

## **A monthly weather Summary - March 2021**

### **General**

Rainfall amounts in March were smaller than average in almost all regions. Unlike the central winter months this year, during which most of the rains occurred in one single event, in March, it rained in a relatively large number of days and events with small amounts in each of them.

With regard to temperature, March was overall close to average and was characterized by significant temperature variations during it. This was especially evident in the last ten days of the month, the first part of which was hot and even rainy, while the second part was considerably cooler than average.

The rainfall amounts since the beginning of the season exceed the average for the entire season in the Coastal Plain, are close to average in the north of the country, and are below it in the central mountains and in the south of the country.

### **Rainfall in March**

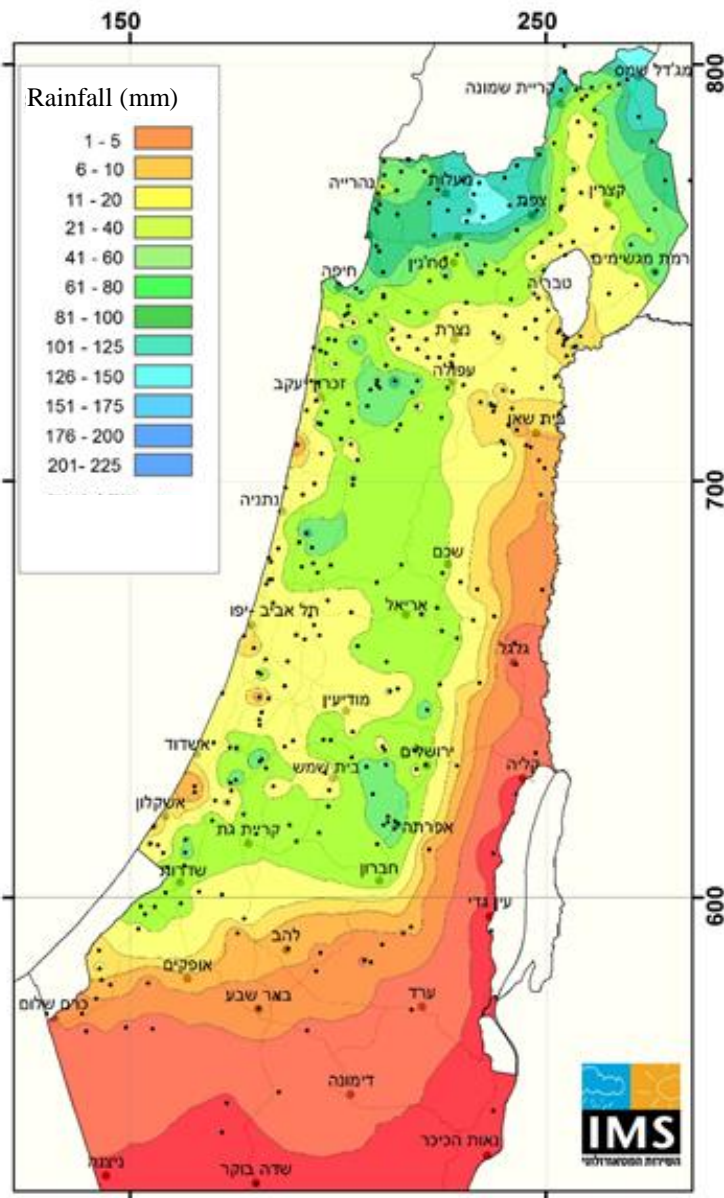
Rainfall amounts in March were below average (1991 to 2020) except for a limited area in the northern Coastal Plain, where the amounts were close to the monthly average.

In the Upper Galilee, 60 to 80 mm of rainfall were measured, which account for 60% to 80% of the average for March in this area. Smaller amounts of about 40 to 60 mm were measured in the Golan Heights and other parts of the Galilee. In the Hula Valley and in the north of the Sea of Galilee, 30 to 35 mm were measured (60% to 65% of the average) and in the south of the Sea of Galilee and the Jezreel Valley, less than 50% of the average was measured.

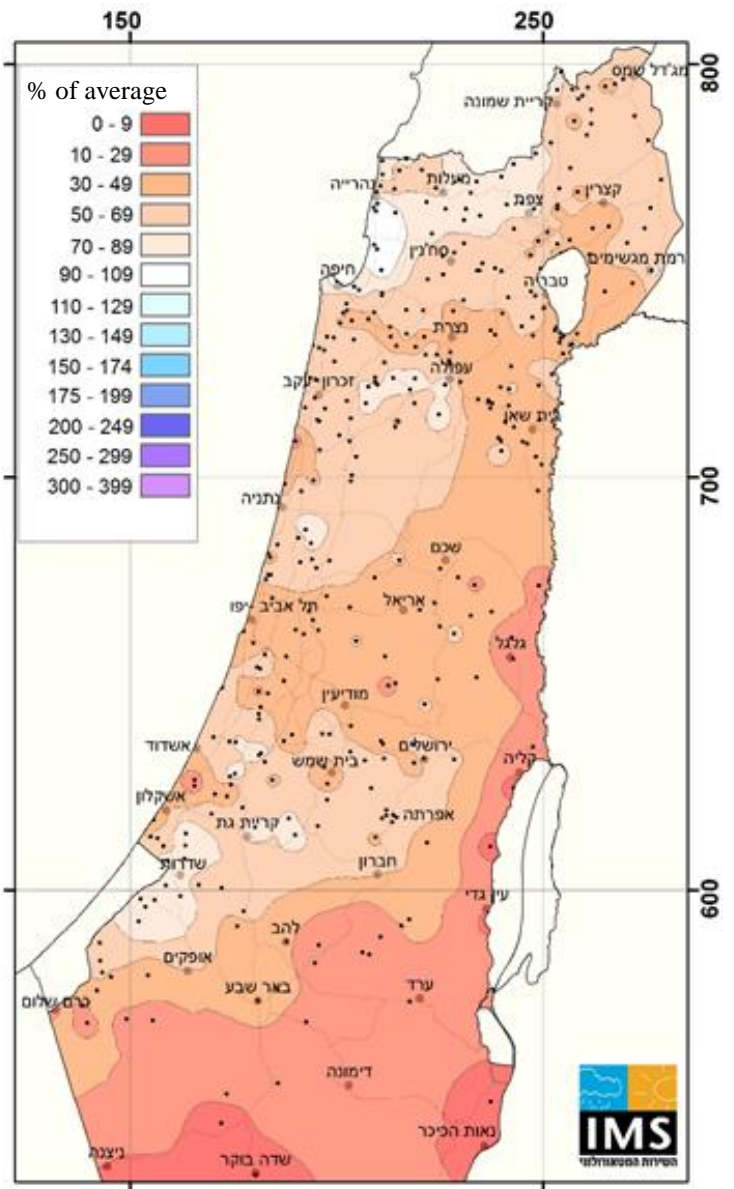
In the Coastal Plain (south of Haifa), 25 to 40 mm were measured (40% to 60% of the average), and in parts of the southern Coastal Plain, 40 to 45 mm were measured, which account for 70% to 80% of the average for March.

In the central mountains, 30 to 45 mm were measured (50% to 60% of average), and in the Gush Etzion area, about 50 mm were measured (Maps 1, 2 and Table 1).

Further south the amounts were smaller - in the northern Negev 5 to 10 mm (less than half the average for March), in the central Negev 2 to 5 mm and in the Arava there was no rainfall.



**Map 1:** Precipitation in March 2021 (mm)



**Map 2:** Precipitation in March 2021  
– percent of average

**Table 1: Rainfall in March 2021 in comparison with the long term average<sup>1</sup>**

	<b>Station</b>	<b>Rainfall in March 2021 (mm)</b>	<b>Long term average for March (mm)</b>	<b>% of March average</b>
Coastal Plain and the Shfela <sup>2</sup>	Nahariyya	36	54	66%
	Evron	57	54	106%
	Haifa (Port)	49	48	102%
	Yagur	31	70	44%
	En HaShofet	39	63	62%
	En HaHoresh	26	55	48%
	Kefar Hess	48	62	78%
	Nir Eliyyahu	37	60	62%
	Nahshonim	23	55	42%
	HaKefar HaYarok	25	57	44%
	Miqwe Yisrael	16	49	33%
	Bet Dagan	29	55	53%
	Gan Shlomo (Rehovot)	29	52	56%
	Qevuzat Yavne	28	51	54%
	Nizzanim	11	48	23%
	Negba	37	53	70%
	Ziqim	20	41	48%
	Dorot	27	43	63%
	Yakhini	37	50	74%
	Be'eri	28	35	80%
Besor	11	24	46%	
Northern Mountains	Merom Golan Picman	53	102	52%
	Gamla	46	73	63%
	Elon	45	85	53%
	Kefar Gil'adi	69	90	77%
	Meron	83	100	83%
	Zefat Har Kenaan	62	76	81%
	Harashim	86	106	81%
	Deir Hanna	38	66	58%
Northern Valleys	Newe Ya'ar	30	55	55%
	Afula Nir Ha'Emek	37	45	82%
	Dafna	38	71	54%
	Kefar Blum	25	57	44%
	Ayelet HaShahar	32	50	64%
	Ginnosar	33	49	68%
	Zemah	17	42	41%
	Sede Eliyyahu	13	31	43%
Central Mountains	Kdumim	39	79	49%
	Eli	37	81	46%
	Talmon	20	79	25%
	Zova	38	83	46%
	Jerusalem Centre	37	67	55%
	Beit Jimal	25	61	41%
	Rosh zurim	49	70	70%
Negev	Arad	5	18	28%
	Beer Sheva	9	26	34%
	Sede Boqer	1	14	7%
	Mizpe Ramon	3	10	29%
Jordan Valley and the Arava <sup>3</sup>	Gilgal	4	18	22%
	Sedom	0.1		
	Hatzeva	0		
	Paran	0		
	Timna (Ramon Apt.)	0		
	Elat	0		

<sup>1</sup> Long-term average pertains to 1991-2020. For stations that were not active, averages are computed for this period

<sup>2</sup> Foothills between the Coastal Plain and the central mountains.

<sup>3</sup> In arid zones, the monthly average and the rainfall for the same period average are not presented due to the non-regular characteristics of rainfall in these areas

### **Rain events in March**

March 1: In the north of the country, 5 to 15 mm were measured and in Nahariyya area about 20 mm were measured. In the central Coastal Plain a few millimeters were measured. The event started on February 28, but it rained mostly on March 1.

March 2-4: In the Coastal Plain 10 to 25 mm were measured, locally about 30 mm or more. In the northern and central mountains and in the northern valleys 5 to 15 mm were measured.

March 11: A fairly wide spread rainfall - from the north of the country to the northern Negev, 5 to 15 mm were measured and in Gush Etzion area close to 30 mm during the passing of a cold front accompanied by lightning and strong winds.

March 17: Sparse rainfall, mostly in the north.

March 21 – 26: During this event, amounts of about 10 to 20 mm were measured in the north and the center of the country and in several places, mainly in the northeast, 25 to 30 mm and even 40 mm and more, were measured. In the north of the country it rained, usually in small amounts, in each one of the days, and more significant amounts were measured on the 24th. In the center of the country, rains occurred mainly from the 23rd to the 26th of March.

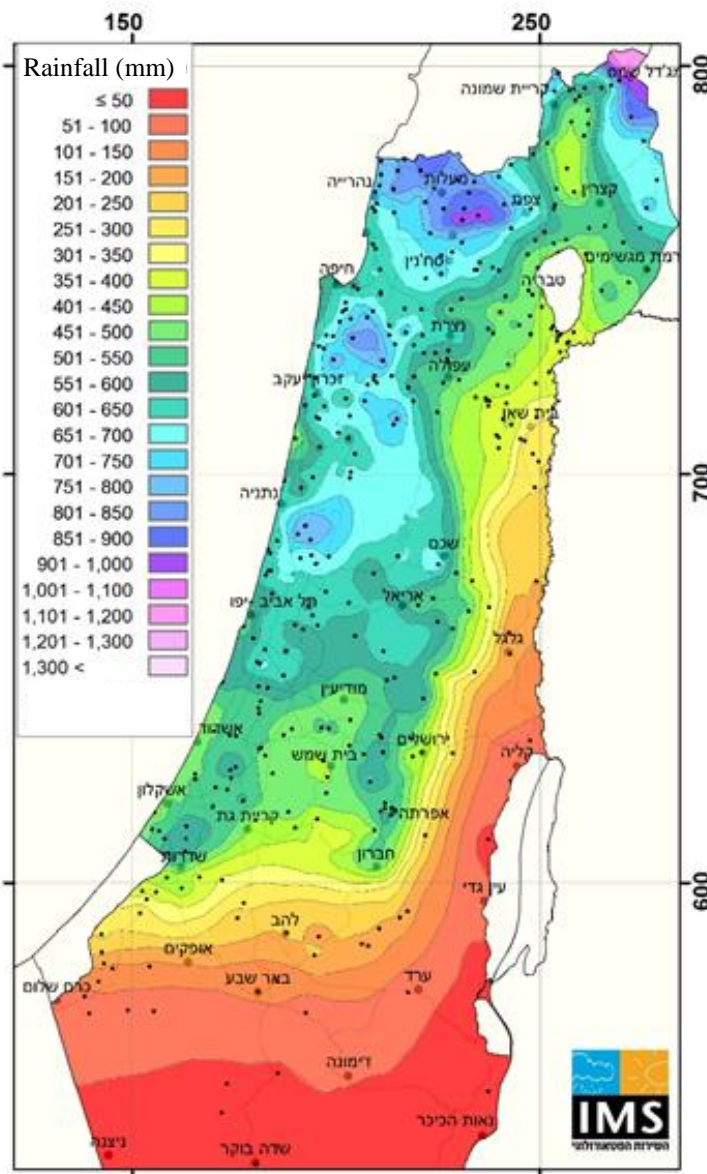
### **Accumulated rainfall since the beginning of the season**

The reference is to the rainfall amounts accumulated since the beginning of the season until yesterday (April 4), so that they include the rains that were measured in early April.

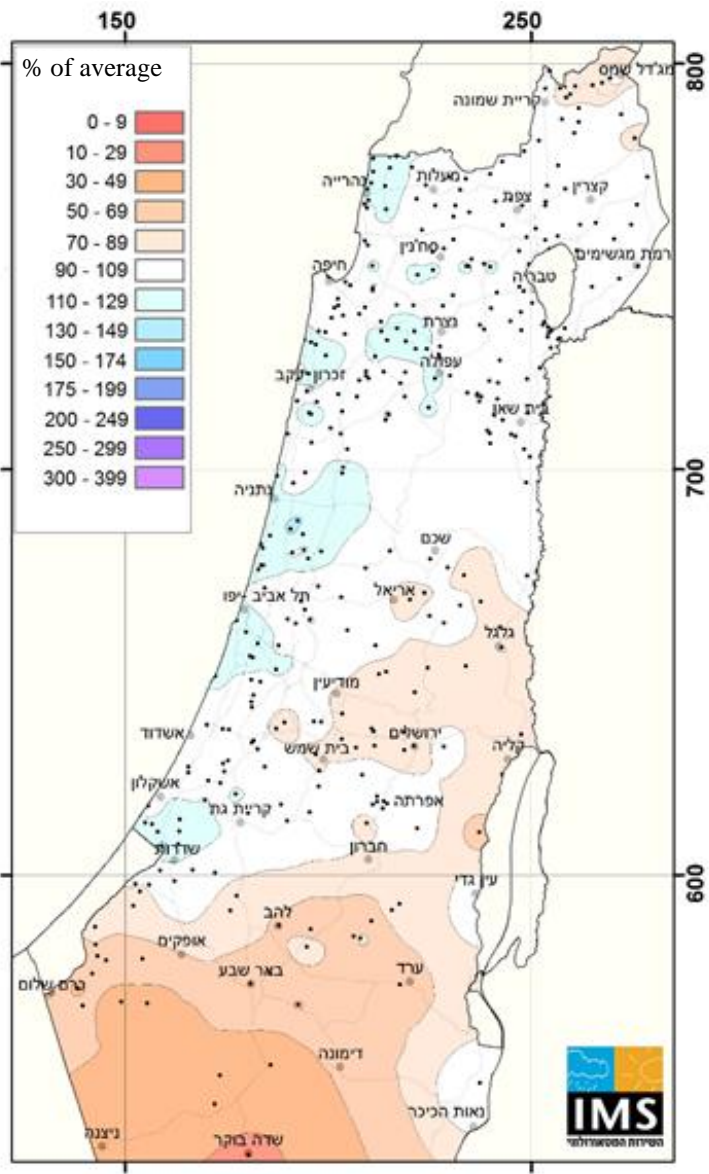
The accumulated amounts are higher than the average for the entire season in the Coastal Plain, close to it in the north of the country and below it in the central and southern mountains.

From the beginning of the season, the Coastal Plain received 105% to 115% of average for the entire season, and in some places even 120% or more (the Nahariyya area, parts of the Sharon and the western Jezreel Valley). In the north of the country and in Samaria, the accumulated amounts are close to the long-term average for the entire season (Maps 3, 4 and Table 2).

In the Judean Mountains, the amounts are smaller than average and reach 80% to 90%, and the deficit is even more pronounced in the south of the country - in the northern Negev, only 55% to 65% of the average for the entire season were so far measured.



**Map 3:** Accumulated precipitation Sep 2020 to April 4, 2021 (mm)



**Map 4:** Accumulated precipitation Sep 2020 to April 4, 2021 - % of same period average

**Table 2: Accumulated rainfall since the beginning of the season until the end of March 2021 / 04 April 2021 compared with the average<sup>1</sup>**

Station	Accumulated rainfall Sep 2020-March 2021 (mm)	Accumulated rainfall Sep 202 to 4.4.2021 (mm)	Annual average (mm)	% of average for the same period	% of annual average
Nahariyya	728	743	636	118%	121%
Evron	691	707	615	110%	113%
Haifa (Port)	542	563	565	96%	100%
Yagur	741	772	709	105%	109%
En HaShofet	653	666	661	99%	101%
En HaHoresh	615	627	576	107%	109%
Kefar Hess	775	780	614	126%	127%
Nir Eliyyahu	663	672	636	104%	106%
Nahshonim	608	616	552	110%	112%
HaKefar HaYarok	593	597	566	105%	105%
Miqwe Yisrael	578	583	522	111%	112%
Bet Dagan	627	639	540	116%	118%
Gan Shlomo (Rehovot)	561	563	535	105%	105%
Qevuzat Yavne	513	514	526	98%	98%
Nizzanim	528	528	505	105%	105%
Negba	551	552	500	110%	110%
Ziqim	496	496	447	111%	111%
Dorot	381	381	394	97%	97%
Yakhini	452	452	451	100%	100%
Be'eri	261	261	359	73%	73%
Besor	117	117	216	54%	54%
Merom Golan Picman	672	699	811	83%	86%
Gamla	526	545	578	91%	94%
Elon	854	868	805	106%	108%
Kefar Gil'adi	678	693	757	90%	92%
Meron	784	811	881	89%	92%
Zefat Har Kenaan	646	665	688	94%	97%
Harashim	958	989	988	97%	100%
Deir Hanna	597	624	616	97%	101%
Newe Ya'ar	702	716	584	120%	123%
Afula Nir Ha'Emek	507	514	460	110%	112%
Dafna	524	536	615	85%	87%
Kefar Blum	452	457	507	89%	90%
Ayelet HaShahar	478	492	472	101%	104%
Ginnosar	451	466	447	101%	104%
Zemah	407	411	383	106%	107%
Sede Eliyyahu	258	259	278	93%	93%
Kdumim	642	648	642	100%	101%
Eli	537	543	522	103%	104%
Talmon	548	551	648	85%	85%
Zova	539	541	656	82%	82%
Jerusalem Centre	420	421	522	80%	81%
Beit Jimal	443	445	506	88%	88%
Rosh zurim	519	521	564	92%	92%
Arad	86	86	134	64%	64%
Beer Sheva	106	106	192	55%	55%
Sede Boqer	22	22	87	25%	25%
Mizpe Ramon	29	29	70	41%	41%
Gilgal	144	144	171	84%	84%
Sedom	41	41	39	105%	105%
Hatzeva	23	23	40	58%	58%
Paran	9	9	33	27%	27%
Timna (Ramon Apt.)	21	21	25	84%	84%
Elat	18	18	22	82%	82%

<sup>1</sup> Long-term average pertains to 1991-2020. For stations that were not active, averages are computed for this period

<sup>2</sup> In arid zones, the monthly average and the rainfall for the same period average are not presented due to the non-regular characteristics of rainfall in these areas

### **Temperatures and weather during the month**

Temperatures in March were close to the average (1995-2009) and as typical for this month of the late winter and the early spring, temperatures changed rapidly, with significantly cooler-than-average periods and warm periods, including Sharav days.

The first days of the month were cooler than average. In the mountains and in the northern valleys, minimum temperatures of 2 to 3°C were measured on some days, and in the northern Golan Heights, temperatures of less than 0°C were also measured.

On the 9<sup>th</sup> it became warmer, and even more so on the 10<sup>th</sup>. A Sharav prevailed with temperatures of 31 to 33°C in the Coastal Plain and 34 to 35 ° C in the northern Negev. In the next morning a cold front passed accompanied by strong winds and rain, leading to a considerable cooling of 10 to 15 C and the temperatures became close to average and even below that. The following days were more stable with temperatures close to average.

On the 20<sup>th</sup> there was a rise in temperatures and on the 21<sup>st</sup> to the 22<sup>nd</sup> the weather was considerably warmer than average. On the 23<sup>rd</sup> there was further warming and a Sharav prevailed with temperatures of 32 to 33 degrees in the Coastal Plain and in the valleys, 34 to 36 degrees in the northern Negev and 27 to 28 degrees in the mountains. On the 24<sup>th</sup> there was a considerable cooling with haze that continued to prevail until the afternoon.

The cooling trend continued on the 25<sup>th</sup>, so during the last week of the month the weather was significantly cooler than usual. Similarly to the beginning of the month, temperatures of 2 to 3°C were measured in the mountains and in the northern valleys and temperatures below 0°C were measured in the northern Golan.

**Table 3: March 2021 temperatures (°C) compared with the average**

Region	Station	March 2021		Deviation from the average 1995-2009	
		Maximum	Minimum	Maximum	Minimum
Coastal Plain and the Shfela	Haifa (Technion)	19.3	11.5	+0.7	+0.1
	En HaHoresh	21.0	8.9	+0.2	+1.1
	Bet Dagan	21.7	10.8	+0.5	+0.7
	Negba	20.7	9.9	0.0	0.0
Northern mountains	Elon (western Galilee)	19.2	10.1	-0.2	-0.4
	Merom Golan Picman	15.1	5.0	+0.6	+0.9
	Avne Etan	19.0	7.3	-0.1	-0.2
	Zefat Har Kenaan	14.2	6.5	-0.7	-1.0
	Deir Hanna	19.7	11.3	+0.4	+0.2
Northern valleys	Afula, Nir HaEmeq	21.3	7.8	-0.2	+0.6
	Eden Farm (Bet Shean)	23.2	10.0	+0.3	0.0
	Kefar Blum	22.3	8.2	+0.5	-0.5
	Zemah	23.0	10.2	-0.1	0.0
Central mountains	Qarne Shomron	19.6	9.4	+0.4	-0.2
	Jerusalem	16.9	8.9	-0.1	-0.3
	Bet Jimal	20.3	11.0	-0.1	+0.1
	Rosh Zurim	15.2	7.4	+0.3	-0.3
Negev	Besor	21.7	10.2	-0.2	+0.3
	Arad	19.7	8.6	+0.3	-0.6
	Be'er Sheva	22.6	9.7	+0.6	-0.1
	Sede Boqer	21.0	7.6	+0.7	-0.1
Arava	Sedom	26.2	18.2	+0.4	+0.4
	Elat	27.6	15.2	+1.2	+0.6



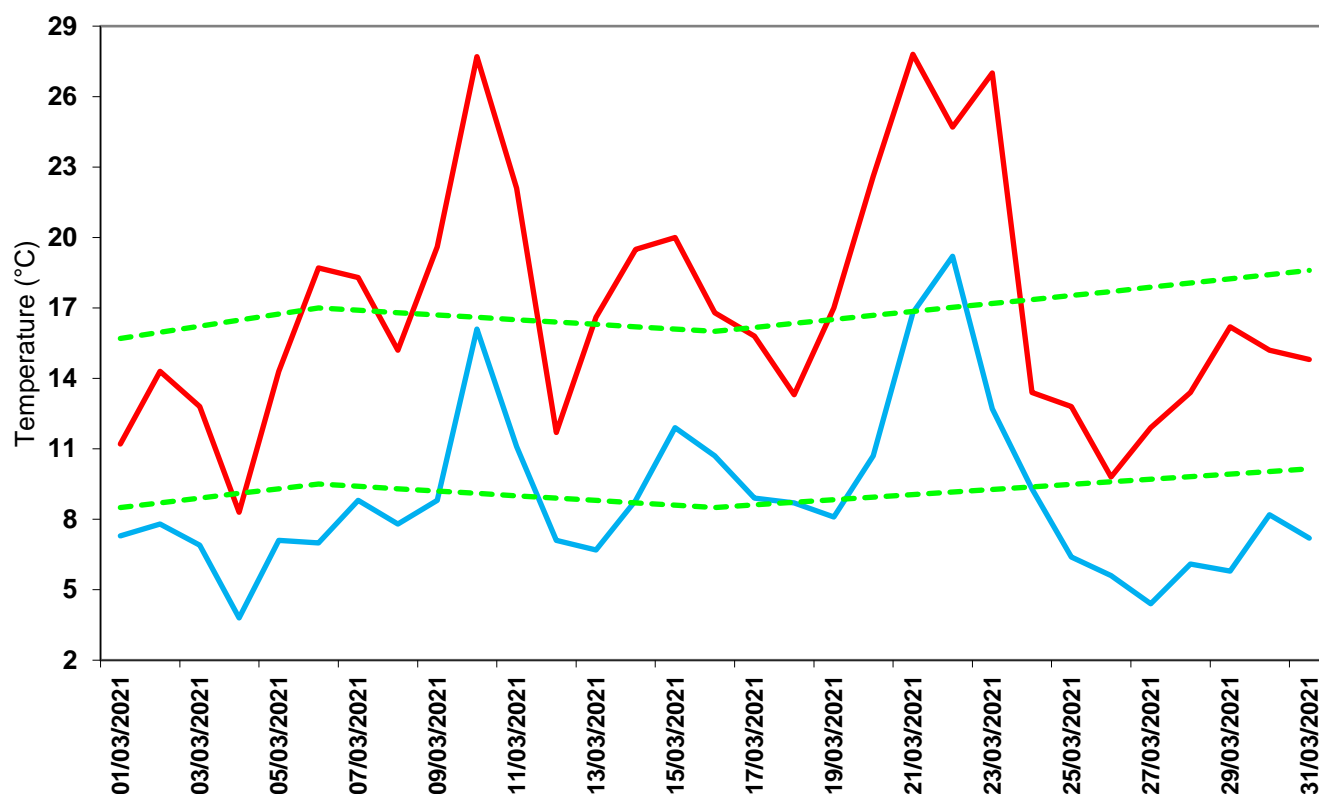
**Table 4: Extreme temperatures in March 2021 (°C) compared with the past**

Station	March 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	<b>*41.5</b>	19/4/21	8.2	13/4/21 14/4/21	41.2	20/4/94	3.0	1/4/88	1962-2021
Negba	42.0	19/4/21	7.4	5/4/21	42.0	20/4/94	2.5	1/4/56	1950-2021
Zefat Har Kenaan	31.8	30/4/21	3.0	11/4/21	34.5	24/4/08	0.2	6/4/49	1939-2021
Jerusalem <sup>1</sup>	35.6	19/4/21	6.1	11/4/21	36.3	23/4/36	0.8	2/4/90	1867-2021
Be'er Sheva <sup>2</sup>	40.8	19/4/21	5.4	4/4/21	43.8	30/4/28	1.5	15/4/52	1922-2021
Elat	42.5	30/4/21	12.1	11/4/21	43.4	24/4/08	8.4	3/4/90	1949-2021

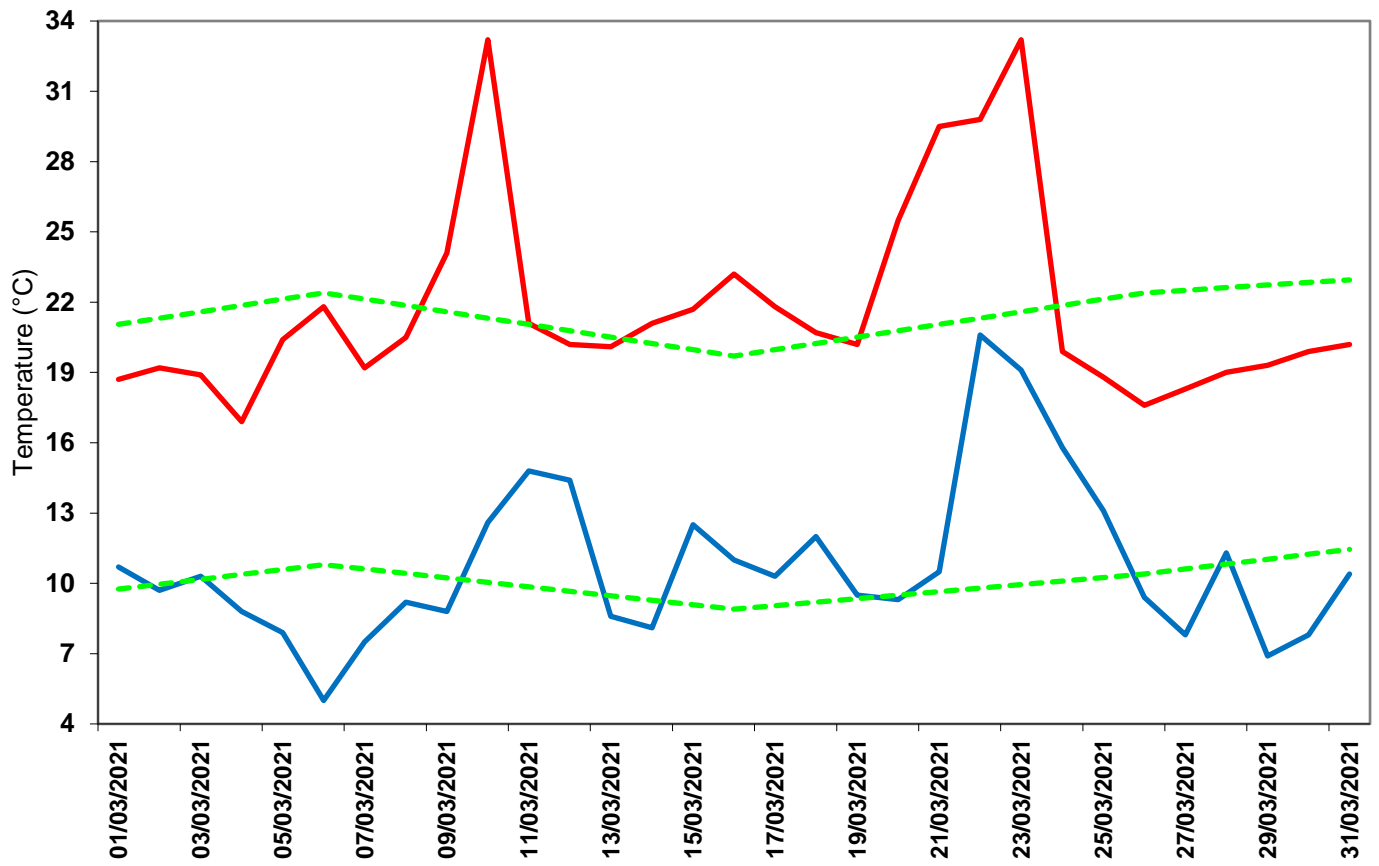
\* New record

<sup>1</sup> 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

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



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



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

1995-2009 Average      2021      Min      Max