

The daily Temperature on DJF in comparison with the past

The winter of 2009/10 was characterized by relatively high temperatures. In each of the central winter months (DJF) the temperatures were considerably higher than average. From the comparison of the average daily temperature of those months with the past, it appears that the 2009/10 winter was the hottest one since the beginning of the measurements history. This is true for stations in most of the areas, except the stations in the northern valleys (the Yizre'el Valley, the Hula Valley and the Sea of Galilee, where the 1962/63 winter was hotter).

At the tables shown below one can see the average daily temperature in Jerusalem and Har Kenaan at the 2009/10 winter compared with the perennial average of 1981-2000 and the perennial average of the last ten years. One may also see there the average temperature of the two winters, which were the hottest ones except the current one.

Jerusalem*

The perennial average		The hottest winters		
2009-1999	2000-1981	2005/06	1962/63	2009/10
10.7 deg	9.9 deg	12.0 deg	12.2 deg	13.3 deg

* The Jerusalem data is based on the station at the Palace Hotel 1935-1947, the station at Talabiya 1948-1949 and the station at Generaly 1950-2000.

Har Kenaan

The perennial average		The hottest winters		
2009-1999	2000-1981	**1962/63	1940/41	2009/10
8.4 deg	7.7 deg	9.9 deg	10.1 deg	10.8 deg

**The station at Mount Kanaan did not operate during 1962-1964. Estimation for those years was made with data from the station at Tirat Ya'el

The following figures include the average daily temperature in each winter (DJF) since the beginning of the measurements until today in Jerusalem and Har Kenaan. These

graphs, as well as the data tables present the substantial difference between the 2009/10 winter and the other winters, including the hottest winters, besides the current one.

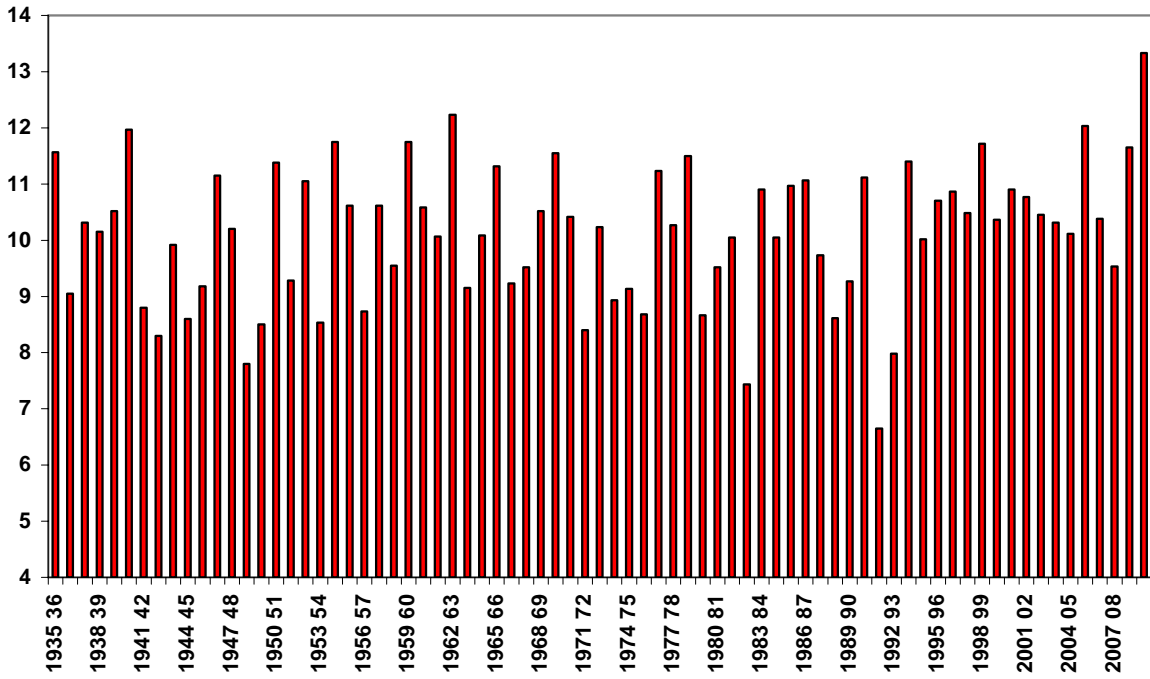


Fig. 1: Average daily temperature in Jerusalem in each winter from 1935 to 2010

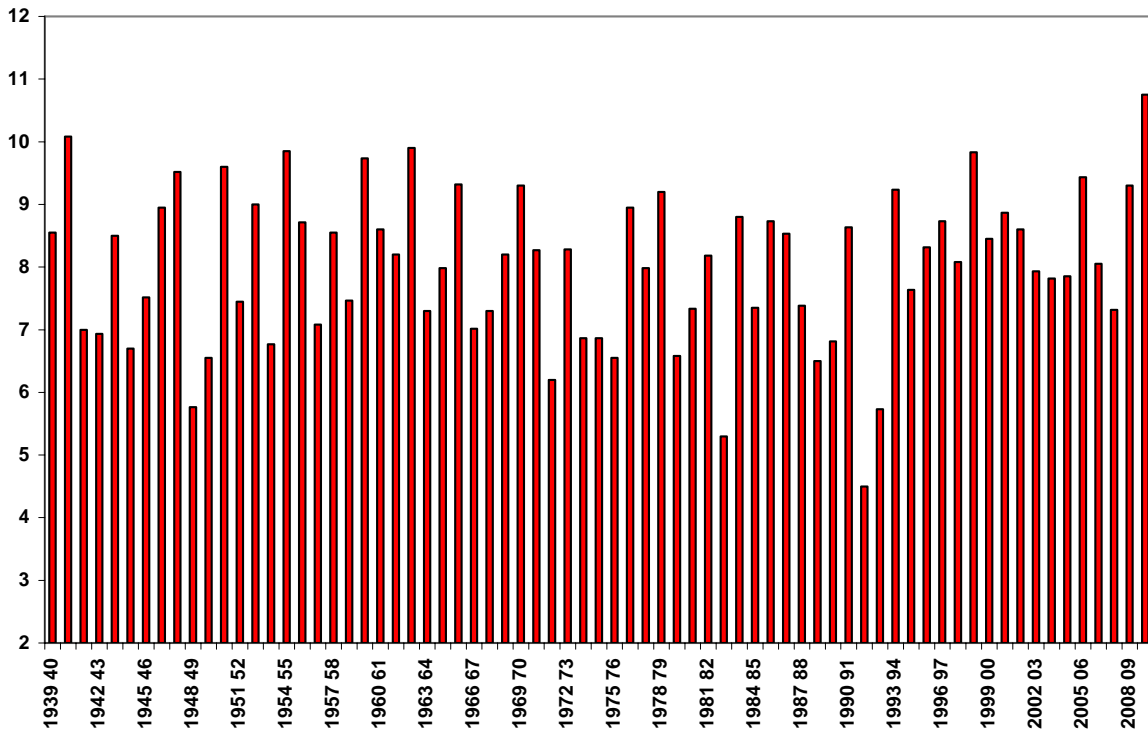


Fig.2: Average daily temperature in Har Kenaan in each winter from 1939 to 2010

The last image shows the daily temperature in Jerusalem between December 2009 and February 2010 compared with the perennial average (1981-2000).

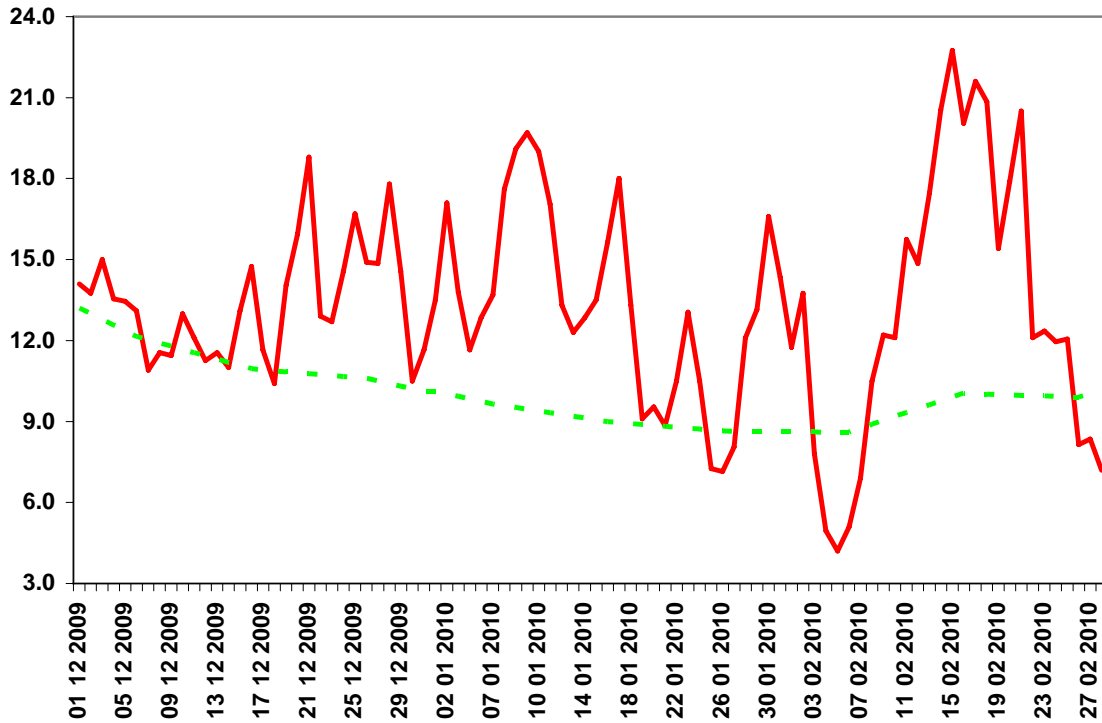


Fig. 3: The daily temperature in Jerusalem from December 2009 to February 2010 compared with the perennial Average (1981 – 2000)

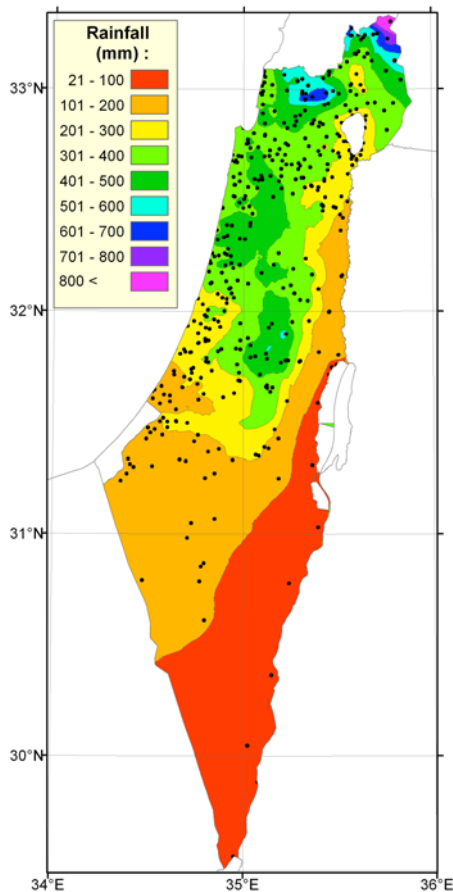
The wave heat during February

Despite the extreme values of the maximum temperatures during the wave heat, they did not surpass the historical highest records for February, but in many stations the measured temperature was the second or the third highest registered for this month. In addition, the durations of hot days sequences were the longest registered ever since the beginning of the measurements (some of the stations started to work during the 1950's, some back in the 40's and a few even before).

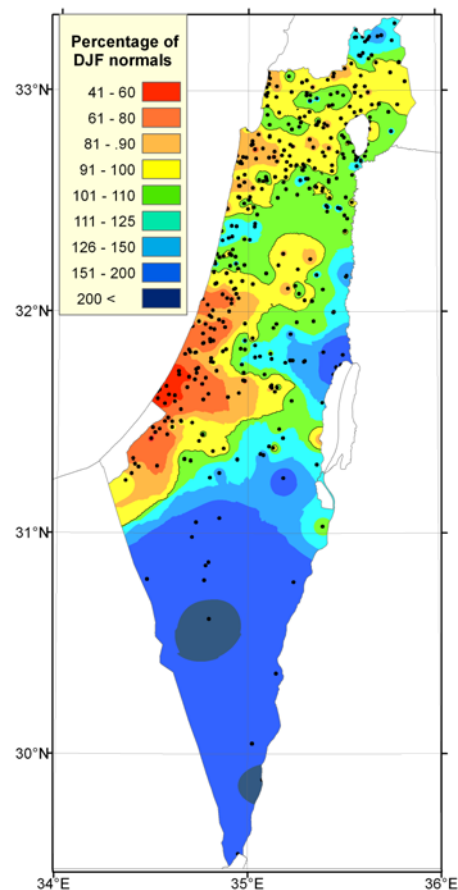
Generally speaking it is possible to compare the February 2010 heat wave only with the one in February 1941, in which there was a sequence of hot days and the absolute values were even higher.

Rain during December-January-February compared to average

During the central winter months (December 2009 – February 2010) there was a regional variance of the rain amounts as compared with the perennial average. In the north the rain amounts were mostly close to the average. In the central parts of the Galilee and north Jordan Valley they were larger than average (100% - 120%). In the northern coastal plain those were smaller than average (80% - 90%) and in the southern coastal plain and north western Negev this tendency was even strongly felt (60% - 80%). On the contrary to that in the central coastal plain and especially in the Sharon region the central winter months were rainy (110% - 125%). In the mountains of central Israel (Judea and Samaria) as well as in the Jordan Valley the rain amounts were larger than average. In the Negev it was even more pronounced with rain amounts soaring up to 1.5 to 2 times the average.



Accumulated Rainfall in DJF 2009/10



Percentage of 1961-1990 Normals

Severe Flooding Event in southern Israel

A substantial rain event had happened between the 17th and the 21st of January throughout Israel. At its beginning its focus was concentrated in the south. In the Northern and Central Negev there were precipitation amounts of 30-75 mm, in southern Negev and the Arava Region (Inc. Eilat) 15-25 mm and in the Jordan Valley and the Dead Sea 20-35 mm. Those rains had caused severe flooding in the streams of the south. The rain was exceptional both in the amounts measured in the different stations as well as in its extent. As for example, the Sdeh-Boqer station had measured 63 mm on the 17th and 76 on the 17-18th – those were the largest amounts measured since the beginning of the measurements in 1953.

In terms of geographic extent, only the rain event, occurring on February 1975 was more spacious.