



Forecasting guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

**SHORT RANGE FORECAST DISCUSSION 14H00 EST 06<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, 06<sup>TH</sup> MARCH 2008  
Valid: 00Z 07<sup>TH</sup> MARCH 2008-00Z 09<sup>TH</sup> MARCH 2008**

**1: TROPICAL CYCLONE WARNING:**

The Tropical cyclone JOKWE presently centered North of Madagascar (Fig.01), it is expected to move southwestard across the Mozambique channel. The cyclone has produced heavy rainfall over northern Madagascar and it poses a flood threat over Central Mozambique.

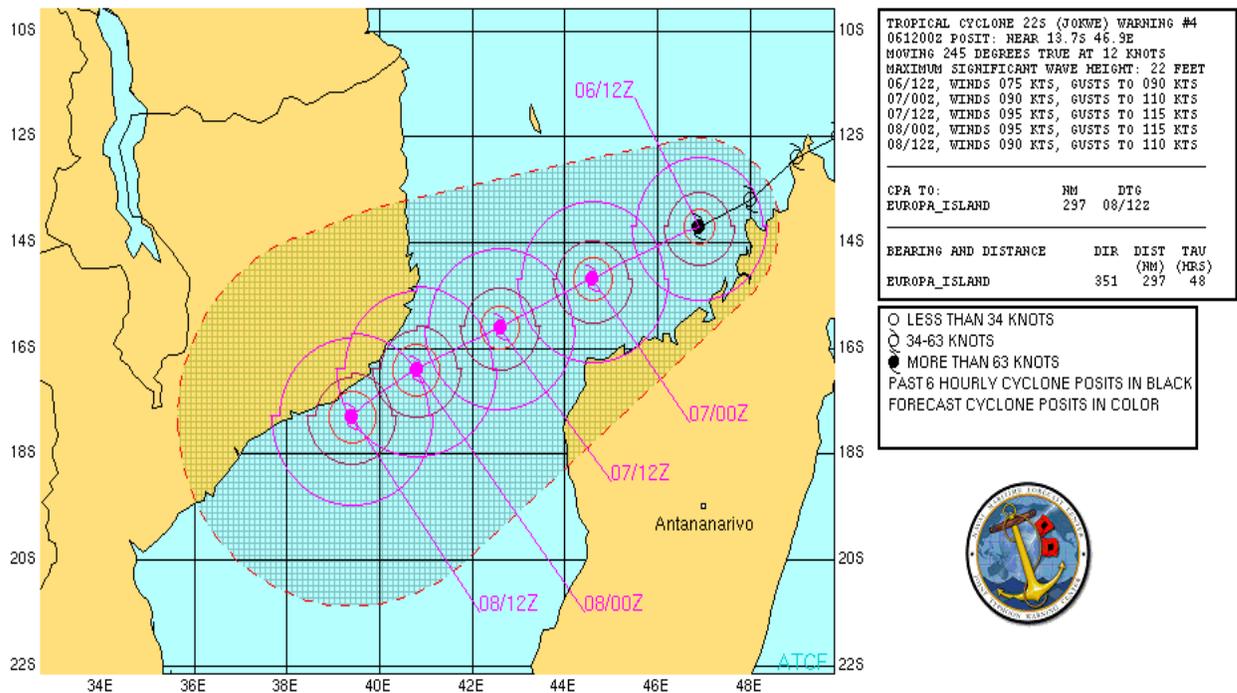
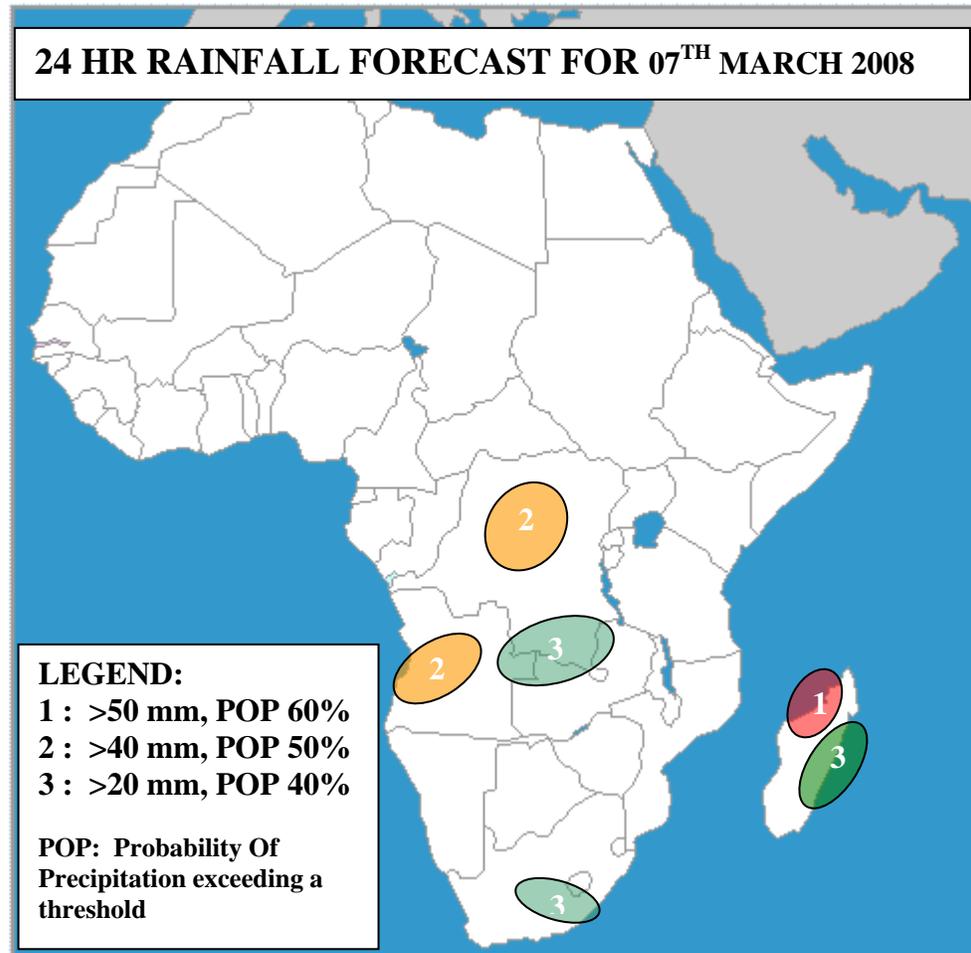
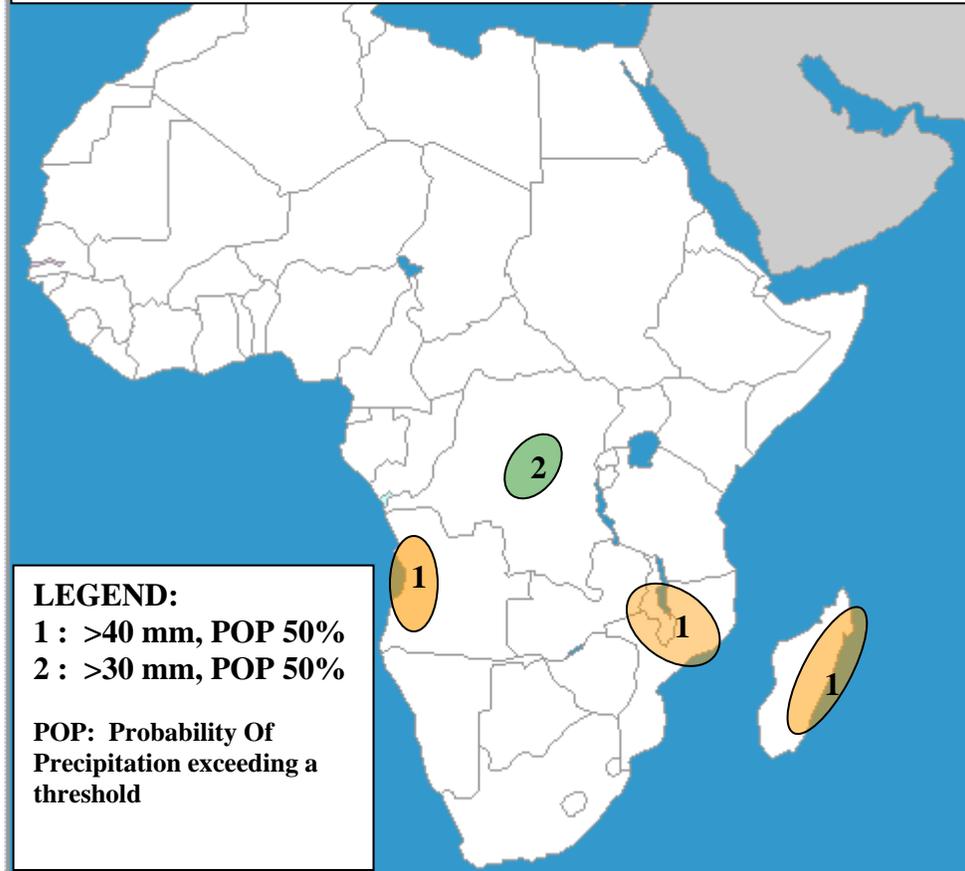


Figure 1 : Forecasted track of Tropical Cyclone JOKWE  
Source : <http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/index.primjo.html>

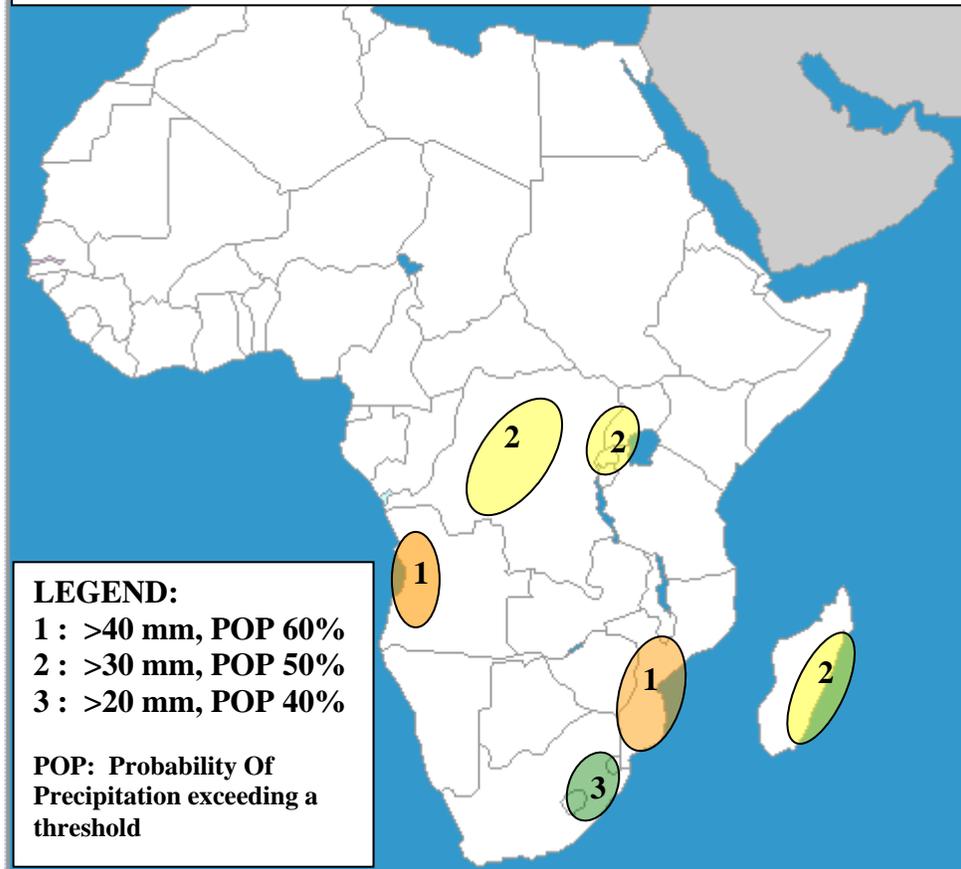
## 2: 24 HR RAINFALL FORECAST



## 24 HR RAINFALL FORECAST FOR 08<sup>TH</sup> MARCH 2008



## 24 HR RAINFALL FORECAST FOR 09<sup>TH</sup> MARCH 2008



## 2: MODELS DISCUSSION:

*Models comparison (Valid from 00Z; 06<sup>th</sup> March 2008): There is an agreement of UK MET, ECMWF and GFS models. There are no major discrepancies between them*

### **FLOW AT 850MB**

At T+24, Tropical cyclone Jokwe is expected to move southwestwards to 44.8E 14.6S. It will contribute to convergence over northern Madagascar and northern Mozambique. A Mascarin high pressure system centered at 52E 38S is expected to dominate the southeastern part of the subcontinent. It will contribute to an easterly diffluent flow pattern is expected to prevail over Malawi, Zambia, Zimbabwe, and Botswana, this flow will cause a convergence zone further west over central Angola and western Namibia. A frontal system is expected to move into southwest of South Africa and enhanced a chance of convective activity over the southwestern part of the subcontinent. A high pressure system is expected to create a diffluent flow pattern over Tanzania it will generate a convergence area over the lake basin and over northeastern DRC.

At T+48, Tropical cyclone Jokwe is expected to move toward central Mozambique coast causing convergent flow over northern part of the country and over southern Malawi. The frontal system which was southwest of South Africa is expected to shift slightly eastward and will contribute to convective condition over the southeastern part of the country. Otherwise, the same scenario as at T+24 is expected to prevail with a convergence area expected to move toward southeastern DRC.

T+72hr, Tropical cyclone Jokwe is expected to continue moving further southwest to 37.5E 20S. It is expected to contribute to convergence area over central Mozambique and will create a trough pattern over northern Mozambique, Malawi, northern Zambia and the extreme southern DRC. A low pressure is expected to continue prevailing over western Angola with a weak trough extending over central Namibia.

### **FLOW AT 500MB**

At T+24, a middle level high pressure system is expected to dominate over Madagascar. It will block the Tropical Cyclone Jokwe to move southward. An easterly flow pattern is expected to dominate the northern part of the sub continent, reducing the convective activity over there.

The southern part of the subcontinent is expected to be dominated by a middle level high pressure system.

At T+48, the high pressure system which has blocked the Tropical Cyclone Jokwe is expected to weaken and will permit the T.C. Jokwe to move southward.

St. Helene high pressure is expected to ridge over central Namibia causing convergence over the northern part of the country. An easterly flow pattern is expected to prevail over the northern part of the subcontinent.

At T+72, the high pressure system which was over Madagascar is expected to continue stretching and a middle level trough to develop at northeast of South Africa. Therefore, the T.C. Jokwe is expected to connect with this trough. Consequently, a trough is expected to take shape over northern Mozambique and Malawi.

### **FLOW AT 200MB**

At T+24, an upper level divergent flow is expected to prevail over northern Madagascar and to ridge over northern Mozambique and southern Tanzania which will be associated with a convergent flow pattern over Malawi, Zambia, and northern Mozambique. An upper level divergent flow is expected to prevail over eastern Zambia, central DRC and central Angola. This will cause by convective activities over there. An upper level trough expected to dominate over Botswana, Zimbabwe and northern South Africa will prohibit convective activities over there.

At T+48, northern Madagascar is expected to be dominated by an upper level high pressure associated with the T.C. Jokwe. Upper level divergent flow is expected to dominate over western to northeastern Angola, southwestern to central DRC, causing convective activities over there. The upper level trough which was over the southern part of the subcontinent is expected to extend northward over southern Zambia.

At T+72, an upper level high pressure system associated with the passage of the T.C. Jokwe is expected to develop over northern Madagascar. Enhance the convective activities that were associated with the tropical cyclone. Therefore, an upper level confluent flow is expected to establish further south over southern Mozambique. Divergent patterns are expected over western Angola and western DRC. They are caused by convective activities from the lower levels over there.

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