



Forecasting guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

## SHORT RANGE FORECAST DISCUSSION 14H00 EST 13<sup>TH</sup> MARCH 2008

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

**FORECAST DISCUSSION 14H00 EST, 13<sup>TH</sup> MARCH 2008  
Valid: 00Z 14<sup>TH</sup> MARCH 2008-00Z 16<sup>TH</sup> MARCH 2008**

### 1: TROPICAL CYCLONE WARNING:

Tropical cyclone JOKWE, is located near 40.2E 25.1S in the southern Mozambican Channel. This system is expected to be slightly stationary and will fill-up during the period. It is due to its merging with a trough moving from the west and will cause vertical windshear into the system. Figure 1 displays its forecasted track.

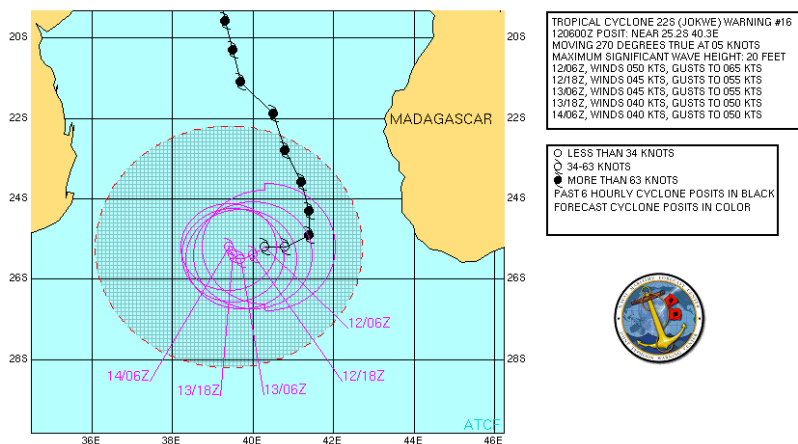


Figure 1: Forecasted track of Tropical Cyclone JOKWE  
Source: <http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/index.primjo.html>

### 2: 24 HR RAINFALL FORECAST

Areas showing Probability Of Precipitation (POP) exceeding significant thresholds as shown in figures 2 – 4 for the dates of 14 to 16 march 2008 respectively.

**24 HR RAINFALL FORECAST FOR 14<sup>TH</sup> MARCH 2008**

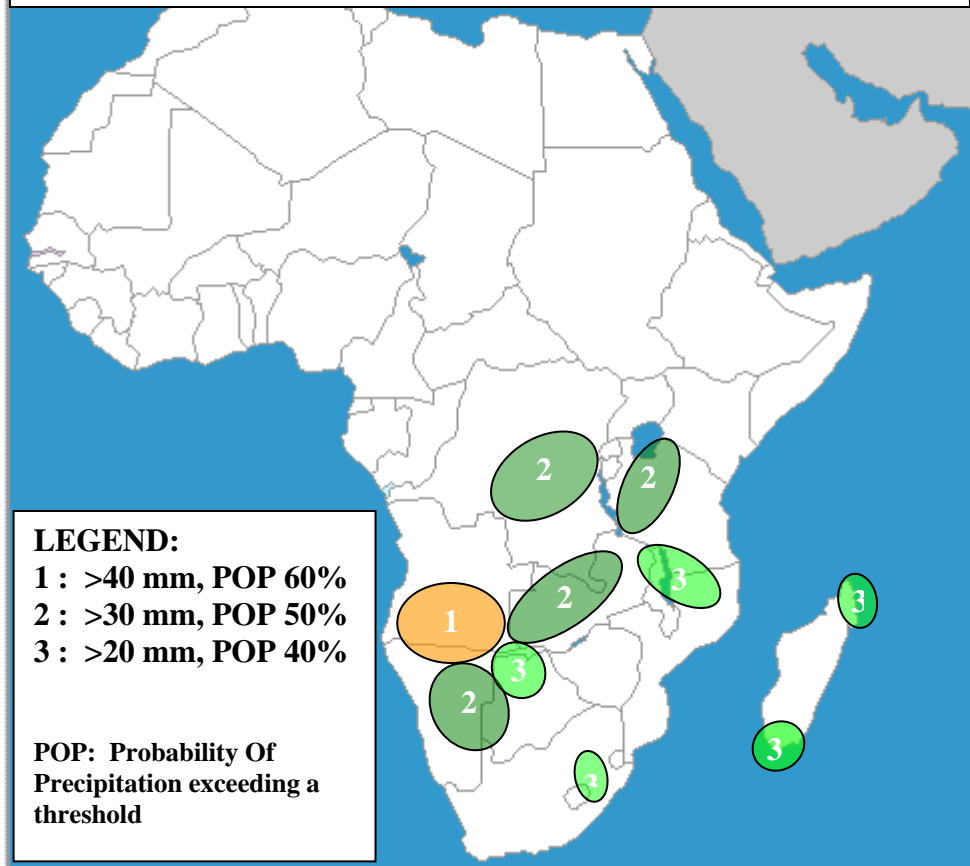


Figure 2: Areas of probability of precipitation for 14<sup>th</sup> march 2008.

## 24 HR RAINFALL FORECAST FOR 15<sup>TH</sup> MARCH 2008

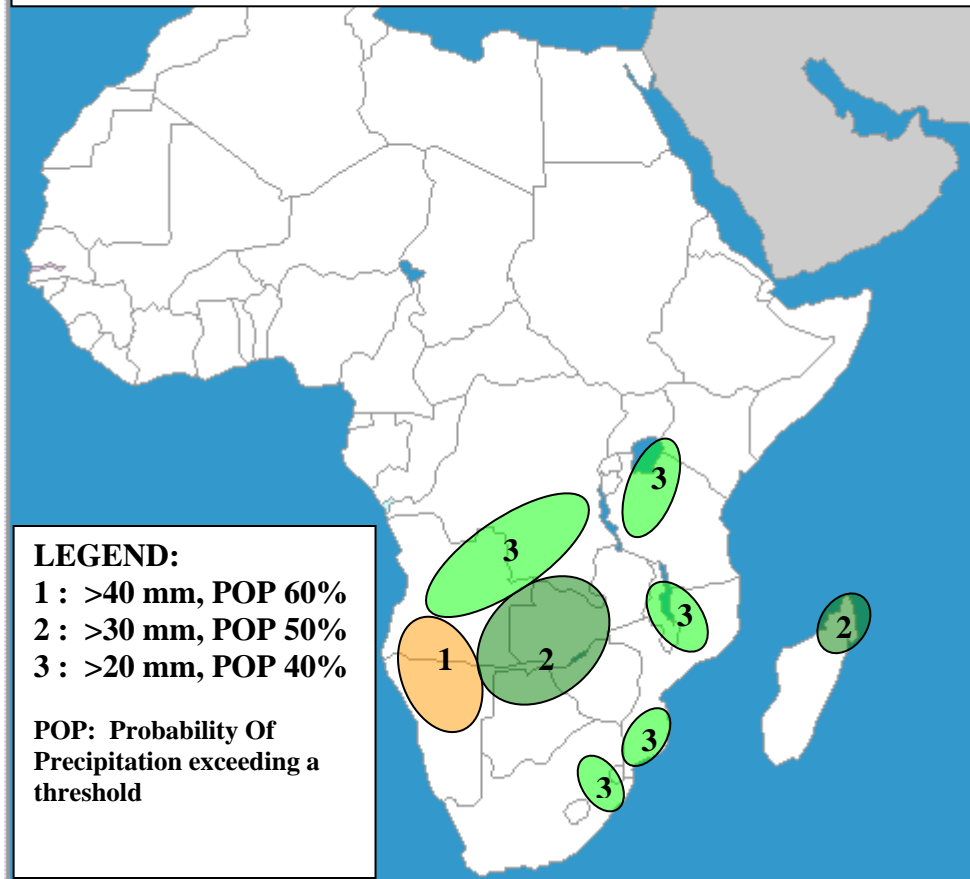


Figure 3: Areas of probability of precipitation for 15<sup>th</sup> march 2008.

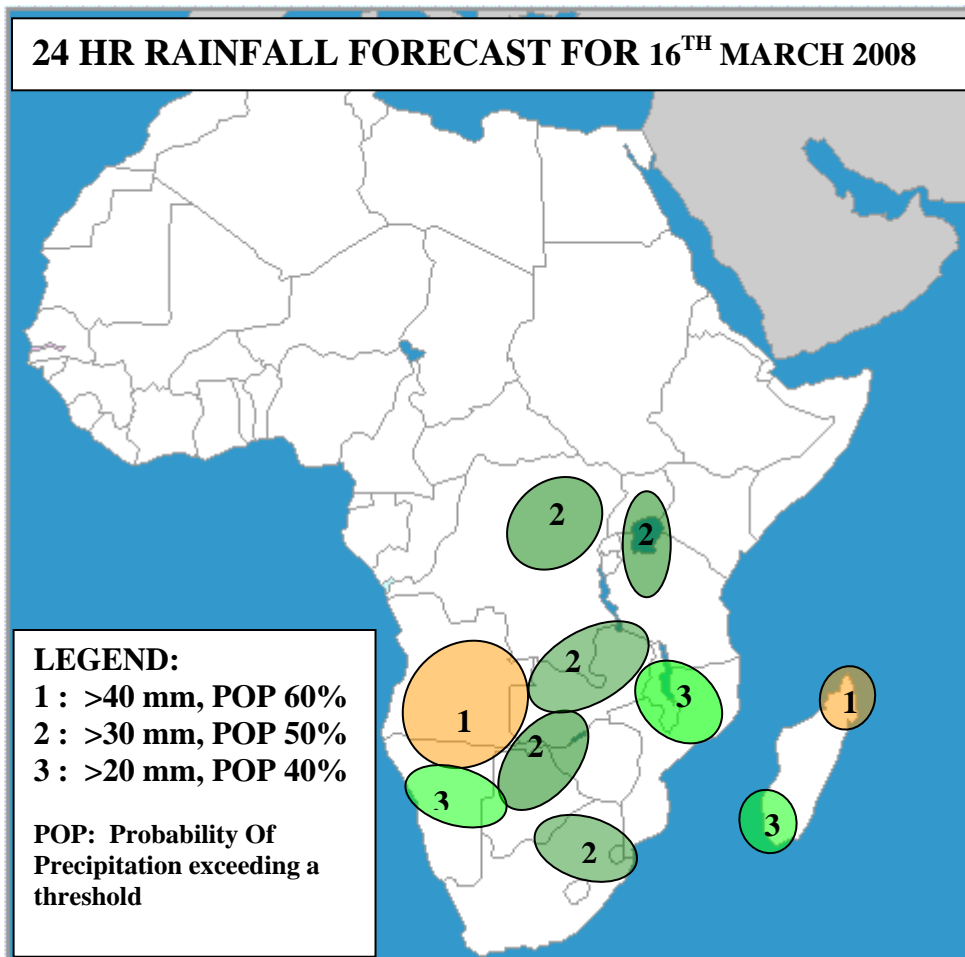


Figure 4: Areas of probability of precipitation for 16<sup>th</sup> march 2008.

## 2: MODELS DISCUSSION:

*Models comparison (Valid from 00Z; 13<sup>th</sup> 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, Tropical Cyclone Jokwe is expected to weaken and to be located near 38E 26S, and to be surrounded to the northeastern side by a ridge associating from the Mascarine high pressure centered at 55E 41S, to the west by a ridge associated with St Helene high pressure, and by a trough to its southwest direction along the southeast coast South Africa. A low pressure area is expected to prevail over northern Namibia. This system associated with the St Helene's ridge will cause isolated convergence over central Zambia, northern Botswana, and northern Namibia. To the northeast of this low pressure area, a diffluent southwesterly pattern is expected to prevail over northern Angola and central DRC, it will 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 prevail and slightly move eastward. The St. Helene ridge is expected to prevail over

South Africa, eastern Botswana, Zimbabwe and southern Mozambique. Jokwe being surrounded by the anticyclonic flow is expected to weaken further and put-off. The northwesterly flow to the north of the low pressure system over western Angola will cause isolated convergence over northeastern Namibia, northern Botswana, while its southwesterly 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 is expected to fill-up and to be merged with the trough which was prevailing to the southeast of South Africa. Therefore, this trough is expected to expand and dominate over the Mozambican Channel and central to southern Madagascar. The St Helena ridging is expected to enlarge and dominate over South Africa, western Botswana, Zimbabwe, and Mozambique. The northeasterly flow pattern associated with this trough is expected to contribute to isolated convergence over western Zambia, northern Botswana, and western Namibia when they meet with the northwesterly flow originated by a low pressure area to the southwest of Angola. This low pressure area will cause convective activity over central Angola, while a southwesterly flow to its northeast is expected to prevail over DRC and contribute to convergence over western Tanzania while they meet with the southeasterly flow from a trough over the Indian Ocean.

### **FLOW AT 500MB**

At T+24, an anticyclonic flow pattern is expected to dominate over Zimbabwe, southern Mozambique, eastern Botswana and northeastern South Africa. A trough area is expected to dominate over southern Madagascar and prevail over southern South Africa, west Namibia and southern Angola. The Mascarine high pressure ridge is expected to dominate over northeastern Madagascar while the easterly flow pattern will prevail over Tanzania.

At T+48, an anticyclonic flow pattern is expected to dominate over Madagascar, Zimbabwe, Mozambique, eastern Botswana and northeastern South Africa while the easterly flow pattern is expected to prevail over Tanzania. A persistent trough over southern South Africa, west Namibia and southern Angola is expected to prevail.

At T+72, an anticyclonic flow pattern is expected to dominate over Madagascar, Mozambique, Zimbabwe, Botswana, southern Tanzania, eastern Angola and eastern Namibia while a trough area is expected to prevail over southern South Africa, west Namibia and southern Angola. A low pressure system is expected over DRC and northern Angola and cause localized convergence over there.

### **FLOW AT 200MB**

At T+24, an upper level high pressure system associated with divergent flow over southern Angola and northern Namibia is expected to dominate over Angola, northern Namibia, Botswana, northeastern South Africa, Zimbabwe, western Mozambique, and southern Zambia. An another upper level high pressure area is also expected to prevail over northern Madagascar and expand to the Indian Ocean. An upper level trough is expected over central Mozambique and central to southern Madagascar. A strong upper level trough is expected over the southern Namibia and southern South Africa. Divergent flow pattern is expected to dominate over DRC.

At T+48, the upper level flow at T+24 is expected to dominate over the central part of the subcontinent and move eastward and ridging over Madagascar including the Mozambican Channel. An upper level trough will also prevail over southern Namibia and southern South Africa. Divergent flow pattern is expected to dominate over Angola, northern Zambia and DRC.

At T+72, in general, an upper level high system is expected to dominate over the part of the subcontinent between 10S to 25S latitude including the Mozambican Channel and Madagascar, it will contribute to an easterly flow pattern which will prevail over Tanzania, DRC, and northern Angola, and an northwesterly flow over southern Namibia and South Africa.

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