Forecasting guidance for Sever Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 29TH JANUARY 2008

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

FORECAST DISCUSSION 14H00 EST, 29TH JANUARY 2008
Valid: 00Z 30TH JANUARY 2008-OOZ 01ST FEBRUARY 2008

1: Tropical Cyclone Warning:

During the period, Tropical Cyclone Gula is expected to merge with Ex Tropical Cyclone Fame southeast of Madagascar.

30th Jan 2008, 00Z, the position is expected to be 15.7S 59.7E, central pressure 1002hPa.

31st Jan 2008, 00Z at 19.8S 56.9E and 998hPa.

01st Feb 2008, 00Z at 23.1S 55.4E and 996hPa.

2: 24HR RAINFALL FORECAST

DAY 1: 30TH JAN 2008

During this period, 30-50mm is expected over southern Tanzania, central to northern Mozambique, southern Malawi, Zimbabwe, northeastern Botswana , eastern DRC and northwestern Madagascar; 10-20mm over southeastern Madagascar; 5-10mm over western to southwestern Tanzania, southern DRC, Zambia, eastern Angola, northern Namibia, southern Zimbabwe, eastern South Africa and central to northeastern Madagascar.

DAY 2: 31ST JAN 2008

During this period, 30-50mm is expected over northern Mozambique, northern Malawi, central to northern Zambia, southern DRC and northwestern Madagascar; 10-30mm over southern Tanzania, central to eastern Angola and southeastern Madagascar; 5-10mm over western Tanzania, central DRC, northern Namibia, northern Botswana, northern Zimbabwe, central Mozambique, southern Malawi and central to northeastern Madagascar.

DAY 3: 01ST FEB 2008

During this period, 20-40mm is expected over northern Mozambique, southern Tanzania, Malawi, Zambia, southern DRC and eastern Angola; 10-30mm over northwestern and southeastern Madagascar; 5-20mm over western Tanzania, central DRC, central Angola, northern Zimbabwe, central Mozambique and central to northeastern Madagascar.

2: MODELS DISCUSSION:

Models comparison (Valid from 00Z; 29TH JANUARY 2008): During this period, three models UK MET, GFS and ECMWF show two different ways to merge the Tropical cyclones. GFS and UK MET indicates that Gula Tropical Cyclone merge into Ex Fame Tropical Cyclone while ECMWF model weakens Ex Fame and deepens Gula., otherwise no major discrepancies.

FLOW AT 850MB

At T+24, a Mascarine high pressure system has located far to the east and extends westwards and forms a high pressure cell on the northern South Africa. A frontal system has located to the southeast of South Africa ridging behind by a St Helena high pressure system which extends toward west of South Africa. The Ex Tropical Cyclone Fame is located to the southeast of Madagascar and a second Tropical Cyclone Gula has located northeast of Madagascar, the two systems cause strong convergence over the area. Low pressure systems causing convergence dominates northern Mozambique, northern Zimbabwe, northern Botswana, southern Zambia, great part of Tanzania, Lake Victoria Basin and eastern to southern DRC. A high pressure over the Indian Ocean contributes towards a strong northerly winds over eastern Tanzania.

At T+48, a Mascarine high pressure system continues to maintain its position far to the east ridging slightly to the west. A high pressure system has continues to dominate northern South Africa. A frontal system has pushed further southeastwards. A Tropical Cyclone Gula has shifted southwestwards, merged with Ex Tropical Cyclone Fame and expected to be located southeast of Madagascar. Convergences continue to dominate Zambia, eastern Angola, northern Mozambique, Lake Victoria Basin, Malawi, southern Tanzania and central to southwestern DRC. The high pressure over the Indian Ocean persists and maintains strong northerly wind on the eastern Tanzania.

At T+72, a new Mascarine high pressure system has developed to the east of South Africa extending a ridge to the northern South Africa. A St Helena high pressure system has almost maintained the position to the west and ridging towards western South Africa.

A Tropical Cyclone Gula continues to deepen and maintains the position southeast of Madagascar. Convergence dominates southern Tanzania, Lake Victoria Basin, northern Mozambique, northern Zambia, eastern Angola and southern DRC. A high pressure over the Indian Ocean maintains its position and contributes toward a diffluent pattern over eastern 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. There is a trough system over the Mozambique Channel extending towards southern Madagascar. Westerlies dominate southern DRC, Zambia, Malawi, northern Mozambique and southwestern to southern Tanzania, converging to the Ex Tropical Cyclone Fame and Tropical Cyclone Gula, east of Madagascar.

At T+48, a high pressure sits over the western South Africa extending a ridge towards eastern part of the county. A trough system has been pushed further to the east. A Tropical Cyclone Gula has shifted towards southeast of Madagascar, merged with Ex Tropical Cyclone Fame, dragging westerly wind through Malawi to southern Tanzania. A low pressure system associated with convergence dominates northern Mozambique, western Zambia and eastern Angola.

At T+72, a high pressure system over South Africa has now shifted to the east and ridging westwards. A Tropical Cyclone Gula continues to maintain its position southeast of Madagascar, causing convergence over there and extends a trough towards Mozambique Channel. Low pressure system associated with convergence dominates over northern Mozambique to eastern Angola. These two systems contribute towards strong southeasterlies over southern Mozambique, northern South Africa, Zimbabwe, Botswana and Namibia.

FLOW AT 200MB

At T+24, a high pressure system causing divergence sits over northern Zimbabwe and extends a ridge towards northern Namibia. An upper level trough extends from south towards eastern South Africa, together with a high pressure system over Zimbabwe, they both contributes to very strong westerlies over northern South Africa and southern Botswana. Divergence dominates eastern Madagascar, otherwise strong southeasterlies over the northern part of the sub continent.

At T+48, a high pressure system associated with divergence has shifted northwards towards northern Zambia. Another high pressure cell sits over the northern Namibia. A trough system has slightly shifted to the east. These two systems continue to contribute towards strong westerlies over southern Mozambique, northern South Africa, southern Zimbabwe, southern Botswana and southern Namibia. Divergence associated with a Tropical Cyclone Gula continues to prevail east of Madagascar, strong southeasterlies continue to dominate northern pat of the sub continent.

At T+72, a high pressure over Zambia has weakened, but still weak divergence continues to prevail. A trough system has almost maintained the position to the east, together with a high pressure system, they both continue to contributes to the strong northwesterly wind over southern Mozambique, northern South Africa, southern Zimbabwe and Botswana. Divergence continues to dominate east of Madagascar.

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