



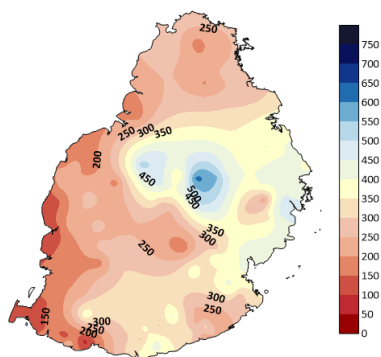
MAURITIUS METEOROLOGICAL SERVICES

CLIMATE DECEMBER 2023

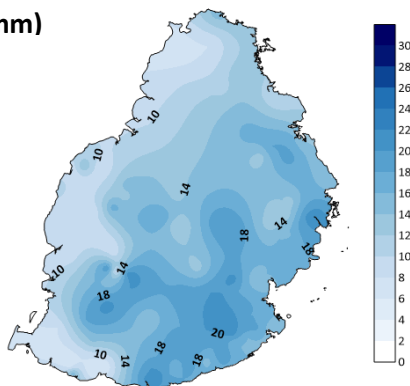
Introduction

December 2023 was the fourth wettest since the last 30 years. Mean temperature was slightly warmer than the normal for the month. The El Nino Southern Oscillation (ENSO) and the Indian Ocean Dipole (IOD) were in the positive phase while the Subtropical Indian Ocean Dipole (SIOD) was in the neutral phase. The Madden Julian Oscillation signal was weak in the Indian Ocean. One tropical storm formed in the South West Indian Ocean basin (Mozambique Channel) by the end of December and reached the Severe Tropical Storm but did not influence weather over the Mascarene Islands.

Monthly rainfall



Rainfall days (> 1 mm)



Rainfall

Well above normal rainfall was recorded in December 2023, amounting to 293 mm and which represents 178 % of the long-term mean. About 55% of the total rainfall was recorded in the first fortnight and the remaining amount in the second fortnight. One torrential rain event was recorded on the 19 December.

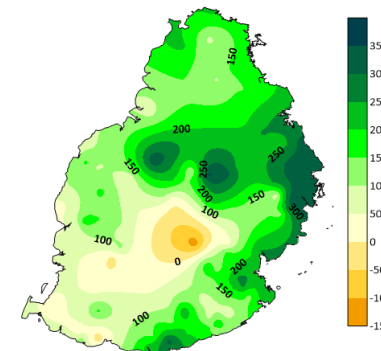
Rainfall was in excess over the whole island by 100-300 mm except over parts of the central plateau where it was deficient by 50-150 mm.

The highest cumulative rainfall for the month was 616.6 mm recorded at Providence, Quartier Militaire.

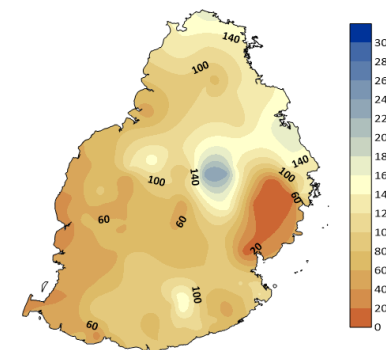
The highest number of rainy days (≥ 1 mm) was observed at Union Savanne, Riviere des Creoles, Union Vale, Grand Port and Good End with 21 rainy days respectively. Elsewhere, the number of rainy days varied between 6 and 20.

Highest 24-hour rainfall was 240.2 mm recorded at Providence, Quartier Militaire on 19 December.

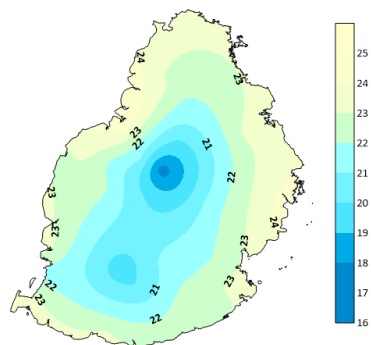
Monthly rainfall Anomaly



Highest 24-hour Rainfall



Minimum Temperature



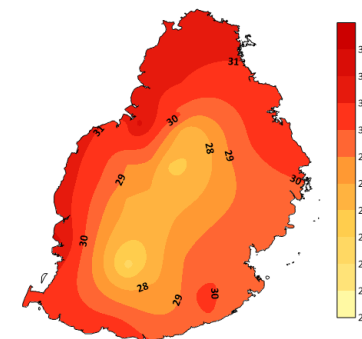
Temperature

The mean temperature over the island was 0.35 °C warmer than the LTM of 1991-2020. The mean minimum temperature and the mean maximum temperature were 0.6 °C and 0.1 °C warmer than the normal respectively.

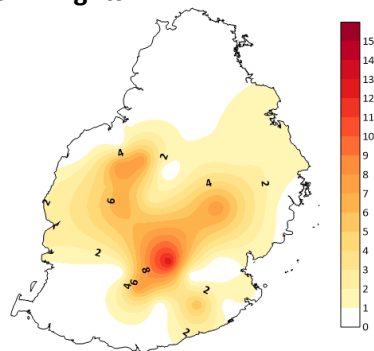
The highest maximum recorded was 35.0 °C at Riviere Noire on 21 December. The lowest maximum temperature recorded was 21.3 °C at Grand Bassin on 10 December.

The highest minimum was 27.1 °C at Port Louis on 18 December and the lowest minimum was 16.1 °C at Bois Cheri on 05 December.

Maximum Temperature



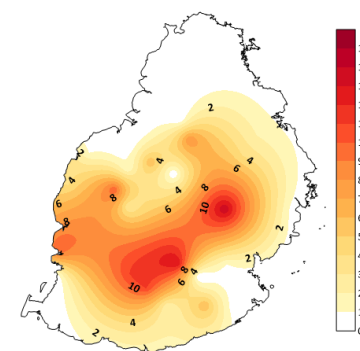
Warm nights



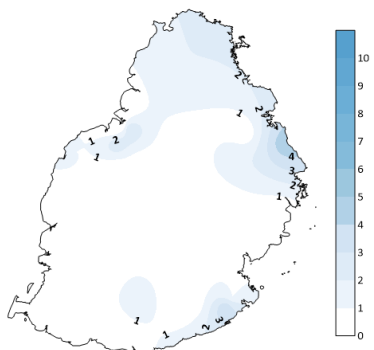
Nights and days were particularly warm during the month. The highest number of warm nights observed during the month was 13 at Union Park.

The highest number of warm days were 14 at Sans Souci and 13 at Union Park.

Warm days

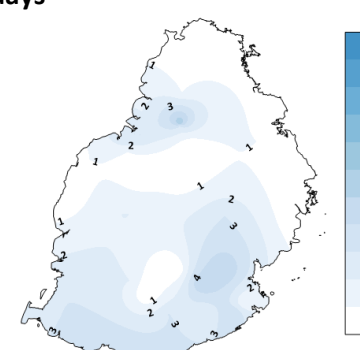


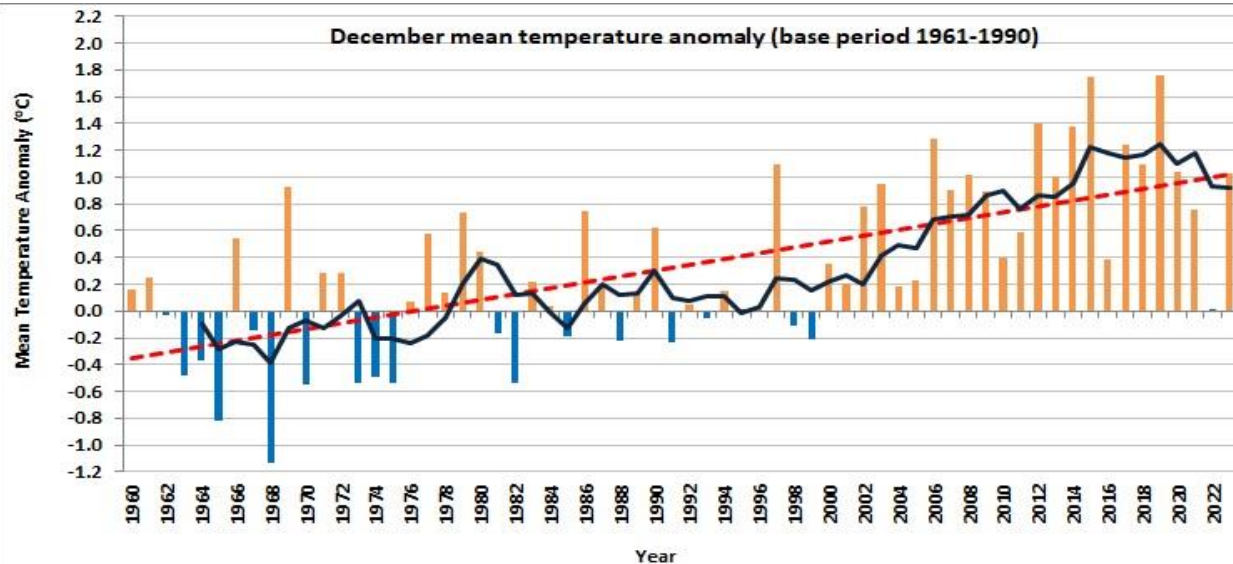
Cold nights



Very few cold nights and cold days were recorded during the month. The highest number of cold nights was 05 at Belle Mare and the highest number of cold days was 06 at Pamplemousses.

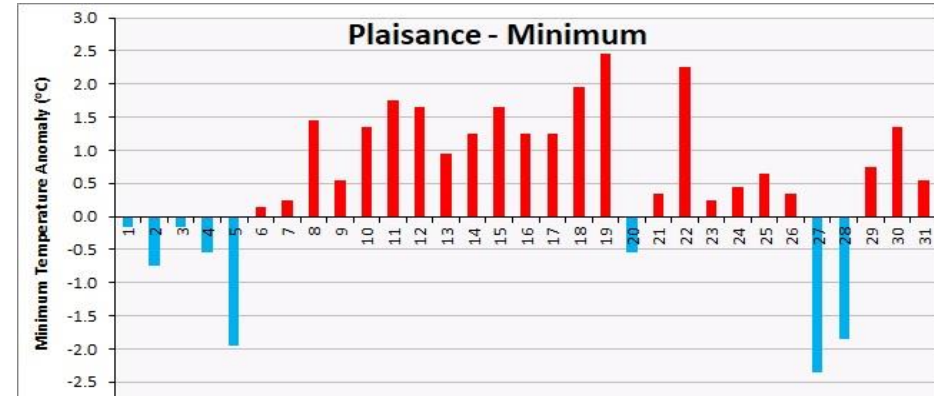
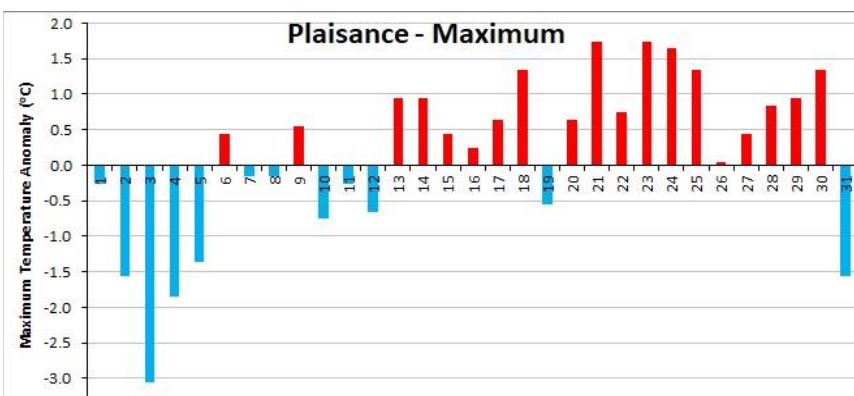
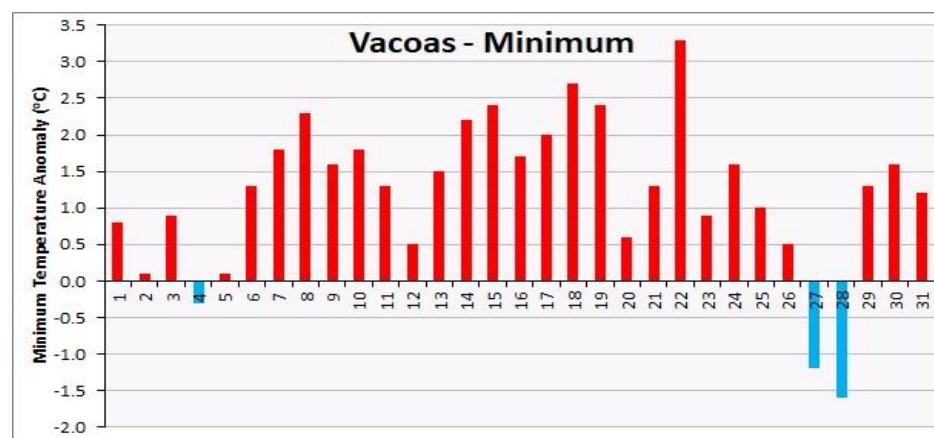
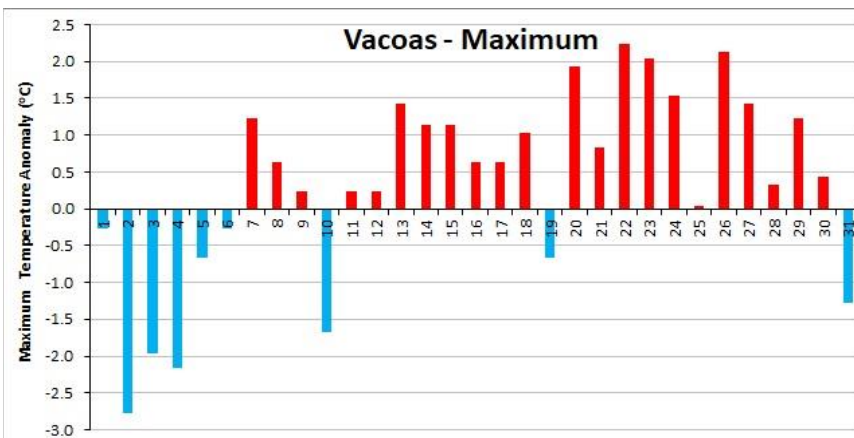
Cold days





Daytime and night time temperatures were most of the time warmer both at Plaisance and Vacoas. On several occasions, both stations recorded positive anomalies of 1-2 °C in the maximum and minimum temperatures.

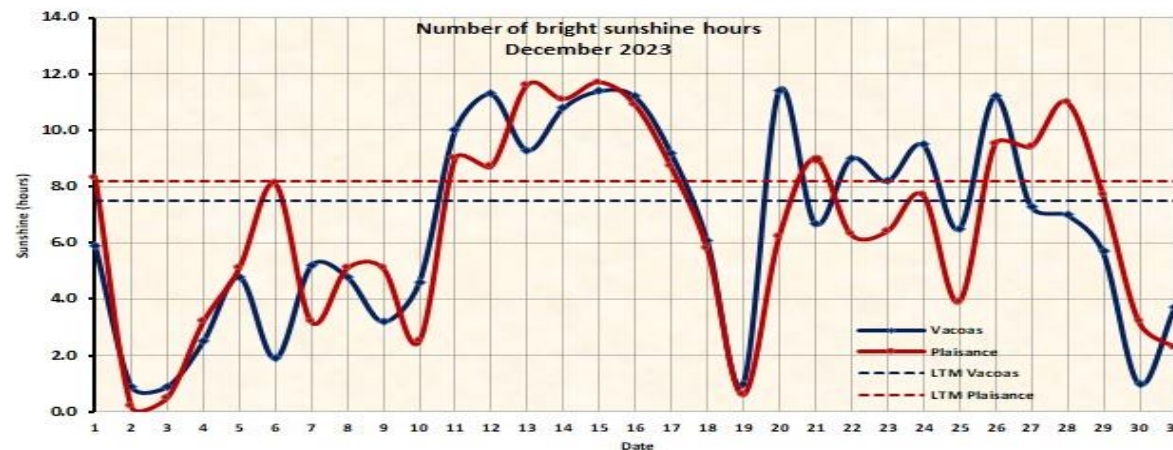
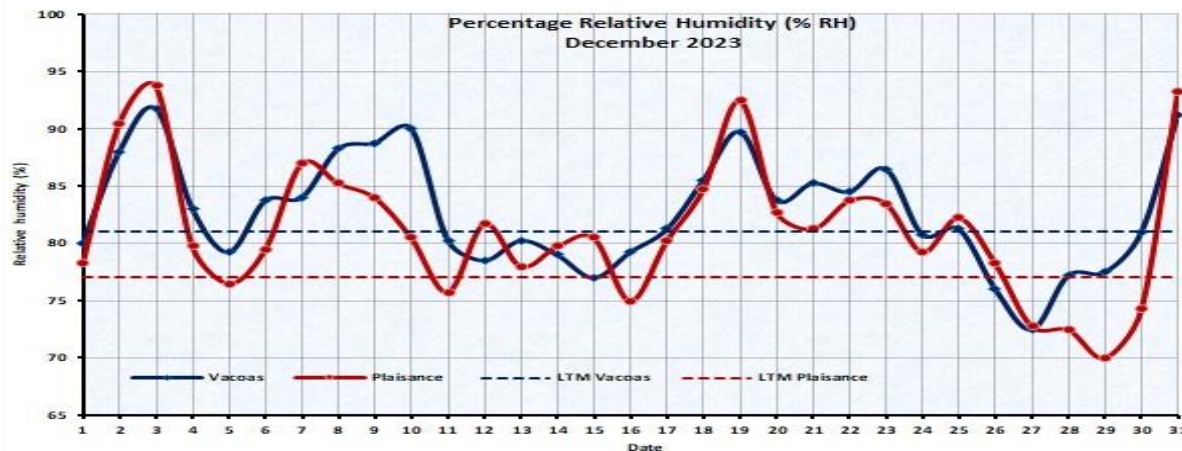
However, during the first and last weeks of the month, a significant drop of about 2-3 °C in the maximum temperature and a drop of about 2 °C in the minimum temperature were noted both at Vacoas and Plaisance.



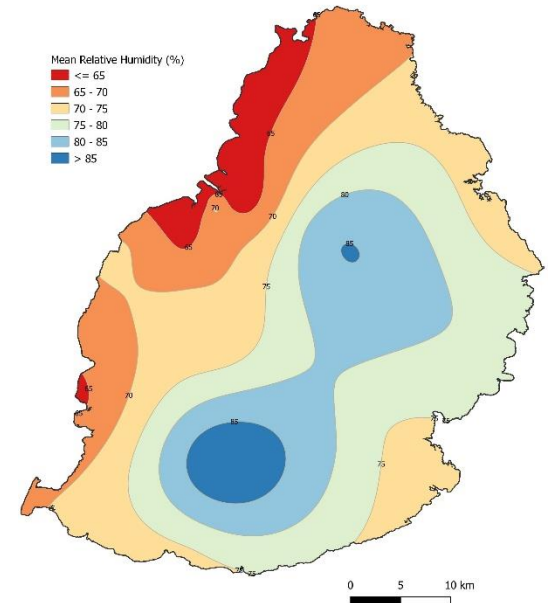
Sunshine and Humidity

On average the mean relative humidity for the month was close to the normal both at Vacoas and Plaisance. The daily humidity ranged from 73 to 92 % at Vacoas and from 70 to 94 % at Plaisance.

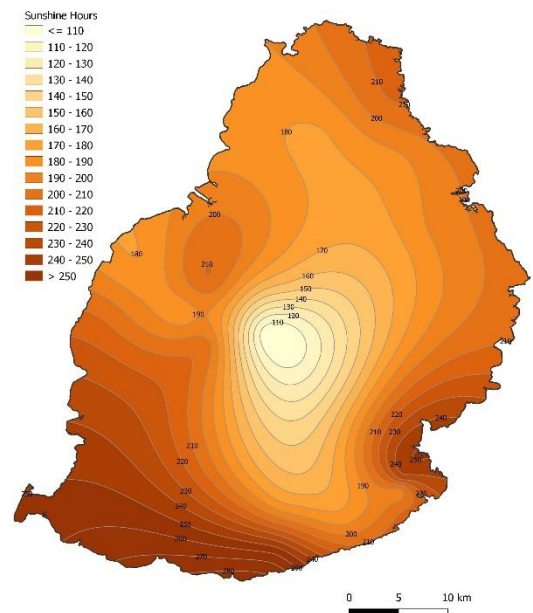
The number of daily bright sunshine hours were 88 % of the normal at Vacoas and 81 % at Plaisance (anomaly of -0.9 at Vacoas and -1.5 at Plaisance). The highest number of sunshine hours at Vacoas was 11.4 (recorded on 15 and 20 December) and 11.7 at Plaisance (recorded on 15 December). The lowest number of sunshine hours was 0.9 at Vacoas (recorded on 02 and 03 December) and 0.2 hours at Plaisance (recorded on 02 December). The total number of monthly bright sunshine hours was 202.2 at Vacoas and 202.0 at Plaisance.



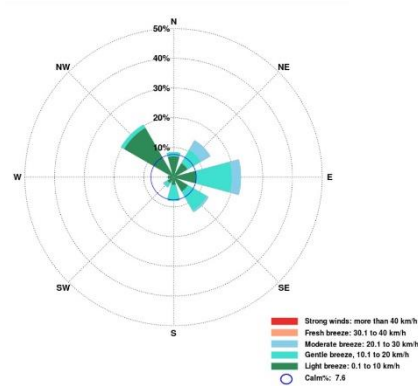
**Monthly mean humidity
December 2023**



**Monthly total sunshine hours
December 2023**



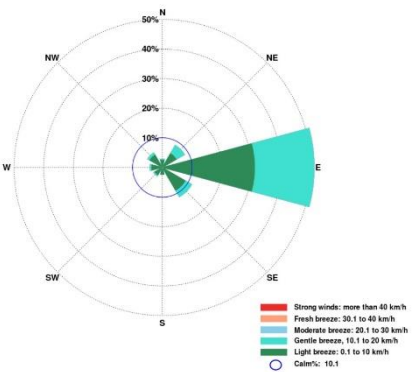
Winds



Wind frequencies from Plaisance (left) and Vacoas (right) show winds mainly from the Eastern sectors. However, on a few occasions North Westerly winds were also recorded, mainly at Plaisance. Light to moderate winds prevailed most of the time over the island.

The highest gusts recorded over the island were as follows:

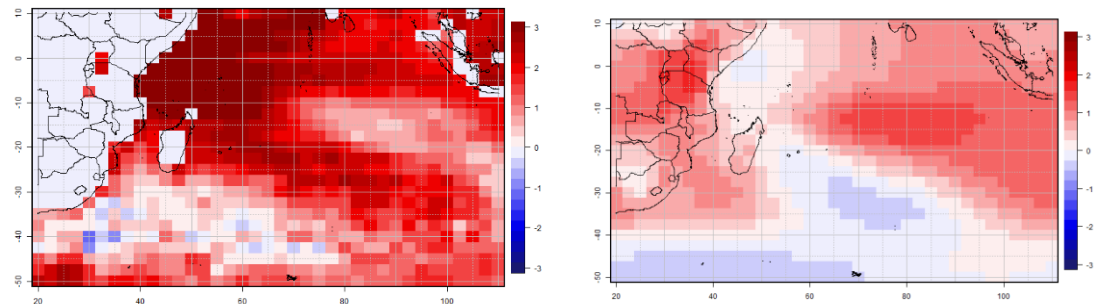
| Regions | Highest gusts (km/h) | Date |
|-----------------------|----------------------|------|
| Champ de Mars | 61 | 19 |
| Domaine les Pailles | 54 | 19 |
| Belle Mare | 47 | 19 |
| Queen Victoria | 47 | 19 |
| Riviere Noire | 47 | 22 |
| St. Felix | 47 | 25 |
| Plaisance | 47 | 15 |
| Riviere des Anguilles | 45 | 25 |



FORECAST FOR FEBRUARY-APRIL (FMA)

El Nino conditions are expected to prevail till the end of the forecast period. The IOD is expected to remain neutral and the SIOD to remain in the negative phase.

Sea surface temperatures are expected to be above normal and pressure anomalies to be near normal in the Mascarene region as shown in the SST and pressure anomaly charts respectively.



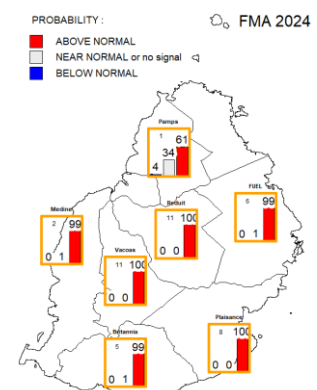
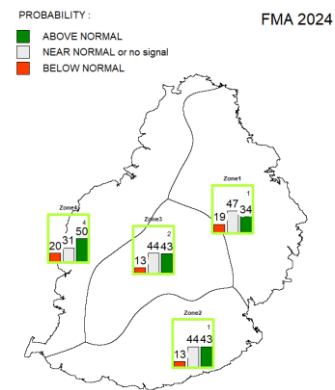
(a) Sea surface temperature and (b) pressure anomaly charts for FMA

Consensus forecast for Mauritius

Cumulative rainfall for February to April 2024 is expected to be slightly below normal. The monthly rainfall forecast consensus is as follows: -

- February: Below normal (~ 210 mm)
- March: Normal (~ 300 mm)
- April: Normal (~ 200 mm)

Mean temperature is forecasted to be above normal over the whole island.



Statistical Model Forecast of (a) rainfall and (b) temperature for FMA

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