

AWIO20 FMEE 111103

TROPICAL CYCLONE CENTER / RSMC LA REUNION / METEO-FRANCE

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

DATE: 2024/08/11 AT 1200 UTC

PART 1:

WARNING SUMMARY:

Nil.

PART 2 :

TROPICAL WEATHER DISCUSSION:

The western part of the basin remains in a winter configuration. However, east of 70E, a Near-Equatorial Trough (NET) pattern has begun to form this Sunday August 11th, with a NET axis between 1 and 4S. Convective activity in the vicinity of this NET has risen compared with previous days.

This pattern change was triggered by the onset of a large-scale equatorial westerly wind burst driven by the passage of a Kelvin wave over the basin in recent days. Vorticity and moisture convergence within the NET should be further reinforced over the next few days by the additional contribution of an Equatorial Rossby wave and by the installation of the active phase of the MJO over the Indian Ocean this mid-August, thus providing an atmospheric background which is unusually conducive for the heart of the south-hemispheric cool season. A new Kelvin wave is also set to reinforce convergence next weekend. Moreover, ocean heat content north of 10S is unseasonably high, with SSTs close to 29C around 5S/75E and 27C around 10S.

Numerical models thus suggest the formation of a closed low-pressure circulation early in the week near 5S/75E, which could more or less develop over the following days as it moves close to the Chagos Archipelago. This development could, however, be hampered by the presence of moderate northeasterly shear or sub-optimal low-level convergence. Some deterministic models, in particular GFS, have been simulating the formation of a tropical storm at the end of the week for several runs now. The deterministic IFS remains less reactive, but the GEFS and EPS ensembles have an increasingly high number of members forming a tropical storm by next weekend, illustrating increasing cyclogenesis potential.

For the next 5 days, there is a low risk of tropical storm development near the Chagos archipelago from Friday August 16th onwards.

Beyond the next 5 days, this risk could increase and become moderate during the weekend of August 17-18th.

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.