



# MAURITIUS METEOROLOGICAL SERVICES



## CLIMATE JUNE 2021

### Introduction

June 2021 was very wet with 174% of the Long Term Mean rainfall. The month was rather warm and ranks the 11<sup>th</sup> warmest from 1960. El-Nino La-Nina Southern Oscillation (ENSO) remained in the neutral phase and the Indian Ocean Dipole (IOD) in the equatorial Indian Ocean became gradually negative in the 3<sup>rd</sup> week. The Subtropical Indian Ocean Dipole remained neutral and the Madden Julian Oscillation (MJO) was active over the western Indian Ocean during the mid of the month.

### 1. Rainfall

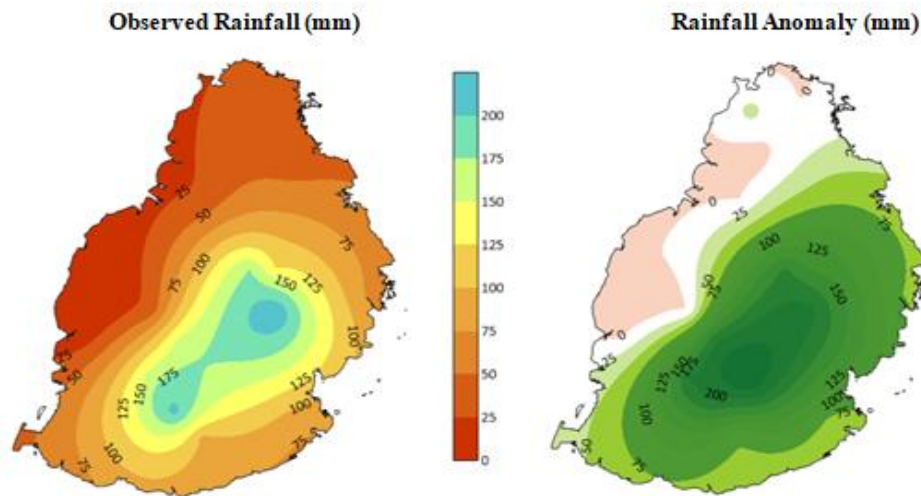
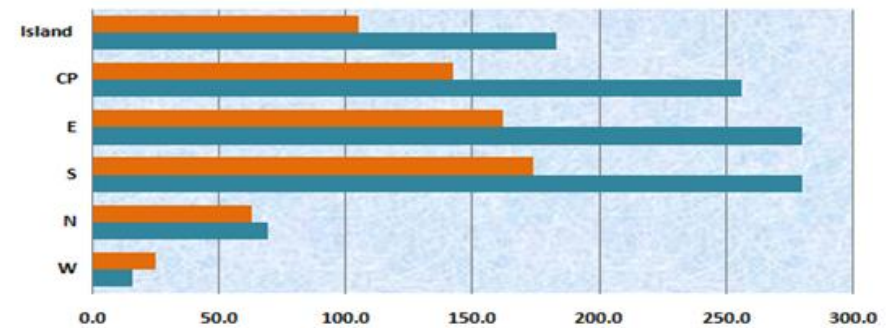


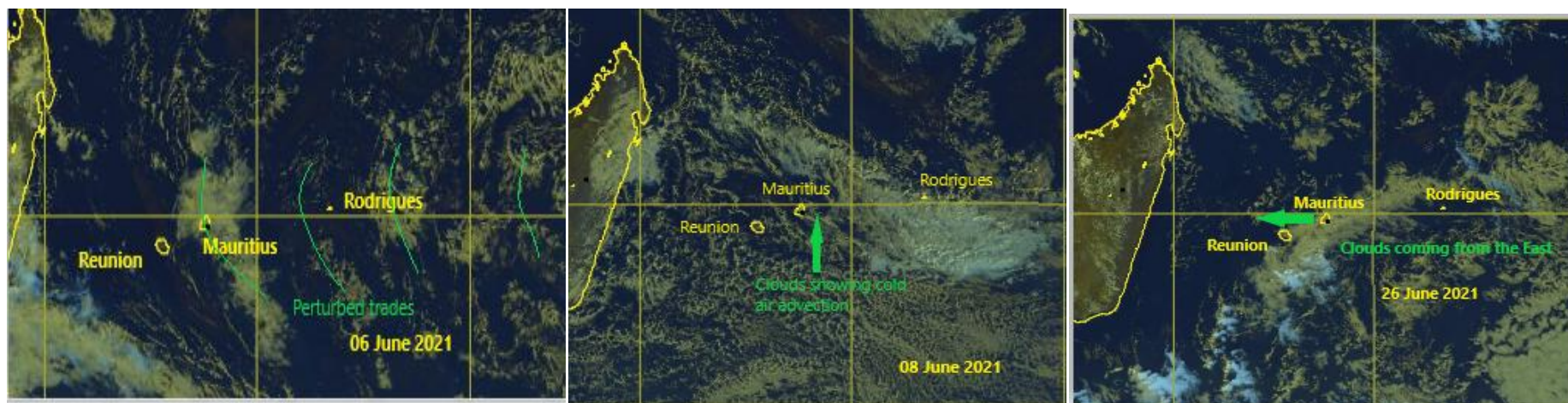
Fig. 1: Spatial rainfall distribution (a) Observed (b) Anomaly (mm)



	W	N	S	E	CP	Island
June LTM (1981-2010) rainfall (mm)	25	63	174	162	143	105
Actual Mean rainfall (mm) June 2021	15.8	69.3	280.5	280.2	256.4	183.2

Fig. 2: Regional rainfall distribution

An average of 183mm of rainfall was recorded over the island equivalent to 174% of the long term mean for the month with 55% in the first fortnight and 45% in the second. Vacoas recorded 17 rain days ( $\geq 1$ mm of rain).



(a) Clouds coming from the East on 06

(b) Clouds coming from the South of Mauritius on 08

(c) Clouds coming from the East on 26

Fig. 3: Meteosat8 satellite pictures

## 2. Surface Temperature

The monthly mean temperature over the island in June 2021 was 22.1°C which is slightly above the LTM 1981-2010 (+0.7°C).

The mean minimum temperature anomaly was above the normal (+1.2°C); the 7<sup>th</sup> warmest on records and the mean maximum temperature anomaly was close to the normal (+0.2°C).

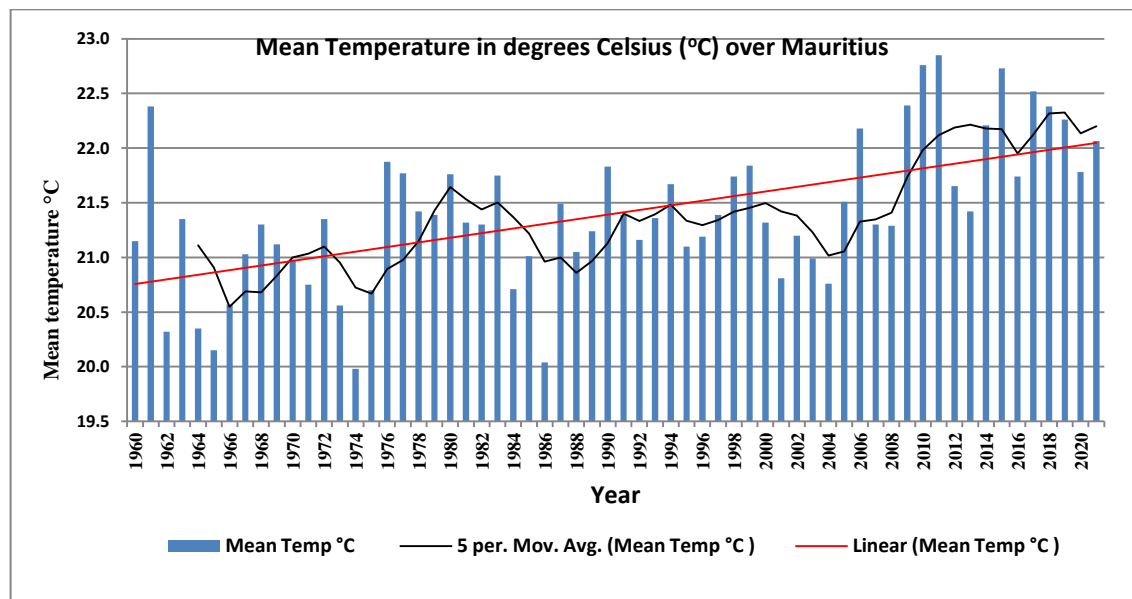


Fig. 4: Mean temperature trend for June from 1960-2021

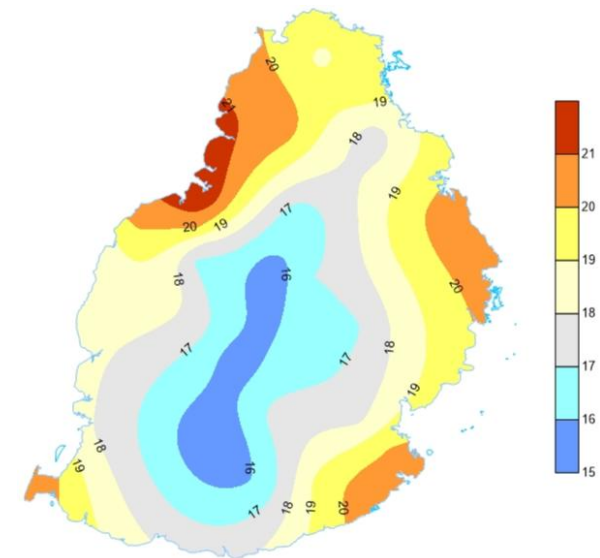
The nights were warmer at most places except from 19-26 where minimum temperatures were cooler than the normal by 1-4°C; (Fig 6(a)). However, no new extreme low minimum was recorded.

The lowest minimum recorded was 11.3°C at Mon Bois on 24 and the highest minimum was 24.6°C at Port-Louis on 02.

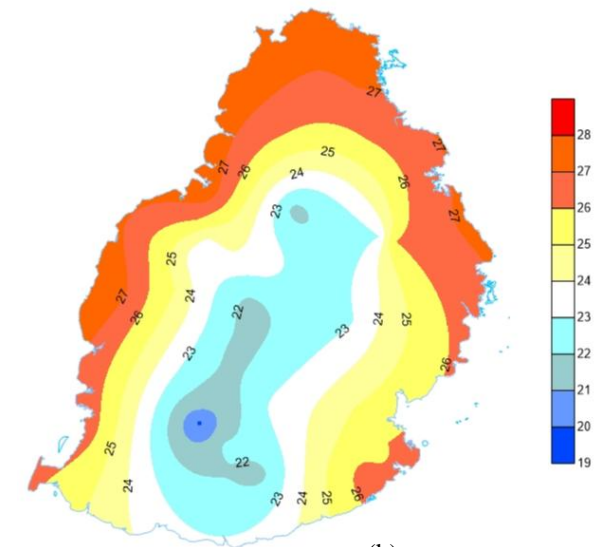
The daytime during the first week was warmer by 1-3°C and the remaining days had mostly close to normal temperatures (Fig 7). However, during the period 20-26, the advection of cold air caused a drop in the maximum temperatures of 2-3°C below the normal on some days.

The lowest maximum for the month was 15.9°C recorded at Grand-Bassin on 21. The highest maximum was 31.3°C recorded at Port-Louis on 06.

No new extreme maximum temperatures were recorded.



(a)



(b)

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

Observed warm days (maximum temperature anomaly (anamax > 2°C)) and warm nights (minimum temperature anomaly (anomin > 2°C)).

Stations	Highest anomax (°C)	Number of warm days	Stations	Highest anomin (°C)	Number of warm nights
Bois - Mangues	3.5	8	Beau Bassin	4.8	17
Queen-Victoria	4.4	8	Pamplemousses	4.1	9
Beau Songes	3.6	11	Plaisance	4.1	11
Alma	3.4	11	Quatre -Bornes	3.0	11
Mon Bois	5.1	8	Beau-Songes	3.8	15
Bois Cheri	3.9	10	Reduit	3.5	10

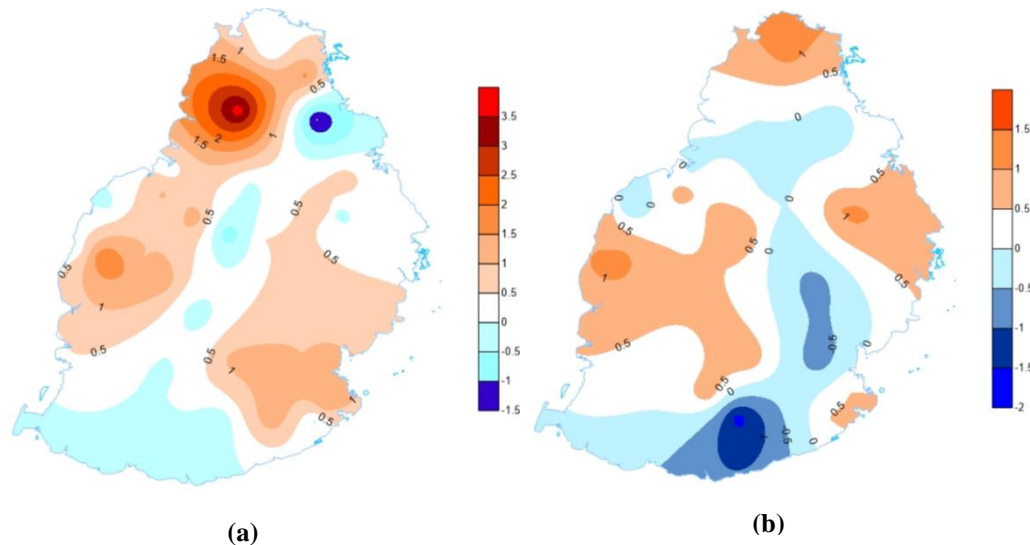


Fig. 6: Spatial distribution of temperature anomaly (a) Minimum (b) Maximum

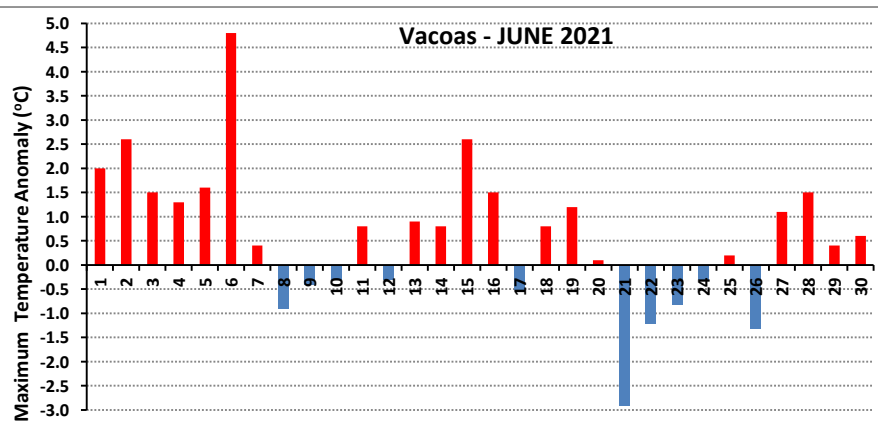
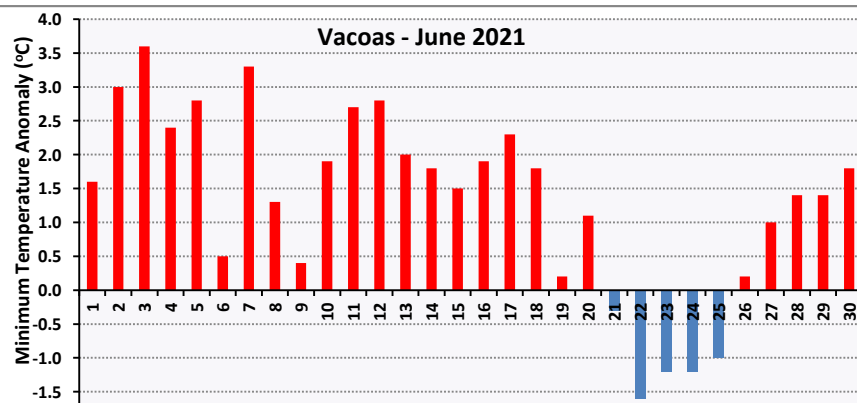
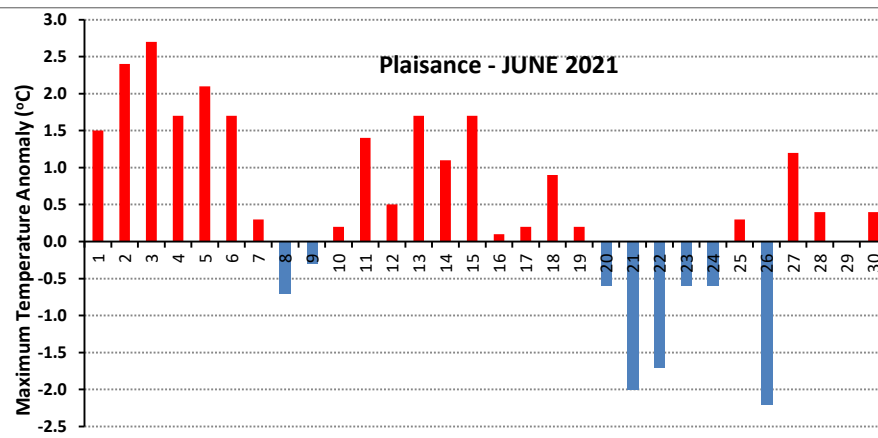
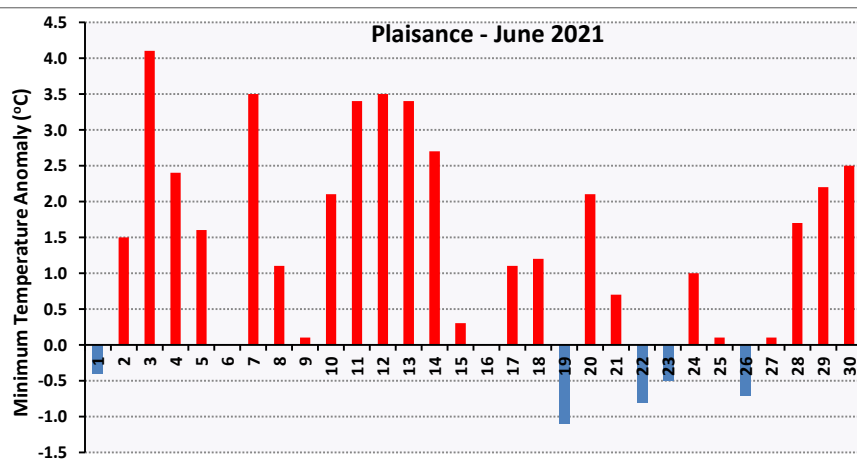


Fig. 7: Daily temperature anomaly at Vacoas and Plaisance: Minimum (left) Maximum (Right)



### 3. Sunshine and Humidity

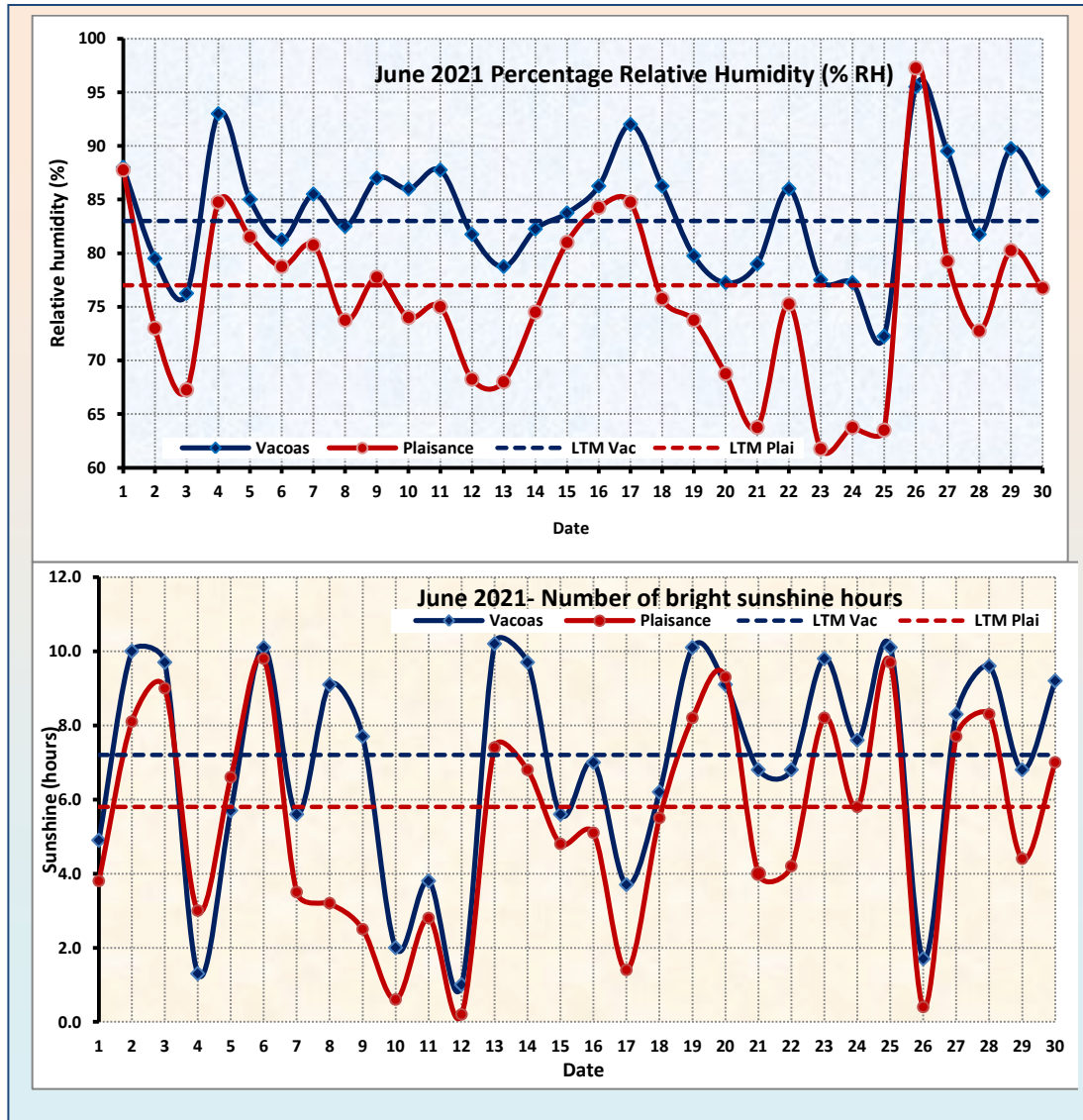


Fig. 8: Daily relative humidity and sunshine

The wind was mainly from the eastern and south-eastern sector. On some occasions light wind from the south and the northwest prevailed at Plaisance.

Overall, the mean relative humidity was close to the normal at both stations. The low values from 20-25 at Plaisance was the effect of the advection of cold dry air.

The number of daily bright sunshine hours was close to the normal at Vacoas and Plaisance; with a daily mean difference of -0.2 hours and -0.4 hours compared to their respective LTM. Day 12 and 26 had the lowest sunshine hours (Fig 08). The total number of monthly bright sunshine hours at Vacoas was 209.2 (97% of LTM) and at Plaisance it was 161.3(93% of LTM).

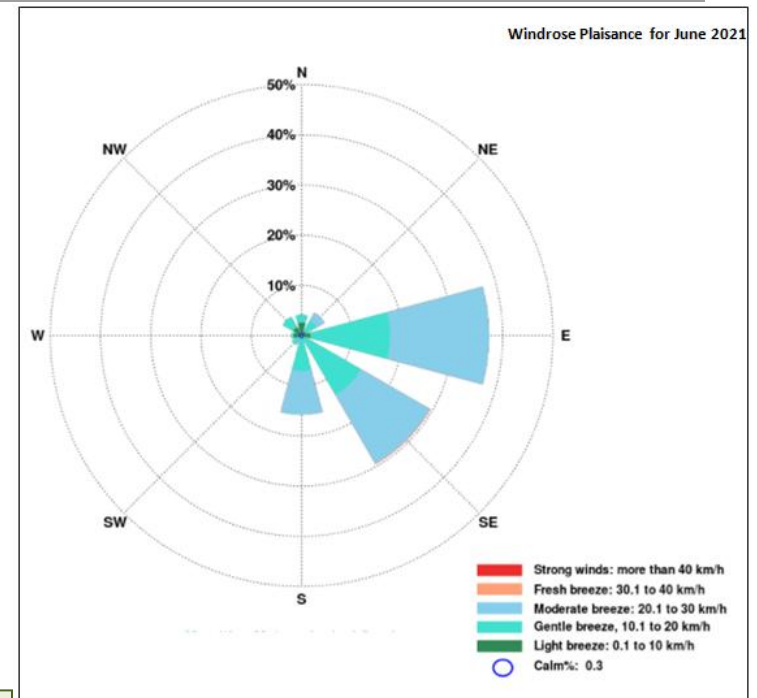


Fig. 9(a): Wind frequency at Plaisance

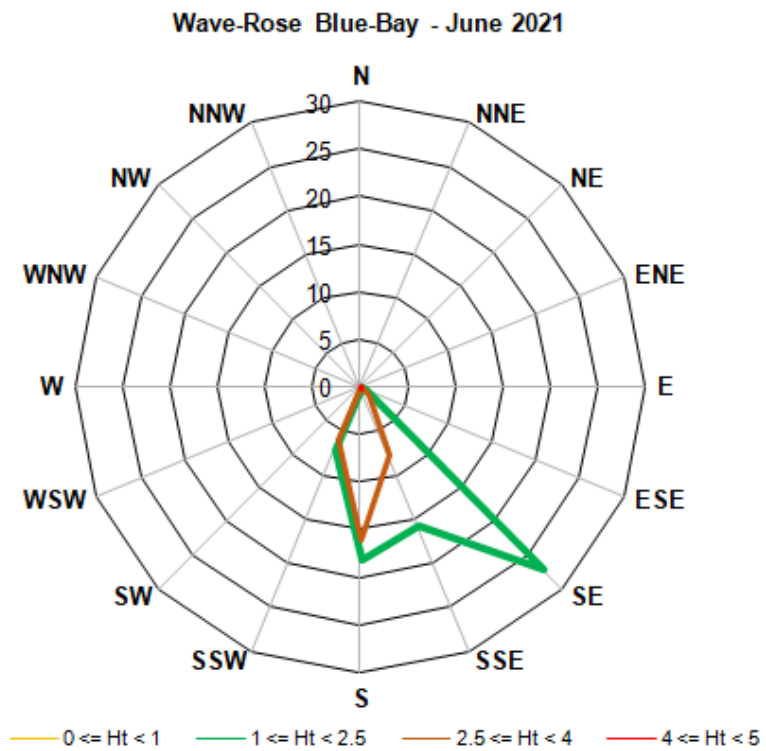


Fig. 10: Waverose at BlueBay showing waves from the south-eastern sector

The ocean waves at Blue Bay were mainly from the southern sector. A high wave warning was issued for the period 06-09 June 2021; the wave height exceeded 4 metres on day 08.

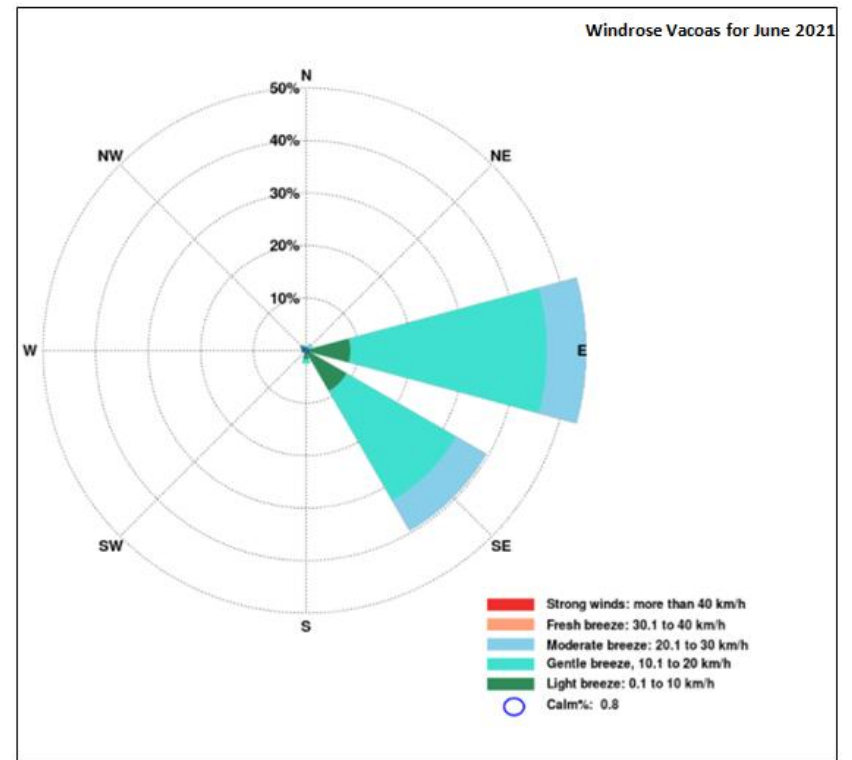
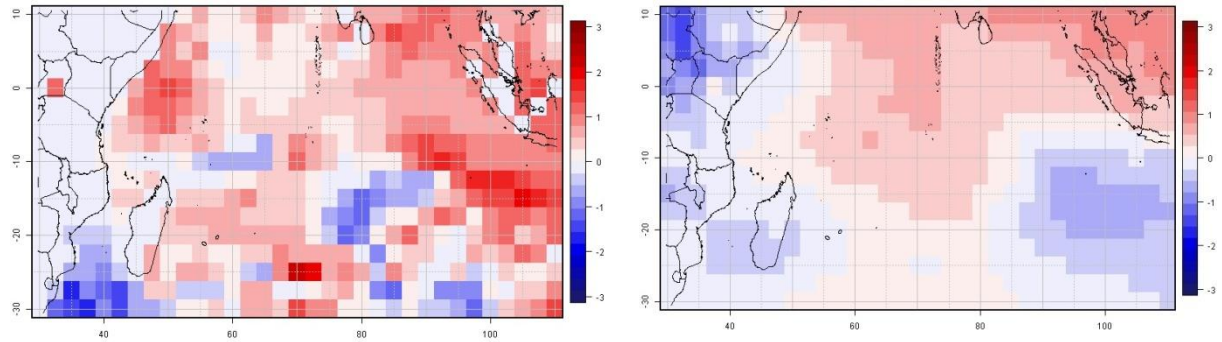


Fig. 9(b): Wind frequency at Vacoas

## FORECAST FOR JULY-AUGUST-SEPTEMBER (JAS)

Neutral ENSO is likely to persist during July-August-September period. From Figure 11 (a), in the Indian Ocean, both IOD and SIOD are forecasted to be neutral. Figure 11 also shows that the Mascarene region will encounter slightly above normal SST during JAS. 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 JAS 2021**

### Consensus forecast for Mauritius:

Statistical analysis is showing normal to slightly above normal rainfall for JAS.

As such cumulative monthly rainfall is as follows:-

- July slightly above normal (~140 mm)
- August normal (~90 mm)
- September normal (~80 mm)

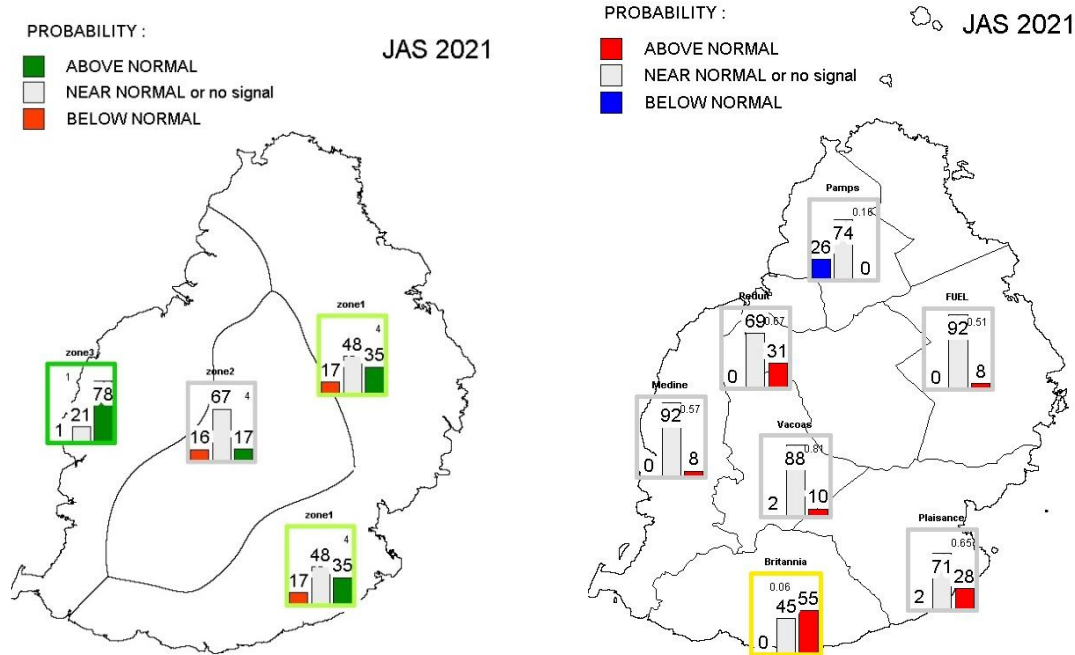
Mean temperature is forecasted to be normal in most places (Fig 12b).

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Updated on: 27 July 2021



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