



# MAURITIUS METEOROLOGICAL SERVICES



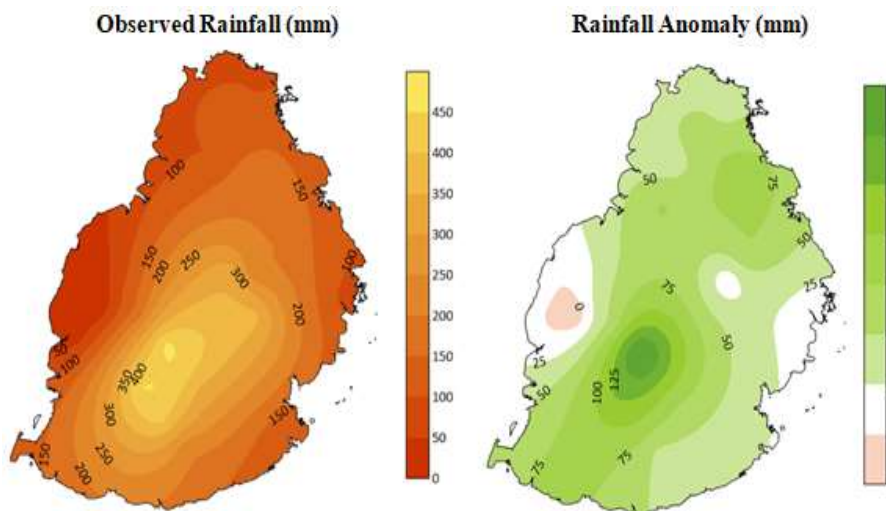
## CLIMATE JULY 2021

### Introduction

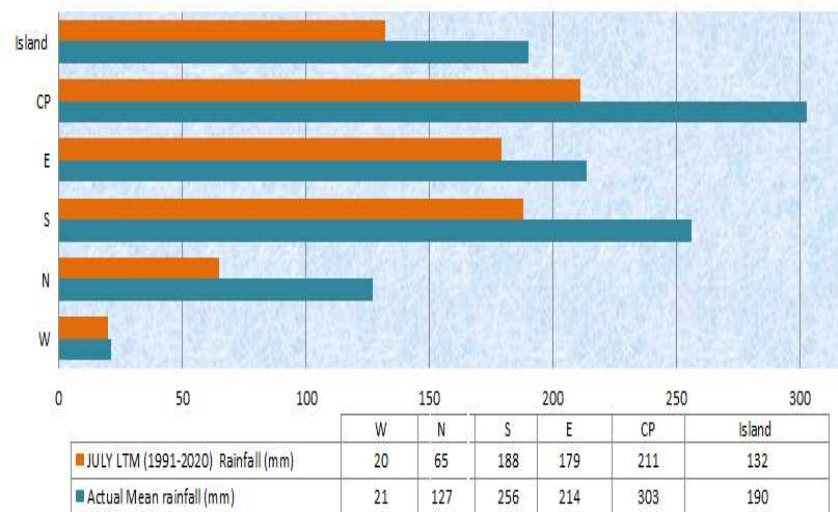
July 2021 had above normal rainfall with 144% of the Long Term Mean.

El-Nino La-Nina Southern Oscillation (ENSO) remained in the neutral phase and the Indian Ocean Dipole (IOD) in the equatorial Indian Ocean was negative. The Subtropical Indian Ocean Dipole remained neutral and the Madden Julian Oscillation (MJO) was active over the western Indian Ocean during the first fortnight.

### 1. Rainfall

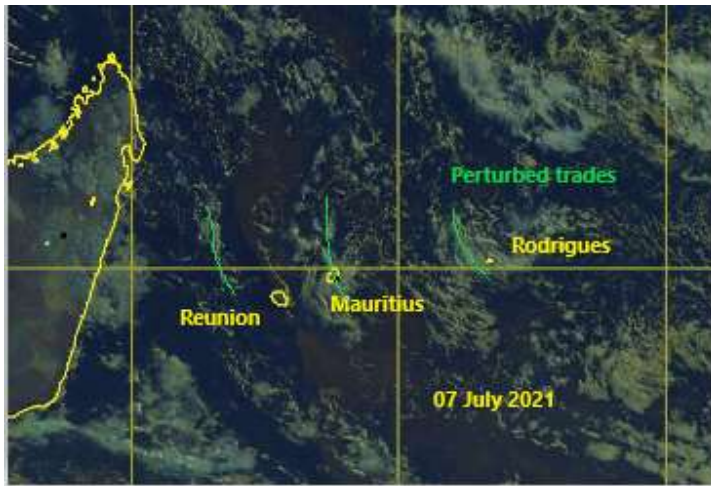


**Fig. 1:** Spatial rainfall distribution (a) Observed (b) Anomaly (mm)

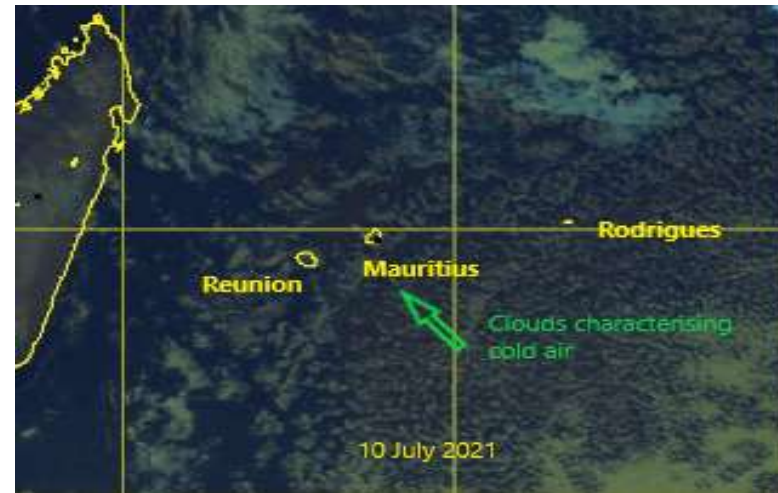


**Fig. 2:** Regional rainfall distribution

An average of 204mm of rainfall was recorded over the island equivalent to 144% of the long term mean for the month; 40% of the total rainfall was recorded in the first fortnight and 60% in the second. The highest 24-hour rainfall was 76.4mm recorded at Pradier located in the South of the island. Vacoas recorded 24 rain days ( $\geq 1$ mm of rain).



(a) Clouds coming from the East on day 07



(b) Clouds characterising cold air coming from the Southeast of Mauritius on day 10

Fig. 3: Meteosat8 satellite pictures

## 2. Surface Temperature

The monthly mean temperature over the island in July 2021 was 21.0°C which is close to the LTM 1981-2010 (+0.3°C).

The mean minimum temperature is slightly above the normal (+0.7°C) and the mean maximum temperature is close to the normal (0.0°C).

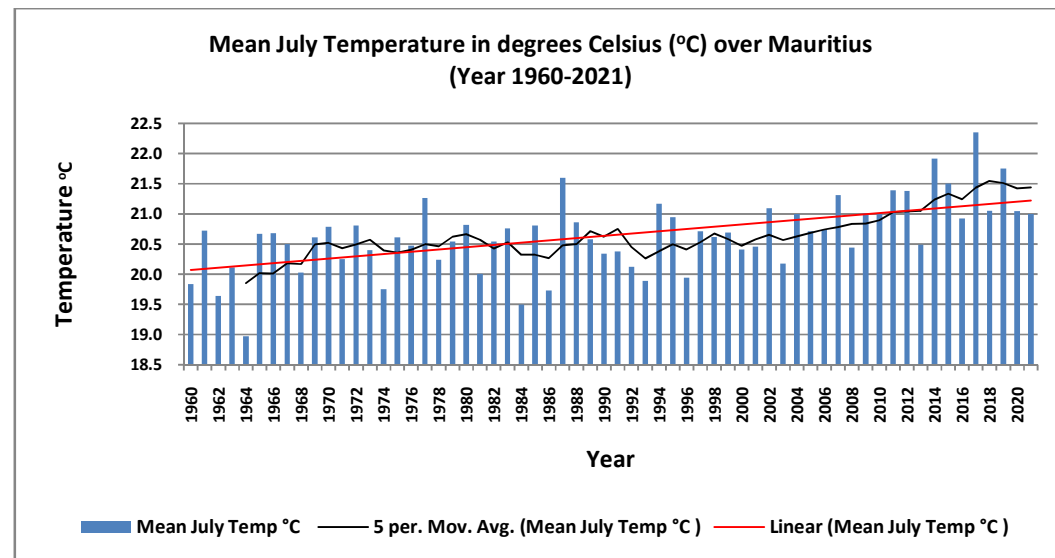


Fig. 4: Mean temperature trend for July from 1960-2021

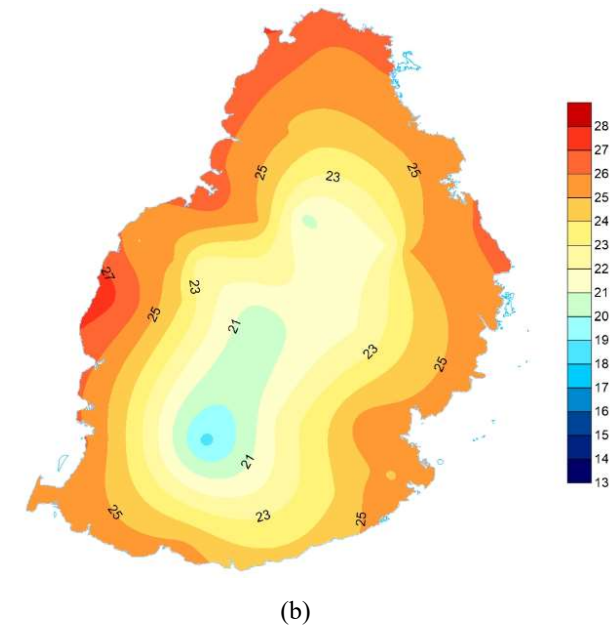
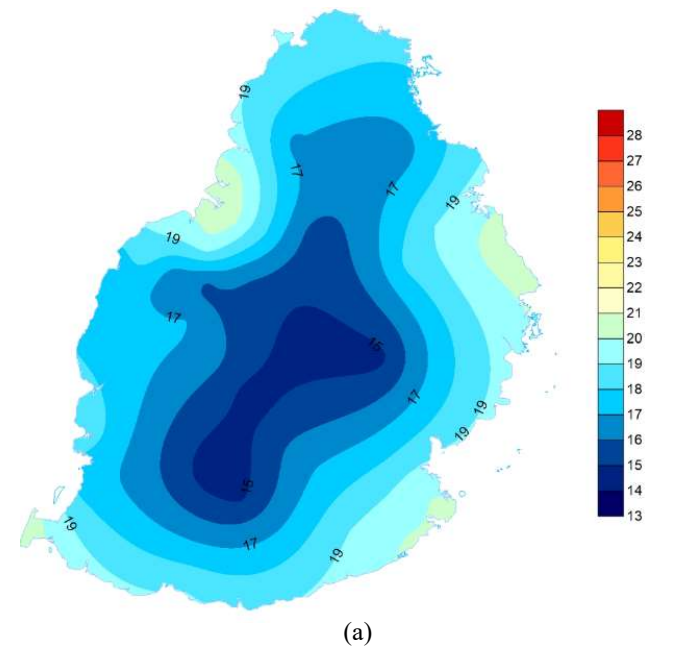
The nights were warmer at most places during the first 10 days where minimum temperatures were higher than the normal by 1-3°C. Afterwards with cold air advection, it occasionally dropped by 2-3°C, with respect to the normal, at many stations; (Fig 6(a)). However, no new extreme low minimum was recorded.

The lowest minimum recorded was 12.1°C at Belle Rive (Wooton) on 20 and the highest minimum was 22.6°C at Port-Louis on 05.

The daytime during the first week was warmer by 1-2°C. Afterwards, the maximum was mainly close to the normal, though occasionally it was cooler by about 2°C (Fig 7).

The lowest maximum for the month was 16.7°C recorded at Grand-Bassin on 27. The highest maximum was 29.5°C recorded at Medine on 03.

No new extreme maximum temperatures were recorded.



**Fig. 5: (a) Mean minimum (b) Mean maximum temperature distribution**

Observed cold days (maximum temperature anomaly (anamax < -2°C)) and cold nights (minimum temperature anomaly (anomin < -2°C)).

Stations	Highest anamax (°C)	Number of cold days	Stations	Highest anomin (°C)	Number of cold nights
FUEL(ALTEO)	3.5	13	Bel-Village	3.3	5
Riviere-Noire	3.1	2	Pamplemousses	3.8	10
Belle Rive(Wooton)	3.7	13	Mon-Loisir	3.7	16
Quatre-Bornes	2.4	1	Albion	4.6	9
Beau-Bassin	3.0	1	Reduit	3.1	3
Nouvelle - Decouverte	2.4	2	Medine	2.5	5

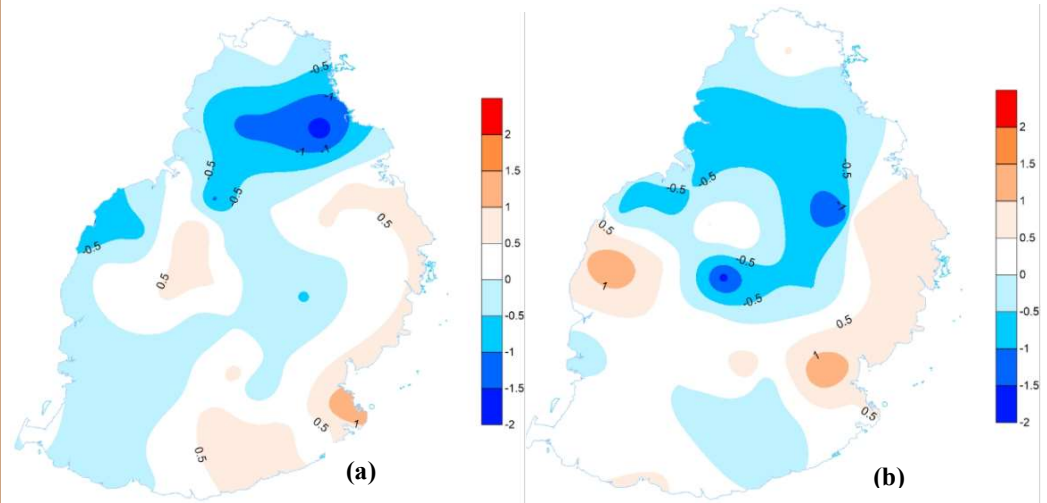


Fig. 6: Spatial distribution of temperature anomaly (a) Minimum (b) Maximum

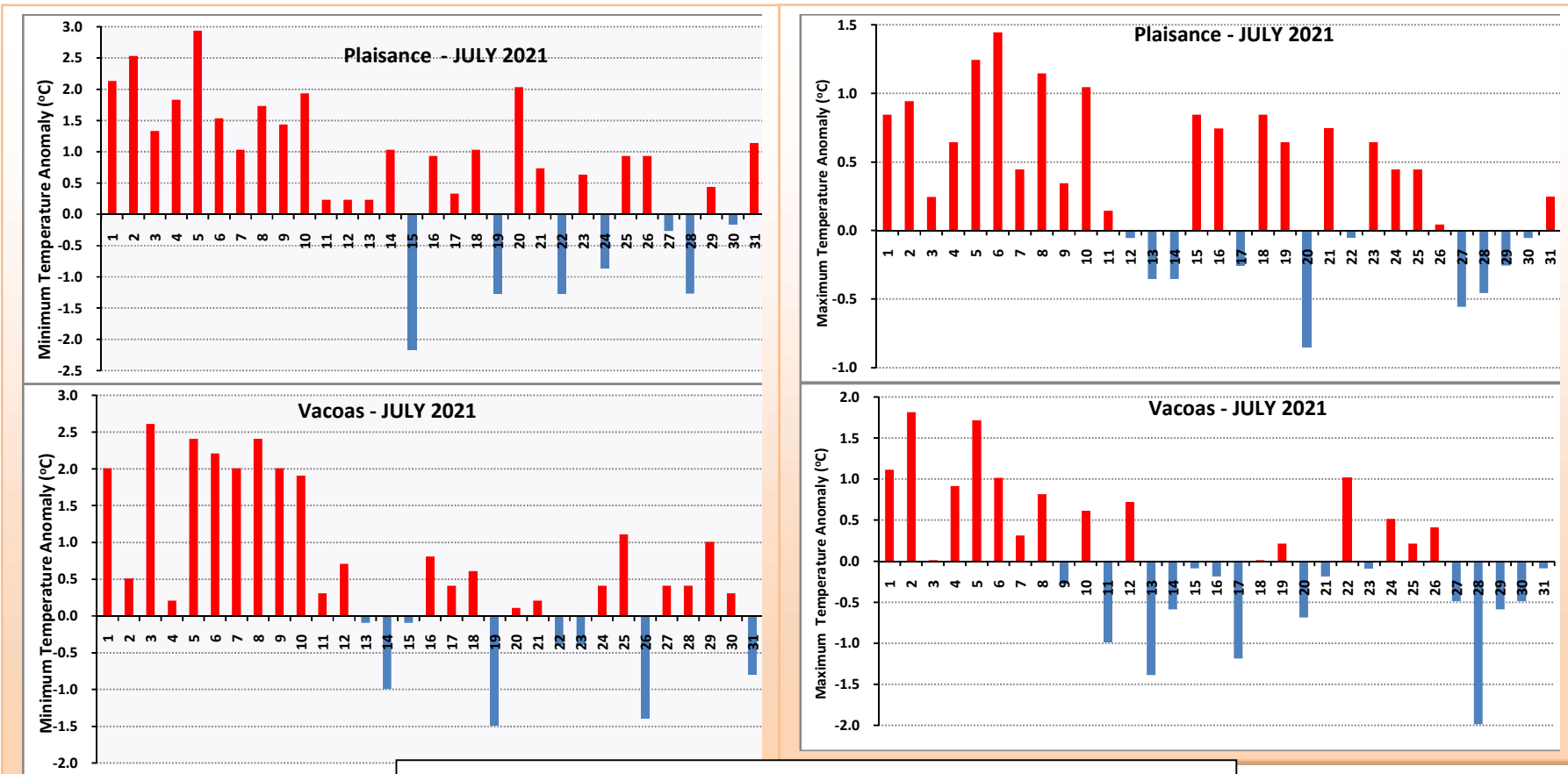


Fig. 7: Daily temperature anomaly at Vacoas and Plaisance: Minimum (left) Maximum (Right)



### 3. Sunshine and Humidity

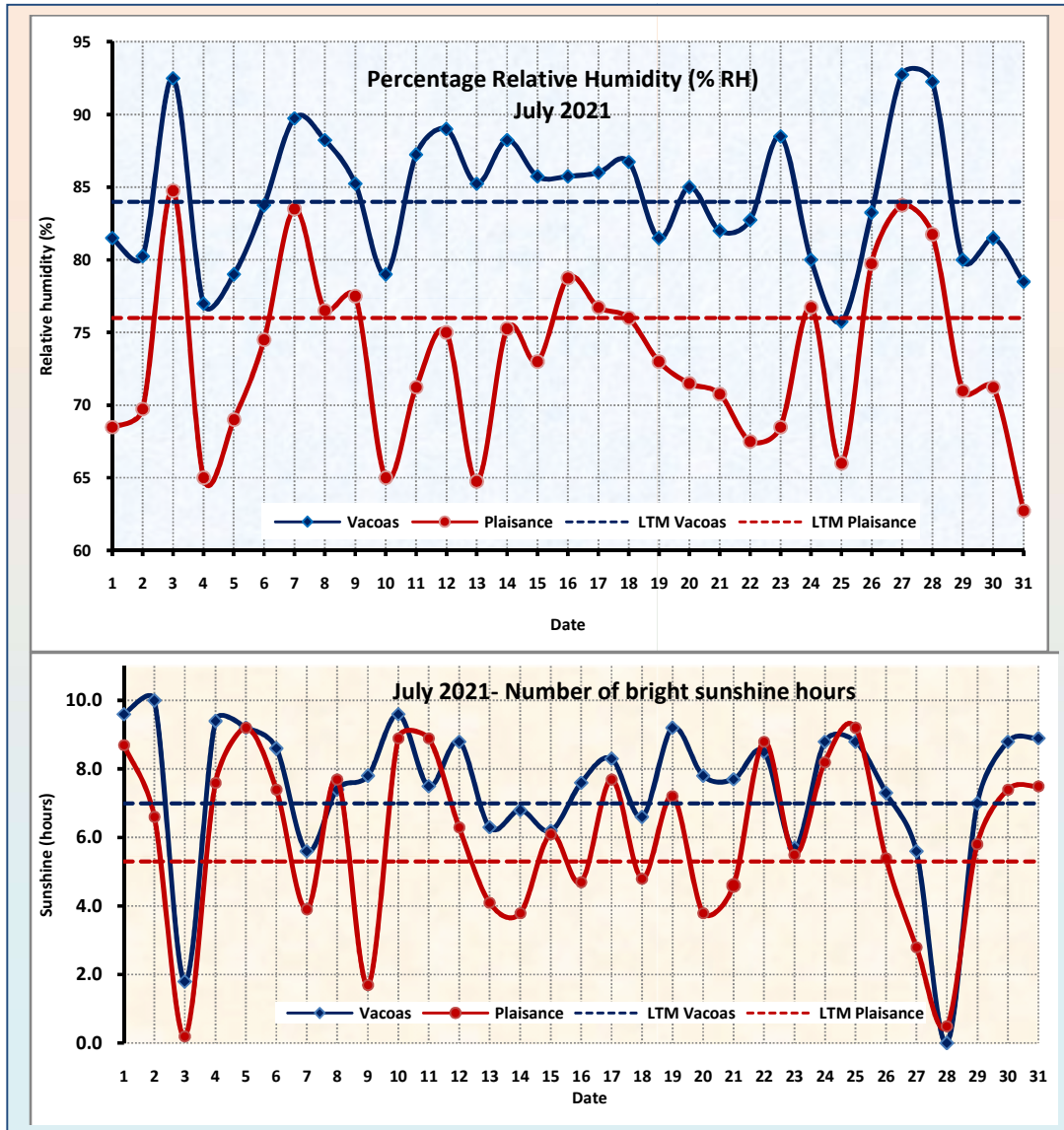


Fig. 8: Daily relative humidity and sunshine

The wind was mainly from the eastern and south-eastern sector at Plaisance

Overall, the mean relative humidity was close to the normal at both stations.

The number of daily bright sunshine hours was close to the normal at Vacoas and slightly above at Plaisance; with a daily mean difference of +0.4 hours and +0.6 hours compared to their respective LTM. Day 03 and 28 had the lowest sunshine hours (Fig 08). The total number of monthly bright sunshine hours at Vacoas was 231.2 (106% of LTM) and at Plaisance it was 185.0 (112% of LTM).

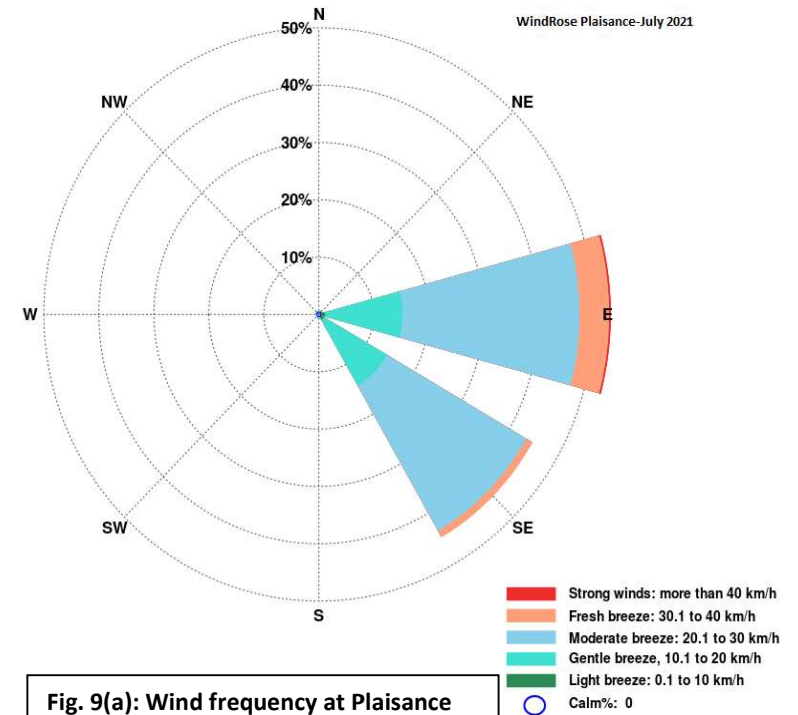
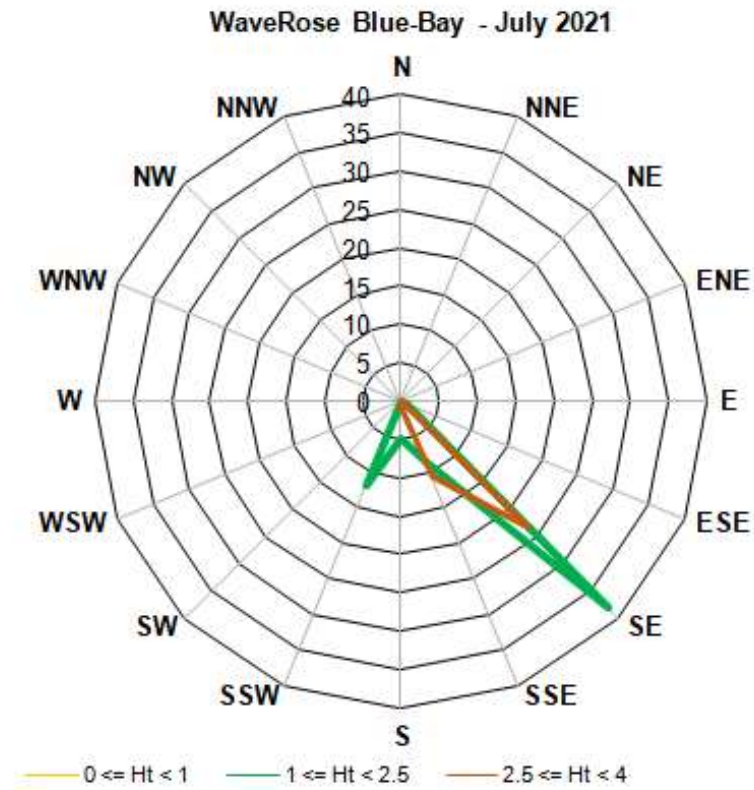
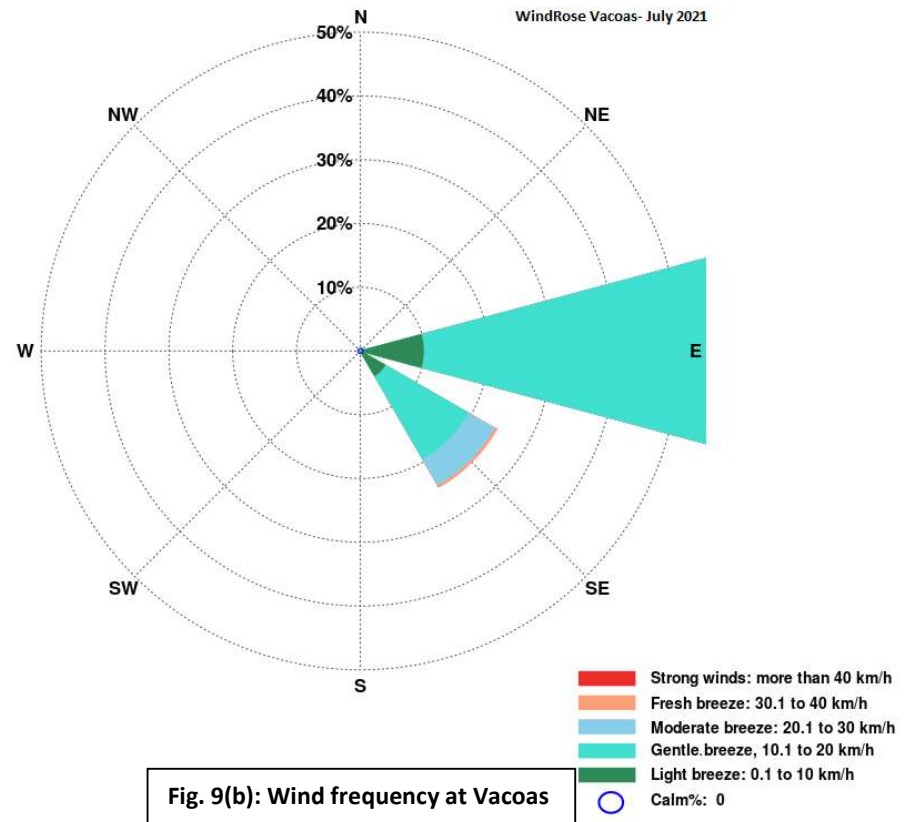


Fig. 9(a): Wind frequency at Plaisance



**Fig. 10: Wave Rose at Blue-Bay showing waves from the south-eastern sector**

The wind waves at Blue Bay were mainly from the south-eastern sector. On some occasions swell waves were observed from the Southern Sector but these were mostly below 2.5m in height.



**Fig. 9(b): Wind frequency at Vacoas**

The wind was mainly from the eastern and south-eastern sector at Vacoas

## FORECAST FOR AUGUST-SEPTEMBER-OCTOBER (ASO)

Neutral ENSO is forecast for August-September-October period with a probability of weak La Nina condition developing as from the period September to October. From Figure 11 (a), in the Indian Ocean, IOD will be negative whereas SIOD is forecasted to be neutral; also the Mascarene region will encounter normal SST during ASO. Figure 11 (b) shows that pressure anomaly over the SWIO will be normal.

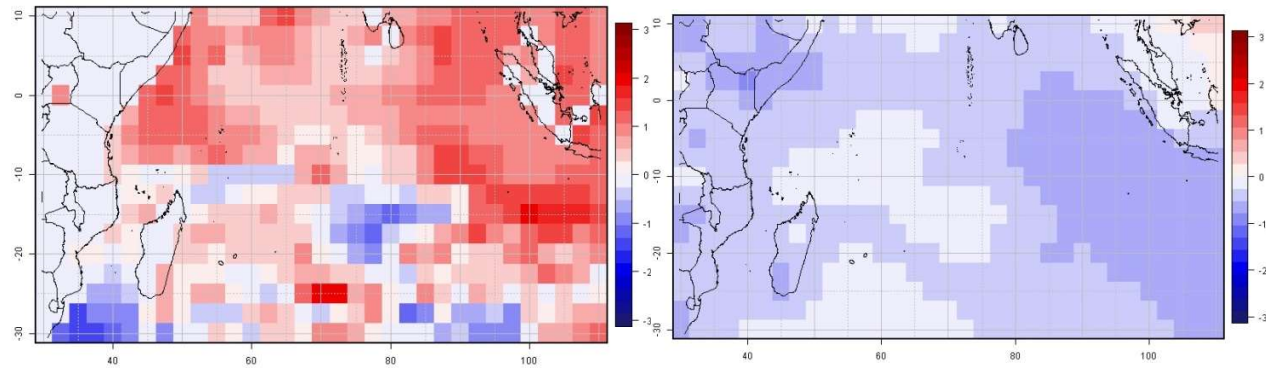


Figure 11: (a) Sea surface temperature and (b) pressure anomaly charts for ASO 2021

### Consensus forecast for Mauritius:

Statistical analysis is showing close to normal rainfall for ASO.

As such cumulative monthly rainfall is forecast as follows:-

- August close to normal (~110 mm)
- September close to normal (~90 mm)
- October close to normal (~70 mm)

Mean temperature is forecast to be near normal in most places except in the South and South-east (Fig 12b).

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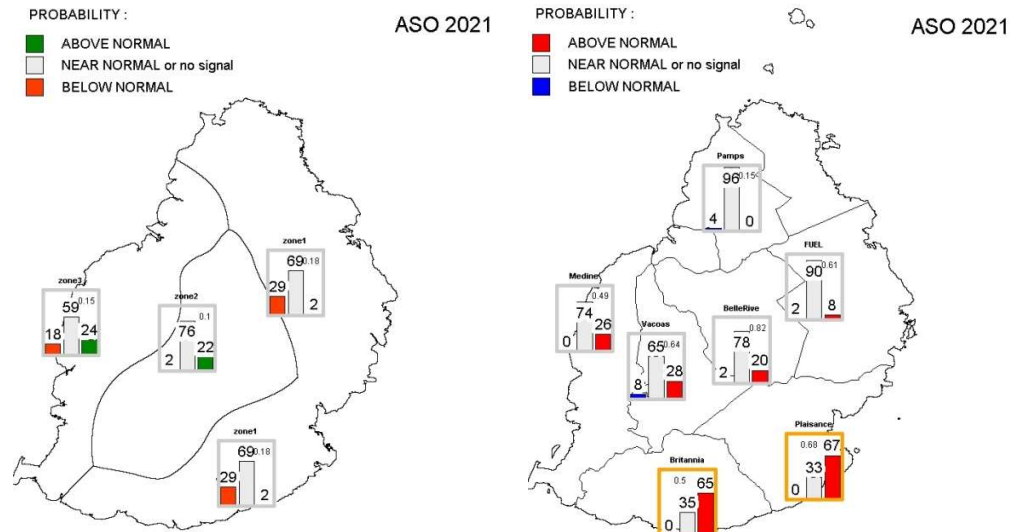


Fig. 12: Statistical Model Forecast of (a) rainfall and (b) temperature