Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 16th March 2007

AFRICA DESK
CLIMATE PREDICTION CENTER
National Centers for Environmental predictions
National Weather Service
NOAA
Camp Springs MD 20746

FORECAST DISCUSSION 14H00 EST 16th March 2007
Valid: 00Z 17th March 2007- 00Z 19th March 2007.

***Highlights*:** *Ex-Indlala 19S is overland (16.6°S 47.4°E), and has tracked southwestward over the past six hours, weakening and it is expected to move south-southeastward at 06 knots. Ex-Indlala has weakened steadily over the past 12 hours in response to decreasing poleward outflow and some dry air entrainment. The system continues to track along the northeastern periphery of a subtropical ridge over southwestern cost of South Africa, and is expected to take a slight eastward turn over the next 24 hours as this ridge shifts eastward and the resulting steering flow becomes more meridional. The storm is expected to weaken slowly in the next 72 hours due to decreasing upper level outflow and low temperatures of this part of the Ocean.*
For details, see the tropical cyclone forecast issued by: Joint Typhoon Warning Center/Naval Pacific Meteorology and Oceanography Center (http://www.nrlmry.navy.mil/tc_pages/tc_home.html).

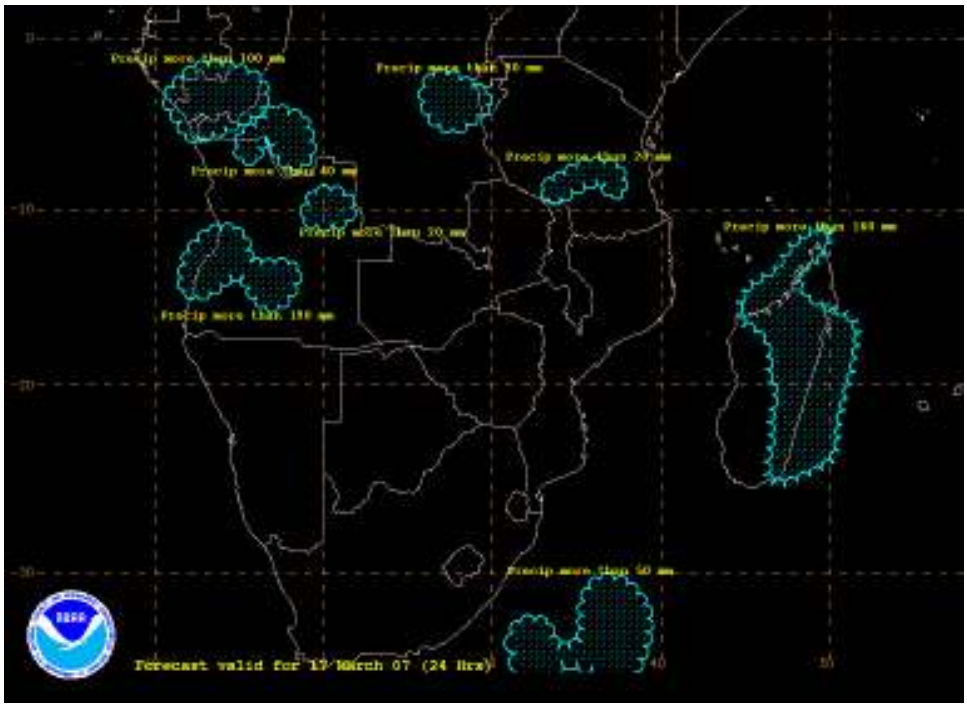
According to GFS, UK-MET and ECMWF models, the general flow pattern at 200mb over Southern Africa (South of the Equator) at T+24 hrs, is a high pressure system with two cells centered at 15°S 55°E and 16°S 19°E, causing divergence over most parts of the sub continent. A shallow trough lying over the Mozambican Channel is causing convergence over the channel. There is another trough to the southwest coast of the sub continent, causing convergence over southwestern South Africa. At T+48 hrs, anticyclonic flow prevails over the sub continent, except over the southern South Africa which is under convergence due to trough. At T+72 hrs, there is no significant change in the general flow pattern, except that the trough is over southern Mozambican Channel, and it has developed a closed circulation at 34°S 38°E. This trough is causing convergence over areas which are to the east of 30°E longitude but south of 25°S latitude.

At 500mb, there is a Tropical Cyclone Ex-Indlala over the eastern Madagascar (20°S 48°E), inducing some instability. The Mascarene high has two cells centered at 19°S

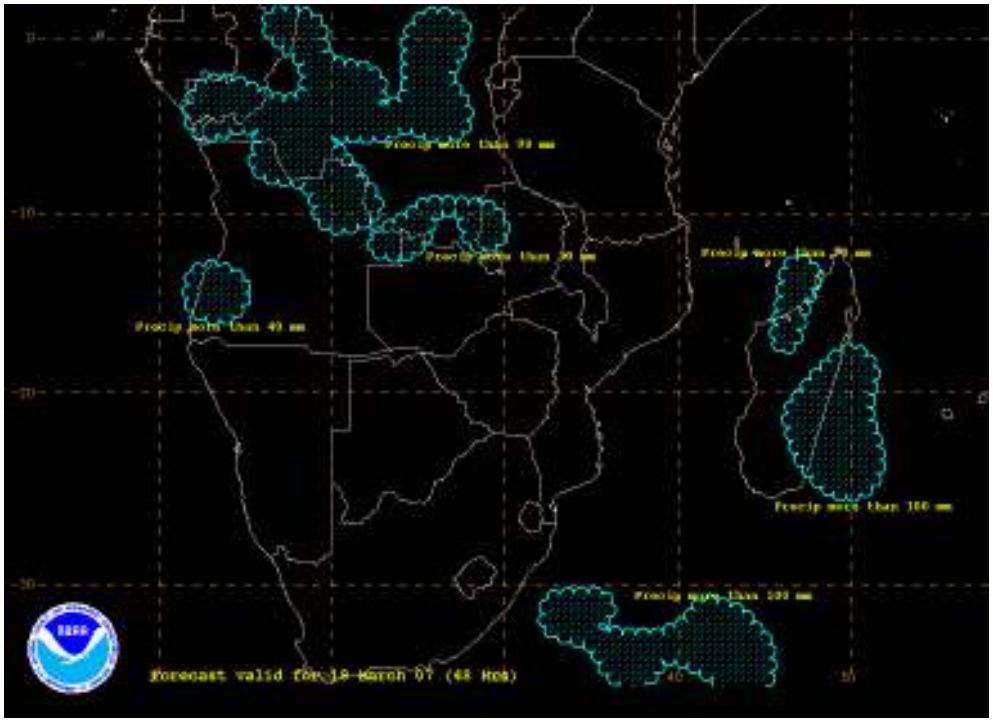
59°E and at 38°S 60°E. There is a trough over the southeastern parts of the sub continent, causing convergence over areas which are to the east of 32°E longitude but south of 19°S latitude. There is trough over the southwest coast of the sub continent, and another one over the coast of Angola, causing convergence over these areas. The St Helena high pressure system with two cells centered at 22°S 20°E and at 24^{o}S 12^{o}W, is causing divergence over the rest of the sub continent. At T+48 hrs, the Tropical Cyclone Ex-Indlala, has shifted south-southeastward and has weakened. The trough over the southeastern coast of the sub continent is maintained. The St Helena high pressure system has three cells centered at 20°S 19°E, 35^{o}S 14^{o}E and at 9°S 7°E, and is causing divergence over the rest of the sub continent, except over the coast of Angola where there is some convergence. At T+72 hrs, the St Helena high pressure system shifts southeastward, but it maintains its ridge over most of the sub continent. The tropical cyclone Ex-Indlala has shifted further east of Madagascar reducing its influence over this area. There is no significant change over the rest of the sub continent. The 5700m and 5870m isolines of the 500mb heights of the GFS ensemble prediction system show a huge spread.

At 850mb, there are lows over northern Namibia, central South Africa and western Angola, causing convergence over these areas. Convergence is also visible over Uganda/D.R. Congo border. The Tropical cyclone Ex-Indlala is lying over eastern Madagascar (19°S 49°E), inducing some instability over Madagascar. This tropical cyclone is lying between the two cells of the Mascarene high, centered at 8°S 49°E and 35°S 61°E. The cell of the Mascarene high centered at 35°S 61°E is throwing a ridge over the extreme southeastern parts of the sub continent, hence divergence over these areas. The St Helena high has its center located at 30°S 03°W, and it is ridging into western South Africa and southwestern Namibia. At T+48 hrs, the tropical cyclone Ex-Indlala weakens and shifts eastwards, but it is still inducing some instability over eastern Madagascar. The channel is under convergence due to a trough with a closed circulation located at 40°S 39°E. The low over western Angola is maintained, and there is another low over Zambia/Angola border. Convergence over Uganda/D.R. Congo border is maintained. South Africa, Botswana, southern Mozambique, Zimbabwe and Namibia are under the ridge of the St Helena high. At T+72 hrs, the tropical cyclone Ex-Indlala has moved further east of Madagascar, but the trough with a closed circulation at 35°S 39°E is causing convergence over southern Madagascar and over the channel. The low over western Angola is maintained, and there is convergence over Namibia/Angola border. Convergence over Uganda/D.R. Congo border is maintained. Divergence prevails over the rest of the sub continent.

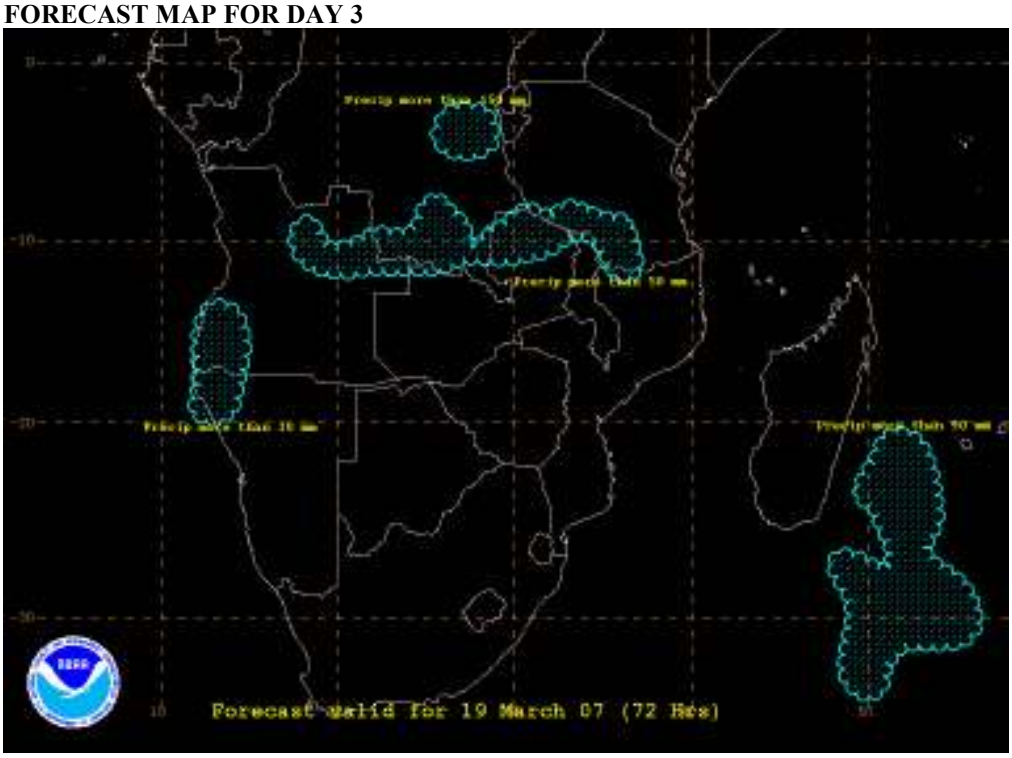
FORECAST MAP FOR DAY 1



FORECAST FOR DAY 2



FORECAST MAP FOR DAY 3



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