



Forecasting guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 12TH MARCH 2008

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

FORECAST DISCUSSION 14H00 EST, 12TH MARCH 2008 Valid: 00Z 13TH MARCH 2008-00Z 15TH MARCH 2008

1: TROPICAL CYCLONE WARNING:

Tropical cyclone JOKWE, is located near 40E 25.2S in the Mozambican Channel. This system is currently tracking under the steering influence of a weak low to mid-level subtropical ridge which has built in south the system. It is expected to weaken during the period and to track as shown in figure 1.

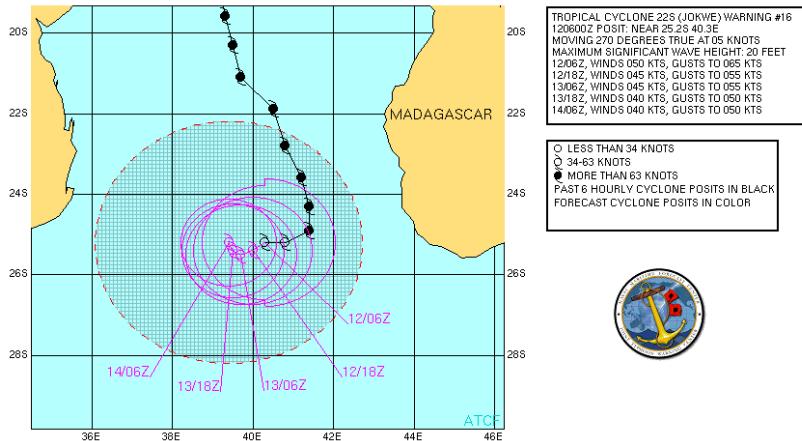


Figure 1: Forecasted track of Tropical Cyclone JOKWE
Source: <http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/index.primjo.html>

2: 24 HR RAINFALL FORECAST

Areas showing Probability Of Precipitation (POP) exceeding significant thresholds as shown in figures 2 – 4 for the dates of 13 to 15 march 2008 respectively.

24 HR RAINFALL FORECAST FOR 13TH MARCH 2008

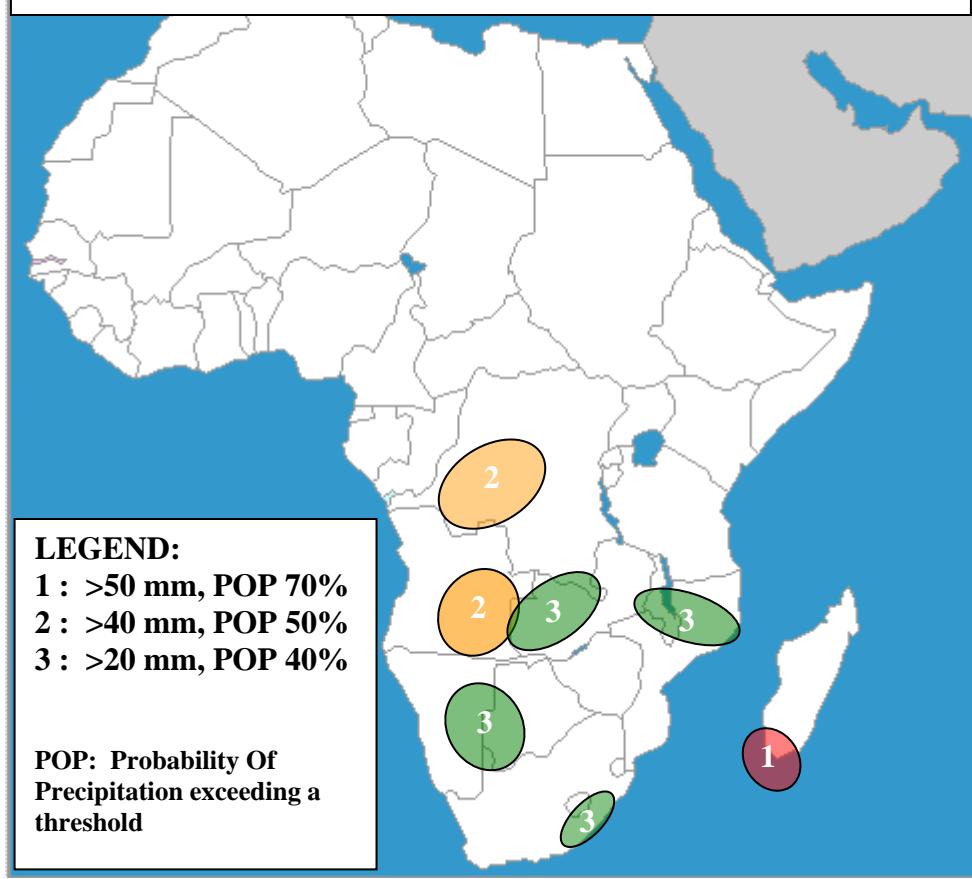


Figure 2: Areas of probability of precipitation for 13th march 2008.

24 HR RAINFALL FORECAST FOR 14TH MARCH 2008

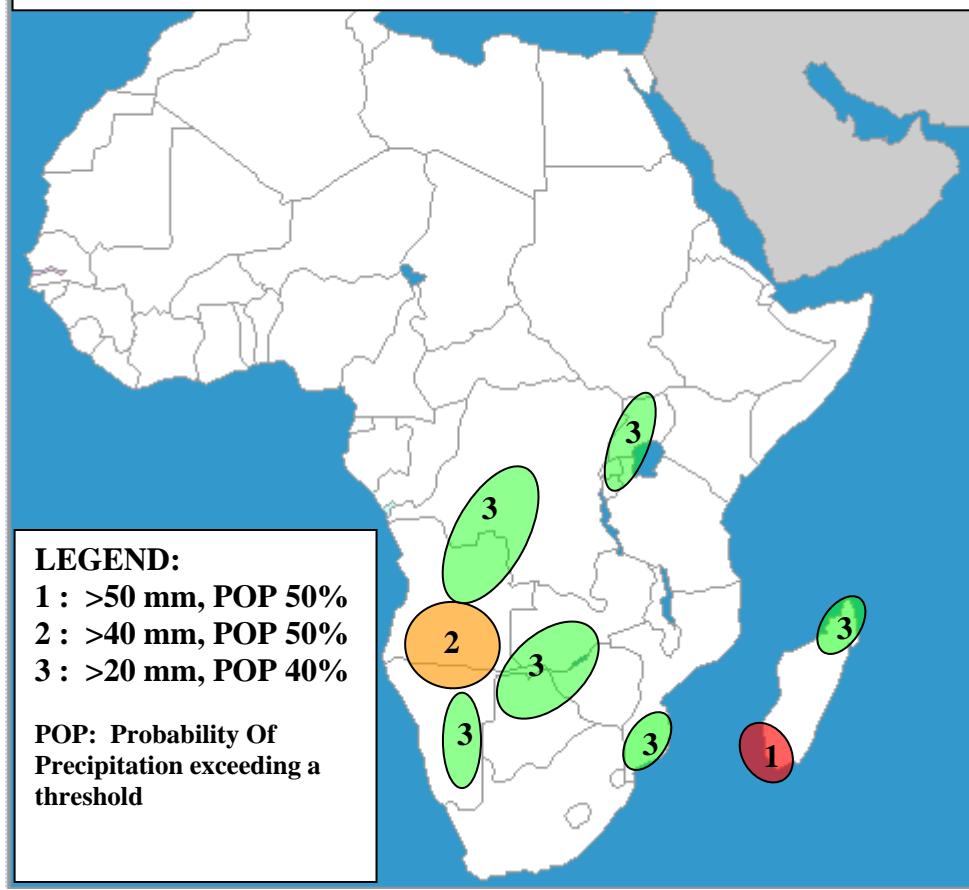


Figure 3: Areas of probability of precipitation for 14th march 2008.

24 HR RAINFALL FORECAST FOR 15TH MARCH 2008

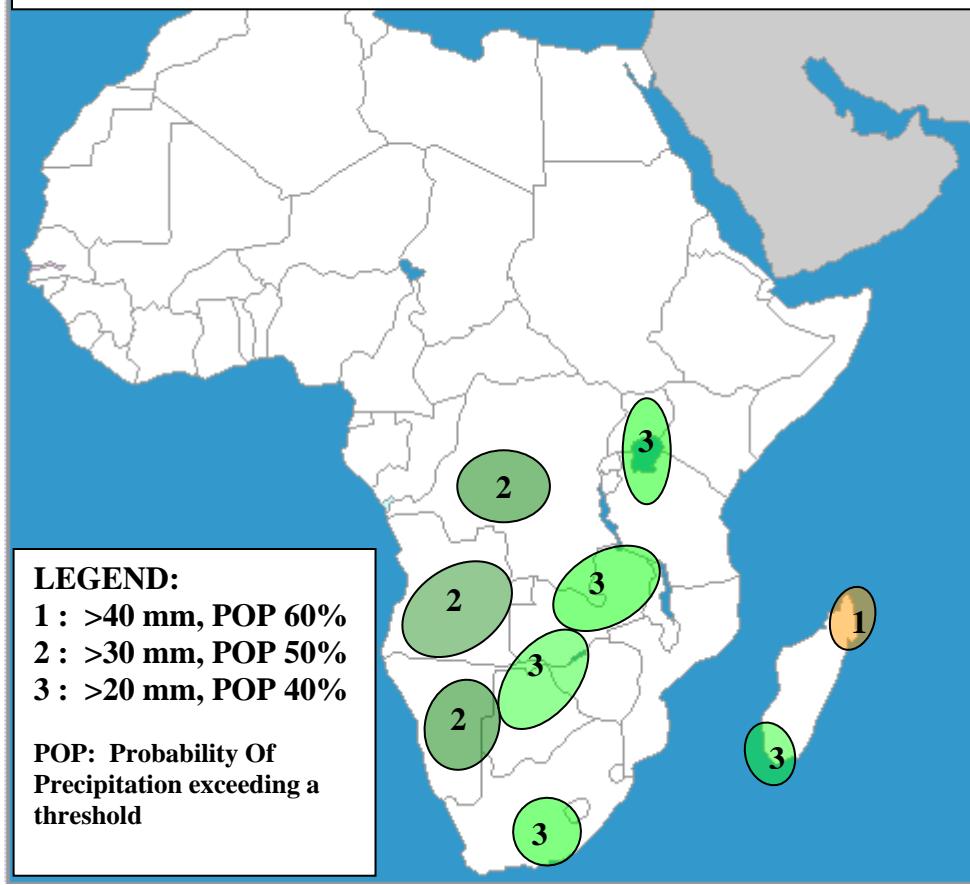


Figure 4: Areas of probability of precipitation for 15th march 2008.

2: MODELS DISCUSSION:

Models comparison (Valid from 00Z; 12th March 2008): In general, there is an agreement of UK MET, ECMWF and GFS models in the forecast to weaken the tropical cyclone JOKWE during the period.

FLOW AT 850MB

At T+24, Tropical Cyclone Jokwe is expected to weaken and to be located near 40E 26S, and to be surrounded to the northeastern side by a ridge associating from the Mascarine high pressure centered at 52E 38S, to the west by a ridge associated with St Helene high pressure, and by a trough to its southwest direction along the south east coast South Africa. A low pressure area is expected to prevail over western Angola. This system associated with the St Helene's ridge will cause isolated convergence over western Botswana and central Zambia. To the northeast of this low pressure area, a diffluent westerly pattern is expected to prevail over northern Angola and contribute convergence over western Tanzania and Lake Victoria basin when they meet with the diffluent easterly flow originating from the Mascarine ridge.

T+48, the Mascarine high pressure and its ridging over Madagascar are expected to relax and slightly move eastward. The St. Helene ridge is expected to prevail over South Africa, eastern Botswana, Zimbabwe and western Mozambique. Jokwe being surrounded

by the anticyclonic flow is expected to weaken further and slightly move southwestward to the troughing along the eastern coast South Africa. The northwesterly flow to the north of the low pressure system over western Angola will cause isolated convergence over northeastern Namibia, northern Botswana and southern Zimbabwe, while its southeasterly component that is expected to dominate over northern Angola and DRC will cause convergence over northern Zambia, western Tanzania and Lake Victoria Basin when they meet with the southeasterly flow from the Mascarine ridging.

T+72, Tropical Cyclone Jokwe being surrounded by the anticyclonic flow from the Mascarine high and St. Helene is expected to weaken further and merge into the trough. The low pressure to the west of Angola is expected to prevail and expand its influence further to the east and contribute to a general area of convergence over Zambia, northwestern Botswana and eastern Namibia. The low pressure area over the Indian Ocean is expected to move westward and maintain an easterly diffluent flow over Tanzania and cause convergence over northern of the country and over Lake Victoria Basin.

FLOW AT 500MB

At T+24, the Mascarine high pressure system is expected to move southwestward while an anticyclonic flow pattern is expected to dominate over a large part of the subcontinent reducing convective activity over there and causing a diffluent Northeasterly flow over northern Tanzania, DRC and Northern coast of Angola. The low pressure system associated with Jokwe is expected to slightly move to the southwest of Madagascar. A trough system is expected to dominate over a large area of Southern South Africa and Western Namibia causing a Northwest flow to dominate along the coast of Namibia and a westerly flow over southern part of South Africa.

At T+48, an anticyclonic flow pattern is expected to continue dominating a large part of the subcontinent, this system will reduce convective activities over there. A trough area is expected to dominate over southern Madagascar and prevail over Southern South Africa and west Namibia.

At T+72, an anticyclonic flow pattern is expected to dominate from Madagascar to southern Tanzania, across Mozambique, eastern South Africa, Zimbabwe, Zambia, Botswana to western Angola while a trough system is expected to prevail over southern South Africa and west of Namibia, this system is expected to cause localized convergence over western Angola and western Namibia with an easterly flow pattern dominating Northern Tanzania.

FLOW AT 200MB

At T+24, an upper level high pressure system associated with divergent flow is expected to prevail over the sub-continent, with a ridging across northern tip of Madagascar to the Indian Ocean and another ridging system to the southeast from eastern South Africa. A low pressure system is expected to dominate over the Indian Ocean to the east and southeast of Madagascar, and a troughing system to prevail over southern South Africa.

At T+48, the upper level flow at T+24 is expected to be dominate by an anticyclonic system over the sub-continent and will move southeastward and ridging to the northern

part of Madagascar including the eastern Mozambican Channel, while the southern part of the country will be dominated by an upper level trough. An upper level trough will also prevail over southern South Africa.

At T+72, the upper level high pressure which ha been dominating the sub-continent is expected to expand and will push the upper level trough further east over the Mozambican Channel and over southern Madagascar. Denote that T.C. Jokwe will be located over an area with a significant vertical wind-shear. An upper level high pressure area is expected to prevail over northern Madagascar as a result of convective activities over there.

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