Forecasting guidance for Sever Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 28TH JANUARY 2008

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

FORECAST DISCUSSION 14H00 EST, 28TH JANUARY 2008
Valid: 00Z 29TH JANUARY 2008-OOZ 31ST JANUARY 2008

A. Tropical Cyclone Warning:

A moderate Tropical Strom Gula is expected to continue deepening with a southwestwards movement:
29th Jan 2008, 00Z, the position is expected to be 14.9S 60E, central pressure 1003hPa

30th Jan 2008, 00Z at 16.3S 58.5E and 1002hPa.

31st Jan 2008, 00Z at 21.2S 54.9E and 999hPa.

1: 24HR RAINFALL FORECAST

DAY 1: 29TH JAN 2008

During this period, 60-90mm is expected over northwest to southeast Madagascar; 30-60mm over central to western Zimbabwe, northeastern Botswana and southern Zambia; 20-40mm over northern Mozambique, southern Malawi and northern Zambia; 15-25mm over eastern South Africa; 5-20mm over northern Madagascar, southern, southwestern and western Tanzania, eastern to southern DRC, central Zambia, eastern to northern Angola, northern Namibia and northern Botswana.

DAY 2: 30TH JAN 2008

During this period, 70-90mm is expected over southeastern and northeastern Madagascar; 30-50mm over northern Mozambique, southern Malawi and eastern Zambia; 30-40mm

over southern Zambia, northern Botswana and western Zimbabwe; 20-40 over central to southern Madagascar; 10-20mm over southern, southwestern to western Tanzania, northern Malawi, central to northern Zambia, eastern to southern DRC, eastern to southern Angola, northern Namibia, eastern Zimbabwe and central Mozambique. .

DAY 3: 31ST JAN 2008

During this period, 50-70mm is expected over southern Madagascar; 20-50mm northeastern Madagascar, northern Mozambique, Malawi, Zambia, eastern Angola and northern Botswana; 10-30mm over central Madagascar; 10-20mm over southern, southwestern to western Tanzania, southern DRC, southern Angola, northern Zimbabwe and central Mozambique.

2: MODELS DISCUSSION:

Models comparison (Valid from 00Z; 28TH JANUARY 2008): On 30th Jan 2008, UK MET and ECMWF models suggest deepening of a tropical depression Gula to 1001hPa while GFS model shows 1004hPa. On 31st Jan 2008, ECMWF and UK MET continue to deepen the system to 996hPa while GFS model maintains the pressure to 1004hPa.

FLOW AT 850MB

At T+24, a Mascarine high pressure system has located far to the east having a little influence to the sub continent. A frontal system has located to the southeast of South Africa ridging behind by a St Helena high pressure system. There is a convergence associated with an Ex-tropical Cyclone Fame over southern Madagascar. A moderate tropical storm Gula is evident over the northeast of Madagascar causing convergence over there. Low pressure system associated with convergence dominates Zimbabwe, Zambia, Malawi, northern Mozambique, eastern Angola, western to southern DRC but weak convergence over southern, southwestern to western Tanzania. A High pressure system sits over the western Indian Ocean, contributing towards a diffluent pattern on the eastern Tanzania.

At T+48, a Mascarine high pressure system continues to maintain its position far to the east. A frontal system has shifted southwestwards with St Helena High pressure system continues to ridge behind it. A Convergence associated with Ex Tropical Cyclone Fame continues to dominate southern Madagascar. A moderate tropical storm Gula continues to deepen and moving southwestwards. Convergence associated with Low pressure systems continues to prevail over northern Mozambique, Malawi, southern Zambia, eastern Angola, southwestern to southern Tanzania and central South Africa. A weak convergence is evident over western Tanzania and Lake Victoria Basin. A high pressure system over the Indian Ocean continues to persist, causing diffluent pattern over eastern Tanzania.

At T+72, a Mascarine high pressure system continues to maintain its position far to the east and ridging towards northern South Africa. A frontal system sits over southern South Africa ridging behind by a St Helena High pressure system. A moderate tropical storm

has deepened to tropical Cyclone Gula located east of Madagascar. There is a significant convergence over eastern Angola and southern Zambia caused by a Low pressure system over there. Weak convergence is also evident over northern Mozambique, southwestern to southern Tanzania, eastern Namibia, western to southern DRC and western Tanzania.

FLOW AT 500MB

At T+24, a high pressure cell sits to the west of South Africa extending a ridge towards central part of the country. A Low pressure system associated with a moderate tropical storm is located east of Madagascar. There is a trough system over the Mozambique Channel associated with a Low pressure system east of Madagascar. A Low pressure system sits over northern Botswana and southern Zambia causing convergence over there. A westerly flow dominates DRC, southwestern to southern Tanzania, Malawi and northern Mozambique.

At T+48, a trough system which was over the Mozambique Channel has shifted to the east and associated with a Low pressure system over southern Madagascar. A Low pressure system associated with a Moderate tropical storm Gula has slightly shifted southwestwards. A high pressure system to the west of South Africa has slightly shifted to the west and extends a ridge towards central South Africa. Convergence associated with a Low pressure system persisted over southern Zambia and northern Botswana. Westerly flow dominates Zambia, Malawi and northern Mozambique.

At T+72, a high pressure system has shifted further to the east and centered over eastern South Africa. A Low pressure system associated with a moderated tropical storm Gula ha s deepened and located on the eastern Madagascar. Convergence continues to dominate southern and northern Zambia and southwestern to southern Zambia.

FLOW AT 200MB

At T+24, a high pressure system causing divergence sits over northern Zimbabwe. An upper level trough extends from south towards central South Africa, together with a high pressure system over Zimbabwe, they both contributes to very strong westerlies over northern South Africa. Divergence associated with a moderate tropical storm Gula dominates east of Madagascar.

At T+48, a high pressure system associated with divergence has shifted to the east, now centered over central Mozambique. A trough system has also shifted to the east and pointing towards eastern South Africa. These two systems continue to contribute towards very strong westerly wind over southern Mozambique Channel.

At T+72, trough system has shifted further to the east. New trough system has developed and extends towards central South Africa. A high pressure cell has retrograted to the west and now centered over northern Zimbabwe. A new high pressure cell associated with divergence sits over northern Namibia. These systems contribute towards very strong westerlies over northern South Africa, central Namibia, southern Botswana and southern Zimbabwe.

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