



MAURITIUS METEOROLOGICAL SERVICES



CLIMATE MAY 2018

Introduction

May 2018 is amongst the 8 warmest on record for the period 1951 to date. An active cyclonic activity in the North Indian Ocean, with two named tropical cyclones, SAGAR and MEKUNU named on the 17 and 23 May 2018 respectively was a good indication of the onset of winter in the southern hemisphere. Neutral condition of both El Niño Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD) prolonged from previous month.

1. Rainfall

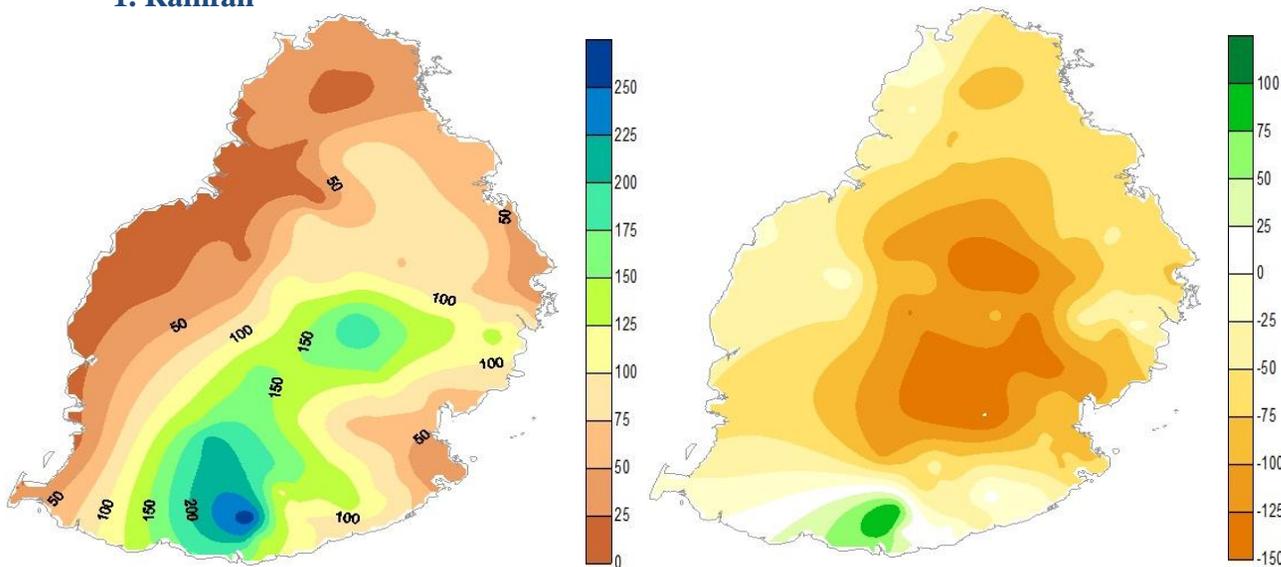


Fig. 1: (a) Observed rainfall (b) rainfall anomaly (mm)

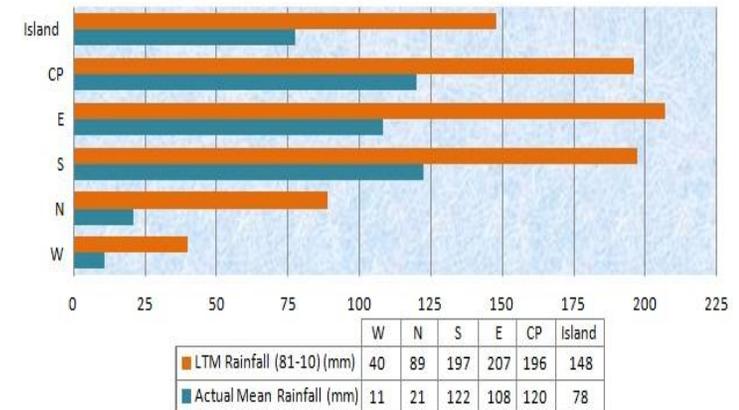
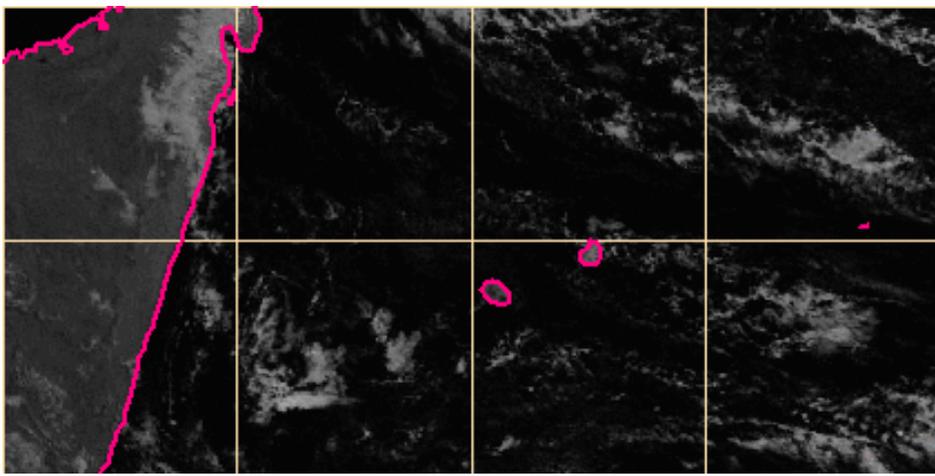
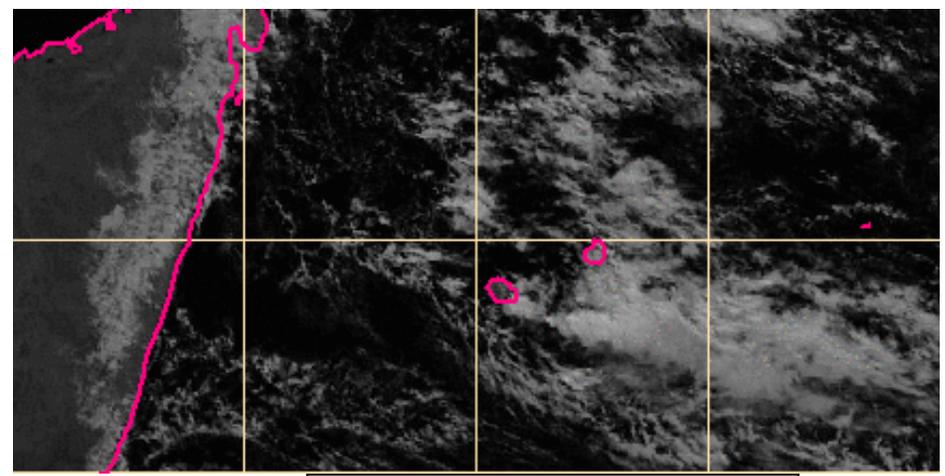


Fig. 2: Regional rainfall distribution (based on 23 stations)

Apart from the third week, the month of May 2018 was observed to be quite dry. The first two weeks were dry with less than one tenth of the monthly mean rainfall recorded. During the third week of May, the island was under the influence of moderate easterlies. As such the windward slopes recorded most of the rainfall, more than 100mm during that period. Although, the rainy period was of quite short duration it did contribute significantly to the total monthly rainfall that reached half of the monthly mean. Highest 24-hour rainfall was observed on 20 in the region of Bois Cheri which amounted to 79 mm



(a) Stable weather e.g. 10 May 2018



(b) Unstable weather on 21 May 2018

Fig 3: Weather systems during May 2018

May 2018 is the fourth warmest May on record since 1969 at Plaisance

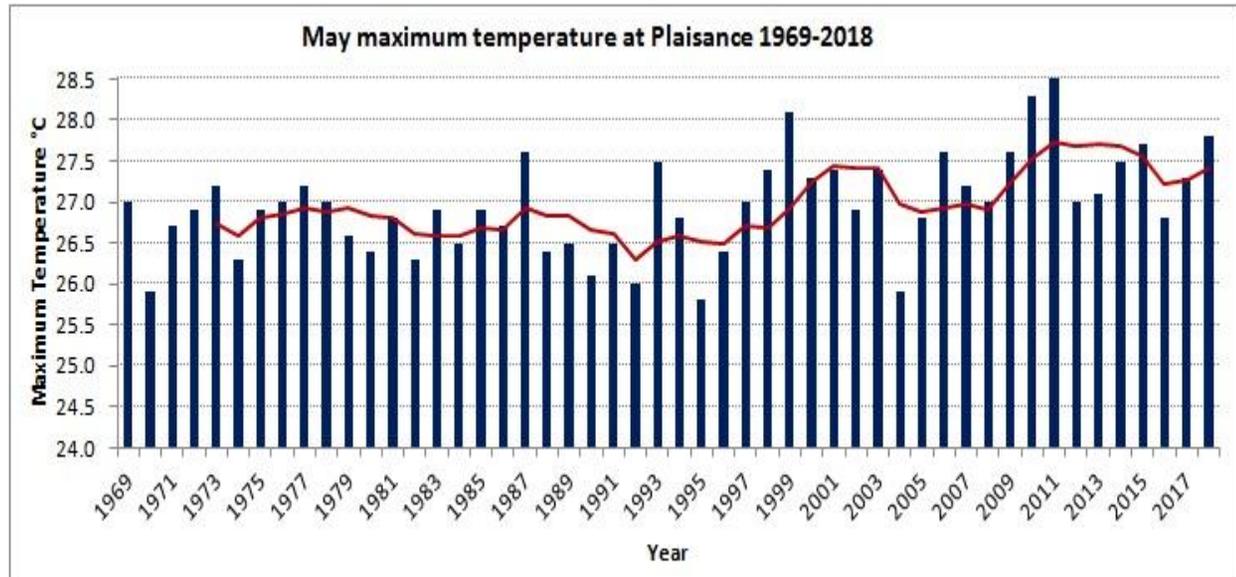


Fig. 4: Maximum temperature trend for May from 1969-2018 (Plaisance).

2. Temperature

May 2018, turned out to a warm month. It was characterized by peak temperatures during the period of 11-15 with the maximum temperature hovering by almost 2 degrees above the seasonal mean at several places over the island (Fig. 7). The extreme maximum temperature on record (31.1°C) for Mon Loisir Rouillard was equaled on the 10. New records of the extreme maximum temperature were set up, on the 11 at Reduit 30 °C (previous 29.1°C) and at Mon Desert Alma 30°C (previous 29.6 °C) and on the 15 at Mon Desert Mon Tresor 32.5°C (previous 32.0°C). The highest maximum temperature for the month was at Port Louis (32.8°C) on the 11. The regional parameter of a warm tongue of Sea Surface Temperature extending from central South Indian Ocean towards the Mascarenes contributed to having a warmer than usual environment in our region. With some rainy periods during the third week, the maximum temperature was observed to be near the monthly mean though in some place it was slightly cooler (Fig. 7). The highest drop in maximum temperature of the order of 3.4°C was recorded on the 23, at Mon Bois where the day maximum temperature was 20 °C. With a cooler air mass invading the Mascarene region during the last week, further drop in maximum temperature over the whole island was observed (Fig.7). The mean monthly daytime temperature anomalies varied from -0.1 to +2.8°C.

Overall during the month, the minimum temperature was observed to be near the monthly mean. The mean monthly night temperature anomalies varied from -1.5 to +2.2°C. The minimum temperature rarely dropped by more than 1°C below the mean (Fig 8). However, to the South and South East the nights were quite warm. For instance, 8, 10 and 11 warm nights could be depicted at Digue Seche, Plaisance, and Beau Vallon respectively. This tendency reversed slowly during the last few days with a few stations recording drop in minimum temperature by 2 to 4 °C. Stations with minimum temperature drop of more than 4 °C were Domaine Les Pailles (18°C) on the 28, Mon Desert Mon Tresor(17.5°C) and Belle Mare(17.9°C) on the 30 and Albion(17.0°C) and Mon Desert Alma(13.5°C) on the 31. Light wind and prevailing clear sky conditions in the morning contributed to plummeting of the morning temperature. The lowest minimum temperature for the month was at Bois Cheri (13.4°C) on the 30.

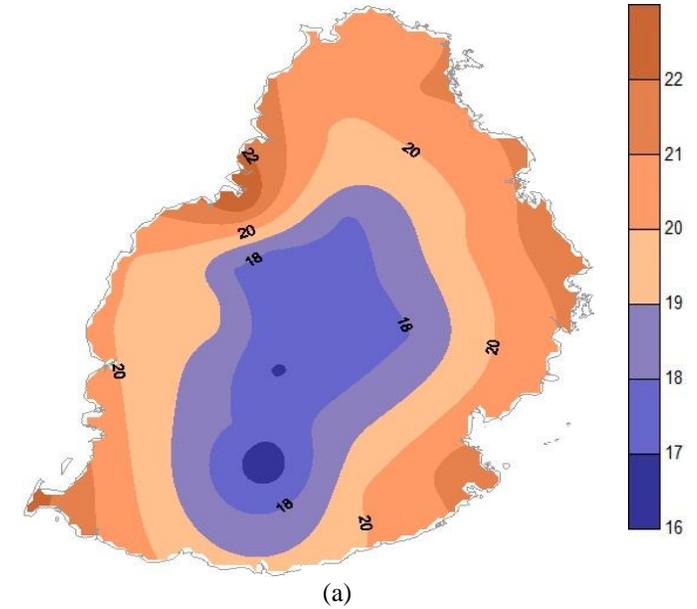
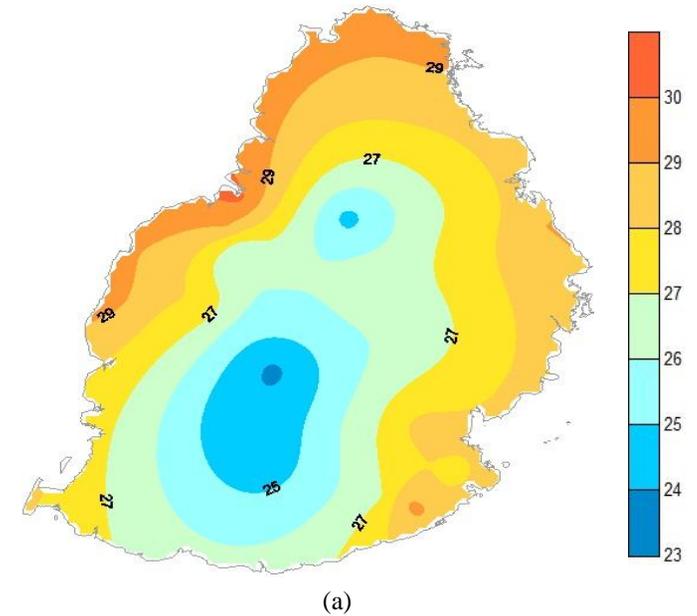


Fig. 5: (a) Maximum (b) Minimum temperature distribution

Some stations had up to 16 warm days (maximum temperature anomaly (anamax) >2°C).

| Stations | Highest anamax (°C) | Number of warm days. |
|----------------------|---------------------|----------------------|
| Union Park | 3.6 | 6 |
| Riche en Eau | 4.0 | 15 |
| Belle Mare | 3.8 | 10 |
| Nouvelle Decouverte | 3.9 | 8 |
| Providence | 5.2 | 22 |
| Mon Desert Alma | 5.1 | 13 |
| Queen Victoria | 3.1 | 8 |
| Sauveterre | 5.0 | 20 |
| Bois Cheri | 4.2 | 9 |
| Reduit | | |
| Mon Loisir Rouillard | 3.9 | 14 |
| Mare Aux Vacoas | 4.1 | 9 |
| Quatres Bornes | 4.4 | 12 |
| Port Louis | 3.4 | 5 |
| Beau Songes | 2.7 | 5 |

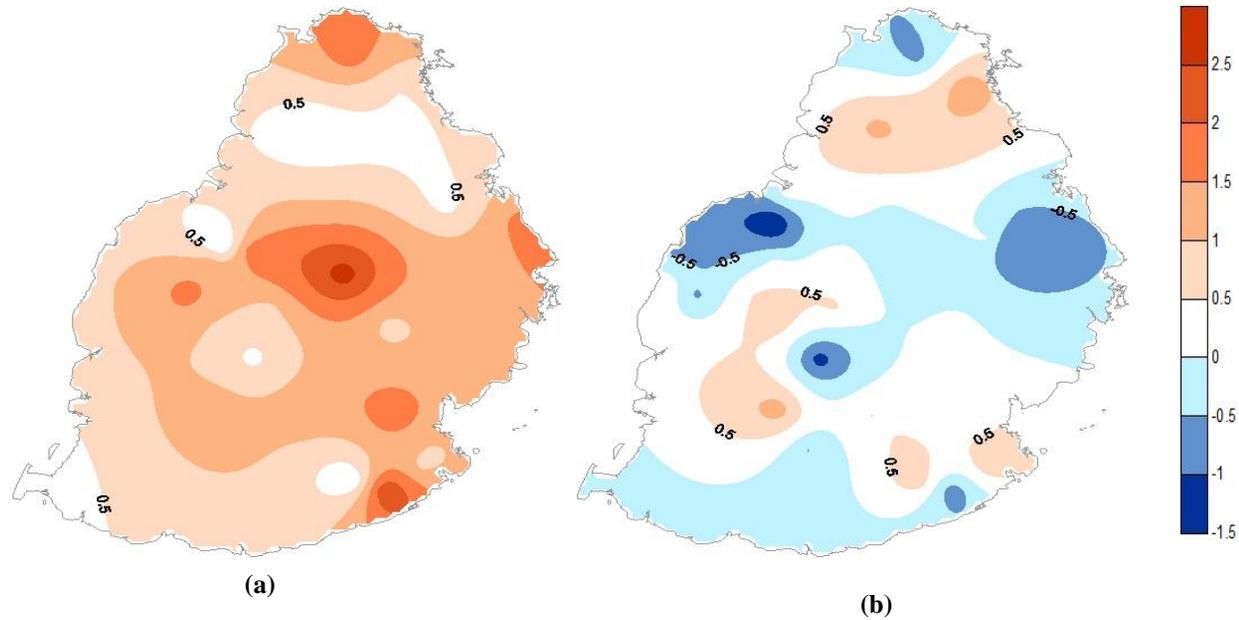


Fig. 6: (a) Maximum (b) Minimum temperature anomaly

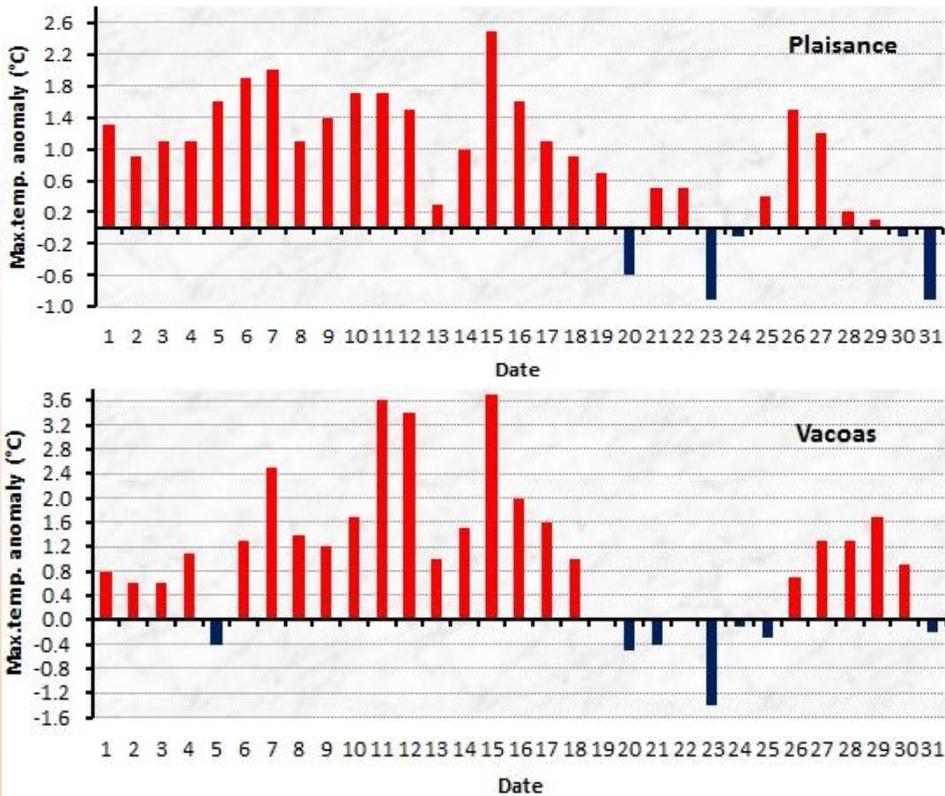


Fig. 7: Daily maximum temperature anomalies at Vacoas and Plaisance

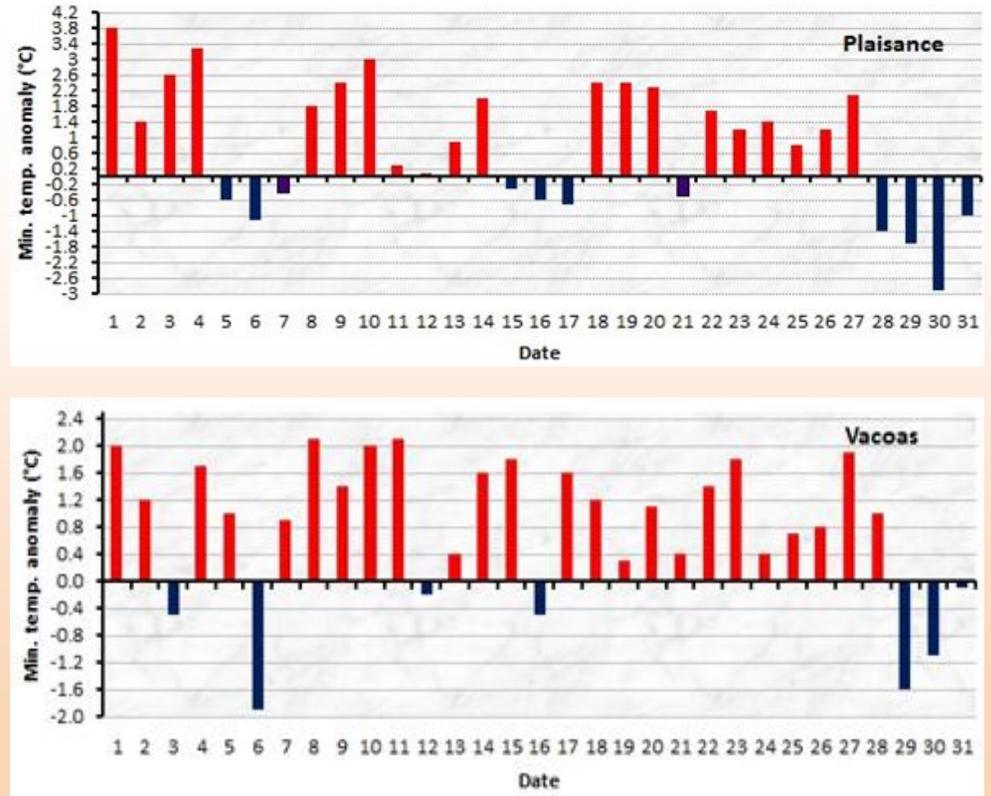


Fig. 8: Daily minimum temperature anomalies at Vacoas and Plaisance

3. Sunshine and Humidity

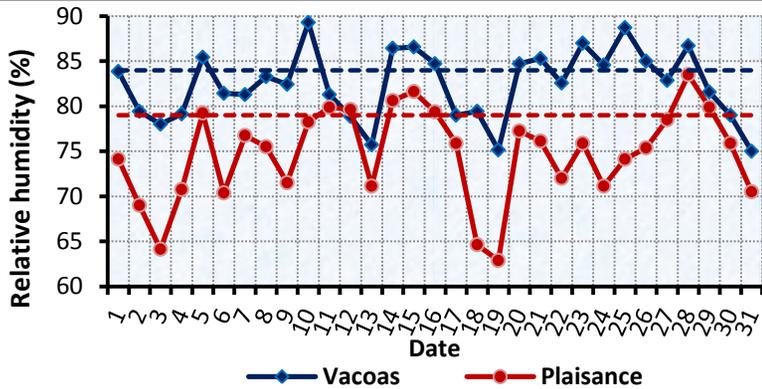


Fig. 9: Daily Relative Humidity: Vacoas (blue) and Plaisance (red)

The monthly relative humidity was close to the mean at Vacoas. On the other hand at Plaisance, the relative humidity was close to slightly below especially by the third week of the May. The drop in humidity, both at Vacoas and Plaisance, between 18-19 and 30-31 was due to influx of dry air over the region. In fact there was a change in air mass over the island at the end of the month.

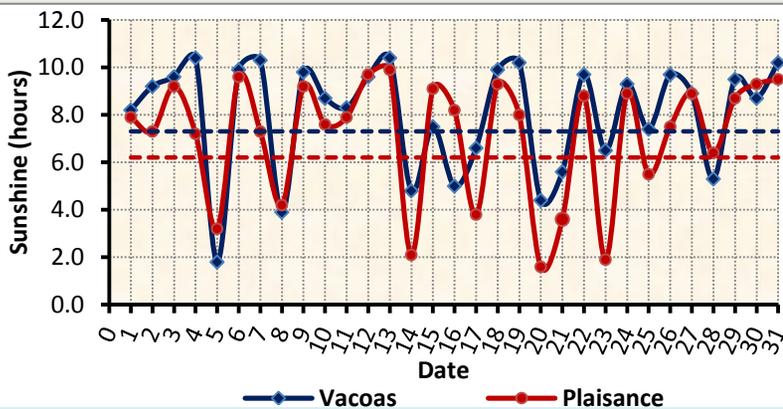


Fig. 10: Daily sunshine hours: Vacoas (blue) and Plaisance (red)

Monthly mean sunshine hours were above by 0.7 hours at Vacoas (8.0 hours) while at Plaisance it was above by 0.9 hours (7.1 hours). Cloud cover during the third week led to almost nil sunshine hours on the 20 and 23. This is in concurrence with the drop in maximum temperatures shown in Fig. 7.

3. Winds

Wind blew mainly from the east south-eastern sector during the beginning of May 2018 and it turned towards the South by the end of the month, accounting for the drop in humidity. Highest gusts were recorded during the third week and this was associated with an instability zone the influence weather over the island (Fig. 11).

The right of publication in print, electronic and any other form is reserved by the Meteorological Services. Any part of this document may be reproduced provided complete source is acknowledged or after authorization from:

Director, Meteorological Services,
St Paul; Road Vacoas,

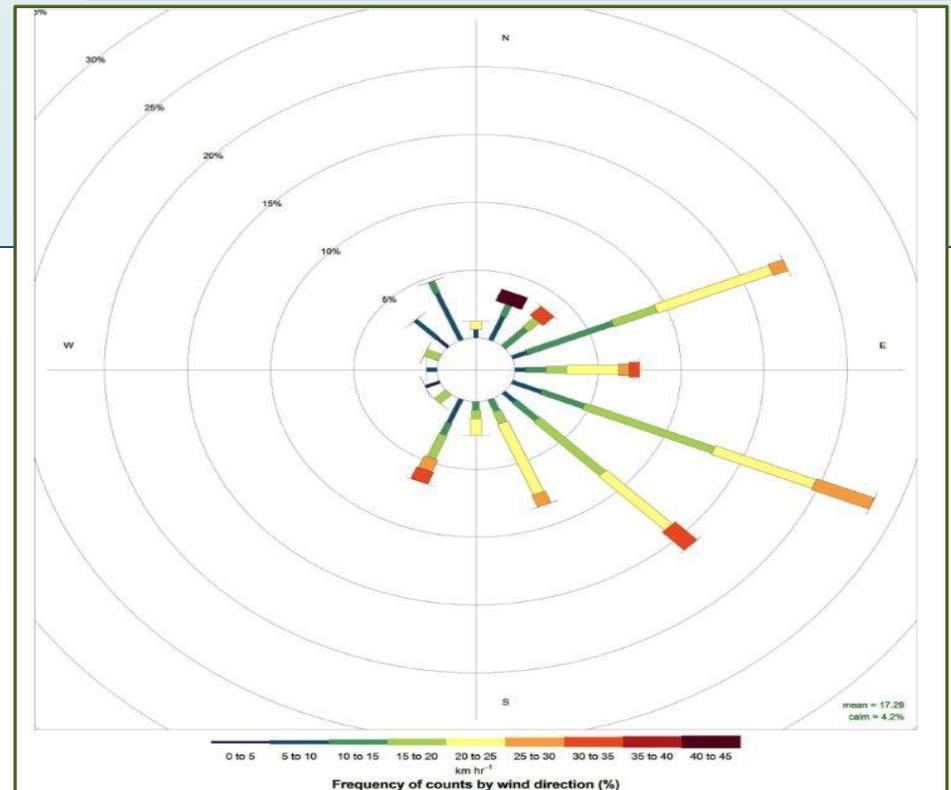


Fig. 11: Wind frequency at Plaisance