AWIO20 FMEE 071243
TROPICAL CYCLONE CENTER / RSMC LA REUNION / METEO-FRANCE

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

DATE: 07/12/2024 AT 1200 UTC

PART 1: WARNING SUMMARY

Nil.

PART 2 : TROPICAL WEATHER DISCUSSION

The Near Equatorial Trough ("NET") pattern over the basin is gradually evolving into a Monsoon Trough ("MT") pattern west of 80E, with trans-equatorial winds notably between 50 and 60E. Convective activity is moderate to strong along these troughs, particularly near a suspect area, south of Diego-Garcia

This improvement of the basin's pattern can be explained by the persistence of an Equatorial Rossby wave crossing the basin, combined with a westerly surge due to a Kelvin wave. The passage of a short Mixed Rossby Gravity wave could also contribute to this improvement in equatorial convergence.

South-west of Diego-Garcia :

This Saturday, the latest satellite images show the presence of a suspect area circulating rapidly westward south of Diego Garcia. The 0439Z ASCAT pass shows winds reaching 25 to 30kt far from the center in the southern semicircle. The circulation appears very elongated, subject to strong easterly shear.

As it moves westward, this area should gradually encounter an increasingly favorable environment for cyclogenesis, with increasing surface convergence on the equatorial side over the next 48 hours, and on the polar side from Monday and especially Tuesday with the arrival of the new high cell. Upper shear could also decrease slightly, particularly from Sunday night onwards, while remaining in the same direction as the motion.

In this context, a slow development at first, accelerating at early week, as suggested by the latest IFS or GFS runs, seems reasonable. The deterministic models (IFS, GFS, HAFS, Arome, etc.) and their ensembles suggest that gale force winds could be expected by Tuesday. There seems to be a consensus on the track, with a west-southwest motion expected, which could bring the system closer to inhabited land. A threat to Agalega and northeastern Madagascar looks possible respectively for the middle and end of the week.

The likelihood of the formation of a moderate tropical storm becomes low on Sunday 8, moderate on Monday 9 and high from Tuesday 10.

Late next week, or early the following week, in the eastern part of the basin, a new crossing of waves (Rossby and Kelvin) could again contribute to an improvement of the basin's pattern and possibly to a new cyclogenesis.

NOTA BENE: The likelihood is an estimate of the chance of genesis of a moderate tropical storm over the basin 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.