



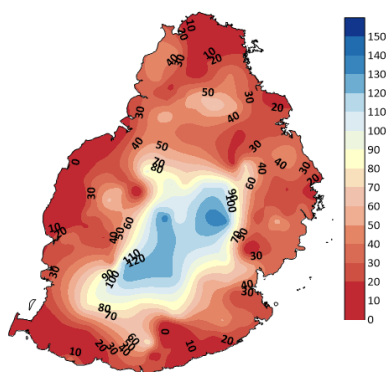
MAURITIUS METEOROLOGICAL SERVICES

CLIMATE DECEMBER 2022

Introduction

December 2022 was dry and the mean temperature over the island was cooler than normal. One tropical storm namely Darian, formed in the South West Indian Ocean but did not influence weather over the Mascarenes. La-Nina conditions persisted during the month. The Indian Ocean Dipole (IOD) was in the neutral phase while the Subtropical Indian Ocean Dipole (SIOD) was positive. The Madden Julian Oscillation (MJO) was weak in the Indian Ocean during December 2022.

Monthly rainfall

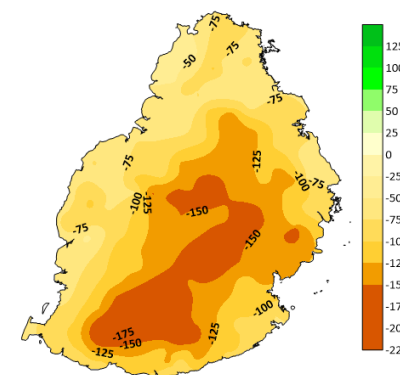


Rainfall

Dry conditions prevailed over the island in December 2022. The island recorded about 59 mm of rainfall, which represents 36 % of the long-term mean. The whole island, notably the Central Plateau, experienced deficient rainfall. About two third of the rainfall amount was recorded in the first fortnight.

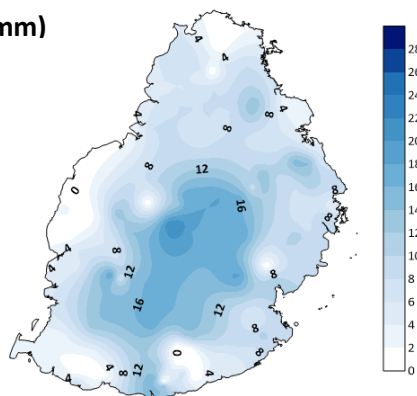
The highest cumulative rainfall for the month was 160 mm recorded at Montagne Ronde.

Monthly rainfall Anomaly



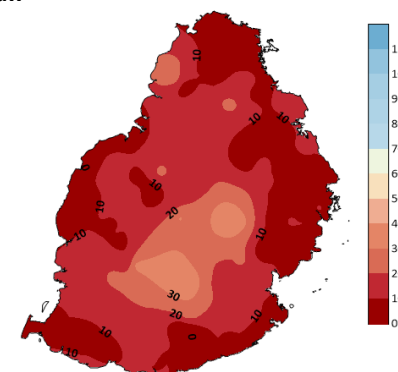
Rainfall days

(> 1 mm)



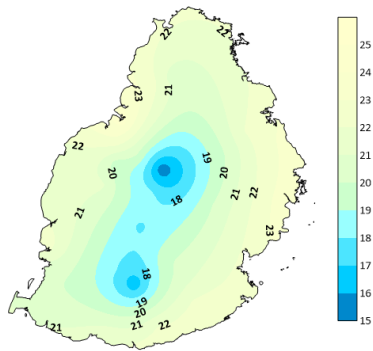
The highest number of rainy days (≥ 1 mm) was observed at Belle Rive with 22 rainy days, but it was mostly light rain. The coastal areas of the island had very few rainy days.

Highest 24-hour Rainfall

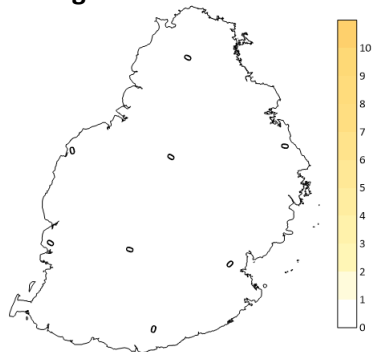


Highest 24-hour rainfall was 50.0 mm recorded at Montagne Ronde on 31 December 2022.

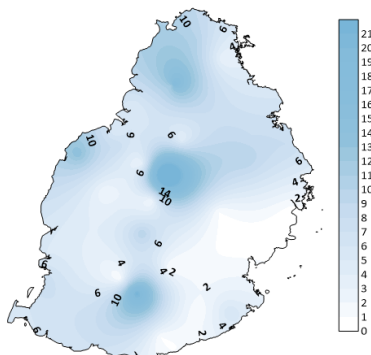
Minimum Temperature



Warm nights



Cold nights



Temperature

The mean temperature over the island was $-0.65\text{ }^{\circ}\text{C}$ cooler than the LTM of 1991-2020. The mean minimum temperature and the mean maximum temperature were $-1.1\text{ }^{\circ}\text{C}$ and $-0.2\text{ }^{\circ}\text{C}$ cooler than the normal respectively. The highest maximum recorded was $35.7\text{ }^{\circ}\text{C}$ at Riviere Noire on Day 22. The lowest maximum temperature recorded was $21.9\text{ }^{\circ}\text{C}$ at Grand Bassin on Day 11. The highest minimum was $25.9\text{ }^{\circ}\text{C}$ at Port Louis on Day 09 and the lowest minimum was $13.8\text{ }^{\circ}\text{C}$ at Alma on Day 10.

Record minimum temperatures for the month were observed at several places:

Station	Min Temp	New Min Temp
Ferret	19.5	17.2
Bois Mangue	20.8	18.3
Riche Terre	21.7	20.5
Port Louis	20.9	20.6
Belle Village	21.6	19.8
Champ de Mars	20.3	19.3
Alma	15.8	13.8
St Felix	20.3	18.9
Beau Bassin	19.0	17.9

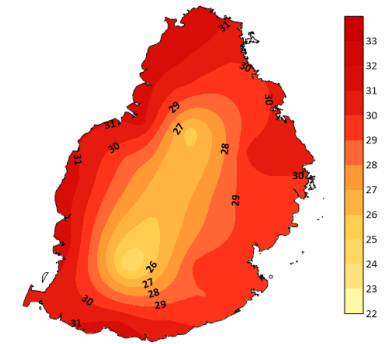
Practically no warm nights were recorded over the island. Few warm days were observed mainly to the east, the west and the southwest of the island.

The highest number of warm days was 13 at Queen Victoria and 9 at Medine and St Felix respectively.

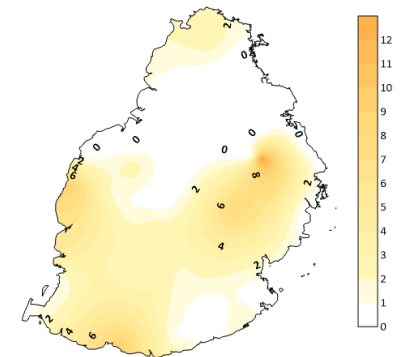
Nights were particularly cold across the island. The highest number of cold nights recorded was 31 at Alma and 22 at Bois Cheri.

A few cold days were observed particularly over the Central Plateau and to the north of the island. The highest number of cold days was 15 at Pamplemousses and 9 at Alma. Elsewhere it was less than 8.

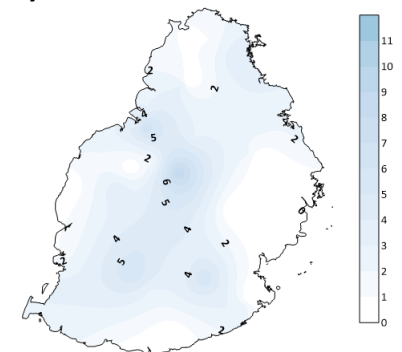
Maximum Temperature

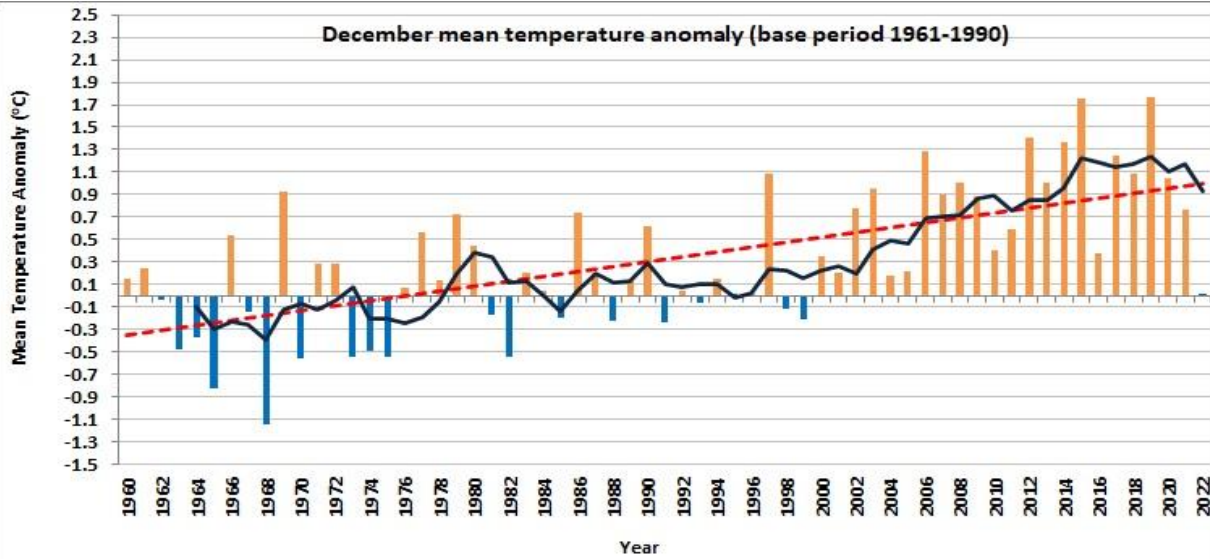


Warm days



Cold days

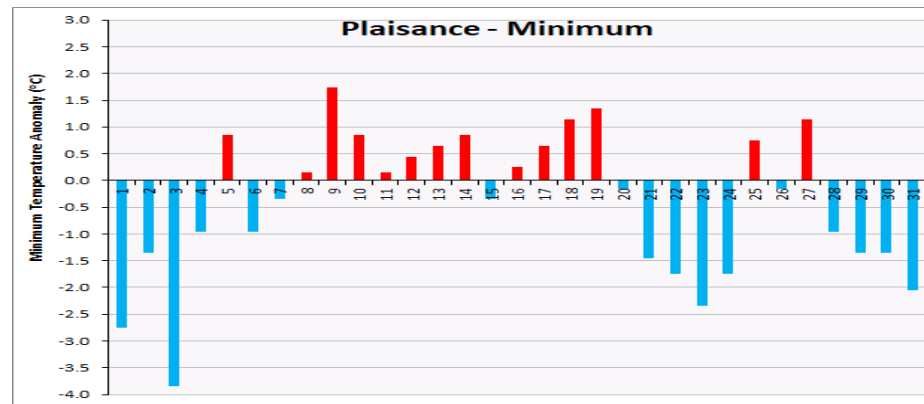
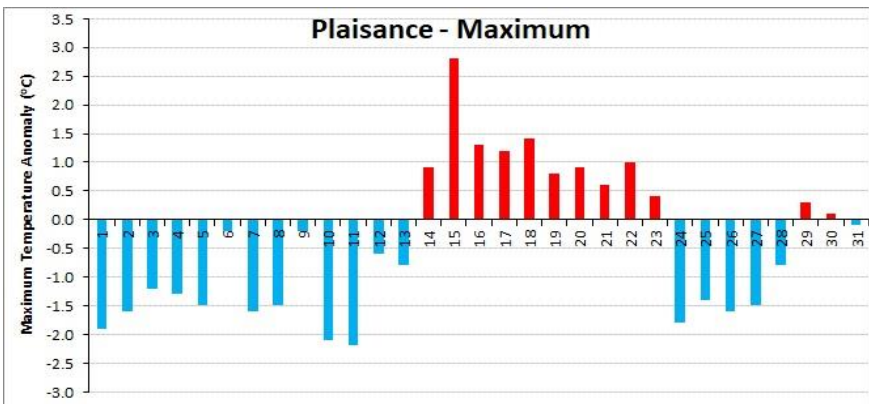
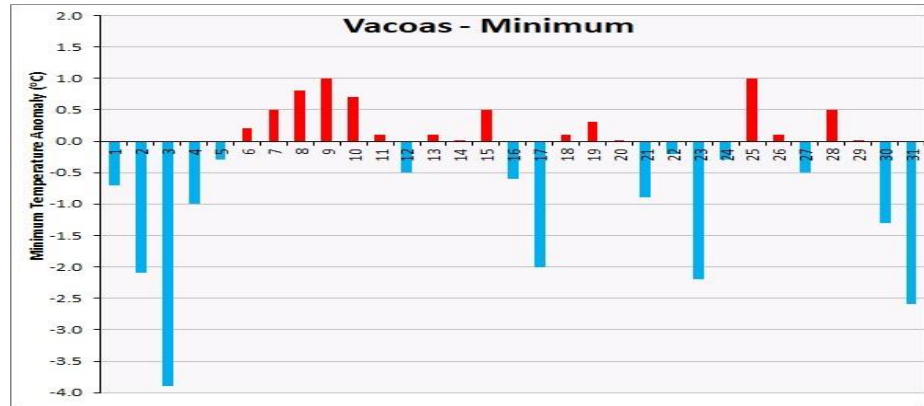
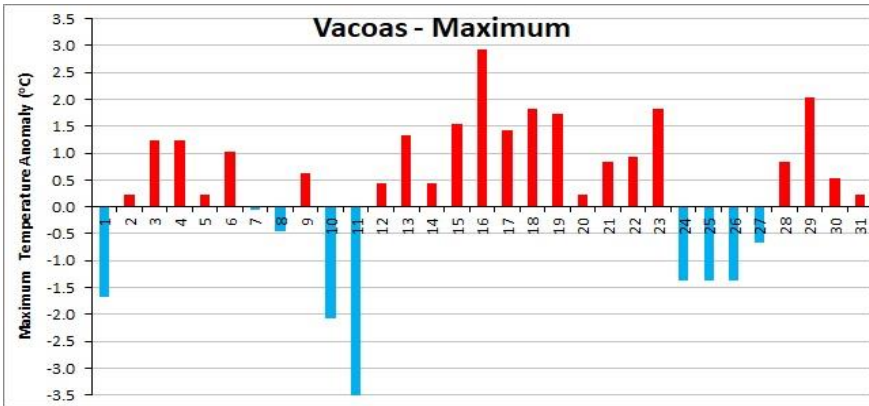




December 2022 was the coolest in the last 22 years.

Daytime temperatures were cooler most of the time at Plaisance. A significant drop of about 2 °C was noted in the first fortnight. At Vacoas, warm days and cold days were equally distributed.

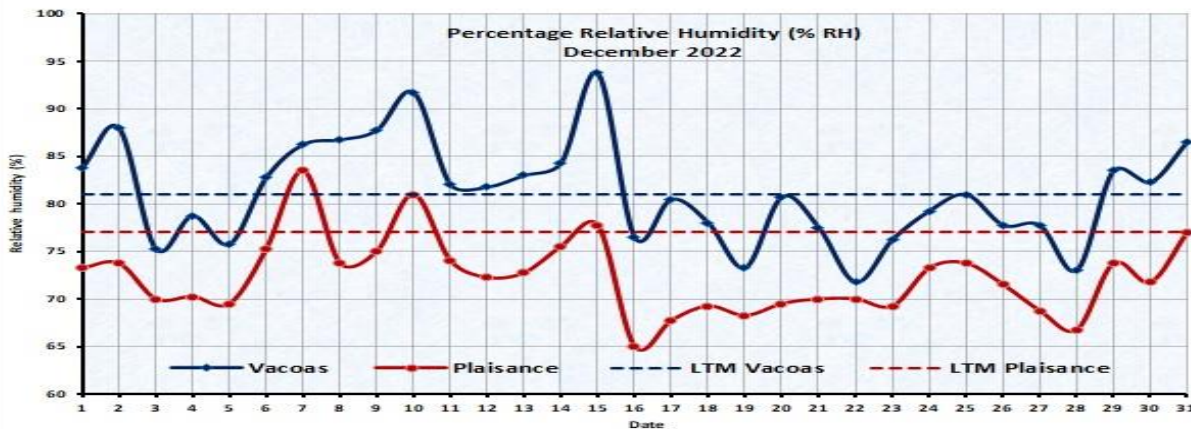
Minimum temperatures were cooler during most of the month both at Vacoas and Plaisance. Significant drop in the minimum temperatures of about 2 to 4 °C were observed at both stations especially during the first and last weeks of the month.



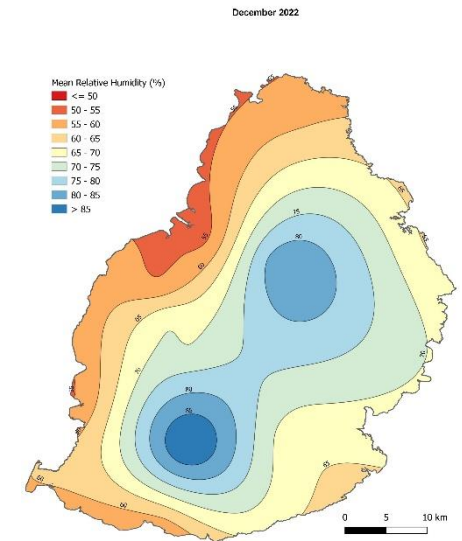
Sunshine and Humidity

On average the mean relative humidity for the month was close to the normal at both at Vacoas and Plaisance. The daily humidity ranged from 72 to 94% at Vacoas and from 65 to 84 % at Plaisance. Due to the presence of relatively cooler and drier air from the south of the Mascarenes, a decrease in humidity was observed during the second fortnight.

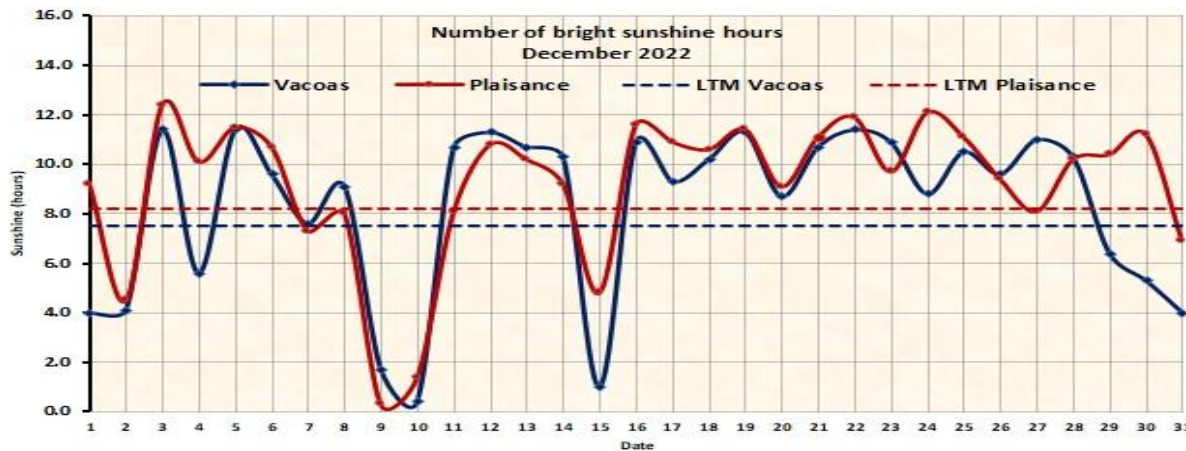
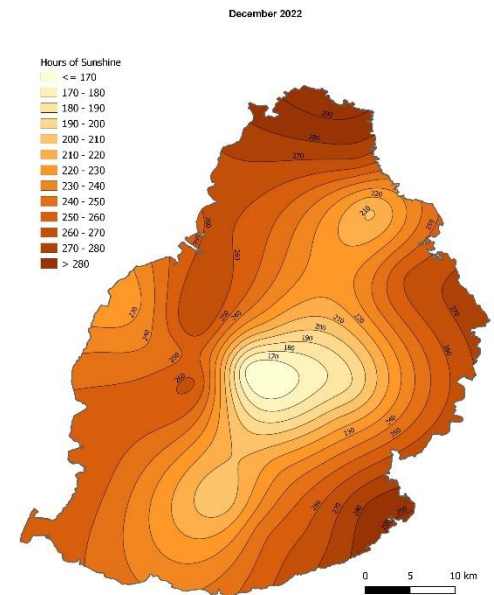
The number of daily bright sunshine hours were 113 % of the normal both at Vacoas and Plaisance (anomaly of +1.0 at both stations). The highest number of sunshine hours at Vacoas was 11.4 (recorded on Day 3, 5 and 22) and 12.4 at Plaisance (recorded on Day 3). The lowest number of sunshine hours was 0.4 at Vacoas (recorded on Day 10) and 0.3 at Plaisance (recorded on Day 9). The total number of monthly bright sunshine hours was 258.2 at Vacoas and 284.2 at Plaisance.



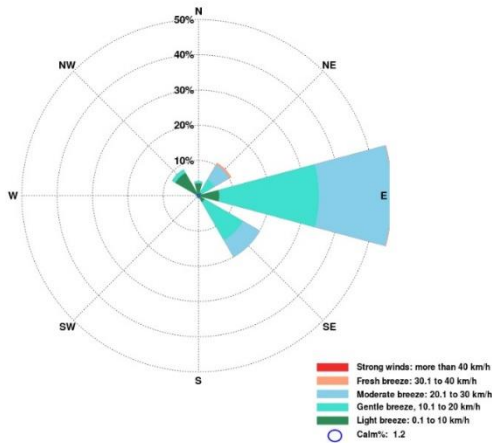
Monthly mean humidity



Monthly total sunshine hours



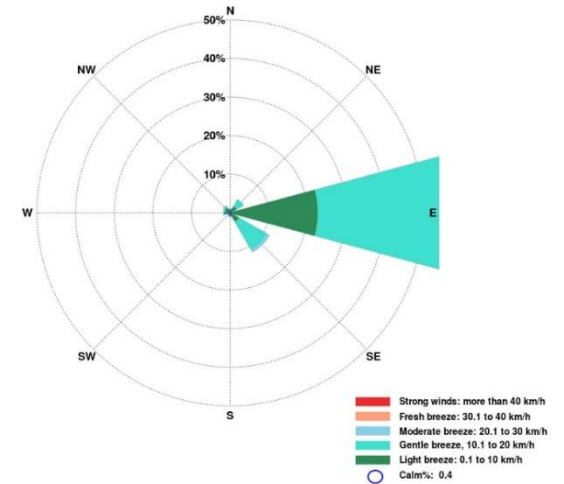
Winds



Wind frequencies from Plaisance (left) and Vacoas (right) show winds mainly from the eastern and, on few occasions, from the south eastern sectors. Light to moderate winds prevailed most of the time over the island.

The highest gusts recorded over the island were as follows:

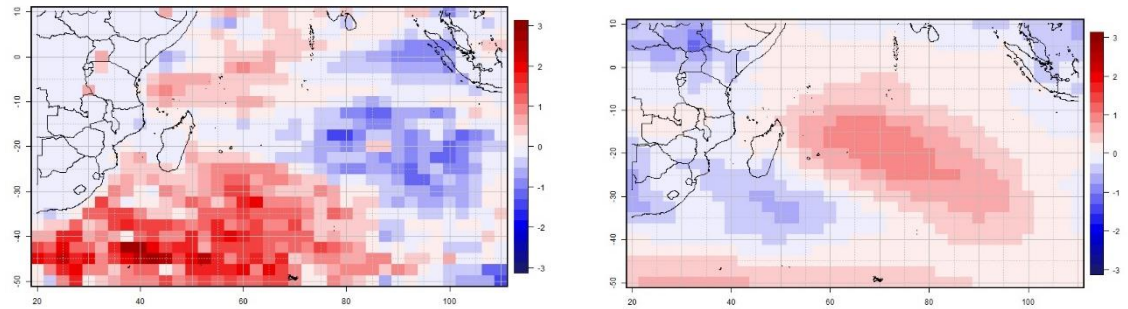
Regions	Highest gusts (km/h)	Date
Champ de Mars	68	13, 17
Domaine les Pailles	61	7, 19
Vacoas	60	7
Grand Bassin	58	7
Bois Mangues	57	7
St. Felix	54	8
N. Decouverte	50	Often
Queen Victoria	50	7



FORECAST FOR FEBRUARY-MARCH-APRIL (FMA)

ENSO neutral conditions are expected to establish in March and to persist till the end of the forecast period. The IOD and SIOD are expected to be neutral during the forecast period.

Sea Surface Temperature (SST) and pressure anomaly are expected to be slightly above 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 is expected to be normal. The monthly rainfall forecast consensus is as follows: -

- February: below normal (~ 240 mm)
- March: normal (~ 280 mm)
- April: normal (~ 185 mm)

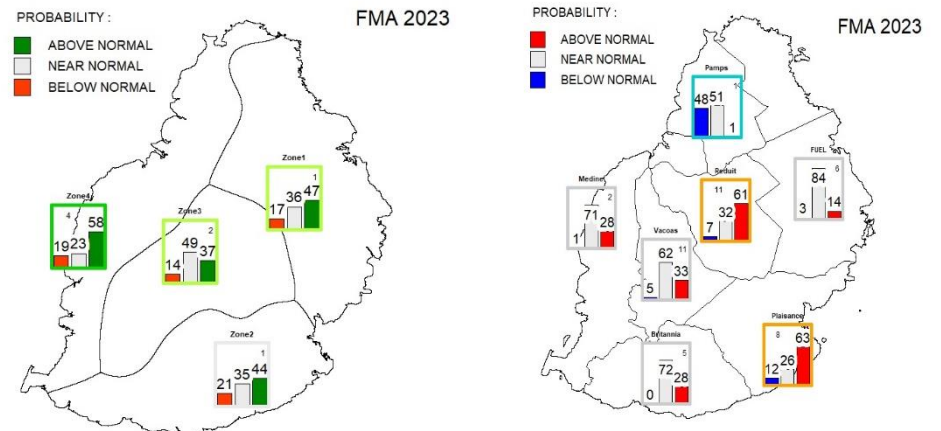
Mean temperature is forecasted to be near normal over the whole island.

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