



Forecasting guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 11TH MARCH 2008

**AFRICAN DESK
CLIMATE PREDICTION CENTRE
National Centers for Environmental Predictions
National Weather Service
NOAA
Camp Spring MD 20746**

**FORECAST DISCUSSION 14H00 EST, 11TH MARCH 2008
Valid: 00Z 12TH MARCH 2008-00Z 14TH MARCH 2008**

1: TROPICAL CYCLONE WARNING:

Tropical cyclone JOKWE, is located near 41.2E 23.7S in the central Mozambican Channel heading in southeastward direction, with sustained winds at 07knots speed. It is expected to weaken after 24hr and to track as shown in figure 1.

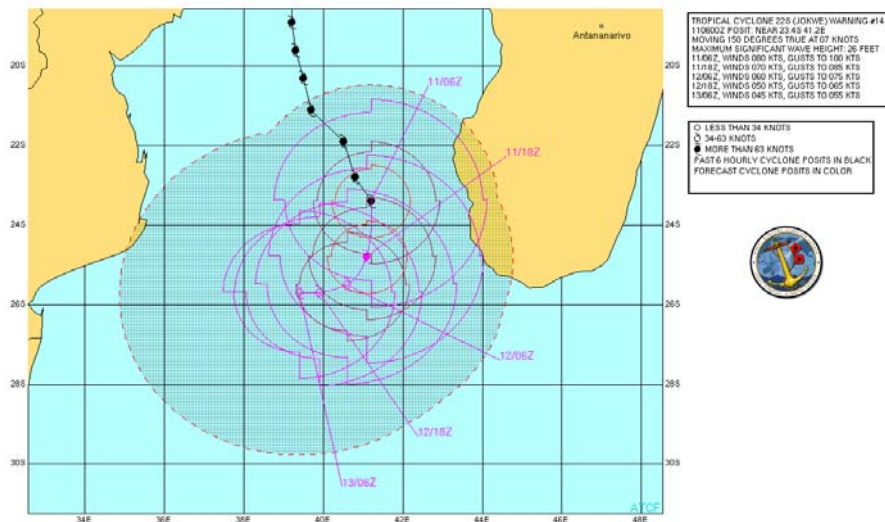


Figure 1: Forecasted track of Tropical Cyclone JOKWE
Source: <http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/index.primjo.html>

2: 24 HR RAINFALL FORECAST

Areas showing Probability Of Precipitation (POP) exceeding significant thresholds as shown in figures 2 – 4 for the dates of 12 to 14 march 2008 respectively.

24 HR RAINFALL FORECAST FOR 12TH MARCH 2008

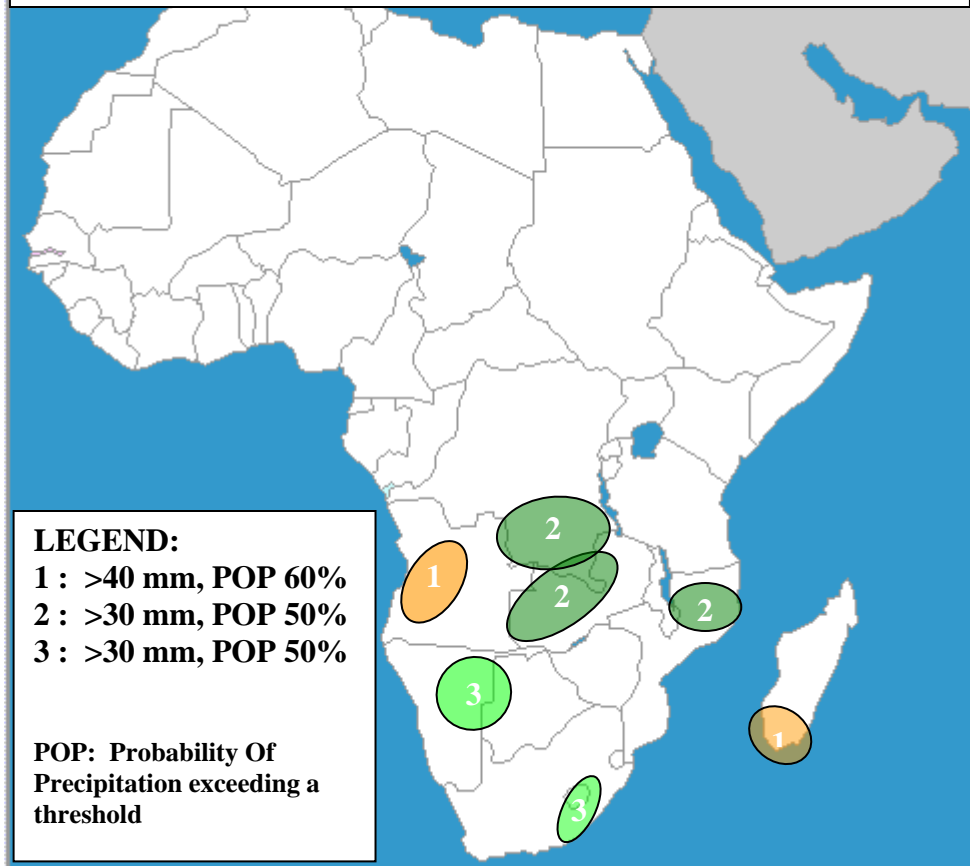


Figure 2: Areas of probability of precipitation for 12th march 2008.

24 HR RAINFALL FORECAST FOR 13TH MARCH 2008

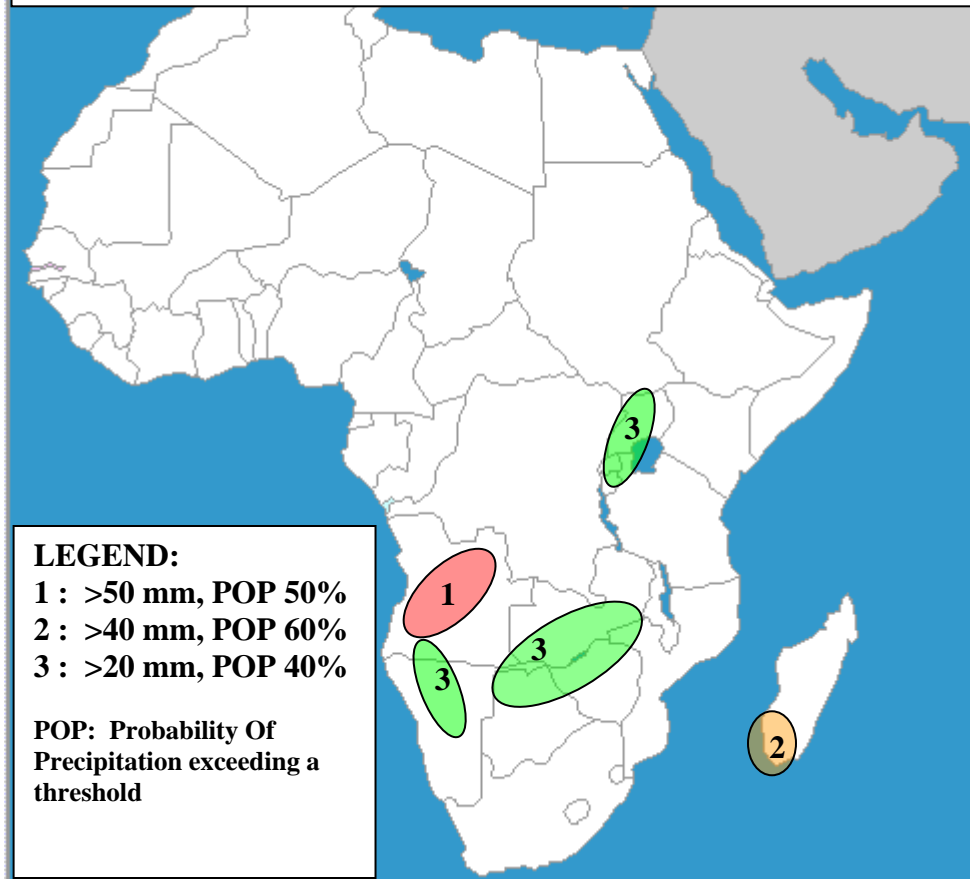


Figure 3: Areas of probability of precipitation for 13th march 2008.

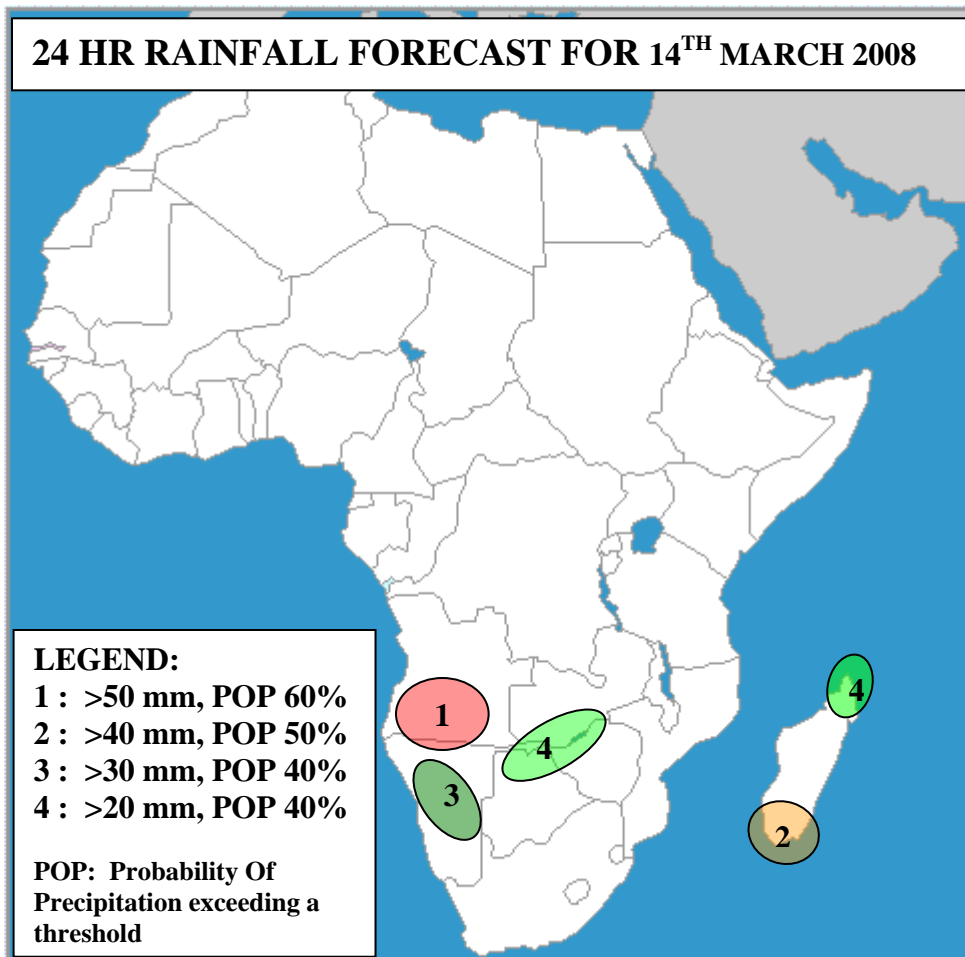


Figure 4: Areas of probability of precipitation for 14th march 2008.

2: MODELS DISCUSSION:

Models comparison (Valid from 00Z; 11th March 2008): In general, there is an agreement of UK MET, ECMWF and GFS models in the forecast track of the tropical cyclone JOKWE.

FLOW AT 850MB

At T+24, the Mascarine high pressure system is expected ridge on both the Northern Madagascar and Southern Mozambique sides of the Tropical cyclone Jokwe blocking it for any movement. The influence of St. Helena High pressure system is expected to extend to western Namibia and western South Africa with a ridge to the south of South Africa. This system together with the expected development low pressure west Angola and Northeast of the tip of Madagascar and the general pressure weakening over Northern Namibia, Western Botswana, eastern and southern South Africa will cause localized convergence over Lake Victoria, Northern Zambia, Northern Namibia and Western Botswana.

T+48, a ridge in the southern Mozambique Channel associated with the Mascarine high pressure system is expected to weaken and a low pressure system to develop to its west. St Helena high pressure system is expected to expand and dominate the southern part of the subcontinent causing a general anticyclone pressure area west of Angola, they will

contribute to convergence over southern Zambia, Northern Botswana, Northwest Zimbabwe. Both the low pressure system of Angola and the low pressure system over Northeast Madagascar contribute to convergence over Northern Tanzania and the lake Victoria Basin.

T+72, the Mascarine high pressure system is expected to move eastward creating a trough behind it. That will permit Jokwe and the trough to join together and move eastward. The ridge is expected to prevail over the area, this ridge together with the persistent low pressure over Western Angola will contribute to convergence over southern Zambia, northern Botswana, Northeast Namibia and Southern Angola. A diffluent westerly flow pattern is expected to dominate over Northern Angola and DRC. This, associated with an easterly flow from the Mascarine ridging over northern Madagascar will cause convergence over lake Victoria Basin.

FLOW AT 500MB

At T+24, the Mascarine high pressure system is expected to be located southeast Jokwe while to the north and east of it an anticyclonic flow pattern is expected to dominate a large part of the subcontinent reducing convective activity over there. A trough is expected to the west of the Madagascar that will cause localized convective activity over southern Africa and over Southwest Namibia.

At T+48, the Mascarine ridge is expected to weaken as a result of the trough system over southern Africa, moving eastward. The trough associated with Jokwe is expected to expand southeastward along Jokwe's surface direction. A high pressure system is expected to dominate over Mozambique, Zambia, Malawi, Botswana, North South Africa, suppressing convective activity over these areas. A persistent low pressure system over central Angola will portray a deeper convective activity over there. An easterly flow pattern is expected to prevail over Tanzania and DRC, contributing to a convergent flow over the lake Victoria Basin and Northwestern part of the subcontinent.

At T+72, the trough system area associated with Jokwe is expected to expand further eastward and southward causing the Mascarine high pressure stretch and the high pressure system over the subcontinent is expected to prevail. A trough system is expected to develop over west of South Africa and will enhance the convergence over the western part over the subcontinent.

FLOW AT 200MB

At T+24, generally, an upper level high pressure is expected to dominate over the northern part of the subcontinent, with a ridge over southwest of Madagascar, which illustrates the position of Jokwe and it. An upper level trough is expected to prevail and dominate over southwestern part of the southern Africa.

At T+48, an upper level high pressure system, is expected to prevail over the northern part of the subcontinent while an eastward ridging across the northern tip of Madagascar and another one in southeast direction from east south Africa while an upper level trough

is expected to expand from the southern Mozambican channel eastward and southeastwards. An upper level trough is expected to prevail over the southern part of the subcontinent.

At T+72, an upper level high pressure is expected to prevail over the northern part of the subcontinent to the northern tip over Madagascar with localized convergence flow over Zimbabwe and western Namibia. An upper level trough is expected to prevail over western South Africa, suppressing convective activity there.

Authors: 1. Leon Guy Razafindrakoto (“Direction General de la Meteorologie de Madagascar” and African Desk) and 2. Arlindo Meque (“Instituto Nacional de Meteorologia (INAM) Mozambique” and African Desk)