

A monthly weather summary - July 2021

July was warmer than average and included two heat waves, yet without extreme temperatures. Rainfall occurred on the 24th with unusual locally for this month for this time of year.

Temperatures and the weather during the month

Temperatures in July were higher than average (1995-2009) by 1.0 to 1.5 degrees Celsius. In the mountains and inland most days of the month were warmer than average, and a few were close to average or below it. In the Coastal Plain almost all of the days were warmer than average (Figs. 1, 2). Two notable hot episodes can be noted during the month. One episode occurred at the beginning of the month, between the 1st and the 3rd (following the warming trend that began at the end of June), during which temperatures of 38 to 40°C were measured in the northern valleys and the Negev, 42-45°C in the Jordan Valley and the Arava, 35-37°C in the lowlands and 32-34°C in the mountains. On the 3rd, almost 47°C were measured in Sodom.

The second significant episode was on the 17th to 19th of the month with temperatures of 34 to 36 °C in the mountains, 37 to 40 °C in the northern Negev and Jezreel Valley, 40 to 42 °C in the Hula Valley and the Sea of Galilee and 42 to 45 °C in the Jordan Valley and the Arava. The Coastal Plain was warmer than usual during the day with 32 to 34 °C, yet the minimum temperatures on the 18th were relatively low for this area and reached 18 to 20 °C, the only day with lower than normal minimum temperatures in the Coastal Plain.

A cooling trend started on the 20th, and the period of July 21-24 was relatively comfortable inland with temperatures below normal. Though it became warmer on the 25th, temperatures remained close to average until the 29th of the month.

In the Coastal Plain there was a slight drop in daytime temperatures during that period, but the nights became warmer with minimum temperatures of 24 to 26°C (compared to 21 to 23 C in the first two decades of the month). As a result, there was an increase in the average daily heat stress in the latter part of the month in this area, compared to the interior parts and the mountains where the heat stress was similar to that in the middle of the month (Figs. 3, 4).

There was some unusual rainfall on the 24th, mainly in the northwest of the country. The focal point was the Rosh Hanikra ridge with 11 mm in Rosh Hanikra, 15 mm in Matzuva and 29 mm in Hanita. At various rain stations in the Western Galilee and the Carmel, as well as in the southern part of the Sea of Galilee, small amounts of up to 2 mm were measured.

Rainfall can occur during summer and it is not rare. However amounts of more than 10 mm in July or August are exceptional and occur approximately once a decade (most recently in August 2012, when a similar amount of 29 mm was measured).

Table 1: July 2021 temperatures (°C) compared with the average

Region	Station	July 2021		Deviation from the average 1995-2009	
		Maximum	Minimum	Maximum	Minimum
Coastal Plain and the Shfela	Haifa (Technion)	29.5	23.7	+1.0	+1.1
	En HaHoresh	31.9	21.6	+0.8	+1.8
	Bet Dagan	32.8	23.8	+1.3	+1.5
	Negba	32.5	22.7	+0.8	+1.4
Northern mountains	Elon (western Galilee)	31.6	21.6	+1.1	+0.6
	Merom Golan Picman	30.6	18.5	+1.4	+1.5
	Avne Etan	33.9	21.4	+0.6	+1.8
	Zefat Har Kenaan	30.9	20.5	+0.2	+0.6
	Deir Hanna	32.3	23.7	+1.0	+0.9
Northern valleys	Afula, Nir HaEmeq	35.7	22.6	+1.6	+1.3
	Kefar Blum	36.8	21.5	+1.2	+1.1
	Zemah	39.3	25.0	+1.6	+1.4
	Eden Farm (Bet Shean)	38.4	24.7	+0.8	+1.2
Central mountains	Qarne Shomron	32.2	22.2	+1.4	+1.6
	Jerusalem	31.0	21.2	+1.0	+1.0
	Bet Jimal	33.6	22.2	+0.7	+1.0
	Rosh Zurim	29.4	19.4	+1.1	+0.7
Negev	Besor	33.1	22.1	+0.5	+1.4
	Arad	34.6	19.5	+1.0	+0.4
	Be'er Sheva	35.6	22.5	+0.9	+1.2
	Sede Boqer	34.2	20.3	+0.8	+1.3
Arava	Sedom	42.2	31.6	+1.5	+1.1
	Elat	41.4	28.1	+1.0	+0.8

Table 2: Extreme temperatures in July 2021 (°C) compared with the past

Station	July 2021				Extreme Values in record				Period of measurements
	Extreme Max.		Extreme Min.		Extreme Max.		Extreme Min.		
	Temp.	Date	Temp.	Date	Temp.	Date	Temp.	Date	
Bet Dagan	34.2	31/7/21	20.3	18/7/21	41.5	17/7/19	14.1	20/7/65	1962-2021
Negba	34.7	3/7/21	20.4	8/7/21	41.7	17/7/19	15.0	20/7/65 13/7/84	1950-2021
Zefat Har Kenaan	34.5	19/7/21	16.4	6/7/21	39.0	30/7/00 23/7/56	12.2	2/7/52	1939-2021
Jerusalem ¹	36.2	18/7/21	17.4	6/7/21	41.1	12/7/1888 13/7/1888	11.8	1/7/34	1867-2021
Be'er Sheva ²	39.8	18/7/21	19.4	8/7/21	42.4	17/7/19	12.0	8/7/23 14/7/33	1922-2021
Elat	45.5	3/7/21	26.1	7/7/21	48.3	31/7/02	20.0	12/7/84 3/7/73	1949-2021

¹ For Jerusalem: Center 1950-2021; Talbiye 1948-1949; Palace Hotel 1935-1947, American Colony 1927-1935, Mt. of Olives 1918-1926, German Colony 1895-1915, English Hospital Nevi'im St 1898-1913, English Hospital Old City 1867-1915

² For Be'er Sheva: Negev Institute 1957-2021; Old Town 1922-1957.

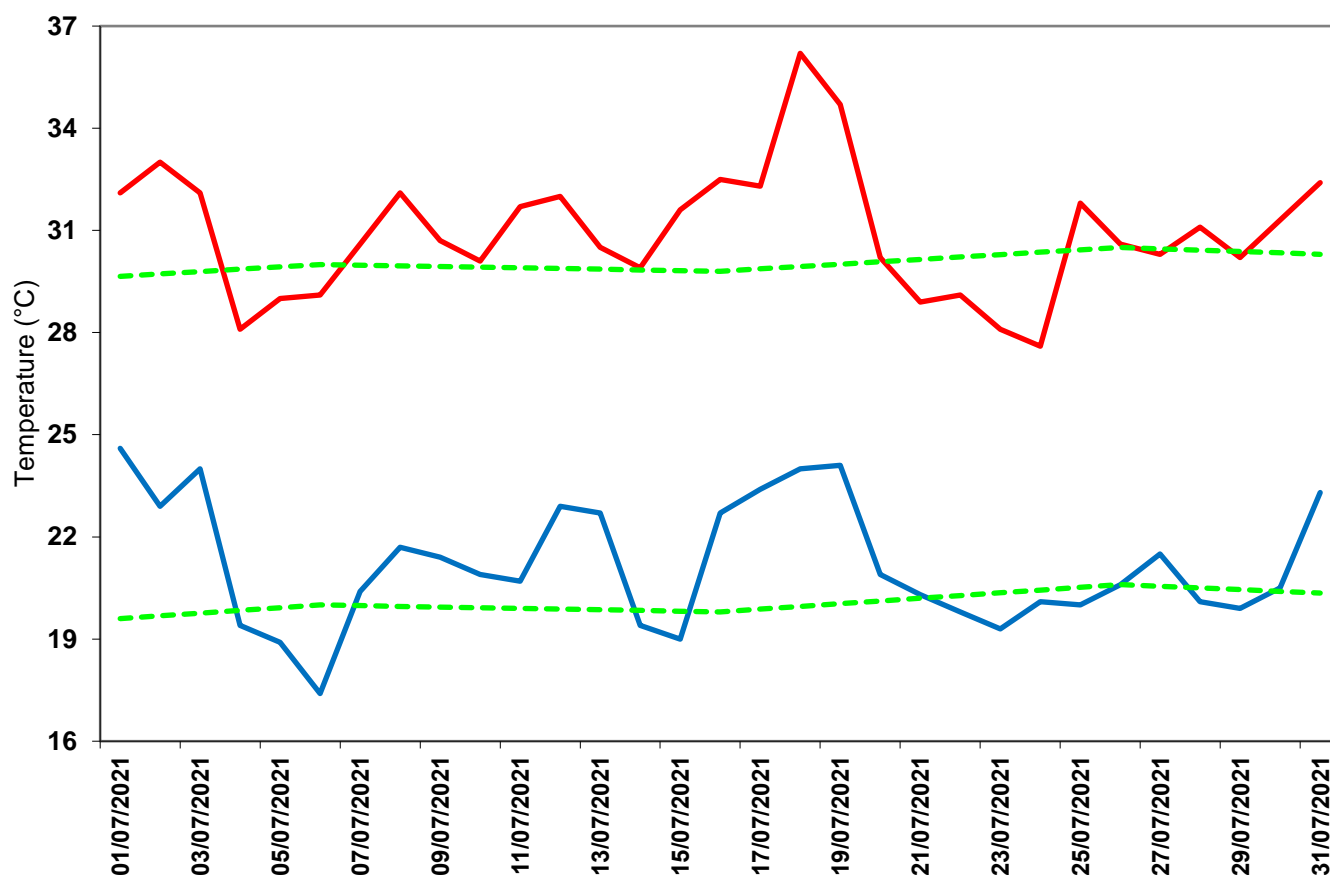


Figure 1: Daily minimum and maximum temperatures in Jerusalem in July 2021 compared with the long-term average



Figure 2: Daily minimum and maximum temperatures in Bet Dagan in July 2021 compared with the long-term average

1995-2009 Average 2021 Min
 Max

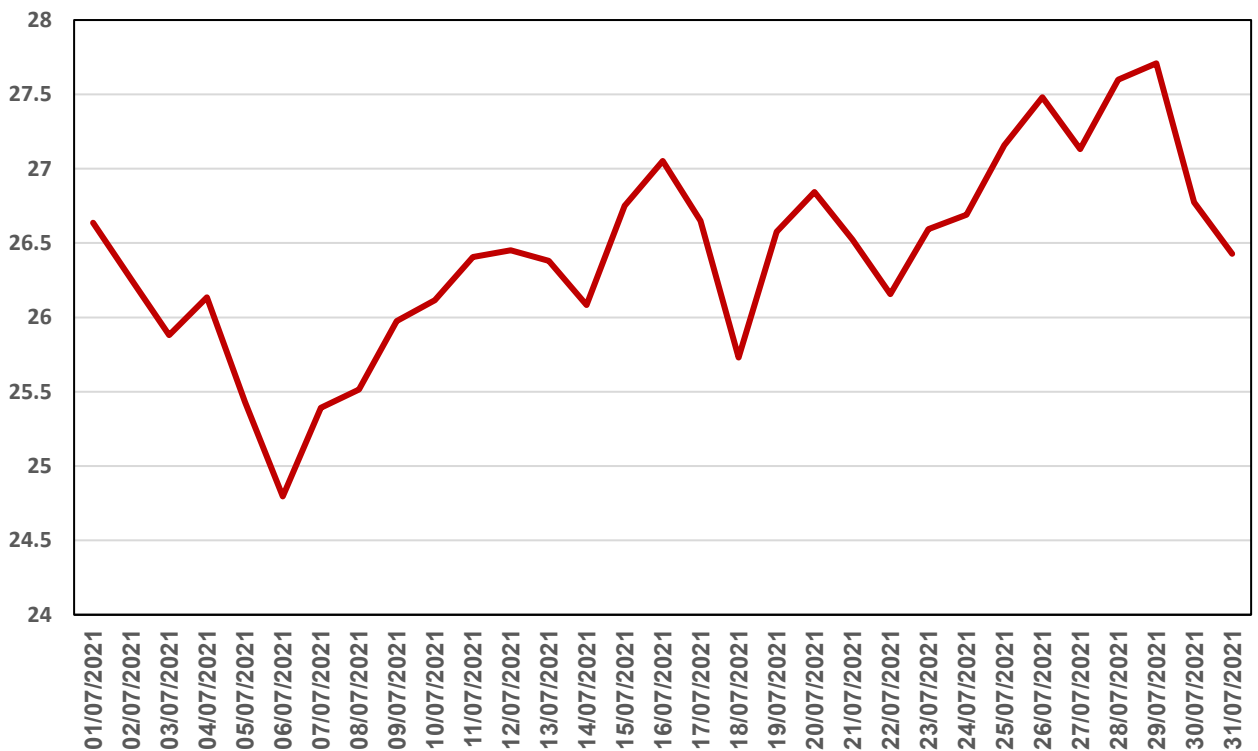


Figure 3: Daily average heat stress* in Bet Dagan in July

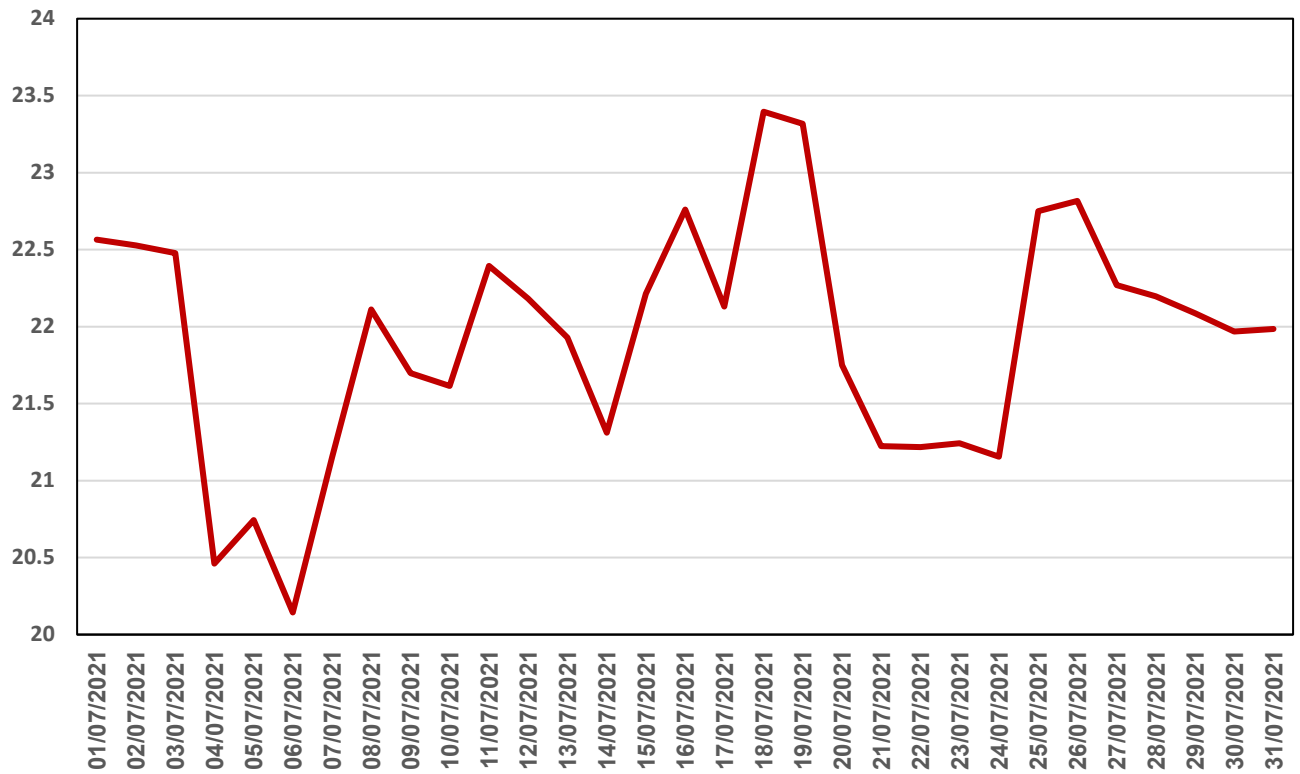


Figure 4: Daily average heat stress* in Jerusalem in July

** Heat stress is an index that describes the stress placed on the human body in conditions of hot weather. The heat load index combines the temperature and relative humidity according to the following details:

- Up to 22.0 – No heat stress
- 22.0-23.9 - Light heat stress
- 24.0-25.9 - Moderate heat stress
- 26.0-27.9 – Medium heat stress
- 28.0 -29.9 – Heavy heat stress
- 30.0 or more - Extreme heat stress