



MAURITIUS METEOROLOGICAL SERVICES



CLIMATE AUGUST 2020

Introduction

August 2020 was deficient in rainfall. Rather strong anticyclones transited to the south of the Mascarenes with the central pressure occasionally reaching 1033hPa, causing windy conditions and rather dry airmass to prevail. The highest recorded gust reached 76km/h at Domaine des Pailles and Champ de Mars on 09.

Neutral ENSO prevailed over the equatorial Central Pacific Ocean. The IOD index changed from neutral to weak negative in the equatorial Indian Ocean and the Subtropical Indian Ocean Dipole was negative. MJO was active in the SWIO at the end of the month.

1. Rainfall

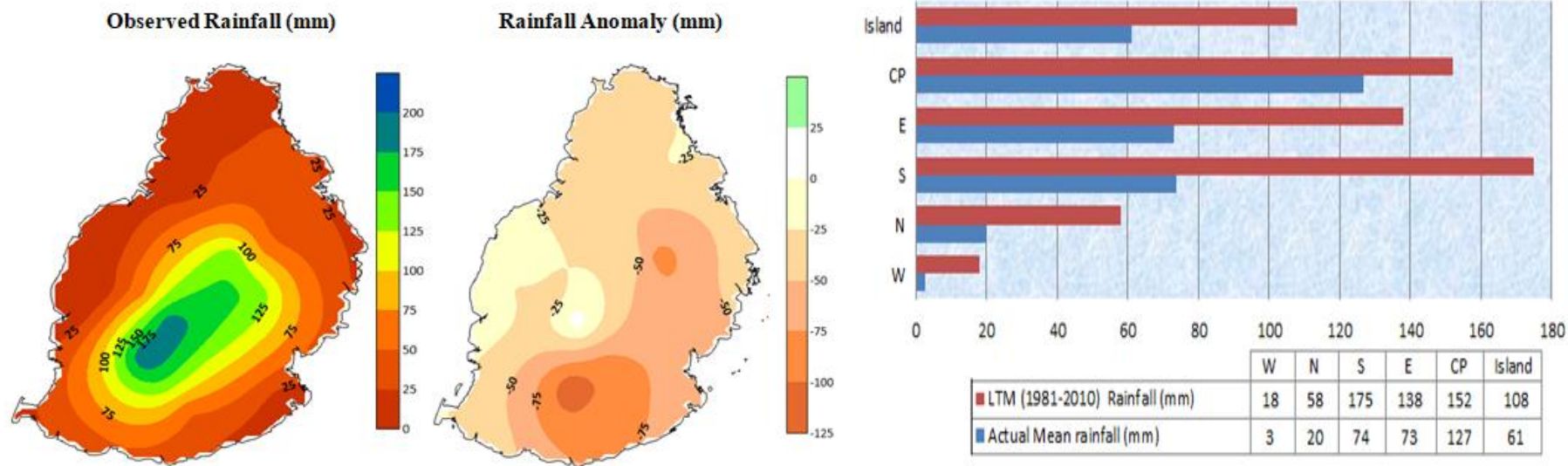
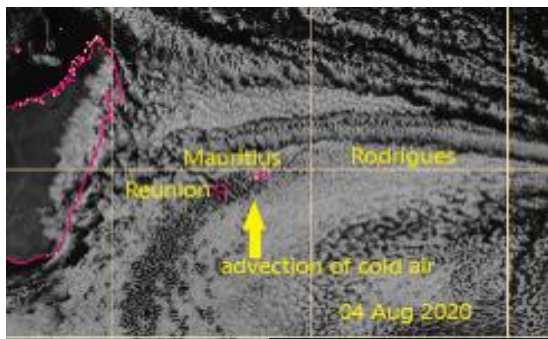


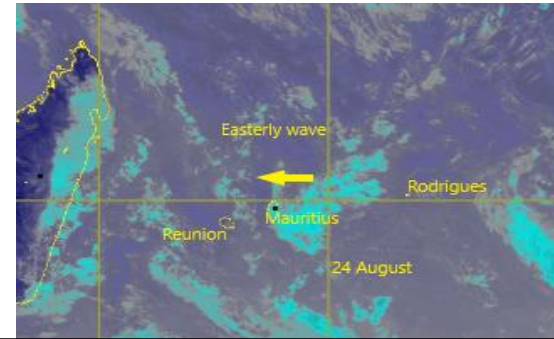
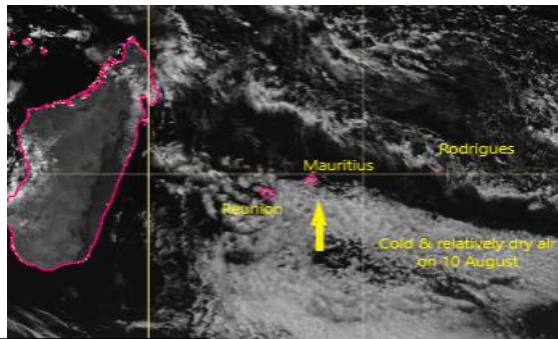
Fig. 1: Spatial rainfall distribution (a) Observed (b) anomaly (mm)

Fig. 2: Regional rainfall distribution

An average of 61mm of rainfall was recorded over the island equivalent to 57% of the long term mean for the month. The first fortnight was dry and contributed to only 13% of the monthly rainfall. Most of the rain was recorded during the second fortnight where on few occasions scattered rainfall was observed. The highest deficiency was in the regions of Bois-Cheri by almost 125mm during the month. Vacoas recorded 14 rain days (≥ 1 mm of rain). The highest 24-hour rainfall was 24.0mm recorded on 29 at Union-Park.



(a) Cold air advection on 04 & 10



(b) Clouds in the easterlies giving scattered rainfall on 24

Fig. 3: Meteosat 8 satellite pictures

2. Surface Temperature

The monthly mean temperature over the island in August 2020 was 20.8°C which is close to the LTM 1981-2010.

Both the average mean minimum temperature and the average mean maximum temperature were near normal.

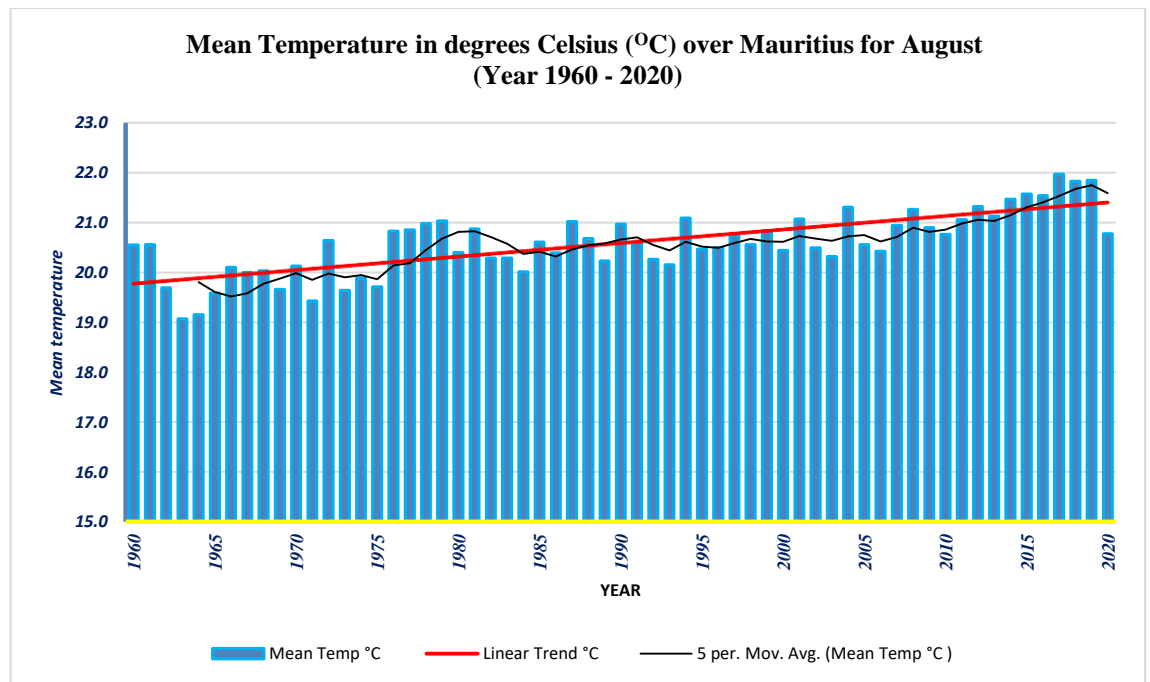


Fig. 4: Mean temperature trend for August from 1960-2020

Average temperature was near normal even though there were a few cold episodes notably on 04 and 10 (Fig 3a). Cold days were particularly observed over the region of Ferret (Pamplemousses), Gros-Cailloux and the extreme South of the island. Cold nights were particularly observed over the region of Alma and Gros-Cailloux (Fig 6(a)).

The maximum temperatures were cooler from 03-05 and 09-10 by about 2-3°C, and the rest of the month was mainly warmer during the day by about 2-3°C and locally up to 5°C (Fig7).

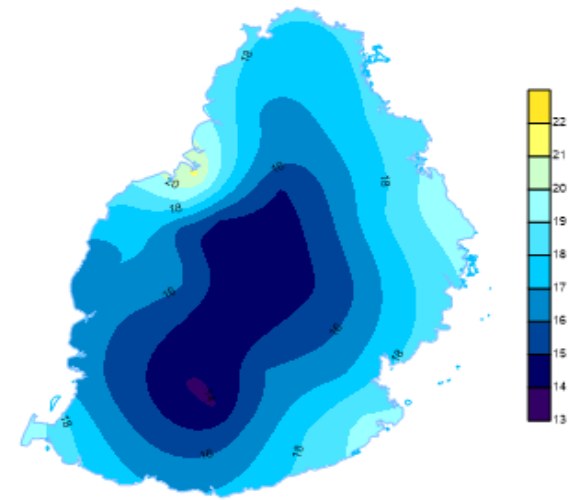
The monthly mean maximum temperature in the region of Ferret (Pamplemousses) and the extreme southern part of the island was slightly below normal (Fig 6(b)) while the regions of Quatre-Bornes, Alma, Nouvelle-Decouvert and Digue-Seche (Poudre d'Or) had slightly warmer mean day time temperatures. Day 03 and 04 were the coolest (Fig 7) and the lowest maximum of 16.6°C was recorded at Grand-Bassin. The maximum at Port-Louis was 24.4°C only which is 2.7°C lower than its monthly mean.

There was one new extreme maximum temperature of 31.0°C at Port Louis on 28 which previously was 30.9°C.

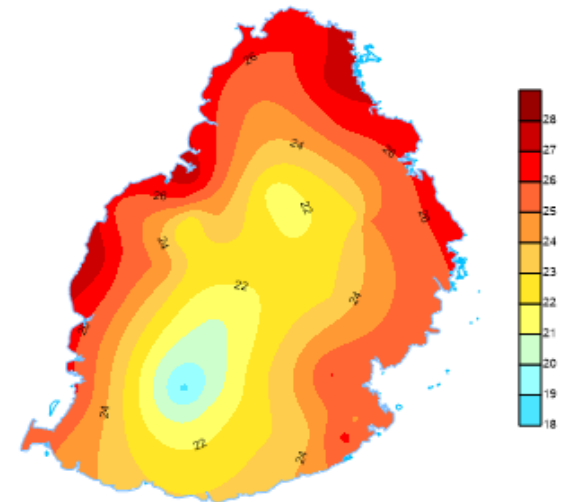
The night temperatures (Fig 7) were cooler by 2-4°C and locally up to 6°C from 05-12, on 15 and 21. The rest of the nights were mostly warmer than the normal. The lowest minimum recorded was 9.2°C at Mon Desert Alma on 11 and the highest drop in minimum temperature at several stations was observed during the same night.

New extreme minimum temperatures were recorded in many places namely at:

Station Location	New extreme minimum in °C	Previous extreme minimum in °C
Mon-Loisir Sugar Estate	14.1	15.1
Queen Victoria	13.4	13.5
Beau-Songes	12.9	13.4
Alma	10.0	12.4
Mon Desert Alma	9.2	9.7
Mon-Bois	9.6	10.9
Albion	12.0	13.4
Gros-Cailloux	14.4	15.0



(a)



(b)

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

Observed cold days (maximum temperature anomaly ($\text{anomax} < 2^\circ\text{C}$)) were more frequent than cold nights (minimum temperature anomaly ($\text{anomin} < 2^\circ\text{C}$)).

Stations	Lowest anomin ($^\circ\text{C}$)	Number of cold nights	Stations	Lowest anomax ($^\circ\text{C}$)	Number of cold days
Albion	6.0	7	Ferret	3.7	7
Mon-Desert Alma	6.0	8	Bel Village	3.5	4
Alma	6.0	12	Gros Cailloux	3.5	5
Belle-Mare	5.7	4	Reduit	3.5	3
Mon Desert Mon Tresor	5.5	6	Rose-Belle	3.5	8
Mon-Bois	5.3	7	Champ de Mars	3.4	4

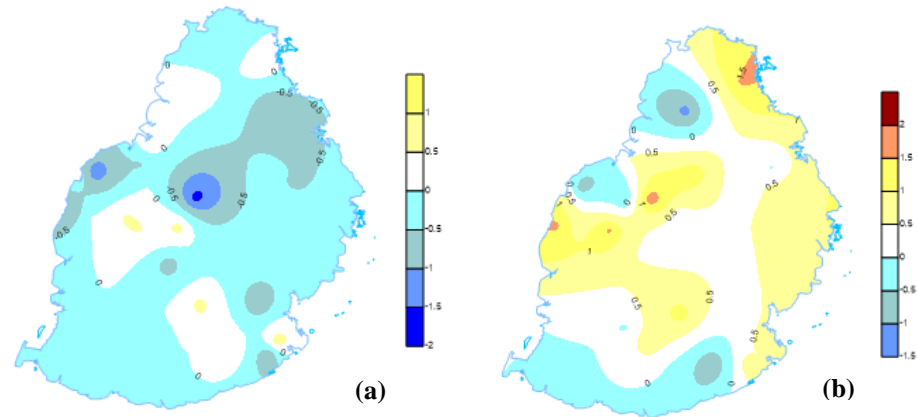


Fig. 6: Spatial distribution of temperature anomaly (a) Minimum (b) Maximum

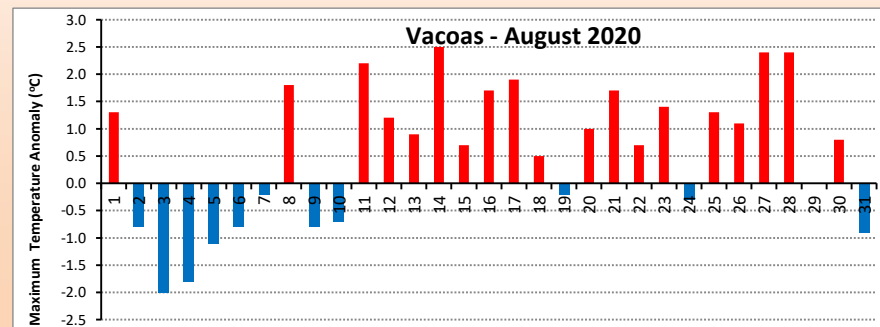
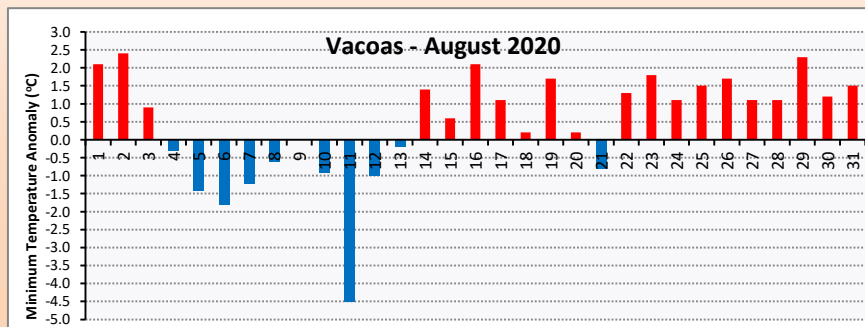
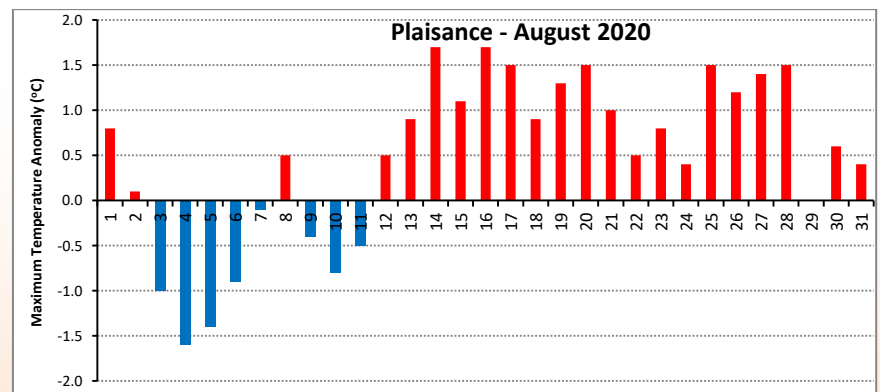
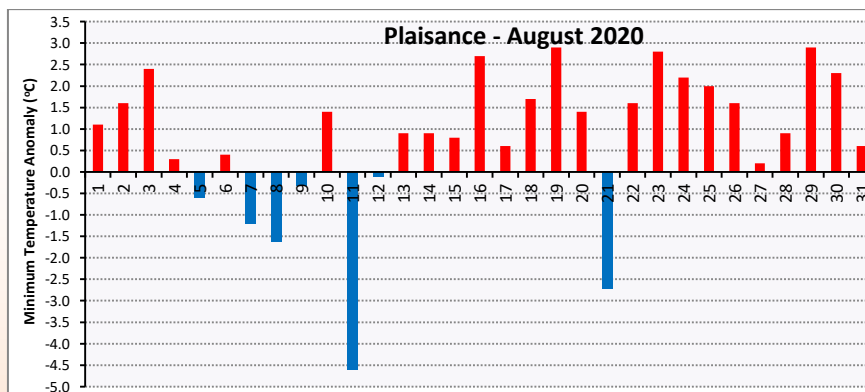


Fig. 7: Daily temperature anomaly at Plaisance and Vacoas: Minimum (left) Maximum (right)

3. Sunshine and Humidity

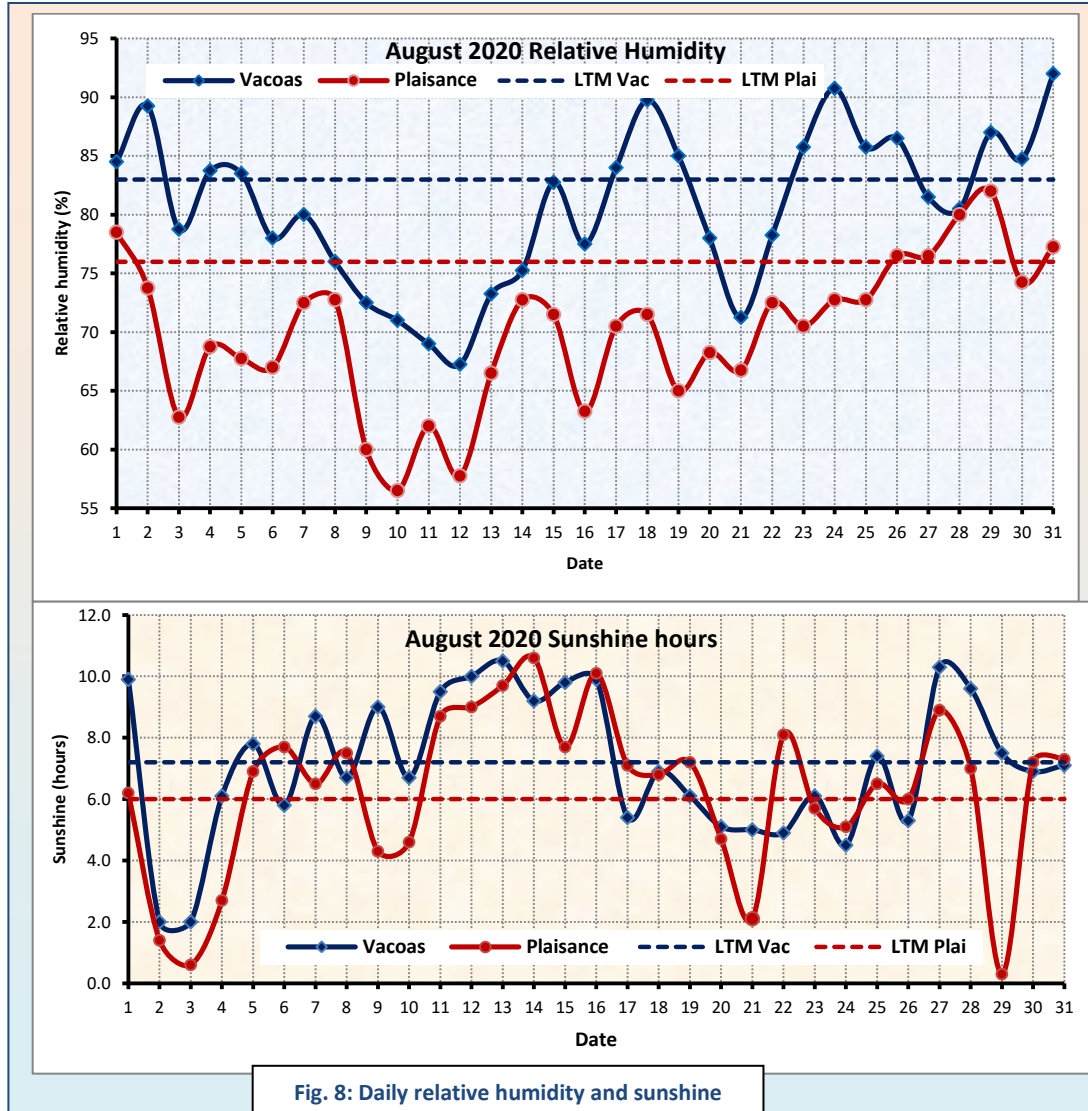


Fig. 8: Daily relative humidity and sunshine

Moderate winds blew mainly from the south-eastern sector. Occasionally the mean wind speed exceeded 35 km/h at Plaisance (SSR Int airport) notably on 04, 15, 19 and 31. The highest gust recorded was 76 km/h at Champ de Mars and Domaine Les Pailles on 09.

The mean relative humidity was below normal on most of the days both at Plaisance and Vacoas. The low relative humidity values were due to the cold and dry air mass prevailing most of the time (Fig 8). Occasionally, during cloudy and rainy conditions, the humidity reached 90 % at Vacoas.

The number of daily bright sunshine hours was close to normal. A daily mean difference of 0.0 hours and +0.3 hours compared to the LTM was recorded at Vacoas and Plaisance respectively. The lowest sunshine hours on 29 were due to cloudy to overcast conditions that prevailed. The total number of monthly bright sunshine hours was close to the normal at Plaisance with 194.2 hours and 221.7 hours at Vacoas.

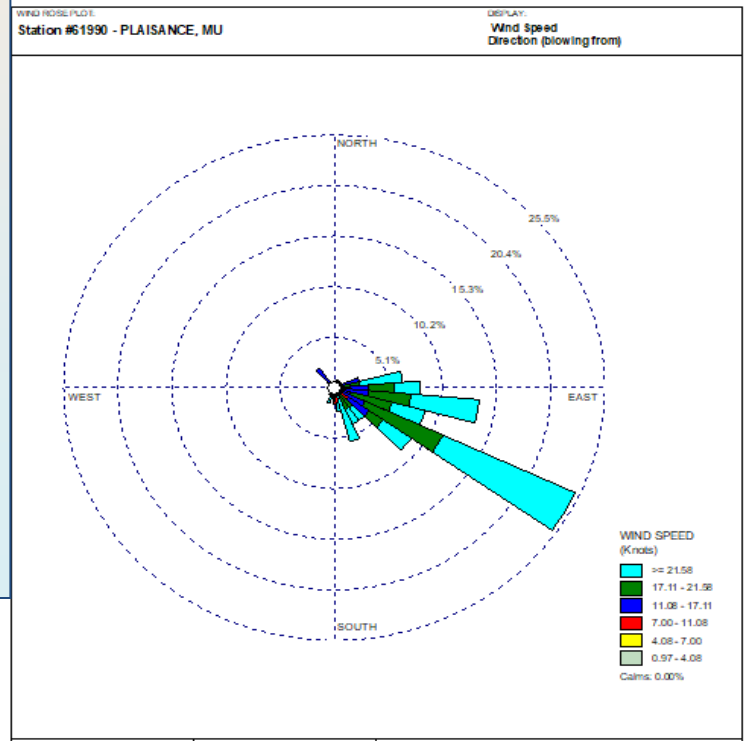


Fig. 9: Wind frequency at Plaisance.

FORECAST FOR SEPTEMBER-OCTOBER-NOVEMBER (SON)

ENSO is currently neutral but a weak La-Nina is forecast. From Figure 13 (a), the equatorial Indian Ocean will be in a neutral negative IOD pattern. The south hemisphere subtropics will remain in a weak negative SIOD pattern. A positive pressure anomaly will prevail over the south of the Mozambique region (Fig 13(b)).

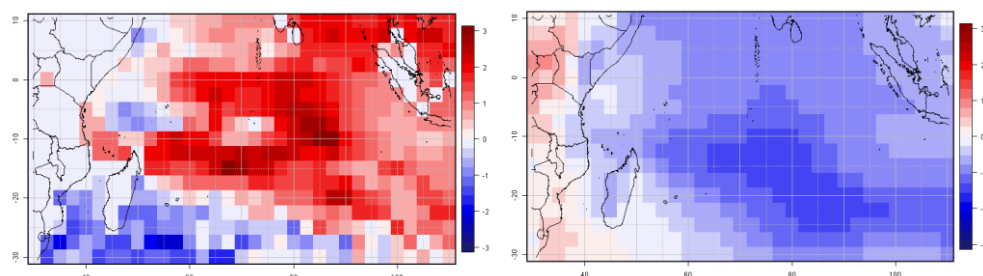


Figure 13: (a) Sea surface temperature and (b) pressure anomaly charts for SON 2020

Consensus forecast for Mauritius

Rainfall is expected to be deficient for the coming three months (Sep-Nov). The monthly rainfall forecast consensus is as follows:-

- September below normal (~70 mm),
- October slightly below normal (~60 mm),
- November slightly below normal (~65 mm),

Mean temperature is forecast to be normal for the North, the West and the South; it will be slightly above to the East and over the Central Plateau (Fig 14b).

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Updated on: 10 September 2020

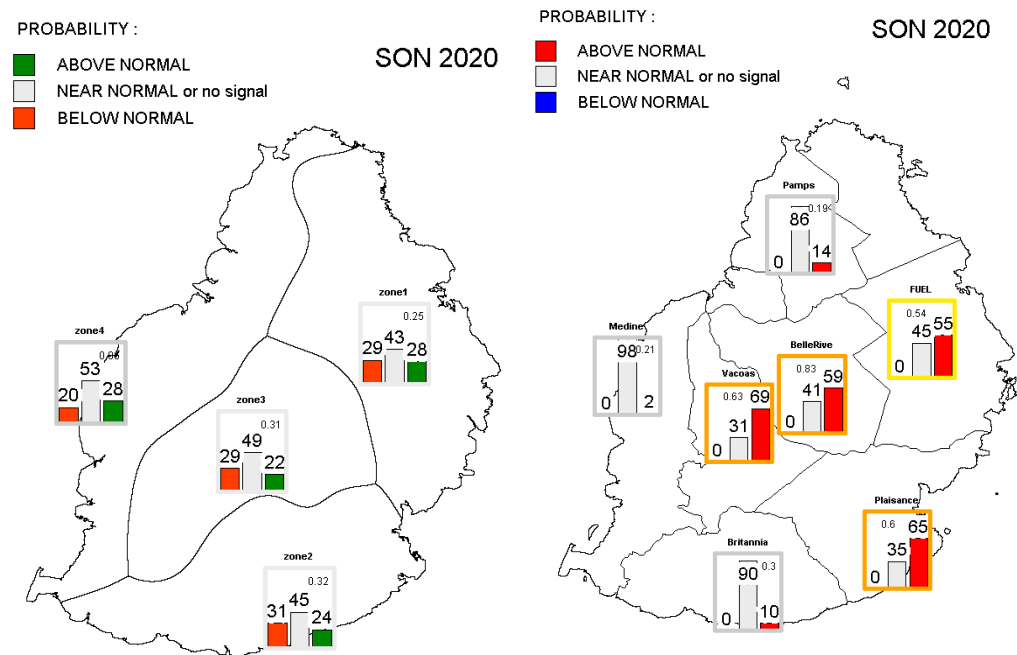


Fig. 14: Statistical Model Forecast of (a) rainfall and (b) temperature