AWIO20 FMEE 131210
TROPICAL CYCLONE CENTER / RSMC LA REUNION / METEO-FRANCE

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

DATE: 2024/02/13 AT 1200 UTC

PART 1:
WARNING SUMMARY:

Nil.

PART 2 :
TROPICAL WEATHER DISCUSSION:

The basin has a monsoon thalweg (MT) pattern between 50 and 70°E, undulating between 12 and 14°S. East of 75°E, the ITCZ is less well defined, with an axis of convergence at around 5°S. Within the monsoon trough, a closed circulation is present, centered on 14°S/66°E. The HY-2B and 2C passes at 2230Z and 0030Z show a closed circulation, with winds of 5-10kt. This convection is essentially located to the northeast of the minimum and
relatively far from the center.
Elsewhere in the basin, convection is localized on the equatorial side of the TM, as well as around a small minimum in the center of the Mozambique Channel.

Over the next few days, convergence within the monsoon trough is set to strengthen. This development will be helped by the strengthening of the anticyclonic belt to the south and marked wave activity on the equatorial side (passage of an MRG wave and above all an equatorial Rossby wave).

Northeastern Mascarene Islands:
In this more favourable context, the minimum to the north-east of Saint-Brandon could consolidate further and initiate a cyclogenesis process. By encountering more favorable environmental conditions (warm waters, low wind shear and increasing
convergence), both deterministic and ensemblistic models agree with the deepening of this minimum. It could reach the stage of a moderate tropical storm at the earliest on Friday, and more likely over the weekend. With a prevailing northwesterly to westerly-northwesterly flow, if a tropical storm does form, it is likely that it will not impact on populated areas.
**The risk of a moderate tropical storm to the northeast of the Mascarenes is therefore low tomorrow, becoming moderate on Friday 16th and then significant
over the weekend.**

North-east of Madagascar :
Within the monsoon thalweg, deterministic and ensemblistic models suggest the creation of a new precursor to the north-east of Madagascar. According to the models, a precursor would "exit" Madagascar at the end of weekend/beginning of next week (IFS scenario) or would form North of Mascarene Islands (GFS scenario). **There is a low risk (less than 10%) of a moderate tropical storm form at the end of the week-end. This risk should increase over the next few days.**

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.