



Forecasting guidance for Sever Weather Forecasting Demonstration Project (SWFDP)

**SHORT RANGE FORECAST DISCUSSION 14H00 EST 10<sup>TH</sup> JANUARY 2008**

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

**FORECAST DISCUSSION 14H00 EST, 10<sup>TH</sup> JANUARY 2008**

**Valid: 00Z 11<sup>TH</sup> JANUARY 2008-00Z 13<sup>TH</sup> JANUARY 2008**

**1: 24HR RAINFALL FORECAST**

**DAY 1: 11<sup>TH</sup> JAN 2008**

During this period, 20-50mm is expected over central to northern Botswana and southern Zambia; 5-30mm over southern Botswana, northeastern Namibia, eastern Angola, southern DRC, northern and western Zambia, northern Madagascar, western Zimbabwe, Malawi and northern Mozambique.

**DAY 2: 12<sup>TH</sup> JAN 2008**

During this period, 20-40mm is expected over northern Botswana and southern Zambia; 5-30mm over southern Botswana, northeastern Namibia, eastern Angola, western Zimbabwe, central to northern Zambia and southern DRC; 5-20mm over northern Madagascar.

**DAY 3: 13<sup>TH</sup> JAN 2008**

During this period, 20-40mm is expected over northeastern South Africa, southeastern, central to northeastern Botswana and extreme southeastern Angola; 5-30mm over eastern South Africa, central to western Zimbabwe, southern Zambia, eastern Angola and northeastern Namibia. 5-20mm over southern South Africa and central to northern Madagascar.

## **2: MODELS DISCUSSION:**

*Models comparison (Valid from 00Z; 10<sup>TH</sup> JANUARY 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, a Mascarine high pressure system has centered at 35S 42E ridging towards northern South Africa while causing onshore flow on the southern Mozambique. A St Helena high pressure has situated far to the west ridging slightly south of South Africa while headed by a frontal system. Convergence associated with Low pressure system dominated Zambia, Namibia, Angola, Malawi, Zimbabwe, northern Madagascar, western Angola and northern Botswana while a weak convergence over the western DRC and western Tanzania. Great part of Tanzania has dominated by divergence.

At T+48, a new Mascarine high pressure system has slightly shifted to the east, centered at 37S 48E ridging towards southern Mozambique and causing offshore flow on the eastern South Africa. A St Helena high pressure system has almost maintained the position to the west, ridging southwards with little influence on the sub continent. A frontal system is touching the tip of South Africa. Convergence dominates central Mozambique, Malawi, Zambia, northern Madagascar, northern Botswana and Zimbabwe, Namibia, southern Angola otherwise weak convergence on the western DRC. Divergence continues to dominate great part of Tanzania.

At T+72, a Mascarine high pressure system has shifted further to the east, centered at 37S 60E ridging towards eastern Mozambique and causing offshore flow on the eastern South Africa. A frontal system has shifted to the east, now touching the southern part of South Africa associated with convergence on the western South Africa. A St Helena high pressure has still maintained the position on the west, centered at 30S 25W ridging southeastwards. Convergence continues to dominate northern Mozambique, Malawi, Botswana, Namibia, Angola and Zambia. Divergence continues to prevail on great part of Tanzania.

### **FLOW AT 500MB**

At T+24, a sub tropical high pressure cell sitting over Madagascar ridging towards Mozambique and Zimbabwe areas. There is a trough system situated to the west of South Africa. Weak convergence dominates northern Angola and Zambia, otherwise southeasterlies dominates northern part of the sub continent.

At T+48, a Weak high pressure system continues to dominate Madagascar and eastern Mozambique. A trough system has slightly shifted to the east, causing strong northwesterlies over the western South Africa. Weak convergence continues to dominate

Zambia, Angola, Botswana and Namibia. Southeasterlies prevails on the northern part of the sub continent.

At T+72, a weak high pressure system continues to dominate Madagascar extending towards central Mozambique. A trough system still situated to the west of South Africa, together with a high pressure system over Madagascar, they both contribute towards convergence stretching from Zambia through Botswana to the southern South Africa.

### **FLOW AT 200MB**

At T+24, a high pressure cell associated with divergence sits over Zimbabwe, it contributes towards very strong westerlies over South Africa. A weak trough system has situated to the west of South Africa, otherwise strong westerlies dominates northern part of the sub continent.

At T+48, a high pressure cell has retrograded to the west, now centered over Botswana at 20S 24E and causing significant divergence over there. A trough system has slightly shifted to the east, together with a high pressure system, they both contributes towards very strong westerlies south of South Africa, otherwise strong southeasterlies continues to dominate northern part of the sub continent.

At T+72, a high pressure cell continues to dominate Botswana. A trough system which was to the west of South Africa, has further shifted to the east. These two systems contribute towards a northwesterly Jet Stream with a maximum speed of ... south of South Africa.

*Author: Augustino Nduganda (Tanzania Meteorological Service and African Desk)*