AWIO20 FMEE 251252
TROPICAL CYCLONE CENTER / RSMC LA REUNION / METEO-FRANCE

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

DATE: 2023/03/25 AT 1200 UTC

PART 1:
WARNING SUMMARY:

Nil.

PART 2 :
TROPICAL WEATHER DISCUSSION:

The South-West Indian Ocean basin still lacks a solid pattern as it usually does at this time of year. However, a trans-equatorial flow is back near the eastern border of the basin, converging towards a short branch of Monsoon Trough centered along 8°S east of 85°S and extending mainly in the Indonesian AoR where a low-pressure area is located near 8°S/93°E.
Further west, with the contribution of an MRG wave, a west-northwest flow along 10°S (pseudo monsoon flow) is feeding an area of low pressure over the center of the basin, between Agalega and Saint-Brandon, within which a suspect area has been monitored for some days.
Convective activity is also marked between the south-west of Seychelles and the northern Mozambique Channel within a large and poorly organized trough.

In the Indonesian and Australian areas :
The weak low located around 8°S/93°E has a potential to develop later next week in a context of equatorial wave crossing favoring an increase in convection and vorticity, but this system should remain well east of 90°E (near the Cocos Islands), carried away at first by the near-equatorial westerly wind surge in progress, thus it does not concern our basin for the next 5 days.

Over the center of the basin, off the northeast of the Mascarene Islands :
The weak low-pressure area currently monitored is located approximately 420 MN east-southeast of Agalega, with a still rather elongated center located approximately at 11.5°S/63.5°E. Deep convection has developed since yesterday near the center with some better organization wrapping around the western and southern edge of the center. Maximum mean winds are estimated to be between 15 and 20kt, as suggested by recent scatterometric data.
In the next few days, despite good monsoon flow-like feed on the equatorial side, convergence will deteriorate on the polar side of the vortex in connection with the weakening of the subtropical high pressure. In addition, an upper trough further south should generate increasing wind shear and inject dry mid-tropospheric air over the west of the circulation. This should counteract the development potential of this system.
The vast majority of deterministic and ensemble modelling confirms these unfavourable conditions and struggle to forecast significant deepening over the next 5 days. A few very isolated members of the European EPS and a recent AROME run suggest weak deepening into a depression or tropical storm off the northeast Mascarene Islands, but this is far from the dominant scenario. The risk of cyclogenesis is therefore maintained very low (<10%) for the next 5 days.

There is a very low risk of tropical storm development northeast of the Mascarene Islands during the next 5 days.

North of the Mozambique Channel:
No closed clockwise circulation is currently present and convective activity is marked but very scattered. During next week, convergence should increase in part due to a surge of southerly winds in the Mozambique Channel. A few ensemble scenarios suggest the formation of a small tropical low, but this option seems quite unlikely at the moment, not backed by deterministic models, which favor a weak and very elongated circulation without development potential.

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.