State of Israel
Ministry of Transport
Israel Meteorological Service

18 August 2026

Exceptional Rainfall Event 15 to 16 August 2026

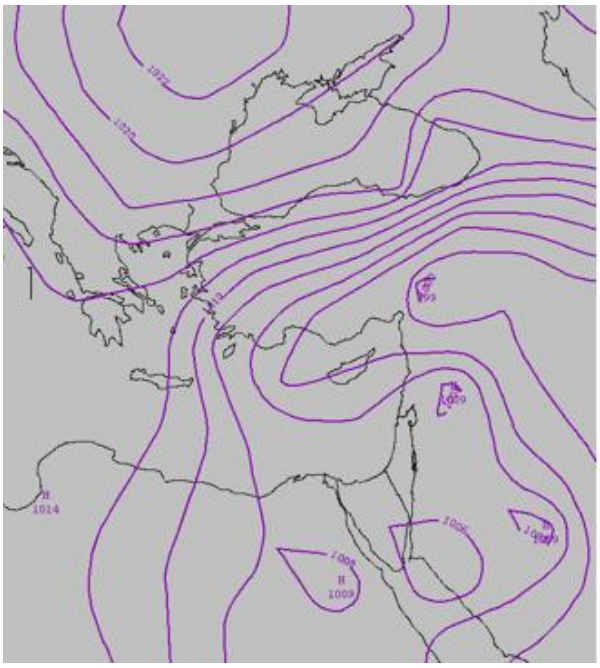
General

Extremely unusual rainfall for the core summer months occurred in mid-August 2026. On the 15th, the rainfall was concentrated over the Judean Hills, with totals of 30 mm in Jerusalem (St. Anne station in the Old City) and 26 mm in Maale Adumim. Since measurements began in the mid-19th century, no rainfall totals of this magnitude had previously been recorded in the Judean Hills during July or August; the highest total previously measured was only 1 mm (in 1932). On the 16th, rainfall was concentrated in the Jordan Valley and the Judean Desert, with double-digit totals that were likewise unprecedented for the summer months in this region.

The event was highly exceptional in terms of both rainfall totals and the areas affected, and may have been due to the influence of El Niño, which is strengthening to an exceptional intensity. Summer rainfall in general, although not usually in such large amounts, has become more frequent over the past two decades, whereas it was rarer beforehand.

Synoptic Situation

At upper levels, a trough was situated west of the region, with southwesterly flow, while at the surface the seasonal Persian trough prevailed (Figures 1 and 2). In the days preceding the event, the upper-level trough approaching the region from the west transported mid-tropospheric moisture from Europe towards North Africa (Figure 3), and the southwesterly flow aloft conveyed this moisture into the region. In addition, cooling occurred in the mid-troposphere: at 700 hPa (an altitude of about 3 km), the temperature fell ahead of the event from 14°C (near the monthly average) to 7°C, resulting in temperatures markedly below average in the mid-troposphere. This produced atmospheric instability that increased around midday on 15 August (Figure 4). Combined with the abundant mid-level moisture, it led to the development of deep convective clouds that produced rainfall over the Judean Hills and the Hebron Hills. A slight eastward shift of the systems on the following day led to the development of deep clouds around midday on 16 August over eastern Samaria, the Jordan Valley and the Judean Desert.



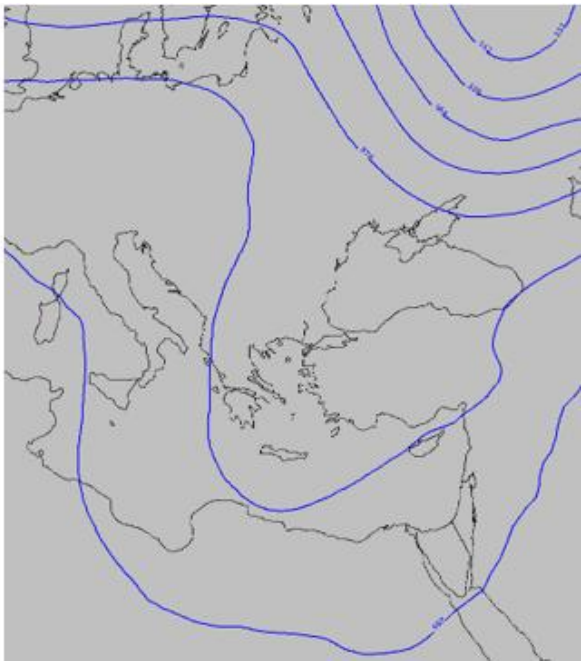


Figure 1 (right): 500-hPa chart, 15 August 2026, 00 UTC
Figure 2 (left): Surface chart, 15 August 2026, 00 UTC

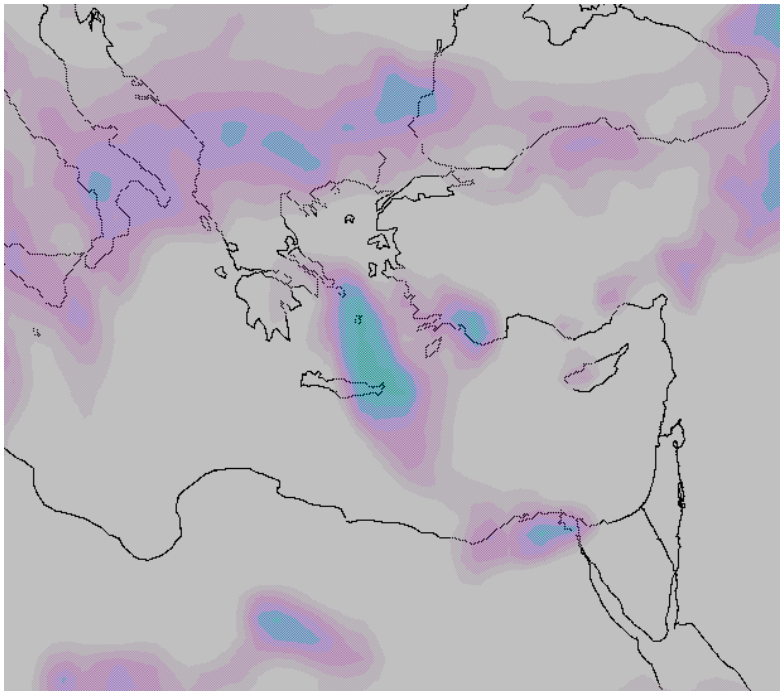
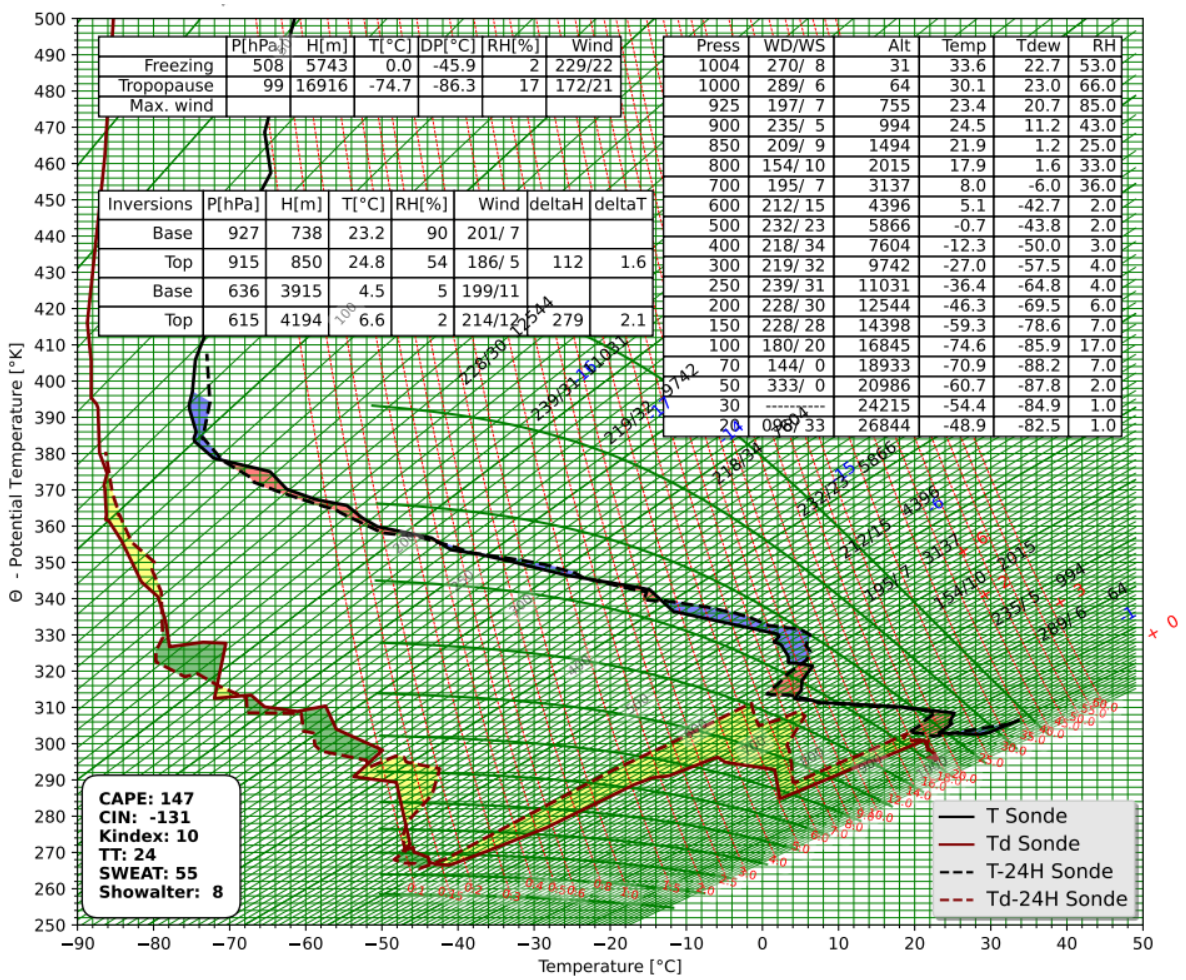


Figure 3: 600-hPa moisture chart, 13 August 2026, 12 UTC



	P[hPa]	H[m]	T[°C]	DP[°C]	RH[%]	Wind
Freezing	508	5743	0.0	-45.9	2	229/22
Tropopause	99	16916	-74.7	-86.3	17	172/21
Max. wind						

Inversions	P[hPa]	H[m]	T[°C]	RH[%]	Wind	deltaH	deltaT
Base	927	738	23.2	90	201/ 7		
Top	915	850	24.8	54	186/ 5	112	1.6
Base	636	3915	4.5	5	199/11		
Top	615	4194	6.6	2	214/12	279	2.1

Press	WD/WS	Alt	Temp	Tdew	RH
1004	270/ 8	31	33.6	22.7	53.0
1000	289/ 6	64	30.1	23.0	66.0
925	197/ 7	755	23.4	20.7	85.0
900	235/ 5	994	24.5	11.2	43.0
850	209/ 9	1494	21.9	1.2	25.0
800	154/ 10	2015	17.9	1.6	33.0
700	195/ 7	3137	8.0	-6.0	36.0
600	212/ 15	4396	5.1	-42.7	2.0
500	232/ 23	5866	-0.7	-43.8	2.0
400	218/ 34	7604	-12.3	-50.0	3.0
300	219/ 32	9742	-27.0	-57.5	4.0
250	239/ 31	11031	-36.4	-64.8	4.0
200	228/ 30	12544	-46.3	-69.5	6.0
150	228/ 28	14398	-59.3	-78.6	7.0
100	180/ 20	16845	-74.6	-85.9	17.0
70	144/ 0	18933	-70.9	-88.2	7.0
50	333/ 0	20986	-60.7	-87.8	2.0
30	----------	24215	-54.4	-84.9	1.0
20	090/ 33	26844	-48.9	-82.5	1.0

Figure 4: Bet Dagan tephigram, 15 August 2026, 12 UTC. Instability is evident through the mid-troposphere.

Rainfall Development and Totals

Around midday on 15 August, clouds began to develop in three areas: the Golan Heights, the Jerusalem–Maale Adumim area and Gush Etzion. The clouds continued to develop and produced rain during the afternoon. Jerusalem–St. Anne station, in the eastern part of the Old City, recorded 30 mm, and Maale Adumim recorded 26 mm, of which 21 mm fell within one hour. Stations in western Jerusalem measured about 5 mm. Rosh Zurim in Gush Etzion recorded 18 mm, Alon Shvut 12 mm, and other stations in the area about 5 mm. The accumulated radar rainfall image for 15 August shows the distribution over the Judean and Hebron Hills (Figure 5). In the Golan Heights, rain was reported only at Bental station (0.2 mm), but radar imagery suggests that several millimetres fell near Katzrin, possibly more than 10 mm.

Rainfall in the Jerusalem area caused flooding in the city's eastern and southern neighbourhoods, and in several cases residents had to be rescued from flooded homes and vehicles. The rainfall also caused flash flooding in Nahal Og in the northern Judean Desert and in the upper reaches of the Kidron Stream.

Around midday on 16 August, clouds developed again, mainly over the Jordan Valley, eastern Samaria and the Judean Desert. Rainfall totals of 12.4 mm at Gitit and 10.4 mm at Bekaot in the Jordan Valley were measured. Stronger radar echoes were observed east of Bekaot, and the Jordan Valley R&D rain station at Roi, an unofficial station, recorded 28.4 mm in approximately 20–30 minutes. Rain then spread gradually southwards from eastern Samaria into the Judean Desert, with about 8 mm recorded at Nabi Musa. Convective clouds also produced rain farther south, as far as Ein Gedi. As a result, Nahal Og flowed again, this time in its lower reaches, and Nahal Kedem near Ein Gedi also flowed. The accumulated radar rainfall image for 16 August shows the distribution over the Jordan Valley and the Dead Sea region (Figure 6). Table 1 gives rainfall totals at selected stations during the event.

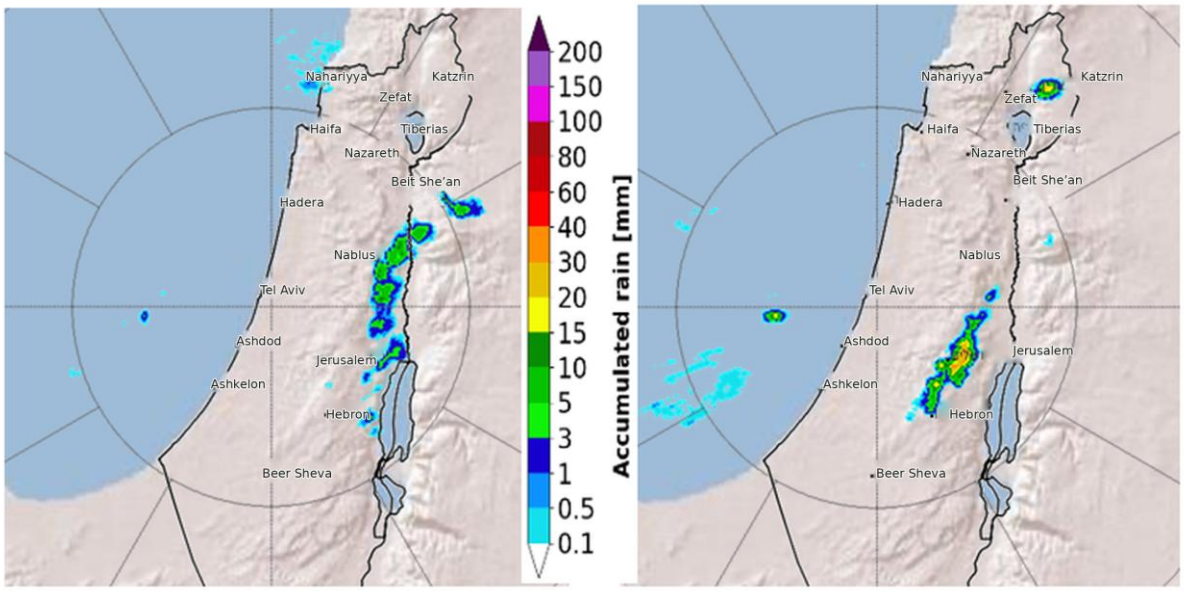


Figure 5 (right): Accumulated rainfall (mm), 15 August 2026
Figure 6 (left): Accumulated rainfall (mm), 16 August 2026

Table 1: Rainfall Totals on 15 and 16 August 2026 (mm)

Station	15 August 2026	16 August 2026
Jerusalem Center	4.8	0
Jerusalem Givat Ram	5.4	0
Jerusalem St. Anne	30.4	0
Maale Adumim	25.6	0
Rosh Zurim (manual)	18.0	0
Alon Shvut	12.5	0
Elazar	4.0	0
Kfar Etzion	6.1	0
Maale Mikhmas	2.2	0
Bekaot	0	10.2
Gitit	0	12.4
Roi	0	28.0
Pazael	0	6.3
Gilgal	0	1.0
Beit HaArava	0	2.8
Nabi Musa	0	8.1
Ein Gedi	0	1.0

Exceptional Nature of the Event

Rainfall Totals

This rainfall event was highly exceptional. Although rainfall during the two core summer months (July and August) is not particularly rare in western and northern Israel, the totals measured in and east of Jerusalem were unprecedented. Since measurements began in the city in the mid-19th century, no previous event had produced 30 mm or more, not only in July and August, the driest months of the year, but also in June or September. In one isolated case, on 12 September 1932, tens of millimetres of rain fell west and southwest of the city, but totals within Jerusalem itself remained below 30 mm.

Only a few rainfall events had previously occurred in July and August, and the highest total at any Jerusalem station was just 1 mm; thus, totals of 30 mm are of a completely different order of magnitude. The rainfall in the Jordan Valley (10 mm or more) was also unprecedented for the summer months in this region.

It should be emphasised that totals of 25 mm or more in northern Israel during July and August are also exceptional, with only six other such cases since measurements began.

Flash Floods in August

Before this event, no August flash floods had been documented in the streams of the Judean Desert. Within the rainy-season cycle, the earliest known flash flood had occurred in the Ein Gedi streams on 4 September 1956. The only previous flash-flood event in August or September during the preceding 50 years occurred on 15 September 2015, also a strong El Niño year.

Rainfall Intensities

Most of the rain on the 15th fell within a single hour: at Maale Adumim, 23 mm of the 26 mm total fell within one hour. The St. Anne station provides daily measurements only, but the rainfall pattern indicates that most of its 30 mm total fell within one hour. The one-hour rainfall threshold associated with a 5% annual exceedance probability (an average return period of 20 years) is approximately 21 mm at Maale Adumim (based on about 20 years of observations) and approximately 25 mm at Jerusalem Center (based on about 75 years of observations). These thresholds were exceeded during the event. Indeed, over much of the Mount of Olives-Al-Eizariya-Anata area, the return period for the one-hour rainfall totals was 20 years or more, considering the entire rainy season.

Increase in the Overall Frequency of Summer Rainfall

Rainfall during the core summer months is not in itself exceptional and occurs from time to time; however, it is generally light and tends to be concentrated near the coast and in the Western Galilee. Double-digit rainfall totals and rainfall extending into inland areas are exceptional. Only a few such events occurred in July and August in the past, as shown in Table 2.

It is noteworthy that, over the past two decades, these cases of significant rainfall during the core summer months (July and August) have been more frequent than in the past. Since 2006 there have been seven such events, four of them in the past six years. An increase in the frequency of rainfall events can also be identified during the summer shoulder months of June and September.

Table 2: Significant Rainfall Events During the Core Summer Months (July-August), 1920-2026

Event Date(s)	Maximum Event Total (mm) (Station)	Rainfall Distribution During the Event
15-16 Aug 2026	**30 (Jerusalem St. Anne)**	**Widespread and inland: Judean Hills, Jordan Valley, northern Dead Sea and Golan Heights**
29 Aug 2023	11 (Ram On and Mishmar HaEmek)	Northern Israel
21 Aug 2022	10 (Yonatan)	Mainly northeastern Israel
23-24 Jul 2021	**29 (Hanita)**	Widespread event across northern Israel and the Coastal Plain
29-30 Aug 2012	**29 (Rosh Haniqra and Saar)**	Northern Coastal Plain and northeastern Israel
16 Aug 2008	15 (Malkiya)	Localized in the Eastern Galilee
20-21 Aug 2006	21 (Yiftah)	Mainly northeastern Israel
9-12 Jul 1995	**34 (University of Haifa)**	Widespread and prolonged event
25 Aug 1990	17 (Akko)	Widespread event across northern Israel
3 Jul 1981	**26 (Kefar Giladi)**	Mainly northeastern Israel
3-5 Aug 1971	**33 (Kefar Galim)**	Widespread event
1-3 Jul 1957	12 (Regba)	Widespread event
31 Aug 1922	13 (Ramla)	
August 1920	**30 (Zichron Yaakov)**	

Relationship Between the Rainfall Event, El Niño and Climate Change

This highly exceptional event also affected neighbouring countries. Latakia in northwestern Syria received 130 mm, an exceptionally high summer total, and rain also reached Jordan. More broadly, the preceding week was marked by abundant rainfall at latitudes of 30°–35°N across the Middle East and North Africa, including Algeria, Tunisia, the Libyan promontory, Marsa Matruh in Egypt and Kuwait. In some of these places, August rain is less unusual than in Israel. Nevertheless, the near-simultaneous occurrence of rain in many locations normally dominated by subsiding air that suppresses rainfall was itself highly exceptional.

In view of the increase in summer rainfall over the past two decades, particularly significant rainfall in inland areas, this may be linked to the general trend of global warming, which is particularly pronounced during El Niño years, especially during strong El Niño events.