



EXPRESS MONITORING OF CLIMATE CONDITIONS IN KAZAKHSTAN FOR SEPTEMBER 2026

Anomalies of average monthly air temperature and monthly precipitation in Kazakhstan

The bulletin is designed to promptly inform government agencies, industry organizations, the scientific community, and other interested parties about current climatic conditions in Kazakhstan.

RELEVANT

- In September 2026, the mean monthly air temperature exceeded the **climatic normal** by **2.38 °C**.
- The amount of precipitation was **8.49 mm below the climatic norm**.

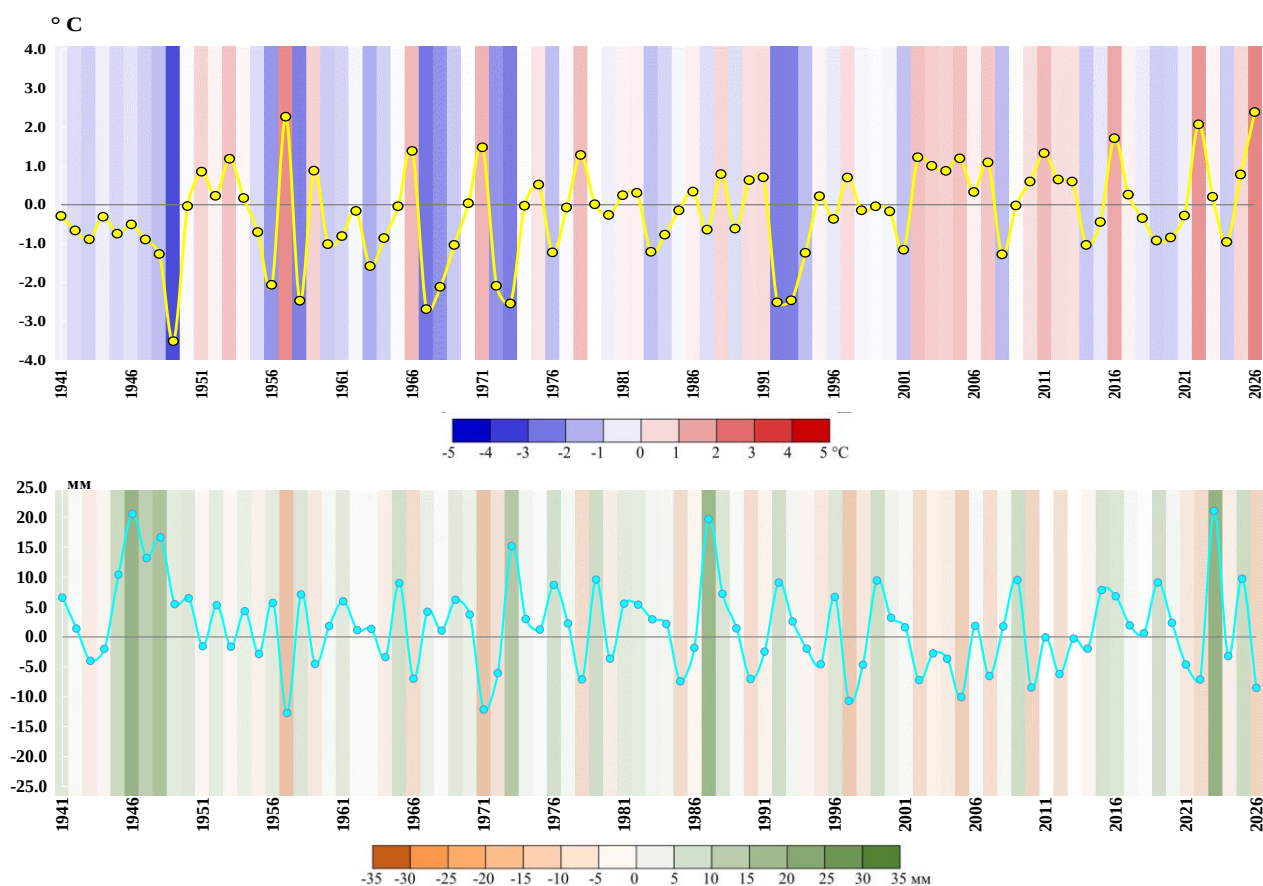


Figure 1 – Time series of september air temperature (a, °C) and precipitation (b, mm) anomalies averaged over Kazakhstan for the period 1941–2026. The anomalies were calculated relative to the 1991–2020 climatological normal

AIR TEMPERATURE

Analysis of the long-term time series of air temperature anomalies in September showed an alternation of years with negative and positive temperature anomalies throughout the period under consideration (Fig. 1a). In September 2026, the mean air temperature exceeded the climatic norm by 2.38°C , corresponding to 1st rank in the long-term observation series. The previous maximum mean air temperature was recorded in September 1957.

In September, positive anomalies in mean monthly air temperature relative to the climatic norm were observed across the entire territory of Kazakhstan (Fig. 2). Over most of the country, temperature anomalies ranged from 1.5 to 3.0°C , while the highest positive deviations reached 3.0 – 4.1°C and were observed predominantly in the North Kazakhstan, Pavlodar, Akmola, and Kostanay regions, as

well as in the central parts of Aktobe and Ulytau Region, the northern districts of Karaganda and Abai Region.

The largest positive anomaly in mean monthly air temperature, 4.1°C , was recorded at the Petropavlovsk meteorological station in North Kazakhstan Region.

According to data from 67.5% of meteorological stations, located predominantly in the northern, western, central, and southern regions of the country, the mean monthly air temperature values fell into the extremely high category. These values were among the highest 5% recorded over the entire observation period, with a non-exceedance probability of 95–100%.

In September 2026, new records for mean monthly air temperature were set at 15 meteorological stations, while previously recorded record values were equaled at 4 stations (Table 1).

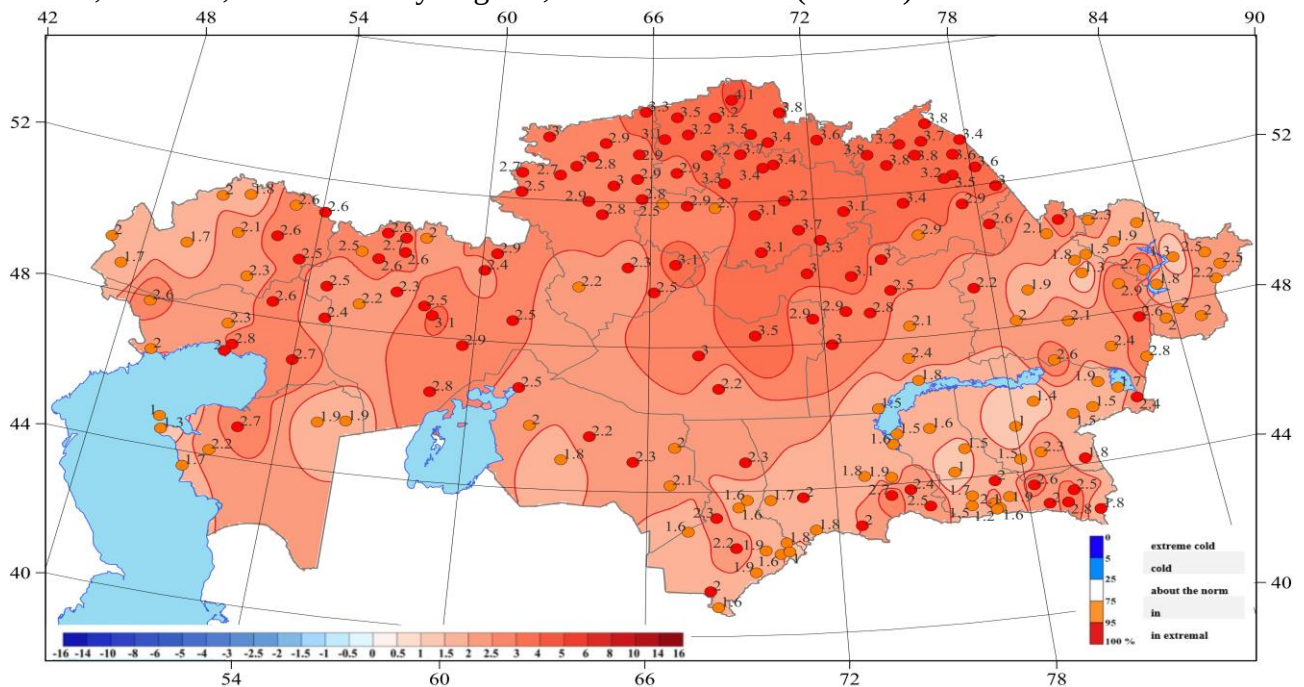


Figure 2 – Spatial distribution of mean air temperature anomalies ($^{\circ}\text{C}$) relative to the 1991–2020 climatological normal and non-exceedance probabilities of September 2026 air temperature (reference period: 1941–2026)

Table 1. Record values of the average monthly air temperature in september 2026

№	Meteorological station	Region	New maximum of mean monthly air temperature, °C	The previous record of the average monthly air temperature, °C
1	Akkol	Akmola	14,2	13,9 (1966)
2	Arshaly		14,9	14,4 (1978)
3	Astana		16,3	15,7 (1957)
4	Korgalzhyn		15,8	15,2 (2011)
5	SFM Borovoye		14,1	13,8 (2011)
6	Aksu-Ayuly	Karaganda	14,2	13,9 (1978)
7	Aktogay	Pavlodar	15,8	15,3 (1966)
8	Zholboldy		15,9	15,8 (1966)
9	Koktobe		15,8	15,6 (2016)
10	Fedorovskaya		15,2	15,1 (1966)
11	Sharbakty		15,8	15,8 (2016)
12	Zhanaarka	Ulytau	15,8	15,5 (1957)
13	Zhezkazgan		18,1	17,9 (1957)
14	Kzylzhar		17,9	17,5 (1957)
15	Kegen	Almaty	13,1	13,0 (2016)
16	Kishkenekol	North Kazakhstan	15,1	14,9 (1966)
17	Timiryazev		14,7	14,7 (2011, 1971)
18	Sergeevka		14,7	14,7 (2011)
19	Tasty	Turkistan	20,6	20,5 (2022, 2016, 1978)

ATMOSPHERIC PRECIPITATION

Analysis of the time series of precipitation anomalies for September shows significant interannual variability. No pronounced persistent trend in precipitation changes was observed over the period under consideration. In September 2026, precipitation was 8.49 mm below the climatic norm, ranking 4th among the driest Septembers over the period 1941–2026 (Fig. 1b).

In September 2026, a precipitation deficit was observed across most of Kazakhstan (Fig. 3). Over large areas of northern, northeastern, central, southern, and eastern Kazakhstan, as well as in some areas of the western regions, precipitation totals were below 30% of the climatic norm, and in some places below 10%.

At individual meteorological stations, monthly precipitation totals fell into the extremely low category, with a non-exceedance probability of up to 5%. During September, no precipitation was recorded at 23 meteorological stations in Kyzylorda, Turkistan, Zhambyl, Karaganda, and Almaty regions, as well as in Abai and Zhetisu regions. Precipitation totals exceeding 120% of the climatic norm were observed locally in various regions of Kazakhstan. The most significant positive precipitation anomalies were recorded in some areas of West Kazakhstan, Mangystau, Kostanay, Kyzylorda, Turkistan, and Almaty regions. In some locations, the maximum monthly precipitation totals reached 310% of the climatic norm.

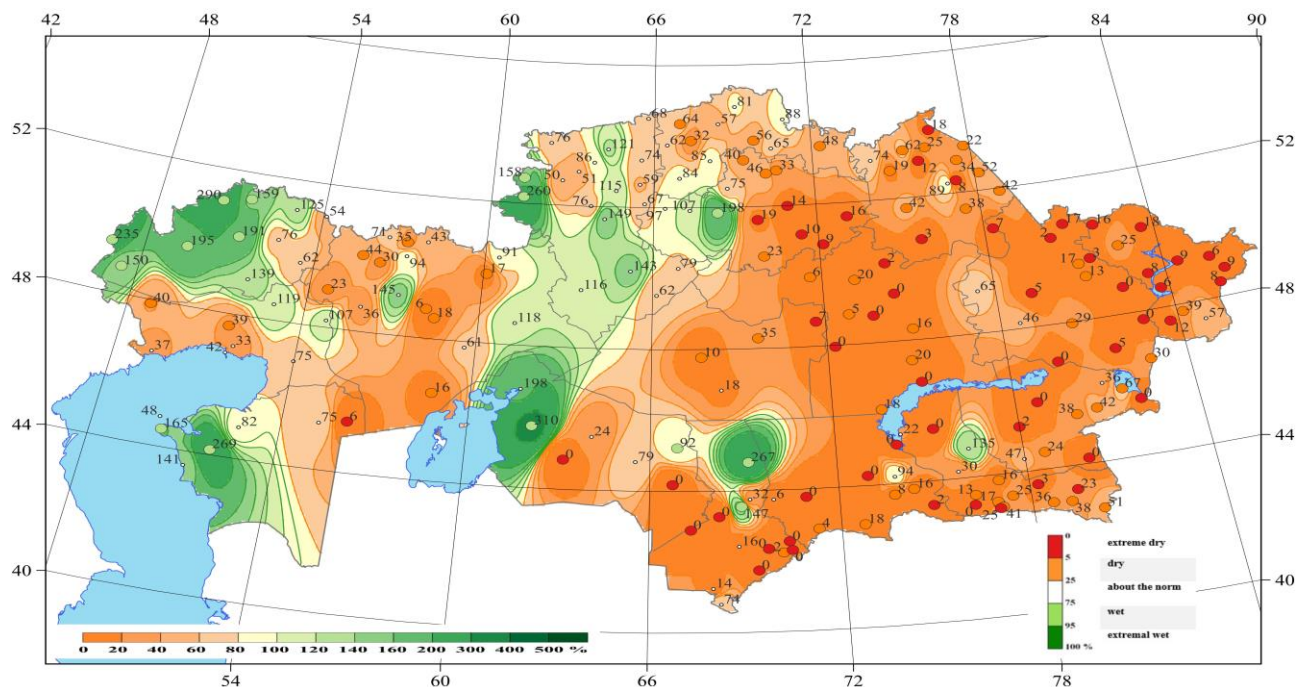


Figure 3 – Spatial distribution of precipitation totals (% of the 1991–2020 climatological normal) and non-exceedance probabilities of september 2026 precipitation based on the 1941–2026 reference period

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