**Republic Hydrometeorological Service of Serbia**
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# MONTHLY BULLETIN FOR SERBIA

# OCTOBER 2023

Belgrade, the 5th of November 2023

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- ***2nd warmest October for Serbia since 1951***
- ***The warmest October for Novi Sad, Zrenjanin, Banatski Karlovac, Loznica, Valjevo, Kraljevo, Dimitrovgrad, Sjenica, Kopaonik, Zlatibor and Crni Vrh***
- ***Record-breaking number of summer days in Loznica (total of 19)***
- ***One tropical day was recorded in Belgrade, Loznica, Valjevo, Kraljevo, Krusevac, Nis, Leskovac, Zajecar and Dimitrovgrad***
- ***Tropical night was recorded in Valjevo and for the first time in Kikinda***
- ***Record high daily minimum and maximum air temperature, particularly in the last decade of October***
- ***7th driest October for Serbia, 2nd driest for Kraljevo, 3rd driest for Nis and Pozega***

# AIR TEMPERATURE

## Mean monthly air temperature

October 2023 ranks as **the 2nd warmest** for Serbia in the period from 1951 to 2023 (Figure 1), **warmest on record** for Novi Sad, Loznica, Zrenjanin, Kraljevo, Valjevo, Banatski Karlovac, Dimitrovgrad, Sjenica, Crni Vrh, Zlatibor and Kopaonik since the record-keeping at these stations began. **At all stations, October ranks among the top four warmest** (*Table 1*).

In the appendix are graphs showing 15 warmest years since the record-keeping began at the stations: Crni Vrh, Novi Sad, Loznica, Zrenjanin, Kraljevo, Valjevo, Zlatibor, Dimitrovgrad, Sjenica and Belgrade.

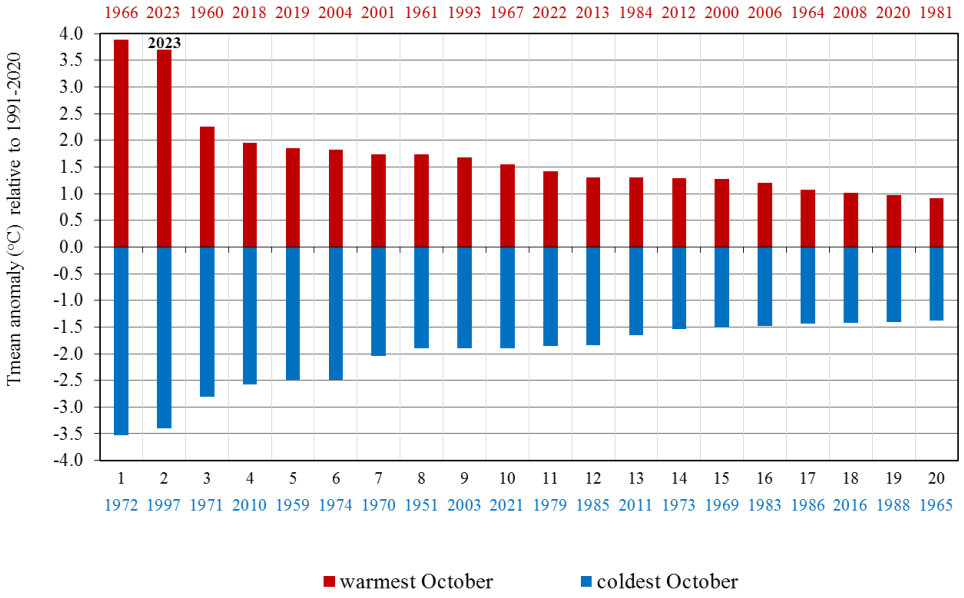



Figure 1. Rank of the warmest and coldest October in Serbia

Table 1. Ranking of October 2023 with mean air temperature, average and departure from the normal 1991-2020

| STATION | historical period | Tmean (°C) - October 2023 | 1991-2020 base period for October | temperature anomaly (°C) | ranking for October 2023 |
|---|---|---|---|---|---|
| **CRNI VRH** | 1966-2022 | 12.5 | 7.6 | 4.9 | **1** |
| **NOVI SAD** | 1948-2022 | 16.6 | 12.0 | 4.6 | **1** |
| **LOZNICA** | 1952-2022 | 16.8 | 12.3 | 4.5 | **1** |
| **ZRENJANIN** | 1943-2022 | 16.3 | 12.2 | 4.1 | **1** |
| **KRALJEVO** | 1926-2022 | 16.1 | 12.1 | 4.1 | **1** |
| **VALJEVO** | 1926-2022 | 16.1 | 12.1 | 4.0 | **1** |
| **ZLATIBOR** | 1950-2022 | 13.1 | 9.1 | 4.0 | **1** |
| **B.KARLOVAC** | **1985**-2022 | 15.6 | 12.0 | 3.6 | **1** |
| **DIMITROVGRAD** | 1945-2022 | 14.5 | 10.9 | 3.6 | **1** |
| **KOPAONIK** | 1949-2022 | 8.5 | 5.3 | 3.2 | **1** |
| **SJENICA** | 1946-2022 | 10.9 | 8.0 | 2.9 | **1** |
| **BELGRADE** | 1887-2022 | 17.6 | 13.3 | 4.3 | 2 |
| **CUPRIJA** | 1948-2022 | 15.8 | 11.7 | 4.1 | 2 |
| **KRUSEVAC** | 1930-2022 | 15.8 | 11.9 | 3.9 | 2 |
| **KIKINDA** | 1948-2022 | 15.7 | 11.9 | 3.9 | 2 |
| **KRAGUJEVAC** | 1925-2022 | 16.0 | 12.2 | 3.8 | 2 |
| **SOMBOR** | 1941-2022 | 15.3 | 11.5 | 3.8 | 2 |
| **PALIC** | 1945-2022 | 15.4 | 11.6 | 3.7 | 2 |
| **KURSUMLIJA** | 1952-2022 | 14.7 | 11.1 | 3.6 | 2 |
| **S.PALANKA** | 1939-2022 | 15.5 | 12.0 | 3.5 | 2 |
| **NEGOTIN** | 1927-2022 | 15.2 | 12.1 | 3.2 | 2 |
| **POZEGA** | 1952-2022 | 13.2 | 10.4 | 2.8 | 2 |
| **S.MITROVICA** | 1925-2022 | 15.4 | 11.9 | 3.5 | 3 |
| **LESKOVAC** | 1948-2022 | 14.7 | 11.5 | 3.2 | 3 |
| **V.GRADISTE** | 1926-2022 | 14.9 | 11.9 | 2.9 | 3 |
| **NIS** | 1925-2022 | 16.3 | 12.6 | 3.7 | 4 |
| **VRANJE** | 1926-2022 | 15.4 | 12.1 | 3.4 | 4 |
| **ZAJECAR** | 1929-2022 | 14.1 | 10.9 | 3.2 | 4 |

Mean October air temperature ranged from 13,2ºC in Požega to 17,6ºC in Belgrade, and in the mountains from 8,5ºC at Kopaonik to 13,1ºC at Zlatibor (*Figure 2*).

Departure from the mean monthly air temperature from the normal[1] for the 1991–2020 ranged from +2,8ºC in Požega to +4,9ºC at Crni Vrh (*Figure 3*).

Mean air temperature, based on the percentile method[2], was in the category of extremely warm *(Figure 4)*.

[1] Term ***normal*** refers to ***climatological standard normal***, that is, the average value of a particular climate element, calculated for the period from January 1, 1991 to December 31, 2020

[2] **n**th percentile of a variable refers to the value of the observed variable below which there is n percent of data previously arranged in an ascending order

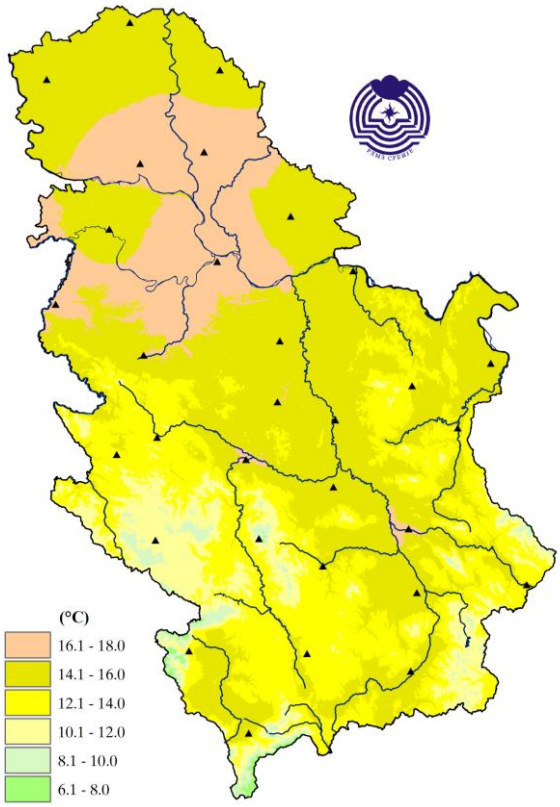



Figure 2. Spatial distribution of mean monthly air temperature (ºC)

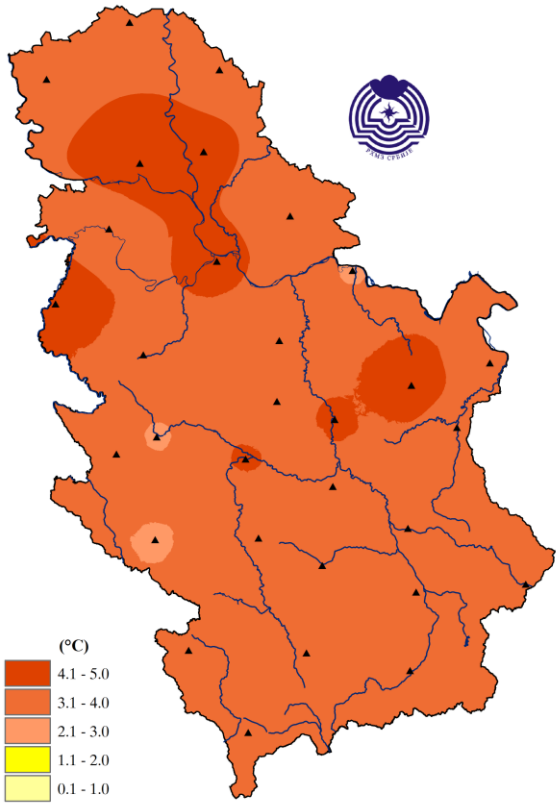



Figure 3. Spatial distribution of mean monthly air temperature anomaly (ºC)

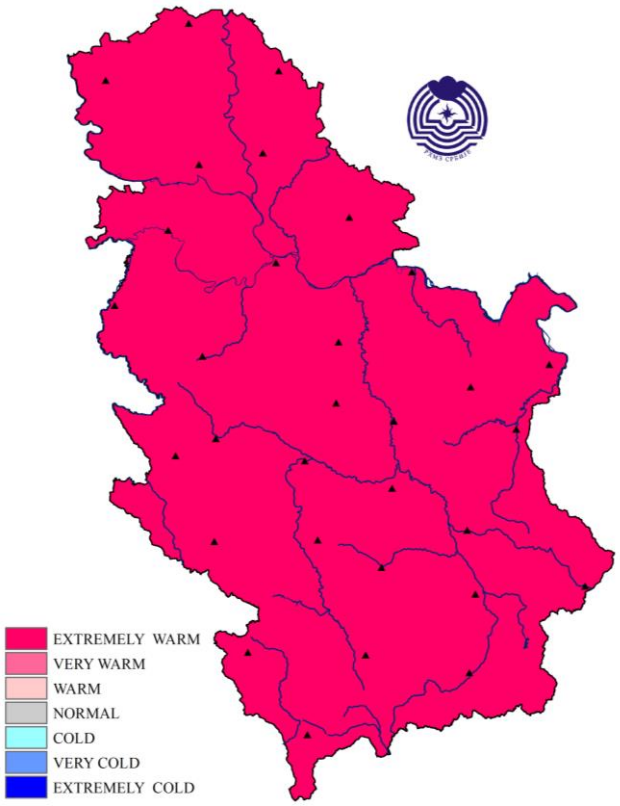



Figure 4. Spatial distribution of the mean monthly air temperature using percentile method

Mean daily air temperature in Belgrade, based on the percentile method, was in the normal category at the beginning and mid-October, then on October16 and 17 it was cold, in the remainder of the month it was in the categories spanning from warm to extremely warm (*Figure 5).* Daily course of the mean daily air temperature and the accompanying percentiles for the stations Sombor, Novi Sad, Loznica, Negotin, Kragujevac, Zlatibor, Nis and Vranje are given in the Appendix.

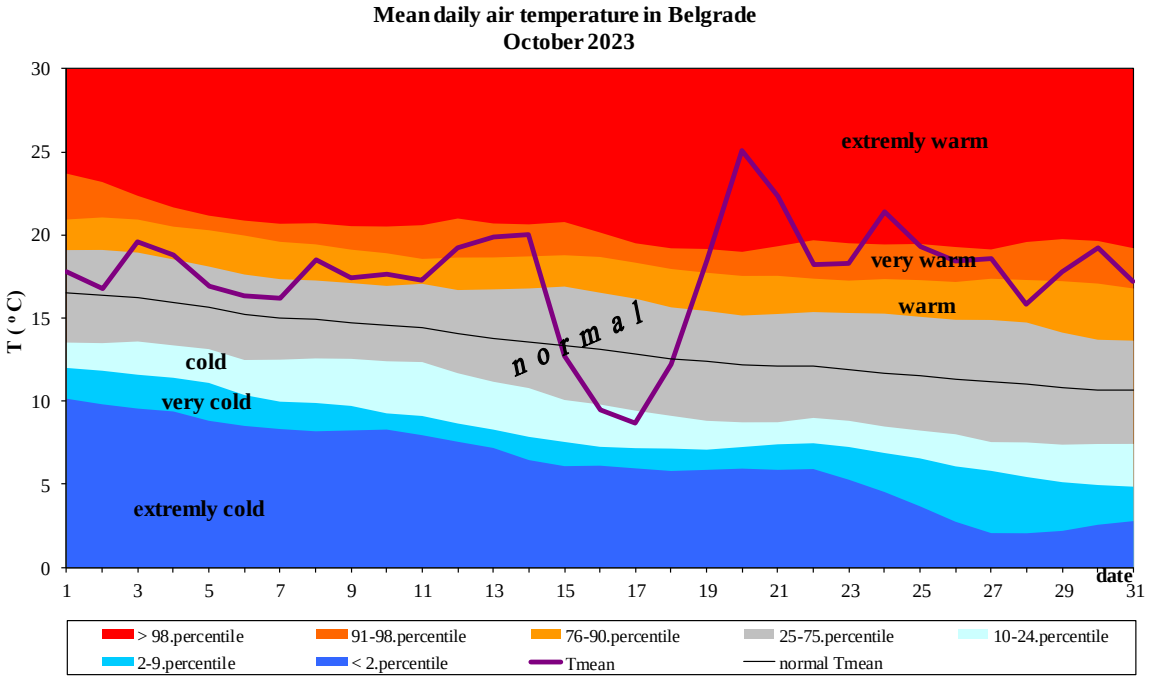



Figure 5. Daily course of the mean daily air temperature and accompanying percentiles for Belgrade

## Maximum air temperature

Mean maximum air temperature ranged from 21,8ºC on Palic to 24,8ºC in Loznica, whilst Belgrade observed air temperature of 23,9°C. On the mountains, mean maximum air temperature ranged from 13,1ºC at Kopaonik to 19,0ºC in Sjenica.

Based on the percentile method, mean maximum air temperature was in the category of extremely warm in most of the country, and very warm in Sjenica and Kopaonik.

The highest daily air temperature of 32,4ºC was measured in Valjevo on October 20, while Belgrade observed 30,2ºC on the same day.

The number of summer days[3] ranged from 5 on Palic to to 19 in Loznica. There weren't any summer days in the mountains. Loznica observed **record-breaking number of summer days,** thereby breaking the previous record of 15 days set in October 1966. In most of the country, the recorded number of summer days was 5 to 10 days above the October average.

[3] Summer day refers to a day with maximum daily air temperature 25°C and above

One tropical day[4] was observed in Loznica, Valjevo, Belgrade, Kraljevo, Krusevac, Nis, Leskovac, Zajecar and Dimitrovgrad

Heat wave[5] was recorded in most of the country from 20 to 25 October, and the longest heat wave was registered in Dimitrovgrad lasting from 20 to 31 October (*Table 2).*

Table 2. Heat waves in Serbia

**HEAT WAVES IN SERBIA - OCTOBER 2023**

**(relative to the 1991-2020 base period)**

**OCTOBER**

| station/day | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PALIC | | | | | | | | | | | | | | | | | | | VW | EW | VW | VW | VW | EW | | | | | | | |
| SOMBOR | | | | | | | | | | | | | | | | | | | VW | EW | VW | VW | VW | EW | | | | | | | |
| KIKINDA | | | | | | | | | | | | | | | | | | | | EW | VW | VW | VW | VW | | | | | | | |
| ZRENJANIN | | | | | | | | | | | | | | | | | | | | EW | VW | EW | VW | VW | | | | | | | |
| NOVI SAD | | | | | | | | | | | | | | | | | | | VW | EW | VW | VW | VW | VW | | | | | | | |
| S.MITROVICA | | | | | | | | | | | | | | | | | | | VW | EW | VW | VW | VW | VW | VW | VW | VW | | | | |
| BELGRADE | | | | | | | | | | | | | | | | | | | | EW | VW | VW | VW | EW | VW | | | | | | |
| LOZNICA | | | | | | | | | | | | | | | | | | | EW | EW | VW | VW | VW | VW | | | | | | | |
| VALJEVO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V.GRADISTE | | | | | | | | | | | | | | | | | | | | EW | EW | EW | VW | VW | VW | | | | | | |
| S.PALANKA | | | | | | | | | | | | | | | | | | | | EW | VW | EW | VW | VW | VW | VW | | | | | |
| KRAGUJEVAC | | | | | | | | | | | | | | | | | | | | EW | VW | EW | VW | VW | VW | VW | | | | | |
| KRALJEVO | | | | | | | | | | | | | | | | | | | | EW | VW | EW | VW | VW | VW | EW | | | | | |
| POZEGA | | | | | | | | | | | | | | | | | | | | EW | VW | VW | VW | VW | VW | | | | | | |
| ZLATIBOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CUPRIJA | | | | | | | | | | | | | | | | | | | | EW | EW | EW | EW | EW | EW | VW | | | | | |
| KRUSEVAC | | | | | | | | | | | | | | | | | | | | EW | EW | EW | VW | VW | | | | | | | |
| NEGOTIN | | | | | | | | | | | | | | | | | | | | | EW | EW | EW | VW | EW | EW | | | | | |
| ZAJECAR | | | | | | | | | | | | | | | | | | | | EW | EW | EW | VW | EW | EW | EW | VW | | | | |
| CRNI VRH | | | | | | | | | | | | | | | | | | | | EW | EW | VW | VW | VW | VW | | | | | | |
| KOPAONIK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SJENICA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NIS | | | | | | | | | | | | | | | | | | | | EW | EW | EW | VW | VW | VW | VW | | | | | |
| VRANJE | | | | | | | | | | | | | | | | | | | | VW | EW | VW | EW | VW | | | | | | | |
| DIMITROVGRAD | | | | | | | | | | | | | | | | | | | | EW | EW | EW | VW | VW | EW | VW | VW | VW | VW | EW | VW |
| LESKOVAC | | | | | | | | | | | | | | | | | | | | EW | EW | EW | VW | EW | EW | VW | | | | | |
| KURSUMLIJA | | | | | | | | | | | | | | | | | | | | EW | EW | EW | VW | VW | | | | | | | |
| B.KARLOVAC | | | | | | | | | | | | | | | | | | | | EW | EW | EW | VW | VW | VW | | | | | | |

| | |
|---|---|
| EW | EXTREMELY WARM |
| VW | VERY WARM |

Figure 6 shows daily course of the maximum daily air temperature and the accompanying percentiles for Belgrade in October 2023 and for the stations Sombor, Novi Sad, Loznica, Negotin, Kragujevac, Zlatibor, Nis and Vranje are given in the Appendix.

[4] Tropical day refers to a day with maximum daily air temperature 30°C and above

[5] Heat wave is, according to the percentile method, is a period during which maximum daily air temperature is in the warm and very warm categories for 5 consecutive days or longer

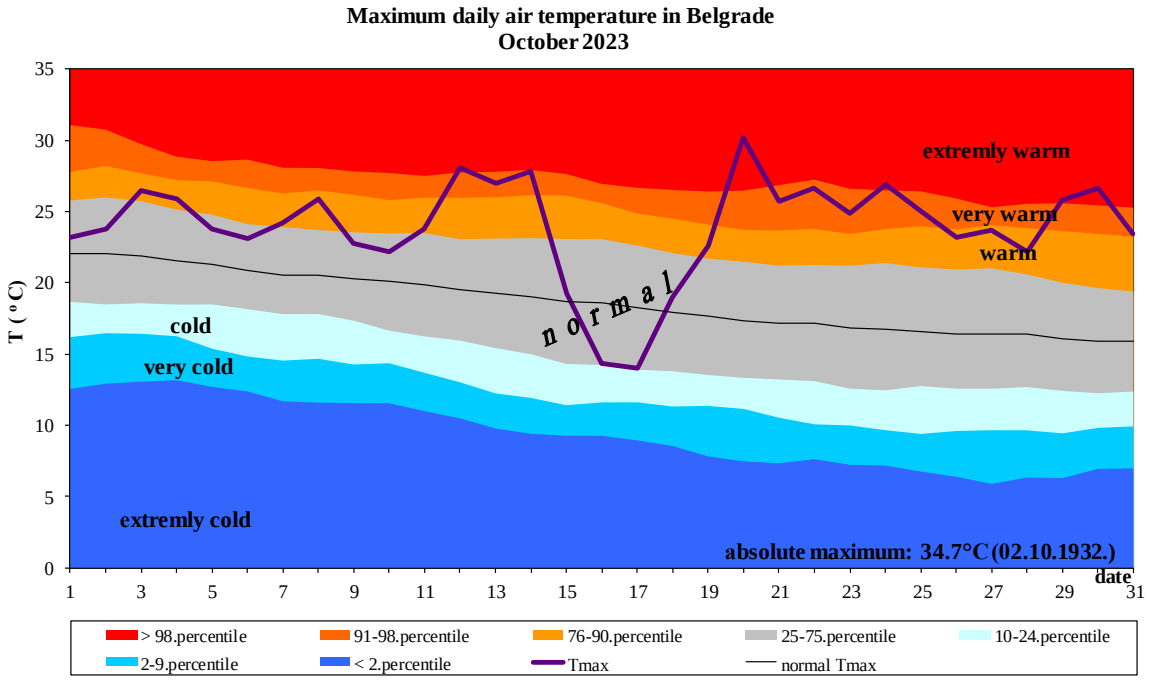



Figure 7. Daily course of the maximum daily air temperature and accompanying percentiles for Belgrade

## Minimum air temperature

Mean minimum air temperature in October ranged from 6,1ºC in Zaječar to 13,0ºC in Belgrade. In the mountains, mean minimum air temperature ranged from 4,4ºC in Sjenic to 8,8ºC at Zlatiboru.

Based on the percentile method, mean minimum monhtly air temperature was in the extremely warm category in most of the country, very warm in Sjenica and Dimitrovgrad, warm in Veliko Gradiste, Pozega and Leskovac, and normal in Zajecar.

The lowest minimum daily air temperature of -2,4ºC was measured at Kopaonik on October 16. In the lowland, the lowest daily air temperature of -1,5ºC was measured in Zajecar on October 17. On October 17 and 18, Belgrade observed the lowest monhtly air temperature of 5,3ºC.

One tropical night[6] was recorded in Kikinda, **for the first time** since record-keeping began, as well as in Valjevo, for the second time, only after 1991.

Figure 7 shows daily course of the minimum daily air temperature and the accompanying percentiles for Belgrade in October 2023, and for the stations Sombor, Novi Sad, Loznica, Negotin, Kragujevac, Zlatibor, Nis and Vranje are given in the Appendix.

[6] Tropical night is defined as the day with minimum daily air temperature 20°C and above

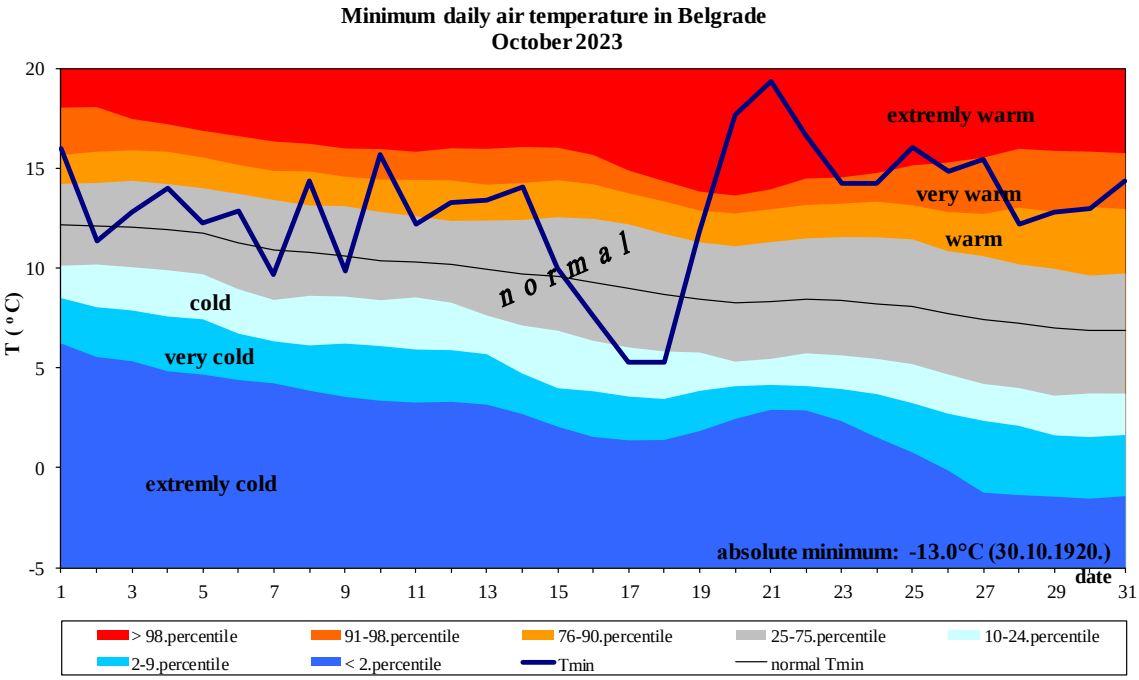



Figure 7. Daily course of the minimum daily air temperature and accompanying percentiles for Belgrade

Figure 8 shows assessment of the minimum and maximum air temperature in Serbia for October based on the tercile distribution relative to the 1991-2020 base period. It can be noted that mean minimum and mean maximum air temperature are significantly above the upper tercile threshold and their values are at **the highest** in the period since 1981.

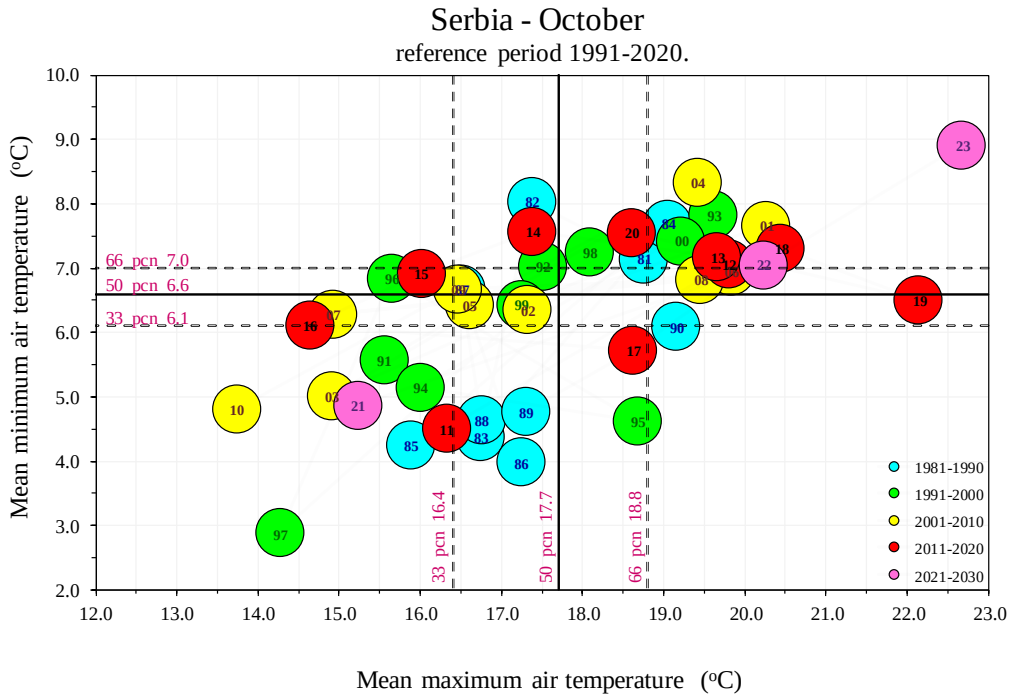



Figure 8. Assessment of minimum and maximum air temperature for Serbia with the accompanying terciles in relation to the 1991-2020 base period

In the period from 20 to 31 October, minimum air temperature in Serbia was significantly above the monthly average, however, in relation to the average for the last decade of the month it was even more extreme (*Figure 9*). During this period, **record high minimum daily air temperature** was observed almost daily at a number of stations (the minimum daily air temperature records have been exceeded surpassing the previous date records for minimum temperatures).

During October 2023, there were more days with **exceeded or tied historical maximum air temperature records** at specific stations. On October 20, almost the entire country observed its hottest day since the record-keeping began. Moreover, on October 21, 22 and 30 historical maximum temperature recorded were exceeded at numerous stations.

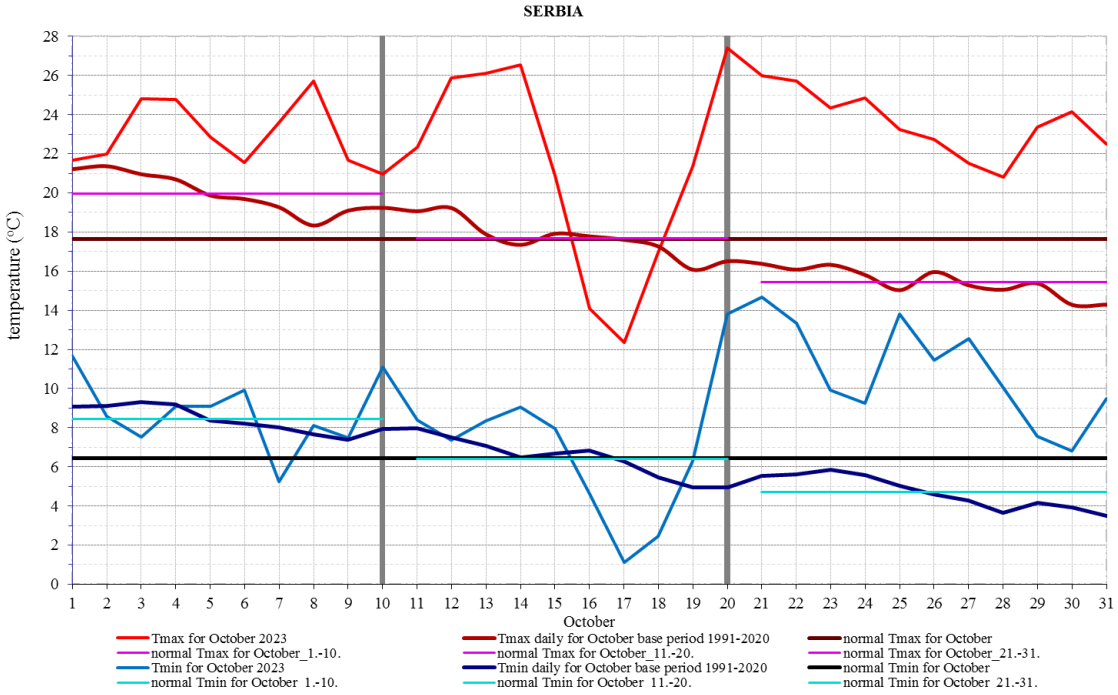



Figure 9. Daily course of the maximum and minimum daily air temperature and their normals for the month and decades for Serbia

# PRECIPITATION

October 2023 ranks as **the 7th driest** for Serbia in the period since 1951 (*Figure 10)*, 2nd driest for Kraljevo, 3rd driest for Pozega and Nis, 4th driest for Dimitrovgrad since record-keeping at these stations began. In the appendix are graphs showing rank of 5 driest years since the measurments at these stations began: Kraljevo, Nis, Pozega, Dimitrovgrad and Cuprija.

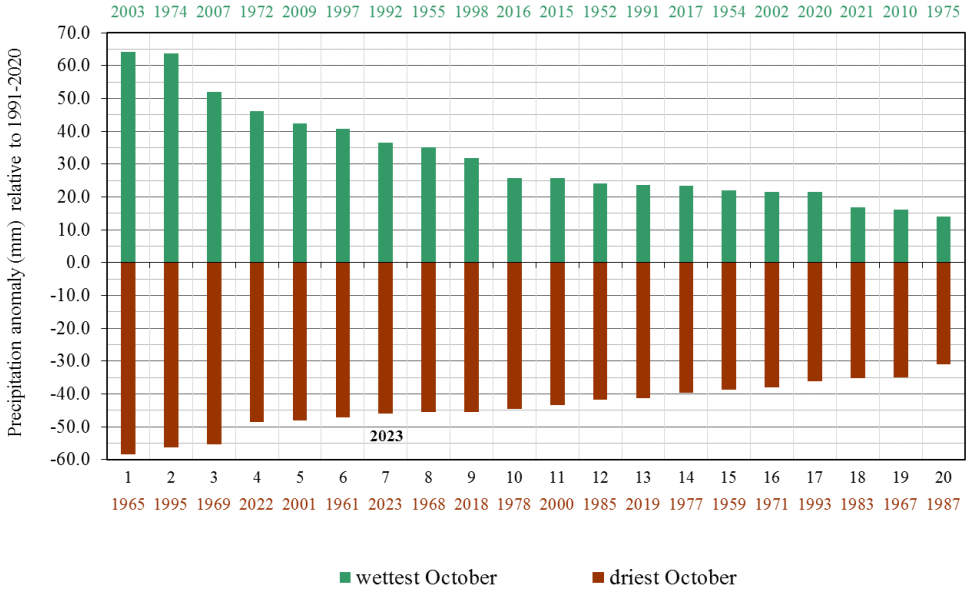



Figure 10. Rank of the wettest and driest October for Serbia for the period from 1951 to 2023

The recorded amount of precipitation in October ranged from 1,1 mm in Nis to 30,6 mm in Sjenica, whereas Belgrade recorded 13,0 mm (*Figure 11*).

Total precipitation sums in relation to the normal for the 1991-2020 base period ranged from 2% in Nis to 45% in Sombor and Veliko Gradište (*Figure 12*).

Based on the percentile method, precipitation sums were in the following categories: dry and very dry in most of the country, extremely dry in Pozega, Kraljevo, Cuprija, Nis and Dimitrovgrad, normal in Sombor, Banatski Karlovac and Veliko Gradiste (*Figure 13*).

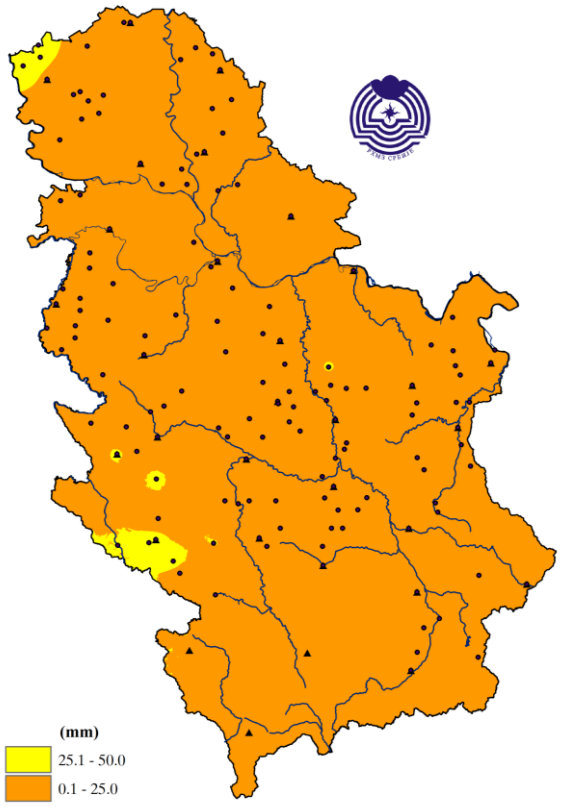



Figure 11. Spatial distribution of the monthly precipitation sums (mm) according to data from 28 major meteorological, 21 climatological and 95 rain gauge stations

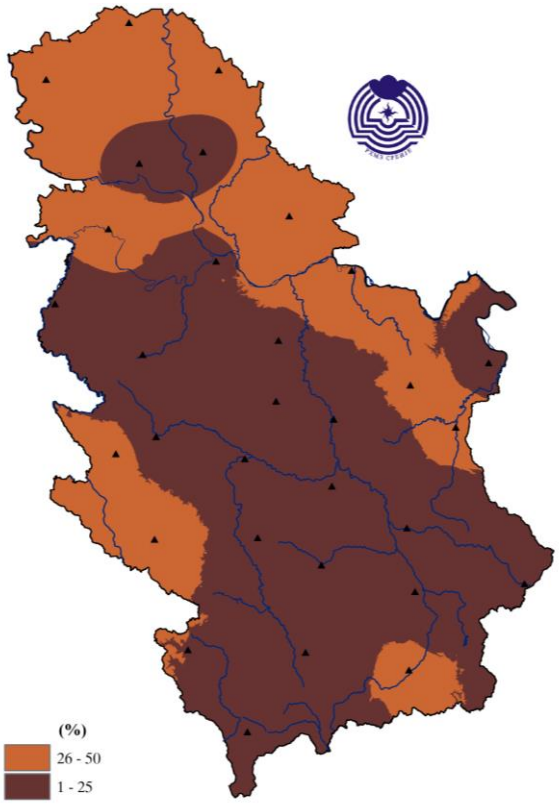



Figure 12. Spatial distribution of the monthly precipitation sums in the percentages of normal for the 1991–2020 base period

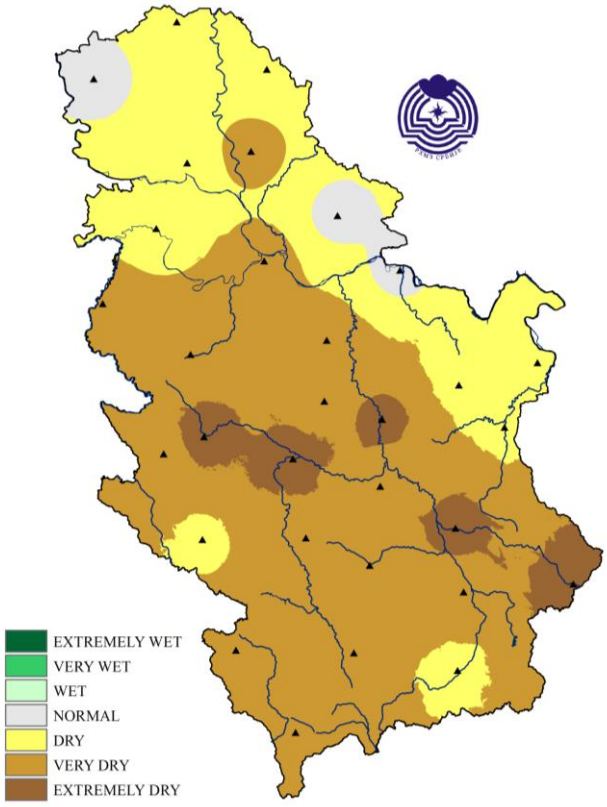



Figure 13. Monthly precipitation sums according to the percentile method

The highest daily precipitation sum of 20,6 mm was registered in Sjenica on October 22. On October 25, Belgrade recorded daily precipitation sum of 6,0 mm.

Number of days with precipitation in October ranged from 2 in Nis and Leskovac to 9 in Banatski Karlovac, Kopaonik and Crni Vrh (*Figure 14).* The recorded number of days with precipitation was 2 to 8 days below October average in most of the country (*Figure 15).*

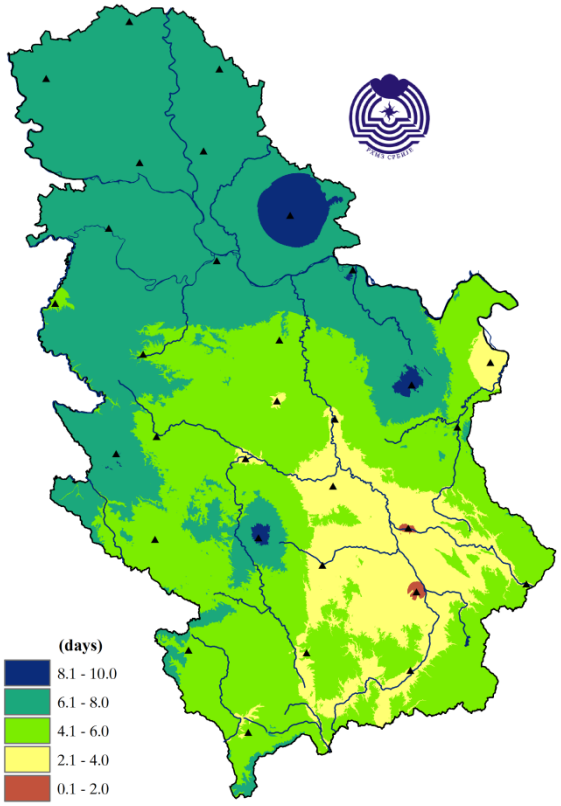



Figure 14. Spatial distribution of number of days with precipitation

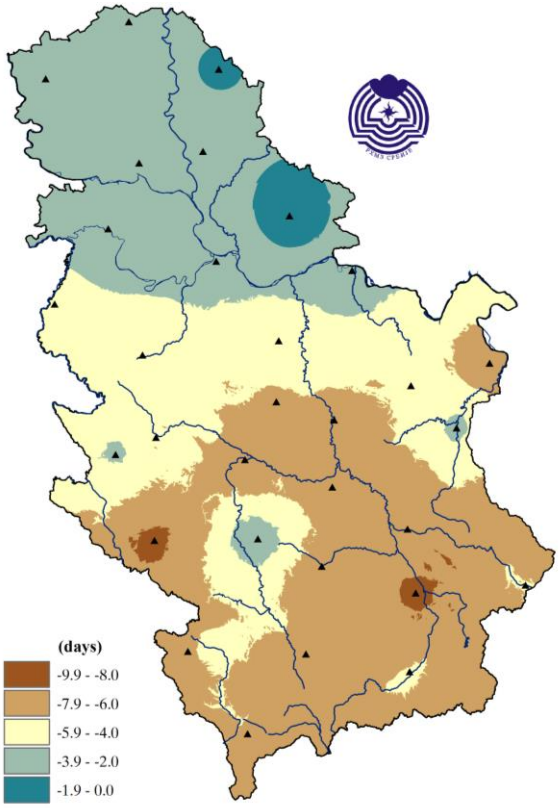



Figure 15. Spatial distribution of deviation of number of days with precipitation

Figure 16 show daily and cumulative precipitations sums with averaged normal 1991-2020 for October in Belgrade, and for the stations Sombor, Novi Sad, Loznica, Negotin, Kragujevac, Zlatibor, Nis and Vranje precipitation sums are given in Appendix.

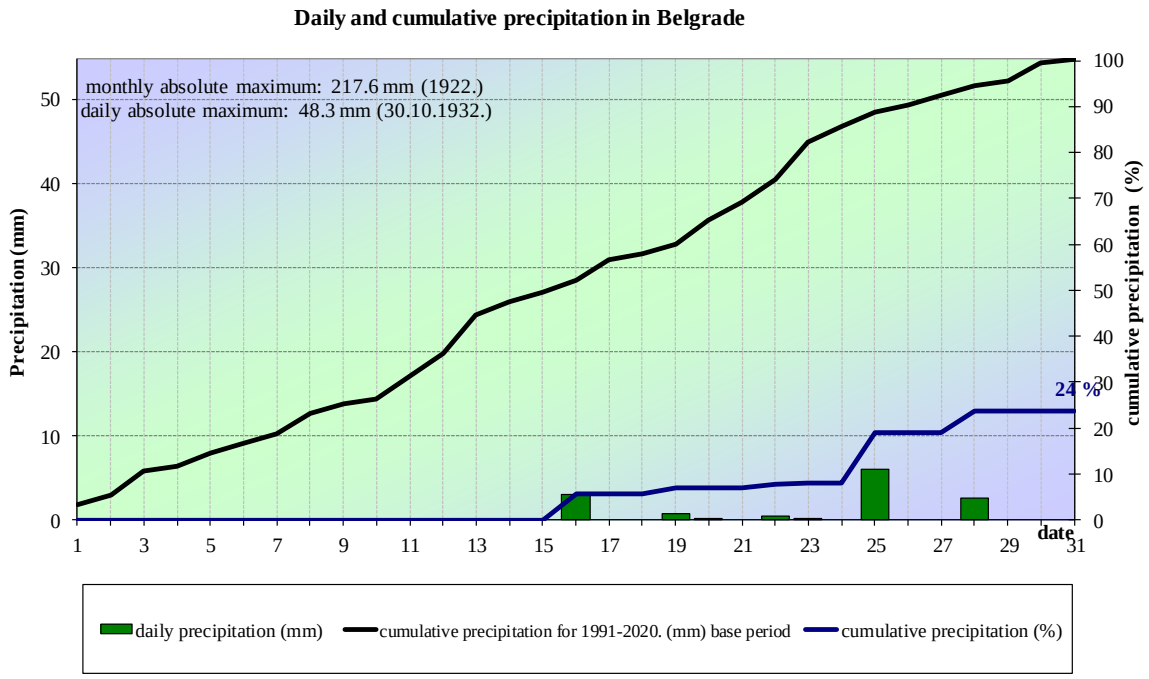



Figure 16. Daily and cumulative precipitation in Belgrade

Figure 17 shows assessment of air temperature and precipitation sums for Serbia for October based on the tercile distribution relative to the 1991 – 2020 base period. It can be noted that October 2023 was marked by air temperature significantly above the upper tercile threshold (the highest since 1981) and precipitation sums significantly below lower tercile.

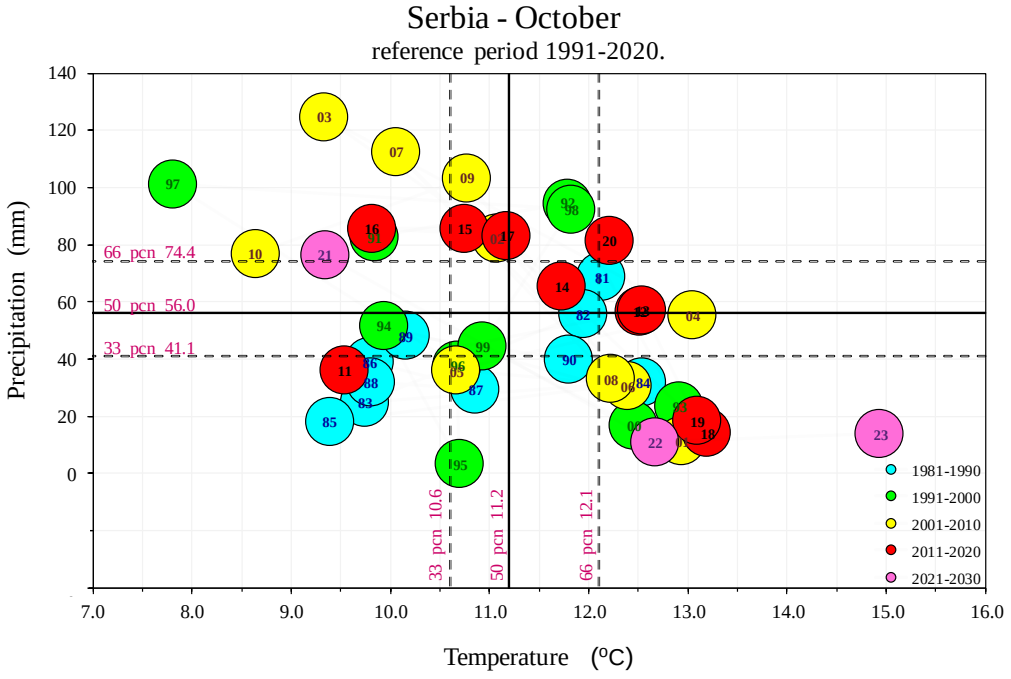



Figure 17. Assessment of air temperature and precipitation for Serbia with the accompanying terciles in relation to the 1991-2020 base period

# CLOUD COVER, BRIGHT AND CLOUDY DAYS

Mean cloud cover in Serbia was around and slightly below the average, ranging from 4/10 to 6/10. Figures 18, 19 and 20 show the average daily cloud cover in October for Belgrade, Pozega and Banatski Karlovac.

Bright days[7] were not recorded in Pozega, whereas the highest number of bright days, total of 9 days, was recorded in Nis and Leskovac. Belgrade recorded 8 bright days. The recorded number of bright days was around the October average.

The fewest cloudy days[8] were recorded at Crni Vrh, the highest number of cloudy days, total of 8 days, was recorded at Kopaonik. Number of cloudy days was 3 to 7 days below the October average.

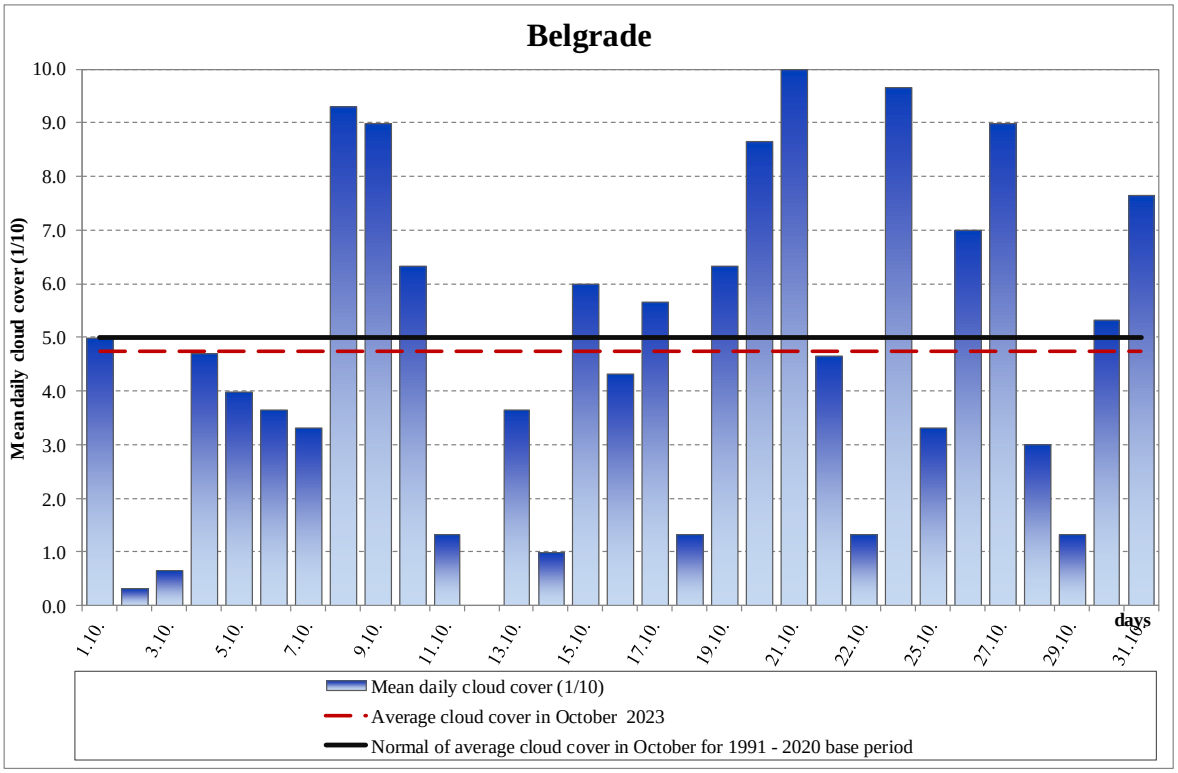



Figure 18. Mean daily cloud cover in Belgrade

[7] Bright day refers to a day with cloud cover less than 2/10
[8] Cloudy day refers to a day with cloud cover over 8/10

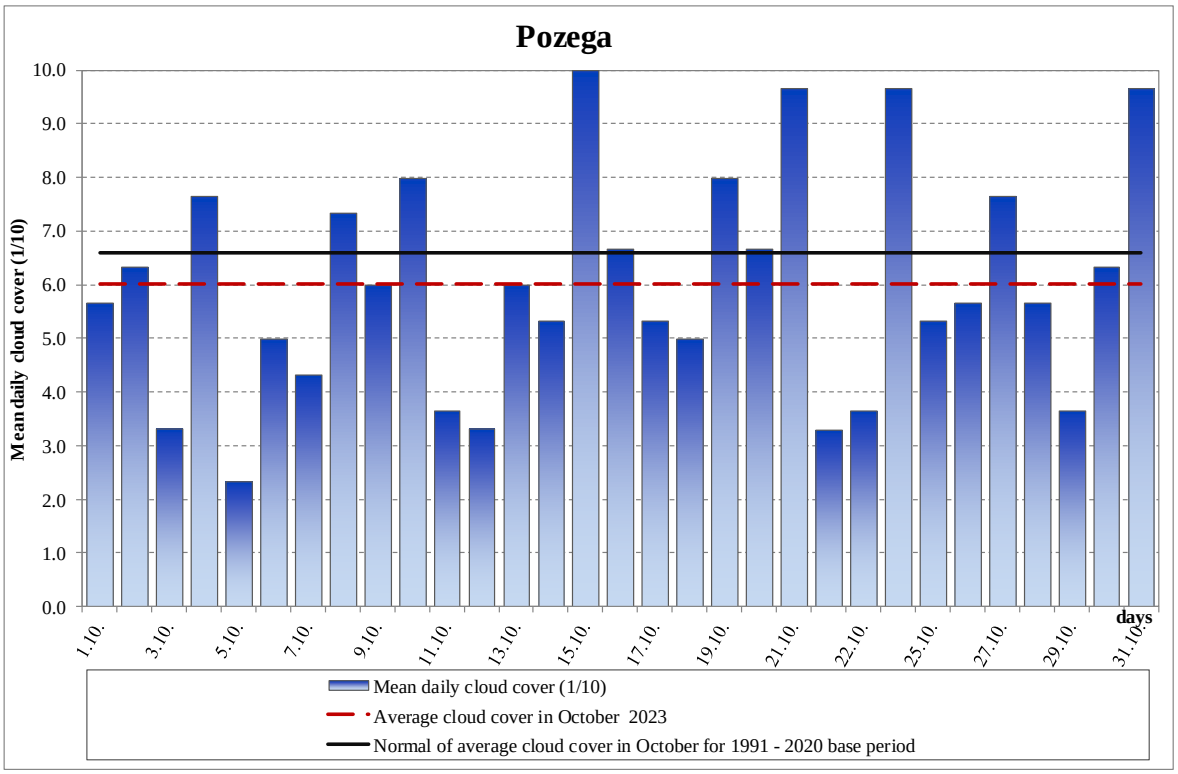



Figure 19. Mean daily cloud cover in Pozega

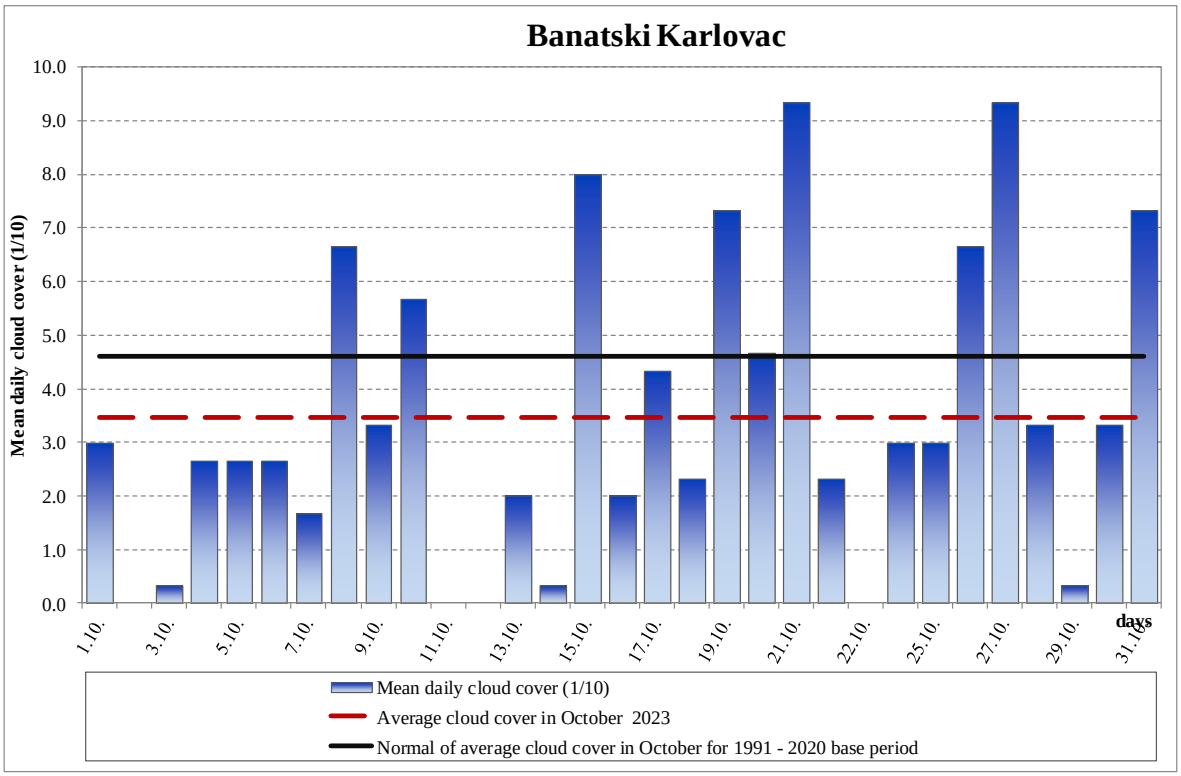



Figure 20. Mean daily cloud cover in Banatski Karlovac

# SUNSHINE DURATION (INSOLATION)

Sunshine duration in October ranged from 130,9 časova in Požea to 209,6 hours in Negotin (*Figure 21*).

October insolation ranged from 106% in Sjenica to 146% in Negotin relative to the normal for the 1991-2020 base period (*Figure 22*).

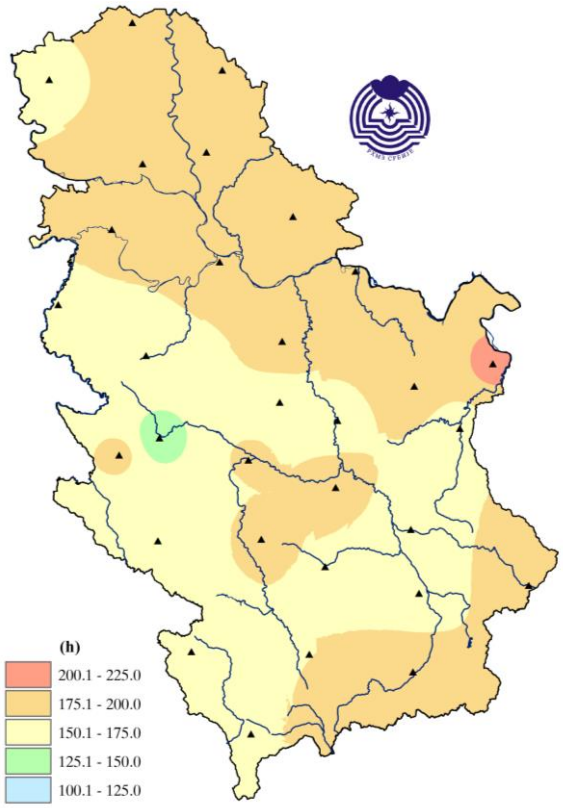



Figure 21. Insolation, expressed in hours

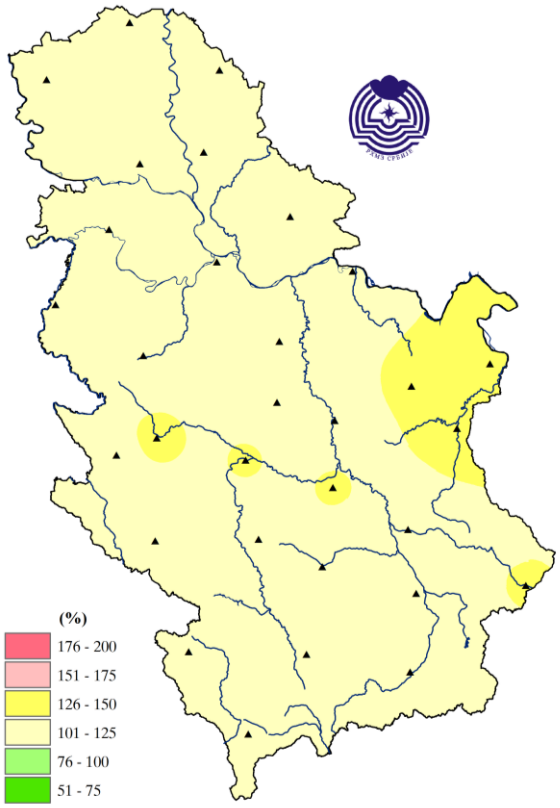



Figure 22. Insolation expressed in the percentages of normal

*** Note:** Climate analysis of meteorological elements was done based on the preliminary data obtained from 28 main meteorological stations

# OVERVIEW OF THE SYNOPTIC SITUATION*

***Warm, in the second half of the month, there will be exceptionally warm weather for this time of the year. Initially, dominant high-pressure systems over western and central Europe, along with the leading edge of a ridge from the western Mediterranean and the western part of the continent. In the second half of the month, the weather will be changeable, with occasional rain and local thunderstorms due to cyclonic activity in the western and central Mediterranean and the Adriatic Sea, moving eastward across our region.***

The first half of the month was characterized by predominantly dry and warm weather for this time of the year. Over the southwestern and western regions of the continent, the western and central Mediterranean, a ridge and the Azores high-pressure system persisted on most days, simultaneously with cyclonic activities in northern regions and the area around Iceland. Above the Balkan Peninsula and our region, which was positioned on the leading edge of the mentioned ridge, there were several passages of cold fronts from the northwest, resulting in a brief increase in cloudiness, and very light rain was observed in the mountainous areas in the south and southwest.

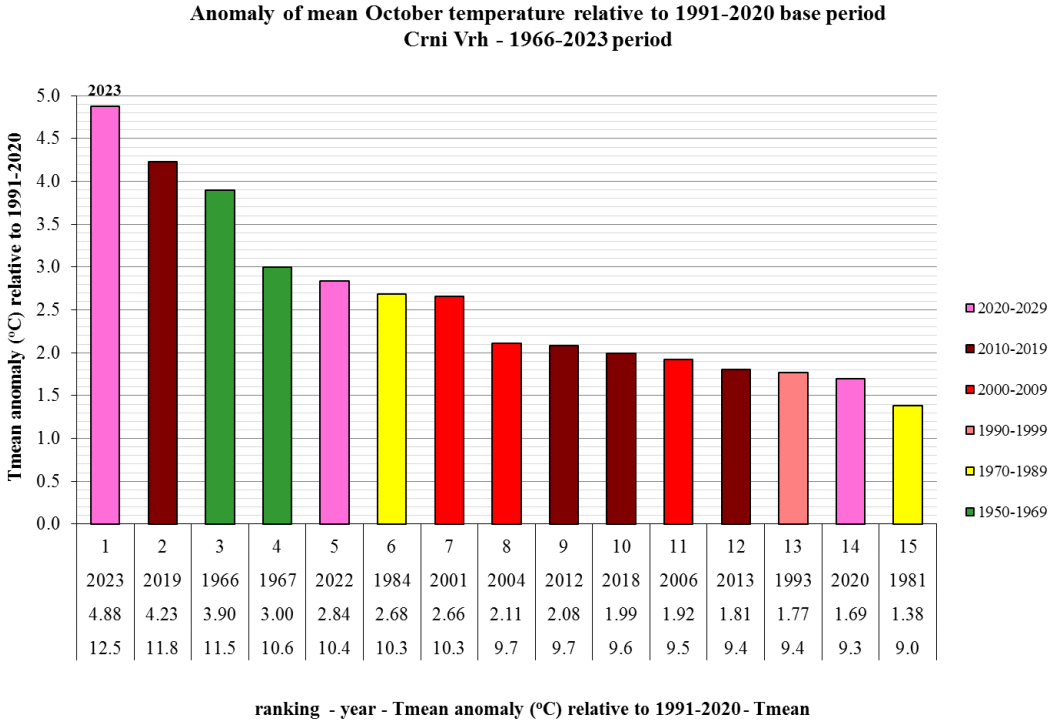
In the middle of the month, there was an increase in the amplitude of the meridional wave, that is, a deepening of the upper-level trough and the incursion of a cold front from the northwest towards the south and southeast, resulting in occasional rain and showers with a slight temperature drop, making the following days noticeably cooler, particularly in the morning hours.

Subsequently, there was further weakening of the ridge and frequent cyclonic activities in the eastern Atlantic, followed by the Bay of Biscay, the western Mediterranean, and the Adriatic Sea, with their transfer across Serbia towards the east. The weather was exceptionally warm and windy with occasional influences of moist air masses, primarily from the Mediterranean, especially in the southern and eastern parts of the country.

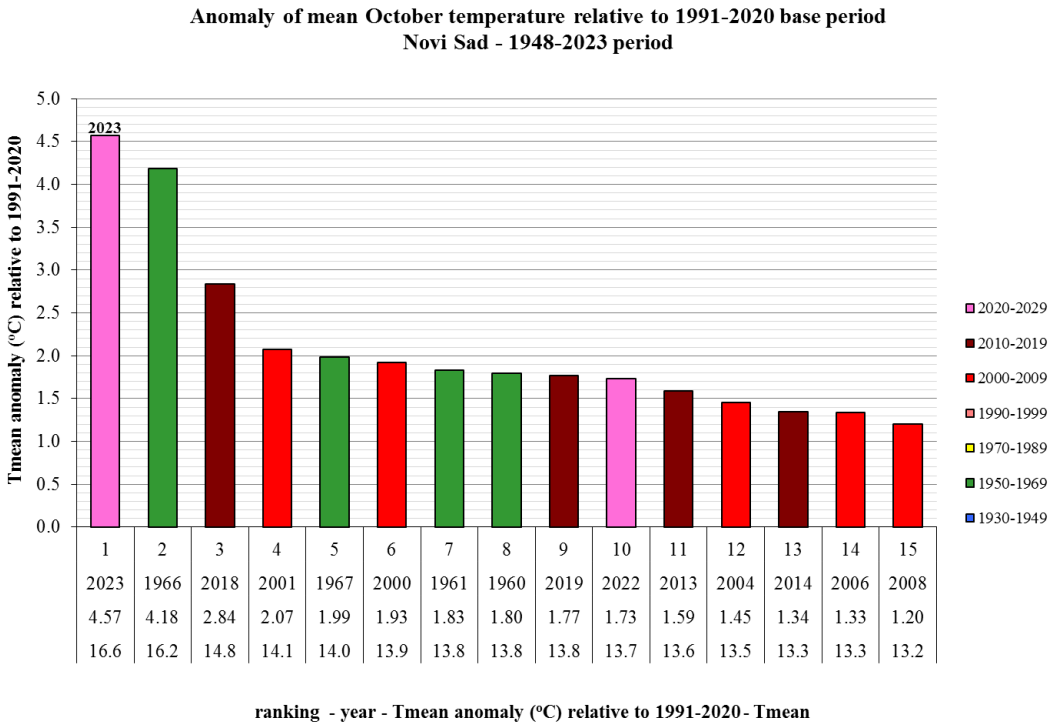
* National Center for Hydrometeorlogical Early Warning System

# APPENDIX

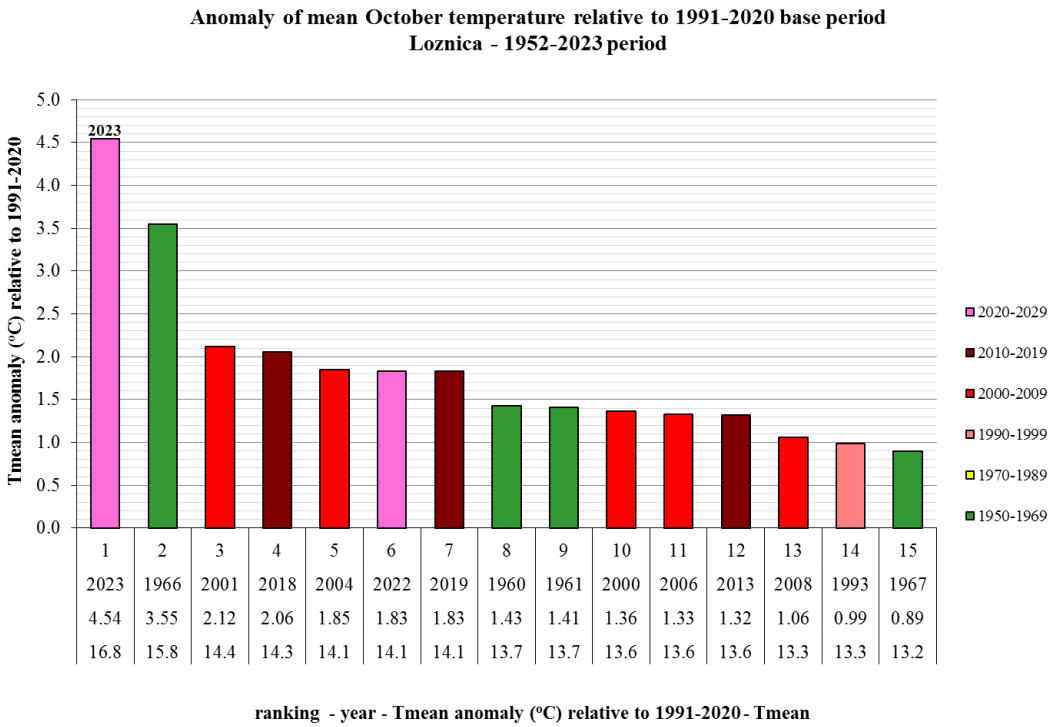
## Ranks of the warmest October




Appendix 1. Rank of the warmest October on Crni Vrh

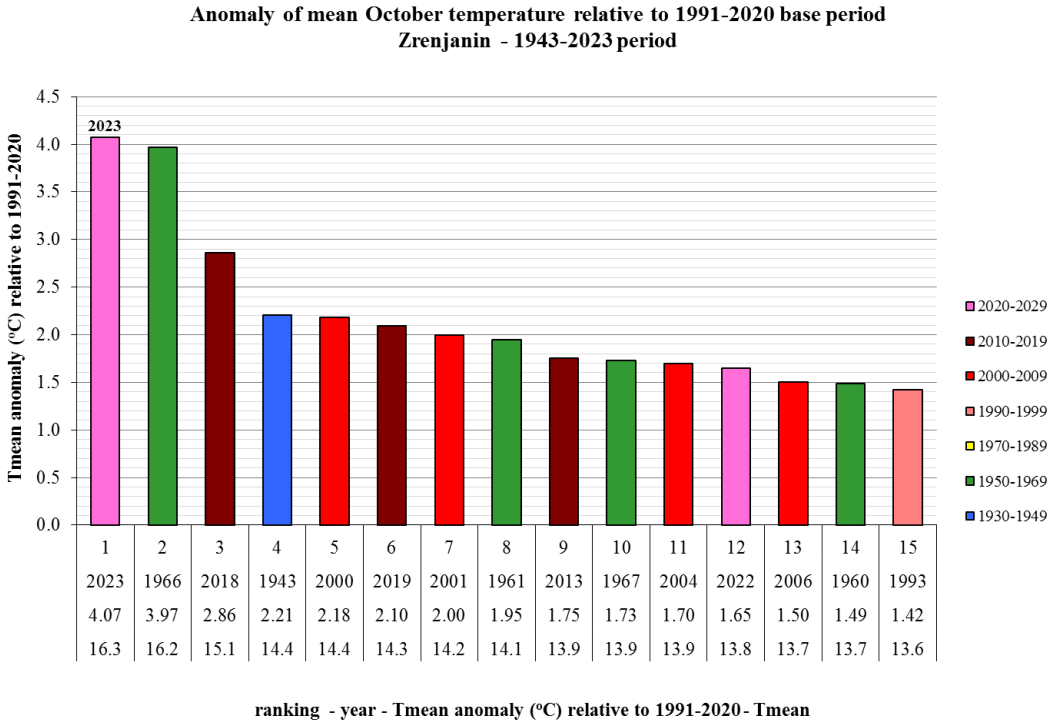



Appendix 2. Rank of the warmest October in Novi Sad



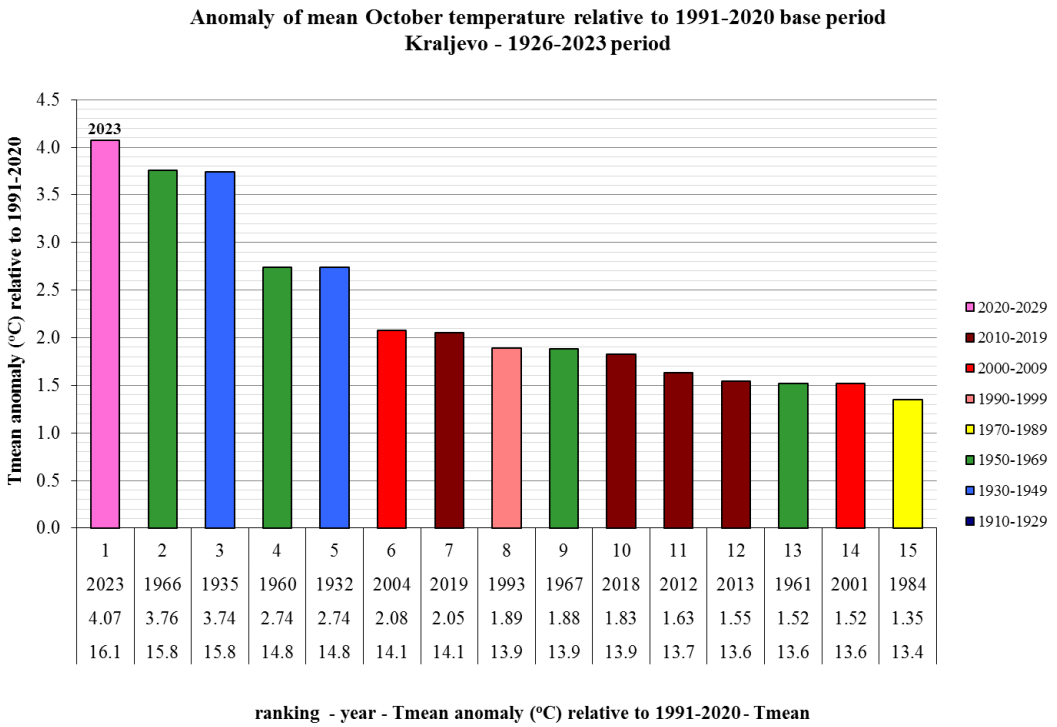

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2023 | 1966 | 2001 | 2018 | 2004 | 2022 | 2019 | 1960 | 1961 | 2000 | 2006 | 2013 | 2008 | 1993 | 1967 |
| 4.54 | 3.55 | 2.12 | 2.06 | 1.85 | 1.83 | 1.83 | 1.43 | 1.41 | 1.36 | 1.33 | 1.32 | 1.06 | 0.99 | 0.89 |
| 16.8 | 15.8 | 14.4 | 14.3 | 14.1 | 14.1 | 14.1 | 13.7 | 13.7 | 13.6 | 13.6 | 13.6 | 13.3 | 13.3 | 13.2 |

Appendix 3. Rank of the warmest October in Loznica

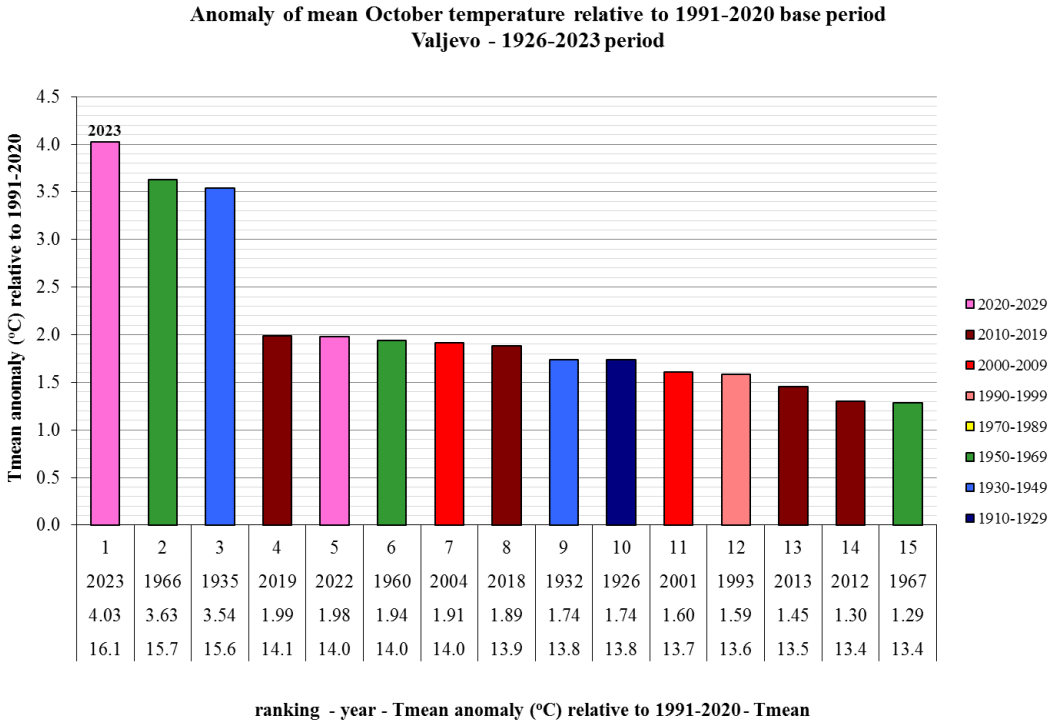



| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2023 | 1966 | 2018 | 1943 | 2000 | 2019 | 2001 | 1961 | 2013 | 1967 | 2004 | 2022 | 2006 | 1960 | 1993 |
| 4.07 | 3.97 | 2.86 | 2.21 | 2.18 | 2.10 | 2.00 | 1.95 | 1.75 | 1.73 | 1.70 | 1.65 | 1.50 | 1.49 | 1.42 |
| 16.3 | 16.2 | 15.1 | 14.4 | 14.4 | 14.3 | 14.2 | 14.1 | 13.9 | 13.9 | 13.9 | 13.8 | 13.7 | 13.7 | 13.6 |

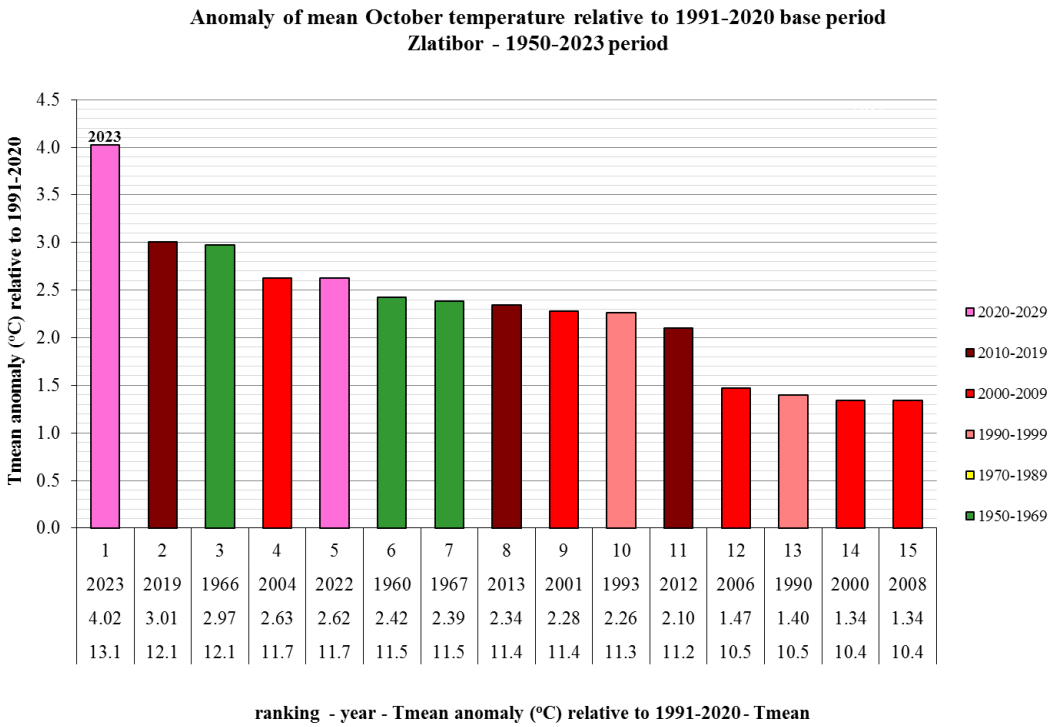
Appendix 4. Rank of the warmest October in Zrenjanin



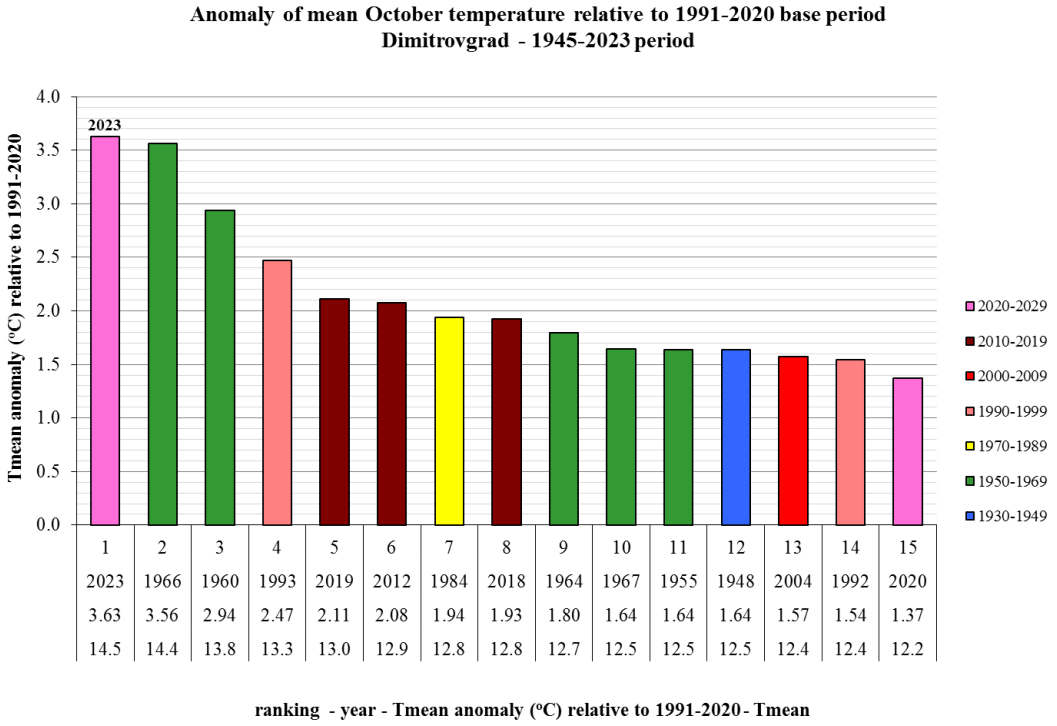

Appendix 5. Rank of the warmest October in Kraljevo



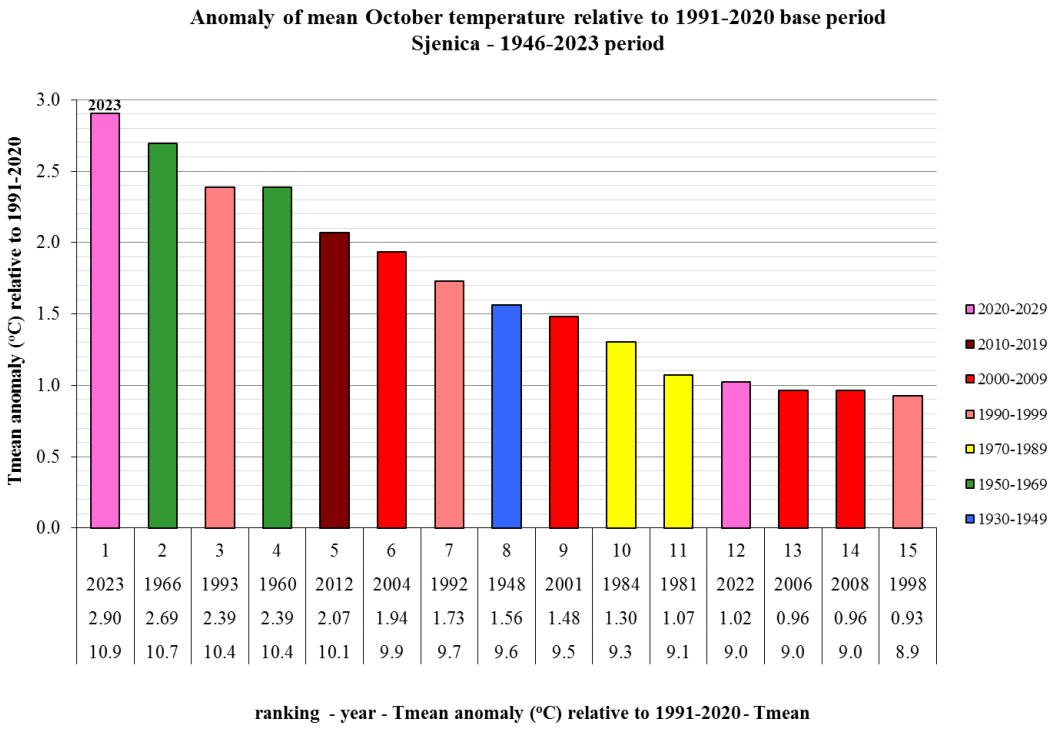

Appendix 6. Rank of the warmest October in Valjevo



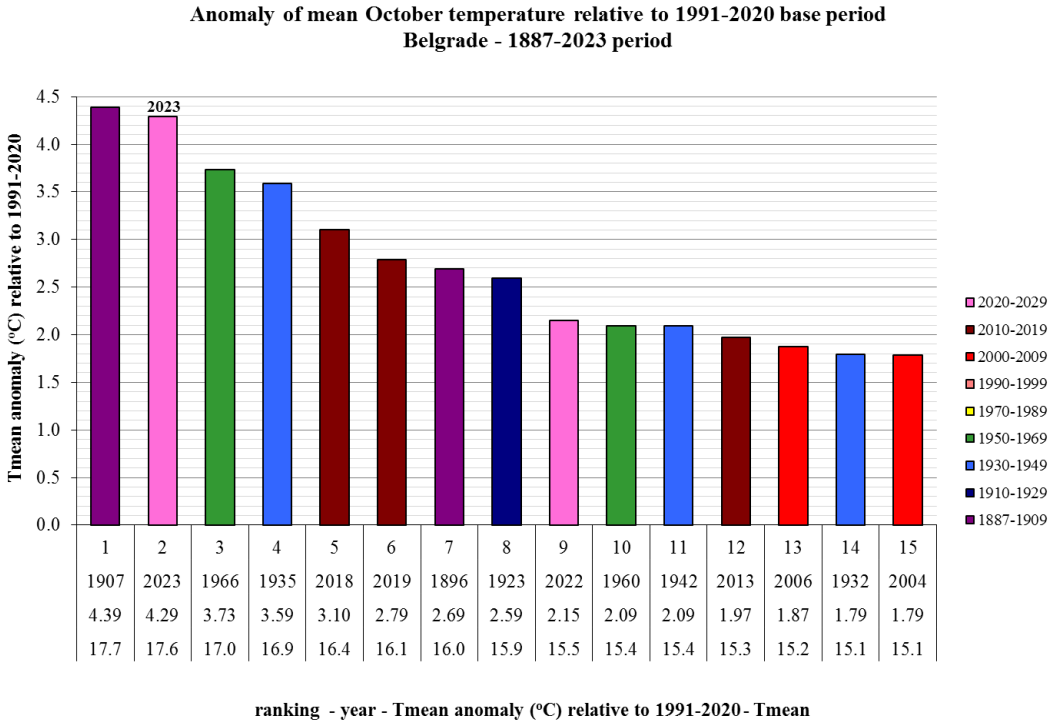

Appendix 7. Rank of the warmest October on Zlatibor




Appendix 8. Rank of the warmest October in Dimitrovgrad

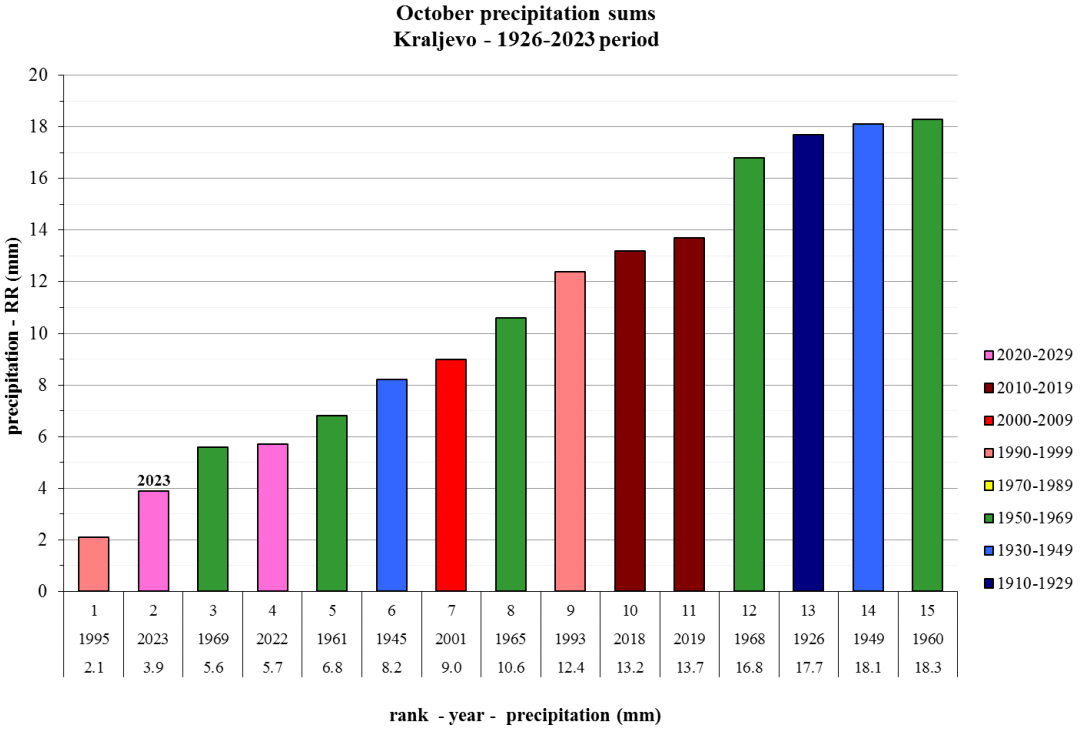



Appendix 9. Rank of the warmest October in Sjenica



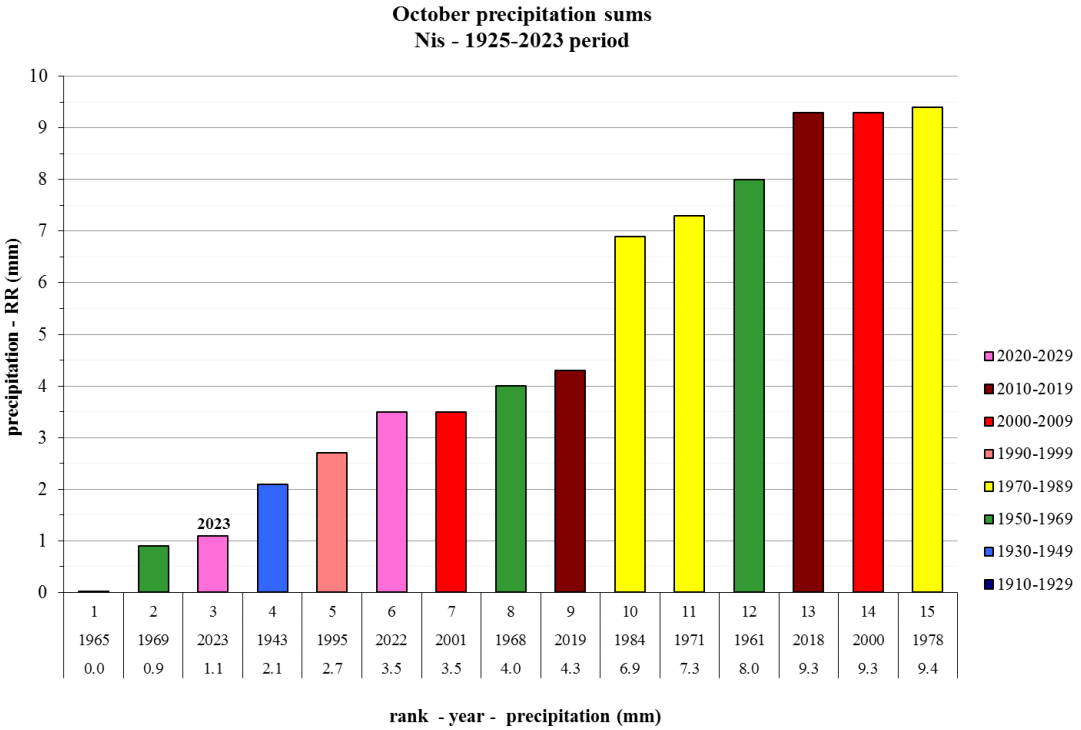

Appendix 10. Rank of the warmest October in Belgrade

# Ranks of the lowest precipitation in October



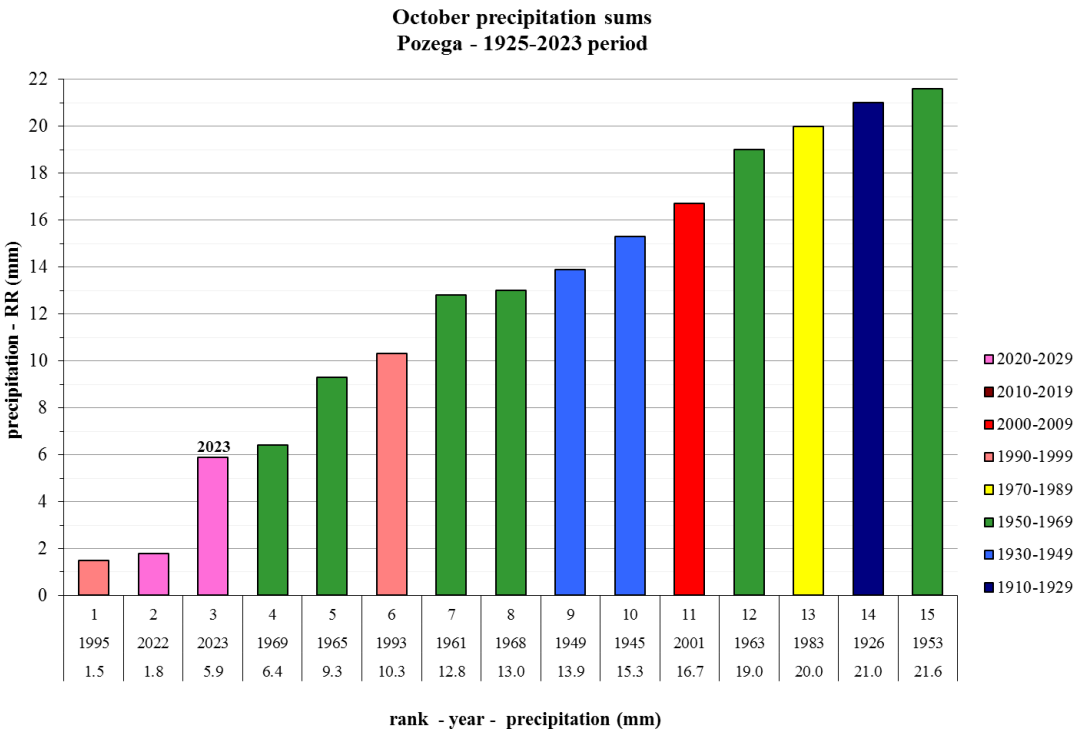

| rank | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| year | 1995 | 2023 | 1969 | 2022 | 1961 | 1945 | 2001 | 1965 | 1993 | 2018 | 2019 | 1968 | 1926 | 1949 | 1960 |
| precipitation (mm) | 2.1 | 3.9 | 5.6 | 5.7 | 6.8 | 8.2 | 9.0 | 10.6 | 12.4 | 13.2 | 13.7 | 16.8 | 17.7 | 18.1 | 18.3 |

Appendix 11. Rank of the lowest precipitation in Kraljevo

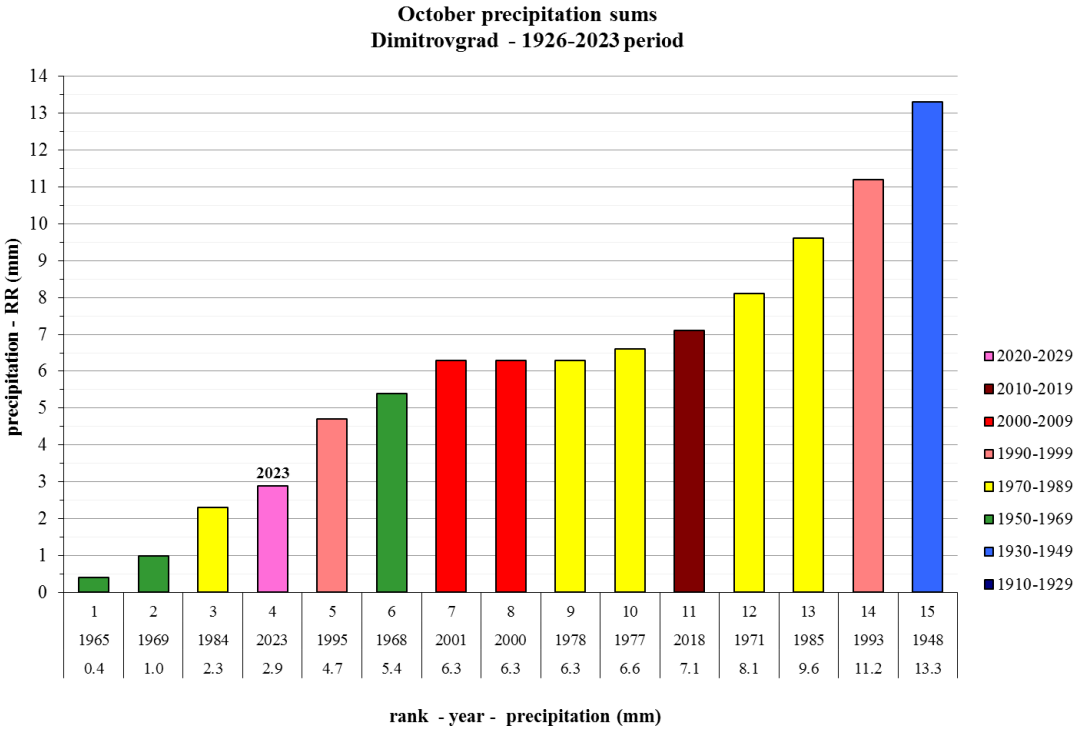



| rank | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| year | 1965 | 1969 | 2023 | 1943 | 1995 | 2022 | 2001 | 1968 | 2019 | 1984 | 1971 | 1961 | 2018 | 2000 | 1978 |
| precipitation (mm) | 0.0 | 0.9 | 1.1 | 2.1 | 2.7 | 3.5 | 3.5 | 4.0 | 4.3 | 6.9 | 7.3 | 8.0 | 9.3 | 9.3 | 9.4 |

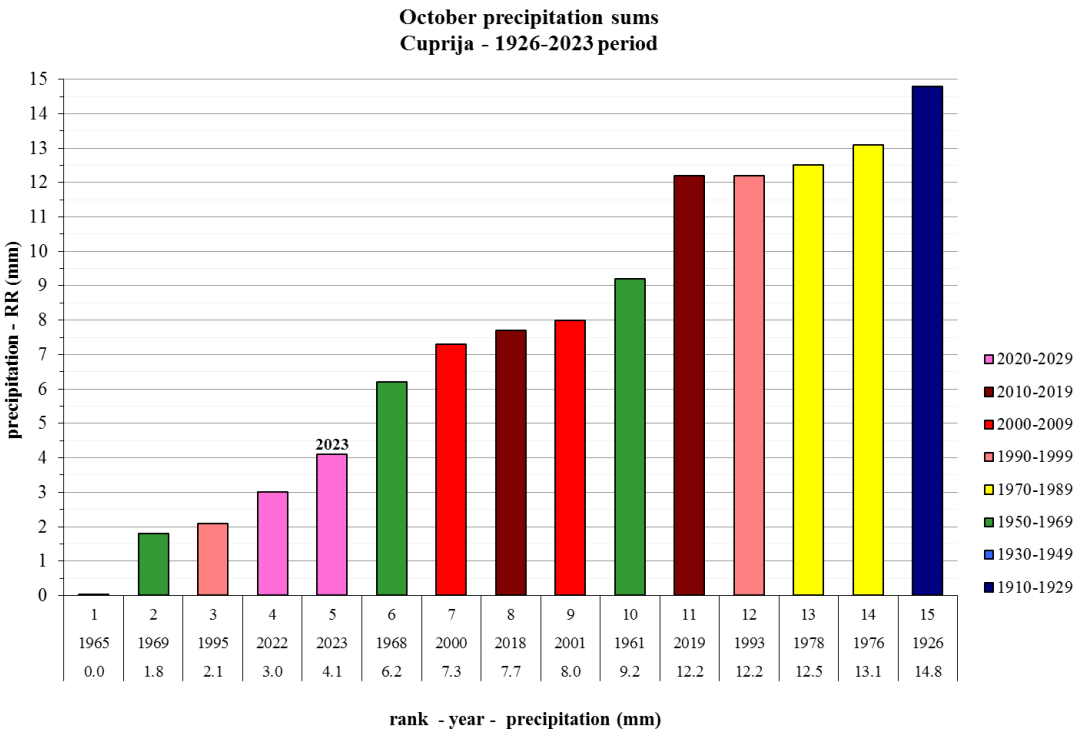
Appendix 12. Rank of the lowest precipitation in Nis




Appendix 13. Rank of the lowest precipitation in Pozega

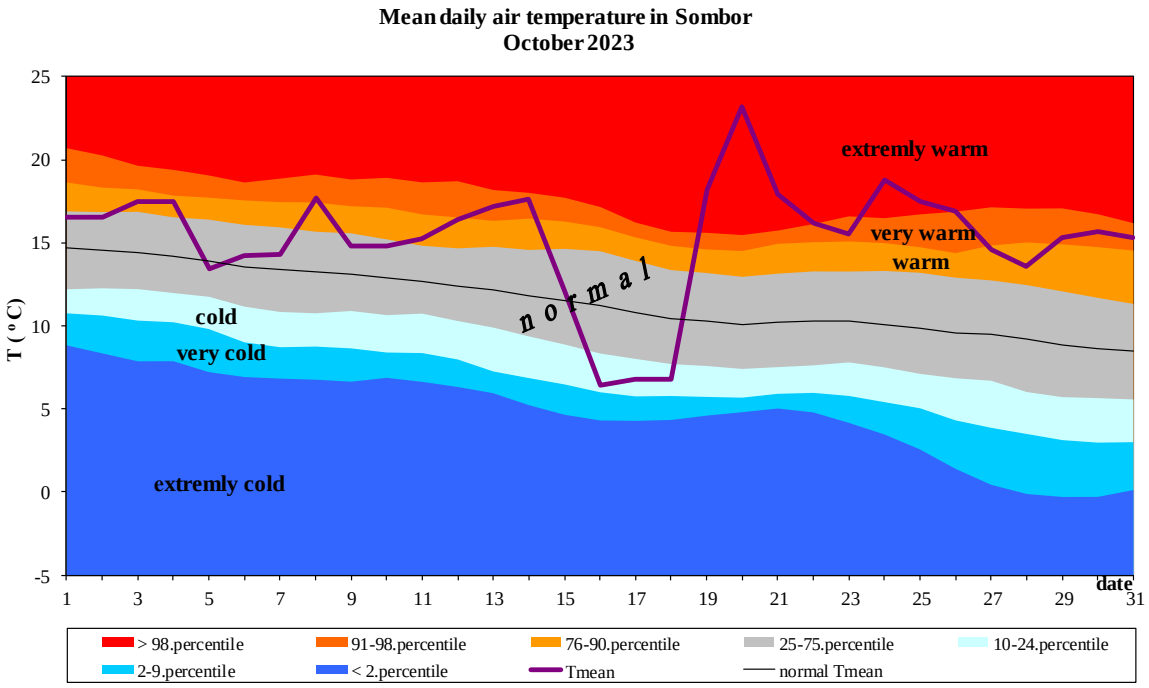



Appendix 14. Rank of the lowest precipitation in Dimitrovgrad

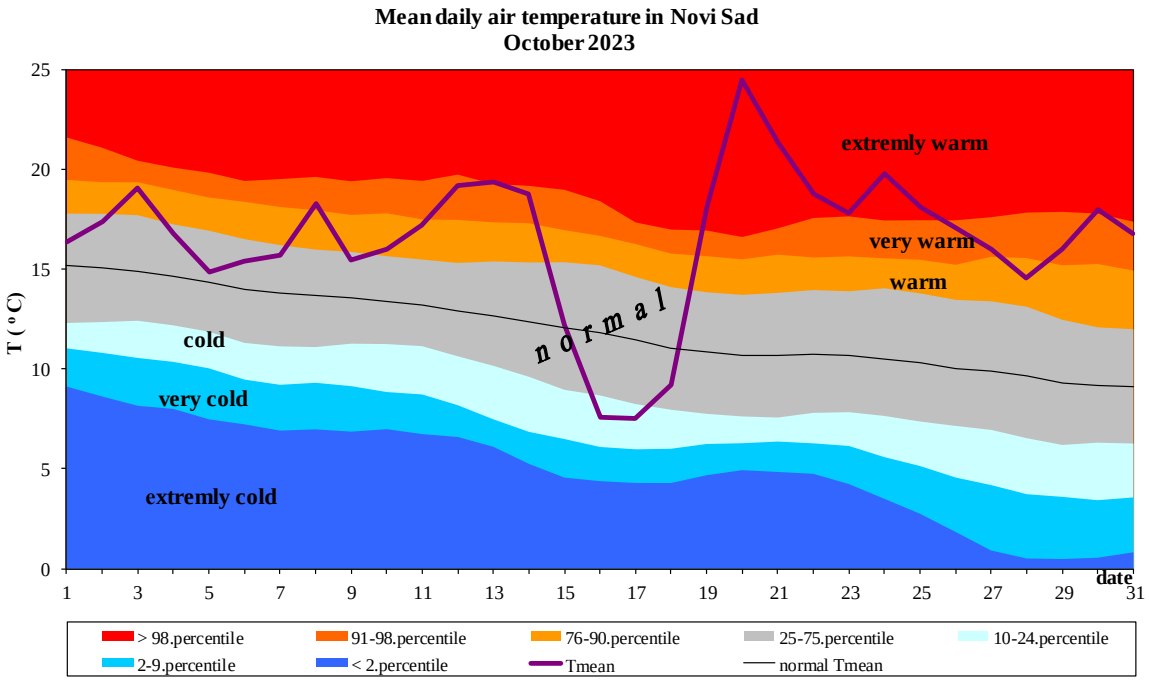



Appendix 15. Rank of the lowest precipitation in Cuprija

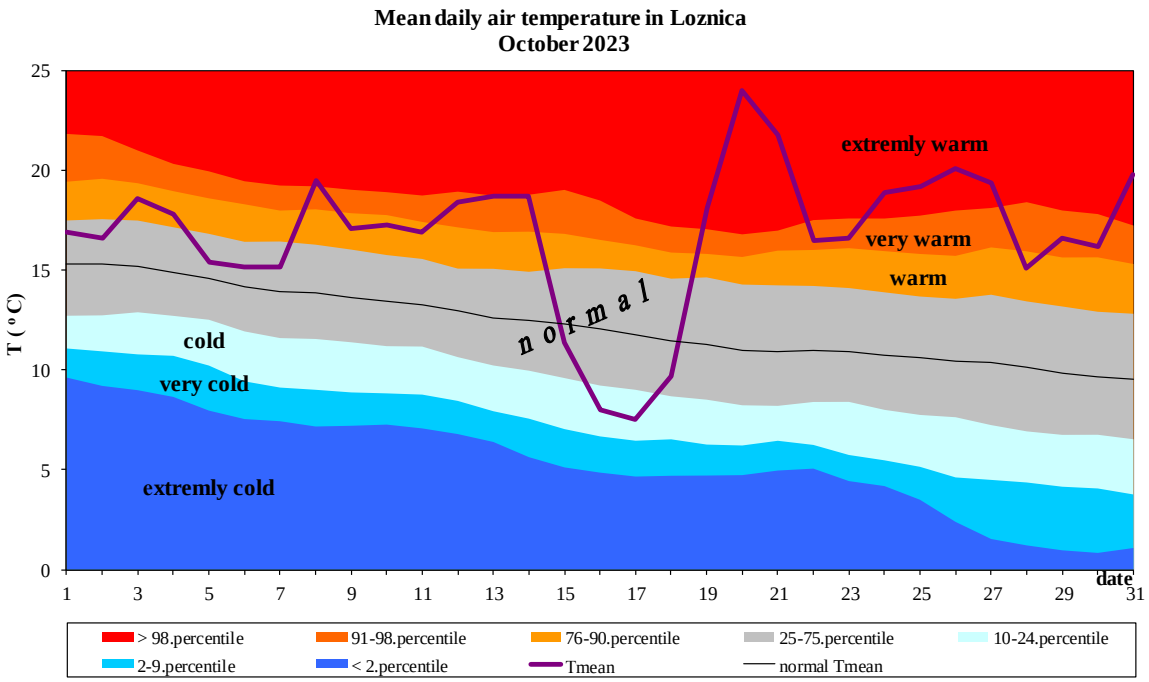
# Mean air temperature



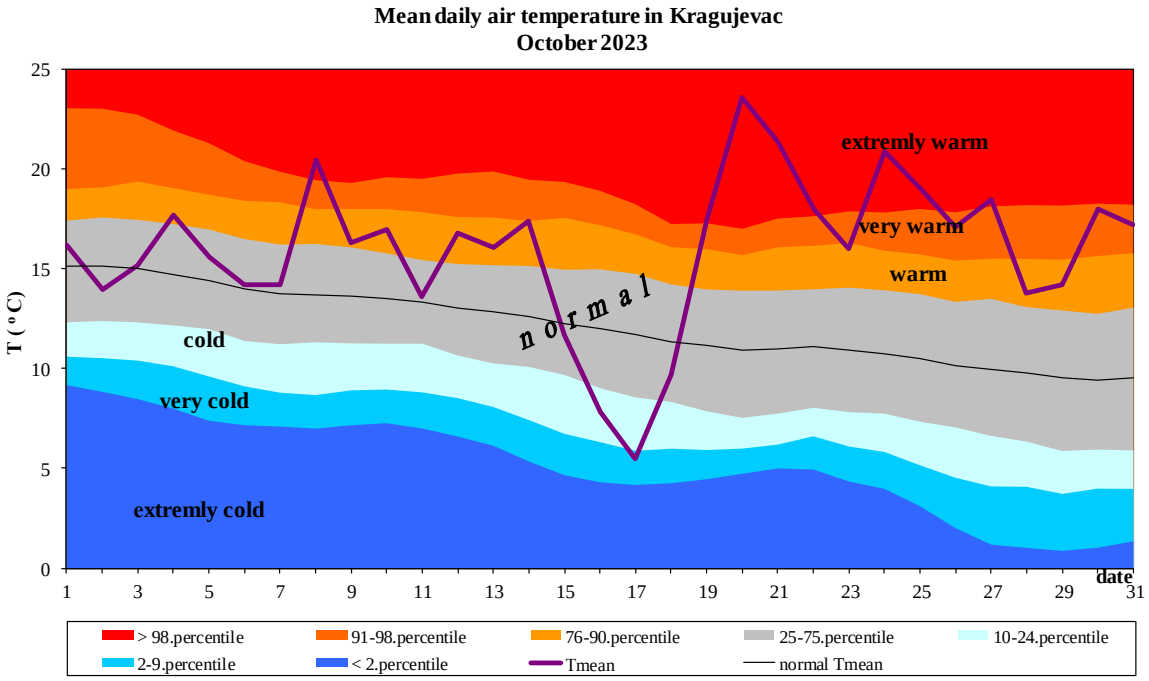

Appendix 16. Daily course of the mean daily air temperature and accompanying percentile for Sombor



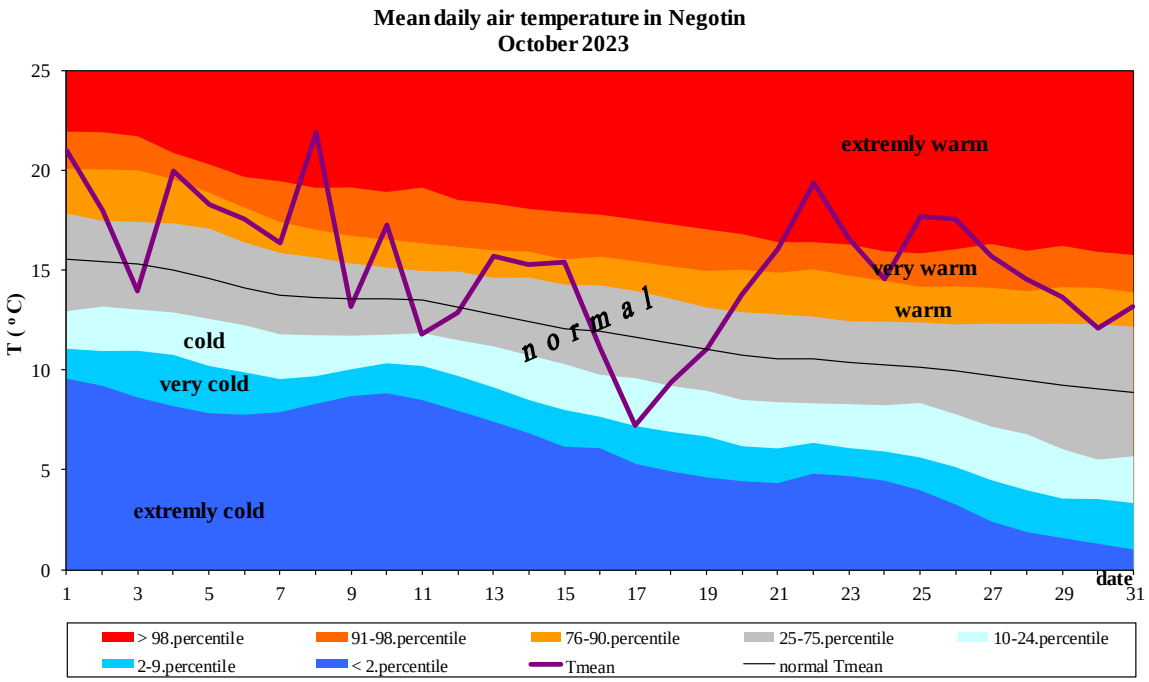

Appendix 17. Daily course of the mean daily air temperature and accompanying percentile for Novi Sad



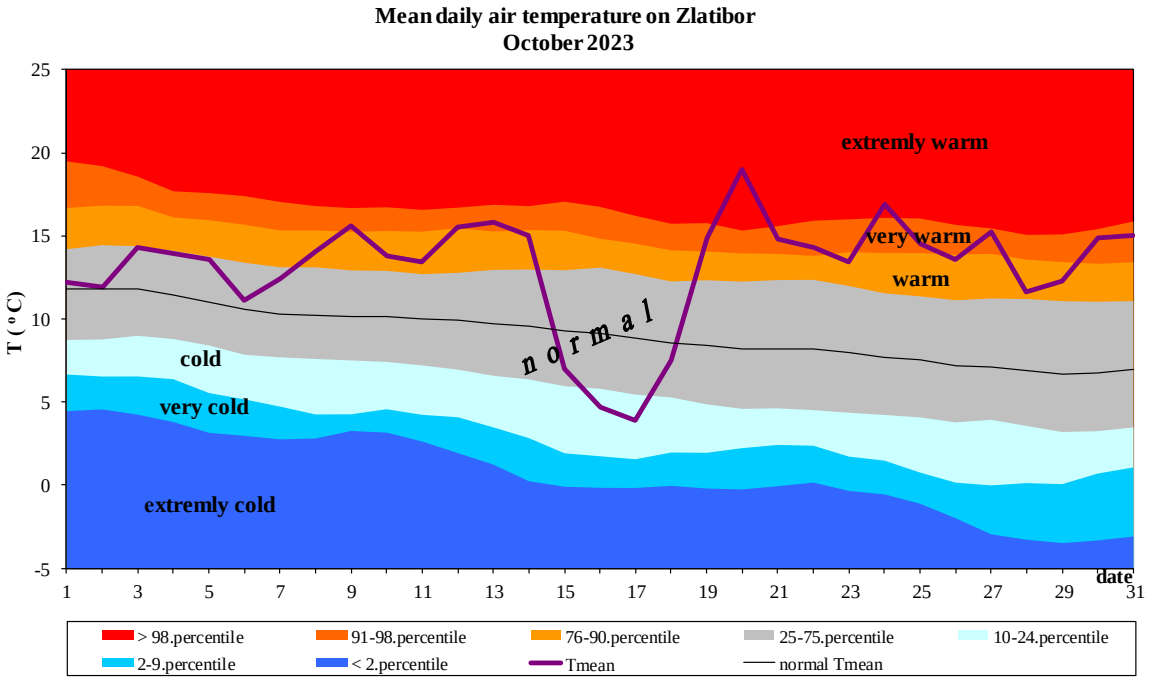

Appendix 18. Daily course of the mean daily air temperature and accompanying percentile for Loznica



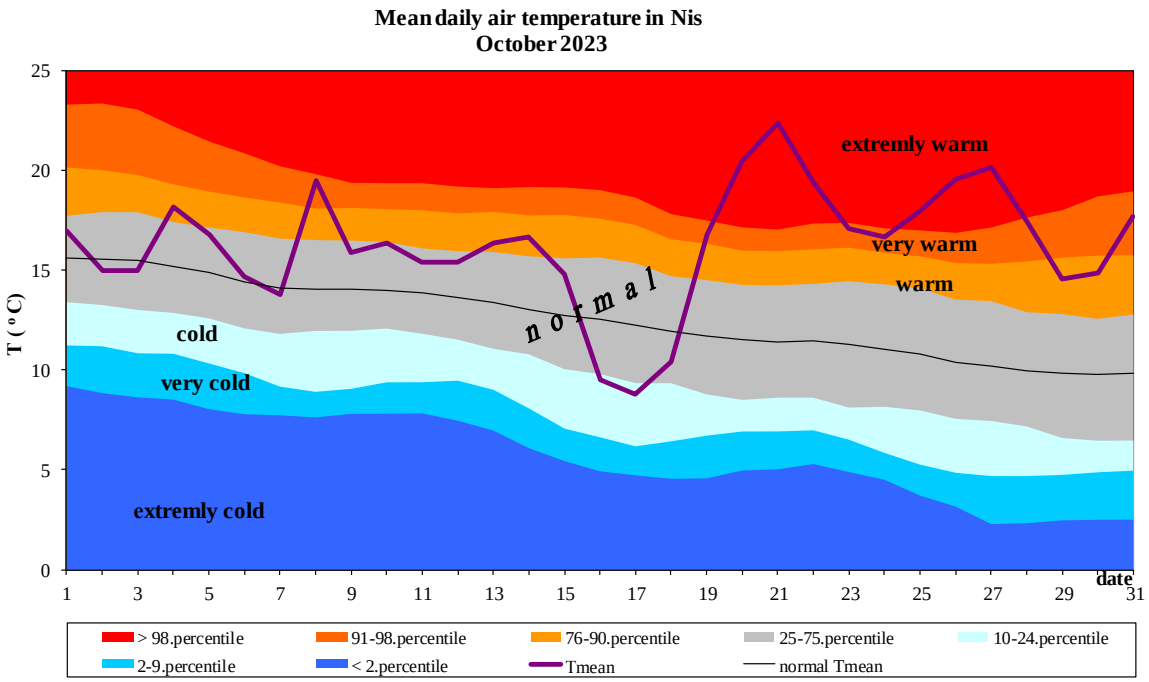

Appendix 19. Daily course of the mean daily air temperature and accompanying percentile for Kragujevac



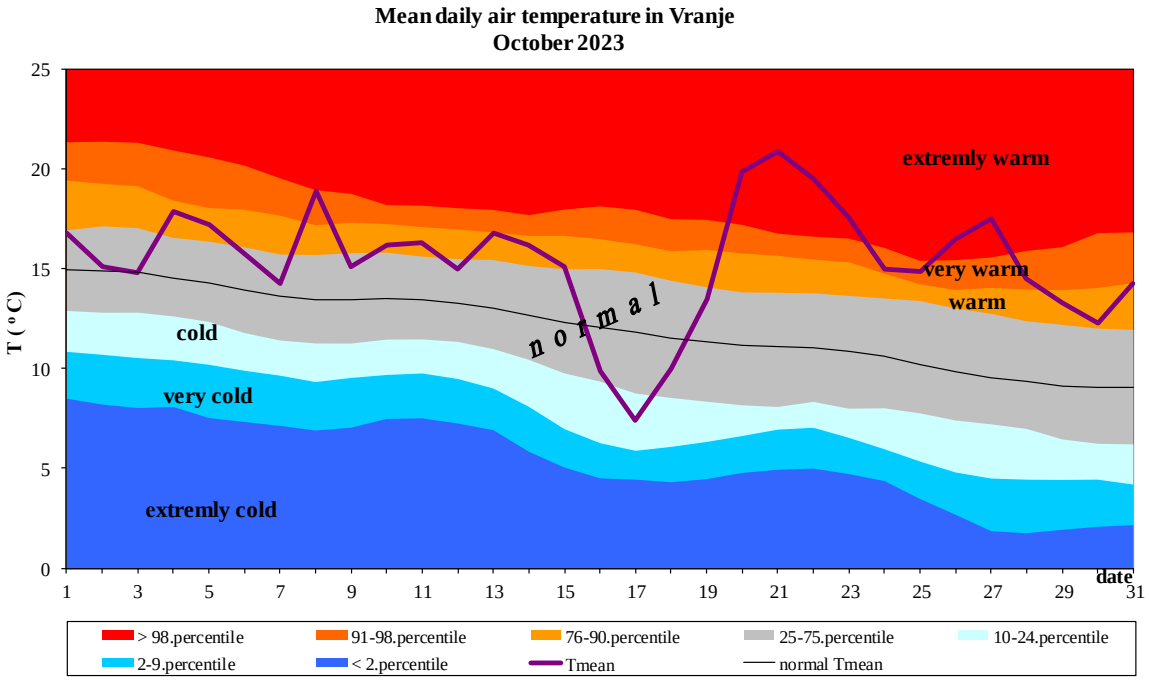

Appendix 20. Daily course of the mean daily air temperature and accompanying percentile for Negotin




Appendix 21. Daily course of the mean daily air temperature and accompanying percentile on Zlatiboru

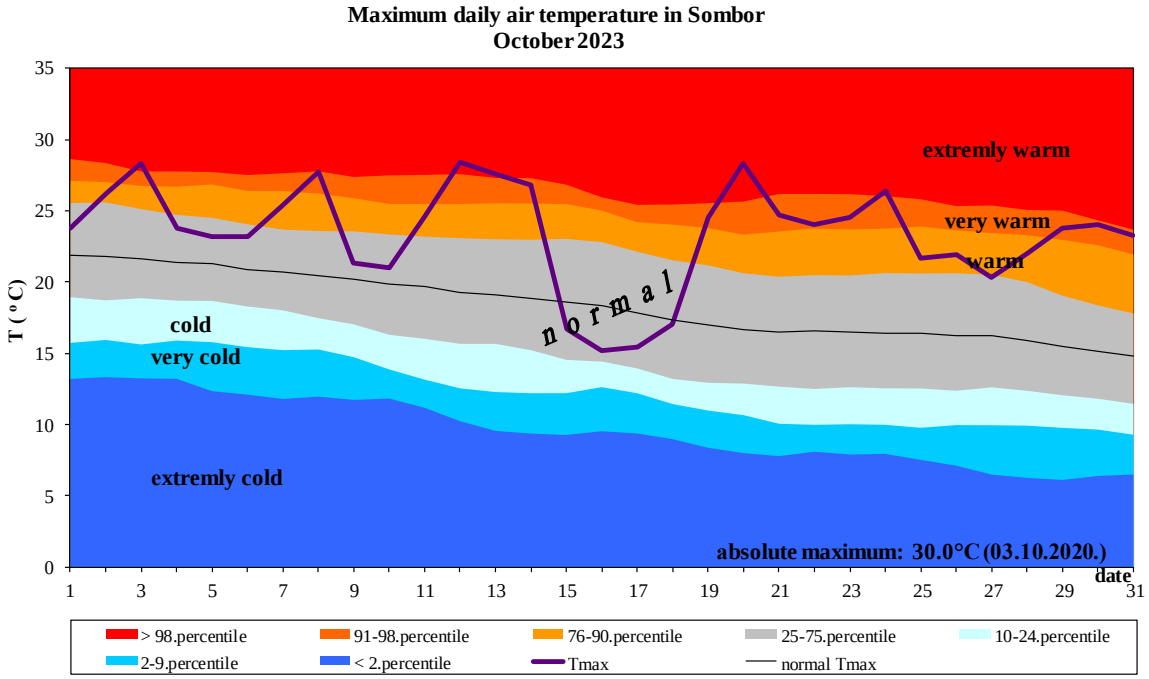



Appendix 22. Daily course of the mean daily air temperature and accompanying percentile for Nis

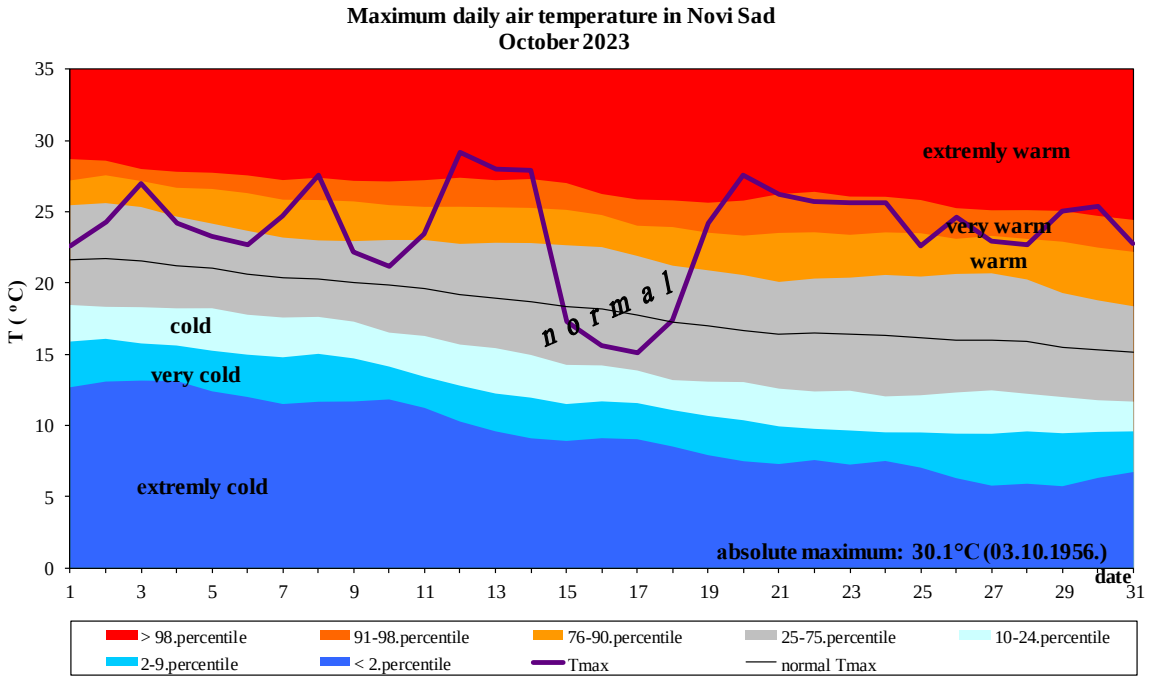



Appendix 23. Daily course of the mean daily air temperature and accompanying percentile for Vranje

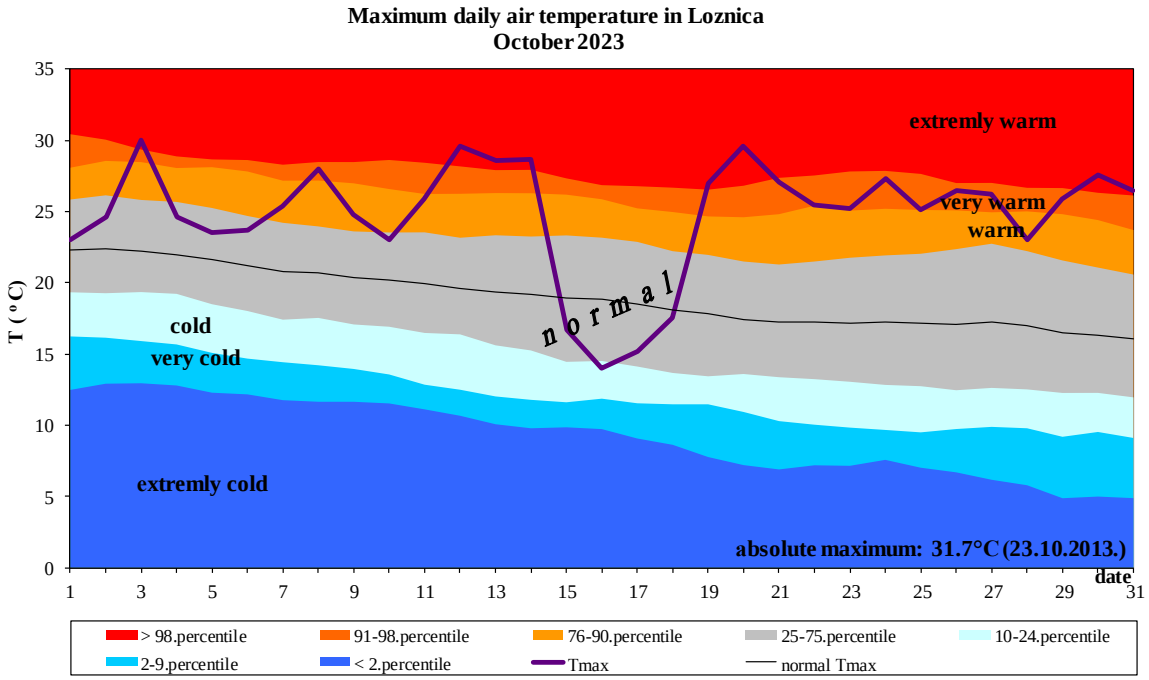
# Maximum air temperature



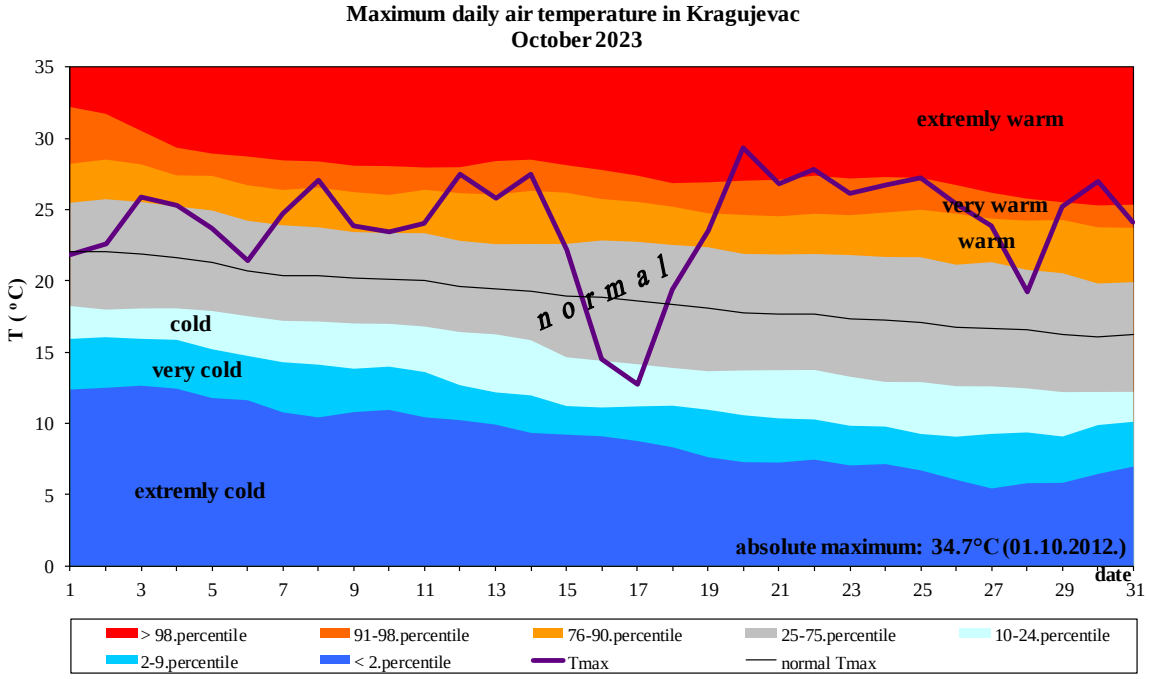

Appendix 24. Daily course of the maximum daily air temeperature and the accompanying percentile for Sombor



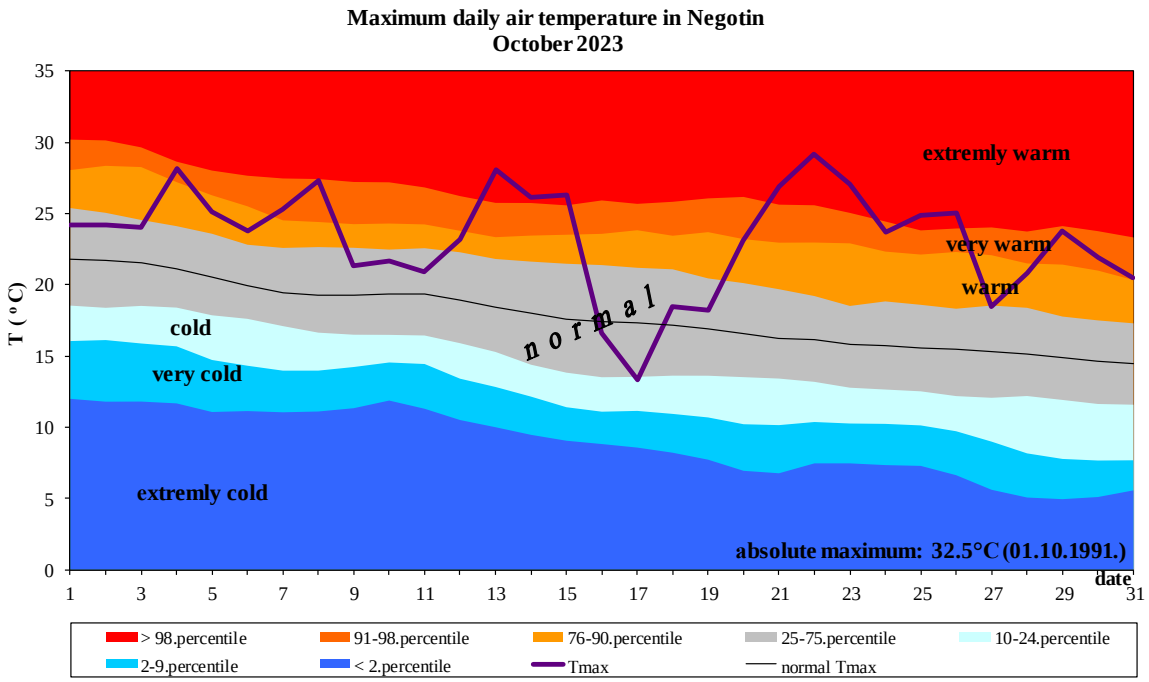

Appendix 25. Daily course of the maximum daily air temeperature and the accompanying percentile for Novi Sad



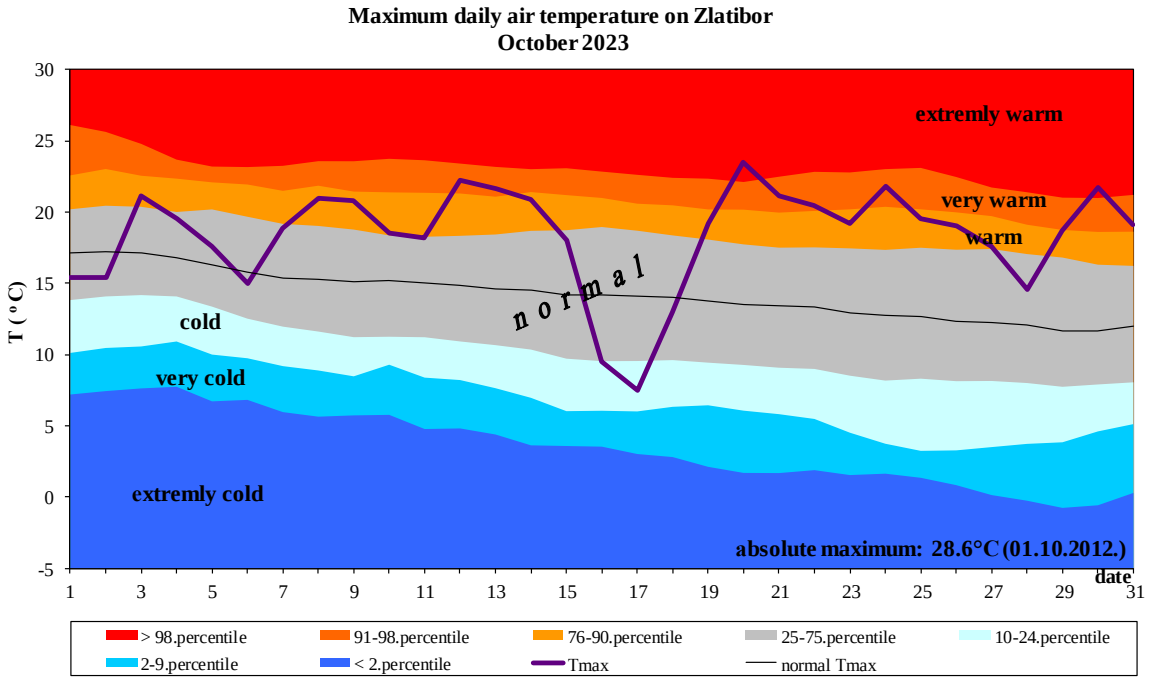

Appendix 26. Daily course of the maximum daily air temeperature and the accompanying percentile for Loznica



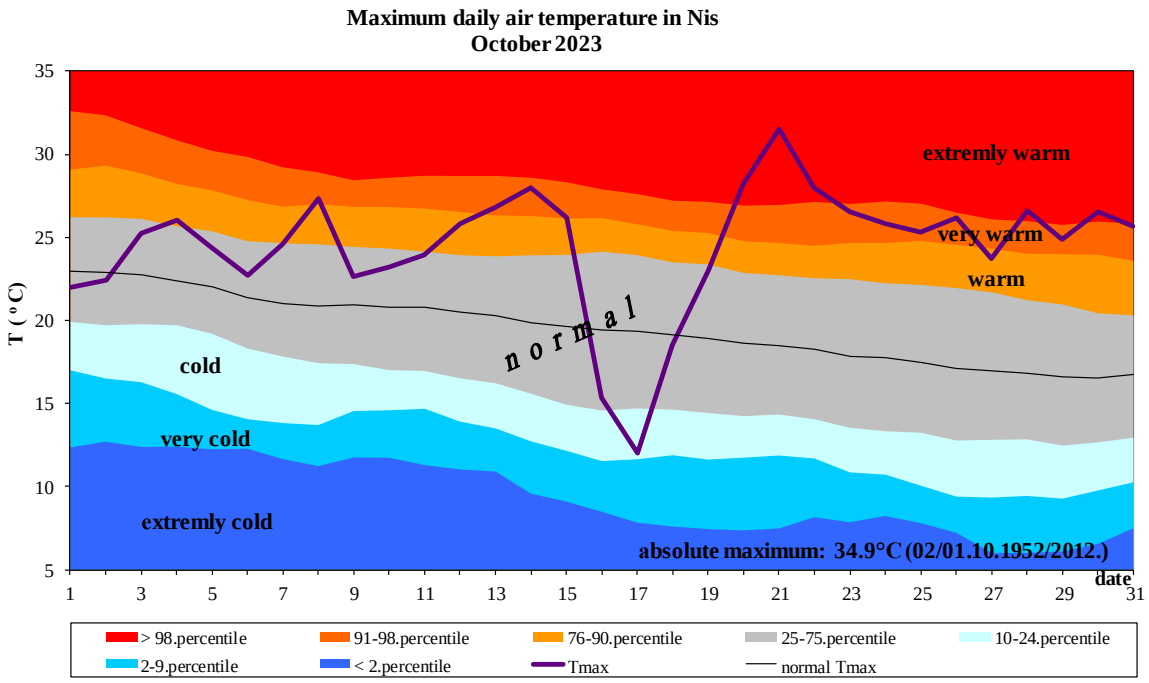

Appendix 27. Daily course of the maximum daily air temeperature and the accompanying percentile for Kragujevac



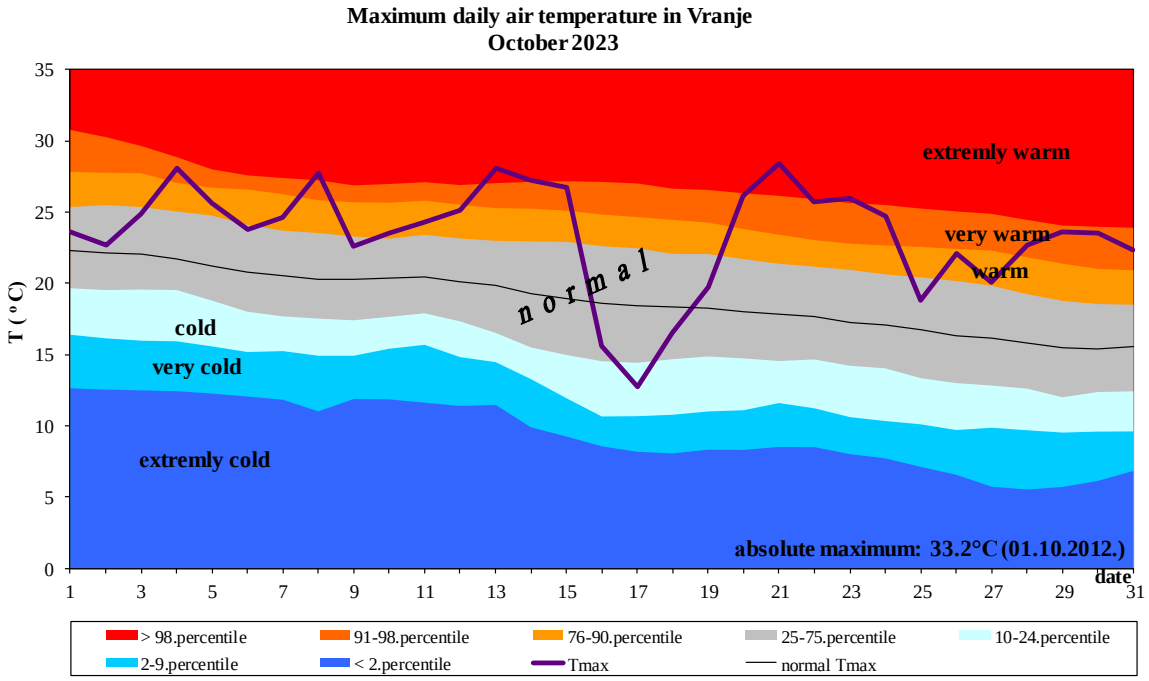

Appendix 28. Daily course of the maximum daily air temeperature and the accompanying percentile for Negotin




Appendix 29. Daily course of the maximum daily air temeperature and the accompanying percentile on Zlatibor

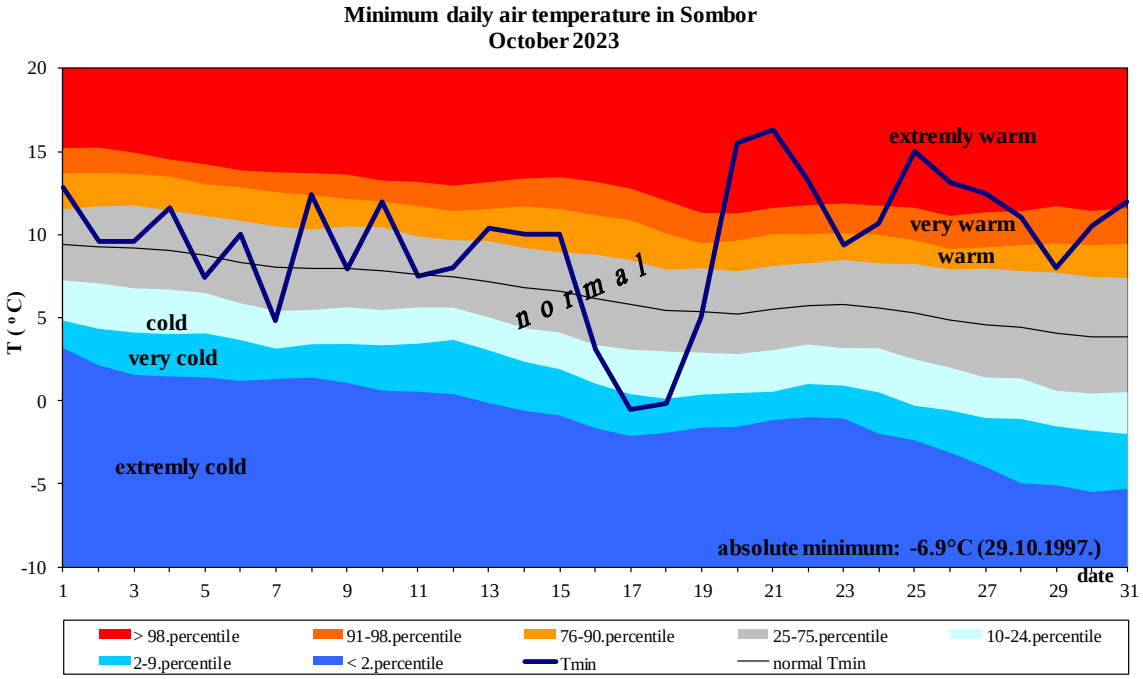



Appendix 30. Daily course of the maximum daily air temeperature and the accompanying percentile for Nis

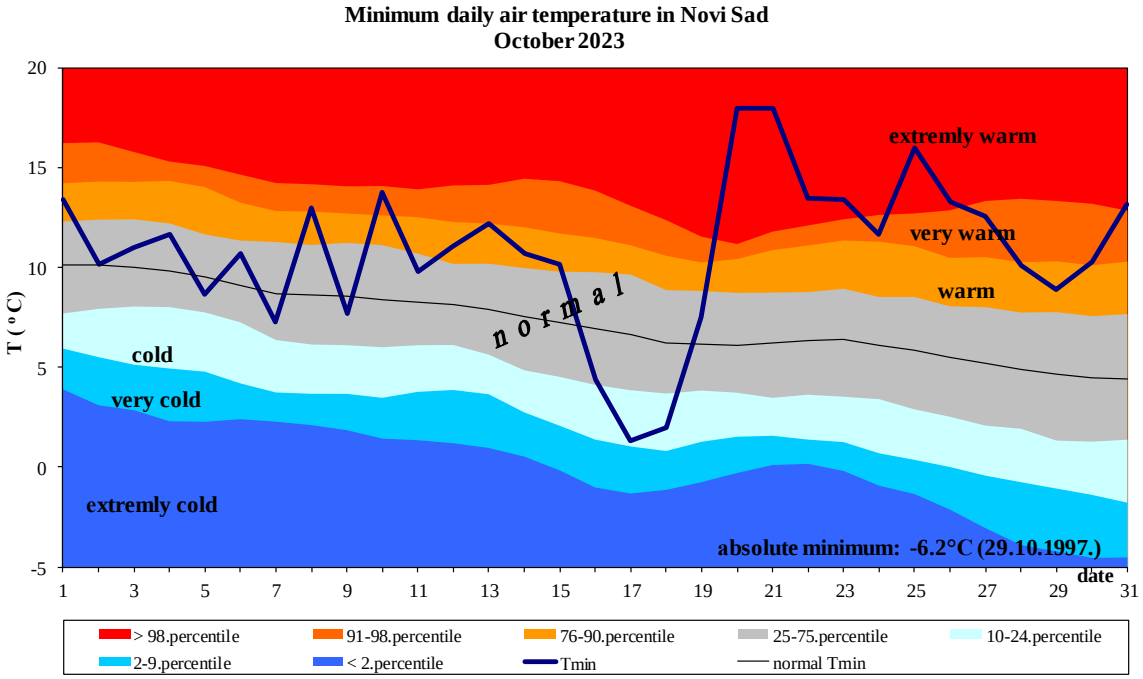



Appendix 31. Daily course of the maximum daily air temeperature and the accompanying percentile for Vranje

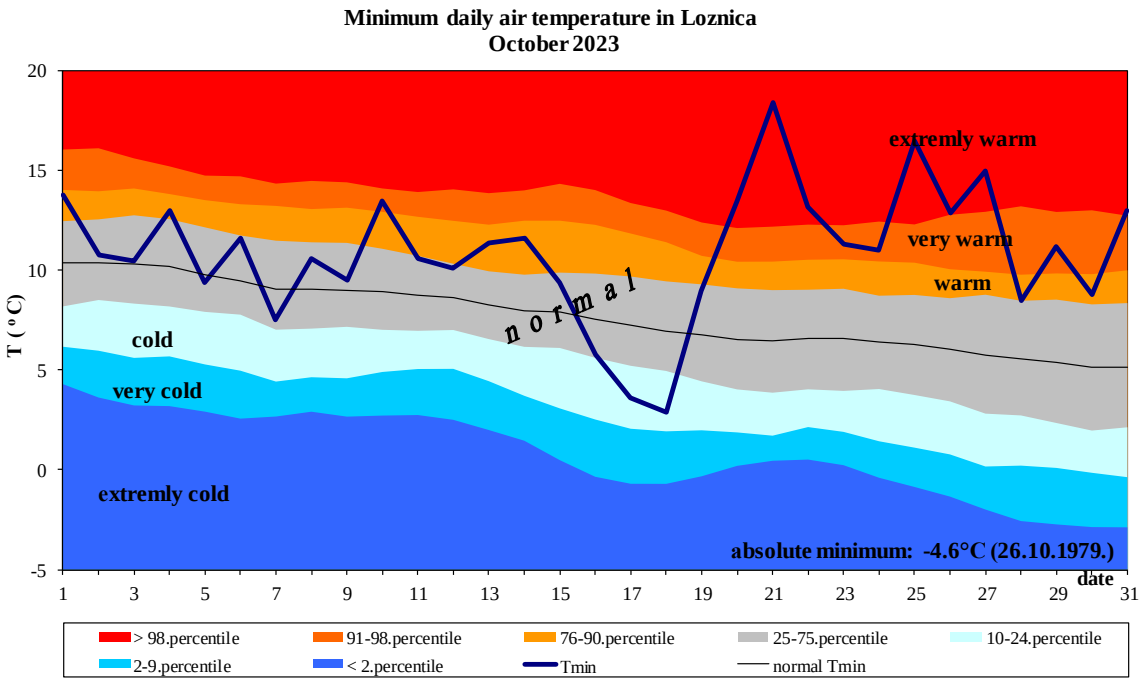
# Minimum air temperature



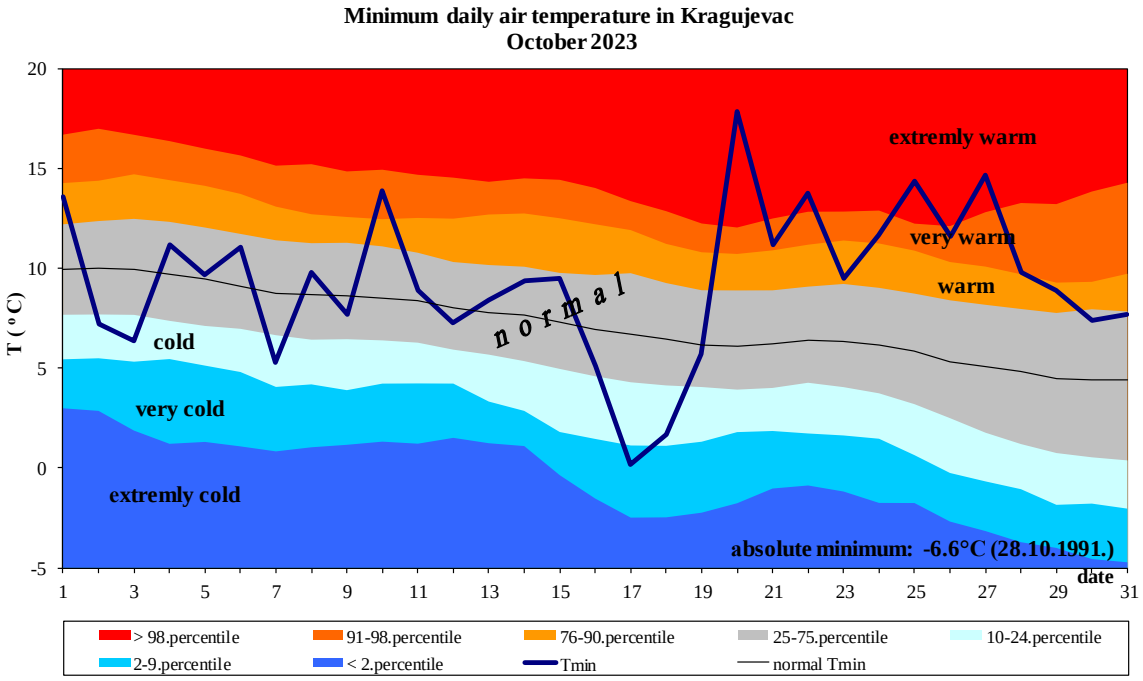

Appendix 32. Daily course of the minimum daily air temperature and the accompanying percentile for Sombor



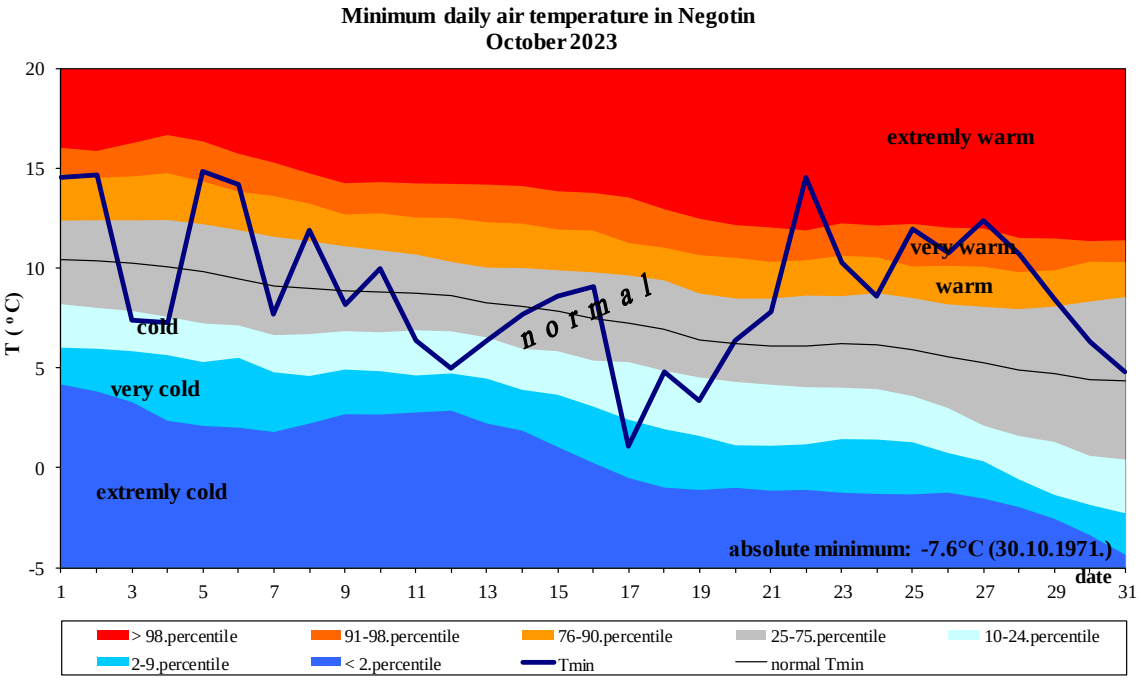

Appendix 33. Daily course of the minimum daily air temperature and the accompanying percentile for Novi Sad



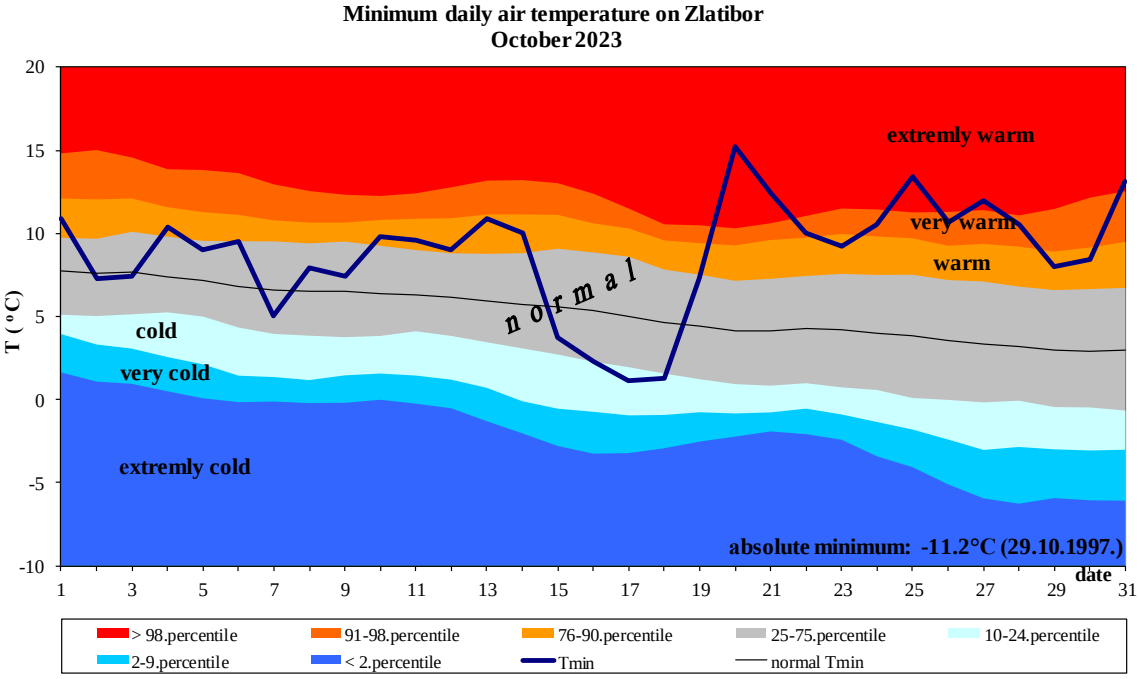

Appendix 34. Daily course of the minimum daily air temperature and the accompanying percentile for Loznica



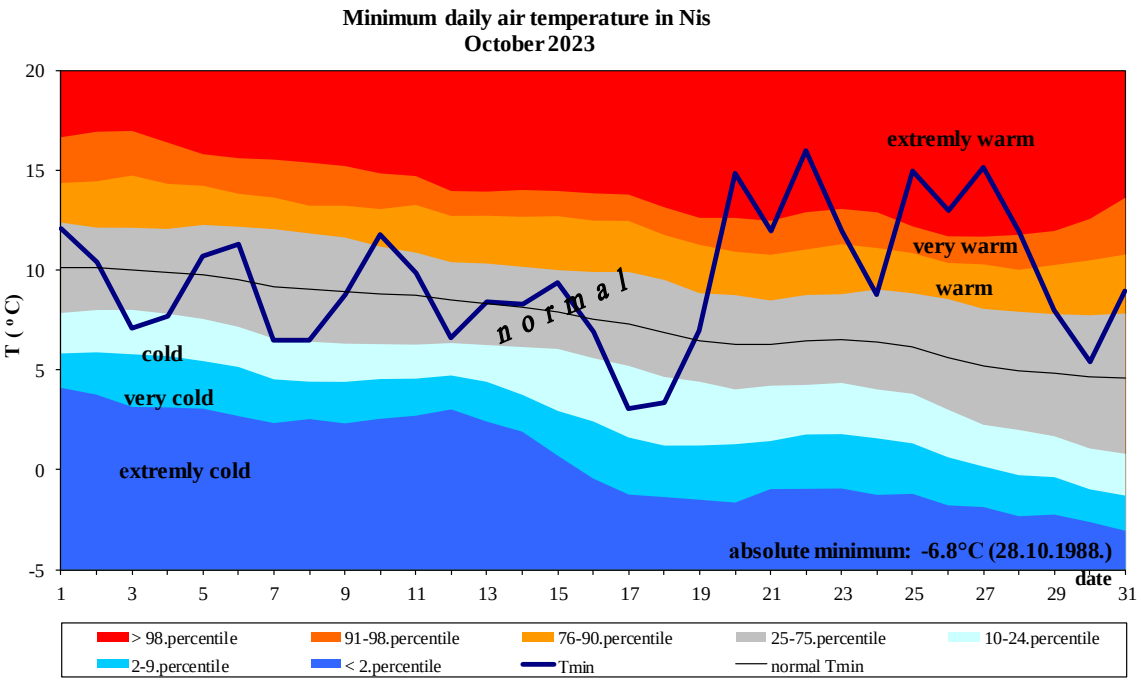

Appendix 35. Daily course of the minimum daily air temperature and the accompanying percentile for Kragujevac



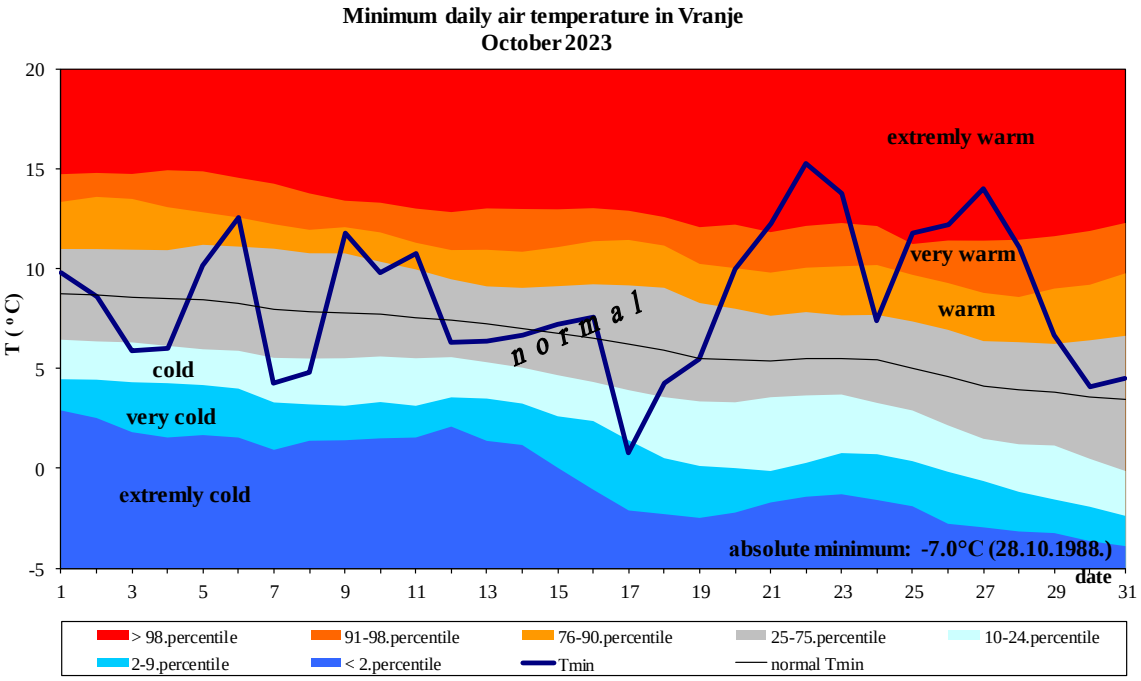

Appendix 36. Daily course of the minimum daily air temperature and the accompanying percentile for Negotin




Appendix 37. Daily course of the minimum daily air temperature and the accompanying percentile on Zlatibor

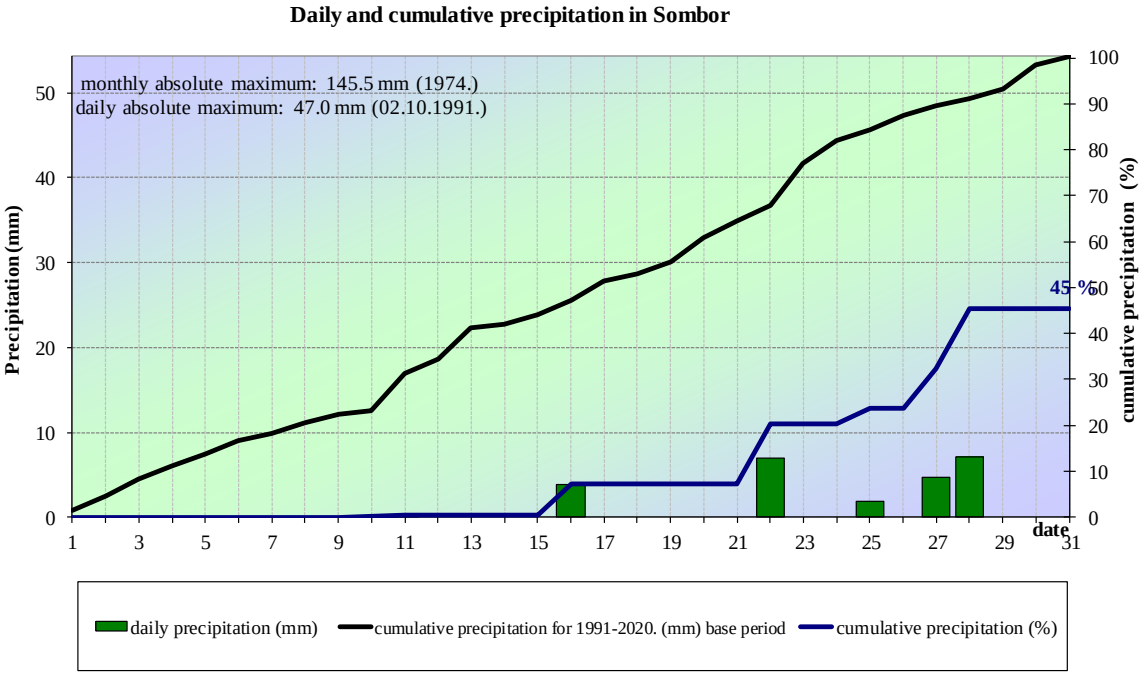



Appendix 38. Daily course of the minimum daily air temperature and the accompanying percentile for Nis

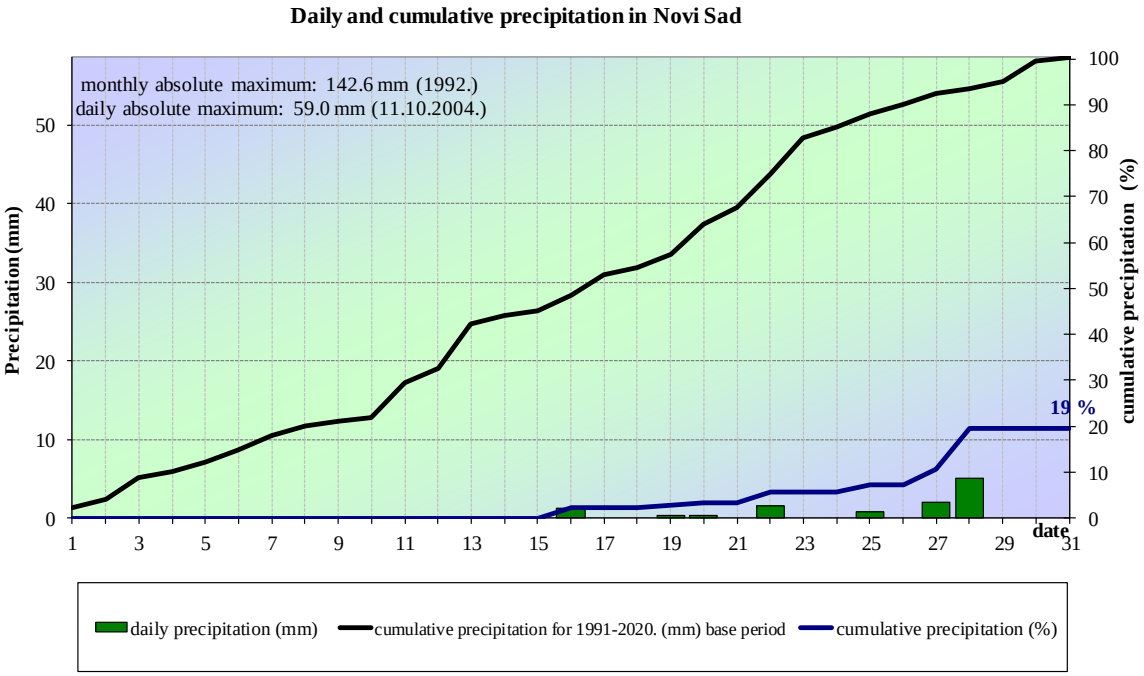



Appendix 39. Daily course of the minimum daily air temperature and the accompanying percentile for Vranje

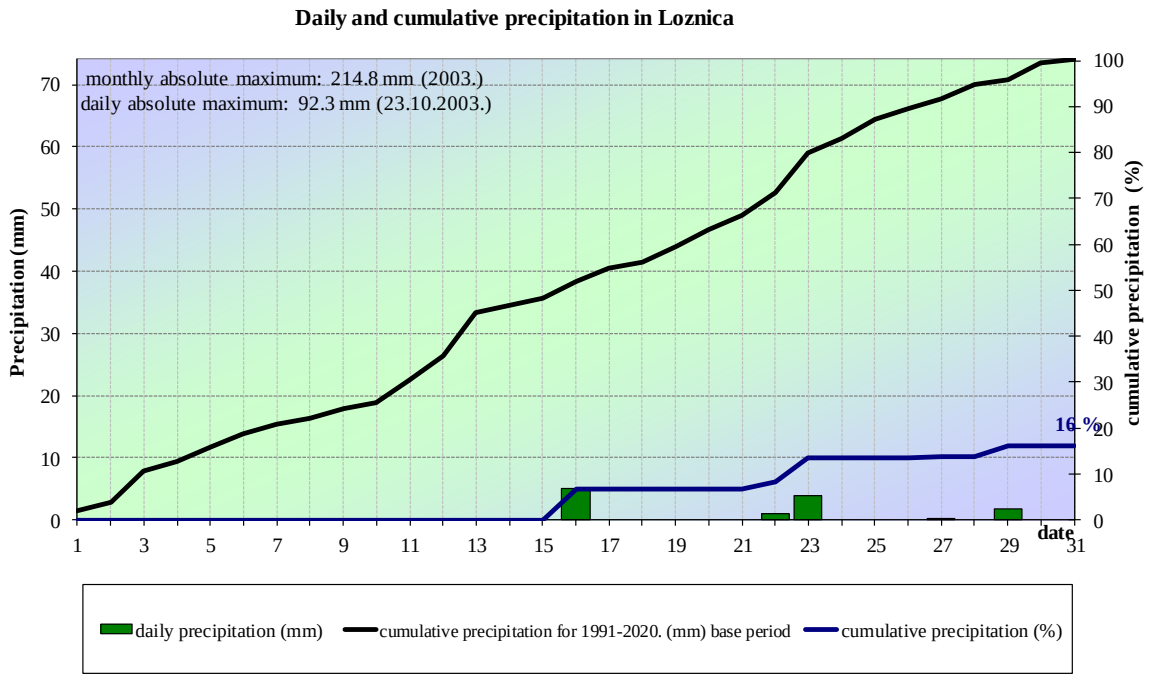
# Precipitation



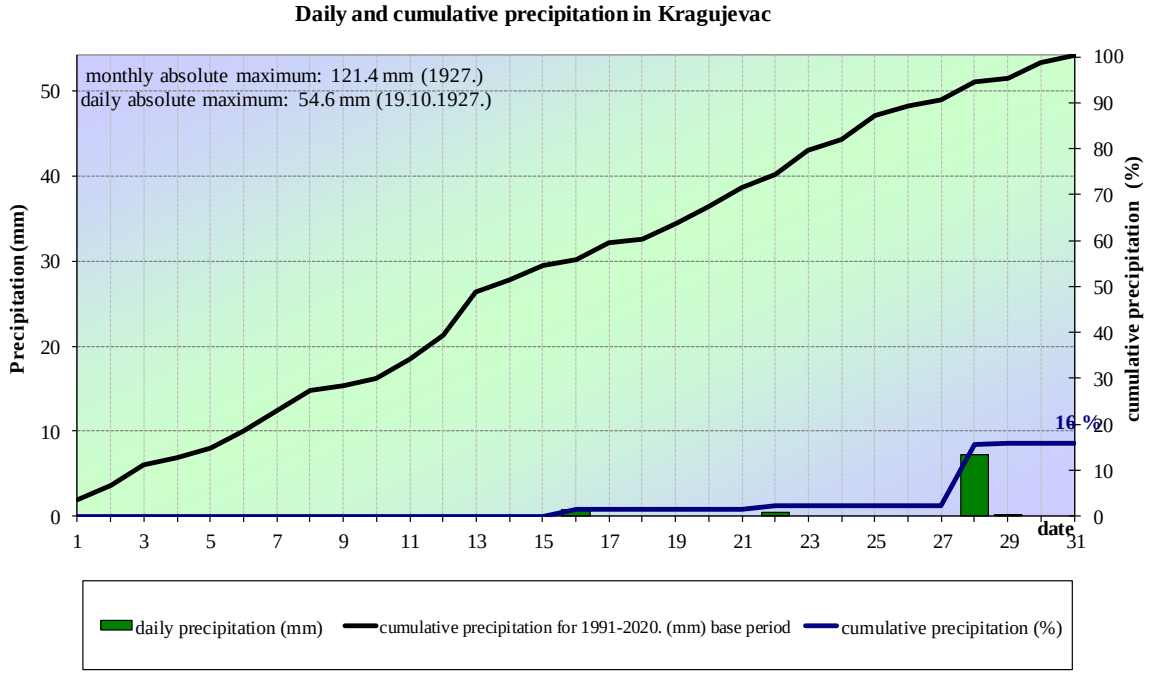

Appendix 40. Daily and cumulative precipitation sums for Sombor



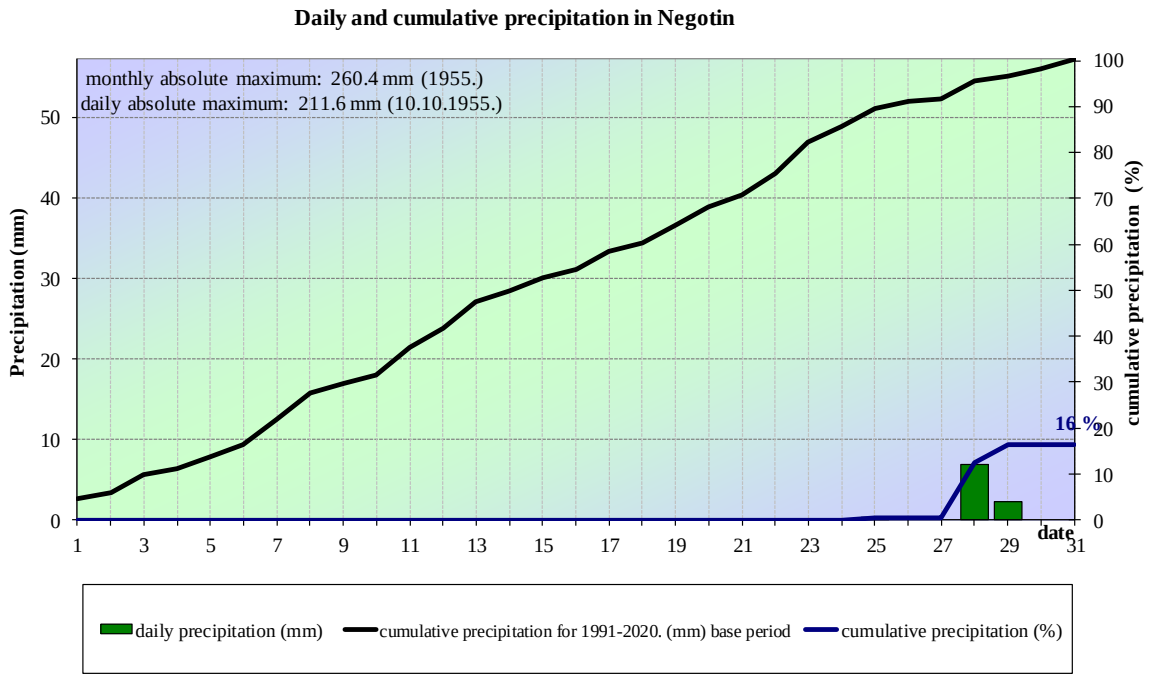

Appendix 41. Daily and cumulative precipitation sums for Novi Sad



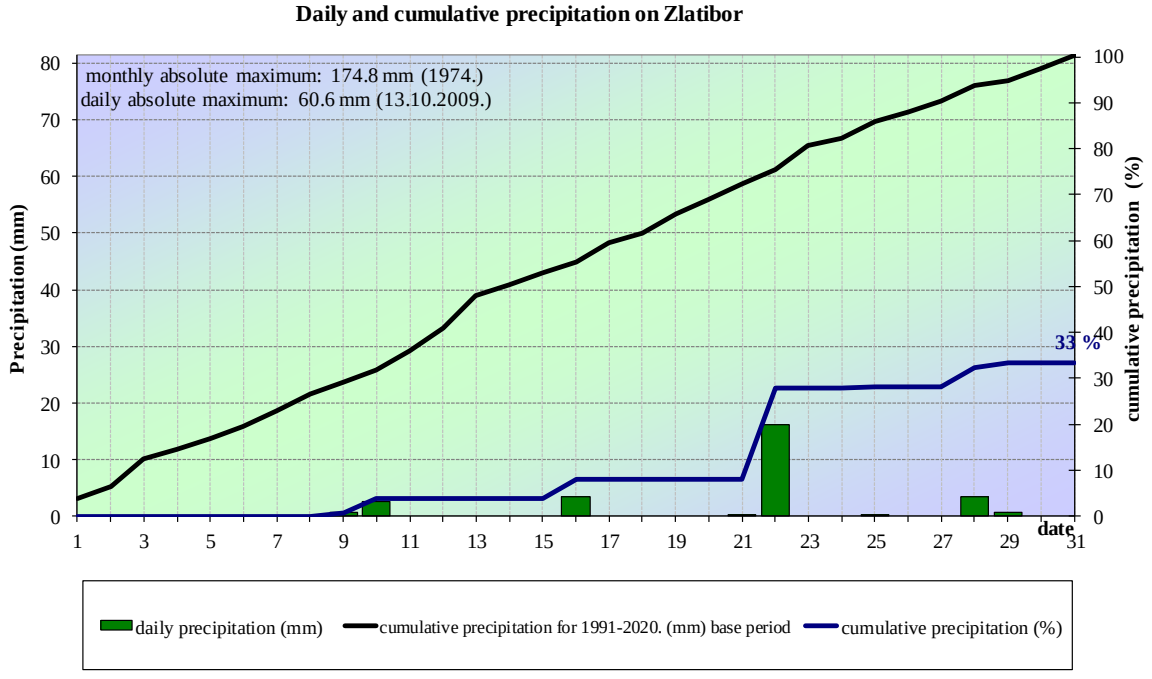

Appendix 42. Daily and cumulative precipitation sums for Loznica



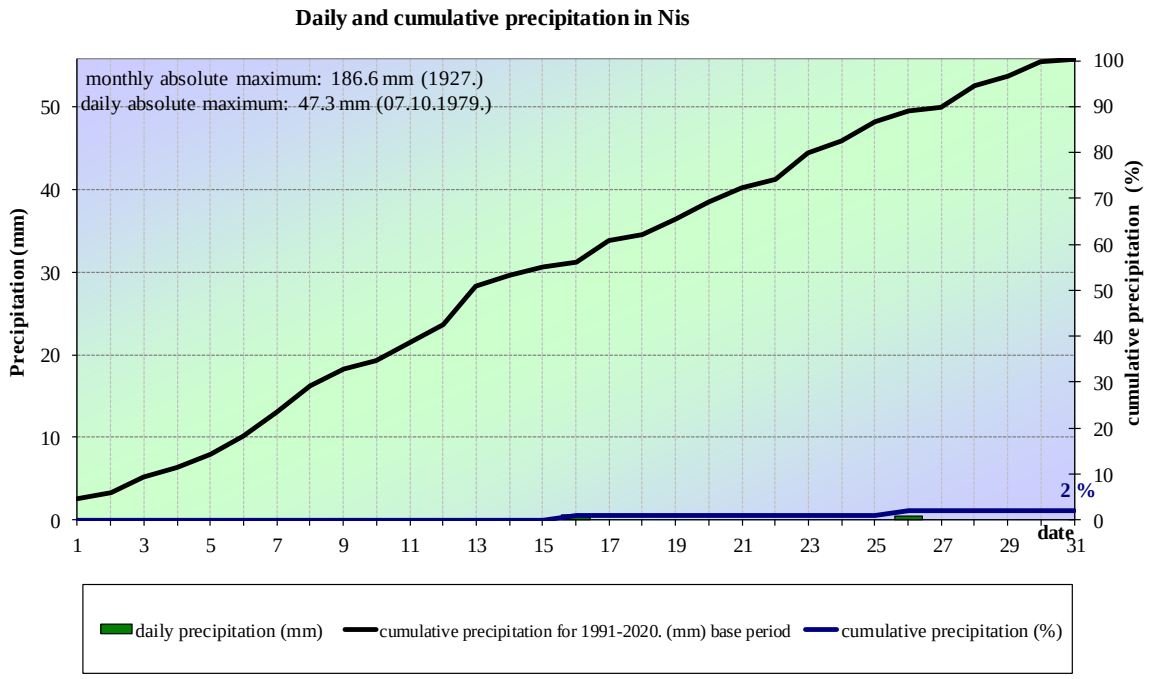

Appendix 43. Daily and cumulative precipitation sums for Kragujevac



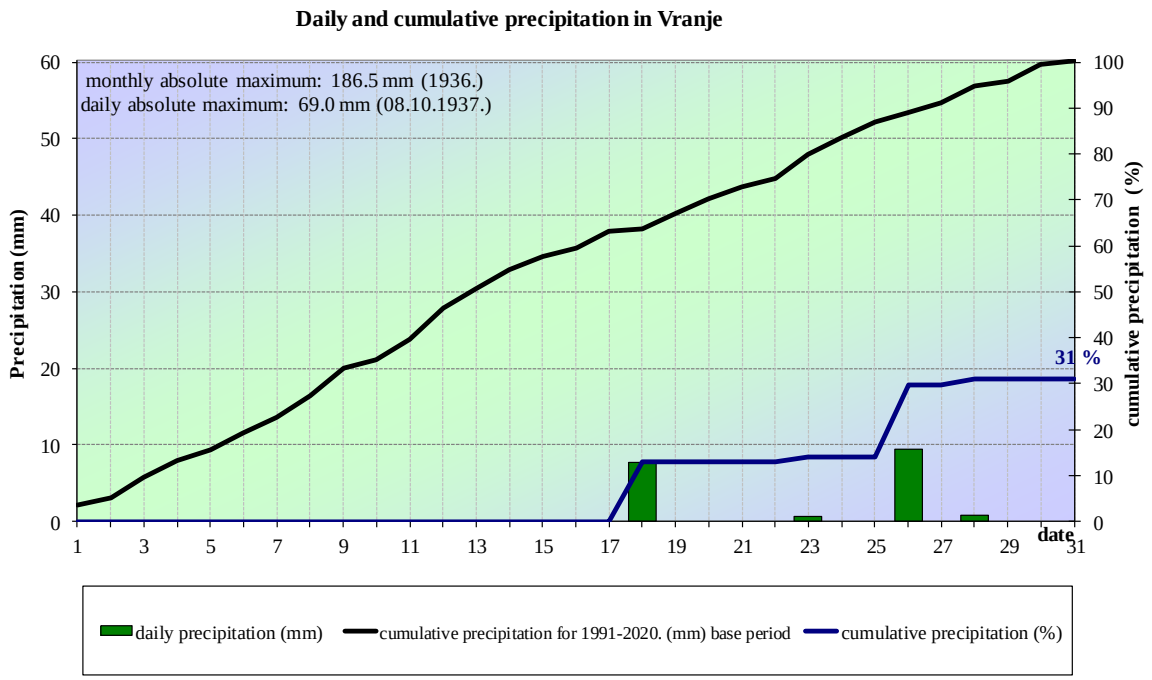

Appendix 44. Daily and cumulative precipitation sums for Negotin




Appendix 45. Daily and cumulative precipitation sums on Zlatibor




Appendix 46. Daily and cumulative precipitation sums for Nis




Appendix 47. Daily and cumulative precipitation sums for Vranje