

AWIO20 FMEE 031149

TROPICAL CYCLONE CENTER / RSMC LA REUNION / METEO-FRANCE

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

DATE: 2022/10/03 AT 1200 UTC

PART 1:

WARNING SUMMARY:

Nil.

PART 2 :

TROPICAL WEATHER DISCUSSION:

The background of intense wave activity currently occurring over the extreme northeast of the basin, with a significant negative IOD phase in parallel, the basin depicts a Near Equatorial Trough (NET) pattern, East of 59°E undulating around 4°S. This pattern should last at least until the end of the week.

Convective activity is essentially nestled on the eastern edge of the NET, where a disturbed area located around 5.90°S/89°E at 0945 UTC has been monitored for several days. The convective activity is thus located in the vicinity of this vortex, in the low level convergences of the trade wind flow as well as in the slowing of the western flow at the northern edge of the NET. The activity does not seem to have developed during the last 24 hours and there is no clear organization compared to yesterday.

The estimated pressure is relatively high, around 1006 hPa, and has remained stable since yesterday afternoon. Finally, the 0330 Z ASCAT-B partial pass has average maximum wind speed on the order of 10 to 15kt, around a poorly defined and rather diffuse low-level center.

According to the latest CIMMS data, this system benefits from good environmental conditions, offset by a moderate Easterly to North-Easterly wind shear aloft, which has been increasing slightly over the last 24 hours. Convective activity could however develop in the short term, under the effect of a good upper level divergence in the southern semicircle of this system. Moving South-South-Westerly initially, the upper wind shear should loosen its grip slightly and allow a short window of intensification for Tuesday or Wednesday.

Beyond that, although the low level convergence will consolidate further, and the shear will lose its effectiveness as the system moves South-Westward, dry mid-tropospheric air should gradually surround the warm low level core from the North, with an additional oceanic heat content that should weaken from Thursday onwards and thus complicate the cyclogenesis in place.

The latest outputs of European (IFS) and French (ARP) deterministic models share the same scenario: a slow development up to the possible stage of tropical depression. The American model, on the other hand, digs punctually until the stage of moderate tropical storm on Wednesday, before losing intensity beyond. The differences in terms of deepening can be explained by the difference in the management of the arrival of dry air aloft over the LLC, as well as the intensity of the upper vertical wind shear.

However, the European and American ensemble models still suggest (despite a decreasing signal for the EPS) a possibility of deepening to the tropical storm stage in the next 24 to 48 hours.

In the end, there is still a short window of intensification between Tuesday and Wednesday on a probable possibility of reaching the stage of tropical storm over the extreme northeast of the basin.

There is a moderate risk of tropical storm formation from Wednesday onwards over the extreme northeast of the basin, then moderate to weak until Thursday.

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:

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

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