



Forecasting guidance for Sever Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 18TH JANUARY 2008

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

FORECAST DISCUSSION 14H00 EST, 18TH JANUARY 2008

Valid: 00Z 19TH JANUARY 2008-00Z 21ST JANUARY 2008

1: 24HR RAINFALL FORECAST

DAY 1: 19TH JAN 2008

During this period, 20-40mm is expected over northern Namibia and southern Angola; 10-30mm over central to southern Madagascar, northern Mozambique, western Zambia and eastern Angola; 5-30mm over northern Madagascar, northern South Africa, eastern Namibia, southern Botswana, northern Zimbabwe, central to northern Zambia, western and northern coast of Tanzania, eastern Namibia and Malawi.

DAY 2: 20TH JAN 2008

During this period, 20-40mm is expected over central to southern Madagascar, northern Namibia and eastern to southern Angola; 10-30mm over northern Mozambique, southern Malawi, northern and western Zambia and northern Madagascar; 5-30mm over northern South Africa, eastern Namibia, southern to western Botswana, northern Zimbabwe, central Zambia, western and northern coast of Tanzania and northern Madagascar.

DAY 3: 21ST JAN 2008

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

2: MODELS DISCUSSION:

Models comparison (Valid from 00Z; 18TH 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 situated far to the east having little influence on the sub continent. A St Helena high pressure system has centered at 35S 9W ridging south of South Africa and forming a high pressure cell on the eastern part of the country. The Low pressure systems causing convergence dominate western Madagascar, central to northern Mozambique, Zambia and eastern Angola. There is also convergence over the northern South Africa, Zimbabwe, northern Botswana and western Tanzania. A long track of wind over the Indian Ocean is causing onshore flow on the eastern Tanzania.

At T+48, a frontal system is moving over southern South Africa with a St Helena high pressure system ridging behind it. A Mascarine high pressure system has situated far to the east ridging towards eastern South Africa. Low pressure system associated with convergence dominates southern Madagascar, northern Mozambique, Malawi, central to western Zambia, eastern Angola, eastern Namibia, eastern DRC, western Tanzania, Lake Victoria Basin and western South Africa. Onshore flow associated with convergence continues to prevail over the eastern Tanzania.

At T+72, a frontal system has slightly shifted to the east while a St Helena high pressure system continues ridging behind it. A Mascarine high pressure system maintained the position far to the east, ridging eastwards and forming a high pressure cell, centered at 32S 38E. Convergence associated with Low pressure systems dominate western Madagascar, northern Mozambique, Malawi, Zambia, western Tanzania, Lake Victoria Basin, Botswana, eastern Namibia, eastern Angola and central South Africa. On the eastern Tanzania, convergence associate with onshore flow dominates northern coast.

FLOW AT 500MB

At T+24, a weak sub tropical high pressure cell centered at 25S 3E ridging towards Botswana and associated with southwesterly flow over southern Africa. Wind convergence dominates northern Mozambique, northern Zimbabwe, northern Botswana, Zambia, Malawi and eastern Angola otherwise southeasterlies dominates northern part of the sub continent.

At T+48, a weak sub tropical high pressure system has retrograded to the west but ridging towards eastern Namibia. Another weak sub tropical high pressure system has situated to the west of Madagascar ridging towards southern Mozambique. Convergence dominates Zambia, Malawi, western DRC, Zimbabwe and northern South Africa.

At T+72, a weak sub tropical high pressure system which was over the eastern Madagascar has filled up but a new high pressure cell has developed northern part of the South Africa. Convergence dominates central South Africa, Botswana, eastern Namibia and eastern Angola.

FLOW AT 200MB

At T+24, a high pressure system associated convergence sits over northern Botswana and contributes to a westerly Jet Stream with a maximum speed of 85Kts over South Africa. There is a trough system extending from Madagascar to northern parts of Tanzania, it is associated with strong southwesterly wind west of it.

At T+48, a high pressure system has retrograded to the west, now centered over the western Namibia. There is a trough system south of South Africa, together with a high pressure system,, they both contribute towards a westerly Jet Stream with a maximum speed of 80Kts over South Africa. A trough system which was over Madagascar has filled up otherwise strong southeasterlies dominates northern Mozambique, Malawi, northern Zambia and western Tanzania.

At T+72, a high pressure system has shifted eastwards towards northern Botswana. A trough south of South Africa has deepened and forms a closed Low over there. These two system have continues to contribute towards a northwesterly to westerly Jet Stream with a maximum speed of 90Kts over South Africa. Strong southwesterlies continues to dominate Malawi, northern Zambia, western Tanzania and eastern DRC. .

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