

1 December, 2022

Monthly Weather Summary – November 2022

November was close to average in both rainfall and temperatures.

There were areas where November was rainier than average, some even considerably, such as the southern coastal plain. On the other hand, there were areas where the amounts of rain were small, such as the Gush Dan region and the Sharon region, so that on a national average, the amounts were close to the monthly average.

In terms of temperatures, the month was close to average in most parts of the country and slightly warmer than the average on the coastal plain. There were no extreme heat waves, but in the second part of the month there was a relatively long warm spell.

Rain

In November there was regional variance in rainfall, with more rainy areas alongside less rainy areas, although the differences between the regions were not extreme.

The southern part of the coastal plain (from Rishon LeZion to the south) was rainier than the average, and this stood out in two strips. One in the area of Rishon LeZion-Ben Gurion Airport and to the east towards Modi'in and southern Samaria, where the amounts reached 110% to 150% of the average per month. A second strip stretched from Ashkelon and the northern Gaza envelope to the southern lowlands and the western Judean Mountains, where rainfall in November reached 1.5 to 2 times the average per month (for example, Or Haner with 100 mm compared to an average of 55 mm). Another rainy area was in the Jordan Valley, in parts of which the amounts reached twice the average and more (Sha'ar HaGolan with 71 mm compared to a monthly average of 37 mm, Fatsa'el with 42 mm compared to an average of 17 mm). Other rainy regions in the country were in the northern Hula Valley, the northern Golan heights and the Galilee finger with amounts that reached 110% to 140% of the average (Figure 1).

In the north of the country, the amounts as a whole were close to the average with rainier areas in the Upper Galilee and areas with below average amounts such as the Lower Galilee and the Haifa region. In the northern and central coastal plains, it was rainy in the area of Zichron Ya'akov and the Carmel. In contrast, in the Sharon and Gush Dan regions, November was relatively dry, with amounts of rain reaching only 60% to 80% of the average. In the Judean Mountains it was rainier than the average, mainly on the mountain range and in its eastern part.

In most parts of the Negev there was little rain (except for Be'er Sheva), while in the Arava, there were large amounts of rain relative to this area, especially in the southern part (15 mm in Timna Ramon Airport, 12 mm in Eilat).

Table 1 presents data of the rainfall in November compared to the average for a number of stations.

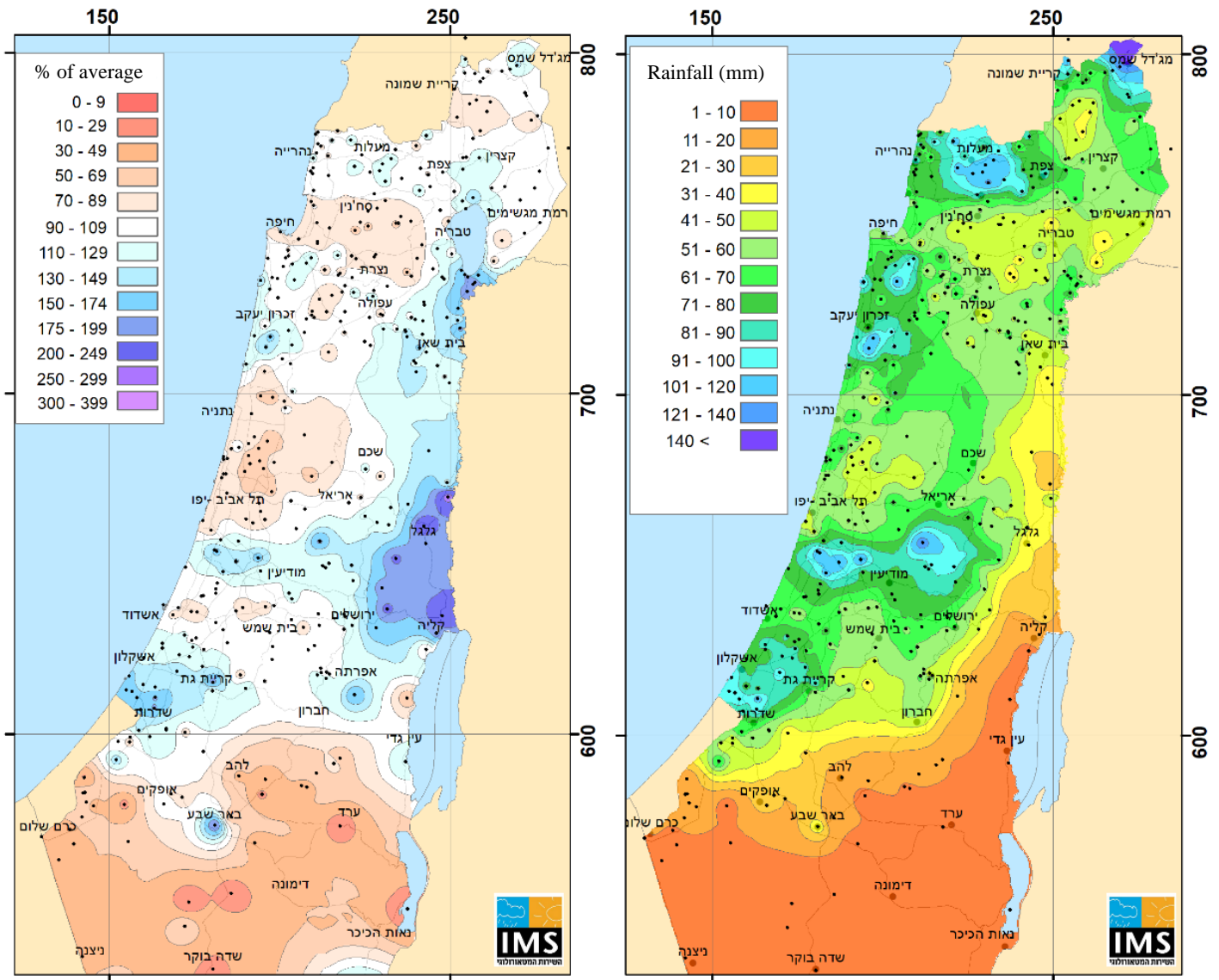


Figure 1: Rainfall amounts in December (right - mm) and comparison to the monthly multi-annual average (left - %)

November rainfall episodes

In November there were several episodes of rain.

- A. November 1 to 2: Rain fell mainly in the north of the country and in the coastal plain. The amounts were usually 5 to 10 mm, but there were places with rainfall of more than 20 mm (Farod 32 mm, Kfar Sumei 29 mm, Tel Dan 22 mm).
- B. November 7 to 9: The first organized system of the season with tens of millimeters in the north and in the center of the country. In many areas the amounts were 20 to 40 mm, but there were some areas with amounts of 40 to 60 mm and above, such as the southern coastal plain and the north of the Gaza envelope, the Akko-, Nahariya area, and southern Gush Dan. In contrast, there were areas with amounts of only 10 to 20 mm, such as Haifa, the Lower Galilee and Rehovot-Ashdod.
- C. November 14 to 17: Rain fell in different parts of the country, usually in amounts that were not considered large. In many places the amounts were 5 to 15 mm, but locally larger amounts were measured – in Be'er Sheba 26 mm fell in one hour, in Negba 33 mm of rain fell, with half of them within half an hour, in Gat rainfall amounts were 39 mm. In contrast, there were areas in which almost no rain fell, such as the central coastal plain and the Haifa area, as well as the Dead Sea and the Arava areas.
- D. November 23 to 26: A significant system in which more than 50 mm fell in some regions of the country. The areas that received the largest amounts of rain were the northeast of the country (Neve Ativ 90 mm, Metulla 71 mm), the central mountains and the central and southern coastal plain. In the Rishon LeZion area, 50 to 70 mm of rain fell, some of which within a short time, causing flooding in the area. On the other hand, there were areas with much smaller amounts of rain, such as the Tel Aviv area and parts of the Sharon region, with about 10 to 20 mm of rain.
- E. November 28 to 30 : Rain fell in some parts of the country. At the first stage (November 29th in the early morning), the rain focused on the south and caused flooding in some of the Negev and the Arava wadis (in Timna Ramon 10 mm, in Yotvata 7 mm). Around noon time, the rains focused on the Sharon region and on the northwest of the country. In some of the stations, large amounts were measured (Daliyat El Carmel 43 mm, Yagur 40 mm, Atlit 33 mm).

Table 1: November 2022 rainfall compared to the multi-year average for the month*

Area	Station	November 2022 (mm)	Multi-year average for November (mm)*	% of the average for November
Coastal plain and lowlands	Rosh Haniqra	74	66	112%
	Nahariyya	88	73	121%
	Evron	77	74	104%
	Haifa Technion	68	76	89%
	Haifa (Port)	53	71	75%
	Yagur	96	73	132%
	En Hashofet	62	76	82%
	Zichron Yaakov	68	68	100%
	Amikam	94	78	121%
	Gilad	80	76	105%
	En HaHoresh	50	76	66%
	Kefar Hess	44	73	60%
	Nir Eliyyahu	49	72	68%
	Nahshonim	57	65	88%
	Hakfar Hayarok	54	72	75%
	Tel Aviv Coast	40	59	68%
	Mikve Yisrael	46	68	68%
	Bet Dagan	76	71	107%
	Ben Gurion Airport	85	66	129%
	Gan Shlomo	83	74	112%
	Qevuzat Yavne	56	75	75%
	Nitzanim	50	80	63%
	Negba	97	63	154%
	Zikim	101	59	171%
	Dorot	49	41	120%
Yachini	53	48	110%	
Be'eri	73	51	143%	
Besor	18	23	78%	
Northern Mountains	Nimrod Fortress	115	92	125%
	Merom Golan Picman	68	74	92%
	Gamla	50	56	89%
	Elon	105	91	115%
	Kabri	61	74	82%
	Kefar Giladi	89	81	110%
	Hurfesh	115	95	121%
	Merom	78	86	91%
	Zefat Har Kenaan	85	76	112%
	Deir Hanna	48	63	76%

Northern Valleys	Neve Ya'ar	67	66	102%
	Afula Nir HaEmek	55	50	110%
	Banias	104	72	144%
	Dafna	80	70	114%
	Kefar Blum	49	56	88%
	Ayyelet Hashahar	45	47	96%
	Ginnosar	33	43	77%
	Zemah	68	37	184%
	Sede Eliyyahu	32	30	107%
The central Mountains Negev	Kedumim	54	66	82%
	Eli	77	63	122%
	Talmon	86	72	119%
	Zova	58	70	83%
	Jerusalem Center	64	49	131%
	Beit Jamal	50	54	93%
	Rosh Zurim	51	54	94%
Negev	Arad	2	12	17%
	Beer Sheva	36	18	200%
	Sede Boqer**	1		
	Mizpe Ramon**	3		
Jordan Valley** and the Arava	Gilgal	30		
	Sedom**	1		
	Hazeva**	8		
	Paran**	1		
	Timna (Ramon Airport)**	11		
	Elat**	12		

* The multi-year average refers to the years 1991 to 2020. In stations that have not operated during this entire period of time, the averages are adjusted for these years.

** In an arid region there is no reference to the multi-year averages per month and parts of the season due to the irregular course of rain amounts in these regions.

Amount of rain since the beginning of the season

Although November was within the average limits, since October was characterized by little rainfall and September was devoid of precipitation, the amounts of rain since the beginning of the season are smaller than the average for the corresponding period and reach about 80% of it nationwide average. In the rainy areas of November, the amounts from the beginning of the season exceed the average for the corresponding period, such as the Rishon LeZion-Modi'in area, southern Samaria and the northern Judean Mountains and the southern Jordan Valley. The low rainfall relative to the average is noticeable in the central coastal plain and the Sharon region, as well as in the Haifa area and in Lower Galilee (Figure 2 and Table 2).

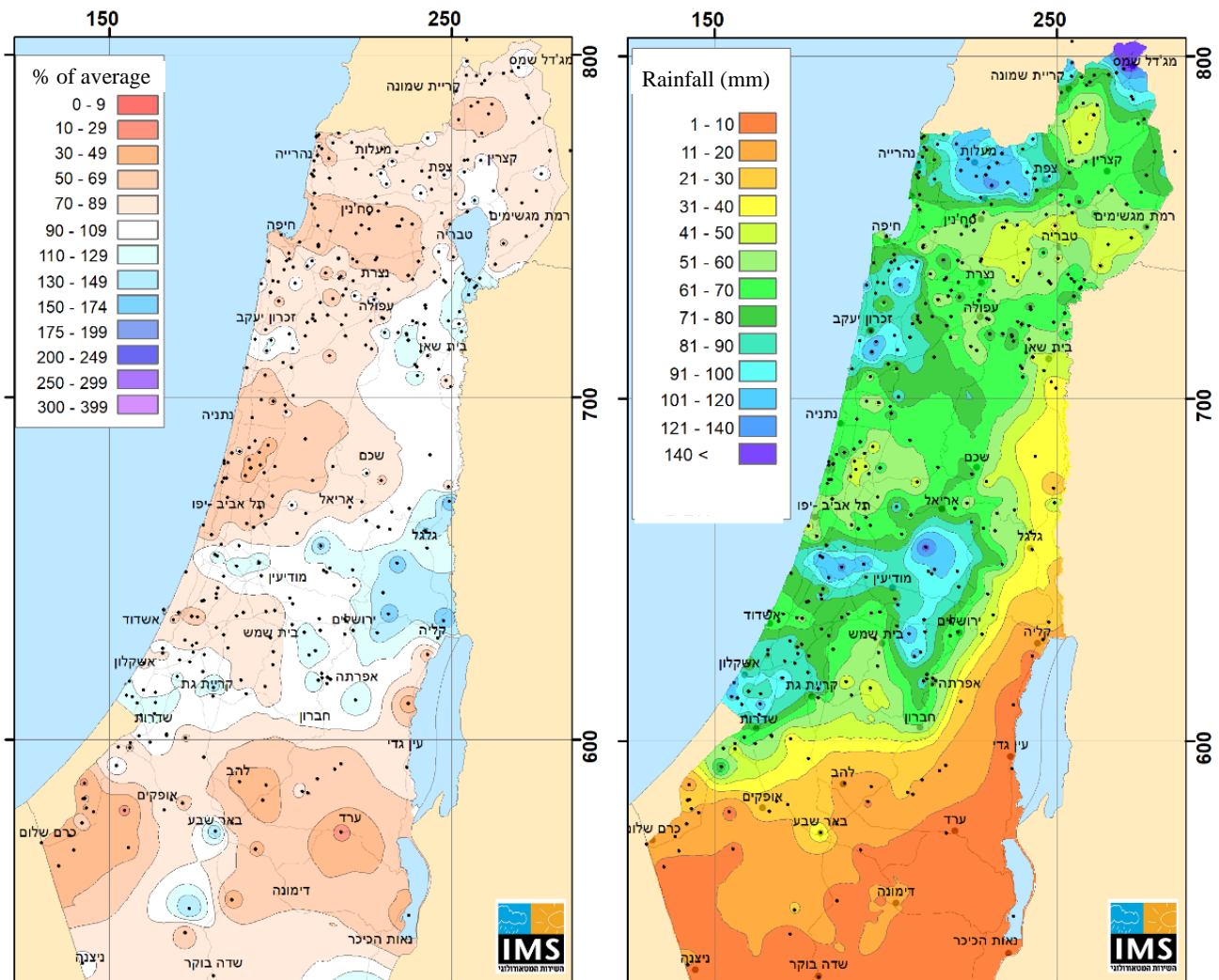


Figure 2: Rainfall amounts from the beginning of the season (right - mm) and comparison to the seasonal multi-annual average (left - %)

Table 2: Amounts of rain from the beginning of the season to date compared to the average*

Station	Cumulative amount from the beginning of the season to the end of November (mm)	Multi-year average* from September to the end of November (mm)	% of average for the corresponding period	Multi-year average* for the entire season (mm)	% Of average for the entire season
Rosh Haniqra	77	118	65%	613	13%
Nahariyya	91	113	81%	615	15%
Evron	82	111	74%	626	13%
Haifa Technion	78	117	67%	671	12%
Haifa (Port)	55	99	56%	565	10%
Yagur	100	105	95%	709	14%
En Hashofet	70	102	69%	661	11%
Zichron Yaakov	74	98	76%	574	13%
Amikam	98	104	94%	635	15%
Gilad	86	102	84%	654	13%
En HaHoresh	54	110	49%	576	9%
Kefar Hess	49	105	47%	614	8%
Nir Eliyyahu	58	103	56%	636	9%
Nahshonim	64	86	74%	552	12%
Hakfar Hayarok	59	105	56%	595	10%
Tel Aviv Coast	44	86	51%	443	10%
Mikve Yisrael	47	96	49%	522	9%
Bet Dagan	78	95	82%	540	14%
Ben Gurion Airport	89	88	101%	541	16%
Gan Shlomo	87	95	92%	535	16%
Qevuzat Yavne	61	98	62%	526	12%
Nitzanim	55	103	53%	505	11%
Negba	102	88	116%	500	20%
Zikim	104	85	122%	447	23%
Dorot	54	58	93%	394	14%
Yachini	60	68	88%	451	13%
Be'eri	79	70	113%	359	22%
Besor	23	34	68%	216	11%
Nimrod Fortress	119	122	98%	816	15%
Merom Golan Picman	75	94	80%	811	9%
Gamla	59	73	81%	578	10%
Elon	111	131	85%	805	14%
Kabri	66	110	60%	666	10%

Kefar Giladi	95	108	88%	757	13%
Hurfesh	118	129	91%	885	13%
Merom	85	115	74%	881	10%
Zefat Har Kenaan	95	102	93%	688	14%
Harashim	134	145	92%	988	14%
Deir Hanna	52	85	61%	616	8%
Neve Ya'ar	72	91	79%	584	12%
Afula Nir HaEmek	57	68	84%	460	12%
Banias	106	102	104%	690	15%
Dafna	83	96	86%	615	13%
Kefar Blum	54	78	69%	507	11%
Ayyelet Hashahar	46	66	70%	472	10%
Ginnosar	36	61	59%	447	8%
Zemah	69	52	133%	383	18%
Sede Eliyyahu	35	44	80%	278	13%
Kedumim	66	90	73%	642	10%
Eli	83	84	99%	522	16%
Talmon	97	92	105%	648	15%
Zova	82	86	95%	656	13%
Jerusalem Center	70	60	117%	522	13%
Beit Jamal	54	70	77%	506	11%
Rosh Zurim	74	71	104%	564	13%
Arad	5	19	26%	134	4%
Beer Sheva	40	27	148%	192	21%
Sede Boqer**	8			87	9%
Mizpe Ramon**	8			70	11%
Gilgal	31			171	18%
Sedom**	4			39	10%
Hazeva**	12			40	30%
Paran**	4			33	12%
Timna (Ramon Airport)**	15			25	60%
Elat**	16			22	73%

* The multi-year average refers to the years 1991 to 2020. In stations that have not operated during this entire period of time, the averages are adjusted for these years.

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Temperatures and weather during November 2022

The daytime temperatures in November were close to the average (1991-2020) in the mountains and inland and 0.5 to 1°C above average in the coastal plain. At night time they were 0.5 to 1.5°C higher than average in the coastal plain, the northern valleys, and in the Arava and close to the average in the mountains and in the Negev (Table 3).

At the beginning of the month, temperatures were close to average, but on November 5th and 6th it became warmer than usual, mainly in the mountains and inland. Later on the weather became cooler than usual for a few days. After that and until the middle of the month, temperatures were close to the average.

In the second half of the month it became warmer, and on November 18-23 there was a warm period during which temperatures of 30 to 32 °C were measured in the coastal plain, in the lowlands and in the Negev, and 33 to 35 °C were measured in the Jordan Valley and in the the Arava. On November 24th there was a considerable cooling, and later on cooler than average weather prevailed, mainly in the mountains and inland. Towards the end of the month, the temperatures returned to near average.

Table 1: The temperatures in November 2022 (degree Celsius) Compared to the average

	Station	November 2022		Difference whatis average 1991-2020	
		Maximum	Minimum	Maximum	Minimum
Coastal plain and lowlands	Haifa (Technion)	23.1	15.9	0.7	0.4
	En HaHoresh	25.2	12.7	0.8	1.2
	Bet Dagan	26.0	14.5	1.4	1.3
	Negba	24.6	14.5	0.4	0.9
Northern Mountains	Elon	23.6	14.7	0.2	0.3
	Merom Golan Picman	17.7	7.0	-0.4	0.6
	Avne Etan	22.6	11.6	0.3	0.4
	Zefat Har Kenaan	17.5	10.9	0.0	-0.2
	Deir Hana	22.9	15.6	0.8	1.0
	Tavor	25.3	13.7	0.8	0.9
Northern Valleys	Afula, Nir HaEmek	25.3	12.4	0.4	1.3
	Kefar Blum	25.9	13.1	0.7	2.0
	Zemach	26.2	15.4	0.2	1.4
	Eden Farm	26.3	14.9	0.4	1.5
Central Mountains	Qarne Shomron	23.2	14.5	0.4	0.6
	Jerusalem	19.6	13.1	-0.3	0.2
	Beit Jamal	23.8	15.2	-0.5	0.2
	Rosh Zurim	18.0	11.6	0.3	0.6
Negev	Besor	24.7	14.0	0.4	0.5
	Arad	21.5	12.8	0.0	0.1
	Beer Sheva	25.2	12.3	0.6	0.2
	Sede Boker	22.5	10.2	0.3	0.2
Arava	Sedom	26.5	15.3	0.3	1.2
	Hazeva	27.1	16.6	1.0	1.2
	Yotvata	28.3	21.6	0.8	1.4
	Elat	28.4	17.9	0.2	1.1

Table 2: Extreme temperatures in November 2022 (°C) compared to the past

	November 2022				Extreme values from the beginning of measurements				Years of activity Station
	Extreme maximum		Extreme minimum		Extreme maximum		Extreme minimum		
	Temp.	Date	Temp.	Date	Temp.	Date	Temp.	Date	
Bet Dagan	31.4	21/11/22	11.4	19/11/22	36.6	14/11/2010	2.6	30/11/1999	2022-1962
Negba	30.9	21/11/22	10.6	28/11/22	36.0	14/11/2010	1.0	30/11/1953	2022-1950
Zefat Har Kenaan	23.5	06/11/22	7.7	27/11/22	30.1	2/11/1941	-1.7	29/11/1953	2022-1939
Jerusalem*	25.5	06/11/22	9.3	25/11/22	33.2	2/11/1941	1.9	30/11/1953	2022-1867
Be'er Sheva**	30.4	21/11/22	9.3	27/11/22	38.3	3/11/1941	2.0	27/11/1961	2022-1922
Elat	34.9	21/11/22	13.6	30/11/22	38.1	2/11/1962	5.3	30/11/1953	2022-1949

* Jerusalem: Center 1950-2022, Talbieh 1948-1949, Palace Hotel 1935-1947, The American Colony 1927-1935, Mount of Olives 1918-1926, The German Colony 1895-1915, The English Hospital on HaNeviim Street 1898-1913, The English Hospital in the Old City 1867-1915

** Be'er Sheba Negev Institute 1957-2022, Be'er Sheba 1922-1957

Figure 3: The daily minimum and maximum temperatures in Jerusalem in November 2022 compared to the multi-year average

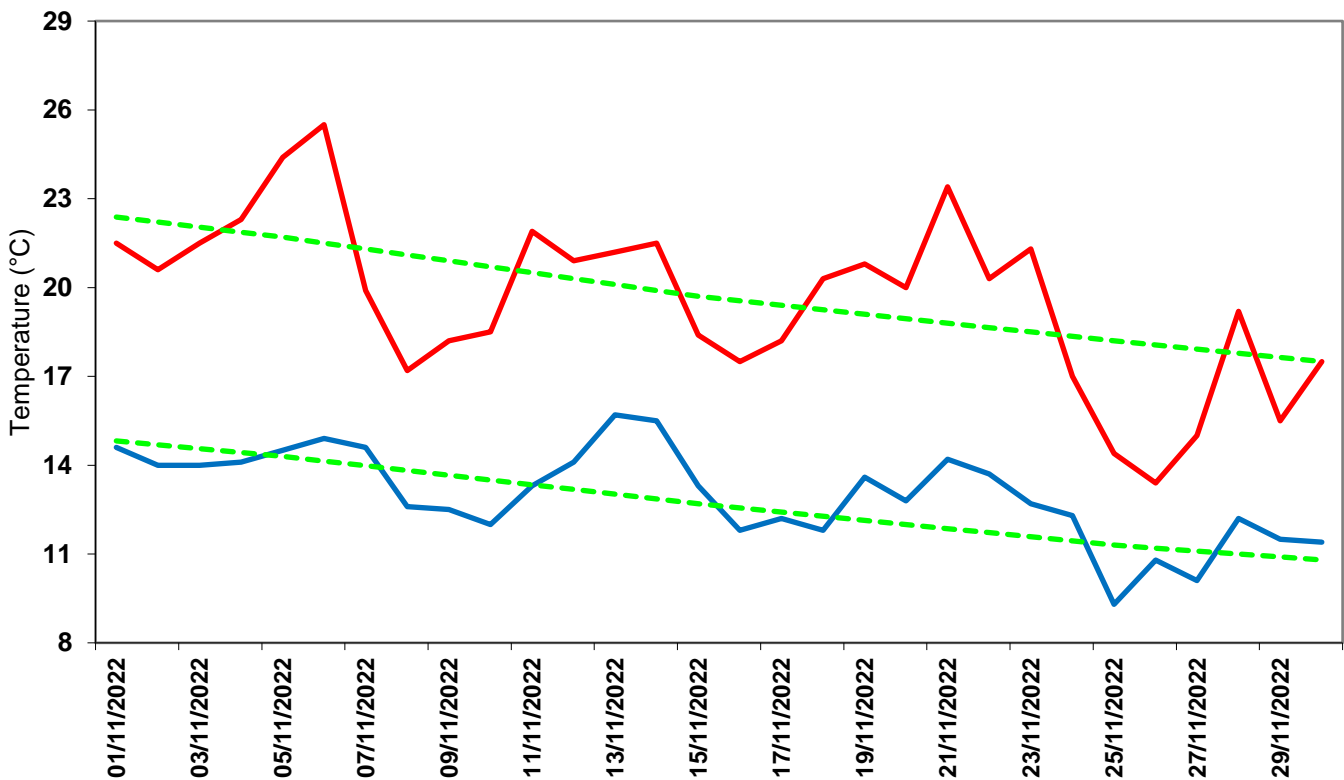


Figure 4: The daily minimum and maximum temperatures in Bet Dagan in November 2022 compared to the multi-year average

