

A dry spell and high temperatures December 2020 - January 2021

A long episode with no rains at all throughout the country occurred from December 25 to January 12. This episode was also characterized by high temperatures, especially during its second part, which began in January. Such an event is exceptional for the major winter months.

Dry spell

The rainfall season in our area is characterized by weather systems, which occasionally cross the region and cause rains. In between, there are breaks of several days with fair and sometimes warm weather. The periods between the systems may sometimes last a week or more, but pauses of two weeks and more are less frequent, especially during the central winter months (December, January and February).

The current dry spell lasted from December 25 to January 12, making it 19 successive days without rain all over the country.

An examination of dry spells in the past, reveals that there have been similar cases and even longer cases, but they tended to appear, mostly, during months, which are not part of the central winter months, for example: 27-28 days of a dry spell from mid-November till mid-December 2006, 27 days from mid-February till mid-March 1984 and more.

Prolonged dry spells during the central winter months have already occurred in the past, but usually they were not absolute and did not include the entire country, for example: 15th January to 10th February 2015 (25 days), but during this episode, there were some rains in the north, 23 to 25 days in January 1955 and in January 1959 and in these cases, too, it did not include parts of the north. It is also worth mentioning a long period, lasting from mid-December 2013 to the beginning of March 2014, during which there was an extreme deficiency of rains, but there was no complete rain stop.

A total dry spell across the entire country in the central winter months was from the 29th December 1970 to the 9th January 1971, making it 21-22 days. A slightly shorter dry spell occurred in January 1993, and it lasted for a period of 16-17 days.

High temperatures

The dry spell was accompanied by high temperatures, especially in its last 7-10 days. Temperatures reached 28 to 29 degrees in the Coastal Plain and the Shfela, although it should be noted that there have already been cases in January with more than 28

degrees measured in these areas, like in 1971, 1987, 1997 and 2003. In 1971, several stations even measured up to 32 degrees.

The sequence of the relatively warm days, as in the current event, is exceptional for January. During this sequence, 9 to 10 consecutive days with maximum temperature above 22 degrees were measured in Bet Dagan and Ayyelet Hashahar and above 24 degrees in Beer Sheva. In Jerusalem, 12 consecutive days with a maximum temperature above 16 degrees were measured. A similar sequence has occurred only once in January, in 1971.

It should be also mentioned that during December and February, there were a number of cases of similar sequences to the present one (3 to 5 cases in the last 60 to 70 years) and in Jerusalem, there was also a similar sequence in January 1936.