

AWIO20 FMEE 291120

TROPICAL CYCLONE CENTER / RSMC LA REUNION / METEO-FRANCE

BULLETIN FOR CYCLONIC ACTIVITY AND SIGNIFICANT TROPICAL WEATHER IN  
THE SOUTHWEST INDIAN OCEAN

DATE: 2020/12/29 AT 1200 UTC

PART 1:

WARNING SUMMARY:

Warning WTIO24 FMEE n°0023/4/20202021 and WTIO30 FMEE n° 0023/4/20202021 to be  
issued on Severe Tropical Storm CHALANE at 06Z. Next warning at 12Z.

PART 2 :

TROPICAL WEATHER DISCUSSION:

The basin is in a Monsoon Trough (MT) pattern over the entire width of the basin and oriented towards 10°S.

The convective activity is mainly located near the three areas that have been monitored for several days: the severe tropical storm CHALANE on the southern Mozambique Channel, and the two suspect areas near Diego-Garcia and the eastern limit of the basin.

**Severe tropical storm CHALANE :**

Position at 0900 UTC : 19.6°S / 38.9°E

Maximum wind over 10 minutes: 50 kt

Estimated central pressure: 990 hPa

Motion: West-Northwest at 14 kt

For more information please refer to warnings WTIO21 and WTIO31 issued at 06 UTC and following.

**Disturbed Zone at the North-East of the basin :**

The low pressure area is located at 0900 UTC around 11.5S/87.7E and moves towards the west-southwest at 09 kt.

Maximum winds are around 20kt, locally reaching 25kt far from the center in the southern semicircle.

The estimated central pressure is 1003 hPa.

The circulation is fairly wide and elongated, under the influence of a weak to moderate east-northeast windshear.

The low level convergence in the northern semicircle is not fully effective despite a well-established monsoon flow. These environmental conditions limit the risk of cyclogenesis in the short term.

During the course of the week, as it moves west-southwest, the vortex will interact with the vortex currently present south of the Chagos, which will have the effect of thwarting low-level convergence on the equatorial side. The scenario retained by the main guidances (deterministics and ensemble forecasts) suggest that this suspicious zone will be maintained to the detriment of the one present south of the Chagos. This representation is not stabilized at the present time and could evolve with the next guidances.

The conditions aloft should also improve, with the decrease of the windshear and then at the beginning of the weekend the increase of the divergence on the polar side in front of an upper levels trough.

The forecast for the weekend is still very uncertain, given the complexity of the situation, with the possible interaction between these two lows.

**During the next 5 days, the risk of a moderate tropical storm forming over the eastern part of the basin is considered moderate from Friday onwards.**

**South of the Chagos:**

The last satellite images show a vortex around 10S/72.7E, moving east-southeast at 5 kt.

The surface circulation is well defined, but completely cut off from the convective activity located further southwest, under the effect of moderate easterly windshear.

Over the next few days, the low-level inflow, especially the trade winds flow, will be thwarted by the more southerly transit of the vortex located on the eastern side of the basin. This will have the effect of limiting the development of this circulation.

In addition, conditions at altitude will be uncondusive, with the presence of dry air and strong shear from the North to North-East.

This scenario is envisaged by the current guidances, but there is still uncertainty about the possible

*NOTA BENE: The likelihood is an estimate of the chance of the genesis of a moderate tropical storm over the basin and within the next five days:*

<i>Very low:</i>	<i>less than 10%</i>	<i>Moderate:</i>	<i>30% to 60%</i>	<i>Very high:</i>	<i>over 90%</i>
<i>Low:</i>	<i>10% to 30%</i>	<i>High:</i>	<i>60% to 90%</i>		

*The Southwestern Indian Ocean basin extends from the equator to 40S and from the african coastlines to 90E.*