



Forecasting guidance for Sever Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 18TH DECEMBER 2007

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

**FORECAT DISCUSSION 14H00 EST, 18th DCEMBER 2007
Valid: 00Z 19th DECEMBER 2007-00Z 21st DECEMBER 2007
1: 24HR RAINFALL FORECAST**

DAY 1: 19TH DEC 2007

During the period, 40-60mm is expected over eastern/southeastern DRC, northeastern Zambia, southern Mozambique, Zimbabwe and extreme eastern Botswana; 20-50mm over southwestern/southern/central/western Tanzania, central/northern Zambia, Malawi, northeastern Botswana, southern DRC, extreme northern South Africa and central Mozambique; 5-20mm over northern Angola and southwestern DRC.

DAY 2: 20TH DEC 2007

During this period, 40-60mm is expected over Zimbabwe and southern Mozambique; 20-40mm over eastern Tanzania; 10-30mm over central/northern Mozambique, northeastern Botswana, Malawi, central/northern Zambia, southwestern/central/western Tanzania, eastern/southeastern DRC; 5-15mm over northern Angola.

DAY 3: 21ST DEC 2007

During this period, 25-40mm is expected over central/eastern Zimbabwe, northern Botswana and southern Zambia; 10-25mm over central Mozambique, eastern Zimbabwe, central/northern Zambia, Malawi, southwestern/western Tanzania.

FLOW AT 850MB

At T+24, a St Helena high pressure system has situated to the east at 30S 18W, ridging south of South Africa and forming a high pressure cell over there, centered at 40S 24E. The trough system associated with a frontal system is to the east pointing towards Mozambique Channel. A strong convergence is evident over central/eastern DRC, western/central/northern/southwestern/southern Tanzania, Zambia, southern/ eastern Angola, Zimbabwe, central Mozambique, northern Namibia and southern Madagascar.

At T+48, a St Helena high pressure system has slightly shifted to the east and now centered at 33S 12W. A new Mascarine high pressure system has formed, centered at 38S 37E and causing onshore flow on Mozambique coast. Wind convergence continues to be a dominant feature over central Mozambique, northern Zimbabwe, central Zambia, central /eastern Angola, northern/central/ southern/southwestern Tanzania and northern Madagascar. A Mascarine high pressure continues to push a trough system further to the east.

At T+72, a St Helena high pressure system has shifted further to the east, now centered at 35S 4E while a Mascarine high pressure system has also shifted to the east, centered at 38S 46E and associated with onshore flow on Mozambique coast. There is a weak convergence over southern DRC, Zambia, central/northern Mozambique, northern Zimbabwe, southern Madagascar, northern/central/southern Tanzania otherwise central Angola and northern Namibia is dominated by strong convergence.

FLOW AT 500MB

At T+24, a trough system is situated south east of the sub continent. Wind convergence is evident over Zambia, otherwise the rest of the sub continent has no significant flow pattern.

At T+48, a trough system has moved further to the east while convergence dominates central/southern DRC, western Tanzania and Zambia. Westerlies to northwesterlies dominate DRC and South Africa while the rest of the sub continent has no significant flow pattern.

At T+72, wind convergence continues to dominate Zambia while westerly flow over the northern part of the sub continent and South Africa. The rest of the sub continent has no significant flow pattern.

FLOW AT 200MB

At T+24, a trough system is situated south of the sub continent where by its southeast-northwest axis is closer to the tip of South Africa. A strong divergence associated by high

pressure cell dominates Zimbabwe. These two systems contribute to a northwesterly Jet Stream over southeast of South Africa with a Maximum speed of 130Kts but 85Kts over South Africa. Strong southeasterlies dominates northern part of the sub continent.

At T+48, a trough system has slightly shifted to the east where the axis is now touching the tip of South Africa. A high pressure cell causing divergence is centered over Mozambique at 23S 34E, together with a trough system, they both contribute to northwesterly Jet Stream of maximum speed of 75Kts over South Africa.

At T+72, a trough system has retrograded to the west, now situated to the west of South Africa. A high pressure cell has shifted further to the east, centered at 24S 48E and intensified. Northwesterly Jet Stream contributed by these two systems continues to dominate South Africa, otherwise strong southeasterlies to easterlies dominate northern part of the sub continent.

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