

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

DATE: 16/10/2025 AT 1200 UTC

PART 1: WARNING SUMMARY

Nil.

PART 2 : TROPICAL WEATHER DISCUSSION

The Near Equatorial Trough (NET) now extends from 52°E to 85°E, undulating between 4°S and 7°S. There is moderate to strong convective activity along this NET within 2 circulations, the main one located to the east of Diego Garcia.

A well-established Rossby wave is currently crossing the basin: the near-equatorial westerly wind anomaly is very marked. Its interaction with a Kelvin wave ahead of a wet MJO will strengthen this westerly anomaly over the next few days. The passage of a mixed Rossby-gravity wave at the very end of the week could strengthen it. The interaction between the four types of wave is at its maximum on Sunday 19 October, which will be the most favourable day for cyclogenesis.

Circulations to the north-east of Diego Garcia:

At present, the 2 circulations located around 6°S 65°E and around 6°S 80°E remain poorly defined and elongated, the second being more marked than the first. The ASCAT swath at 0414Z shows winds of around 20kt along the NET, outside the convective zone. The wave context is very favourable to an increase in low-level convergence and convective activity within the NET. Furthermore, at the end of the week, the deep vertical shear and the mid-tropospheric shear should weaken significantly, allowing one of the 2 circulations to gradually strengthen. The convergence of the second circulation is set to improve with a clear symmetrisation. In addition, there will be an increasing altitude diffluence and a good supply of moist air in the middle and lower troposphere. The second flow is therefore more favourable to cyclogenesis over the next few days.

In terms of deterministic models, GFS is still the earliest, suggesting a deepening into a moderate tropical storm on Saturday night. The same applies to AIFS, while IFS digs in a little later on Sunday morning. Among the ensemble forecasters, GEFS has some members digging as from Saturday evening, but most of them are reinforcing the idea of cyclogenesis during the night from Saturday to Sunday, or even Sunday. EPS, on the other hand, is earlier, with some members digging as from Friday evening.

The likelihood of the formation of a moderate tropical storm becomes low from Friday 17 October, moderate from Saturday 18 and strong from Sunday 19 near Diego Garcia.

10-day outlook :

Taking into account what has been described above, the risk of cyclogenesis for the system discussed is maintained the following week. But other risks are also emerging to the east of the basin in a favourable context for the MJO.

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.