyclonic flow pattern is expected to prevail over southern Africa, from the Atlantic Ocean to western Indian Ocean with a trough over southeastern South Africa and southern Madagascar.

### **2.2. Flow at 500hPa**

T+24h, an westerly flow is expected to dominate the northern most part of Africa with an anticyclonic flow pattern over the north and east Africa and a low pressure area over southern Morocco, northwestern Mauritania and northern Senegal. An equatorial low pressure system is expected to dominate along the Gulf of Guinea influencing all countries around it. An anticyclonic flow pattern is expected to dominate from western Namibia through Angola, Zambia to Tanzania while an extensive trough is expected to dominate over the remaining part of Southern Africa with a westerly flow.

T+48, an anticyclonic flow pattern is expected to prevail over the north, central and eastern parts of Africa including northern Madagascar. A trough is expected to dominate over

Mauritania and Mali. An equatorial low pressure system is expected to prevail along the Gulf of Guinea while an extensive trough is expected to dominate a large part of southern Africa, from the Atlantic Ocean to western Indian Ocean.

T+72h, an anticyclonic flow pattern is expected to prevail over the north, central and eastern Africa with a low pressure in the Gulf of Guinea and a trough over a large part of southern Africa.

### **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 western Mauritania and over northern Libya and Egypt. An upper level divergent flow pattern is expected to dominate over western Cameroon while an anticyclonic circulation is expected to dominate over Western DRC, Rwanda, Burundi and northern Tanzania and along the coast of Tanzania and Kenya. A westerly flow pattern is expected to dominate over southern Africa with an upper level trough over northeastern Madagascar and southeastern South Africa.

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

T+72, an upper level westerly jet stream is expected to prevail over North Africa as well as an upper level divergent flow pattern over western Congo. An anticyclonic circulation system is expected to prevail over east Africa including northern Madagascar. A westerly flow pattern is expected to dominate over southern Africa with an upper level trough over southern South Africa.

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