



The current climate conditions and a national outlook for DJF 2026 in Kazakhstan

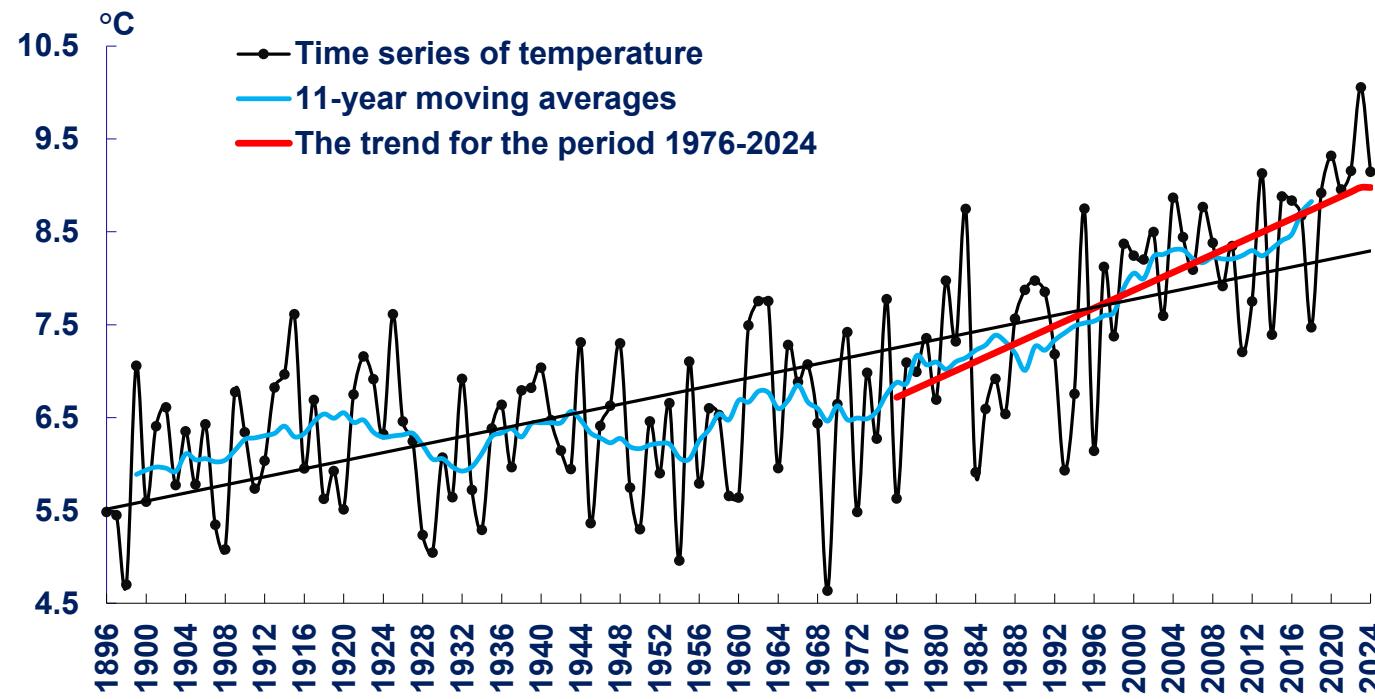
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Kazakhstan's climate is warming faster than the global climate



Trends in air temperature growth by season:

spring by **0,66 °C/10 year** summer by **0,25 °C/10 year**
autumn by **0,28 °C/10 year** winter by **0,26 °C/10 year**

Temperature change in 1976-2024:

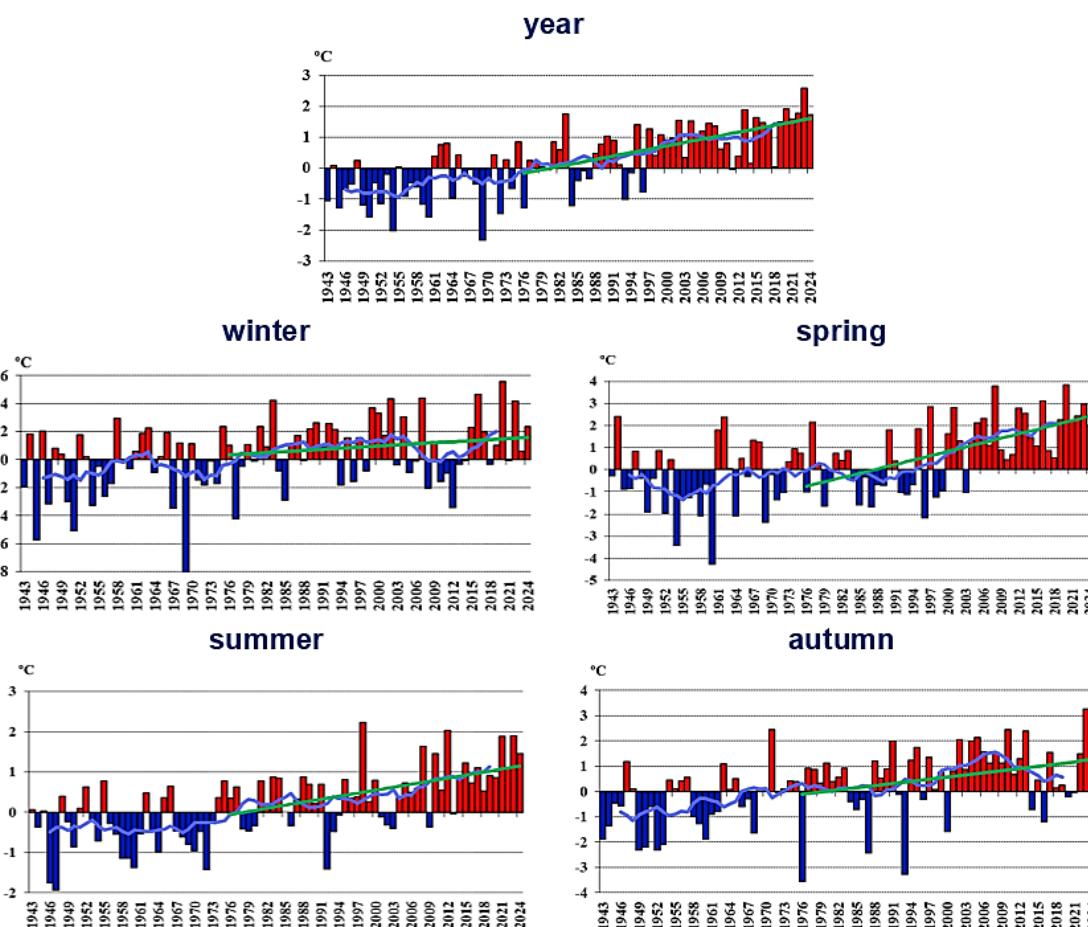
- Global scale: **0,19 °C every 10 years**
- Kazakhstan: **0,36°C every 10 years**

10 warmest years

| Year | Anomaly, °C |
|------|-------------|
| 2023 | 2,58 |
| 2020 | 1,92 |
| 2013 | 1,89 |
| 2022 | 1,78 |
| 1983 | 1,76 |
| 2024 | 1,72 |
| 2015 | 1,64 |
| 2021 | 1,58 |
| 2002 | 1,55 |
| 2004 | 1,53 |

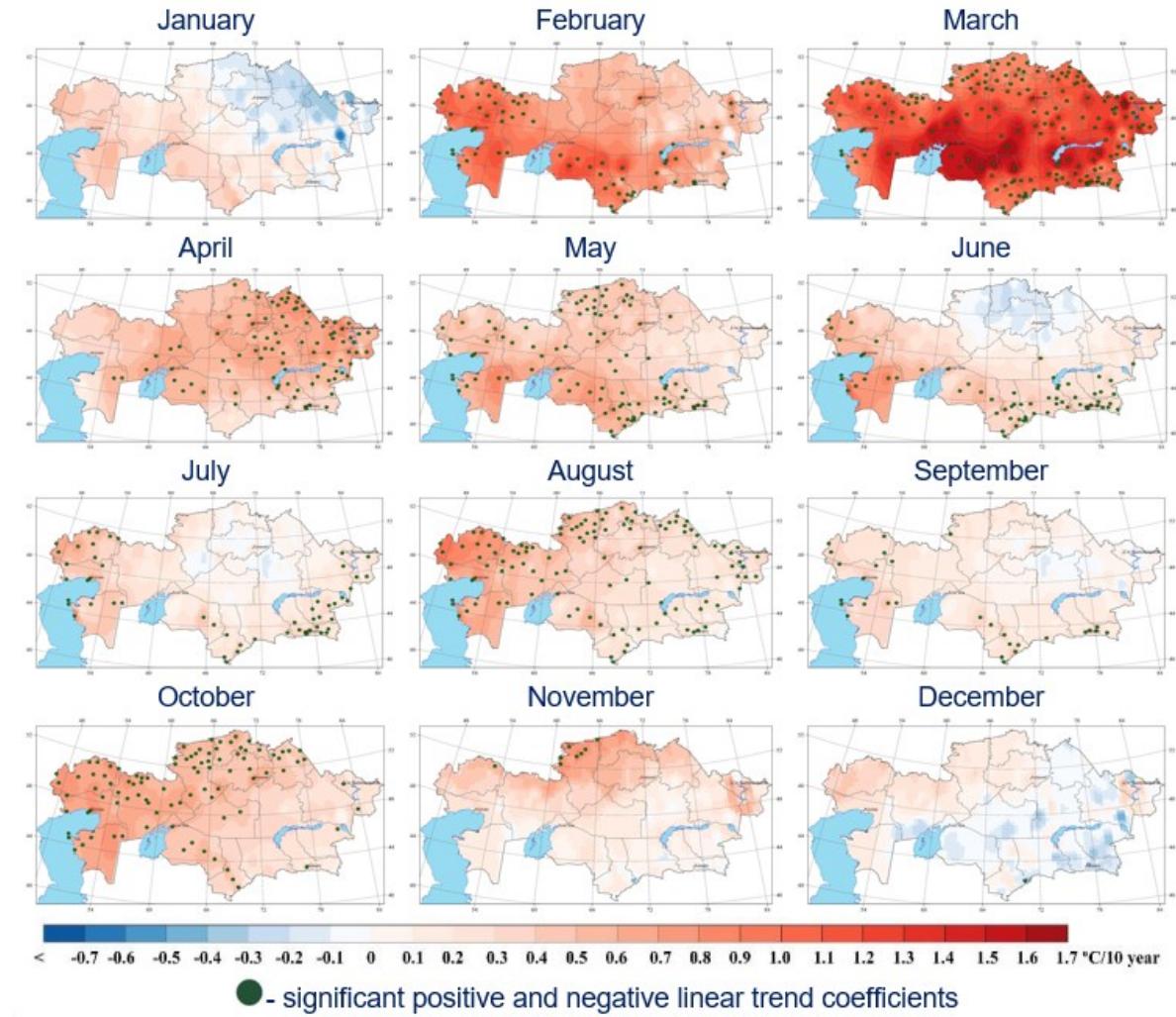


Climate change is heterogeneous across seasons, by territory and over time



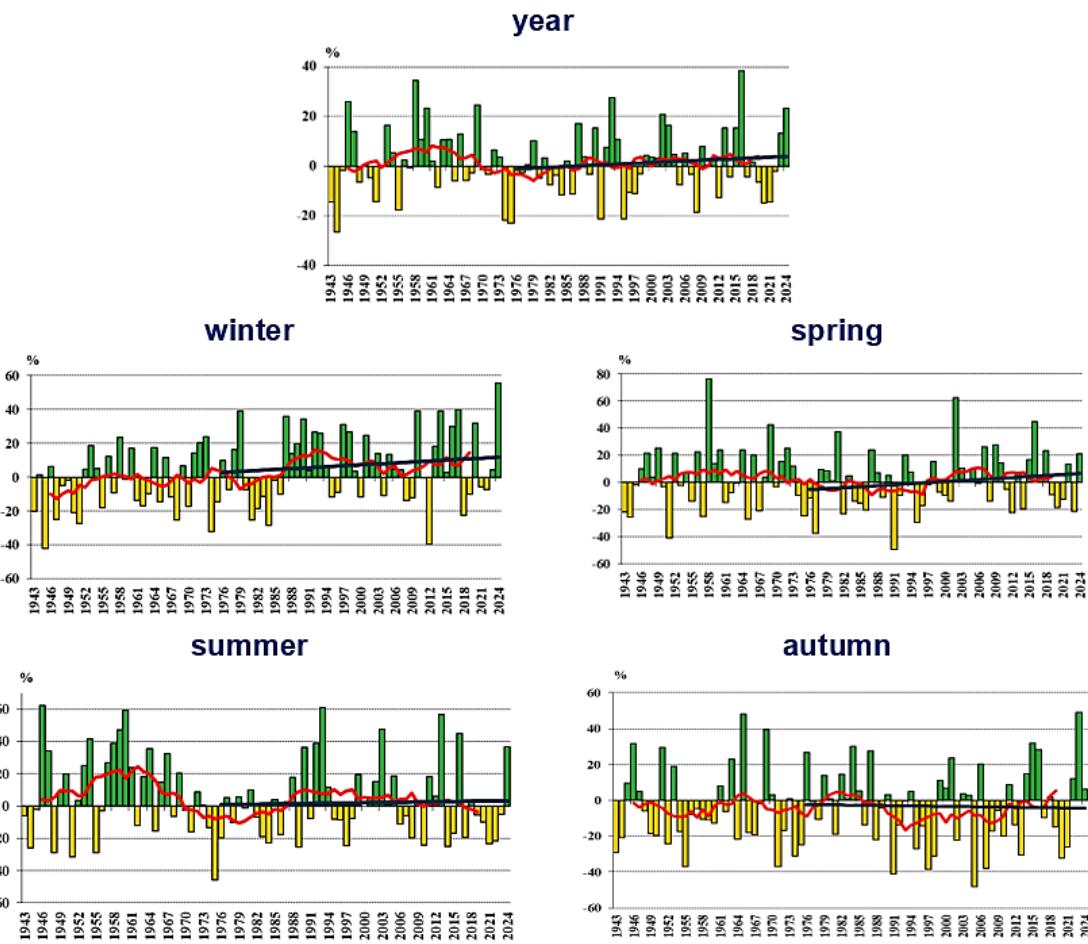
Time series of anomalies of annual and seasonal air temperatures ($^{\circ}\text{C}$) averaged over the territory of Kazakhstan for the period 1941-2024. The anomalies are calculated relative to the base period of 1961-1990.

Air temperature change, $^{\circ}\text{C}/10$ year, 1976-2024



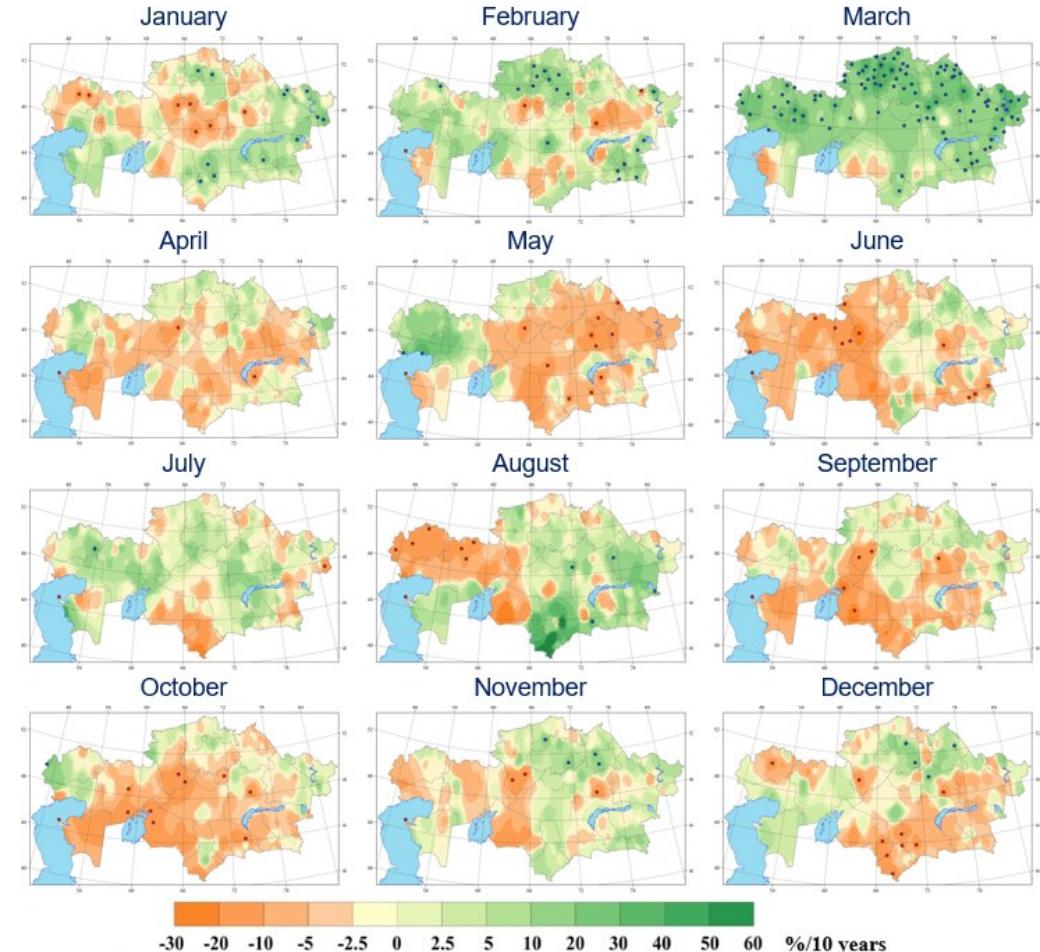
● - significant positive and negative linear trend coefficients

Climate change is heterogeneous across seasons, by territory and over time



Time series of anomalies of annual and seasonal precipitation sums (%), spatially averaged over the territory of Kazakhstan for the period 1941–2024. Anomalies are calculated relative to the baseline period 1961–1990.

Change in precipitation, %/10 year, 1976-2024



significant positive and negative values of the linear trend coefficient are highlighted in blue and red

Long-term weather forecast

- One of the most important tasks of the NHMS of Kazakhstan is **to forecast dangerous and natural hydrometeorological phenomena with maximum advance warning of state bodies**, branches of economy and population of the country about these phenomena in order to prevent loss of life and reduce economic damage, to make short-term, medium-term and long-term weather forecasts for Kazakhstan.
- NHMS of Kazakhstan issues long-term weather forecasts, which are based on the year-analog method, numerical hydrodynamic models of 13 world prognostic centres, products of hydrodynamic models of the Regional North-Eurasian Climate Centre, Main Geophysical Observatory and Hydrometcentre of Russia.
- The following forecasts are issued:
 - **for a decade**
 - **for a month**
 - **for the season** - for the warm half of the year (April - October); for the cold half of the year (November - March).

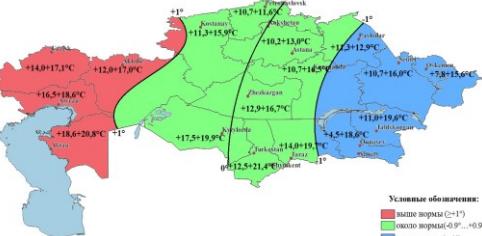
Review of the (ASO 2025) season (Temperature)

advisory weather forecast

August 2025



September 2025



October 2025



Below the norm (≤ -1°C)
 Around norm (-0.9 °C ... +0.9 °C)
 Above the norm (≥ +1 °C)

observed weather

August 2025



September 2025



October 2025



Below the norm (≤ -1°C)
 Around norm (-0.9 °C ... +0.9 °C)
 Above the norm (≥ +1 °C)

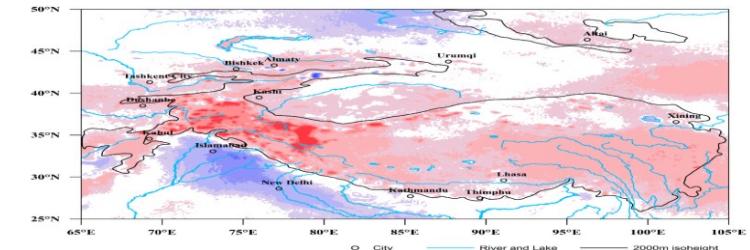
Justifiability of monthly weather forecasts for the Republic of Kazakhstan

| Meteorological value | August 2025 | September 2025 | October 2025 | Average |
|----------------------|-------------|----------------|--------------|---------|
| $\Delta T, \%$ | 96 | 90 | 70 | 85 |

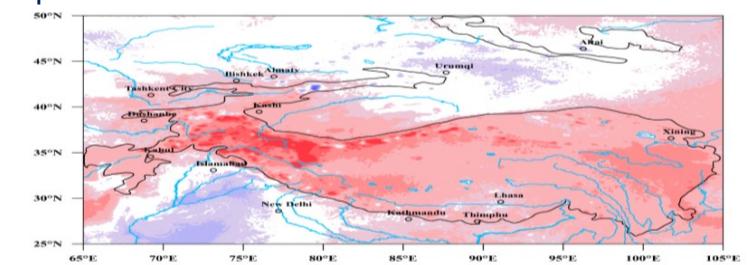
$\Delta T, \%$ - anomaly of atmospheric precipitation

TPRCC observed weather

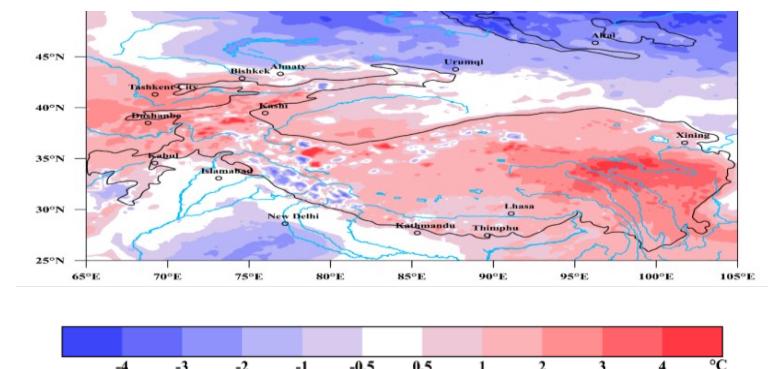
August 2025



September 2025



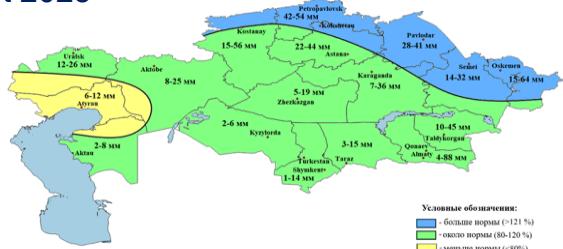
October 2025



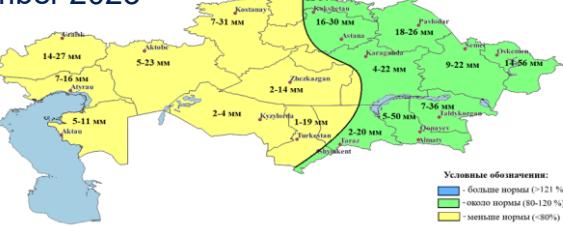
Review of the (ASO 2025) season (Precipitation)

advisory weather forecast

August 2025



September 2025



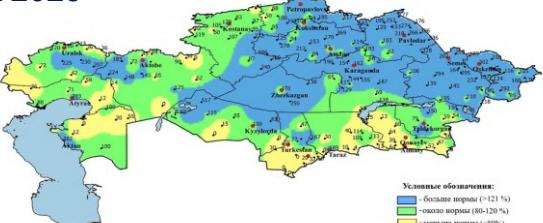
October 2025



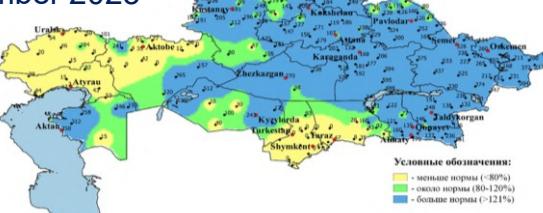
Below the norm ($\leq 80\%$)
 Around norm (80 ... 120 %)
 Above the norm ($\geq 120\%$)

observed weather

August 2025



September 2025



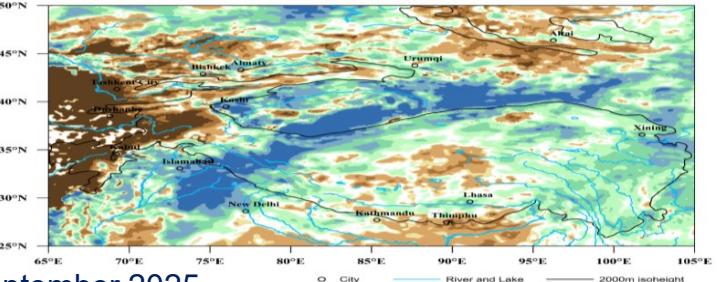
October 2025



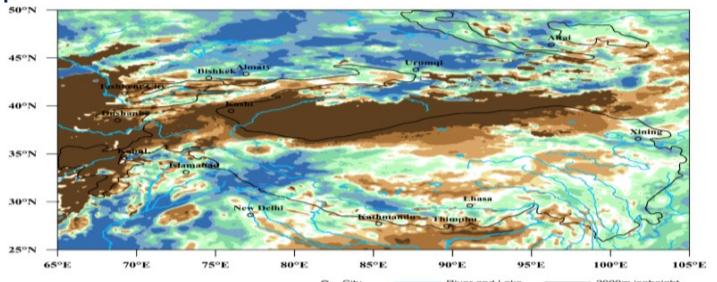
Below the norm ($\leq 80\%$)
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 Above the norm ($\geq 120\%$)

TPRCC observed weather

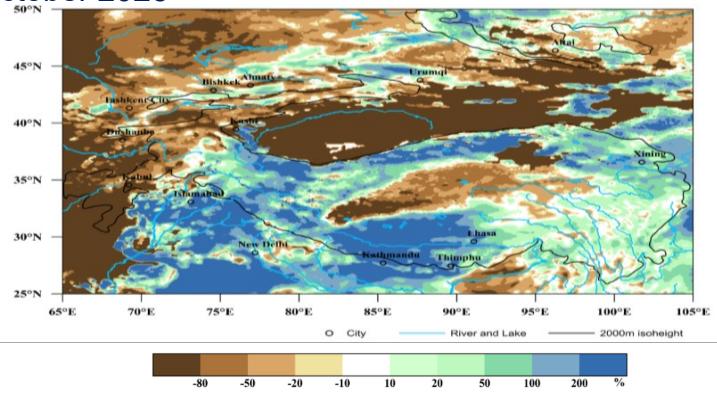
August 2025



September 2025



October 2025



Justifiability of monthly weather forecasts for the Republic of Kazakhstan

| Meteorological value | August 2025 | September 2025 | October 2025 | Average |
|----------------------|-------------|----------------|--------------|---------|
| $\Delta R, \%$ | 72 | 68 | 50 | 63 |

$\Delta R, \%$ - anomaly of atmospheric precipitation

High-impact Climate Events from August to October 2025

In Kazakhstan from August to October 2025, the following dangerous hydrometeorological phenomena occurred, but did not have serious consequences for vital activities and other sectors of the economy.

During August–October 2025, several significant weather events were recorded in Kazakhstan, including isolated cases of large hail (20 mm), severe wind with gusts up to 31.8 m/s, intense rainfall (30–37 mm within a few hours), and one case of heavy snowfall in the high-altitude areas.

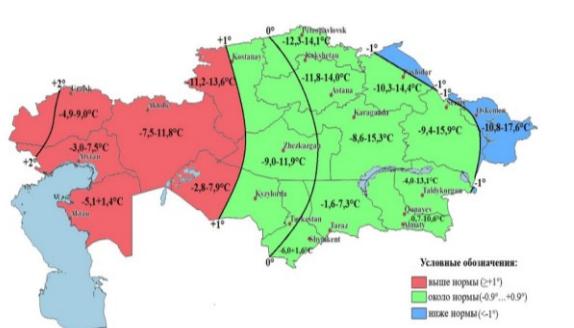
In November, several stations in **the western regions of the country** reported long-lasting dense fog with visibility below 100 meters.

No extreme heat, drought, dry winds, dust storms, or hazardous river rise events were observed during the period.

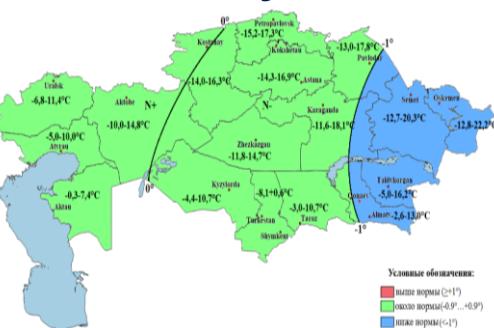
Review of the advisory weather forecast for the winter season

Expected deviations of the average monthly air temperature from the norm in:

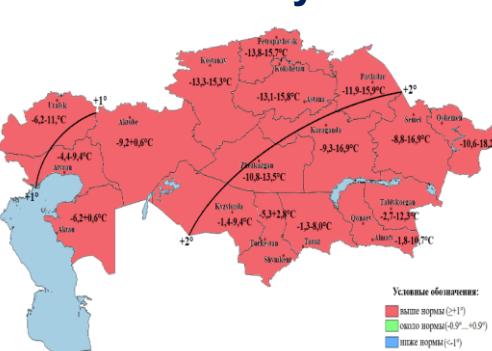
December 2025



January 2026



February 2026

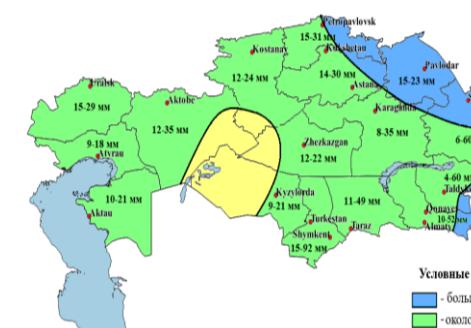


- Below the norm ($\leq -1^{\circ}\text{C}$)
- Around norm ($-0.9^{\circ}\text{C} \dots +0.9^{\circ}\text{C}$)
- Above the norm ($\geq +1^{\circ}\text{C}$)

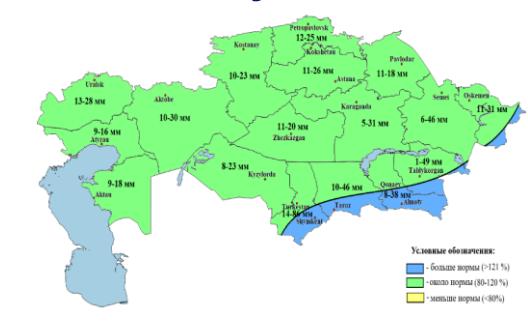
A warm summer is expected, with air temperatures **around or above the climatic norm**.

Expected deviations of the average monthly precipitation from the norm in:

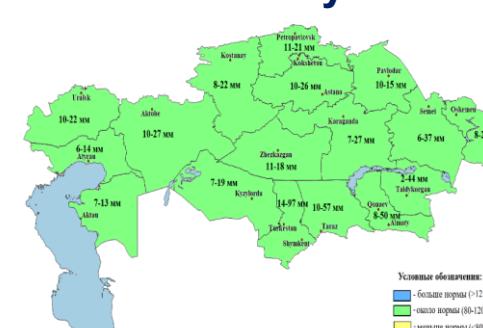
December 2025



January 2026



February 2026



- Below the norm ($\leq 80\%$)
- Around norm (80 ... 120 %)
- Above the norm ($\geq 120\%$)

In the summer season precipitation **below and around the norm is expected**.

Thank you for your attention!