



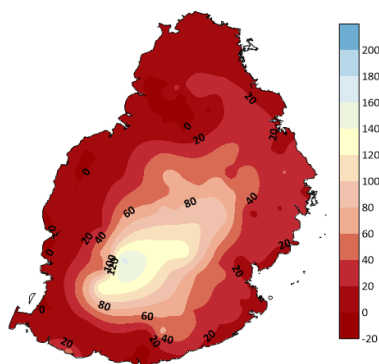
MAURITIUS METEOROLOGICAL SERVICES

CLIMATE SEPTEMBER 2023

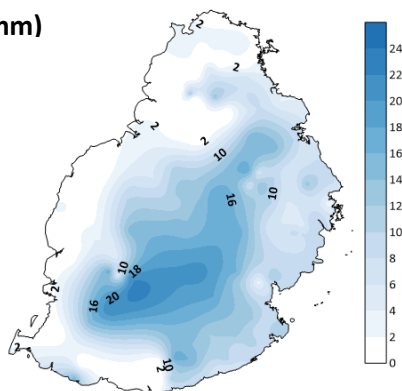
Introduction

September 2023 was very warm and dry, being the warmest since 1960 and the 6th driest in the last 30 years. 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 evolved in the Eastern Indian Ocean.

Monthly rainfall



Rainfall days (> 1 mm)



Rainfall

September 2023 was the 6th driest in the last 30 years. The recorded rainfall during the month was well below normal, amounting to 48 mm and which represents 56 % of the long-term mean. About 40% of the total rainfall was recorded in the first fortnight and the remaining amount in the second fortnight.

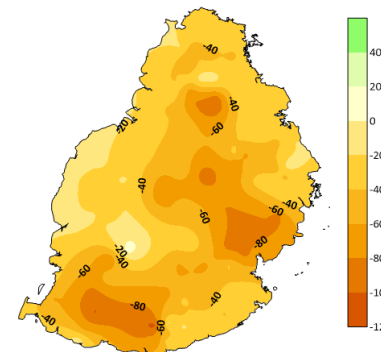
Rainfall was deficient almost over the whole island and especially in the South West and Eastern part of the island where the deficiency was around 80-100 mm. In other regions, rainfall was deficient by about 20-60 mm.

The highest cumulative rainfall for the month was 161 mm recorded at Good End.

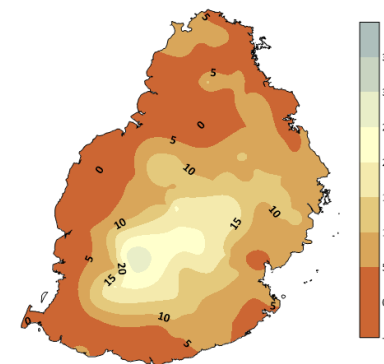
Mostly light rainfall was recorded during the month, especially in the second fortnight. The highest number of rainy days (≥ 1 mm) was observed at Arnaud and Petrin with 23 and 22 rainy days respectively. Very few rain days were observed from the North and West.

Highest 24-hour rainfall was 29.4 mm recorded at Good End on 28 September 2023.

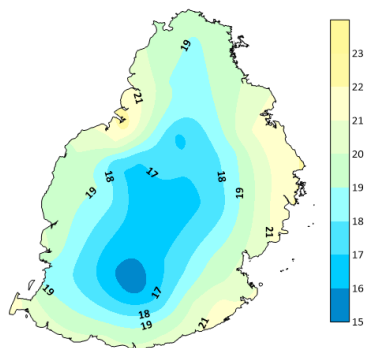
Monthly rainfall Anomaly



Highest 24-hour Rainfall



Minimum Temperature



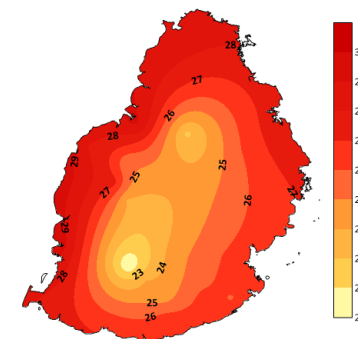
Temperature

The mean temperature over the island was 1.2 °C warmer than the LTM of 1991-2020. The mean minimum temperature and the mean maximum temperature were 1.3 °C and 1.1 °C warmer than the normal respectively.

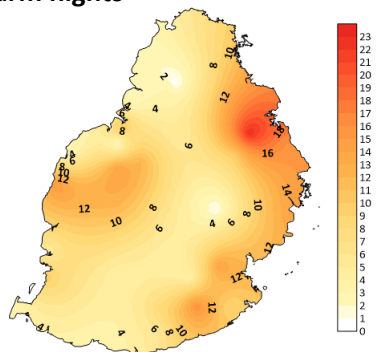
The highest maximum recorded was 31.9 °C at Riviere Noire on 19 September. The lowest maximum temperature recorded was 18.0 °C at Grand Bassin on 28 September.

The highest minimum was 24.1 °C at Port Louis on 21 September and the lowest minimum was 13.2 °C at Bois Cheri on 10 September.

Maximum Temperature



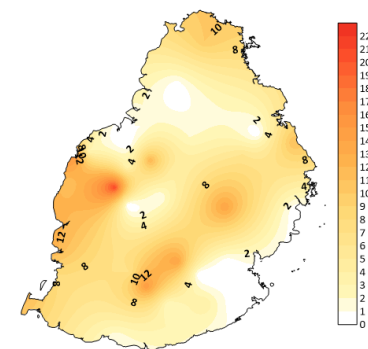
Warm nights



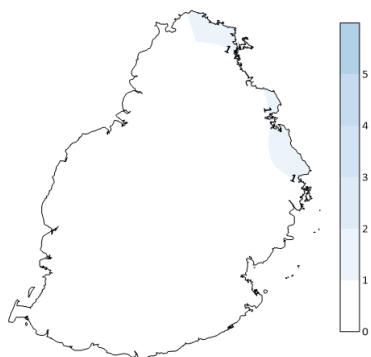
Nights were particularly warm during the month. The highest number of warm nights observed during the month were 23 at Constance, 16 at Belle Mare and La Baraque.

Warm days were recorded mainly to the West and over some parts of the Central Plateau. The highest number of warm days was 21 at Quatre Bornes, 16 at Albion, 15 at Bois Cheri and 14 at Union Park and Sans Souci.

Warm days



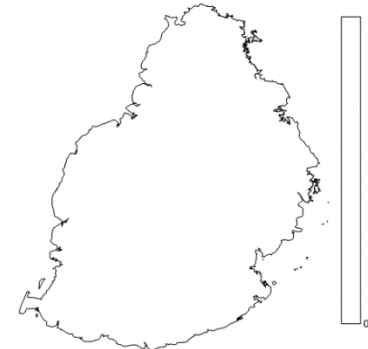
Cold nights

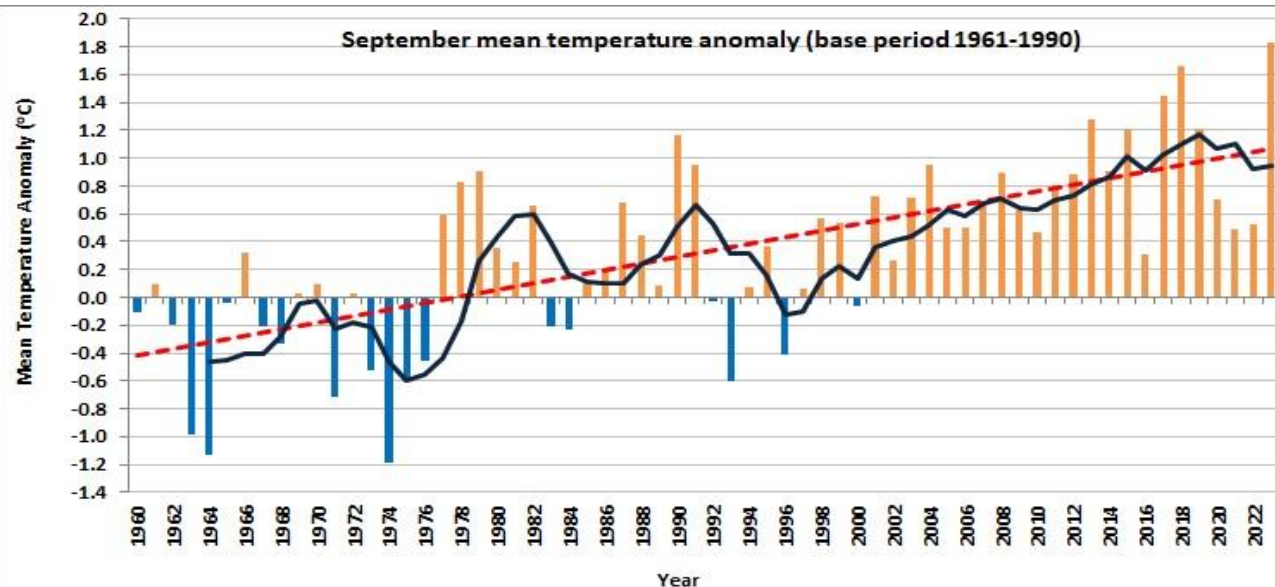


Very few cold nights were recorded during the month; observed over the Eastern coast of the island, the highest being 2 cold nights at Belle Mare.

No cold days were recorded during the month.

Cold days

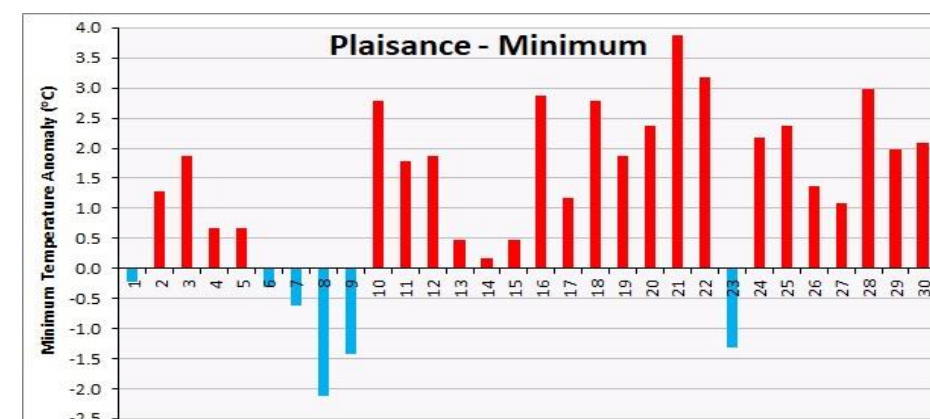
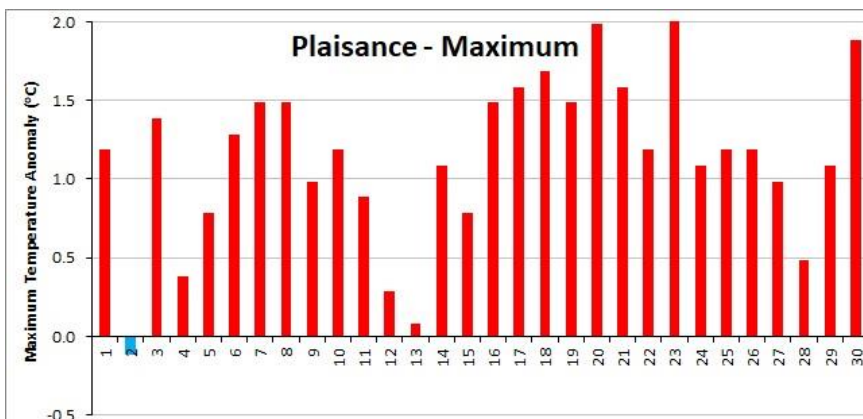
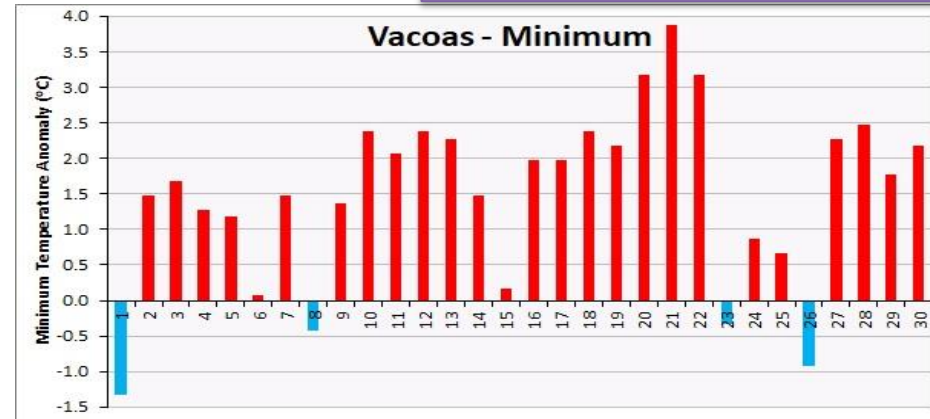
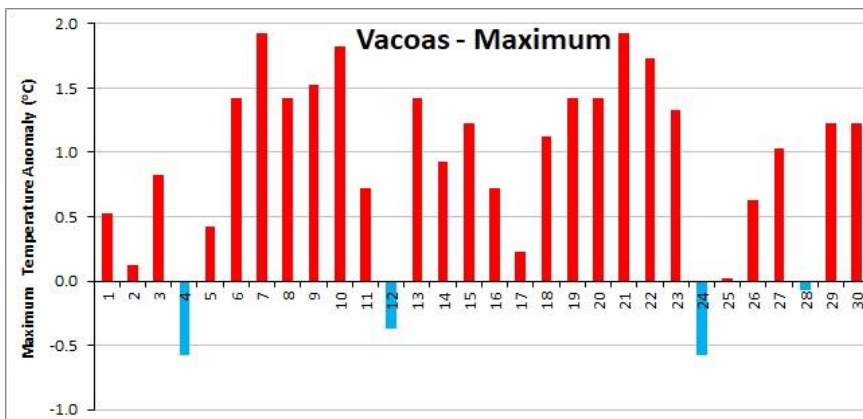




September 2023 was the warmest since 1960.

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 more than 2 °C in the minimum temperatures. The maximum temperatures at both Vacoas and Plaisance were most of the time 1-2 °C higher than the normal

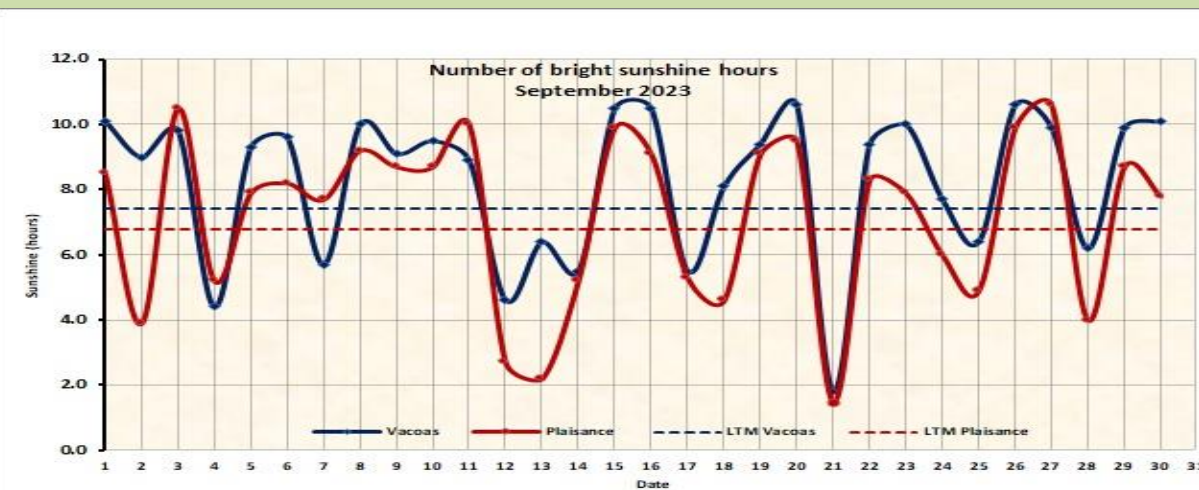
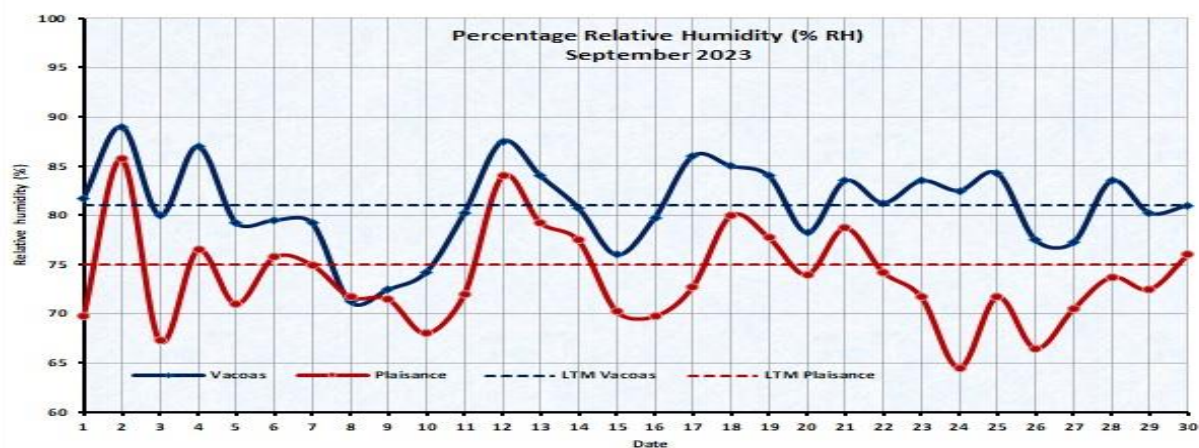
However, on a few occasions, during the second and last weeks, a drop of 1-2 °C in the minimum temperature were noted at Plaisance.



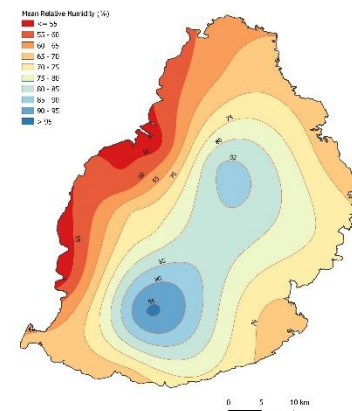
Sunshine and Humidity

On average the mean relative humidity for the month was close to the normal both at Vacoas and Plaisance. The daily humidity ranged from 71 to 89 % at Vacoas and from 61 to 86 % at Plaisance.

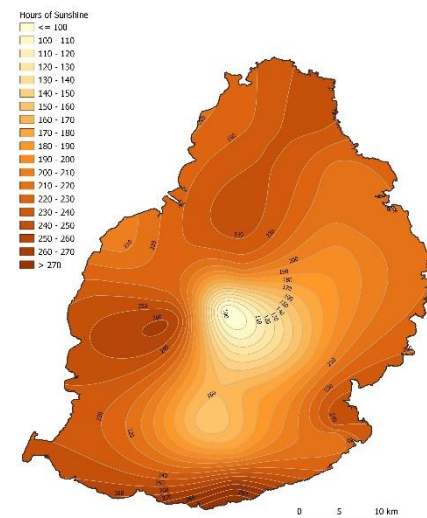
The number of daily bright sunshine hours were 112 % of the normal at Vacoas and 106 % at Plaisance (anomaly of +0.9 at Vacoas and +0.4 at Plaisance). The highest number of sunshine hours at Vacoas and Plaisance was 10.6 (recorded on 20 and 26 September at Vacoas and on 27 September at Plaisance respectively). The lowest number of sunshine hours was 1.8 at Vacoas and 1.5 at Plaisance (recorded on 21 September at both stations). The total number of monthly bright sunshine hours was 248.5 at Vacoas and 215.7 at Plaisance.



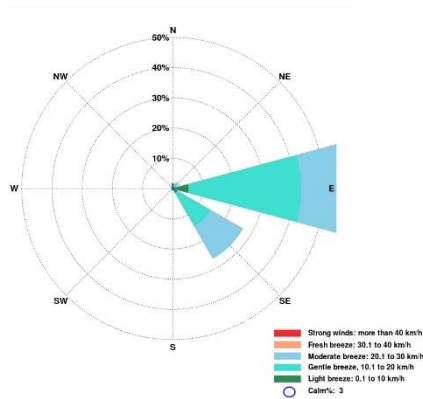
Monthly mean humidity September 2023



Monthly total sunshine hours September 2023



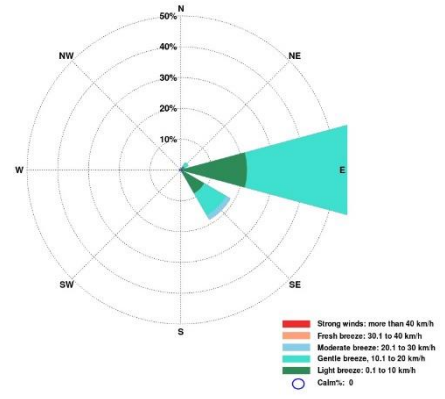
Winds



Wind frequencies from Plaisance (left) and Vacoas (right) show winds mainly from the east and southeast. Light to moderate winds prevailed most of the time over the island.

The highest gusts recorded over the island were as follows:

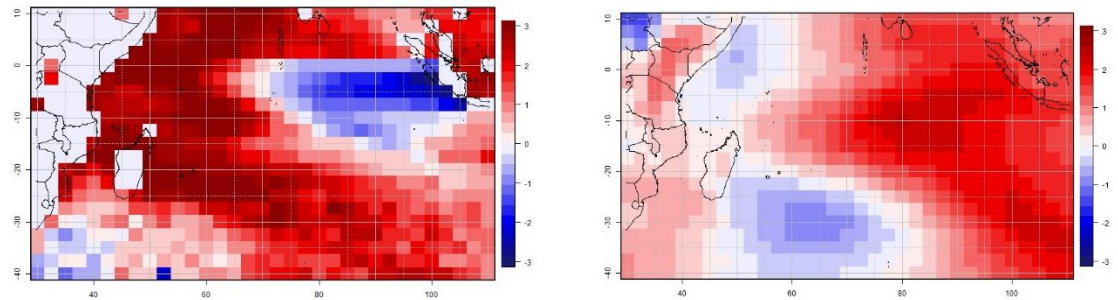
Regions	Highest gusts (km/h)	Date
Champ de Mars	76	20
Dom. les Pailles	68	20
Vacoas	61	20
N. Decouverte	58	20
Plaisance	58	2
Riche Terre	56	20
Albion	54	24



FORECAST FOR NOVEMBER-DECEMBER-JANUARY (NDJ)

El Nino conditions are expected to strengthen gradually and become strong to very strong by the end of the forecast period. The IOD is expected to remain in the positive phase while the SIOD to be neutral.

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.



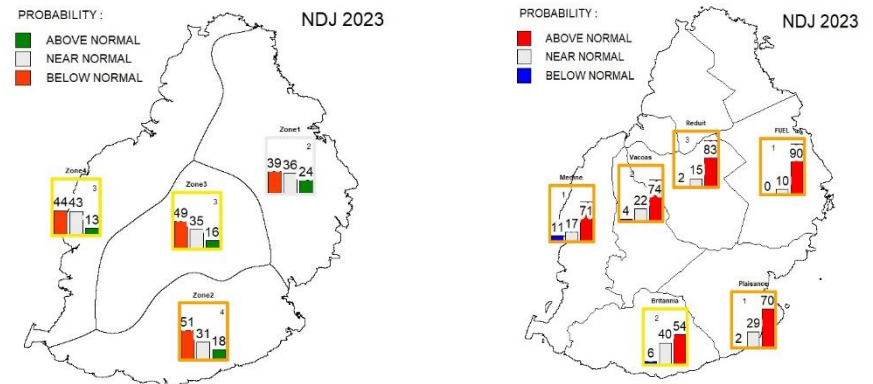
(a) Sea surface temperature and (b) pressure anomaly charts for NDJ

Consensus forecast for Mauritius

Cumulative rainfall for November 2023 to January 2024 is expected to be above normal. The monthly rainfall forecast consensus is as follows: -

- November: Very wet (~ 210 mm)
- December: normal (~ 150 mm)
- January: Below normal (~ 210 mm)

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



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

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