

2024 shows a rise of 1.1°C compared with the 1991-2020 normal

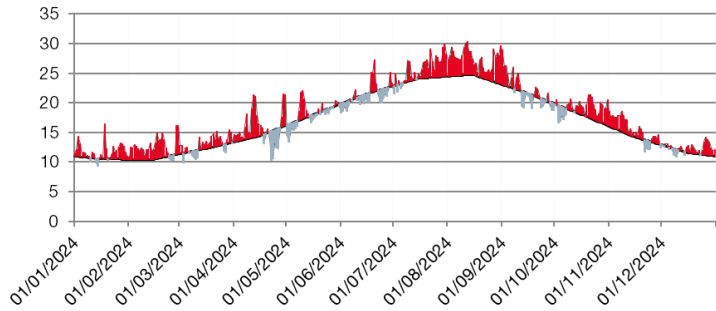
1. Ten-year temperature record

	Average	Average of minimums	Average of maximums	Absolute minimum	Absolute maximum
1971-1980	15.73	12.79	18.68		
1981-1990	16.23	13.37	19.08		
1991-2000	16.42	13.51	19.34	-1.50	33.70
2001-2010	16.77	13.96	19.57	-1.50	34.50
2011-2020	17.16	14.66	19.70	-0.80	34.70
2021-2024	17.80	15.68	20.42	4.10	35.30
2024	17.91	15.68	20.53	6.80	35.30

Unit: degree Celsius

Sources: Department of the Environment, IMSEE

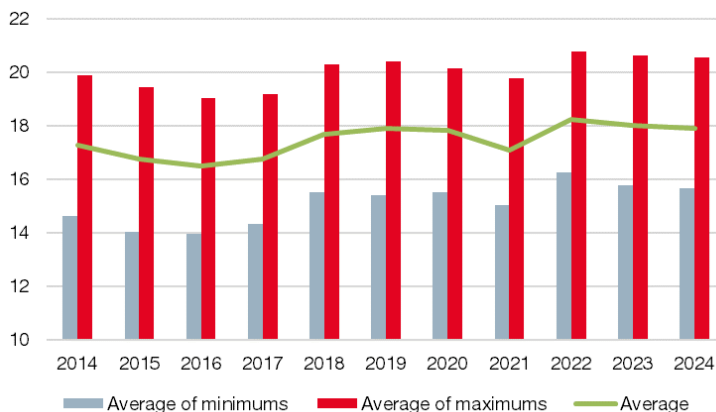
2. Average daily temperature variation for 2024 compared with the 1991-2020 normal



Unit: degree Celsius

Sources: Department of the Environment, IMSEE

3. Change in average temperatures since 2014



Unit: degree Celsius

Sources: Department of the Environment, IMSEE

Methods and definitions

Since 2012, Weather Focus has been analysing the Principality's weather and climate conditions. This study is based on data collected by the Jardin Exotique weather station, supplemented by sunshine and wind data collected by the Department of the Environment at the Oceanographic Museum.

Climate normals are made up of average rainfall and temperature values, calculated over a continuous period of thirty years at the end of each decade. The last normal was established for the period 1991-2020.

Since the 1970s, every decade has seen record-breaking temperatures, and recent readings confirm this trend. Over the period 2021-2024, the average maximum temperature is 20.4°C, and the average minimum is 15.7°C. Absolute temperatures were 35.3°C for the highest and 4.1°C for the lowest, marking two records: one for warmth and one for mildness.

In 2024, the average temperature reached 17.9°C, 1.1°C above the 1991-2020 normal, making it the third warmest year on record, just behind 2022 and 2023. The start of 2024 was particularly mild, with record minimum temperatures, particularly in February, ranked as the third warmest February since 1990, with an absolute minimum of 8.4°C. From May until mid-July, temperatures remained below seasonal normal. The summer was then marked by high temperatures and two heatwaves between late July and mid-August. September and October, on the other hand, saw a marked cooling, accompanied by frequent rainy spells. Finally, the last two months of the year were marked by high minimum temperatures, the lowest recorded being 6.8°C in December.

While 2024 remained very warm, it was slightly cooler than the previous two years (17.9°C in 2024, compared with 18.0°C in 2023 and 18.2°C in 2022).

Average minimum temperatures, although still high, followed the same trend: 15.7°C in 2024, compared with 15.8°C in 2023 and 16.2°C in 2022, a record year for mildness.

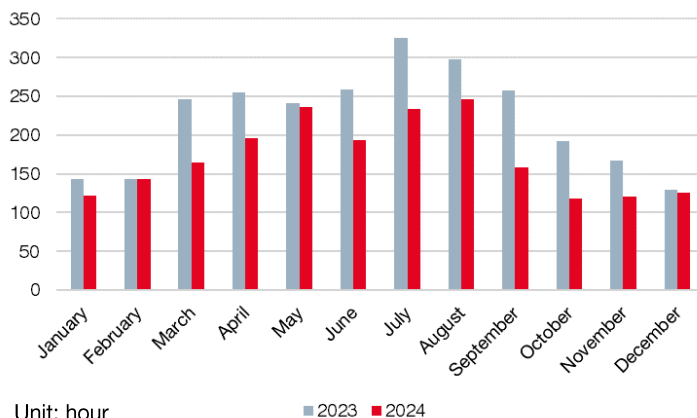
As for maximum temperatures, the average reached 20.5°C, remaining at a particularly warm level, but slightly down on 2023 (20.6°C) and 2022 (20.8°C).

A significant shortfall in sunshine in 2024

In 2024, there was less sunshine, with an average of 5.6 hours per day, down 22.6% on 2023. Over the year, this represents 2,059 hours of sunshine, a substantial deficit of 600 hours compared with the previous year. The amount of sunshine varied considerably from month to month. August remains the brightest month, with 246 hours of sunshine, although this is 52 hours less than in 2023. Conversely, October had the least sunshine, with just 119 hours (down 73 hours). September saw the biggest drop (-99 hours), while February held its own with just one hour less sunshine.

No month has escaped this downward trend in 2024.

4. Monthly number of hours of sunshine in 2023 and 2024



Unit: hour

Sources: Department of the Environment, IMSEE

With 66 days of rain, 2024 puts an end to four years of rainfall deficit

In 2024, there was 1,016 mm of rain, 15.0% more than in the period 2011-2020, when 883 mm was recorded. This puts an end to a four-year rainfall deficit, with 66 days of rain, 20 more than the previous year and 2.5 days more than the decade between 2011 and 2020. It also makes 2024 one of the 12 wettest years since 1966. The record for rainfall in a single day was reached in February with 69.4 mm, well above the maximum recorded in 2023 (47.3 mm), but well below the records set prior to 2020.

Seven out of twelve months had more precipitation than the previous year, with remarkable increases in March (+207.6 mm), February (+202.6 mm), September (+126.7 mm), and October (+101.6 mm). March also holds the monthly precipitation record with 213.3 mm, in stark contrast to the 5.7 mm recorded in March 2023. Conversely, July proved particularly dry, with just 1.4 mm of rain (compared with 4.7 mm in July 2023).

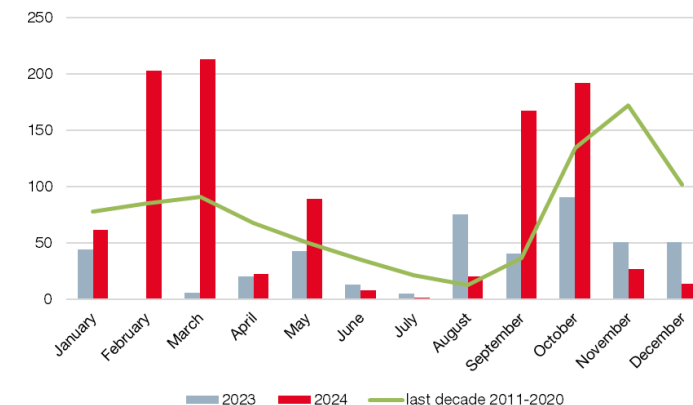
5. Ten-year rainfall record

Period	Average annual rainfall	Maximum annual rainfall	Date	Number of rainy days (≥ 1mm)	Absolute maximum in one day	Date
1971-1980	848	1,217	in 1979			
1981-1990	706	1,114	in 1984			
1991-2000	805	1,116	in 2000	64	115.2	on 25/10/1999
2001-2010	695	1,134	in 2008	62	110.0	on 05/11/2008
2011-2020	883	1,485	in 2014	64	148.4	on 04/10/2015
2021-2024	606	1,016	in 2024	53	69.4	on 25/02/2024
2024	1,016	1,016	in 2024	66	69.4	on 25/02/2024

Unit: millimetre

Sources: Department of the Environment, IMSEE

6. Rainfall in 2023 and 2024 and the decade 2011-2020



Unit: millimetre

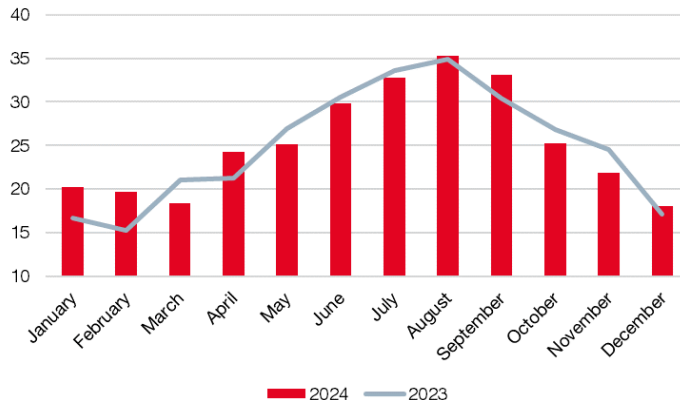
Sources: Department of the Environment, IMSEE

2024: 6th hottest summer in the Principality

The summer of 2024 was marked by two heatwaves. The first ran from 29 July to 1 August, and the second from 10 to 14 August, when a record temperature was reached on 12 August with 35.3°C recorded at the Jardin Exotique station, exceeding the 35.1°C recorded in July 2022. Although the summer was particularly hot, it did not surpass the levels of previous years, ranking as the 6th hottest summer in the Principality.

Finally, compared with 2023, maximum temperatures were higher six months out of twelve, with particularly marked differences in February (+4.4°C), January (+3.5°C), April (+3°C) and September (+2.7°C).

7. Maximum temperature in 2023 and 2024



Unit: degree Celsius

Sources: Department of the Environment, IMSEE

