Annex

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Assessment of the SEECOF-34 Climate Outlook for Slovenia for the winter season 2025/26

SEECOF-34 Climate Outlook for Slovenia for the winter season 2025/26

The consensus statement of SEECOF-34 climate outlook for the winter season of 2025/26 emphasized that observed sea surface temperatures and forecast through December 2025–February 2026 indicated weak La Niña conditions and positive anomalies over the North Tropical Atlantic and Eastern Tropical Indian Ocean. In the atmosphere, models showed a cyclonic curvature over Western Europe. Slightly positive NAO phase and EA pattern were likely to occur during upcoming winter.

The consensus was, that in the entire SEECOF region winter temperatures were likely to be above-normal, with the probability increasing from the north and east (Zone 1 in Figure 1) towards the south of the region (Zone 2 in Figure 1). For Slovenia, the probabilities for below-, near- and above-normal temperature were estimated to be 20, 30 and 50 %, respectively.

Uncertainties in regional predictions are higher for precipitation than for temperature. Southern and southeastern parts of the Balkans and Cyprus were likely to experience above-normal conditions in terms of winter precipitation sums (Zone 2 in Figure 2). Winter precipitation were likely to be below- to normal in Israel and Jordan (Zone 3 in Figure 2), however, in the most of the SEECOF region, there is an equal probability for winter precipitation (Zone 1 in Figure 2). It was noteworthy that certain parts of the countries, particularly mountainous regions, might observe near- or above-normal winter precipitation totals due to the episodes heavy precipitation. For Slovenia that meant no clear signal or probabilities 33 % for each tercile category.

Figures 1 and 2 show the probabilistic consensus forecast for tercile categories of anomalies of seasonal temperature and precipitation, relative to the period 1991–2020.

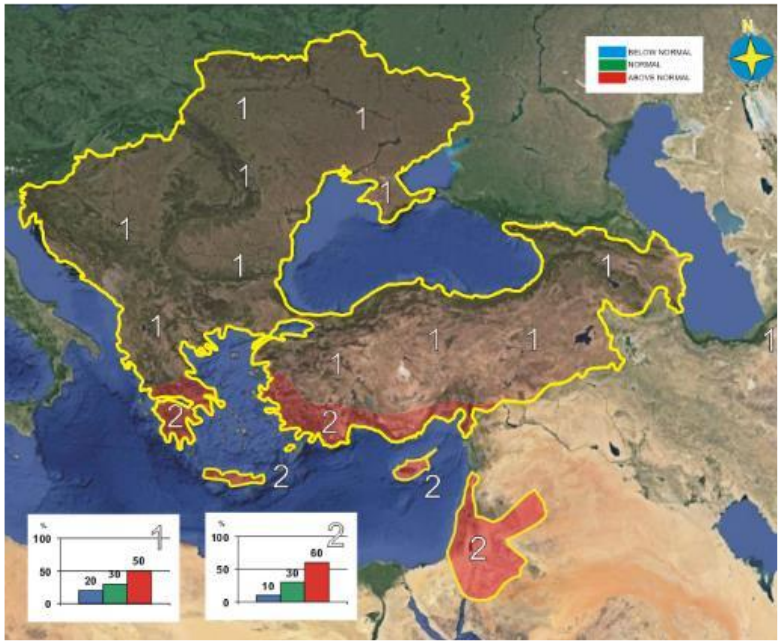

Figure 1. Graphical presentation of the winter 2025/26 temperature outlook

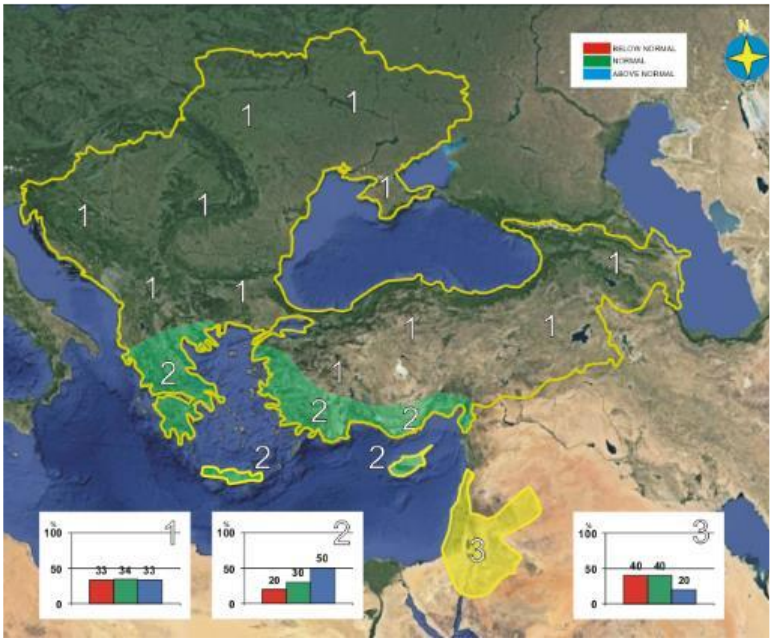

Figure 2. Graphical presentation of the winter 2025/26 precipitation outlook

Analysis of the winter season 2025/26

The average air temperature in Slovenia during winter 2025/26 was above the 1991–2020 average across the entire country (Figure 3). The temperature anomalies for winter 2025/26 (December, January, and February) ranged from –0.1 °C to 2.4 °C, with a national average anomaly of 1.5 °C (surface-weighted average). The highest temperature deviation from the long-term average was observed in southern Slovenia (exceeding 2 °C), with the deviation gradually decreasing towards north-eastern Slovenia, reaching values of around 0 °C in the extreme north-east. Winter 2025/26 has been the nineth warmest on record at the national level since 1950.

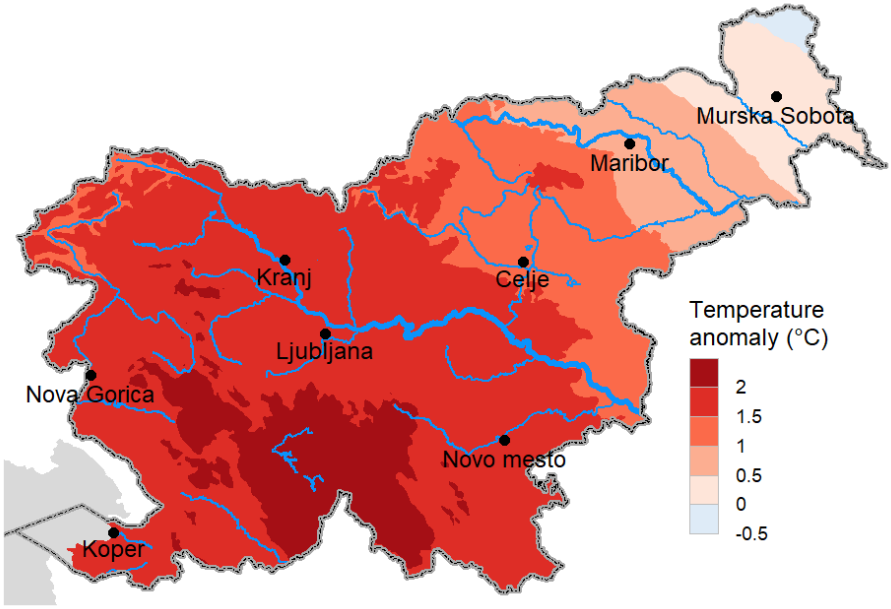

Figure 3. The mean air temperature anomaly in Slovenia during winter 2025/26, relative to the 1991/92–2020/21 average. It was calculated using data from 100 meteorological stations. The below-average values in the extreme north-eastern part of the country are a consequence of interpolation and the lack of temperature data in this area.

Based on tercile rankings, thermal conditions in Slovenia in winter 2025/26 were classified as above normal in the western three quarters of the country, while the eastern quarter experienced normal conditions (Figure 4).

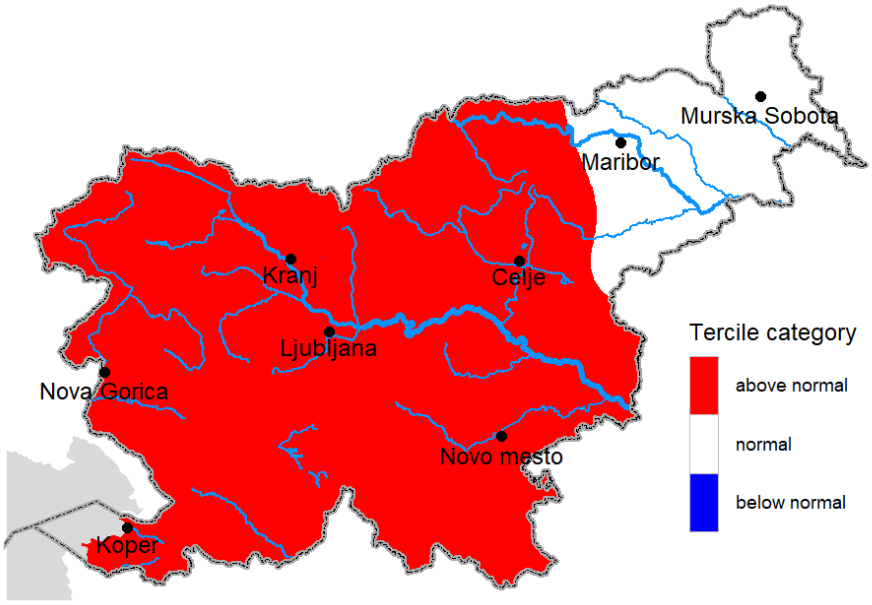

Figure 4. The mean air temperature tercile category of anomaly in Slovenia during winter 2025/26, relative to the 1991/92–2020/21 average. It was calculated using data from 100 meteorological stations.

Averaged across the country, this winter had average precipitation compared to the reference period 1991/92–2020/21. The precipitation index was 94 %, placing it among the normal third

of winters since the 1950/51 season. The spatial distribution of winter precipitation was quite uneven relative to the long-term average. Above-average precipitation totals were recorded in parts of the Slovenian Littoral and, even more so, in the north-eastern part of the country, where the indicator locally exceeded 140 %. Elsewhere, precipitation amounts were below average, with the largest deficit observed in the Julian Alps (north-western part of the country), where the precipitation index fell to below 60 % (Figure 5).

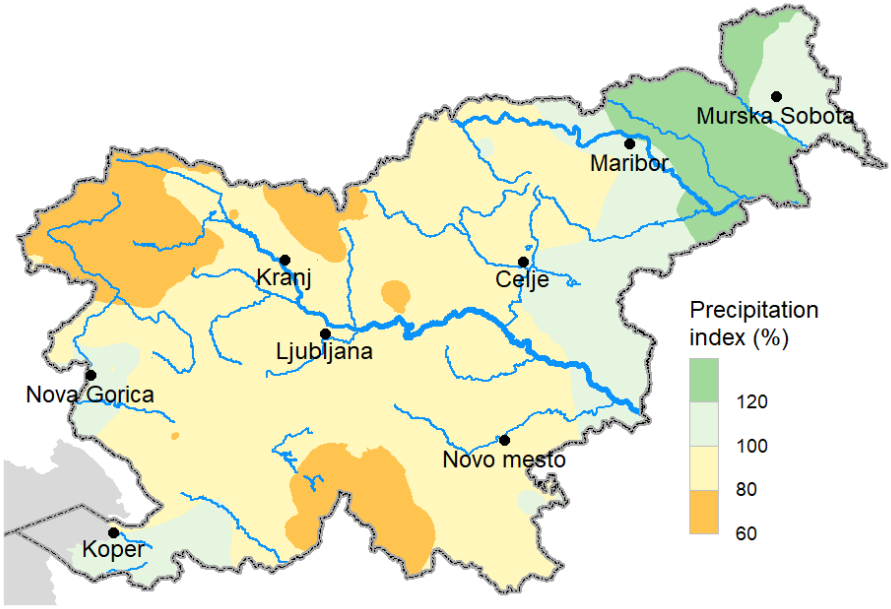

Figure 5. The precipitation index in Slovenia during winter 2025/26, relative to the 1991/92–2020/21 average. It was calculated using data from 219–223 meteorological stations.

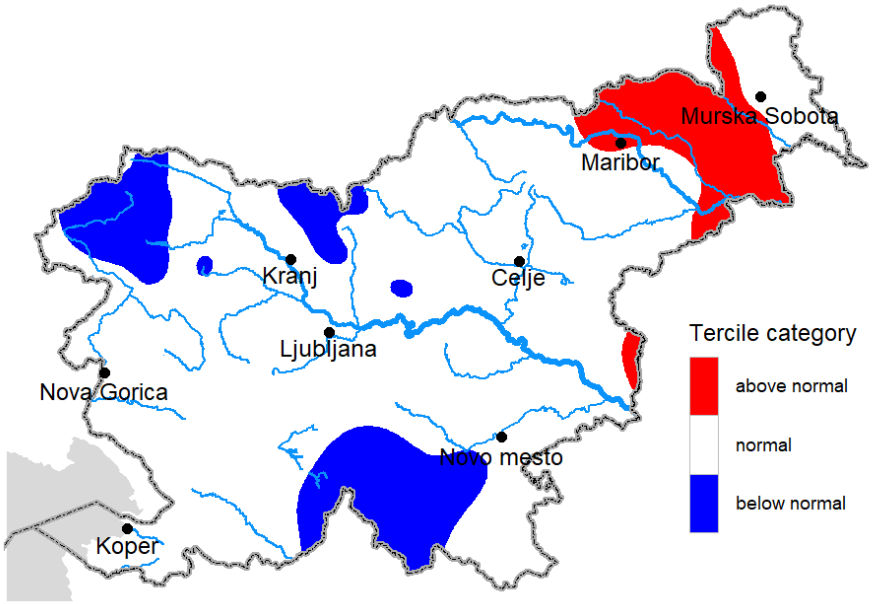

Figure 6. The precipitation tercile category of anomaly in Slovenia in winter 2025/26, relative to the 1991/92–2020/21 average. It was calculated using data from 149 meteorological stations.

According to these data, precipitation across most of Slovenia fell within the second tercile (normal). Areas in the southern and northwestern parts of Slovenia experienced precipitation in the first tercile (below-normal), while the north-eastern part of the country recorded precipitation within the third tercile (above-normal) (Figure 6).

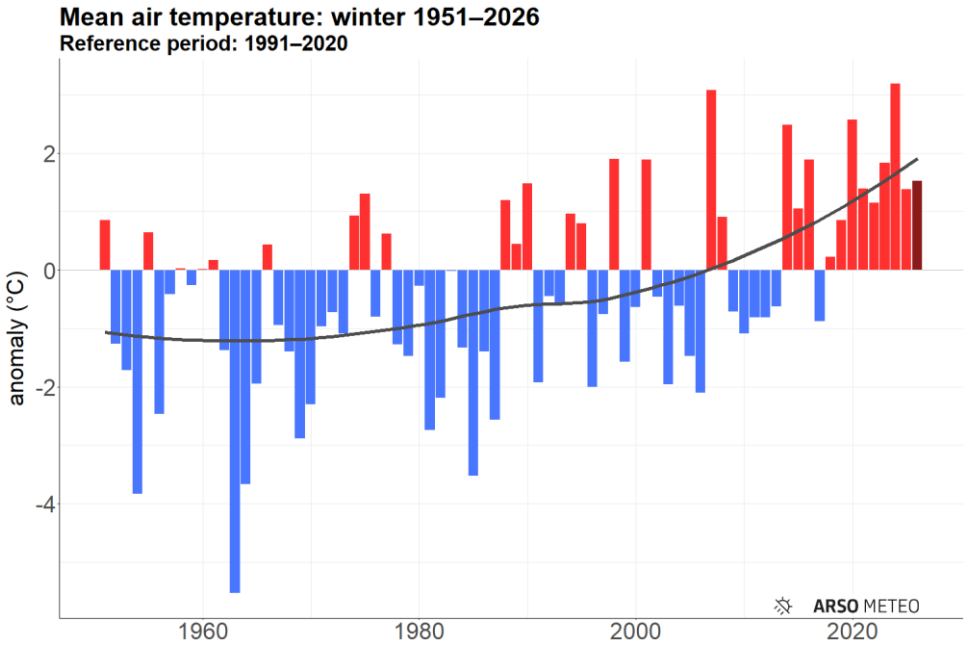

Figure 7. Winter mean air temperature anomaly in Slovenia from 1950/51 to 2025/26, relative to the 1991/92–2020/21 average. Winter 2025/26 is highlighted in dark red.

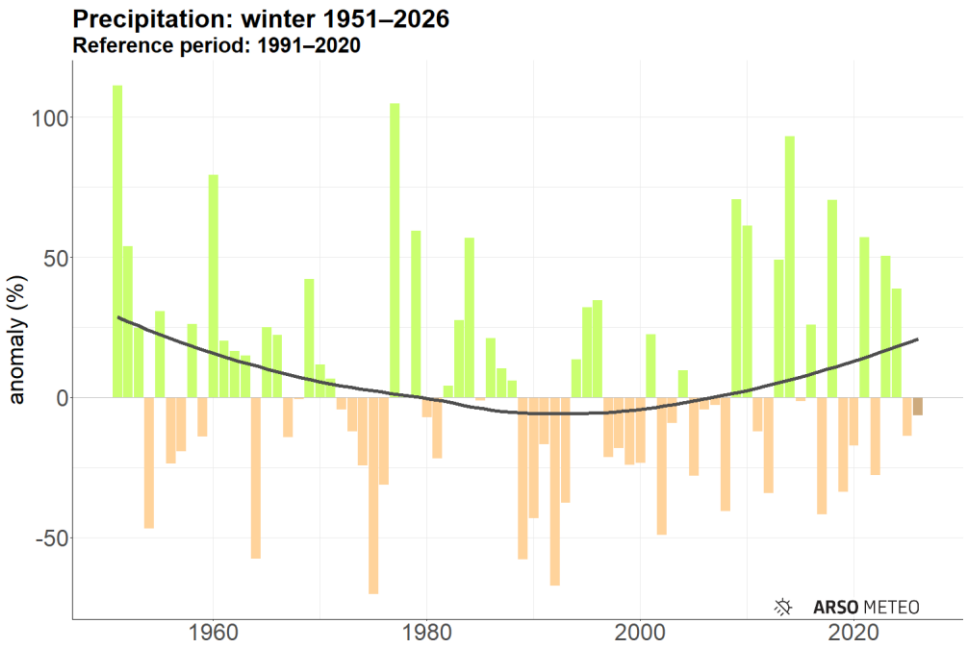

Figure 8. Winter precipitation anomaly in Slovenia from 1950/51 to 2025/26, relative to the 1991/92–2020/21 average. Winter 2025/26 is highlighted in dark brown.

Since the 1970s, winter temperature in Slovenia has been rising and has increased by more than 3 °C since then (Figure 7). Since 2000/01 there have been 15 winters with positive and 11 with negative temperature anomalies, but the negative anomalies have been much smaller than the

positive ones. This winter is already the nineth consecutively warmer than average. In the last thirteen years, only the winter of 2016/17 was colder than the long-term average. The linear winter temperature trend over the period 1950/51–2025/26, at 0.3 °C per decade, is statistically significant.

Since the winter of 1950/51, the winter precipitation index decreased until the mid-1990s, after which the trend reversed and has been increasing since then. There have been 11 winters with an above-average precipitation index since 2000/01 (Figure 8).

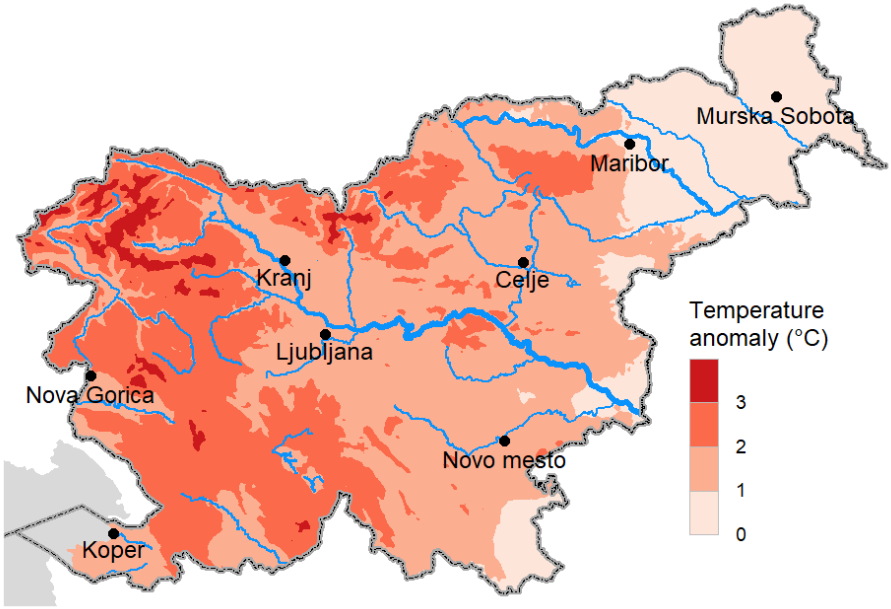

Figure 9. The mean air temperature anomaly in Slovenia during December 2025, relative to the 1991–2020 average. It was calculated using data from 100 meteorological stations.

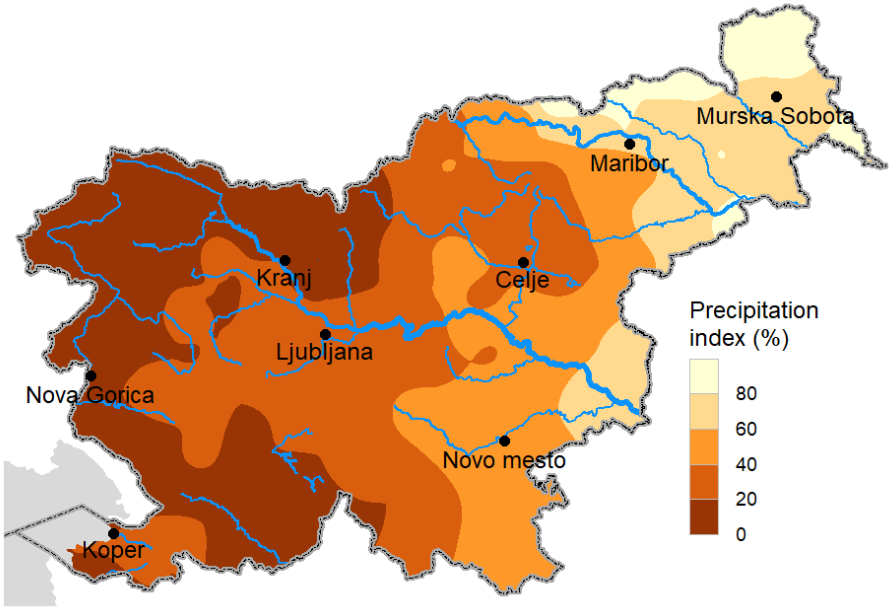

Figure 10. The precipitation index in Slovenia during December 2025, relative to the 1991–2020 average. It was calculated using data from 223 meteorological stations.

December 2025 was warm, with the average air temperature being 1.7 °C above the 1991–2020 average. Air temperature anomalies ranged from 0.3 °C to 3.6 °C (Figure 9). It was the 15th warmest December since 1950. According to tercile ranks, thermal conditions in Slovenia were above-normal in the western two thirds of the country and normal elsewhere.

December 2025 was dry, the national precipitation index was 37 % (surface-weighted average), ranging from 8 % to 95 %. It ranked among the nine driest Decembers since 1950. According to tercile ranks, precipitation in Slovenia below-normal in the western two thirds of the country and normal elsewhere.

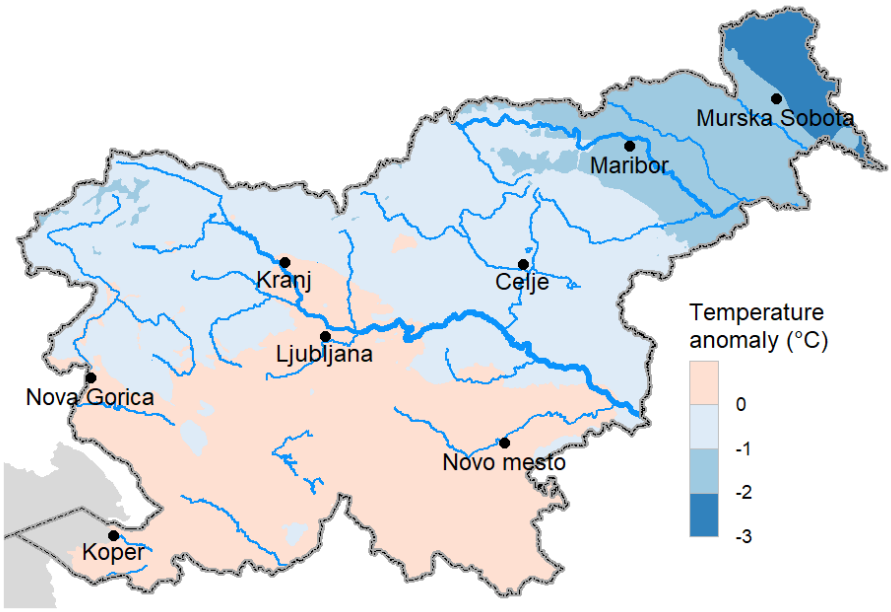

Figure 11. The mean air temperature anomaly in Slovenia during January 2025, relative to the 1991–2020 average. It was calculated using data from 100 meteorological stations.

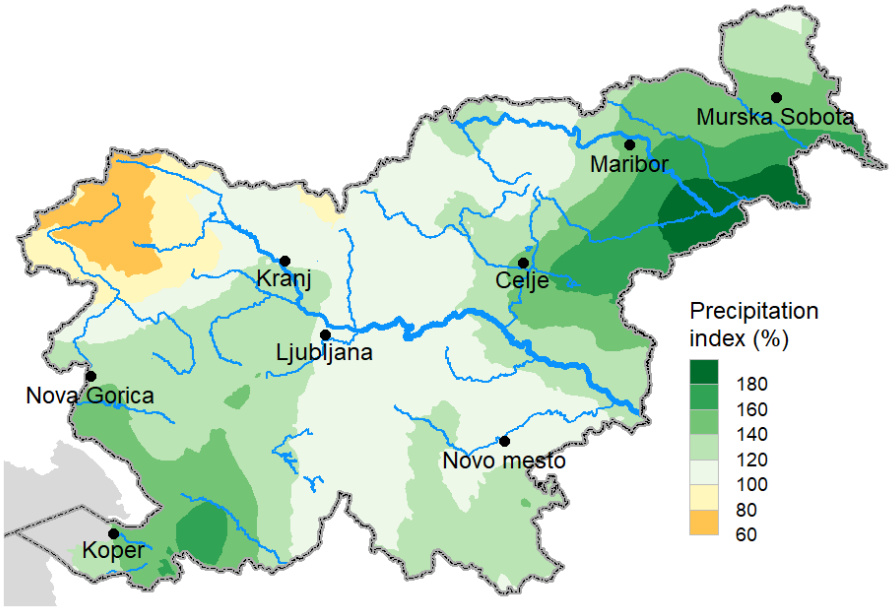

Figure 12. The precipitation index in Slovenia during January 2025, relative to the 1991–2020 average. It was calculated using data from 223 meteorological stations.

January 2025 was colder at the national level than the 1991–2020 multi-annual average. Temperature anomalies ranged from –2.0 °C to 1.4 °C, with a national mean temperature of −0.4 °C (Figure 11). It ranked around the median of Januaries since 1950. According to tercile ranks, thermal conditions in Slovenia were below normal in the north-east, above normal in some smaller areas in the south, west and north and normal elsewhere.

January 2025 was wet in south-western and north-western Slovenia, normal in the north and central Slovenia, and dry in north-western Slovenia (Figure 12). The precipitation index ranged from 60 % to 198 %, with a surface-weighted average value of 127 %. The month ranked around the median among Januaries since 1950. According to tercile ranks, precipitation in Slovenia were above normal in south-western and north-western Slovenia, as well as in parts of south-eastern and northern Slovenia, and normal elsewhere.

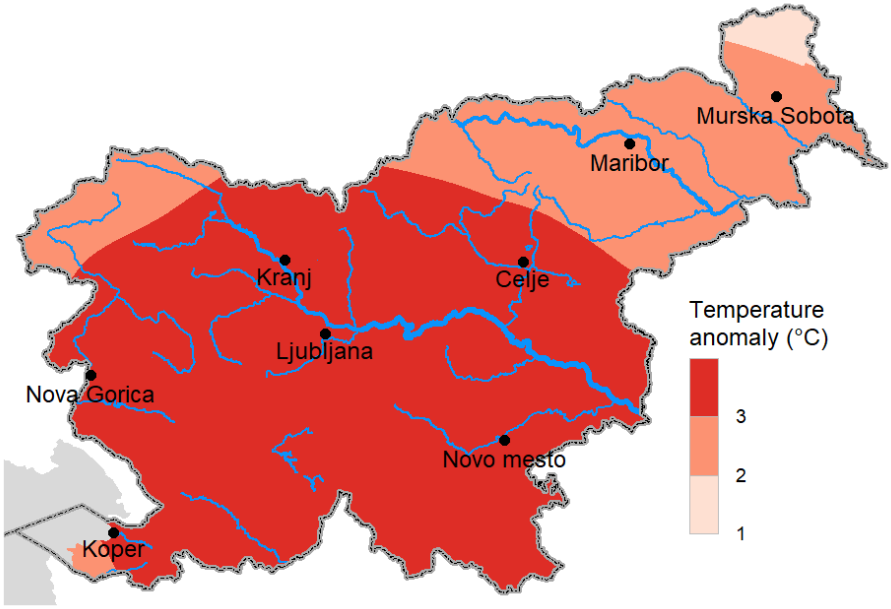

Figure 13. The mean air temperature anomaly in Slovenia during February 2025, relative to the 1991–2020 average. It was calculated using data from 100 meteorological stations.

Temperatures in *February 2025* were above average. Air temperature anomalies ranged from 1.9 °C to 4.3 °C (Figure 13), with a surface-weighted mean anomaly of 3.2 °C. It was the sixth warmest February since 1950. According to tercile ranks, thermal conditions in Slovenia were above normal (third tercile) across the entire country.

February 2025 was also wetter than average across almost the entire country, with below-average precipitation recorded only in a small area in the south (Figure 14). The precipitation index ranged from 89 % to 222 %, with a surface-weighted average value of 143 %. As a result, February 2026 ranked among the 20 wettest Februaries since 1950.

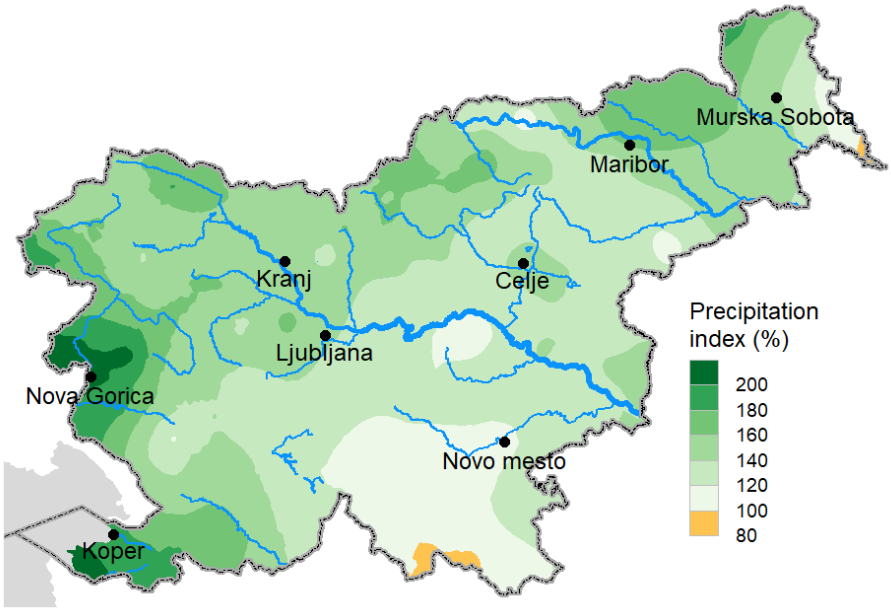

Figure 14. The precipitation index in Slovenia during February 2025, relative to the 1991–2020 average. It was calculated using data from 222 meteorological stations.

A summary of winter 2025 and the monthly (December, January, and February) temperature and precipitation conditions can be found in Table 1.

Table 1. The summary for winter 2025/26 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
December 2025	0.3 to 3.6 °C	1.7 °C	8 to 95 %	37 %
January 2026	–2.0 to 1.4 °C	–0.4 °C	60 to 198 %	127 %
February 2026	1.9 to 4.3 °C	3.2 °C	89 to 222 %	143 %
Winter 2025/26	**–0.1 to 2.4 °C**	**1.5 °C**	**54 to 140 %**	**94 %**

High Impact Events

24 December and 19–20 February: In eastern and north-eastern Slovenia, heavy and wet snow fell, leading to widespread snow breakage. Large amounts of wet caused trees to fall and damaged power lines. As a result, some locations were without electricity for several days. Damage to the electricity infrastructure and forests was unusually severe.

Verification of the SEECOF-34 Climate Outlook in Slovenia for the winter season 2025/26

Table 2 provides a verification summary of the SEECOF-34 climate outlook for the winter season 2025/26 (DJF), using the climatological reference period 1991–2020.

Table 2. SEECOF-34 climate outlook verification summary for Slovenia for winter 2025/26

Country	Seasonal temperature (JJA)		Seasonal precipitation (JJA)	
	Observed	SEECOF-34 climate outlook for temperature	Observed	SEECOF-34 climate outlook for precipitation
SLOVENIA	warmer than normal	warmer than normal	normal across most of Slovenia, below-normal in parts of southern and north-western Slovenia, and above-normal in the north-eastern part of the country	no signal

Users' Perception of the SEECOF-34 Outlook

The meteorological Service at the Slovenian Environment Agency currently doesn't provide a seasonal outlook for the country.