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TROPICAL CYCLONE CENTER / RSMC LA REUNION / METEO-FRANCE

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

DATE: 2022/10/02 AT 1200 UTC

PART 1:

WARNING SUMMARY:

Nil.

PART 2 :

TROPICAL WEATHER DISCUSSION:

While a large western half of the basin remains in a winter pattern, a newly formed equatorial westerly wind burst east of 75°E has nevertheless favored the establishment of a Near-Equatorial Trough (NET) branch over the northeast of the basin this weekend, east of 80°E and around 5°S. Deep convection and vorticity have increased significantly over this area since yesterday. A very much elongated cyclonic circulation has formed around 90°E and 5°S, but without any well-defined center and without particular organization for the moment.

During the next few days, this vorticity area near 90°E should become more and more consolidated thanks to strengthening of the equatorial westerlies and of the NET pattern, enhanced by broad-scale overlapping of multiple equatorial waves (Kelvin, Equatorial Rossby, MRG, superimposed on the -IOD low frequency base state). In this very conducive wave context, convection should strengthen, also benefiting from sufficiently moist environment and good convergence on the trade winds' side. Although the northeasterly vertical shear will be a limiting factor, models predict a southward migration of the vortex, thus moving closer to the the upper troposphere ridge axis where shear is slightly reduced. Oceanic potential will be more than sufficient until Friday, then it should decrease significantly on Saturday onwards as the low moves away from the near-equatorial warm SST reservoir. At the same time, dry mid-tropospheric air intrusions are forecast from the weekend onwards, which would then jeopardize further development. There is therefore a narrow but real window of intensification and cyclogenesis potential between Wednesday and Friday. A growing number of ensemble scenarios now suggest the possibility of reaching tropical storm threshold by the end of the week over the eastern part of the basin. The risk of tropical cyclogenesis is now estimated to be moderate, east of 80°E and therefore far from inhabited areas.

There is a medium risk of tropical storm formation from Thursday over the extreme east of the basin.

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.