Forecasting guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 14TH MARCH 2008

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

FORECAST DISCUSSION 14H00 EST, 14TH MARCH 2008
Valid: 00Z 15TH MARCH 2008-00Z 17TH MARCH 2008

1: TROPICAL CYCLONE WARNING:

Jokwe is expected to gradually weaken during the next 48 hrs. At 0600z was located near 40.4E 25.4S(figure. 1).

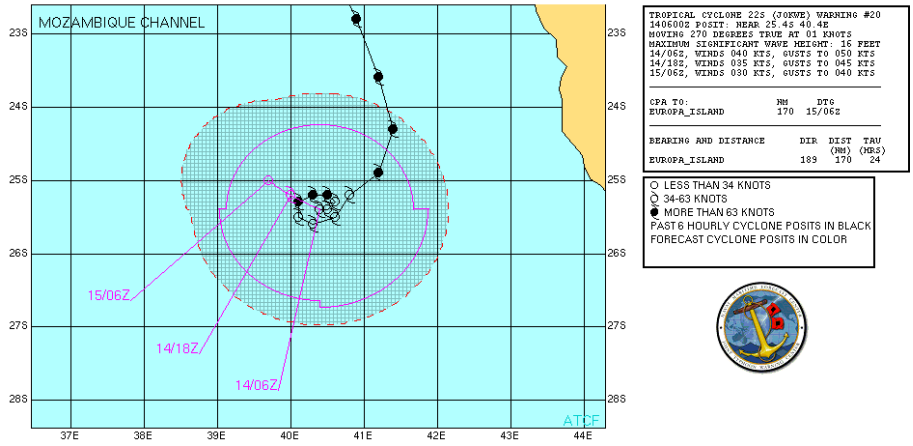

Figure 1: Forecasted track of Tropical Cyclone JOKWE
Source: http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/index.primjo.html

2: 24 HR RAINFALL FORECAST

Areas showing Probability Of Precipitation (POP) exceeding significant thresholds as shown in figures 2 – 4 for the dates of 15 to 17 march 2008 respectively.

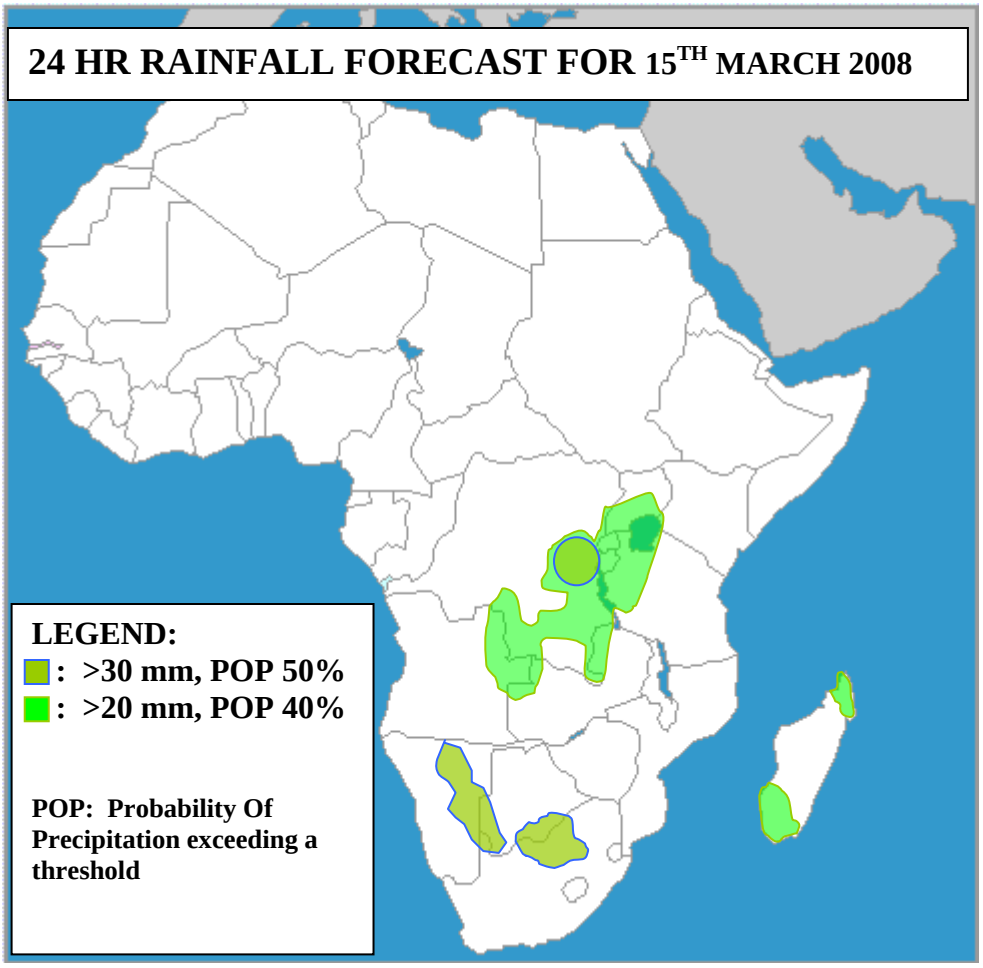

Figure 2: Areas of probability of precipitation for 15th march 2008.

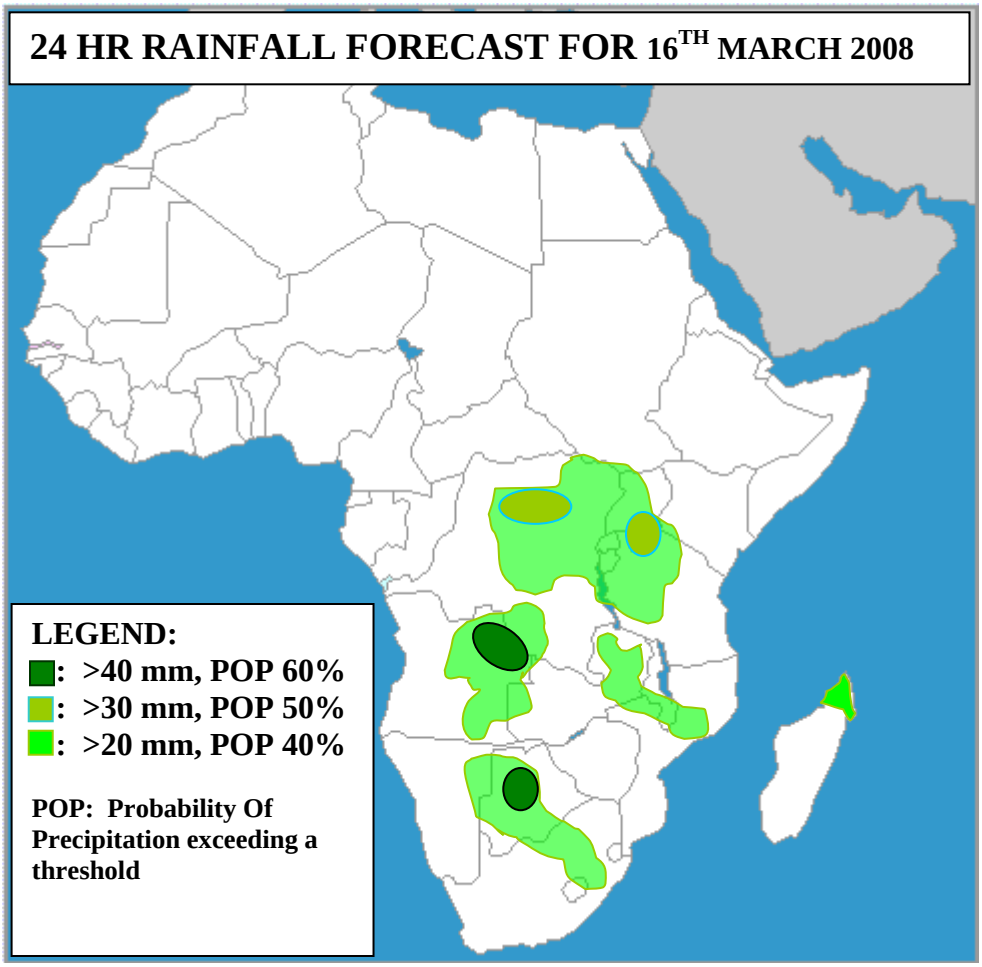

Figure 3: Areas of probability of precipitation for 16th march 2008.

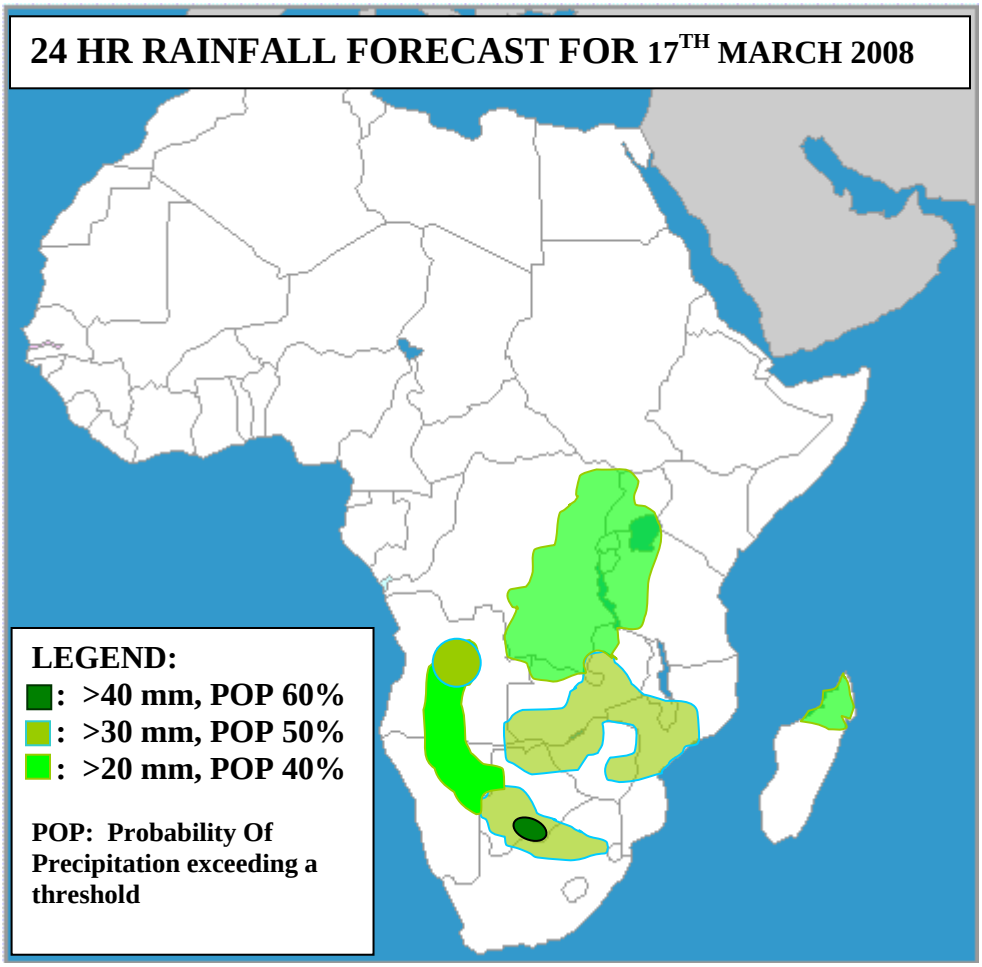

Figure 4: Areas of probability of precipitation for 17th march 2008.

2: MODELS DISCUSSION:

Models comparison (Valid from 00Z; 14th March 2008): In general, there is an agreement of UKMET, ECMWF and GFS models in the forecast to fill-up Tropical Cyclone JOKWE during the period.

FLOW AT 850MB

At T+24, Ex-Tropical Cyclone Jokwe is expected to remain stationary at 39E 26S and continue to weakening. The Mascarine high pressure is expected to ridge northwestward over Madagascar and northeastern Mozambique. A trough/ridge system oriented northeast of the coast of Tanzania will develop, causing a diffluent flow across Tanzania from the coast to feed onto the Lake Victoria trough, northern Mozambique into Ex-tropical Jokwe and northern Zambia. A ridge related to the St. Helene high pressure is expected to penetrate inland over the southeastern part of the subcontinent, and a low pressure area is expected to dominate over northern Namibia and southeastern Angola, and cause a convergence over southern Zambia, northern Botswana, and northern Zambia.

T+48, Ex-Tropical Jokwe is expected to be merged into a trough which was developing to the southeast of the coast of South Africa and erode the Mascarine ridging and cause it to dominate over northern Madagascar, northern Mozambique and southern Tanzania.

The trough/ridge system will prevail to the east of Tanzania and maintain the diffluent flow pattern across Tanzania which will feed over the Lake Victoria basin. A ridge from St. Helene high pressure is expected to prevail over the southern part of the sub-continent and a low pressure area will dominate over western Angola. These two systems will cause convergence over southern Zambia, northern Botswana, and eastern Namibia.

T+72, both the St. Helena Mascarine ridge, as well as the troughing due to the Ex.TC. Jokwe are expected to move further east permitting an anticyclonic flow pattern to dominate over the eastern part of the subcontinent including the Mozambique Channel, Madagascar, and the oceanic area to the east of South Africa. A zonally oriented trough system is expected to prevail over the tropical Indian Ocean area north of Madagascar and east of Tanzania, while a low pressure system expected over southwestern Angola will contribute to localized convergence over southern DRC, western Zambia, eastern Angola and northern Namibia.

FLOW AT 500MB

At T+24, an anticyclonic circulation system is expected to dominate over the most eastern part of the subcontinent engulfing a small low pressure area over the Mozambique channel due to the remaining of jokwe. A trough extending from southern South Africa to western Namibia is expected to prevail with a general area of low pressure weakness over the northwestern part of the subcontinent including south DRC, Angola and northern Namibia.

At T+48, an anticyclonic flow pattern is expected to dominate over Madagascar, southern Tanzania, Mozambique, eastern Zambia, Zimbabwe, Botswana and Northeastern South Africa while the trough over southern South Africa and western Namibia is expected to prevail. A low pressure system is expected to develop over Angola, northern Namibia and western DRC.

At T+72, an anticyclonic flow pattern is expected to dominate over a large part of the subcontinent while the trough over southern South Africa and western Namibia is expected to move further to the east. The low pressure system over Angola is expected to weaken and another one is expected to develop over the western South Africa.

FLOW AT 200MB

At T+24, an upper level high pressure system (with a centre over western Botswana) and ridge eastwards over northern Mozambique to northern Madagascar is expected to dominate over the central part of the subcontinent. This system will cause strong northwesterly flow over South Africa, and a diffluent westerly flow through Tanzania to western DRC. An upper level trough area is expected to prevail over Madagascar.

At T+48, the upper level high pressure which was centered over Botswana is expected to move further eastward with a centre over the Mozambique Channel, and dominate over Madagascar and the central part of the subcontinent. An upper level trough is expected to move toward southern South Africa and enhance the northwesterly flow over there. An easterly flow pattern is expected to continue prevailing over Tanzania and DRC.

At T+72, the upper level high pressure area is expected to expand further eastward to the southeast of Madagascar, and will be associated with a highlight upper level divergent

flow over southern Zambia. An upper level low pressure area is expected to prevail over southern South Africa and maintain a strong northwesterly flow over the country, while a weak easterly flow will exist over Tanzania through DRC.

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