**MINISTRY OF ECOLOGY
AND NATURAL RESOURCES OF
THE REPUBLIC OF KAZAKHSTAN**

**Republican State
enterprise «KAZHYDROMET»**

EXPRESS MONITORING OF CLIMATE CONDITIONS IN KAZAKHSTAN FOR OCTOBER 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 October 2026, the mean monthly air temperature exceeded the **climatic normal by 0.61 °C**
- The amount of precipitation was **5.05 mm below the climatic norm.**

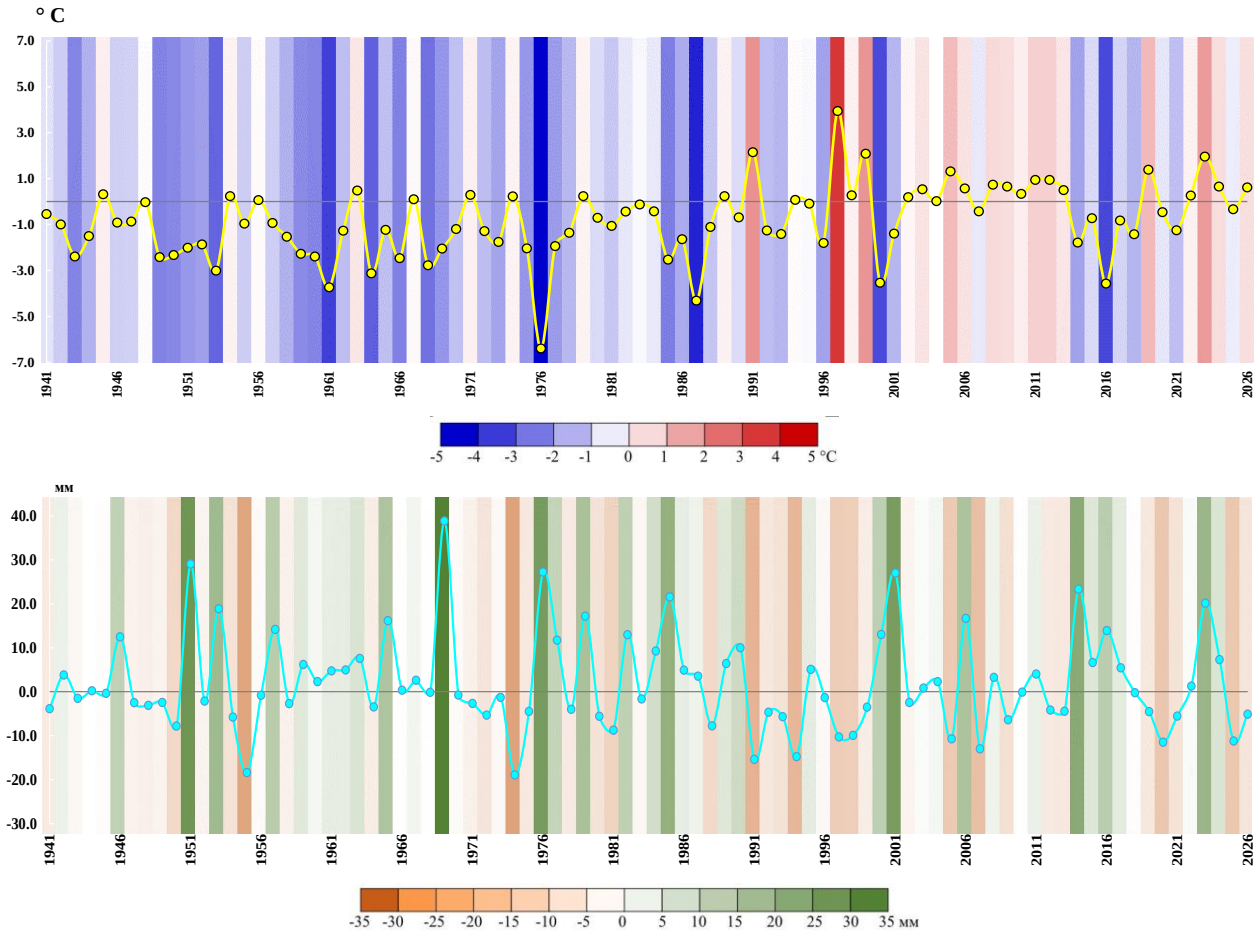


Figure 1 – Time series of October air temperature (a, °C) and precipitation (b, mm) anomalies averaged over Kazakhstan for the period 1941–2026. The anomalies were calculated relative to the 1991–2020 climatological normal.

AIR TEMPERATURE

An analysis of the long-term time series of October air temperature anomalies revealed an alternation of years with negative and positive temperature anomalies throughout the period under review (Fig. 1a). In October 2026, the monthly mean air temperature exceeded the climatological normal by 0.61 °C, ranking 12th in the long-term observation series. The highest positive monthly mean air temperature anomaly for the period was recorded in October 1997.

In October, both positive and negative monthly mean air temperature anomalies relative to the climatological normal were observed across most of Kazakhstan (Fig. 2).

Positive temperature anomalies ranging from 1.5 to 3.9 °C were recorded predominantly in the western regions of the country, the northern parts of Kostanay, North Kazakhstan, and Akmola regions, as well as locally in Pavlodar, Kyzylorda, and Turkestan regions. Furthermore, 28 meteorological stations located in West Kazakhstan, Aktobe, and Atyrau regions fell into the «extremely warm» category, corresponding to the 95th percentile threshold (Fig. 2). The most pronounced positive temperature anomalies were registered at the Novyy Ushtogan meteorological station in Atyrau region (3.9 °C) and the Fort-Shevchenko meteorological station in Mangystau region (3.6 °C).

Negative temperature anomalies ranging from 0.4 to 2.3 °C were observed predominantly in the eastern and southeastern regions, as well as locally in the central and southern regions of Kazakhstan. The most significant negative deviation from the climatological normal was recorded at the Sarkand meteorological station (Zhetysu region), where the air temperature anomaly reached −2.3 °C.

In October 2026, new record highs for monthly mean air temperature over the entire observation period were registered at eight meteorological stations (Table 1).

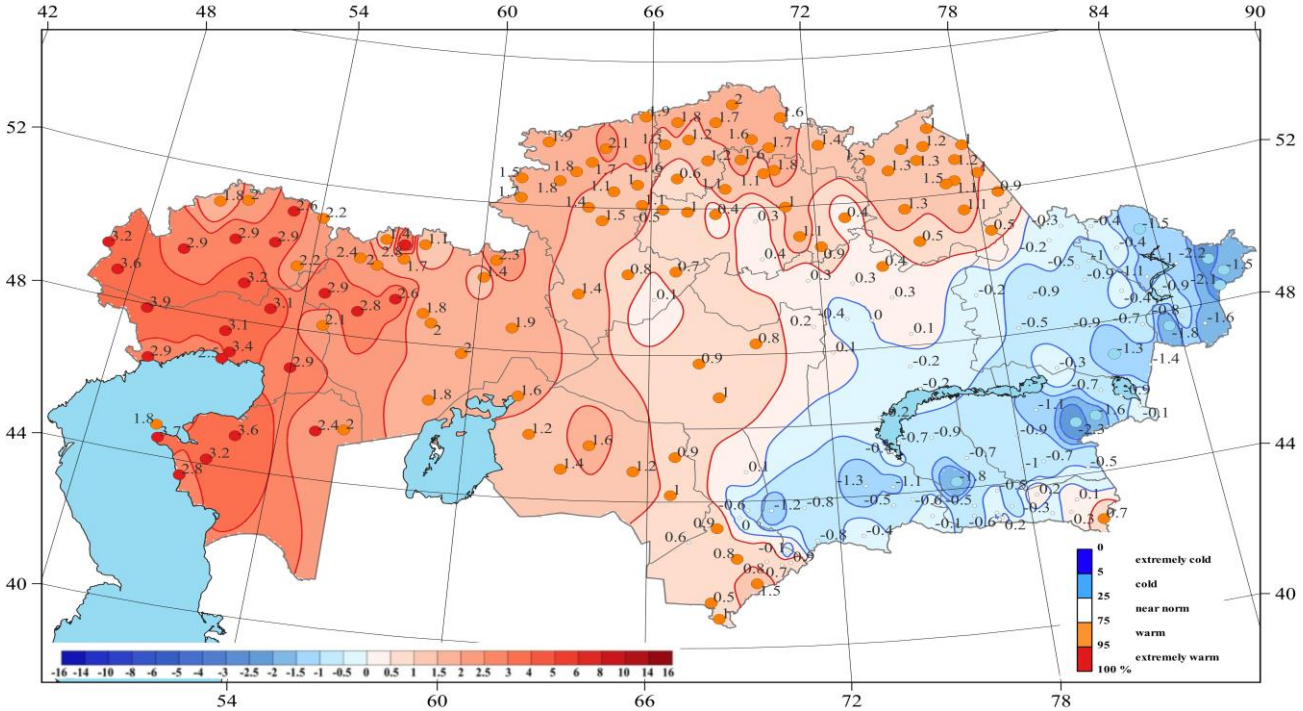


Figure 2 – Spatial distribution of mean air temperature anomalies (°C) relative to the 1991–2020 climatological normal and non-exceedance probabilities of October 2026 air temperature (reference period: 1941–2026).

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

№	Meteorological station	Region	New maximum air temperature, ºC	The previous record of the average monthly air temperature, °C
1	Aktau	Mangystau	16,3	16,1 (2012)
2	Fort-Shevchenko		17,5	16,8 (1974)
3	Makhambet	Atyrau	12,3	12,0 (1974)
4	Novyy Ushtogan		13,2	12,2 (1974)
5	Atyrau		13,6	12,9 (1997)
6	Ganyushkino		12,9	12,5 (1974)
7	Zhanibek	West Kazakhstan	11,5	11,4 (1974)
8	Urda		12,7	12,1 (1974)

ATMOSPHERIC PRECIPITATION

An analysis of the long-term time series of October precipitation anomalies indicates significant interannual variability in the parameter under study. Furthermore, no pronounced sustainable trend toward an increase or decrease in precipitation is observed over the period under review. In October 2026, total precipitation was 5.05 mm below the climatological normal, ranking 67th in the 1941–2026 observation series (Fig. 1b).

In October 2026, a deficit of atmospheric precipitation was observed across most of Kazakhstan (Fig. 3). Throughout most of the western and northwestern regions, as well as locally in the central and southern parts of the country, monthly precipitation did not exceed 30 % of the climatological normal. According to data from 22 meteorological stations, precipitation totaled less than 10 % of the climatological normal in certain areas of western Kazakhstan, as well as locally in southern Kostanay region, central Ulytau region, and northeastern Zhetysu region, falling into the «extremely dry» category (5th percentile threshold). Furthermore, seven meteorological stations located in West Kazakhstan, Atyrau, Aktobe, and Zhetysu regions recorded no atmospheric precipitation throughout the entire month of October.

Precipitation exceeding 120 % of the climatological normal was recorded in Pavlodar region, the northern parts of East Kazakhstan and Abai regions, as well as in specific areas of Akmola, Karaganda, Turkestan, and Zhambyl regions, and locally in Zhetysu region.

The highest amount of precipitation was recorded at the Semipalatinsk meteorological station (Abai region) — 51 mm, which accounted for 227 % of the climatological normal.

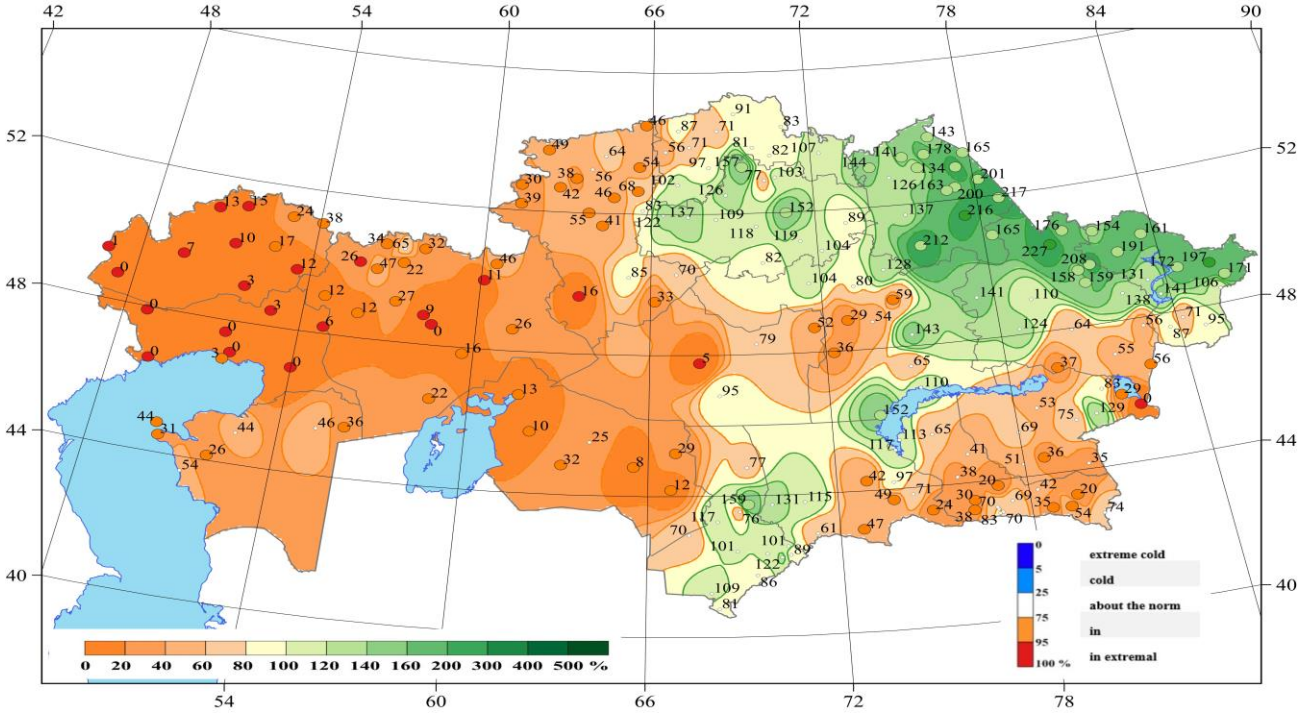


Figure 3 – Spatial distribution of precipitation totals (% of the 1991–2020 climatological normal) and non-exceedance probabilities of October 2026 precipitation based on the 1941–2026 reference period.

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