

Thursday, January 2, 2025

Annual Climate Report: Israel 2024

Israel Meteorological Service

Temperature Trends

An exceptionally warm year was observed in Israel, with average temperatures approximately 1°C above the 1991-2020 climatological baseline. This positions 2024 as the second warmest year on record since systematic observations began in 1950, surpassed only by the record set in 2010.

The summer of 2024 was particularly notable, setting new temperature records across the country. Summer temperatures averaged 2°C above the average, exceeding the previous record highs observed in 2012 and 2023 by more than 0.5°C. June emerged as the most anomalous month, with temperatures ranging 3 to 3.5°C above the average. This surpassed the previous June record from 2016 by over 1°C. The month was characterized by multiple intense heat waves, with two notable events breaking historical records:

- **Avne Eitan:** 42.5°C (June 3rd)
- **Gilgal:** 48.1°C (June 3rd and 14th)
- **Harashim:** 38.3°C (June 14th)
- **Ma'ale Adumim:** 41.5°C (June 14th)

Spring 2024 also exhibited remarkable temperature anomalies, with April ranking as the third warmest on record, following 2016 and 1989.

Significant heat events were recorded towards the end of the month. On April 24-25, several monitoring stations registered unprecedented maximum temperatures:

- **En Hahoresh:** 41.6°C
- **Bet Dagan:** 41.7°C
- **Gilgal:** 45.0°C

These temperature extremes highlight the increasing frequency and intensity of heat waves in the region, underscoring the ongoing trend of warming in Israel's climate system.

Rainfall Patterns

The early months of 2024 brought remarkable precipitation to northern and central Israel. Between January 22 and February 5, the country experienced an extraordinary 15 consecutive days of rain - a phenomenon second only to February 1992's 16-day streak. Daily rainfall consistently exceeded 20mm across these regions, with some areas recording total accumulation of 300-400mm.

Regional Variations

While the 2023/24 season brought above-average rainfall (exceeding 120% of normal) to most non-desert areas in northern and central Israel, the southern and eastern regions exhibited markedly different conditions. The Southern Negev, in particular, experienced one of its driest calendar years on record.



Extreme Weather Events

November 2024 was marked by two significant weather events:

1. On November 2, the Benjamin region experienced intense rainfall, while northern Israel, particularly around Carmiel and the Galilee coast, faced severe hailstorms. Hailstones measuring 4-5cm (possibly up to 6cm) caused extensive damage to agricultural areas and vehicles.
2. On November 19, the Ma'agan Michael area received nearly 200mm of rain within just three hours - setting new national records for rainfall intensity across multiple time intervals, from 10 minutes to four hours.