



Forecast Guidance for Africa

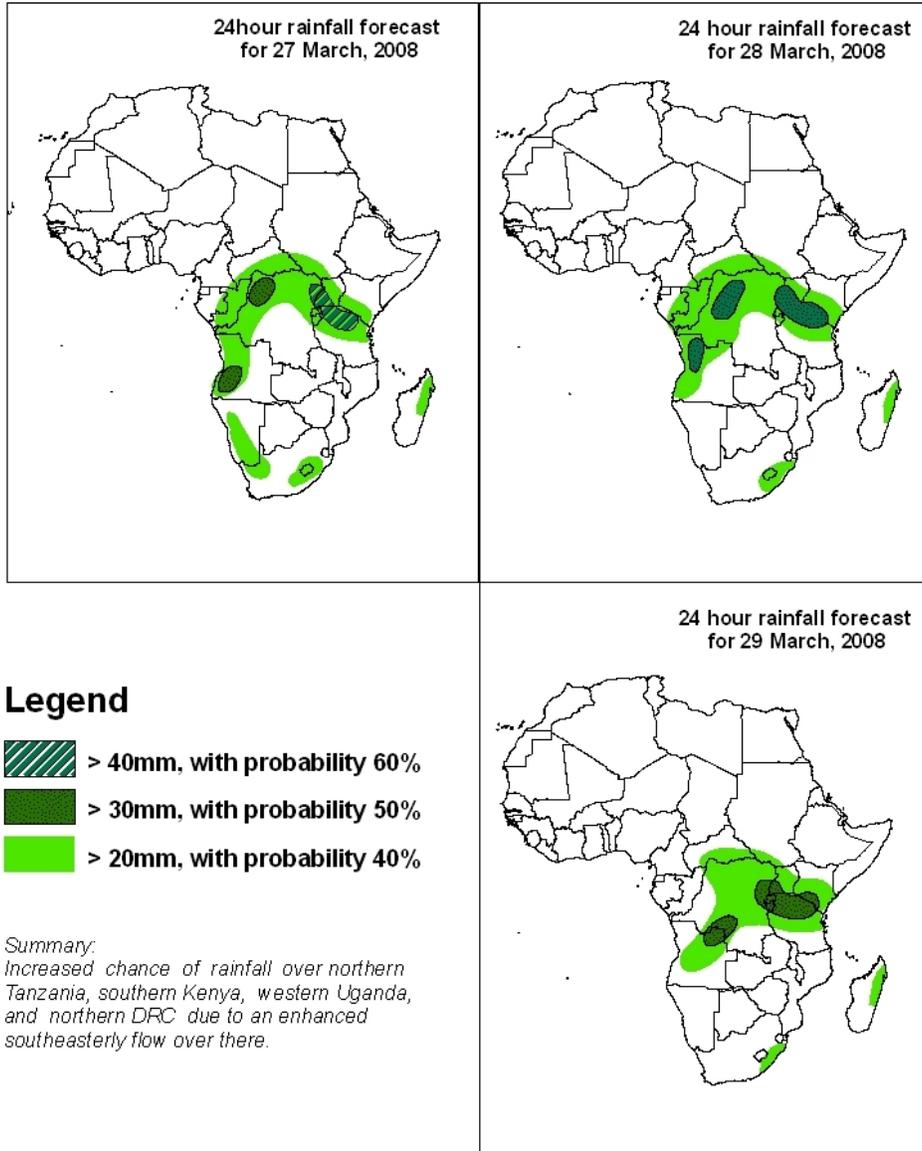
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

FORECAST DISCUSSION 14H00 EST, 26 MARCH 2008

Valid: 00Z, 27-29 MARCH, 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; 26th March 2008): There is an agreement between UK MET, ECMWF and GFS models. These 3 models are almost in agreement in predicting a southeastward track of the tropical disturbance (ex-Tropical Cyclone LOLA) over the Indian Ocean.

2.1. Flow at 850hPa

T+24h, a low pressure system associated with the Tropical Disturbance (ex-Lola) is expected to be centered near 57E 23S with a trough extending over the Indian Ocean to the coast of Tanzania, northern Mozambique and Madagascar. A high pressure system is expected to prevail over the eastern part of the subcontinent and result into southeasterlies through Mozambique Channel, northern Mozambique, southern Tanzania and contribute to convergence in northwestern Tanzania, Uganda, and northeastern DRC, while a low pressure area is expected to prevail over northwestern Angola, southwestern Namibia, and over southwestern South Africa, causing isolated convergence over these countries.

T+48h, the low pressure system associated with the Tropical Disturbance (ex-Lola) is expected to shift further southeast to around 60E 28S. The high pressure over the subcontinent is expected to develop and enhance convergence over northern Tanzania and central DRC, while a low pressure system is expected to prevail along the western coast through northern Angola to southern Namibia, causing localized convergence over there.

T+72h, the low pressure system associated with the Tropical Disturbance (ex-Lola) is expected to weaken further, while the high pressure system over the subcontinent is expected to continue developing westward and northward, causing a filling up of the low pressure systems along the western coast and a strong ridge to develop over the eastern side of the subcontinent. These systems are expected to decrease convergence over Namibia and Angola and maintain convergence over southern DRC and Uganda.

2.2. Flow at 500hPa

T+24h, an anticyclonic flow pattern with two centers is expected to dominate over southeastern and northeastern South Africa, southern Mozambique, Zimbabwe, southern Zambia and Botswana surrounded to the west by a low pressure system over Namibia and southern Angola and to the east by a weak trough covering the Mozambique Channel and Madagascar. A high pressure area is expected to develop over northwest Angola, southwestern DRC, southern Congo and Gabon.

T+48h, the low pressure system over southern Angola and Namibia is expected to move slightly to the north allowing the high pressure system off the coast of South Africa to move eastward thus allowing the anticyclonic flow pattern over northeastern South Africa, southern Mozambique, Zimbabwe, southern Zambia and Botswana to prevail. The trough over Mozambique Channel across southern Madagascar is expected to prevail and the high pressure area over northwest Angola, southwestern DRC, southern Congo and Gabon is expected to weaken.

T+72h, an anticyclonic circulation is expected to prevail over a large part of the southeastern subcontinent (south and central Mozambique, Zimbabwe, southern Zambia and South Africa). This system is expected to be flanked to the west by a low pressure area over Namibia and southwestern Angola and to the east by a trough over the Mozambique Channel and southern Madagascar. A high pressure system is expected to dominate north of Madagascar while a low pressure system is expected to develop off coast of Somalia. This feature is expected to create isolated convergence over Tanzania, DRC and Ethiopia.

2.3. Flow at 200hPa

T+24h, an upper level high pressure system is expected to dominate over Angola, southwestern DRC and Tanzania to the Indian Ocean east of Madagascar while a upper level trough is expected to dominate over western Namibia and South Africa that will cause a westerly flow over north Namibia Botswana, southern Zambia, Zimbabwe and west Mozambique.

T+48h, the upper level divergence over northeastern DRC is expected to prevail. An upper level high pressure system is expected to prevail over Angola and southern DRC and also over the Indian Ocean east of Madagascar while a trough over western Namibia and South Africa is expected to prevail and cause a strong northwesterly flow over northern Namibia, Botswana, southern Zambia, Zimbabwe and west Mozambique and an upper level trough to develop off the coast of Tanzania.

T+72h, the upper level trough over western Namibia and South Africa is expected to move further to the east while the upper level trough off the coast of Tanzania is expected to move southwards to the Mozambique Channel and southern part of Madagascar. A northwesterly flow is expected to dominate over northern Namibia, Botswana, southern Zambia, Zimbabwe and west Mozambique due to the upper level high pressure system over southern DRC and northern Angola and an upper low level which is expected to develop over western Namibia. An upper level high pressure system is expected to prevail over northern Madagascar.

Authors: 1. Leon Guy Razafindrakoto (“Direction Generale de la Meteorologie” (DGM), Madagascar and African Desk)

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