Forecasting guidance for Sever Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 21TH FEBRUARY 2008

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

FORECAST DISCUSSION 14H00 EST, 21ST FEBRUARY 2008
Valid: 00Z 22ND FEBRUARY 2008-OOZ 24TH FEBRUARY 2008

1: TROPICAL CYCLONE SUMMARY.

During this period, an Ex Tropical Cyclone Ivan is expected to be situated over Mozambique Channel, west of Madagascar with a slight deepening. (GFS, UK MET and ECMWF models)

22nd Feb 2008, 00Z the position is expected to be around 22.45S, 42.31E with central pressure 999hPa.

23rd Feb 2008, 00Z at 24.48S, 40.56E and 997hPa.

24th Feb 2008, 00Z at 26.49S, 38.66E and 997Pa.

2: 24HR RAINFALL FORECAST

DAY 1: 22nd FEB 2008

During this period, more than 50mm with a Probability Of Precipitation (POP) 80% is expected over northwestern Madagascar; More than 30mm with POP 60% over southern Madagascar, northern Zambia and northern Malawi, 40% over northern Mozambique, southwestern Angola; More than 20mm with POP 60% over northeastern Angola, 50% over southern DRC and 40% over western to southern Tanzania.

DAY 2: 23rd FEB 2008

During this period, more than 40mm with POP 70% is expected over western Madagascar; More than 20mm with POP 60% over southwestern Angola, northern and

northwestern Zambia and northern Malawi, 40% over southern Madagascar, northern Mozambique, southwestern to southern Tanzania and southern DRC.

DAY 3: 24th FEB 2008

More than 40mm with POP 50% is expected over western Madagascar; More than 30mm with POP 50% over northern Malawi and northern Zambia; More than 20mm with POP 60% over southwestern to northeastern Angola, 30% over southern DRC, northern Mozambique and southern Madagascar.

3: MODELS DISCUSSION:

Models comparison (Valid from 00Z; 21st FEBRUARY 2008): GFS, UK MET and ECMWF models predict an Ex Tropical Cyclone Ivan to be situated over Mozambique Channel, west of Madagascar with a slight intensification. It is expected to start moving southwards at the end of the period. There is an agreement between the models, no major discrepancies among them.

FLOW AT 850MB

At T+24, an Ex Tropical Cyclone Ivan is expected to be situated over the Mozambique Channel, west of Madagascar and causing convergence over northern part. A Mascarine high pressure system is situated far to the east and ridging slightly westwards. A frontal system is expected to be situated south of South Africa ridging behind by a St Helena high pressure system. Diffluent pattern dominates eastern half of Tanzania, Botswana, Zimbabwe, Zambia, northern Angola and southern DRC otherwise a weak convergence over Lake Victoria Basin and northern Mozambique.

At T+48, an Ex Tropical Cyclone Ivan is expected to maintain its position over Mozambique Channel and causing convergence over northern part of Madagascar. A Mascarine high pressure system is expected to maintain its position further to the east. A frontal system is expected to shift slightly to the east ridging behind by a St Helena high pressure system. Diffluent pattern continues to prevail over eastern Tanzania, southern DRC, Zambia, Botswana and Zimbabwe while a weak convergence is expected over southern Angola, northern Mozambique and Lake Victoria Basin.

T+72hr, convergence associated with an Ex Tropical Cyclone Ivan continues to prevail over Mozambique Channel, west of Madagascar and northern part of the country. A frontal system is expected to be over eastern South Africa followed behind by St Helena high pressure system, centered at 40S 3E. Diffluent pattern continues to dominate eastern Tanzania, southern DRC, Zimbabwe, Botswana and northern Angola otherwise a weak convergence over southern Zambia, southern Angola, northern Namibia and northern Mozambique.

FLOW AT 500MB

At T+24, a sub tropical high pressure system is expected to dominate large areas of South Africa, Botswana, Zimbabwe and Namibia causing divergence over there. An Ex

Tropical Cyclone Ivan is expected to be situated over Mozambique Channel, southwest of Madagascar and contributing to convergence over the northern part of the country. Convergence is expected to prevail over northern Mozambique, southern Tanzania, northern Zambia, southern DRC and Malawi while a diffluent over western Angola.
At T+48, a sub tropical high pressure system is expected to continues dominating South Africa, Botswana, Zimbabwe and Namibia associated with divergence over the areas. An Ex Tropical Cyclone Ivan is expected to maintain its position over the Mozambique Channel, west of Madagascar, and contributes to convergence over northern Madagascar. Diffluent pattern continues to prevail over Zambia and Angola whiles a weak convergence over northern Mozambique and eastern DRC.

At T+72, a sub tropical high pressure system is expected to shift northwards toward western Botswana and continues to cause divergence over Namibia, Botswana and northern South Africa. A trough system is expected to be situated southwest of South Africa, together with a high pressure, they both expect to contribute to very strong northwesterlies over western South Africa. An Ex Tropical Cyclone Ivan is expected to maintain its position over the Mozambique Channel associated with convergence over northern part of Madagascar. A weak convergence is expected to be over northern Mozambique, Malawi where as a diffluent pattern over Zambia, Angola, southern DRC and southwestern Tanzania.

FLOW AT 200MB

At T+24, an upper level high pressure system is expected to sit over northwestern Namibia and causing divergence over there. A trough system is expected to be situated east of South Africa extending towards northern Zimbabwe. These two systems contribute to very strong southwesterlies over South Africa and Botswana. Divergence associated with an Ex Tropical Cyclone Ivan is expected to dominate western Madagascar. Very strong northwesterlies are expected to dominate southern Mozambique otherwise a diffluent pattern over eastern Tanzania and southern DRC. .

At T+48, an upper level high pressure system is expected to maintain its position over northwestern Namibia. A trough system which was situated east of South Africa is expected to extend further northwards toward southern Zambia. These two systems continue to contribute towards very strong southwesterlies over South Africa and Botswana. Divergence associated with an Ex Tropical Cyclone Ivan continues to dominate western Madagascar. Very strong northwesterlies are expected to dominate southern Mozambique while divergence over eastern Tanzania and southern DRC.

At T+72, a sub tropical high pressure system which was over northwestern Namibia is expected to continue maintaining the position over the area and contributes to very strong westerlies over South Africa. A trough system which was situated east of South Africa is expected to fill up. A high pressure system causing divergence is expected to sit over southern Madagascar. Diffluent continues to prevail over southern Tanzania and southern DRC.

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