Annex

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Assessment of the SEECOF-35 Climate Outlook for Slovenia – Summer 2026

SEECOF-35 Climate Outlook for Slovenia – Summer 2026

The consensus statement from the SEECOF-35 climate outlook for the summer of 2026 indicated that positive ENSO (strong El Niño) and Indian Ocean Dipole conditions were expected to persist over the coming months, while the Western Tropical Indian Ocean (WTI) was forecast to remain in a positive phase. Neutral NAO conditions were also anticipated. Above-average summer blocking and below-average Atlantic low-pressure activity were favoured during the forthcoming months.

The consensus indicated that summer temperatures across the entire SEECOF region were likely to be above normal, with probabilities up to 60 % in Zone 2 and up to 50 % in Zone 1 (Figure 1). For Slovenia, the forecast probabilities of below-normal, near-normal, and above-normal temperatures were estimated at 10 %, 30 %, and 60 %, respectively.

Uncertainty in regional forecasts is generally greater for precipitation than for temperature. Below-normal summer precipitation totals (Zone 1 in Figure 2) were expected across parts of the western and central Balkans, Pannonian Plain, the Carpathians, western Ukraine, and Moldova. Elsewhere in the region, an equal probability of below-, near-, and above-normal precipitation was indicated (Zone 2 in Figure 2). It was noted that some areas, particularly mountainous regions, could experience near- or above-normal precipitation totals as a result of episodes of enhanced convection associated with heavy rainfall. For Slovenia, the forecast probabilities of below-normal, near-normal, and above-normal precipitation were estimated at 50 %, 40 %, and 10 %, respectively.

Figures 1 and 2 show the probabilistic consensus forecast of tercile categories for seasonal temperature and precipitation anomalies relative to the 1991–2020 reference period. Owing to the ongoing warming trend, the magnitude and interpretation of these anomalies are influenced by the choice of reference period.

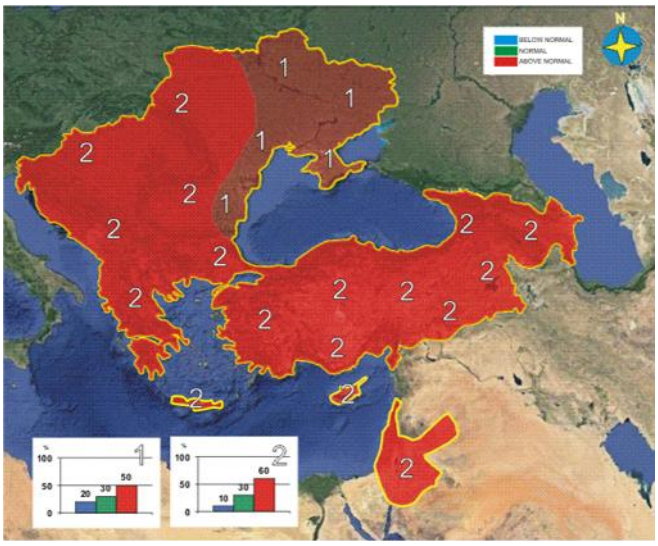


Figure 1. Graphical presentation of the summer 2026 temperature outlook

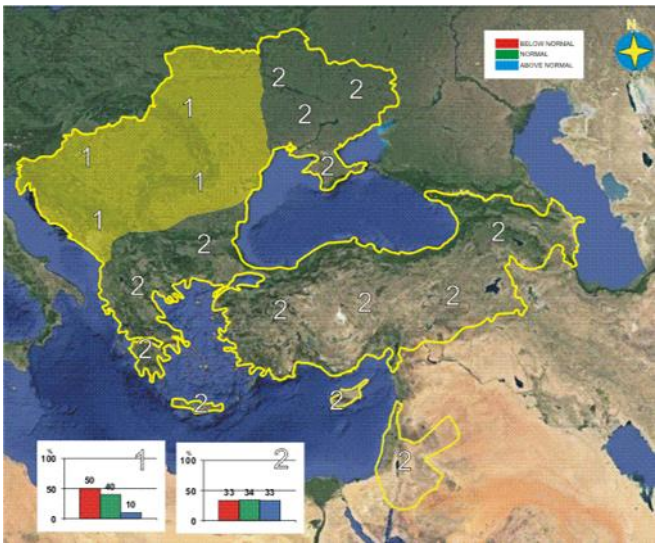


Figure 2. Graphical presentation of the summer 2026 precipitation outlook

Analysis of the Summer 2026 Season

The average air temperature across Slovenia during summer 2026 was above the 1991–2020 baseline throughout the country (Figure 3). Summer temperature anomalies ranged from 1.9 °C to 3.4 °C, with a nationally averaged, area-weighted anomaly of 2.8 °C. Most of the country experienced anomalies between 2.5 °C and 3.0 °C. Slightly smaller anomalies (2.0–2.5 °C) were observed in parts of north-eastern Slovenia, while values exceeding 3.0 °C occurred locally in parts of southern, central and eastern Slovenia. With a national anomaly of 2.8 °C, summer 2026 was the warmest on record since 1950, surpassing the previous records set in 2003 and 2024.

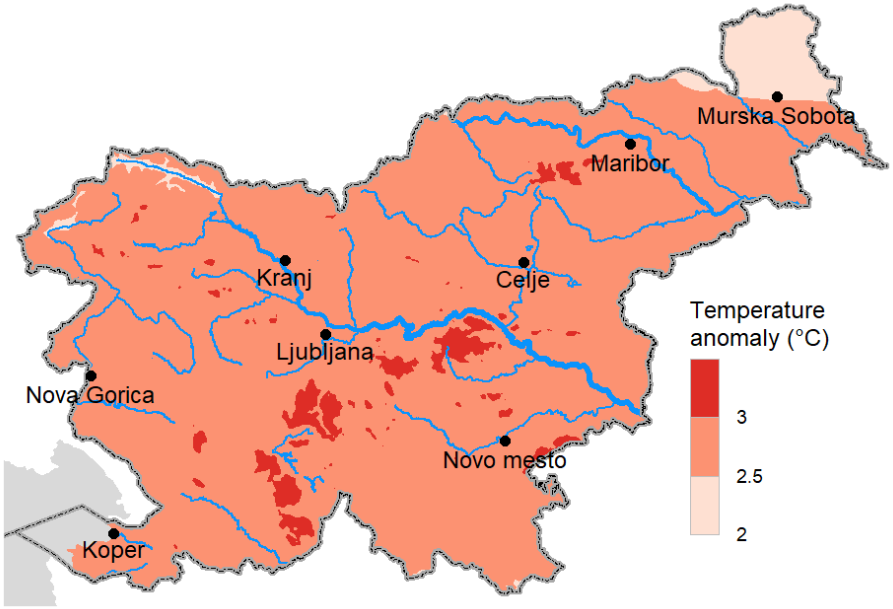


Figure 3. The mean air temperature anomaly in Slovenia during summer 2026, relative to the 1991–2020 average. It was calculated using data from 99–100 meteorological stations.

According to the tercile classification, thermal conditions across Slovenia during summer 2026 were consistently above normal, with above-normal temperatures recorded throughout the country (Figure 4).

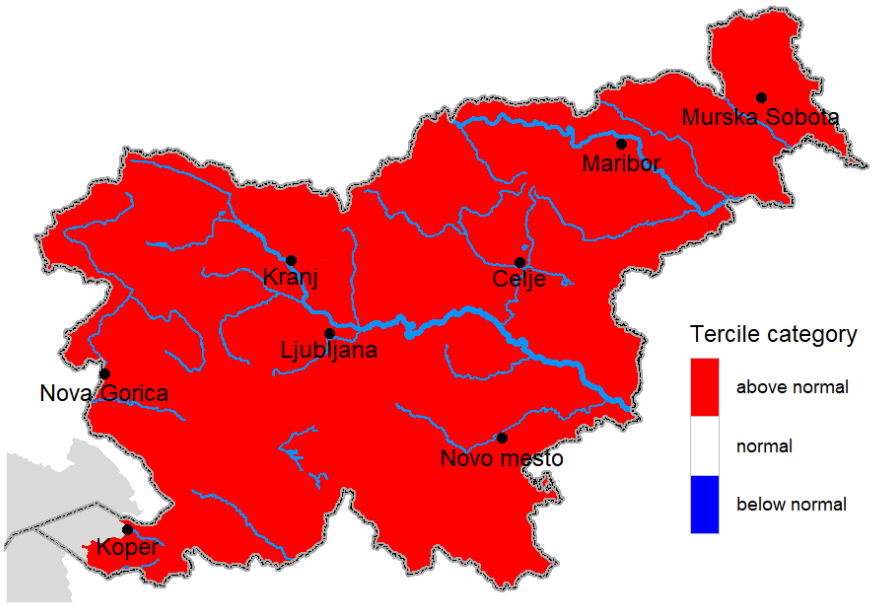


Figure 4. The mean air temperature tercile category of anomaly in Slovenia during summer 2026, relative to the 1991–2020 average. It was calculated using data from 59 meteorological stations.

Summer precipitation is typically highly variable owing to its convective nature. In summer 2026, precipitation was above average only in small parts of western Slovenia, while below-average amounts were recorded across the rest of the country (Figure 5). The precipitation index ranged from 33 % to 109 %, with an area-weighted national average of just 72 % of the

1991–2020 normal. As a result, summer 2026 ranks among the seven driest summers recorded in Slovenia since 1950.

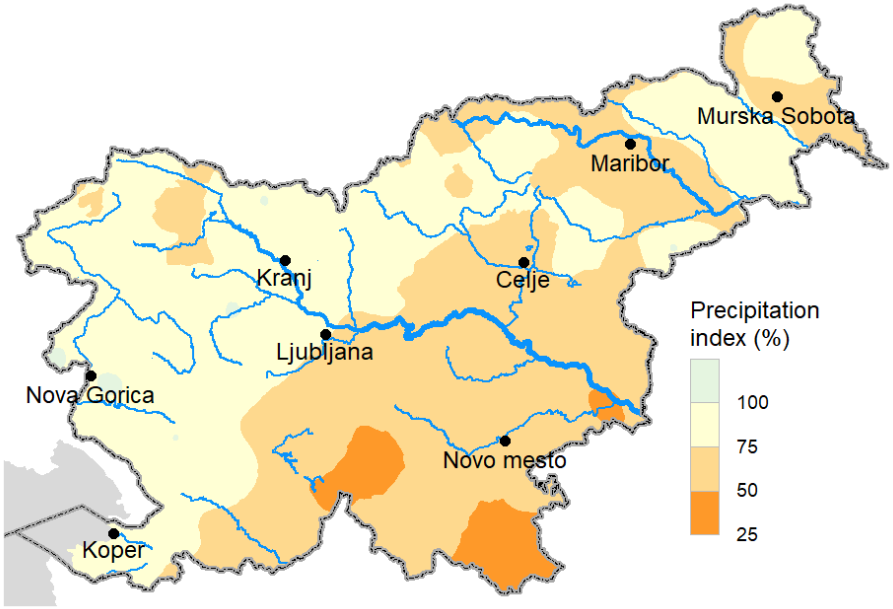


Figure 5. The precipitation index in Slovenia during summer 2026, relative to the 1991–2020 average. It was calculated using data from 221–223 meteorological stations.

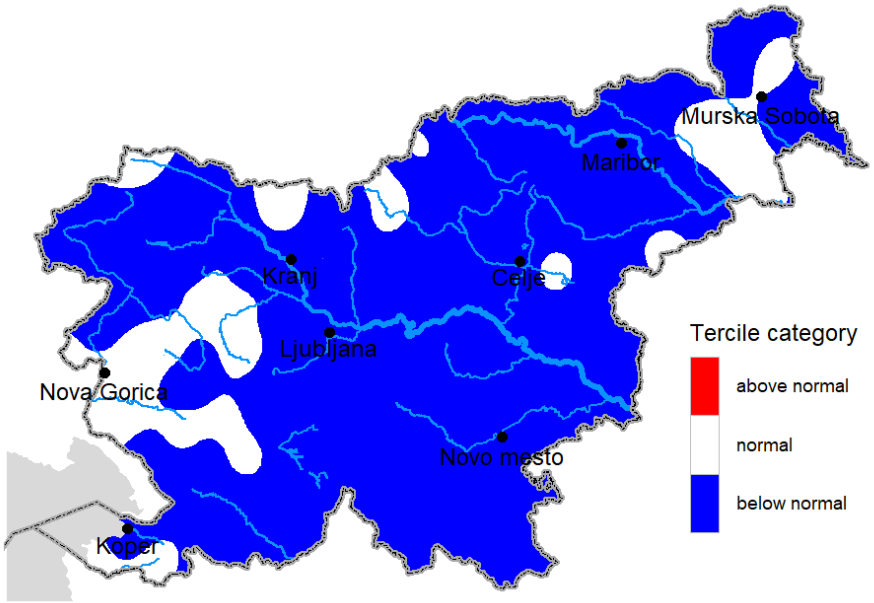


Figure 6. The precipitation tercile category of anomaly in Slovenia in summer 2026, relative to the 1991–2020 average. It was calculated using data from 150 meteorological stations.

According to the tercile classification, precipitation totals in parts of western, northern and north- eastern Slovenia fell within the second tercile (near normal), while the rest of the country was classified within the first tercile (below normal) (Figure 6).

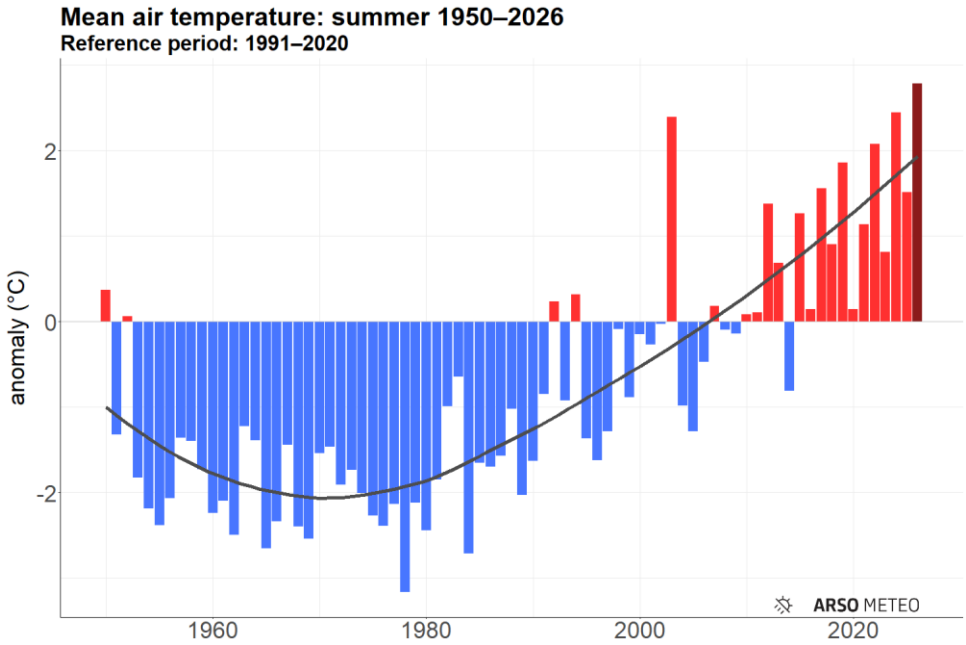


Figure 7. Summer mean air temperature anomaly in Slovenia from 1950 to 2026, relative to the 1991–2020 average. Summer 2026 is highlighted in dark red.

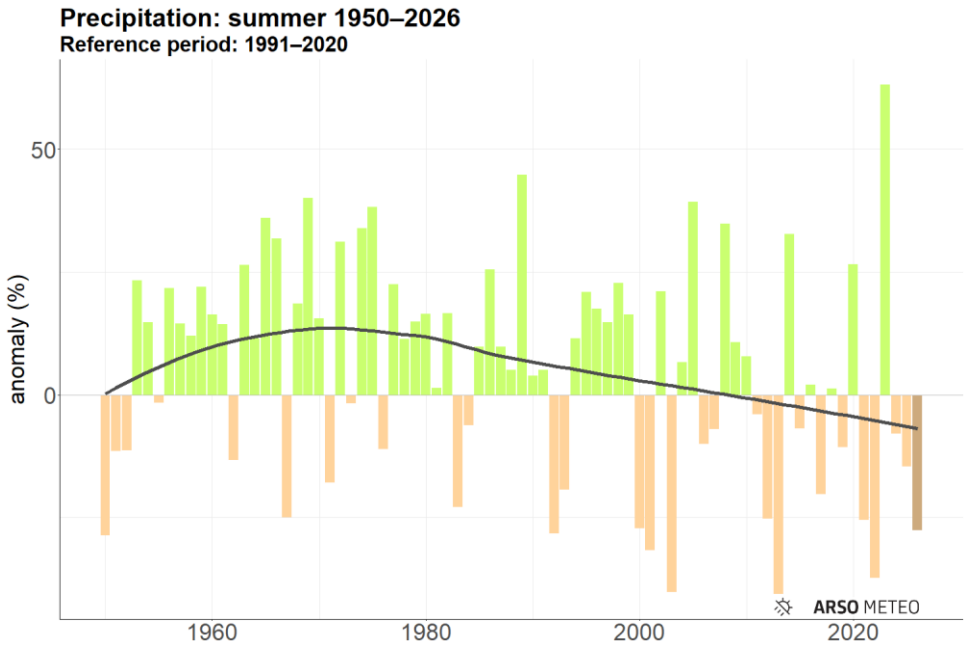


Figure 8. Summer precipitation anomaly in Slovenia from 1950 to 2026, relative to the 1991–2020 average. Summer 2026 is highlighted in dark green.

Since 1950, average summer temperatures in Slovenia initially declined, influenced by the exceptionally warm summers of 1950 and 1952, and continued to decrease until the 1970s. Since then, however, a pronounced positive linear trend has emerged, with summer temperatures increasing by almost 4.0 °C. Relative to the most recent 30-year reference period, only four summers before 2000 were warmer than average. In contrast, above-average summers have predominated in the 21st century, occurring in 18 years to date. Summer 2026 also marked the 12th consecutive above-average summer (Figure 7).

Summer precipitation in Slovenia increased until the 1970s but has generally declined since then. Despite this long-term decrease, wet and dry summers continue to alternate. Since 2000, 15 summers have recorded below-average precipitation, compared with 11 summers that were wetter than average (Figure 8).

Following the record-breaking warmth of June 2025, *June 2026* was also exceptionally warm, with the average air temperature 2.6 °C above the 1991–2020 baseline. This made June 2026 the fifth warmest June on record in Slovenia since 1950. Temperature anomalies ranged from 1.7 °C to 3.4 °C across the country (Figure 9). According to the tercile classification, thermal conditions were above normal throughout Slovenia.

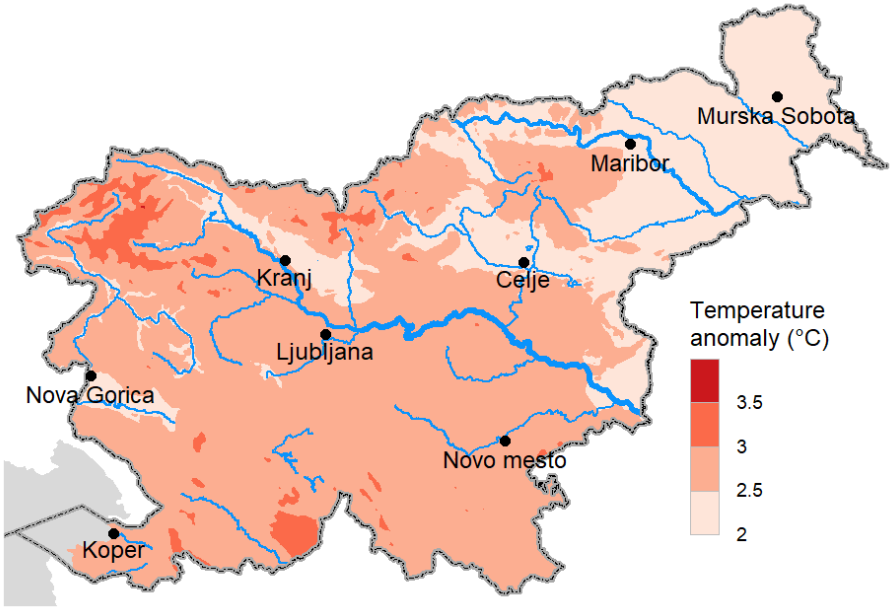


Figure 9. The mean air temperature anomaly in Slovenia during June 2026, relative to the 1991–2020 average. It was calculated using data from 99 meteorological stations.

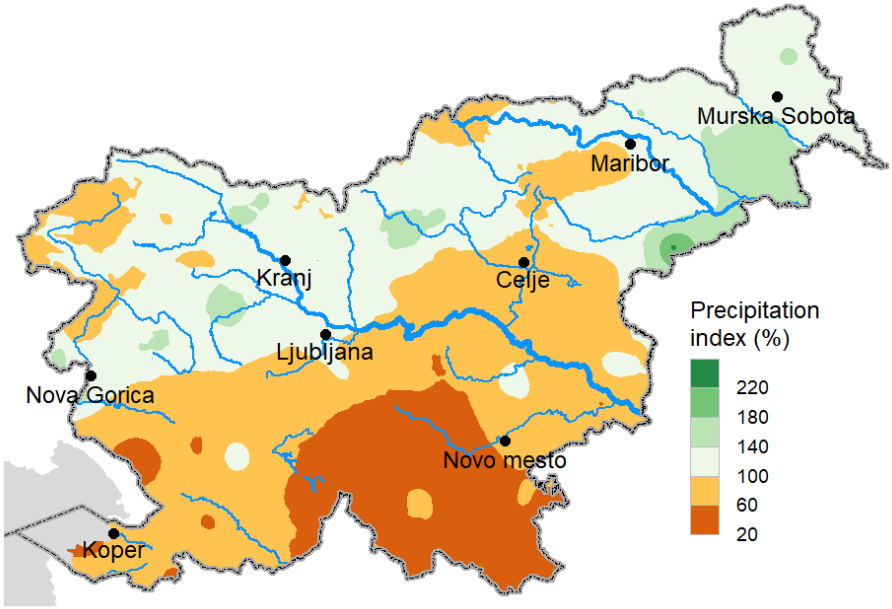


Figure 10. The precipitation index in Slovenia during June 2026, relative to the 1991–2020 average. It was calculated using data from 223 meteorological stations.

Precipitation in *June 2026* was close to the long-term average at the national scale, with a precipitation index of 95 % and values ranging from 31 % to 230 %. However, there was a marked contrast between wetter-than-average conditions in northern Slovenia and below-average precipitation in the south (Figure 10). Despite near-average conditions nationally, June 2026 ranks as the 26th driest June since 1950.

July 2026 was also exceptionally warm, with the national mean air temperature 2.0 °C above the 1991–2020 climatological average. Temperature anomalies ranged from 0.7 °C to 2.7 °C across the country (Figure 11). It was the fourth warmest July on record in Slovenia since 1950. According to the tercile classification, thermal conditions were above normal throughout the country.

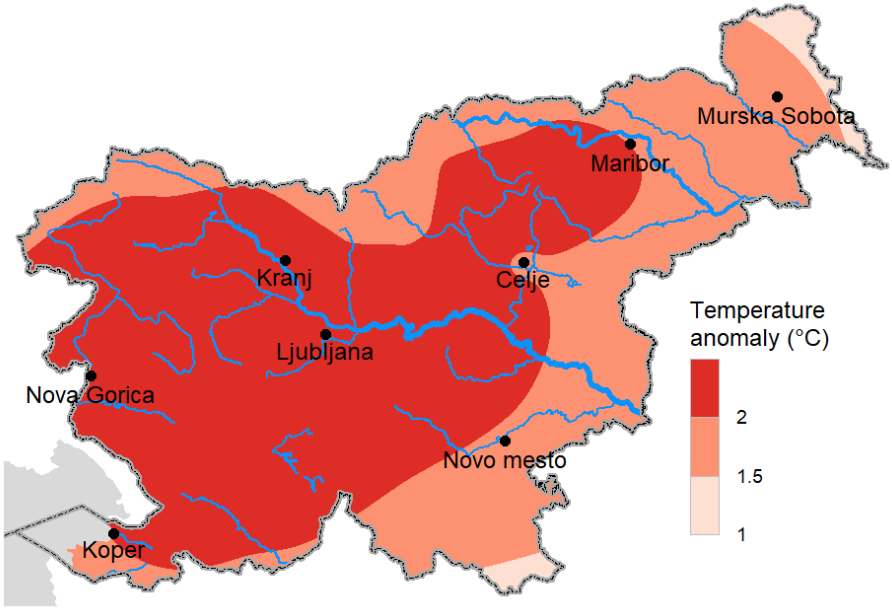


Figure 11. The mean air temperature anomaly in Slovenia during July 2026, relative to the 1991–2020 average. It was calculated using data from 100 meteorological stations.

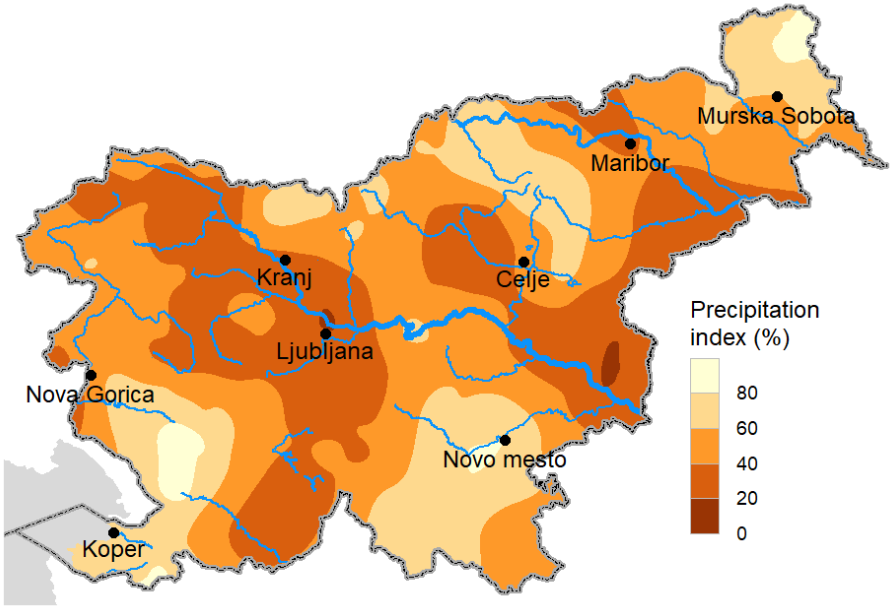


Figure 12. The precipitation index in Slovenia during July 2026, relative to the 1991–2020 average. It was calculated using data from 221 meteorological stations.

However, precipitation in *July 2026* was well below the long-term average at the national level. The precipitation index ranged from 15 % to 97 %, with an area-weighted national average of just 49 % of the 1991–2020 normal. Owing to the convective nature of rainfall, the spatial distribution of precipitation was highly variable. The driest conditions (20–40 % of normal rainfall) occurred mainly in north-western, central, west-central, south-central, central-eastern, south-eastern, and north-eastern Slovenia. Elsewhere, precipitation totals were generally between 40 % and 60 % of normal, locally reaching 80 % in parts of south-eastern and north-eastern Slovenia (Figure 12). July 2026 ranked among the four driest Julys on record since 1950.

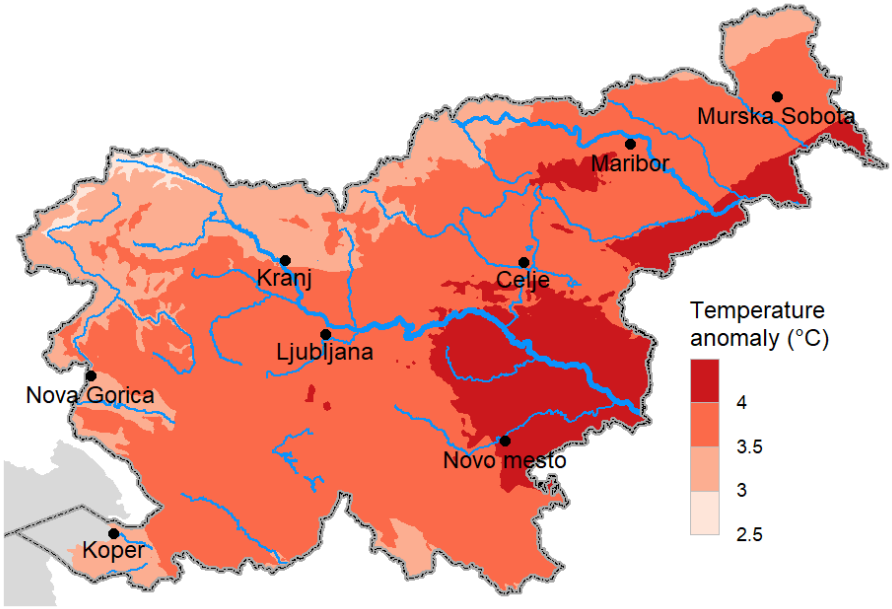


Figure 13. The mean air temperature anomaly in Slovenia during August 2026, relative to the 1991–2020 average. It was calculated using data from 100 meteorological stations.

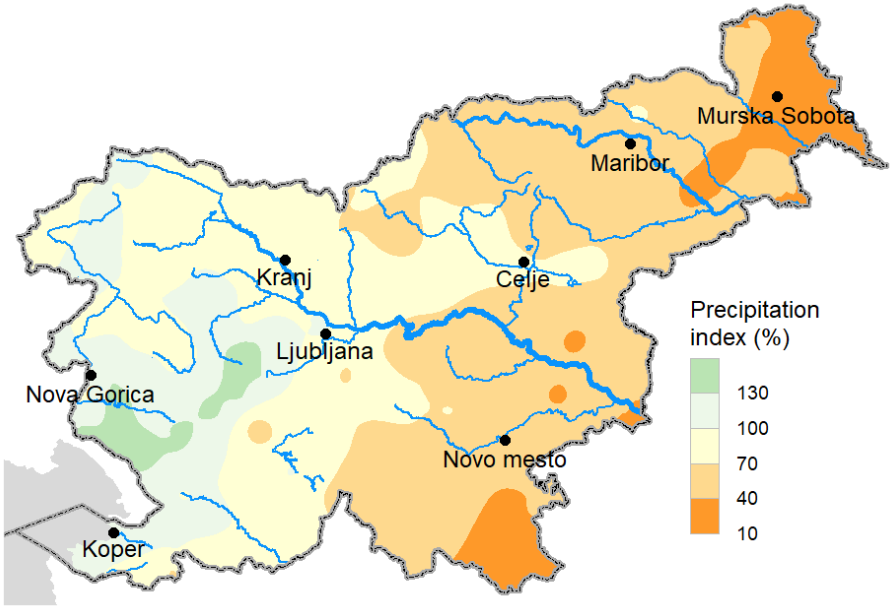


Figure 14. The precipitation index in Slovenia during August 2026, relative to the 1991–2020 average. It was calculated using data from 222 meteorological stations.

August 2026 was exceptionally warm, with air temperature anomalies ranging from 2.5 °C to 4.6 °C across Slovenia (Figure 13). The area-weighted national mean anomaly reached 3.7 °C, making it the warmest August on record since 1950. The record-breaking mean temperature was driven primarily by exceptionally warm afternoons, with the anomaly of the monthly mean daily maximum temperature reaching 4.7 °C, compared with only 2.4 °C for daily minimum temperature. According to the tercile classification, thermal conditions were above normal (third tercile) throughout Slovenia.

August 2026 was considerably drier than average across Slovenia. The precipitation index ranged from 24 % to 146 %, with an area-weighted national average of 72 % of the 1991–2020 normal, making it the 14th driest August on record since 1950. Owing to the convective nature of precipitation, rainfall distribution was highly uneven. The wettest conditions (130–160 % of normal) occurred in a belt extending from the south-western Karst region to central Slovenia, while precipitation totals decreased towards the north and east, falling below 35 % of normal in parts of south-eastern and north-eastern Slovenia (Figure 14).

A summary of summer 2026, including temperature and precipitation conditions for June, July, and August, is presented in Table 1.

Table 1. Summary for summer 2026 temperature and precipitation in Slovenia

SLOVENIA	Temperature anomaly, relative to the 1991–2020 period	Average temperature anomaly	Precipitation index, relative to the 1991–2020 period	Average precipitation index
June 2026	1.7 to 3.4 °C	2.6 °C	31 to 230 %	95 %
July 2026	0.7 to 2.7 °C	2.0 °C	15 to 97 %	49 %
August 2026	2.5 to 4.6 °C	3.7 °C	24 to 146 %	72 %
Summer 2026	**1.9 to 3.4 °C**	**2.8 °C**	**33 to 109 %**	**72 %**

High-Impact Events

Major weather and climate events:

- **12 June–20 August 2026: Drought/Dry spell**

  Severe and prolonged rainfall deficits affected the whole of Slovenia, particularly the southern and north-eastern regions, where many areas received only one-third to one-quarter of their normal summer rainfall totals (approximately 50–80 mm instead of 200–300 mm). Combined with repeated periods of extreme heat, these conditions led to severe to extreme agricultural drought across most of the country. The impacts included substantial crop yield losses, drinking water shortages in some municipalities, and exceptionally low river flows accompanied by unusually high water temperatures. The 2026 agricultural drought was among the most severe recorded in Slovenia in recent decades and was also exceptional at the regional scale.

- **10 June 2026: Thunderstorms/Squall lines**

  A supercell that evolved into a multicell thunderstorm developed over western Slovenia and crossed the northern half of the country during the evening of 10 June. In and around Komenda, a powerful downburst produced wind gusts well in excess of 100 km/h, accompanied by wind-driven, medium-sized hail. The winds caused extensive damage to buildings in several villages, while the hail severely damaged agricultural crops, particularly vegetables, maize, and potatoes. Even greater agricultural losses occurred in the Drava-Ptuj Plain, where the affected area was considerably larger. This was one of the most severe thunderstorm events in Slovenia in recent years. The total damage caused by the thunderstorms between 9 and 11 June

was estimated at 46 million EUR, the majority of which was attributable to damage to buildings.

- **27 July–17 August 2026: Heat wave**

  An exceptionally intense and prolonged heatwave affected Slovenia, breaking records across multiple categories. Several stations recorded their highest temperatures on record, including Koper, where the temperature reached 40.1 °C. On 2 August, Vedrijan in the Goriška Brda region recorded a minimum temperature of 28.7 °C over a 24-hour period, setting a new national record for the highest minimum air temperature ever observed in Slovenia. The heatwave brought a record number of days with maximum temperatures exceeding 35 °C, reaching 9–10 days in some lowland areas. Tropical nights were widespread across much of Slovenia and were recorded even at elevations of around 1,500 m above sea level. The event was driven by a persistent high-pressure ridge and was further intensified by severe drought conditions affecting Slovenia and many other parts of Europe. According to the national heatwave definition, the event lasted up to 20–21 consecutive days in some locations and around 10 days at most meteorological stations. The shorter duration at some sites was due to slightly cooler conditions after 7 August, when temperatures temporarily fell below the heatwave threshold. The combined effects of extreme heat and severe agricultural drought caused extensive crop damage. Forests in many areas turned partially brown unusually early in the season, reflecting widespread heat- and drought-induced stress. River and lake temperatures also reached exceptionally high levels, adversely affecting aquatic ecosystems and fisheries.

Verification of the SEECOF-35 Climate Outlook in Slovenia for the summer season 2026

Table 2 provides a verification summary of the SEECOF-35 climate outlook for summer 2026 (JJA), using the 1991–2020 climatological reference period.

Table 2. SEECOF-35 climate outlook verification summary for Slovenia for summer 2026

Country	Seasonal temperature (JJA)		Seasonal precipitation (JJA)	
	Observed	SEECOF-35 climate outlook for temperature	Observed	SEECOF-35 climate outlook for precipitation
SLOVENIA	above normal	above normal	below-normal precipitation, except in parts of western, northern and north- eastern Slovenia where normal (second tercile)	below normal

Users' Perception of the SEECOF-35 Outlook

The Meteorological Service of the Slovenian Environment Agency does not currently issue a seasonal climate outlook for Slovenia.