Republic Hydrometeorological Service of Serbia
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MONTHLY BULLETIN FOR SERBIA

AUGUST 2024

Belgrade, the 7th of September 2024

Division for Climate Monitoring and Climate Forecast
Department of National Center for Climate Change, Climate Model Development and Disaster Risk Assessment
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- ***Record-breaking number of summer days for Crni Vrh, record-breaking number of tropical days in most of Serbia, and record-breaking number of tropical nights in northern, western and central parts***
- ***2 heat waves were recorded***
- ***6th driest August for Serbia since 1951***
- ***2nd driest August since record-keeping began for Novi Sad, Banatski Karlovac, Kraljevo and Palic, and 3rd driest for Zrenjanin and Smederevska Palanka***

AIR TEMPERATURE

Mean monthly air temperature

August 2024 was **the warmest** for Serbia since 1951 (*Figure 1*) with the mean monthly air temperature of **25.0ºC** for the 1951-2024 period and anomaly of **+3.6°C** from the normal[1]. August 2024 ranks as **the warmest** (*Table 1*) for nearly all main meteorological stations since the record-keeping began apart from Krusevac, Sjenica and Leskovac where it was 2nd warmest, and in Negotin, Kursumlija, Nis and Dimitrovgrad where it was 3rd warmest, and Zajecar and Vranje where it was 4nd warmest. **Belgrade** observed mean monthly air temperature of **28.4ºC** with an anomaly of **+4.6°C** from the normal, making August 2024 **by far the warmest since 1887.**

In Appendix are graphs showing 15 warmest years since the record-keeping began for the stations: Novi Sad, Sombor, Belgrade, Kikinda, Crni Vrh, Smederevska Palanka, Sremska Mitrovica and Kopaonik.

[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

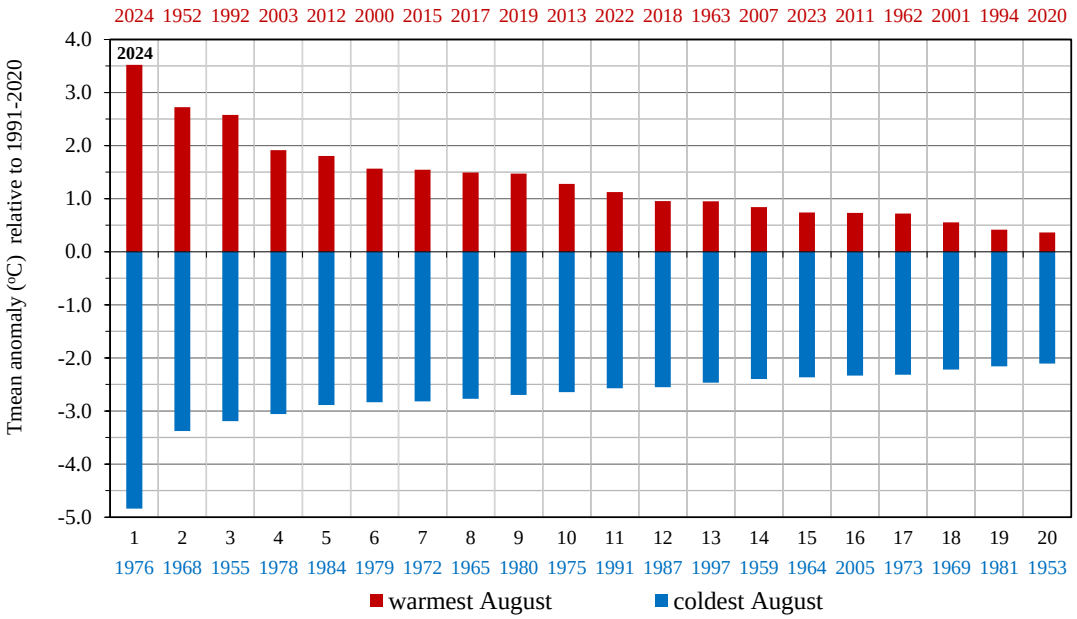


Figure 1. Rank of the warmest and coldest August in Serbia for the 1951-2024 period

Table 1. Ranking of August 2024 with the mean air temperature, normal and anomaly

STATION	Period of observations	Ta (°C) August 2024	Normal for August 1991-2020	Ta anomaly (°C)	Rank no. of 2024 (descending Ta)
PALIC	1945-2023	27.0	22.5	4.5	1
SOMBOR	1942-2023	26.7	22.0	4.6	1
NOVI SAD	1948-2023	27.5	22.4	5.1	1
ZRENJANIN	1943-2023	26.8	22.7	4.1	1
KIKINDA	1948-2023	26.8	22.6	4.2	1
B. KARLOVAC	1986-2023	26.1	22.3	3.8	1
LOZNICA	1952-2023	26.3	22.2	4.1	1
S. MITROVICA	1925-2023	25.9	21.9	4.1	1
VALJEVO	1926-2023	26.0	22.3	3.7	1
BEOGRAD	1887-2023	**28.4**	23.8	4.6	1
KRAGUJEVAC	1925-2023	25.9	22.3	3.6	1
S. PALANKA	1939-2023	26.4	22.4	4.0	1
V. GRADISTE	1926-2023	26.0	22.2	3.8	1
C. VRH	1967-2023	22.1	17.8	4.4	1
NEGOTIN	1927-2023	26.8	23.7	3.1	3
ZLATIBOR	1950-2023	21.7	18.3	3.4	1
SJENICA	1946-2023	19.1	16.8	2.3	2
POZEGA	1952-2023	22.4	20.1	2.3	1
KRALJEVO	1926-2023	26.0	22.3	3.7	1
KOPAONIK	1950-2023	**17.0**	13.6	3.4	1
KURSUMLIJA	1952-2023	23.2	20.5	2.7	3
KRUSEVAC	1927-2023	25.8	22.2	3.6	2
CUPRIJA	1948-2023	26.2	22.1	4.0	1
NIS	1925-2023	26.0	23.1	2.9	3
LESKOVAC	1948-2023	24.3	22.0	2.3	2
ZAJECAR	1929-2023	24.6	22.1	2.5	4
DIMITROVGRAD	1945-2023	23.1	20.5	2.6	3
VRANJE	1926-2023	24.7	22.3	2.4	4

Mean August air temperature ranged from 22.4ºC in Pozega to 28.4ºC in Belgrade, and on the mountains from 17.0ºC at Kopaonik to 22.1ºC at Crni Vrh (*Figure 2*).

Departure of the mean monthly air temperature from the normal ranged from +2.3ºC in Sjenica, Pozega and Leskovac to +5.1ºC in Novi Sad (*Figure 3*).

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

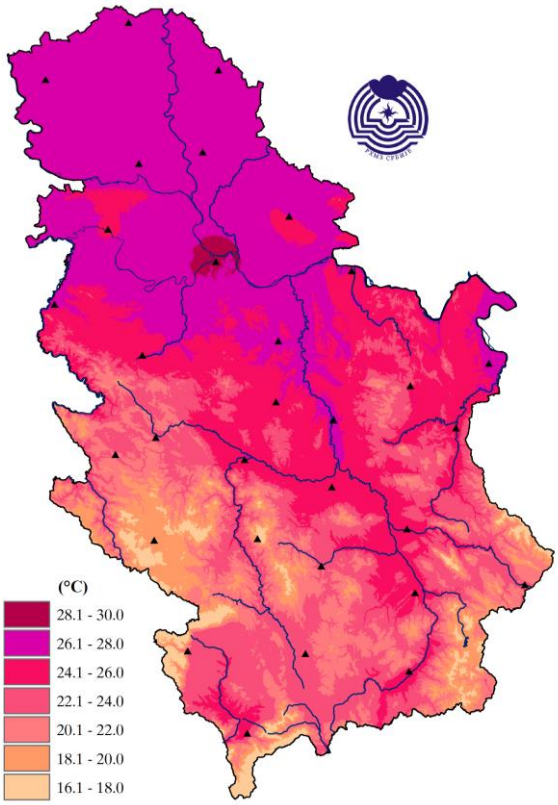


Figure 2. Spatial distribution of mean monthly air temperature (ºC)

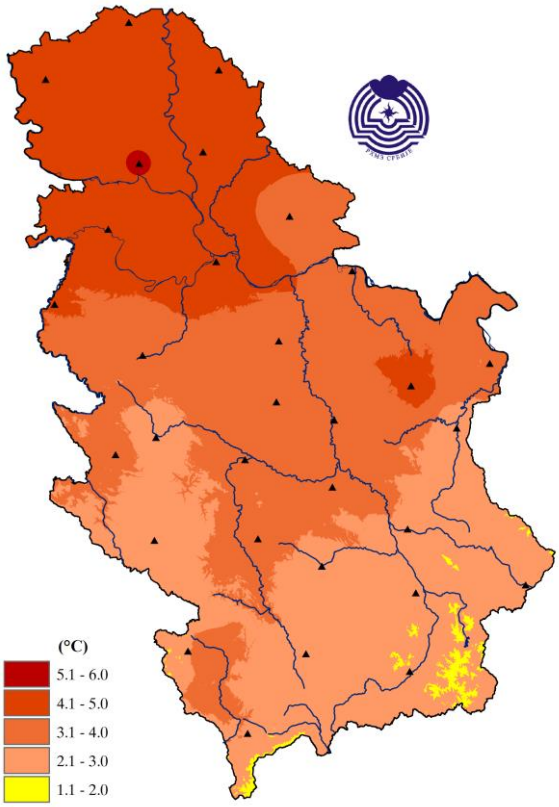


Figure 3. Spatial distribution of mean monthly air temperature anomaly (ºC)

[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

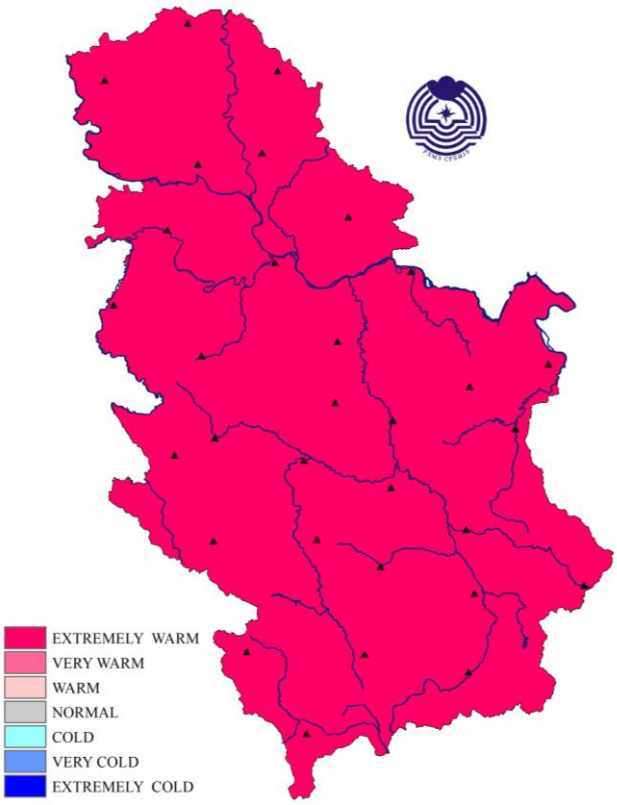


Figure 4. Spatial distribution of the mean monthly air temperature using percentile method

Mean daily air temperature in Belgrade, based on the percentile method was in the normal category during the first week of August, in the very warm and extremely warm category during the second week decade and in the warm and very warm category during the third decade (*Figure 5).* Daily course of the daily air temperature and accompanying percentiles for the stations Sombor, Novi Sad, Loznica, Negotin, Kragujevac, Zlatibor, Nis and Vranje are given in the Appendix.

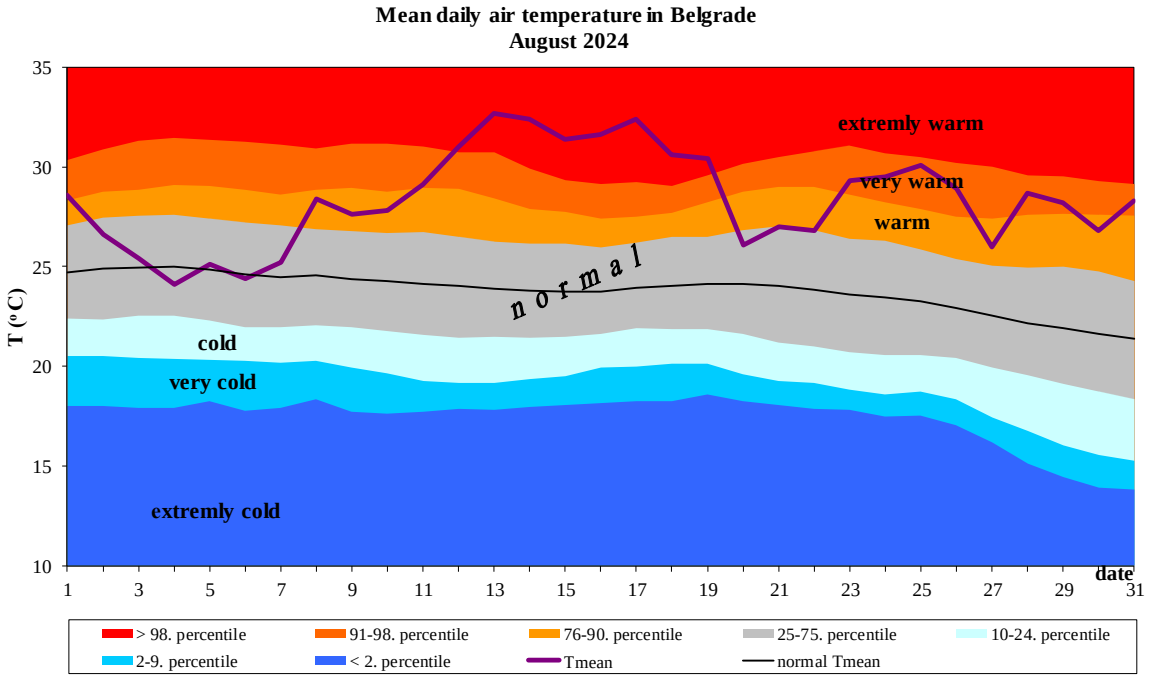


Figure 5. Daily course of the mean daily air temperature and accompanying percentiles for Belgrade

Maximum air temperature

Mean maximum air temperature in August ranged from 32.8ºC in Pozega to 35.9ºC in Cuprija, while Belgrade recorded 34.2ºC. On the mountains, mean maximum air temperature ranged from 22.2ºC at Kopaonik to 28.3ºC in Sjenica.

Based on the percentile method, mean maximum air temperature during August was in the extremely warm category in entire Serbia.

In Serbia, the maximum daily air temperature of 39.0ºC was measured in Nis on August 4. On August 27, Belgrade recorded the highest daily air temperature of 37.2ºC.

The highest maximum daily air temperature of 41.6ºC was measured in Cuprija on August 13. In Belgrade, the highest daily air temperature of 39.7ºC was measured on August 14. **Record-breaking maximum daily air temperatures in August were measured in Sombor, Novi Sad, Kikinda, Kragujevac and Vranje** are shown in Table 2.

Table 2. New record-breaking (maximum) daily air temperatures

STATION	Tmax (°C) AUGUST 2024	previous Tmax record	date of previous Tmax record
SOMBOR	40.6	39.9	6 VIII 2012
NOVI SAD	40.2	40.0	3 VIII 1988
KIKINDA	39.7	39.2	5 VIII 2017
KRAGUJEVAC	40.5	40.4	11 VIII 1994
VRANJE	40.1	39.6	22/23 VIII 2000/2007

Summer days[3] were recorded in the lowland throughout the entire month (31 days), and on the mountains their number ranged from 7 at Kopaonik to 27 in Sjenica. **Crni Vrh** observed record-breaking number of summer days (24 days) thereby **breaking the previous record** of 23 days set in August 1992. Deviation of the number of summer days (*Figure 6*) was positive across the entire country, from 3 days in Negotin to 14 above average at Crni Vrh.

Kopaonik didn't record any tropical days[4]. Number of tropical days ranged from 8 at Zlatibor to 31 in Sombor, Novi Sad, Veliko Gradiste and Cuprije. At the majority of main meteorological stations, **number of tropical days is either surpassed or equaled** *(Table 3).* Deviation of the number of tropical days (Figure 7) was positive across the entire country apart from Kopaonik, from 5 at Zlatibor to 18 days above average in Novi Sad.

[3] Summer day is defined as the day with the maximum daily air temperature of 25°C and above
[4] Tropical day is defined as the day with the maximum daily air temperature of 30°C and above

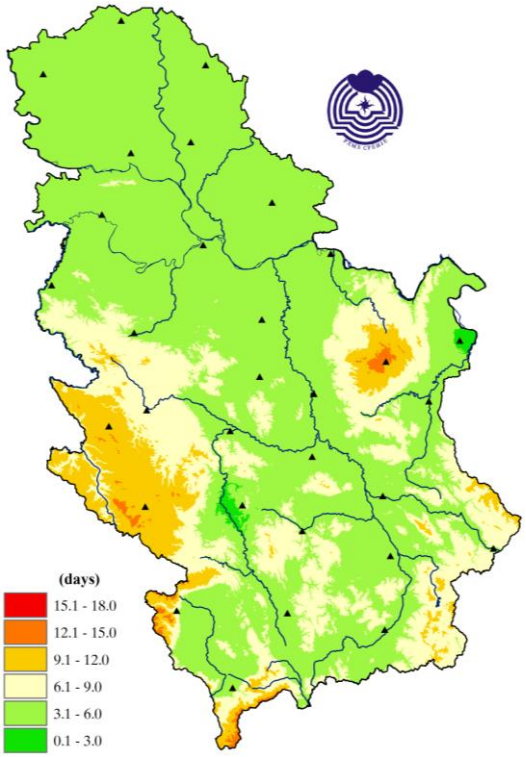


Figure 6. Deviation of the number of summer days from the normal

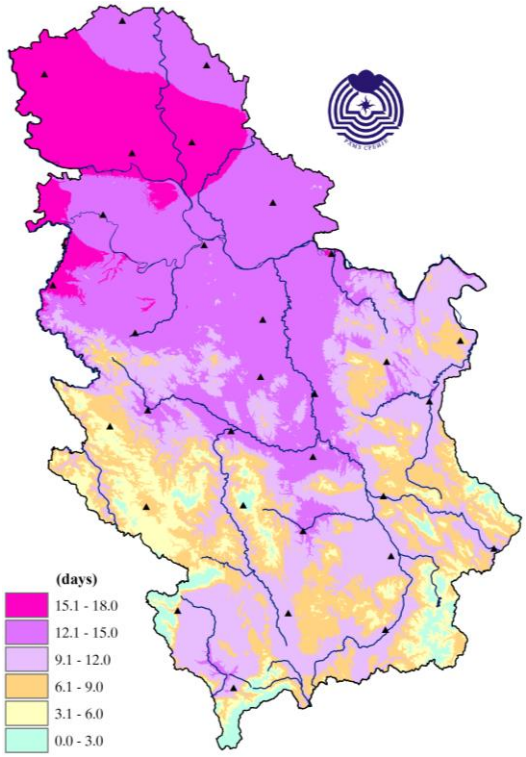


Figure 7. Deviation of the number of tropical days from the normal

Table 3. Exceeded and equaled maximum number of tropical days and tropical nights for August

STATION	number of summer days AUGUST 2024	previous maximum of tropical days	year of previous maximum of tropical days	number of tropical nights AUGUST	previous maximum of tropical nights	year of previous maximum of tropical nights
PALIC	27	tied	1992	11	tied	2023
SOMBOR	31	29	1992	9	6	2017
NOVI SAD	31	28	1992	12	7	2017/2023
ZRENJANIN	30	29	1992	7	-	-
KIKINDA	28	tied	1992	9	-	-
B. KARLOVAC	29	-	-	9	6	1992/2017
LOZNICA	30	29	1992	15	9	2023
S. MITROVICA	28	27	1992	8	6	1946
VALJEVO	28	25	1992	10	6	2017
BEOGRAD	28	tied	1992	25	22	2018
KRAGUJEVAC	29	28	1952	5	-	-
S. PALANKA	29	28	1992	6	5	1952/2007
V. GRADISTE	31	30	1992	5	-	-
CRNI VRH	9	7	2012	6	-	-
NEGOTIN	27	-	-	10	-	-
ZLATIBOR	8	-	-	2	-	-
SJENICA	10	-	-	0	-	-
POZEGA	26	23	2003	0	-	-
KRALJEVO	28	tied	1992	8	4	1998/2007/2017
KOPAONIK	0	tied	-	0	tied	-
KURSUMLIJA	28	27	1952	0	-	-
KRUSEVAC	30	29	2003	3	-	-
CUPRIJA	31	28	1992/2003	5	4	1963/1996/2017/2019/2022
NIS	28	-	-	8	-	-
LESKOVAC	30	tied	1952	0	-	-
ZAJECAR	30	-	-	0	-	-
DIMITROVGRAD	26	-	-	0	-	-
VRANJE	28	tied	1992	0	-	-

Daily course of the maximum daily air temperature and the accompanying percentiles in Belgrade, during August 2024, is shown on Figure 8, while for Sombor, Novi Sad, Loznica, Negotin, Kragujevac, Zlatibor, Nis and Vranje are shown in the Appendix.

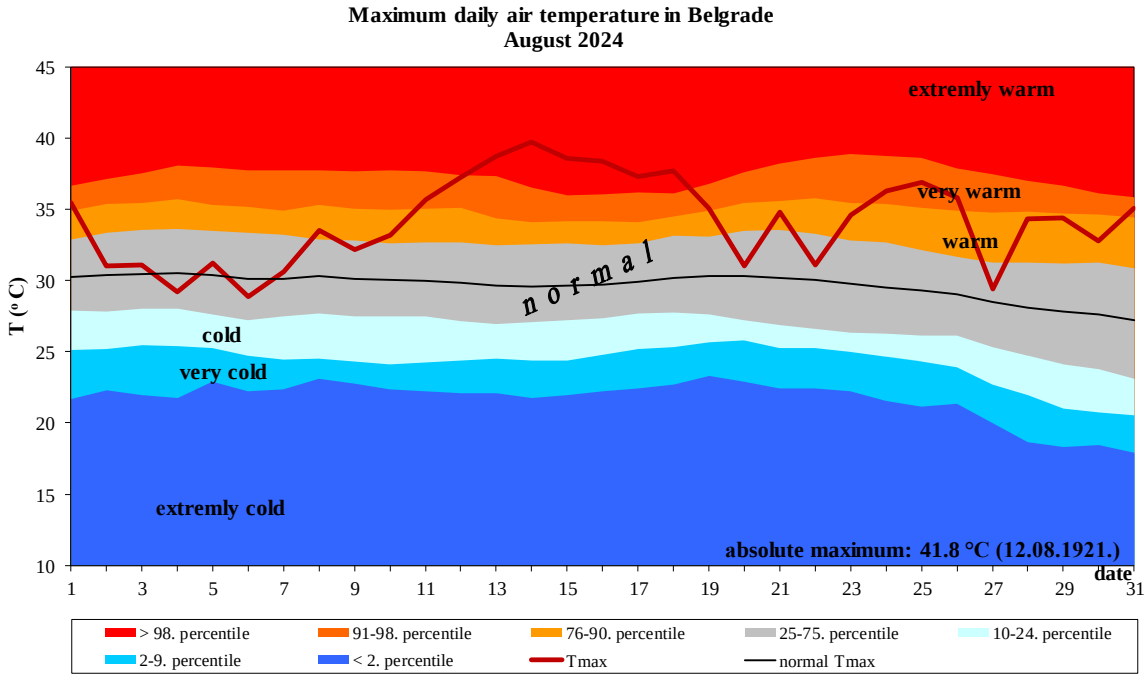


Figure 8. Daily course of the maximum daily air temperature and accompanying percentiles for Belgrade

There were two heat waves[5]; the first one affected the entire territory of Serbia from 10 to 19 August, and the onset of the second one was recorded on August 23 in Sombor, August 24 in Palic, August 28 in Zrenjanin and Novi Sad, and August 29 in Loznica, as well as August 31 in the remainder of the northern and certain parts of central and eastern Serbia. (*Table 4).*

Table 4. Heat waves in Serbia during August

HEAT WAVES IN SRBIA - AUGUST 2024

(reference period 1991-2020)

AUGUST

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	EW	EW	EW	EW	EW	EW	VW					VW	VW	VW	VW	VW	VW	VW	EW
SOMBOR										VW	VW	EW	EW	EW	EW	EW	EW	EW	VW				VW	EW	EW	EW	VW	VW	VW	VW	EW
KIKINDA											VW	EW	EW	EW	EW	EW	VW	EW	VW												VW
ZRENJANIN											VW	EW	EW	EW	EW	EW	EW	EW	VW									VW	VW	VW	EW
NOVI SAD										VW	VW	EW	EW	EW	EW	EW	EW	EW	VW									VW	VW	VW	EW
SR. MITROVICA											VW	EW	EW	EW	EW	EW	EW	EW	VW												VW
BEOGRAD											VW	VW	EW	EW	EW	EW	EW	EW	VW												VW
LOZNICA											VW	EW	EW	EW	EW	EW	EW	EW											VW	VW	VW
VALJEVO											VW	VW	EW	EW	EW	EW	EW	EW	VW												
V. GRADISTE											VW	EW	EW	EW	EW	EW	EW	EW	VW												VW
SM. PALANKA											VW	EW	EW	EW	EW	EW	EW	EW	VW												VW
KRAGUJEVAC												EW	EW	EW	EW	EW	EW	EW	VW												
KRALJEVO											VW	EW	EW	EW	EW	EW	EW	VW													
POZEGA												VW	EW	EW	EW	EW	EW	VW													
ZLATIBOR												VW	EW	EW	EW	EW	EW	VW													
CUPRIJA												EW	EW	EW	EW	EW	EW	EW	VW												VW
KRUSEVAC											VW	EW	EW	EW	EW	EW	EW	EW													
NEGOTIN											EW	EW	EW	EW	EW	EW	EW	EW	VW												VW
ZAJECAR											VW	EW	EW	EW	EW	EW	EW	VW													
CRNI VRH											VW	EW	EW	EW	EW	EW	EW	VW													VW
KOPAONIK												EW	EW	EW	EW	EW	EW	VW													
SJENICA												VW	EW	EW	EW	EW	EW	VW													
NIS												VW	EW	EW	EW	EW	EW	EW													
VRANJE											VW	VW	EW	EW	EW	EW	EW	EW	VW												
DIMITROVGRAD											VW	EW	EW	EW	EW	EW	EW	EW	VW												
LESKOVAC											VW	VW	EW	EW	EW	EW	EW	EW													
KURSUMLIJA												EW	EW	EW	EW	EW	EW														
B. KARLOVAC											VW	VW	EW	EW	EW	EW	EW	EW	VW												VW

EW	EXTREMELY WARM
VW	VERY WARM

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

Minimum air temperature

Mean minimum air temperature in August ranged from 14.3ºC in Dimitrovgrad to 21.7ºC in Belgrade. On the mountains, mean minimum air temperature ranged from 10.9ºC in Sjenica to 17.4ºC at Crni Vrh.

Based on the percentile method, mean minimum air temperature was in the following categories: extremely warm in most of Serbia, very warm in Sjenica, warm in Zrenjanin, Veliko Gradiste, Pozega and Dimitrovgrad, and normal category in Leskovac, Zajecar and Vranje.

The lowest minimum daily air temperature of 5.4ºC was measured in Sjenica on August 1. On August 4, Belgrade observed the lowest daily air temperature of 17.1ºC.

Tropical nights[6] were recorded in most of Serbia apart from the south as well as parts of western, central and eastern regions of the country. The highest number of tropical nights, total of 25, was registered in Belgrade. **Record-breaking number of tropical nights for August** was registered at the main meteorological stations which is shown in Table 3. Deviation of the number of tropical nights (*Figure 9)* from the average was in a range from 2 in Krusevac and Zlatibor to 15 nights above the average in Belgrade.

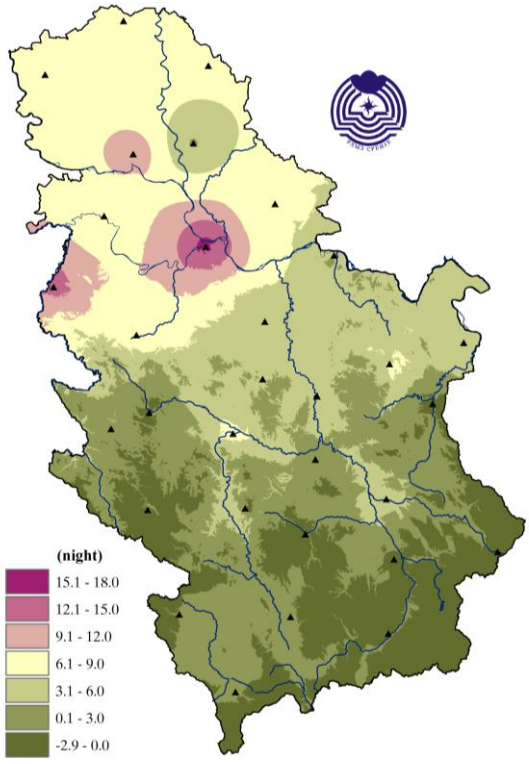


Figure 9. Deviation of the number of tropical nights from the normal

Figure 10 shows assessment of the minimum and maximum air temperature in Serbia for August based on the tercile distribution relative to the 1991-2020 base period. It can be noted that the mean minimum and mean maximum air temperature are extremely above the average.

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

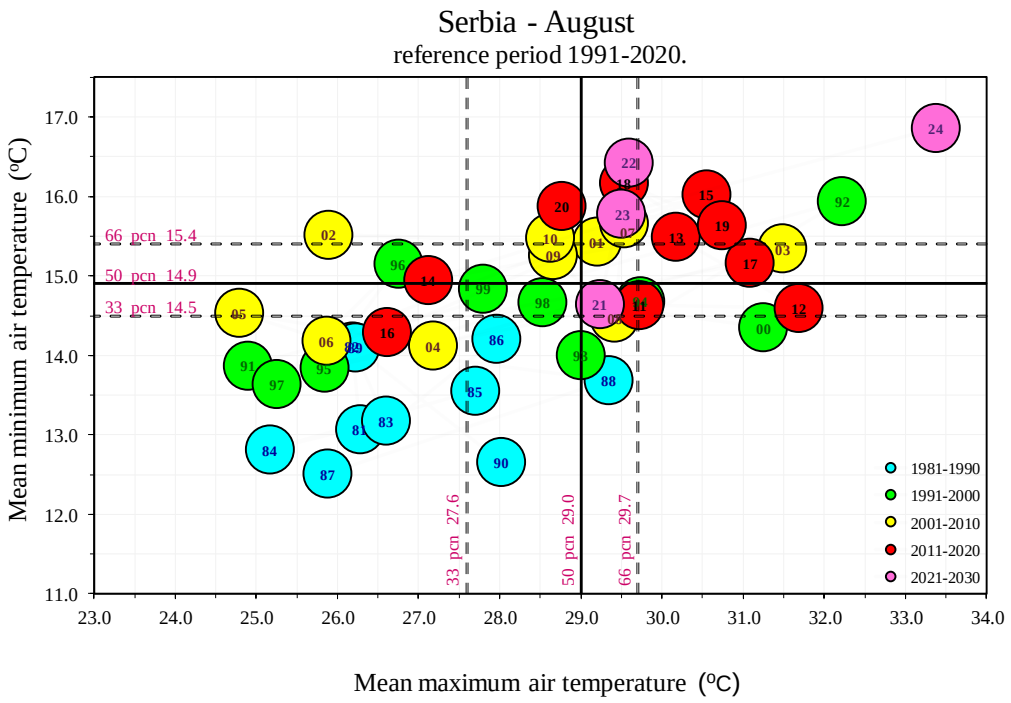


Figure 10. Assessment of minimum and maximum air temperature in October for Serbia with the accompanying terciles in relation to the 1991-2020 base period

Figure 11 shows daily course of the minimum daily air temperature and the accompanying percentiles for Belgrade in August 2024, and for the stations Sombor, Novi Sad, Loznica, Negotin, Kragujevac, Zlatibor, Nis and Vranje are given in the Appendix.

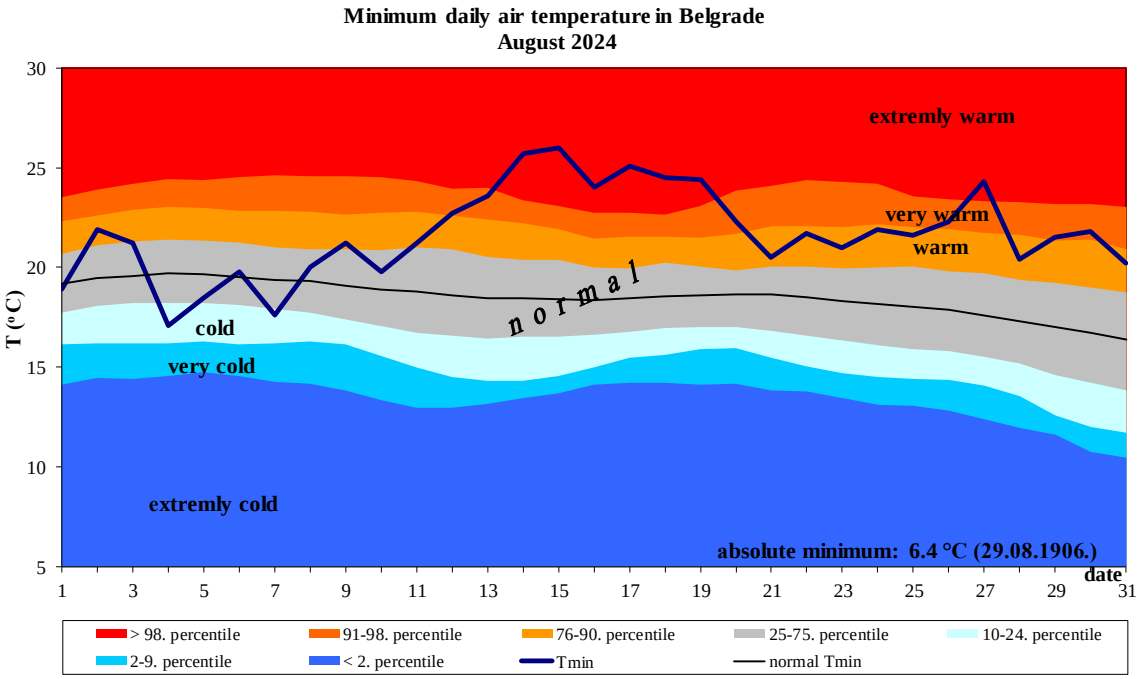


Figure 11. Daily course of the minimum daily air temperature and accompanying percentiles for Belgrade

PRECIPITATION

August 2024 was 6th driest for Serbia (*Figure 12)* since 1951, **2nd driest for Novi Sad, Banatski Karlovac, Sremska Mitrovica, Belgrade, Veliko Gradiste, Kraljevo and Palic,** and **3rd driest for Zrenjanin and Smederevska Palanka.**

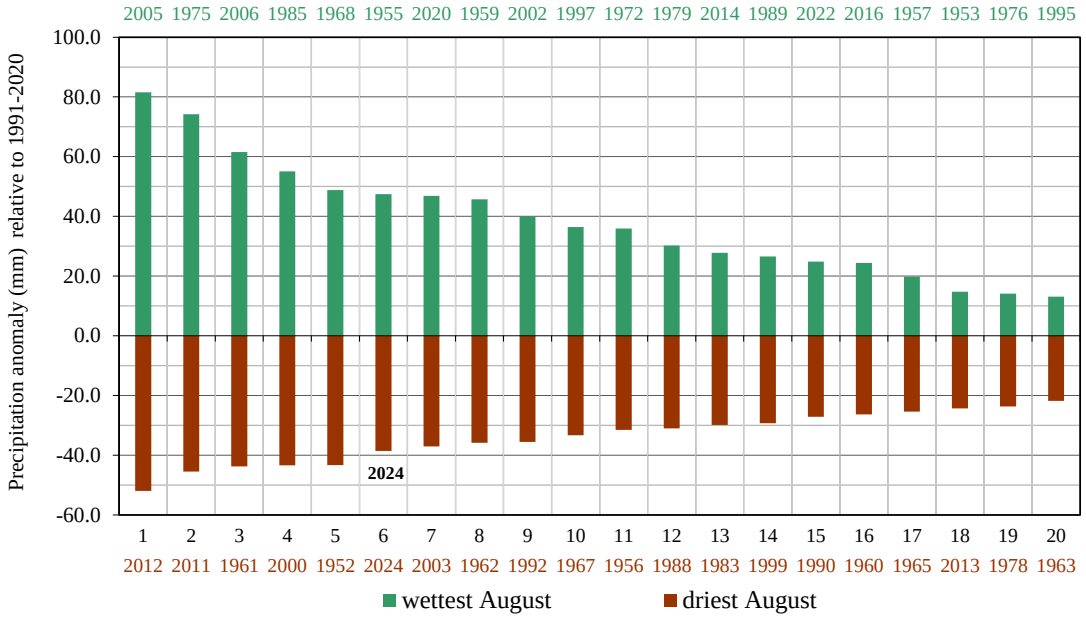


Figure 12. Rank of the wettest and driest August in Serbia for the 1951-2024 period

In the Appendix are given graphs showing 15 driest years since record-keeping began for the stations: Belgrade, Banatski Karlovac, Kraljevo, Novi Sad, Palic, Sremska Mitrovica and Veliko Gradiste.

August precipitation ranged from 0.3 mm in Sremska Mitrovica to 60.3 mm in Veliko Gradiste, while Belgrade received 3.3 mm of precipitation (*Figure 13).*

Precipitation totals compared to the normal ranged from 1% in Sremska Mitrovica to 144% in Vranje (*Figure 14).*

Based on the percentile method, precipitation sums were in the following categories: extremely dry in Belgrade, Veliko Gradiste, Kraljevo and Palic, very dry and dry in northern, parts of western, central and eastern Serbia and rainy in Vranje (*Figure 15*).

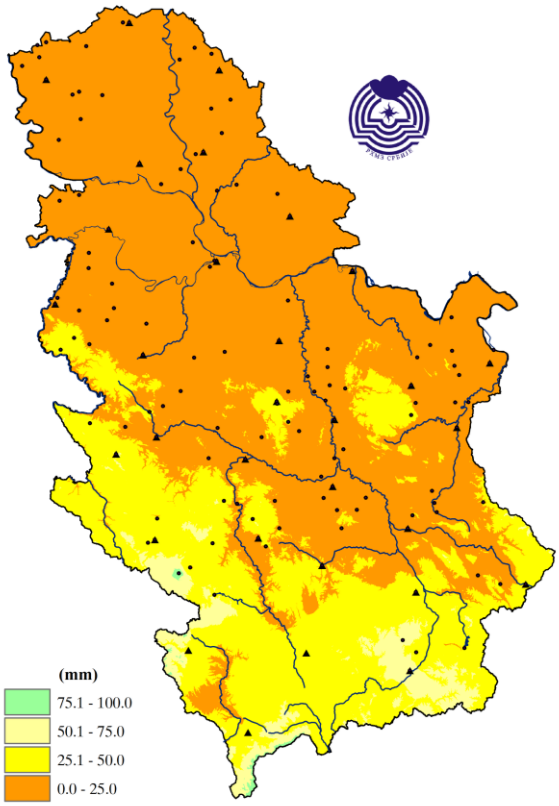


Figure 13. Spatial distribution of the monthly precipitation sums (mm) according to data from 28 major meteorological, 22 climatological and 80 rain gauge stations

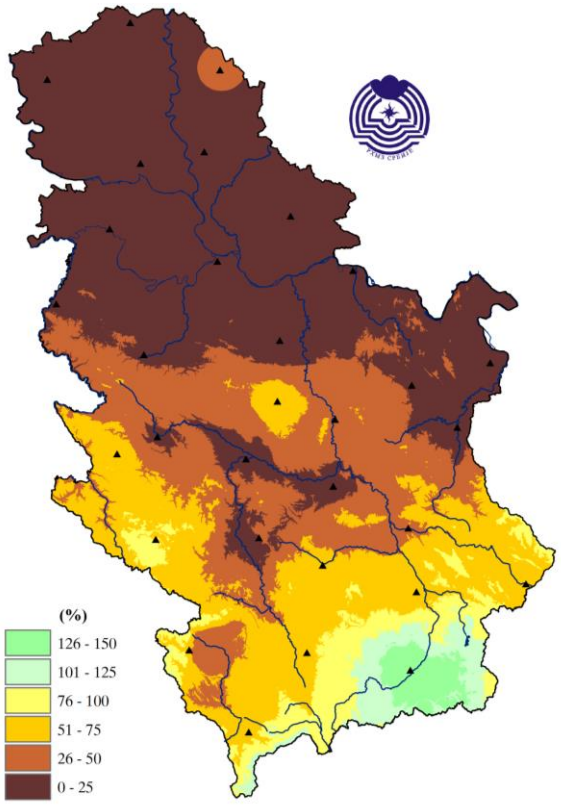


Figure 14. Spatial distribution of the monthly precipitation sums in the percentages of normal for the 1991–2020 base period

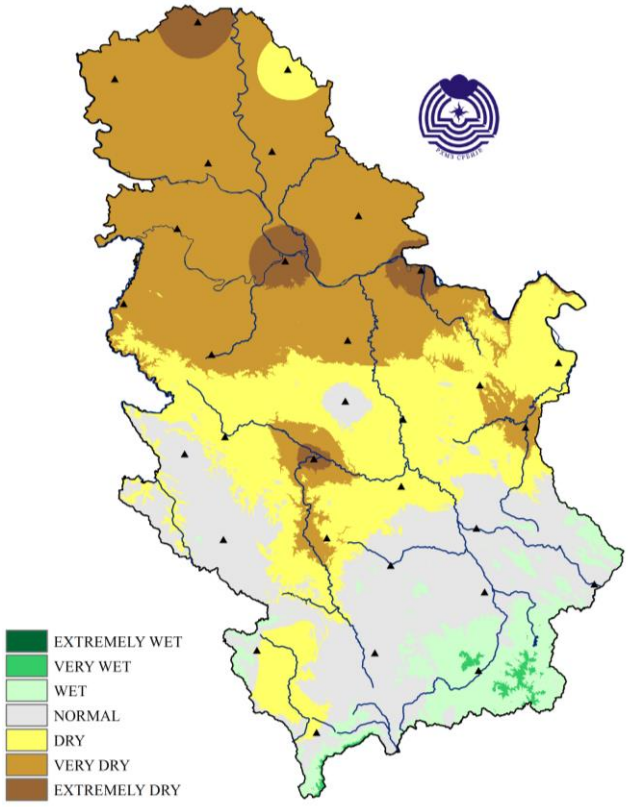


Figure 15. Monthly precipitation sums according to the percentile method

The highest daily precipitation sum of 43.4 mm was recorded in Vranje on August 19. On August 9, Belgrade observed the highest daily precipitation sum of 1.5 mm.

Number of days with precipitation ranged from 1 in Novi Sad and Sremska Mitrovica to 12 days at Kopaonik *(Figure 16).* Departure of the number of days with precipitation ranged from 7 days below the August average in Novi Sad and Sremska Mitrovica to 2 days above the August average at Kopaonik (*Figure 17).*

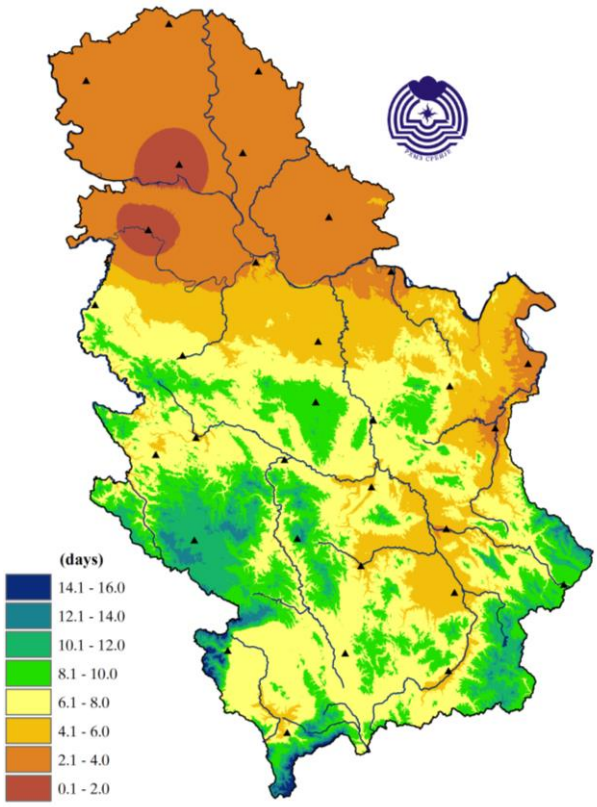


Figure 16. Spatial distribution of number of days with precipitation

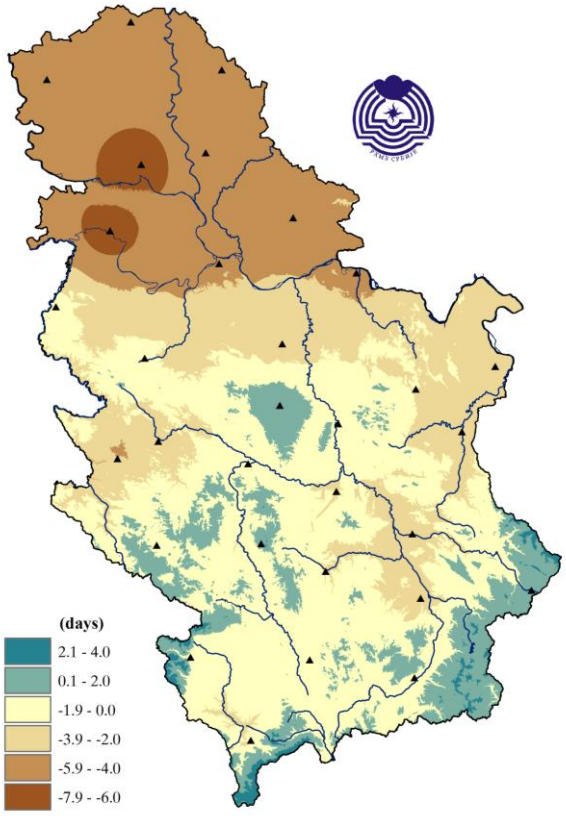


Figure 17. Spatial distribution of deviation of number of days with precipitation

Figure 18 shows assessment of the air temperature and precipitation sums for Serbia for August based on the tercile distribution relative to the 1991-2020 base period. It can be noted that August 2024 was marked by mean air temperature extremely above the upper tercile and precipitation sums significantly below the lower tercile threshold.

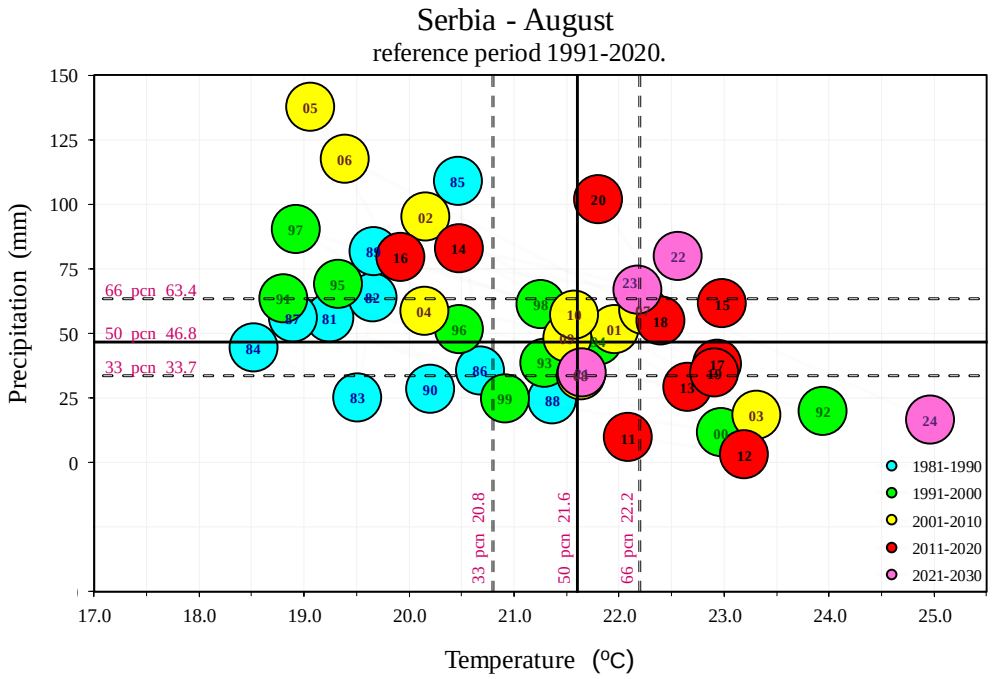


Figure 18. Assessment of air temperature and precipitation in October for Serbia with the accompanying terciles in relation to the 1991-2020 base period

Figure 19 show daily and cumulative precipitations sums with averaged normal 1991-2020 for August in Belgrade, and for the stations Sombor, Novi Sad, Loznica, Negotin, Kragujevac, Zlatibor, Nis and Vranje precipitation sums are given in Appendix.

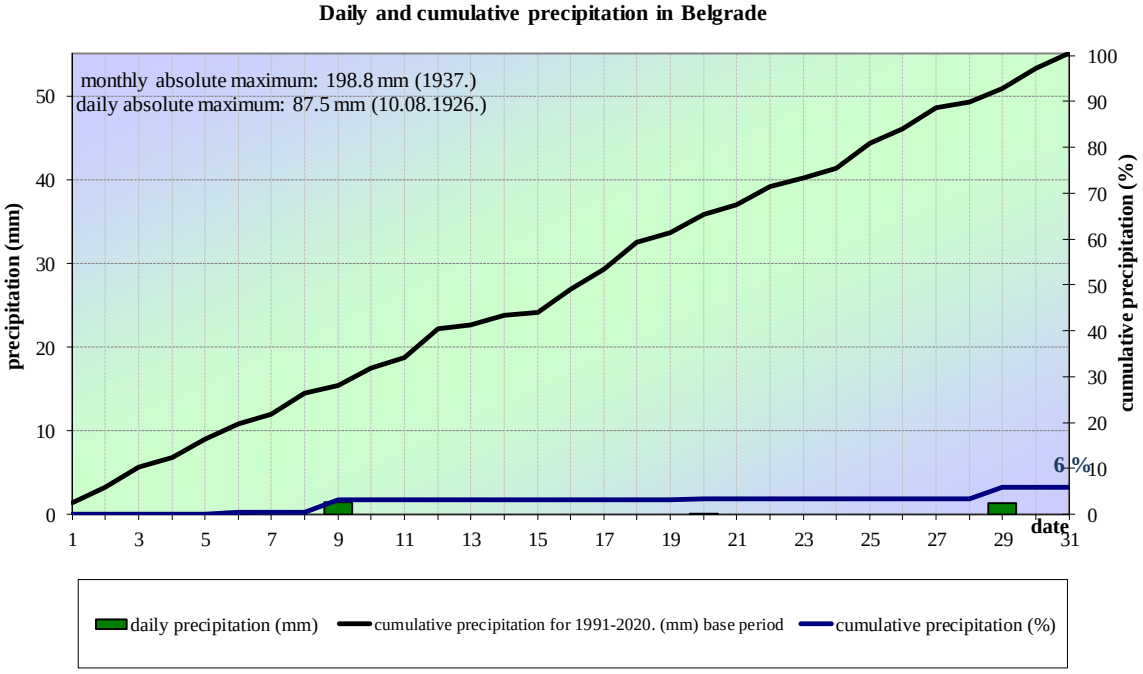


Figure 19. Daily and cumulative precipitation in Belgrade

SUNSHINE DURATION (INSOLATION)

Sunshine duration in August ranged from 250.1 hours in Zajecar to 339.6 hours in Zrenjanin (*Figure 20*).

August insolation ranged from 95% in Zajecar to 131 in Pozega compared to the normal (*Figure 21).*

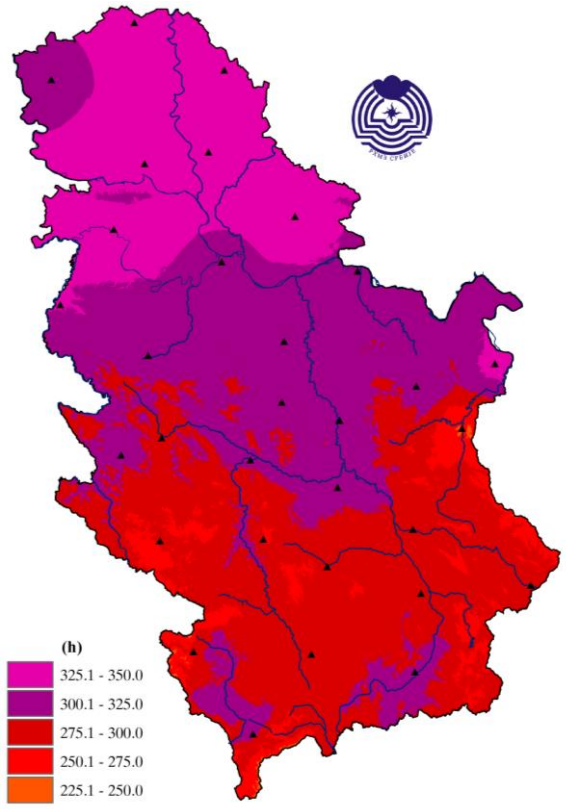


Figure 20. Insolation, expressed in hours

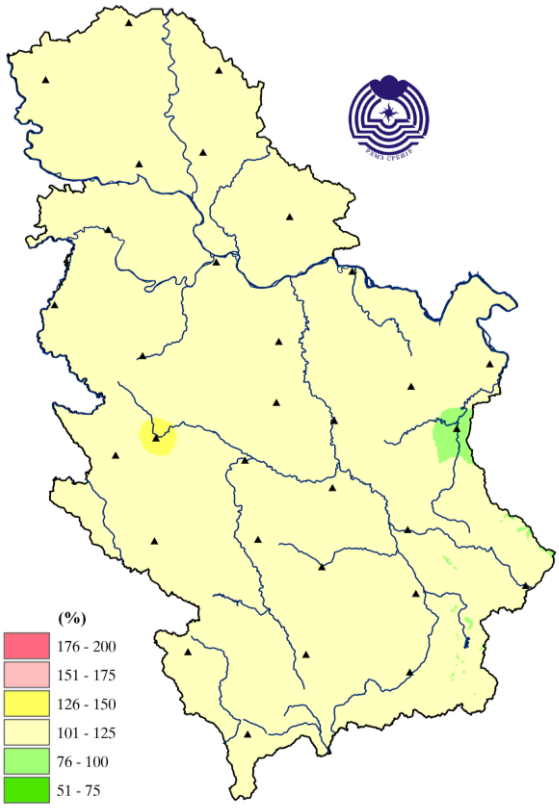


Figure 21. Insolation expressed in the percentages of normal

Note: Climatological analysis of the meteorological elements based on the preliminary data obtained from the 28 principal meteorological stations

OVERVIEW OF THE SYNOPTIC SITUATION*

Exceptionally and persistently warm heat ridge for most of the month; presence of a subtropical air mass from northwest Africa and the Mediterranean; several stormy developments and severe weather events due to cyclonic circulations and upper-air depressions from the Mediterranean, central, eastern, and southeastern parts of Europe

For most of the first decade, the weather was changeable, humid, and very warm, but a few degrees colder than the previous days, with uneven precipitation distribution, occasional rain, and local showers with thunderstorms. Severe weather events were observed at places. The weather was influenced by an upper-air depression with an axis initially extending from southwest to northeast direction, from central Mediterranean and the Ionian Sea towards the Baltic States and Russia. Subsequently, this depression slowly moved eastward over our region, occasionally accompanied by the advection of cooler air from the northeast. Additionally, low atmospheric pressure field at the surface with accompanying waves of relatively moist air moving across our area was registered.

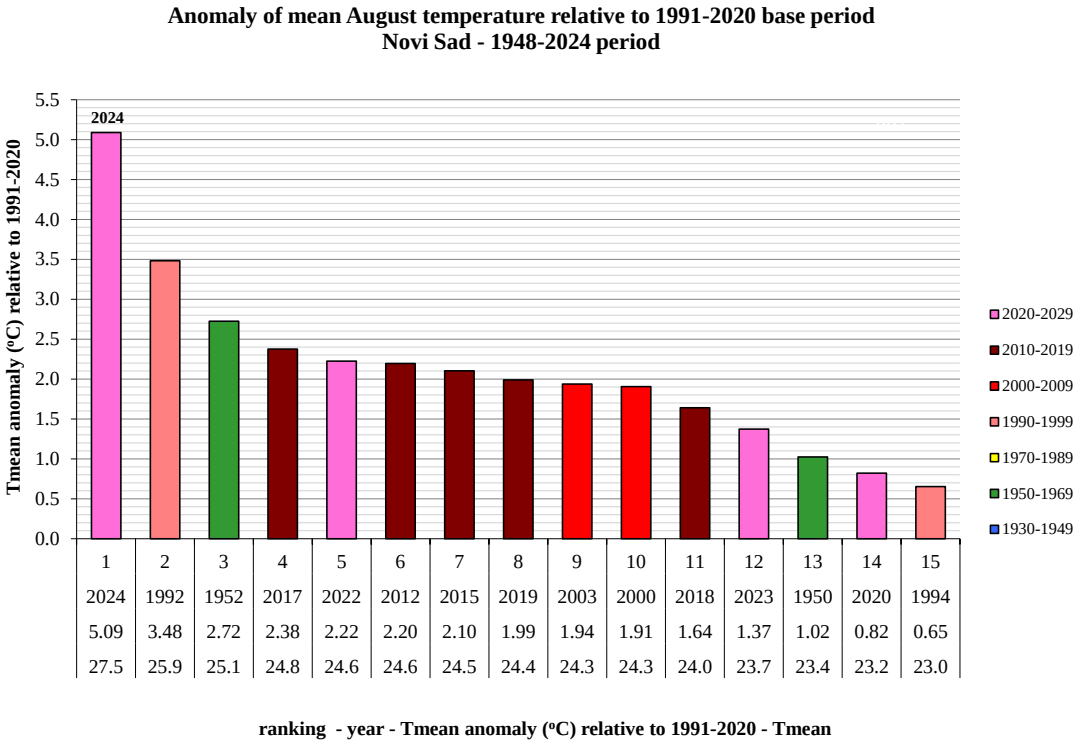
In a subsequent period, most of the second decade, it was extremely warm throughout the end of the decade becoming gradually unsettled initially in southwest and west, and later in the central, southern, and eastern parts of the country with occasional brief showers and thunderstorms. A ridge and a subtropical air mass along with very high daily air temperatures were observed particularly in the Pomoravlje region.

At the end of the second decade, there was increased cloud cover from the northwest and west, accompanied by occarional rain, showers and thunderstorms, and in some places, severe weather events including hail and stromy winds. Passage of a cold front from the northwest, caused a slight decrease in temperatures, especially in northern and central areas. Additionally, due to the influence of a weakly pronounced upper-air low pressure from the southwest, emanating from the Aegean Sea and Greece, somewhat more intense rain was recorded in southern Serbia. Period at the end of the month was marked by rise in temperature and extremely warm weather, particularly in the north of the country due to intense advection of warm air masses from the southwest across the western and central Mediterranean towards the Pannonian Plain.

* National Center for Hydrometeorlogical Early Warning System

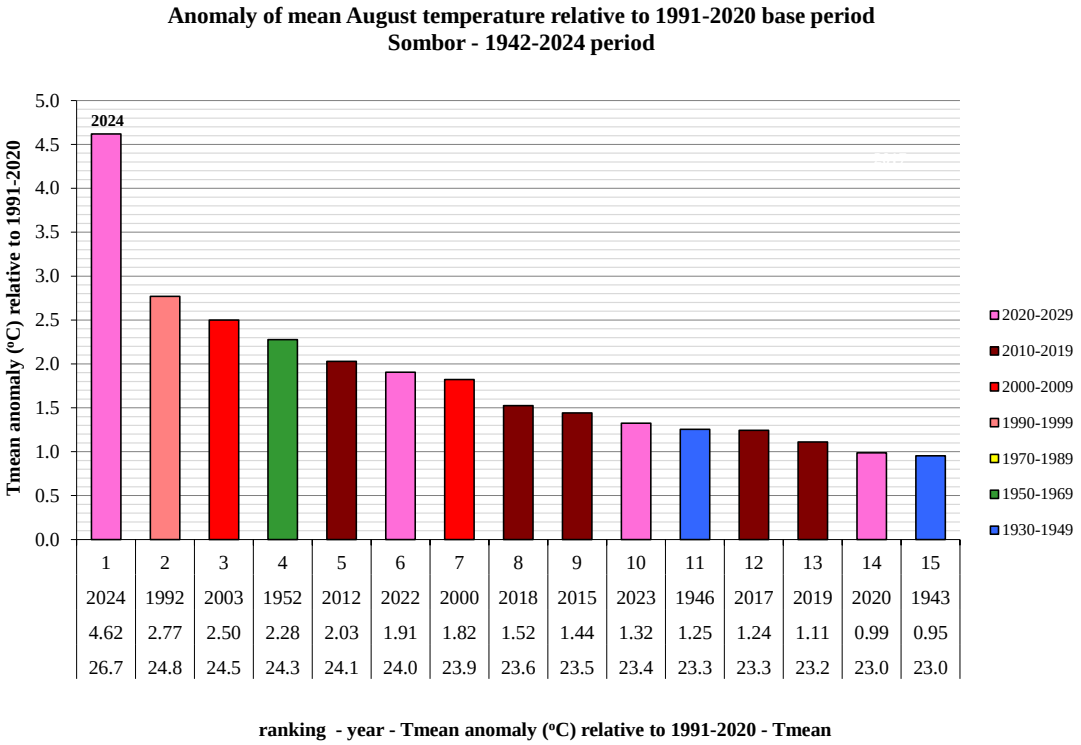
APPENDIX

Ranking of the warmest Augusts



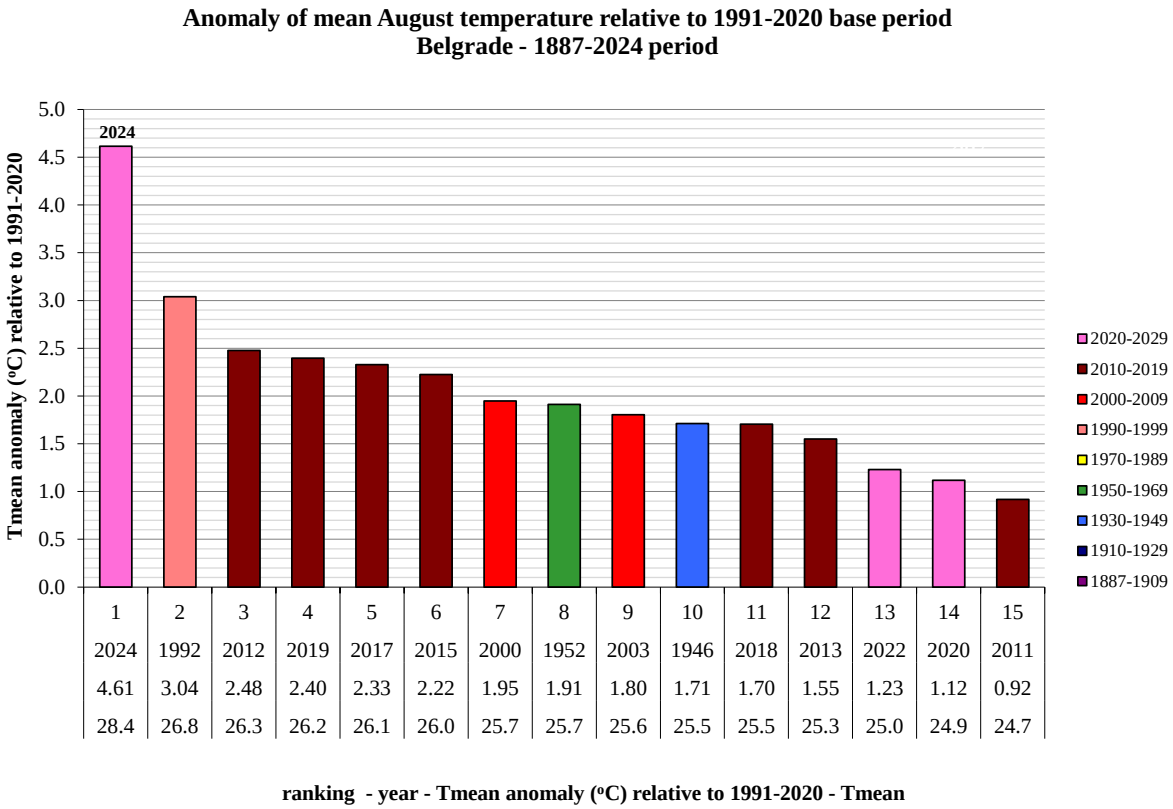
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2024	1992	1952	2017	2022	2012	2015	2019	2003	2000	2018	2023	1950	2020	1994
5.09	3.48	2.72	2.38	2.22	2.20	2.10	1.99	1.94	1.91	1.64	1.37	1.02	0.82	0.65
27.5	25.9	25.1	24.8	24.6	24.6	24.5	24.4	24.3	24.3	24.0	23.7	23.4	23.2	23.0

Appendix 1. Ranking of the warmest Augusts in Novi Sad



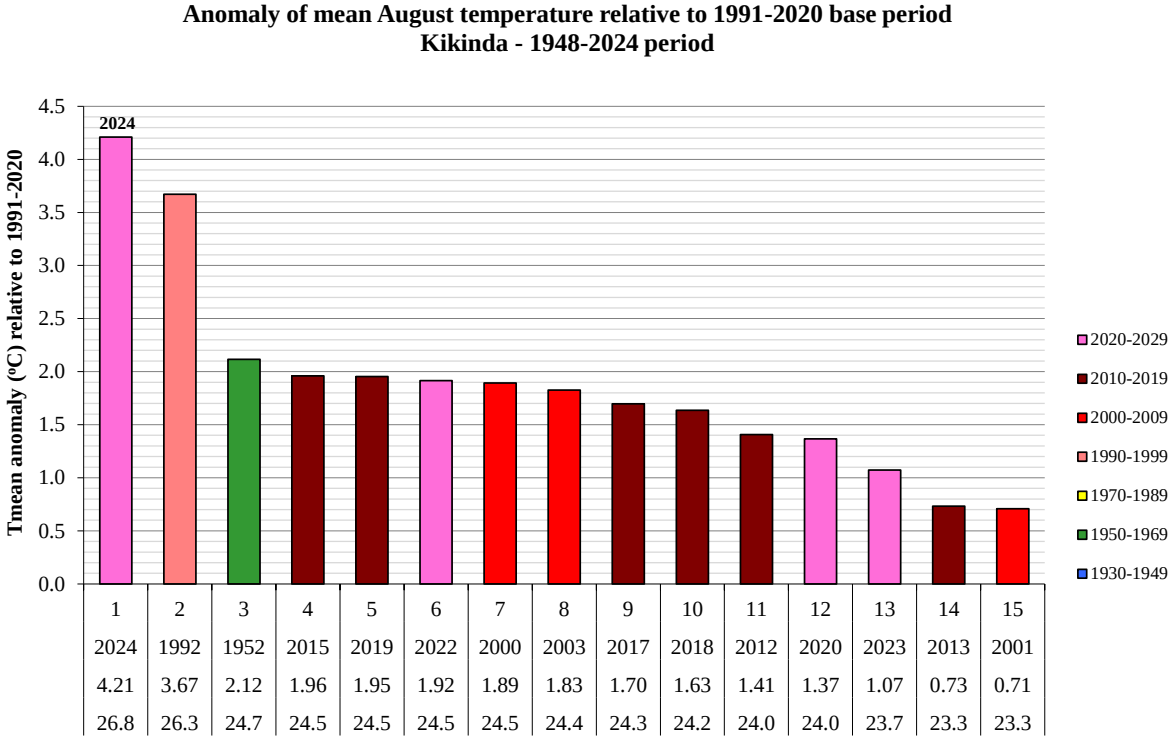
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2024	1992	2003	1952	2012	2022	2000	2018	2015	2023	1946	2017	2019	2020	1943
4.62	2.77	2.50	2.28	2.03	1.91	1.82	1.52	1.44	1.32	1.25	1.24	1.11	0.99	0.95
26.7	24.8	24.5	24.3	24.1	24.0	23.9	23.6	23.5	23.4	23.3	23.3	23.2	23.0	23.0

Appendix 2. Ranking of the warmest Augusts in Sombor



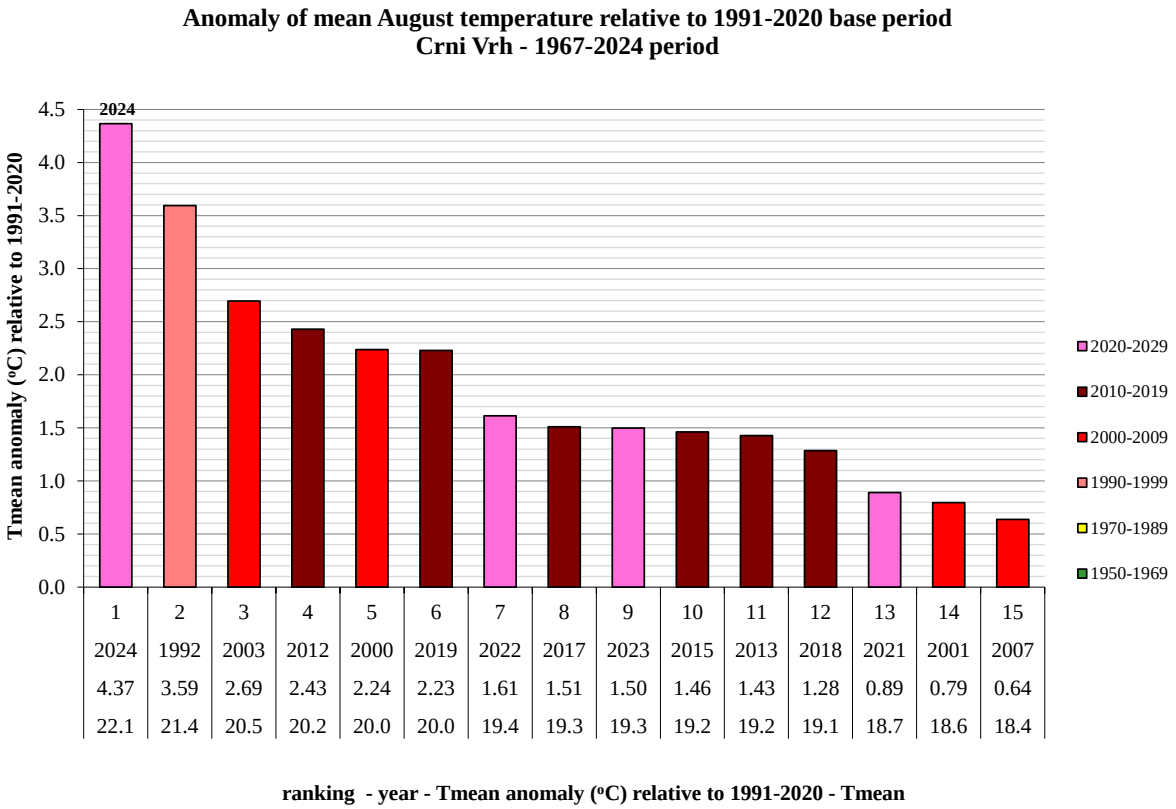
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2024	1992	2012	2019	2017	2015	2000	1952	2003	1946	2018	2013	2022	2020	2011
4.61	3.04	2.48	2.40	2.33	2.22	1.95	1.91	1.80	1.71	1.70	1.55	1.23	1.12	0.92
28.4	26.8	26.3	26.2	26.1	26.0	25.7	25.7	25.6	25.5	25.5	25.3	25.0	24.9	24.7

Appendix 3. Ranking of the warmest Augusts in Belgrade

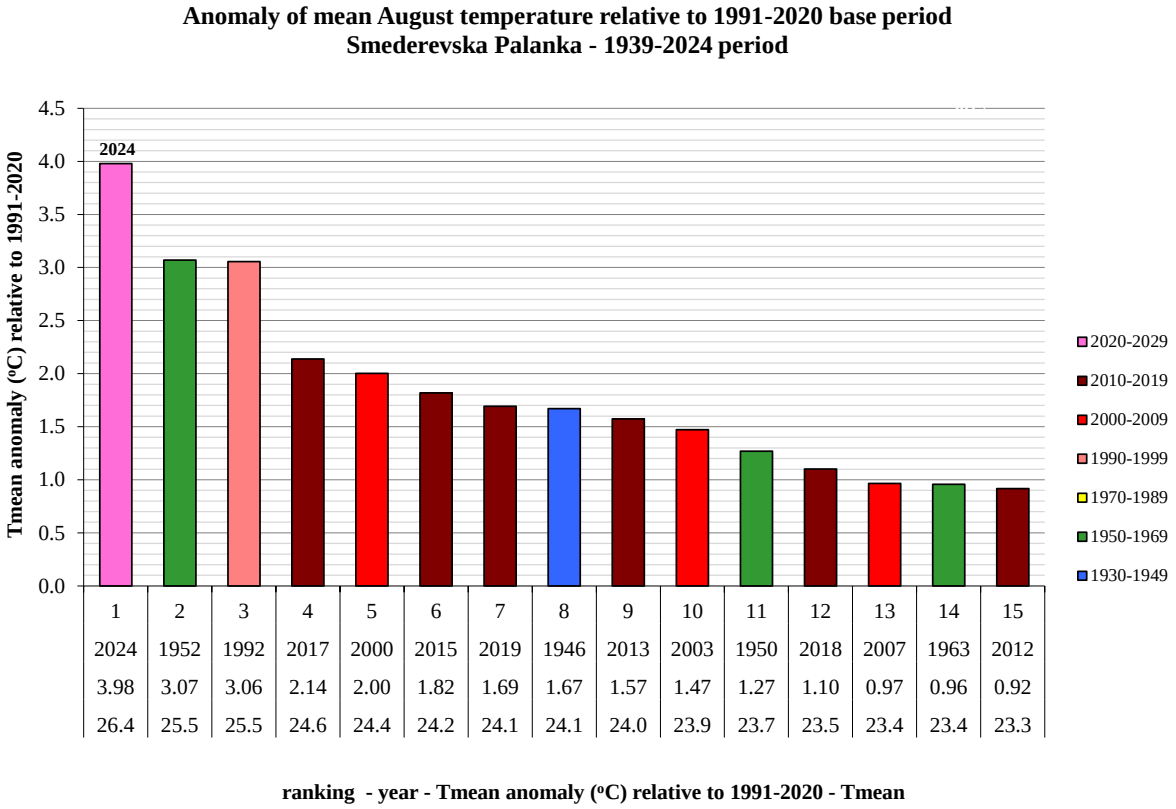


1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2024	1992	1952	2015	2019	2022	2000	2003	2017	2018	2012	2020	2023	2013	2001
4.21	3.67	2.12	1.96	1.95	1.92	1.89	1.83	1.70	1.63	1.41	1.37	1.07	0.73	0.71
26.8	26.3	24.7	24.5	24.5	24.5	24.5	24.4	24.3	24.2	24.0	24.0	23.7	23.3	23.3

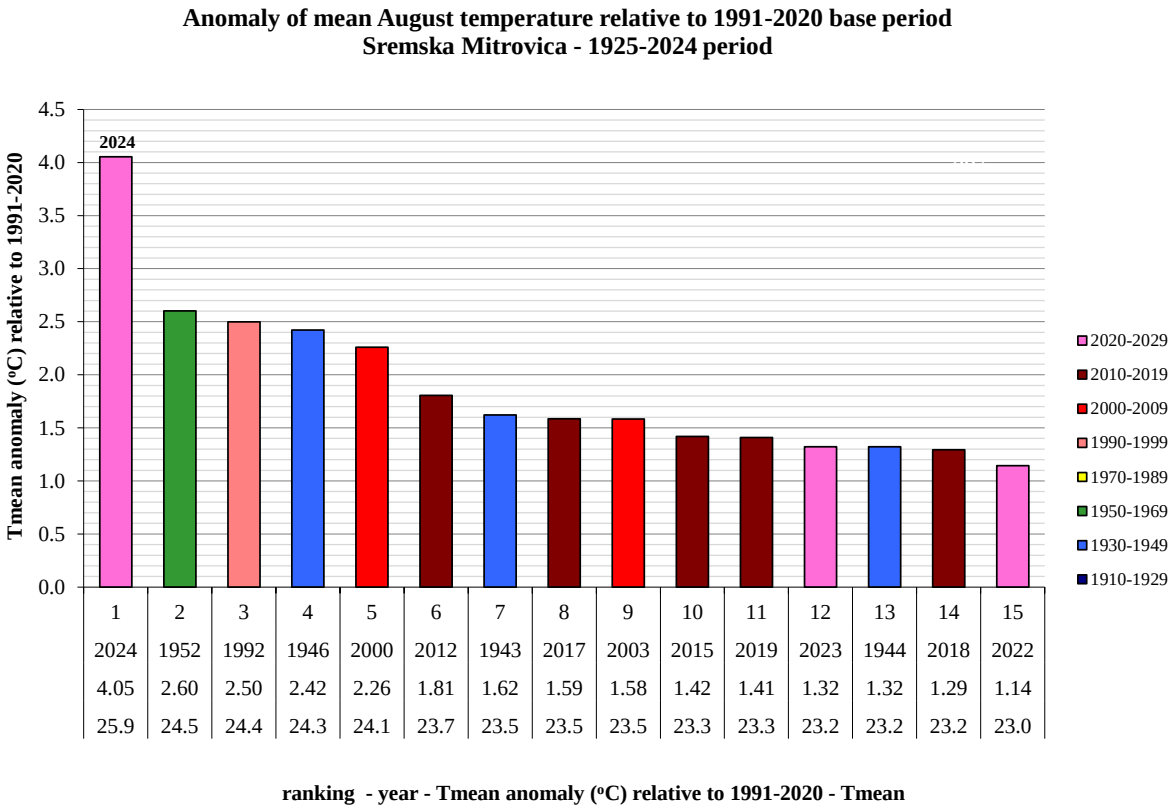
Appendix 4. Ranking of the warmest Augusts in Kikinda



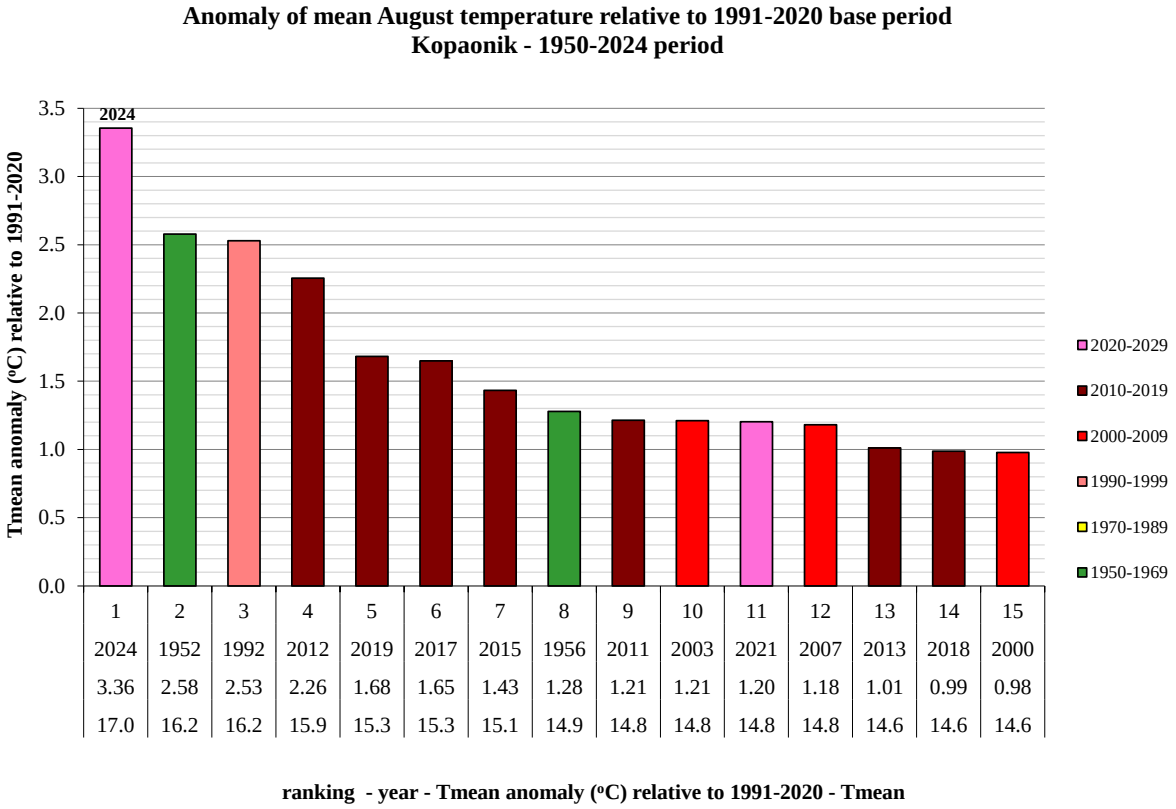
Appendix 5. Ranking of the warmest Augusts at Crni Vrh



Appendix 6. Ranking of the warmest Augusts in Smederevska Palanka

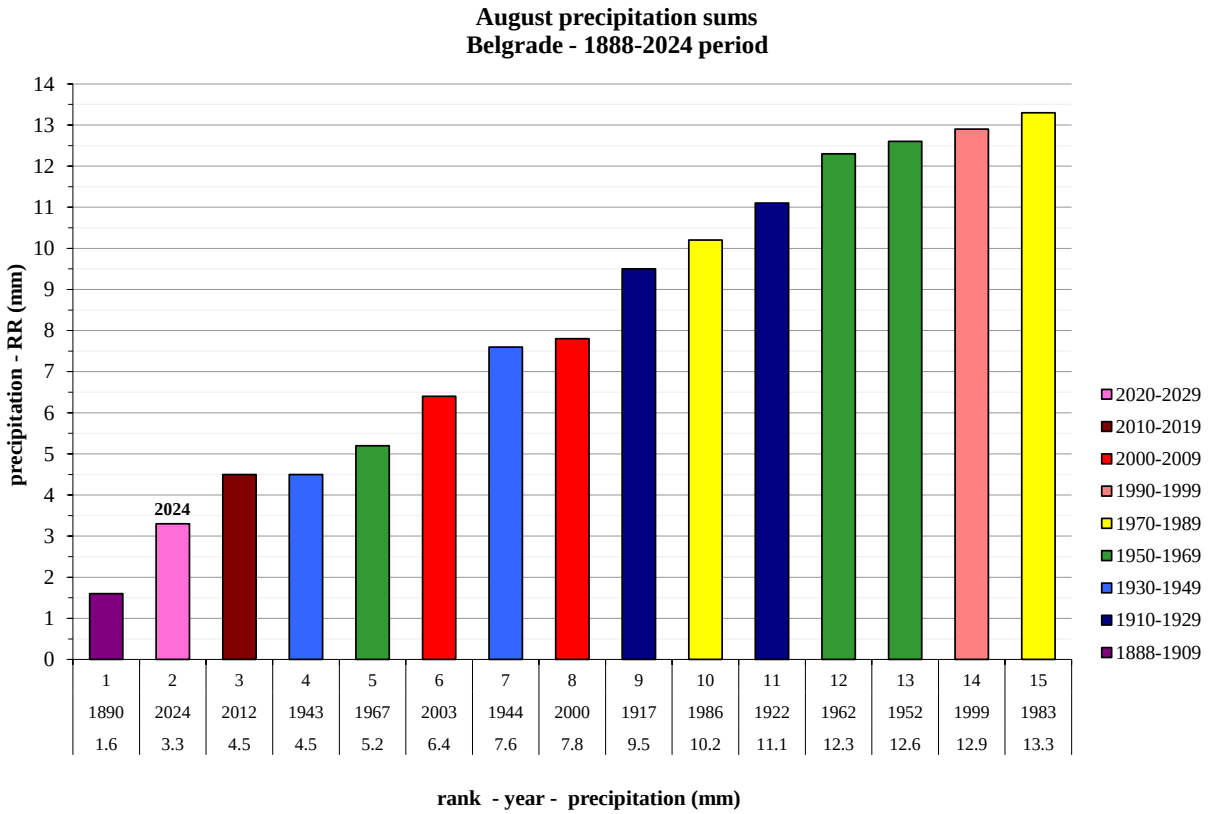


Appendix 7. Ranking of the warmest Augusts in Sremska Mitrovica



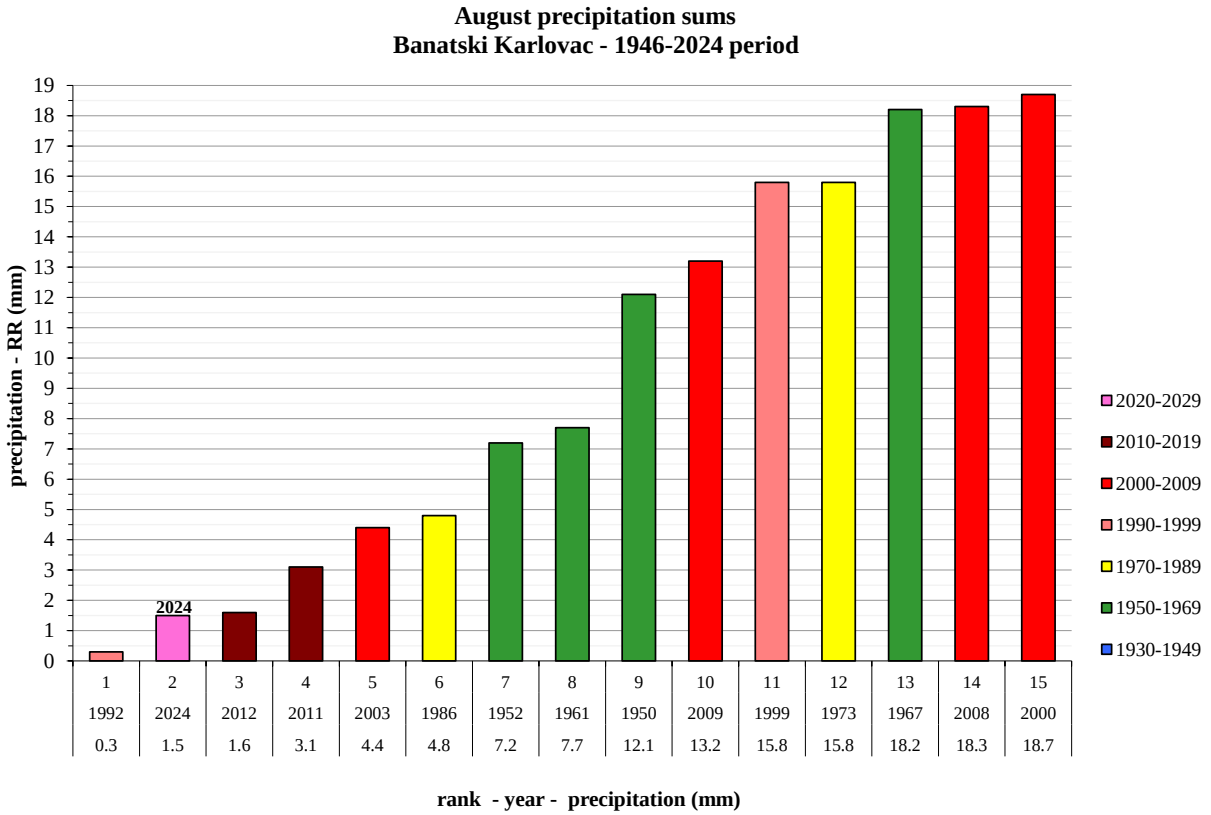
Appendix 8. Ranking of the warmest Augusts at Kopaonik

Ranking of the driest Augusts



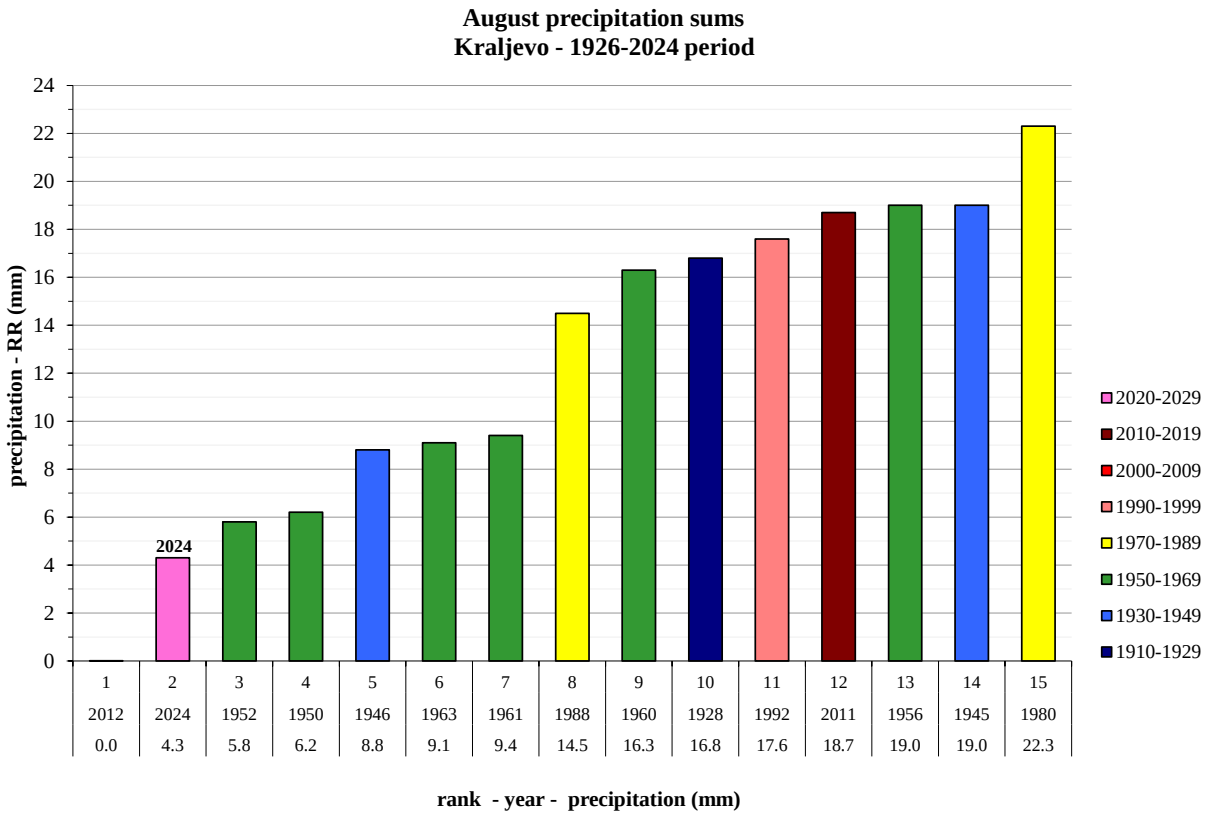
rank	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
year	1890	2024	2012	1943	1967	2003	1944	2000	1917	1986	1922	1962	1952	1999	1983
precipitation (mm)	1.6	3.3	4.5	4.5	5.2	6.4	7.6	7.8	9.5	10.2	11.1	12.3	12.6	12.9	13.3

Appendix 9. Ranking of the driest Augusts in Belgrade

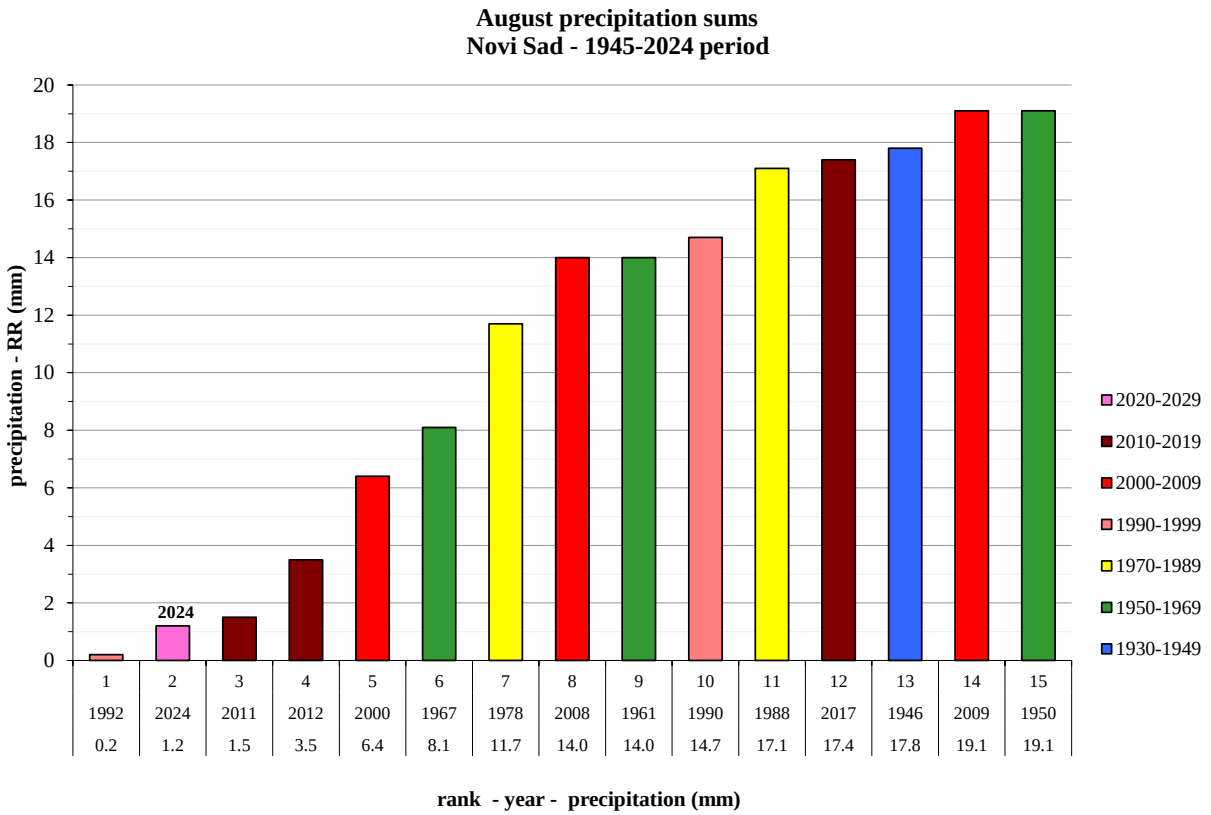


rank	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
year	1992	2024	2012	2011	2003	1986	1952	1961	1950	2009	1999	1973	1967	2008	2000
precipitation (mm)	0.3	1.5	1.6	3.1	4.4	4.8	7.2	7.7	12.1	13.2	15.8	15.8	18.2	18.3	18.7

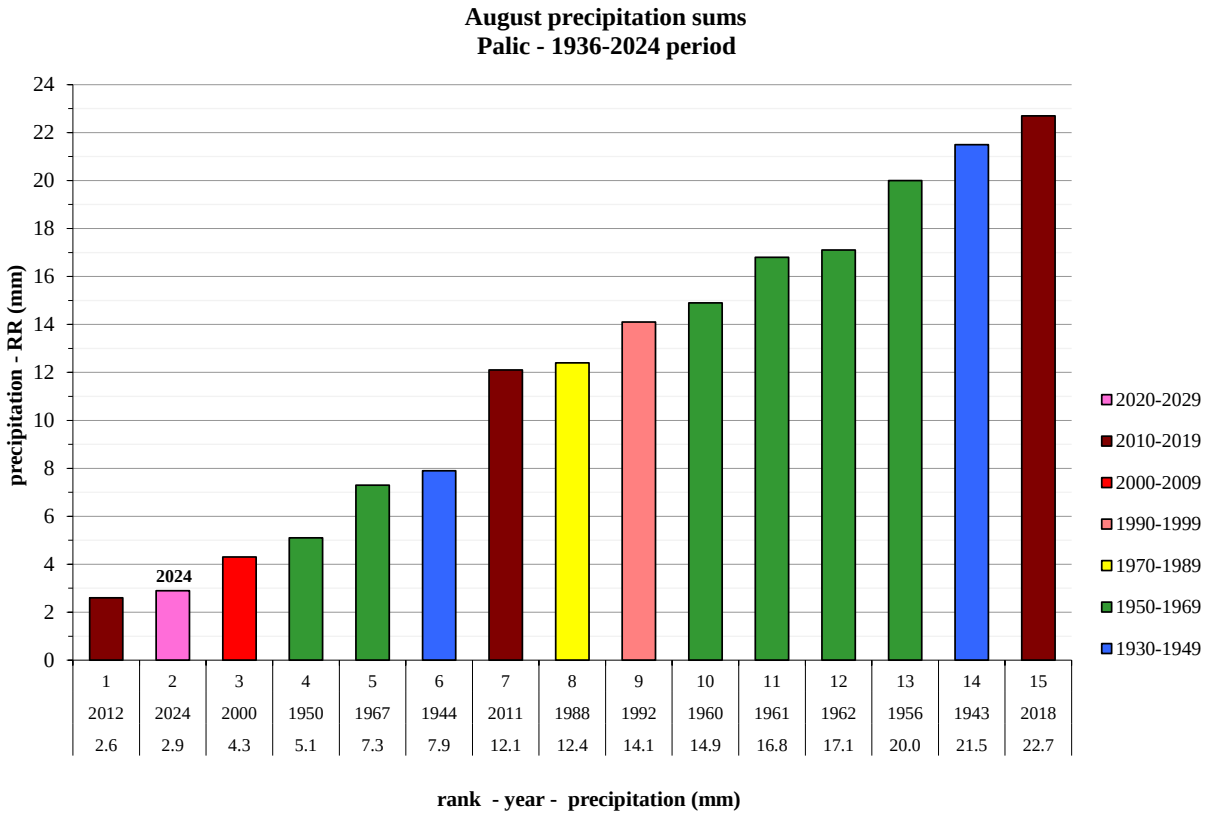
Appendix 10. Ranking of the driest Augusts in Banatski Karlovac



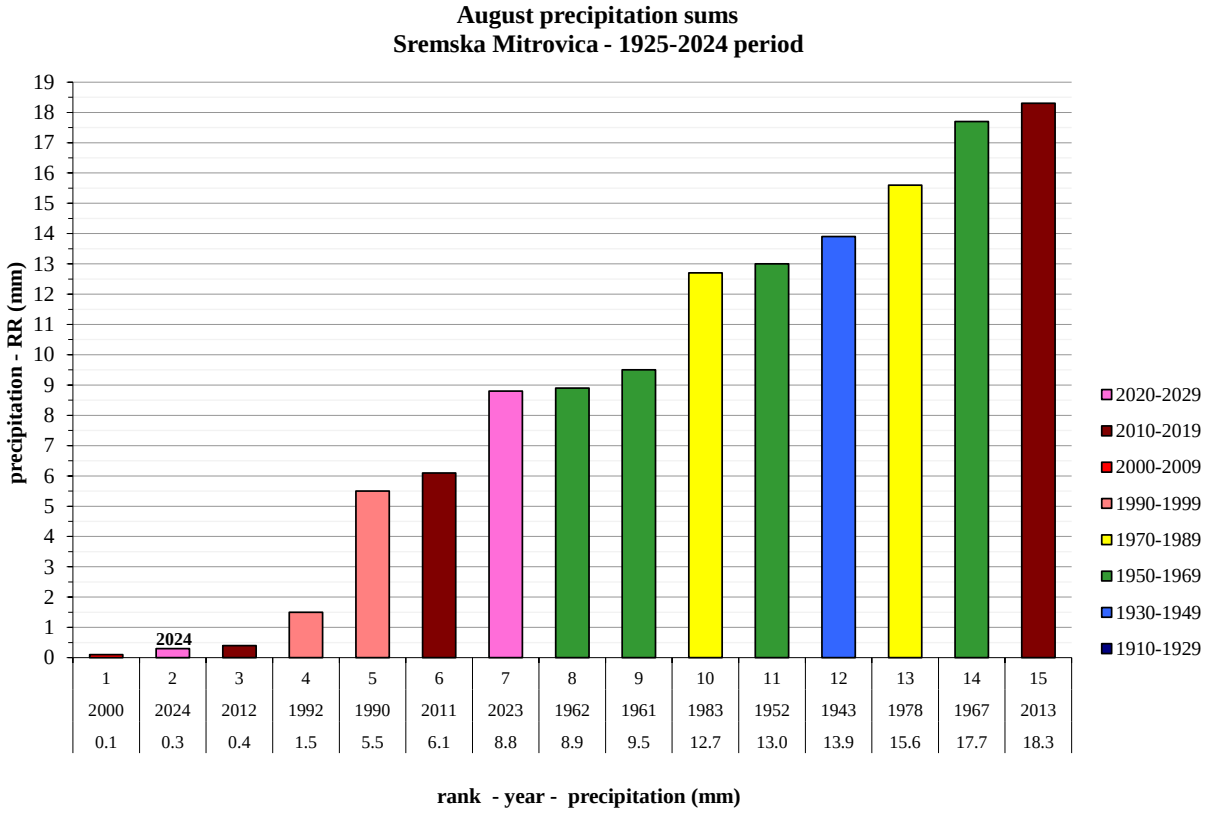
Appendix 11. Ranking of the driest Augusts in Kraljevo



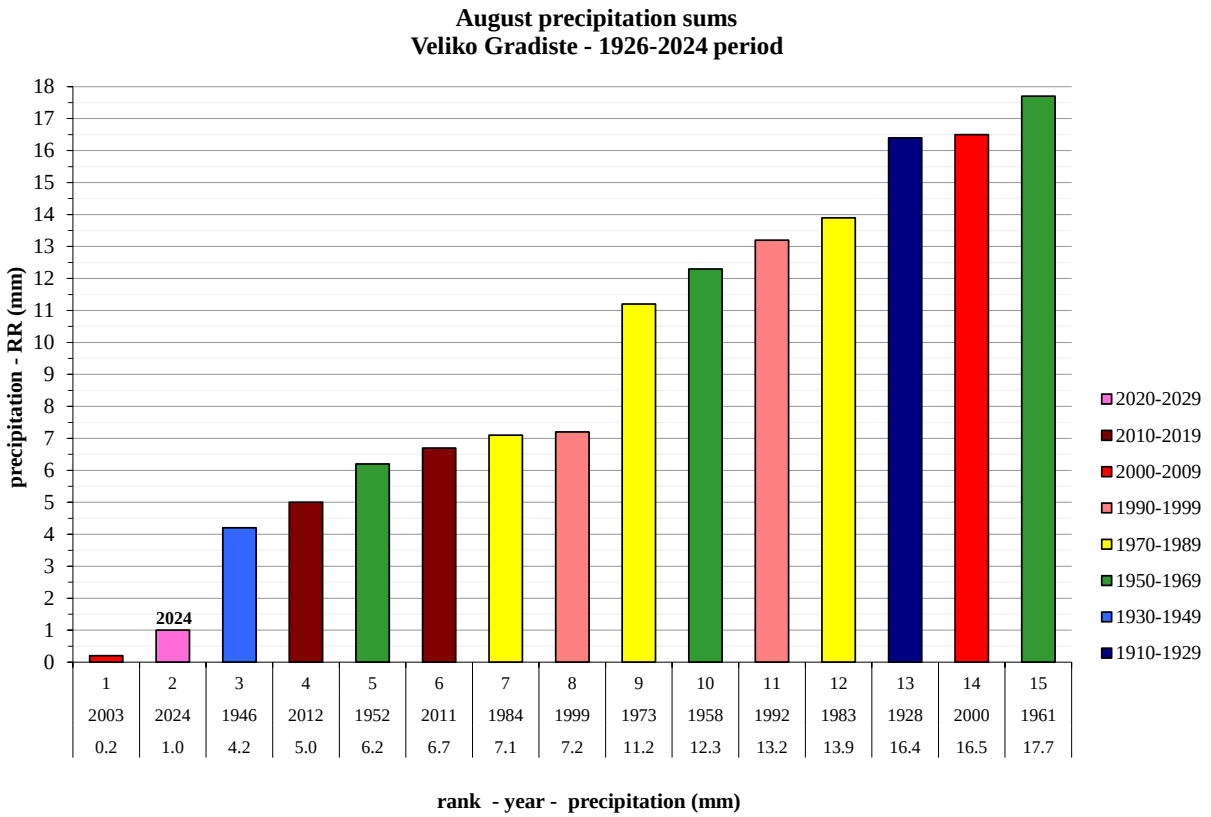
Appendix 12. Ranking of the driest Augusts in Novi Sad



Appendix 13. Ranking of the driest Augusts in Palic



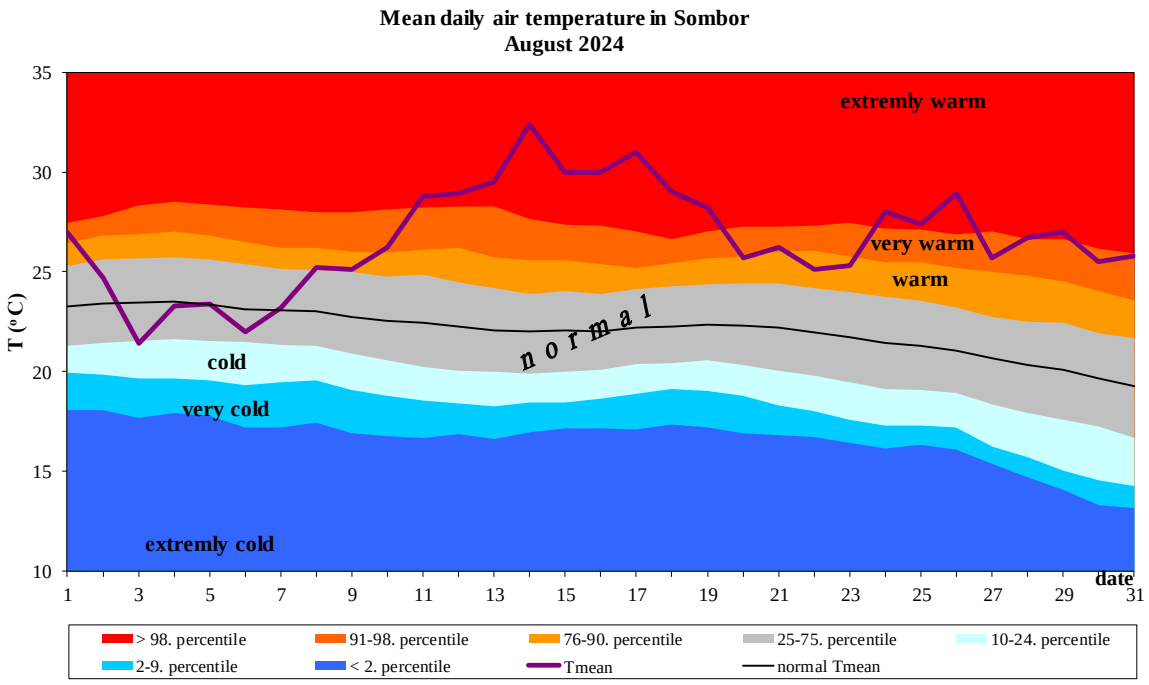
Appendix 14. Ranking of the driest Augusts in Sremska Mitrovica



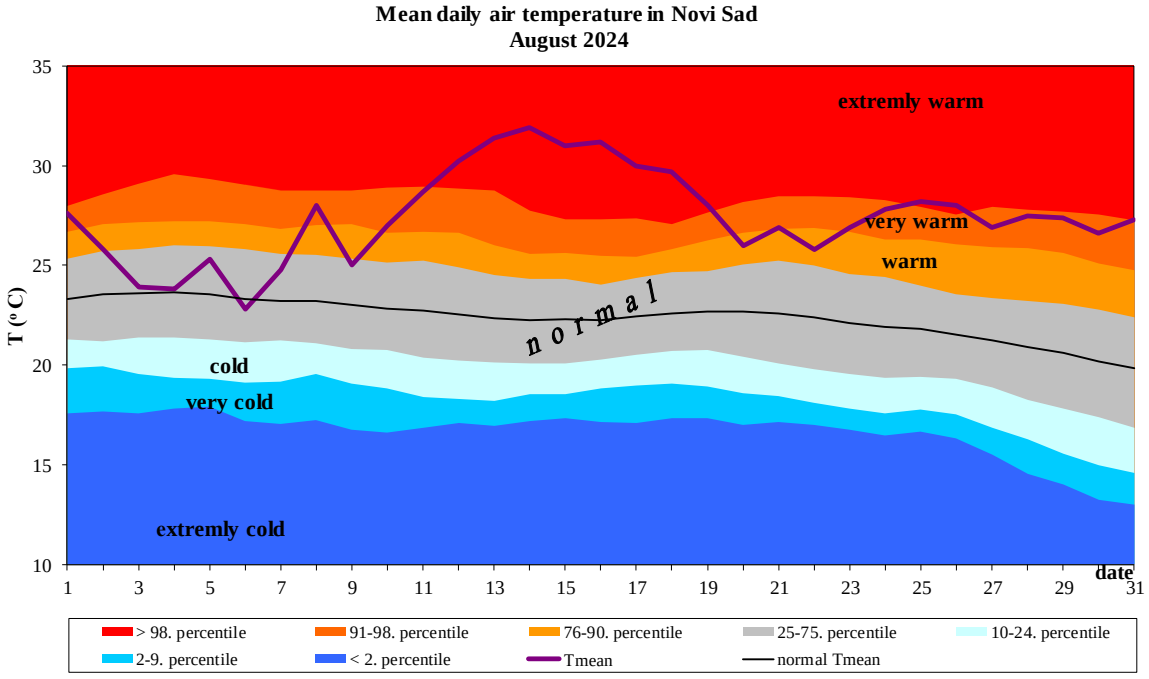
rank	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
year	2003	2024	1946	2012	1952	2011	1984	1999	1973	1958	1992	1983	1928	2000	1961
precipitation (mm)	0.2	1.0	4.2	5.0	6.2	6.7	7.1	7.2	11.2	12.3	13.2	13.9	16.4	16.5	17.7

Appendix 15. Ranking of the driest Augusts in Veliko Gradiste

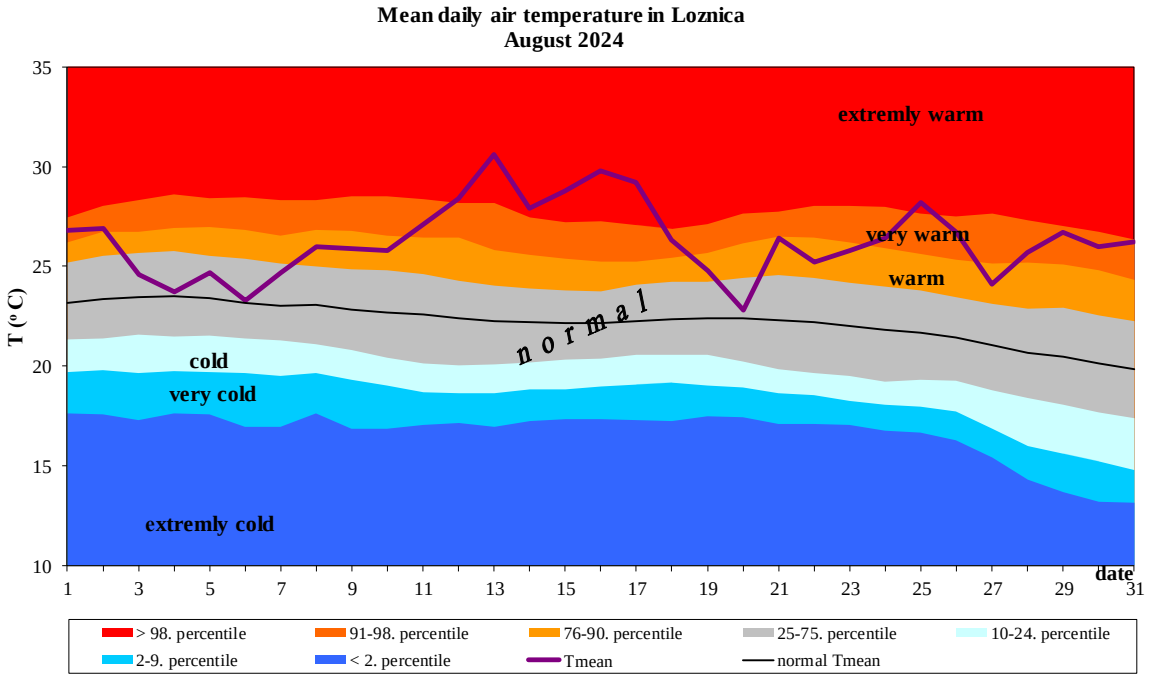
Mean air temperature



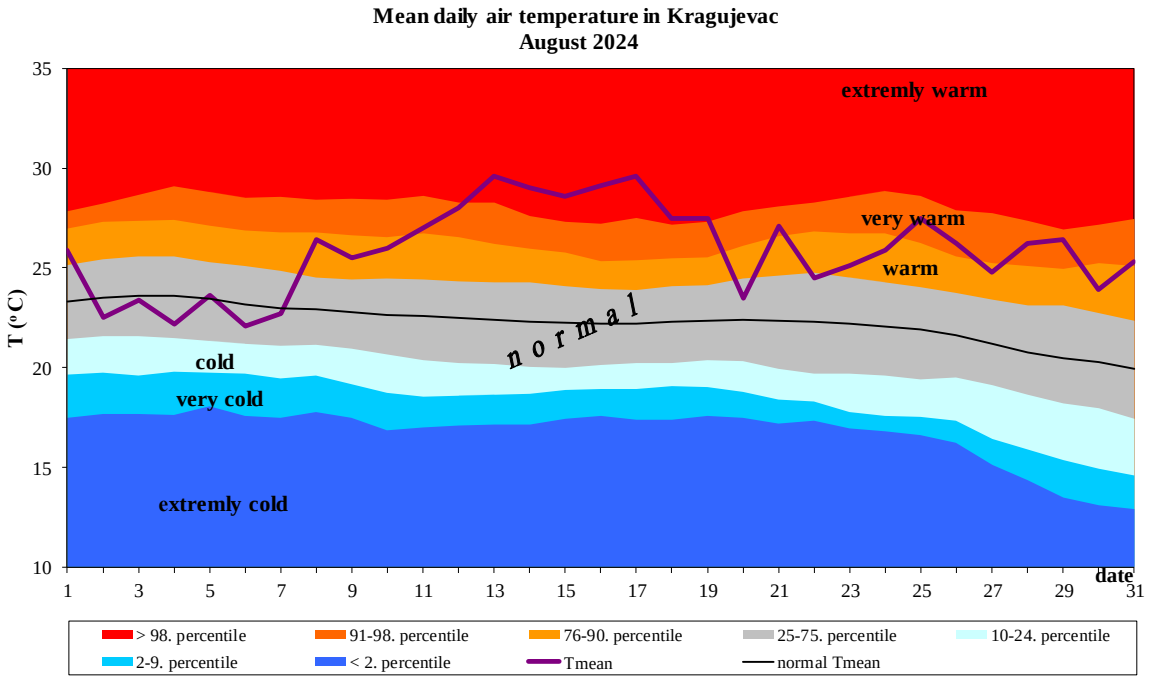
Appendix 16. Daily course of the mean daily air temperature and accompanying percentile for Sombor



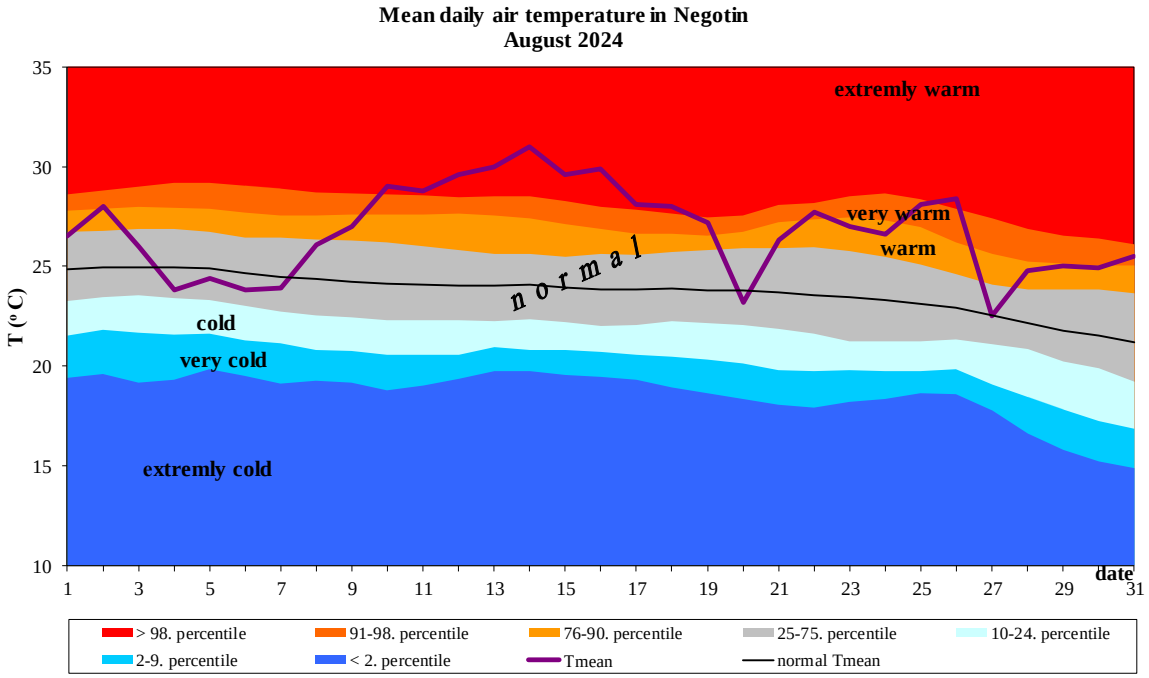
Appendix 17. Daily course of the mean daily air temperature and accompanying percentile for Novi Sad



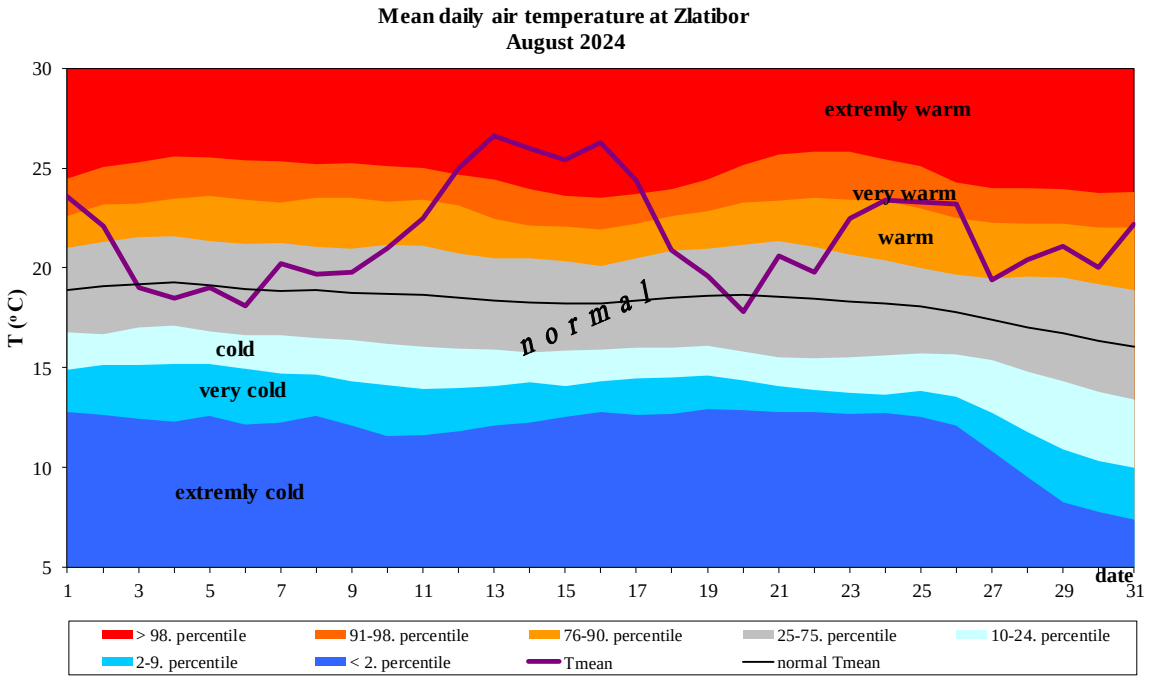
Appendix 18. Daily course of the mean daily air temperature and accompanying percentile for Loznica



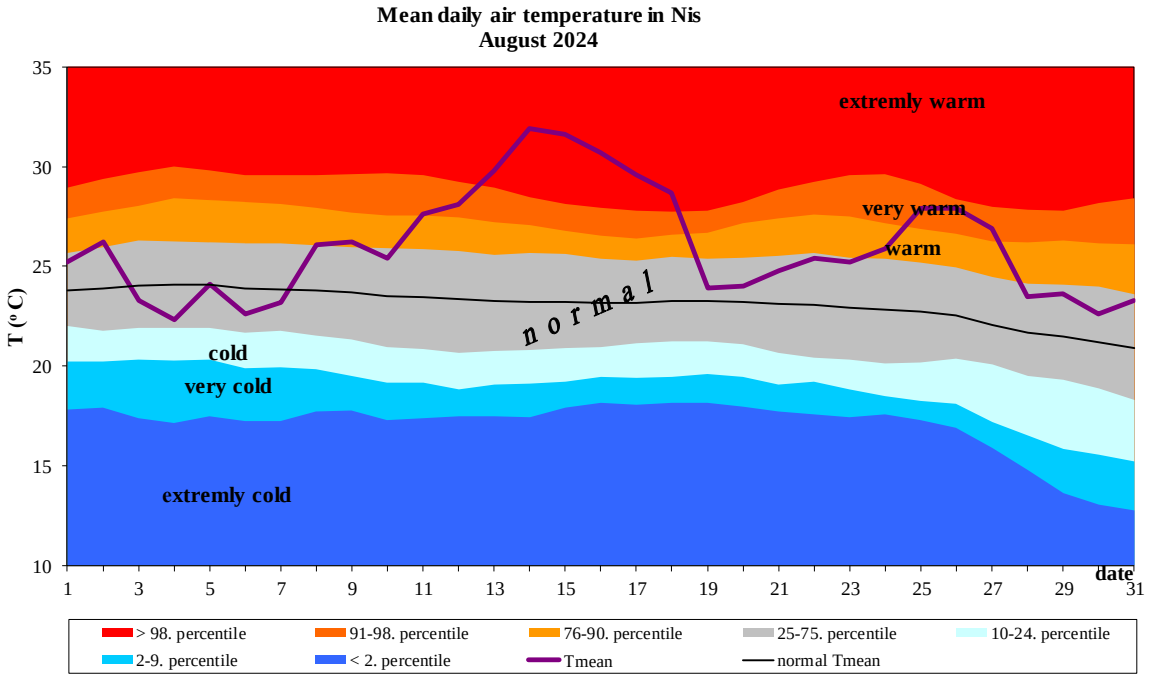
Appendix 19. Daily course of the mean daily air temperature and accompanying percentile for Kragujevac



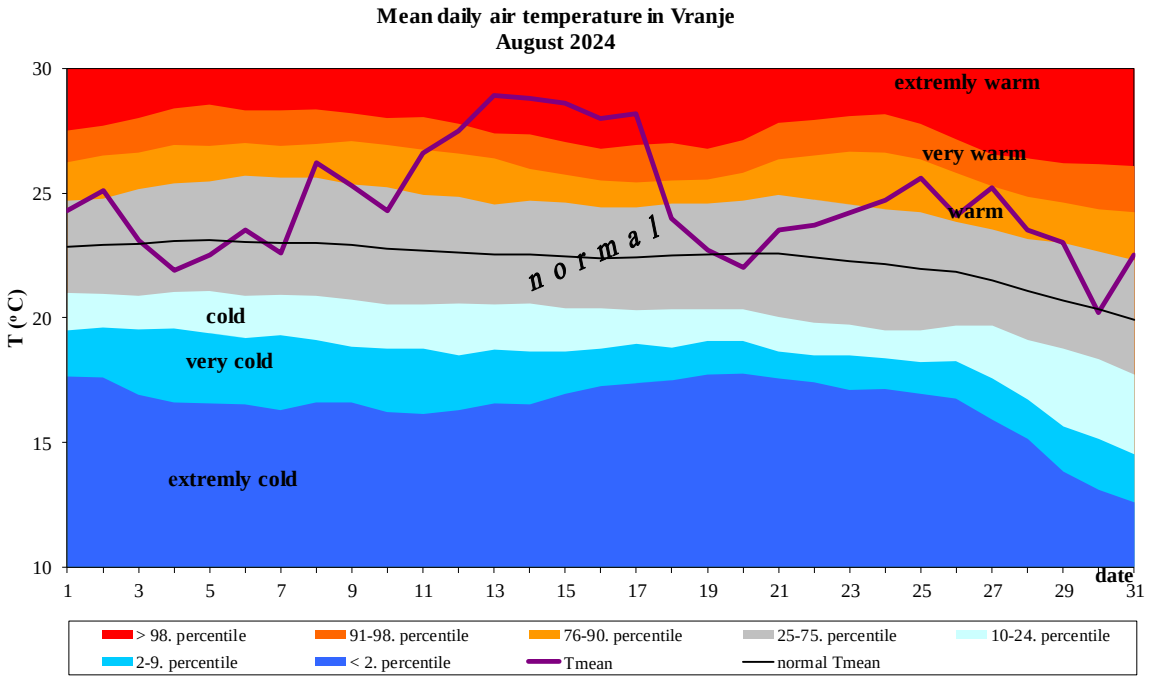
Appendix 20. Daily course of the mean daily air temperature and accompanying percentile for Negotin



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

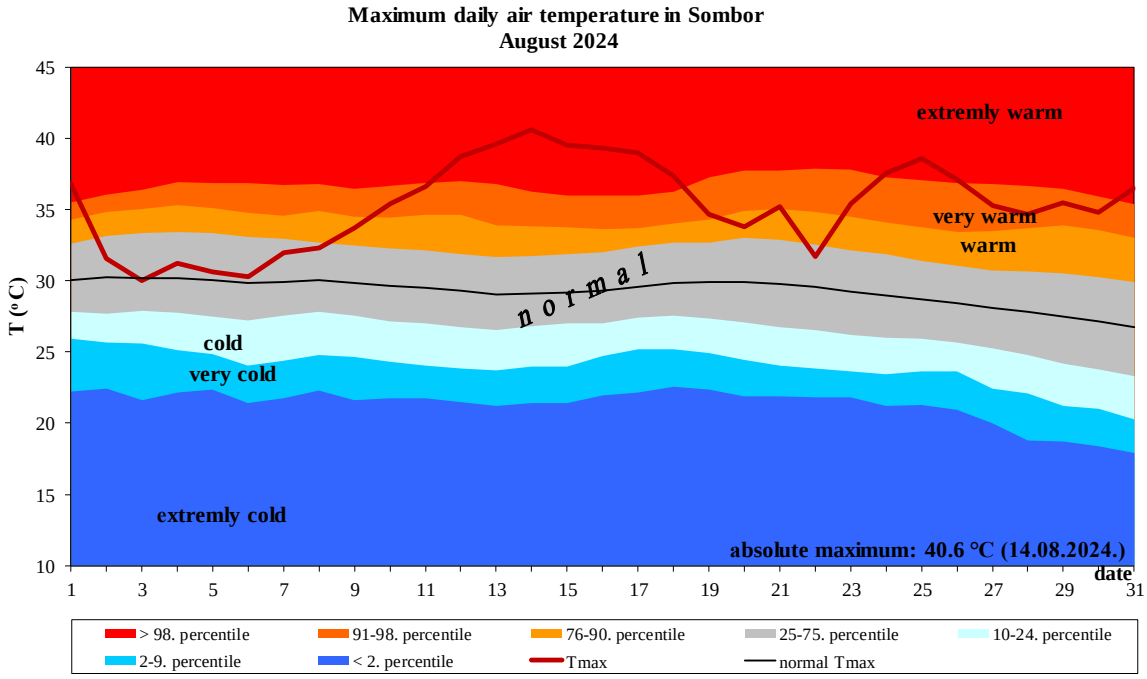


Appendix 22. Daily course of the mean daily air temperature and accompanying percentile for Nis

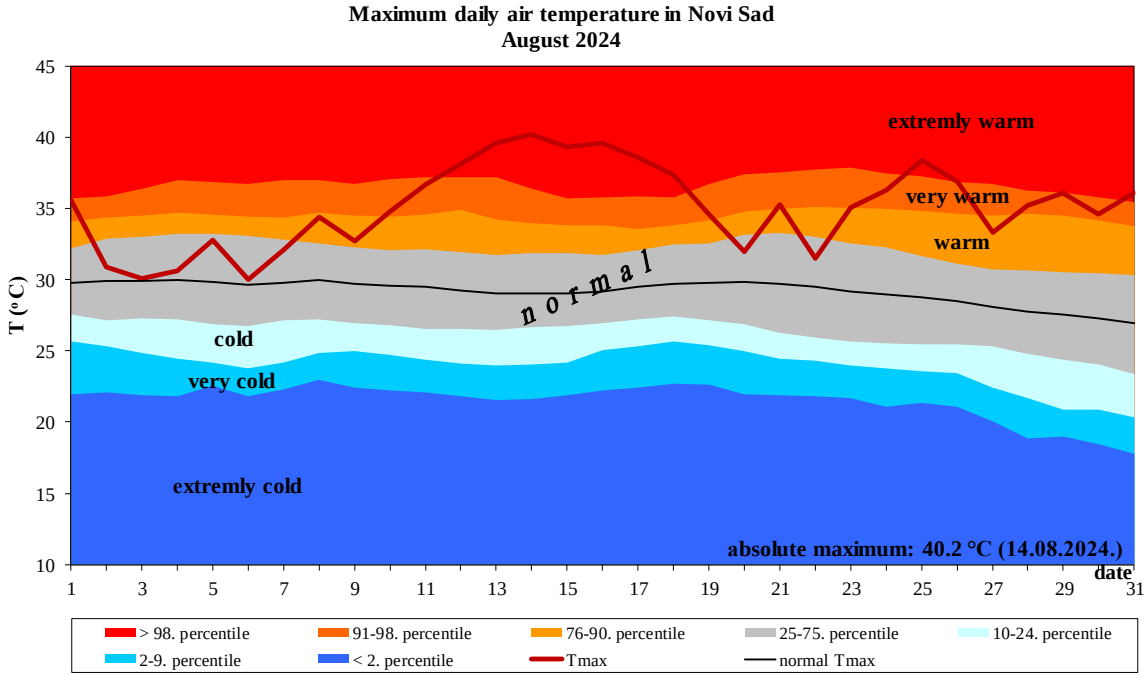


Appendix 23. Daily course of the mean daily air temperature and accompanying percentile for Vranje

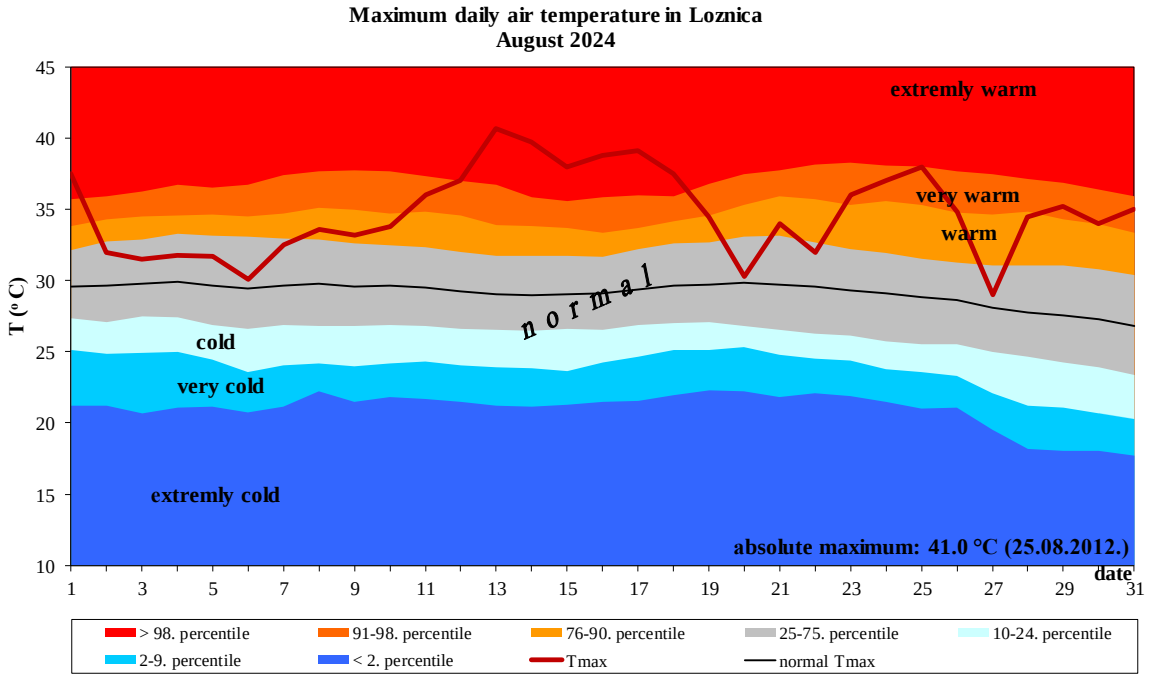
Maximum air temperature



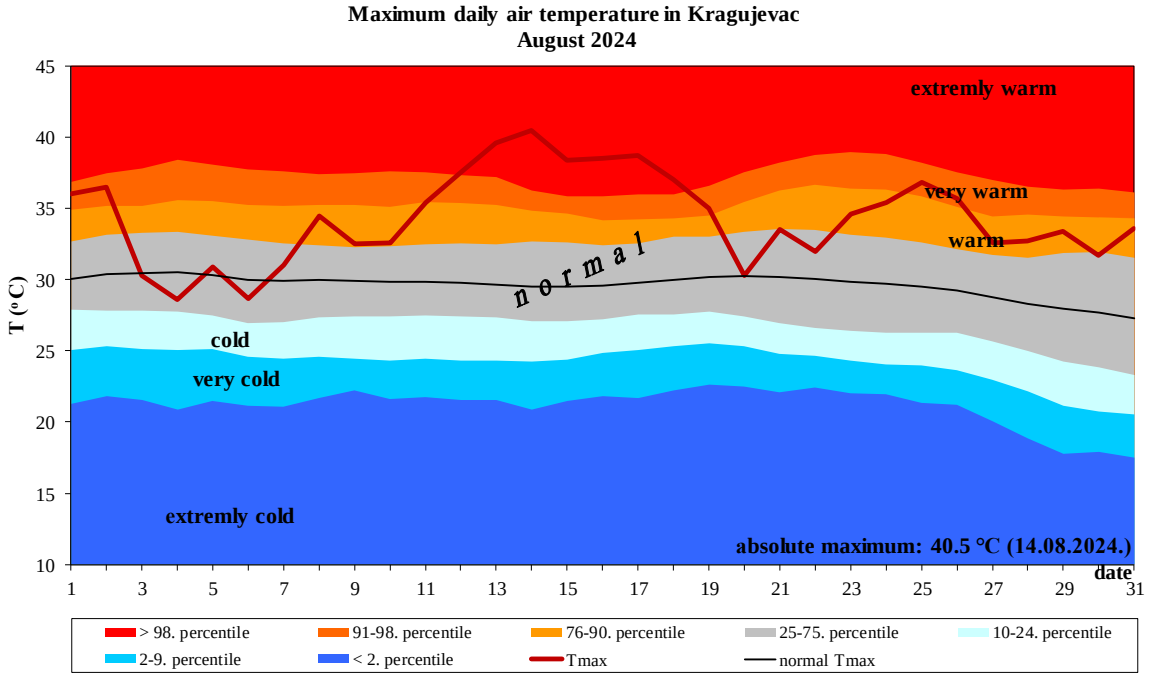
Appendix 24. Daily course of the maximum daily air temeperature and the accompanying percentile for Sombor



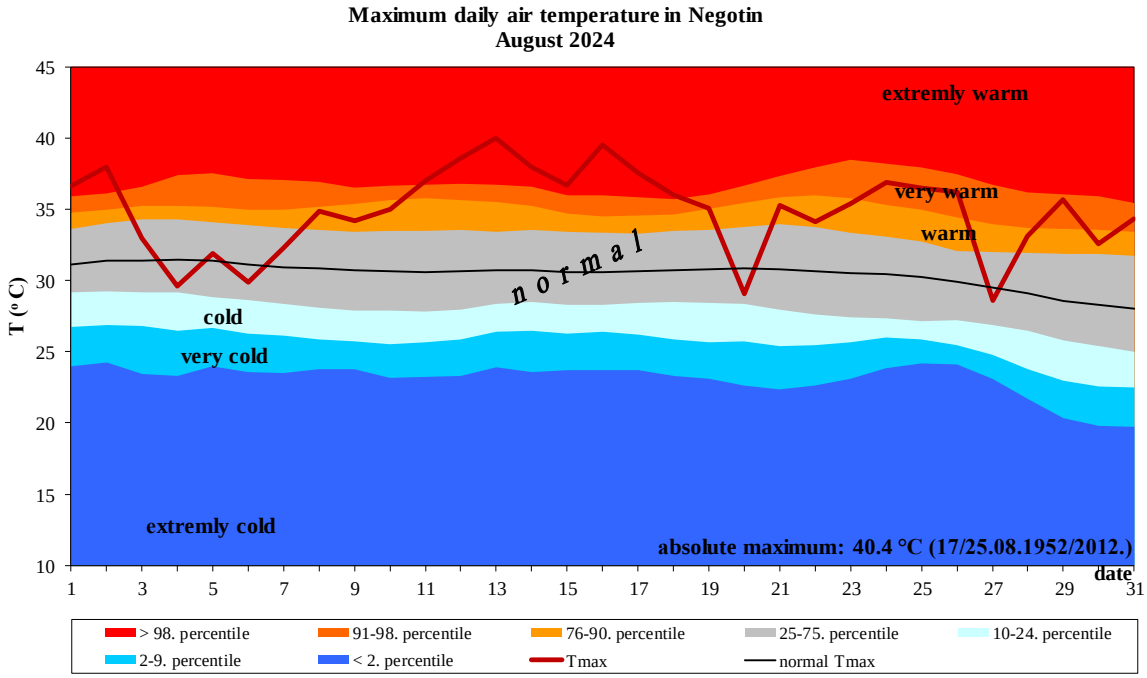
Appendix 25. Daily course of the maximum daily air temeperature and the accompanying percentile for Novi Sad



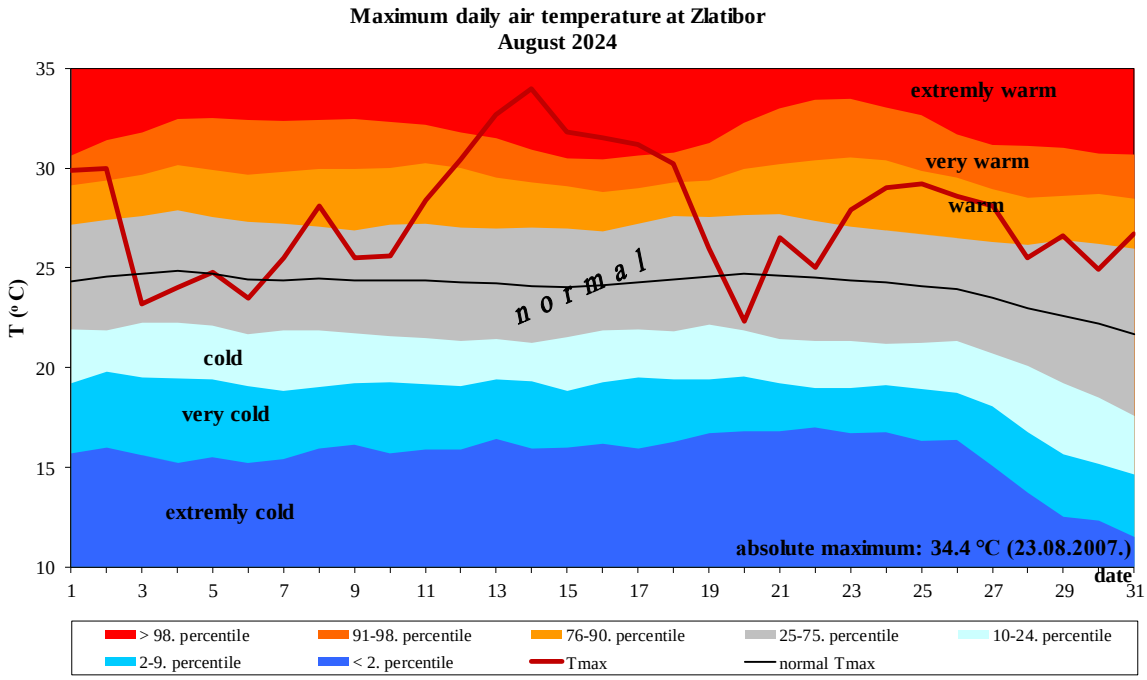
Appendix 26. Daily course of the maximum daily air temeperature and the accompanying percentile for Loznica



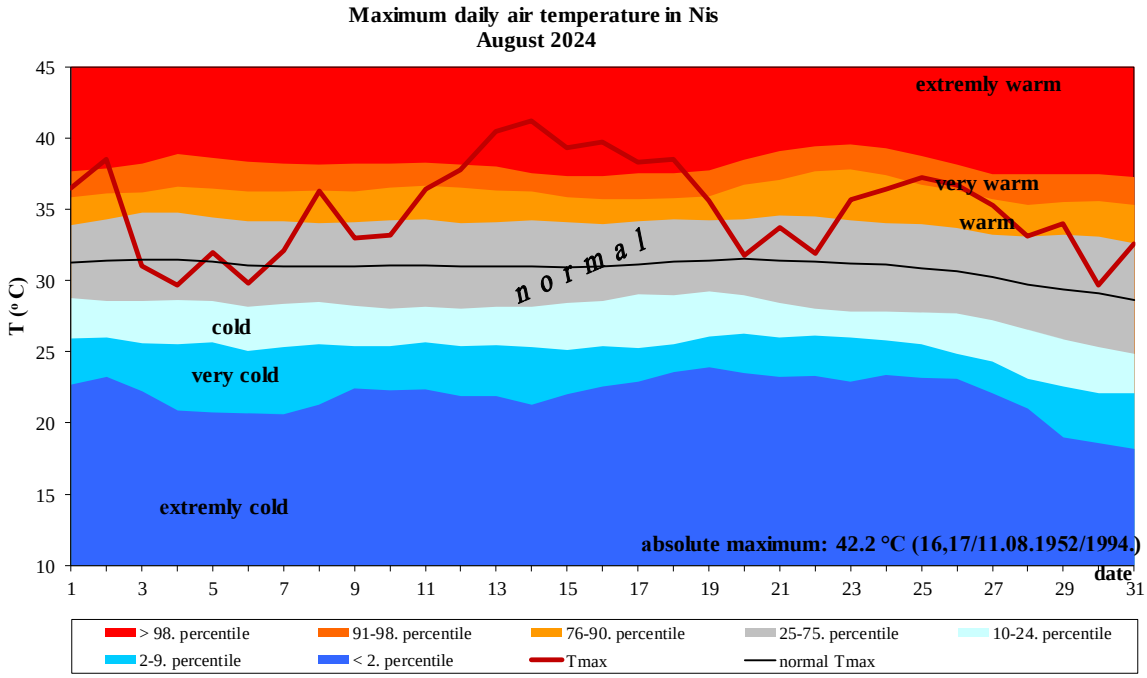
Appendix 27. Daily course of the maximum daily air temeperature and the accompanying percentile for Kragujevac



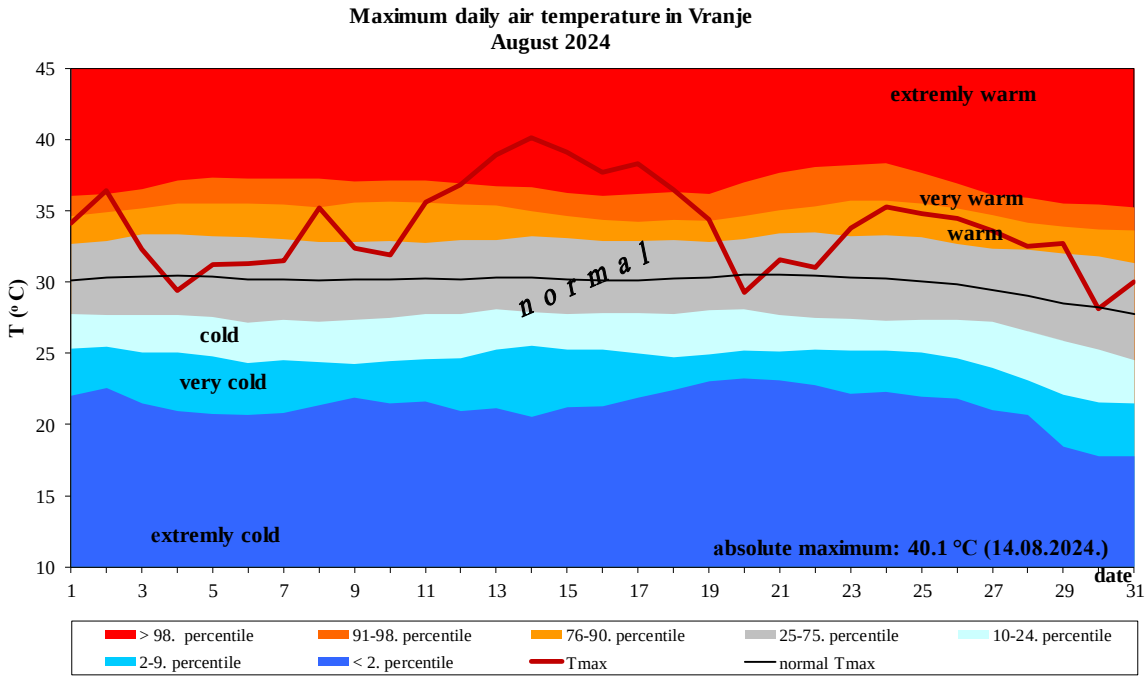
Appendix 28. Daily course of the maximum daily air temeperature and the accompanying percentile for Negotin



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

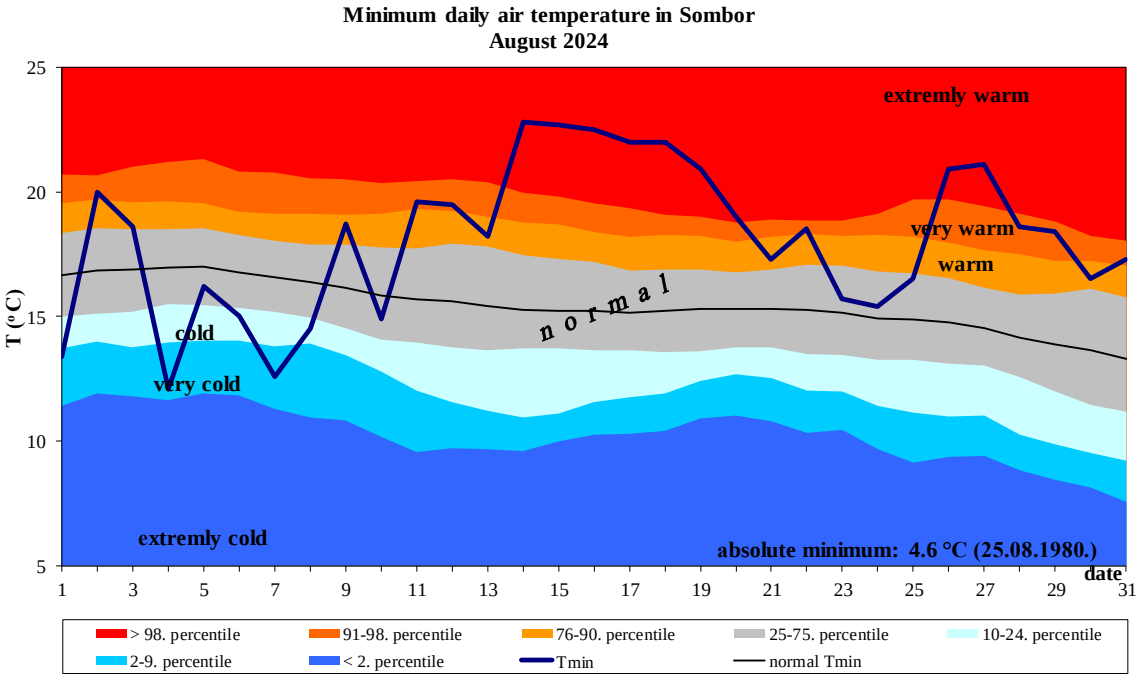


Appendix 30. Daily course of the maximum daily air temeperature and the accompanying percentile for Nis

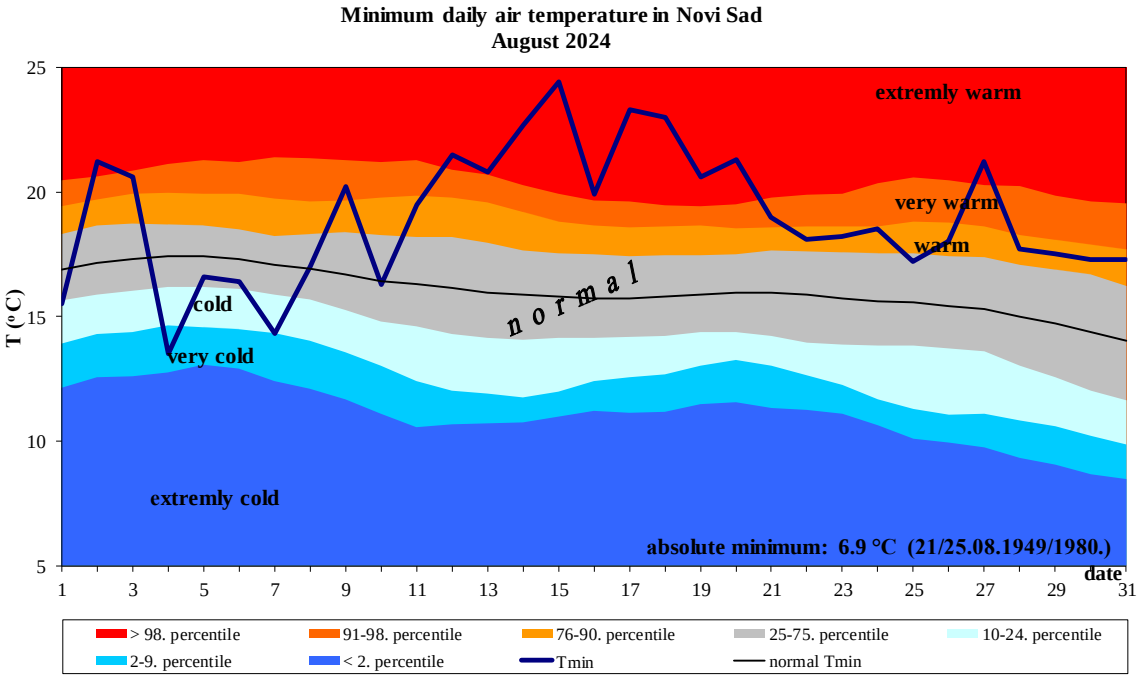


Appendix 31. Daily course of the maximum daily air temeperature and the accompanying percentile for Vranje

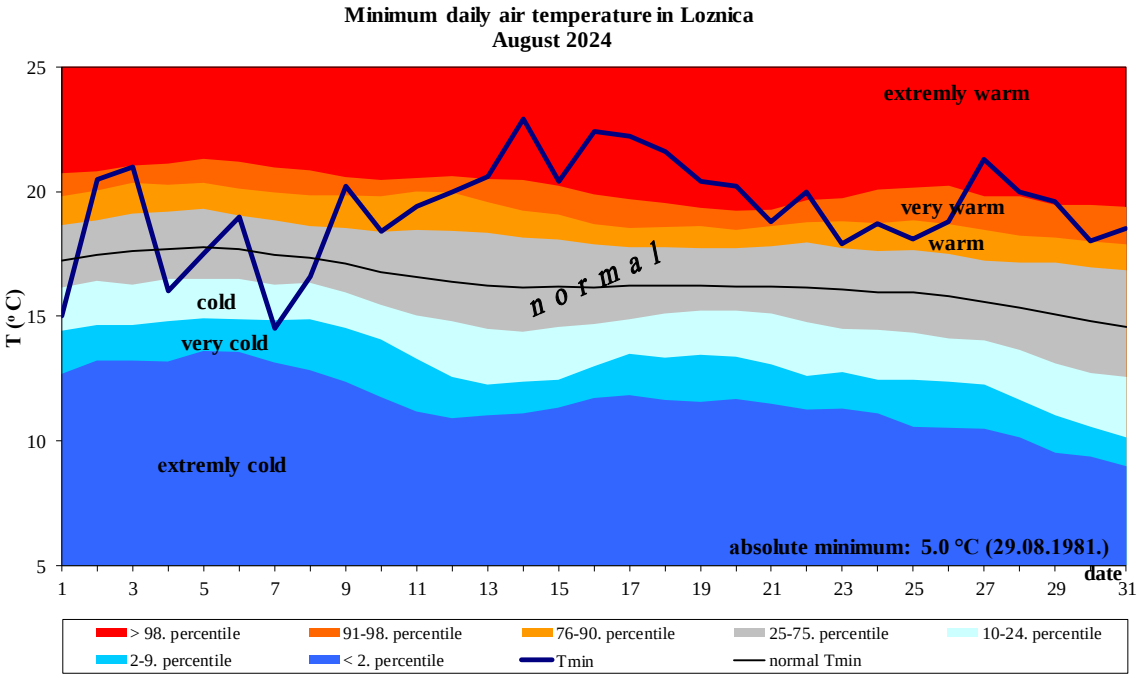
Minimum air temperature



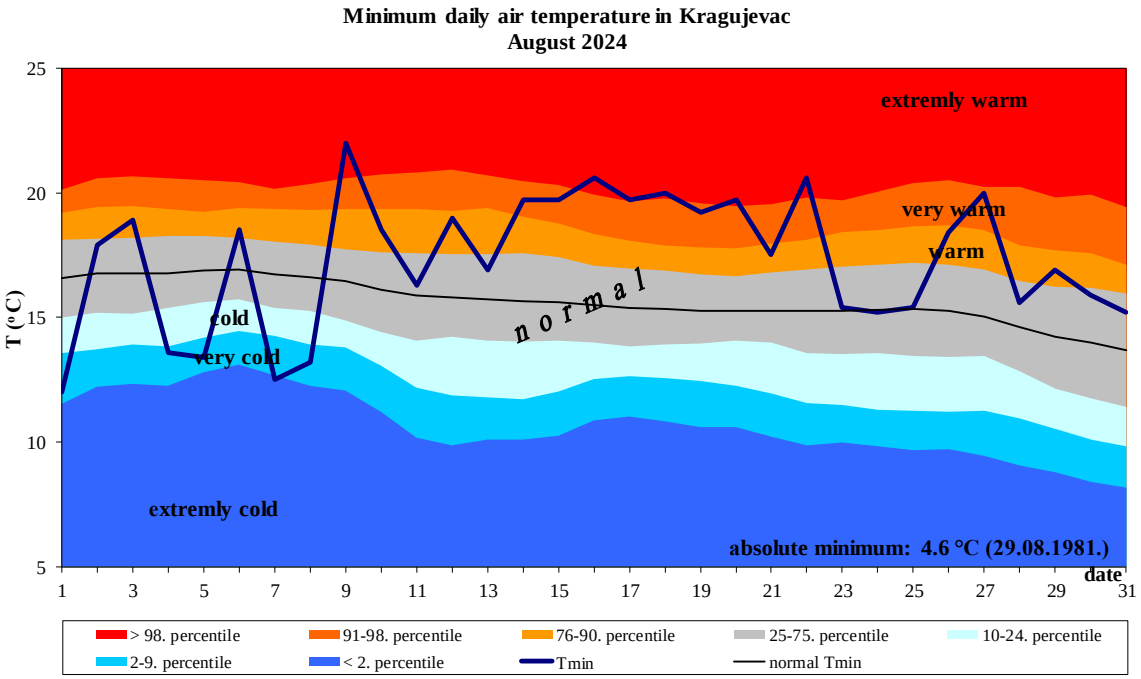
Appendix 32. Daily course of the minimum daily air temperature and the accompanying percentile for Sombor



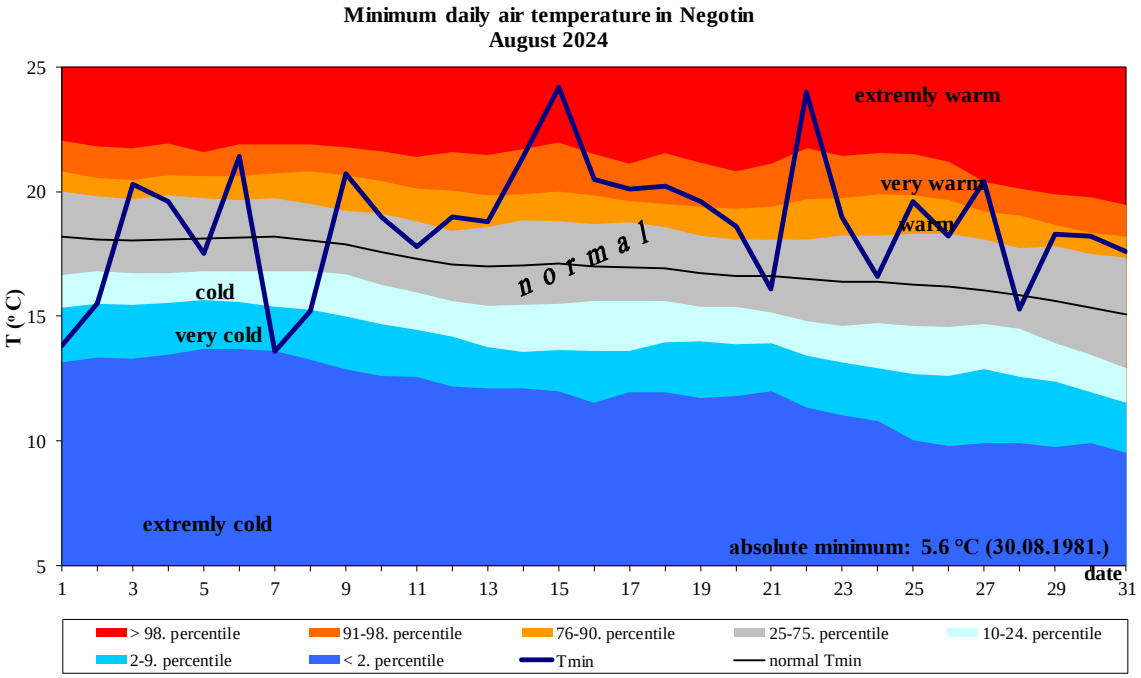
Appendix 33. Daily course of the minimum daily air temperature and the accompanying percentile for Novi Sad



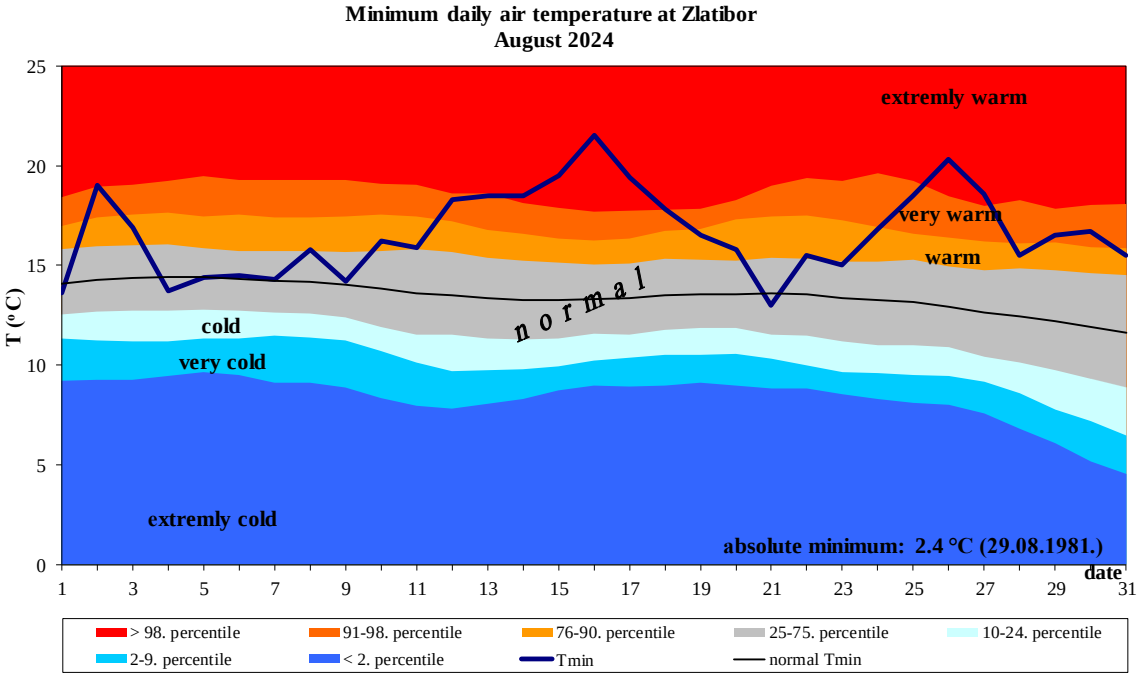
Appendix 34. Daily course of the minimum daily air temperature and the accompanying percentile for Loznica



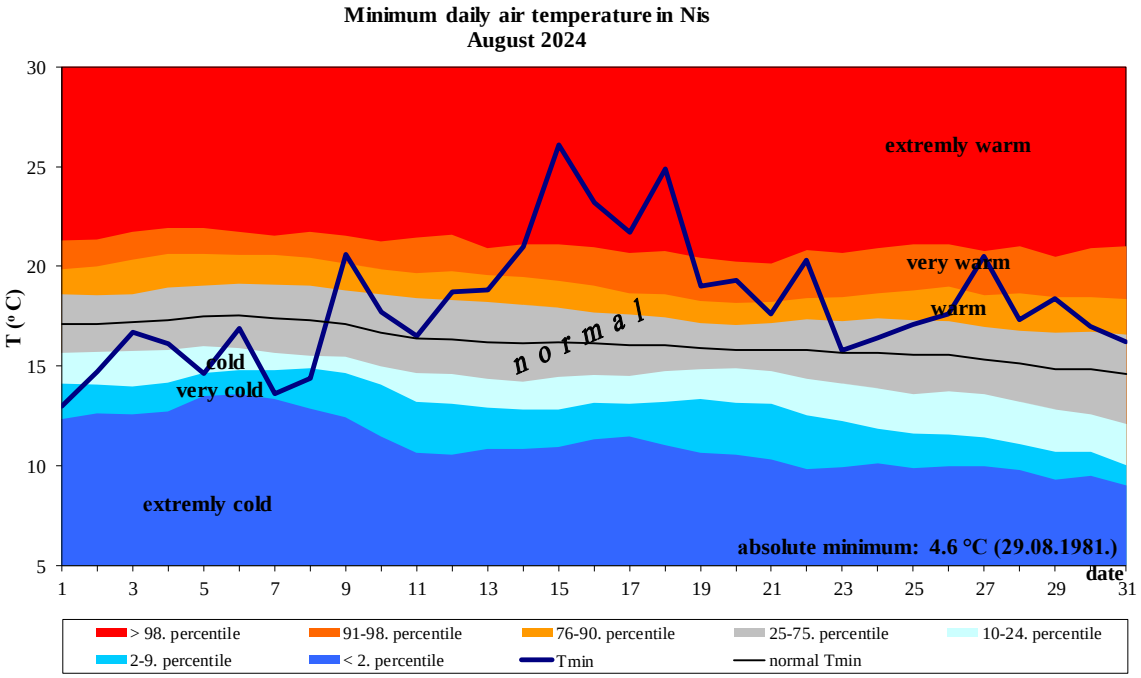
Appendix 35. Daily course of the minimum daily air temperature and the accompanying percentile for Kragujevac



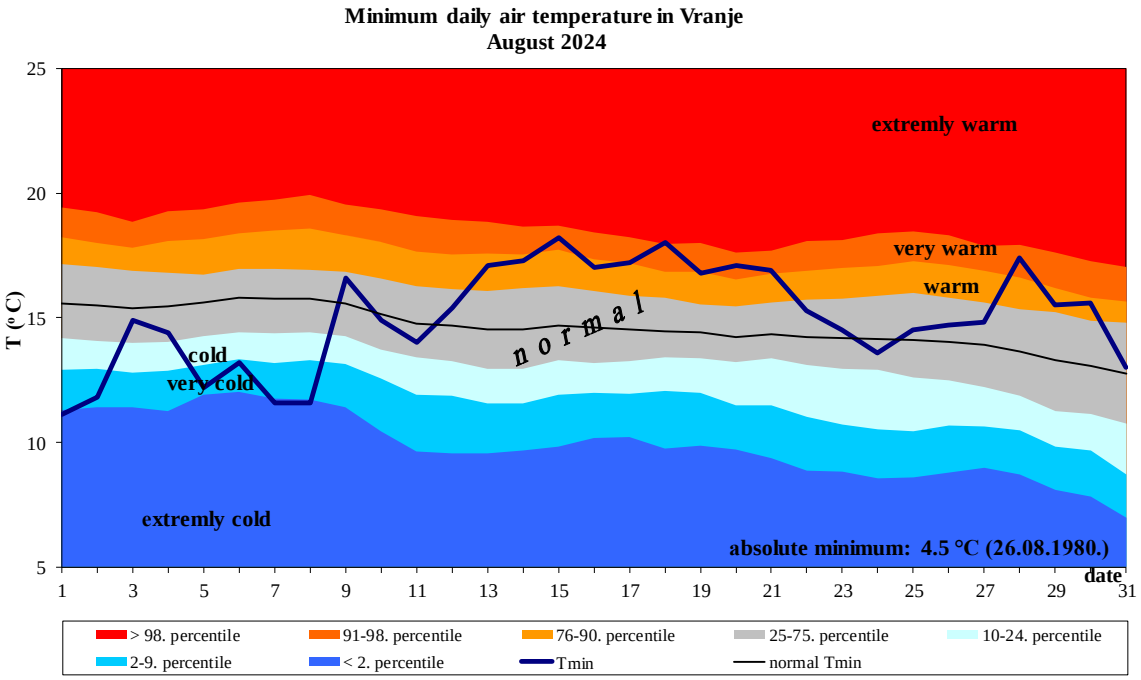
Appendix 36. Daily course of the minimum daily air temperature and the accompanying percentile for Negotin



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

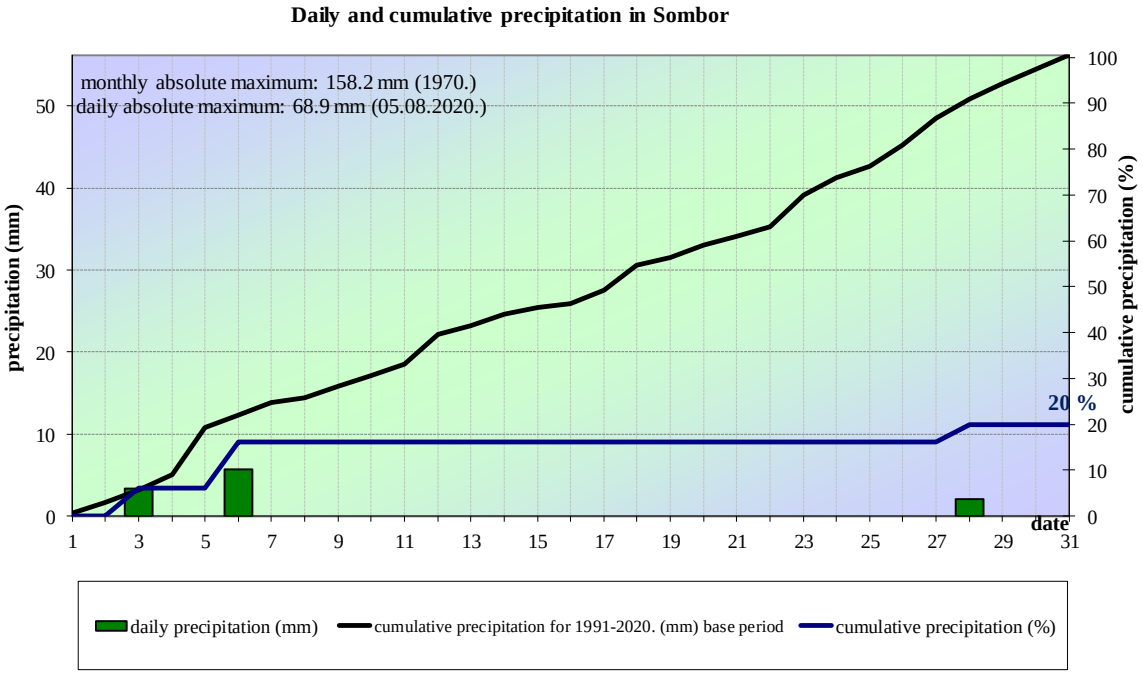


Appendix 38. Daily course of the minimum daily air temperature and the accompanying percentile for Nis

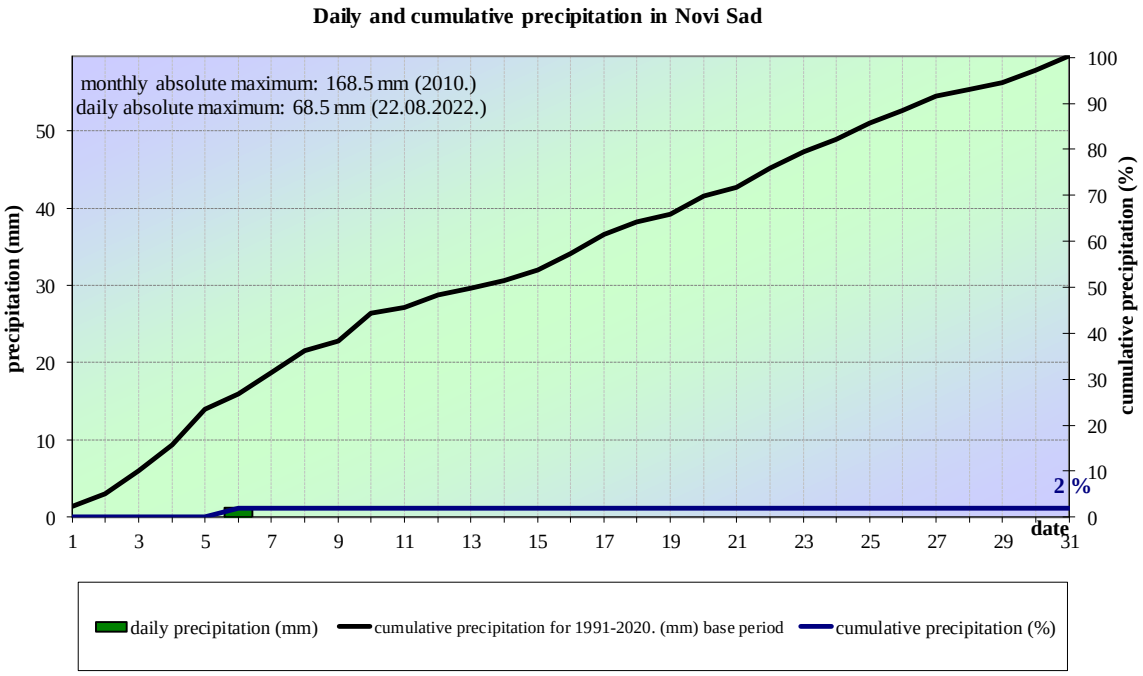


Appendix 39. Daily course of the minimum daily air temperature and the accompanying percentile for Vranje

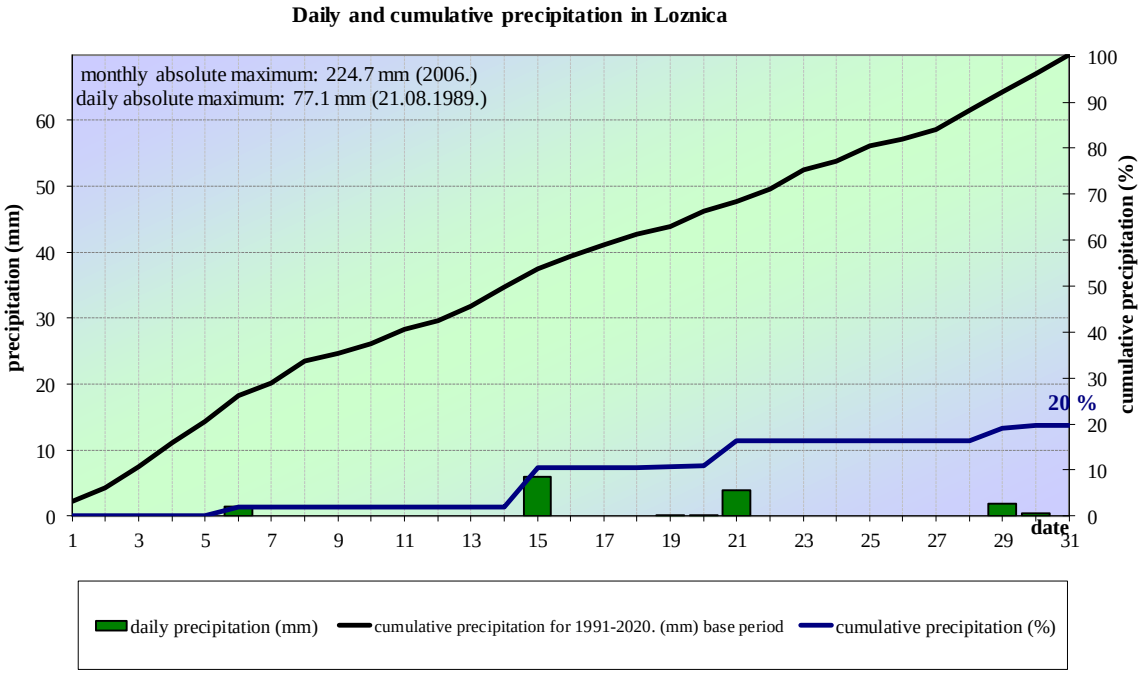
Precipitation



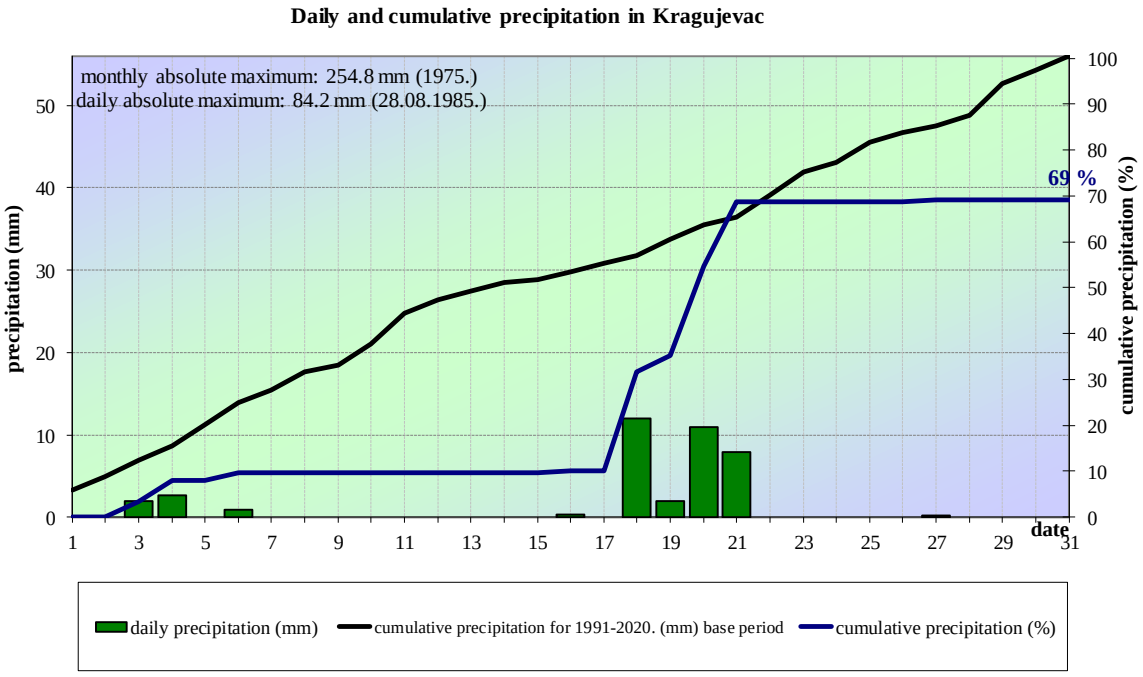
Appendix 40. Daily and cumulative precipitation sums for Sombor



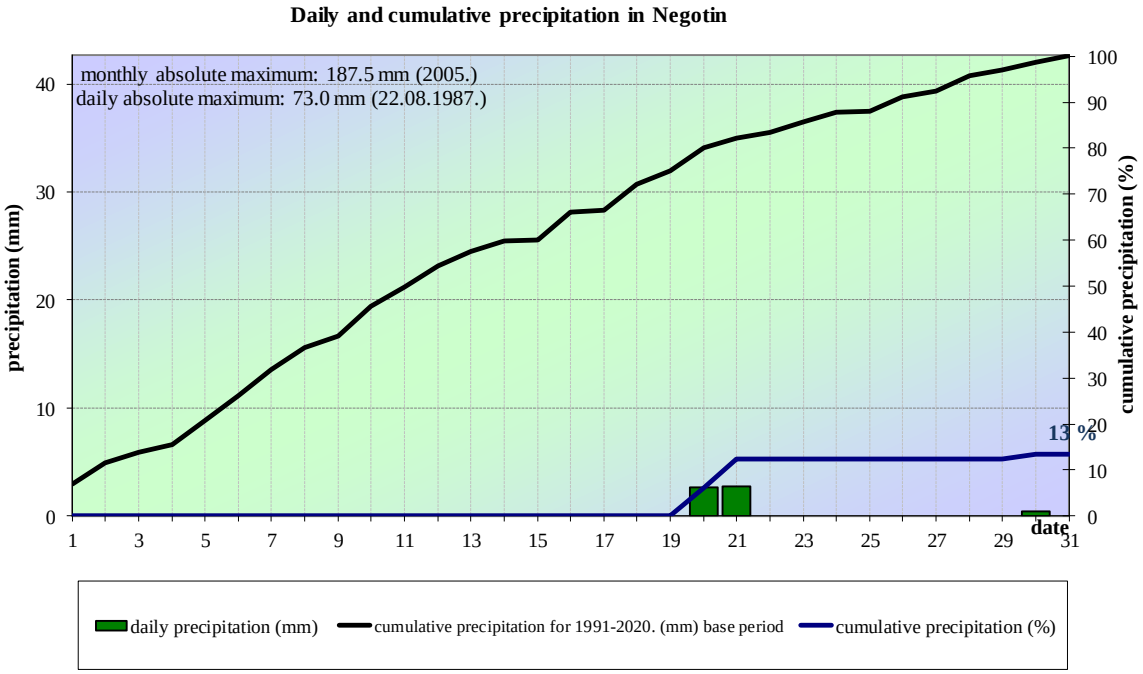
Appendix 41. Daily and cumulative precipitation sums for Novi Sad



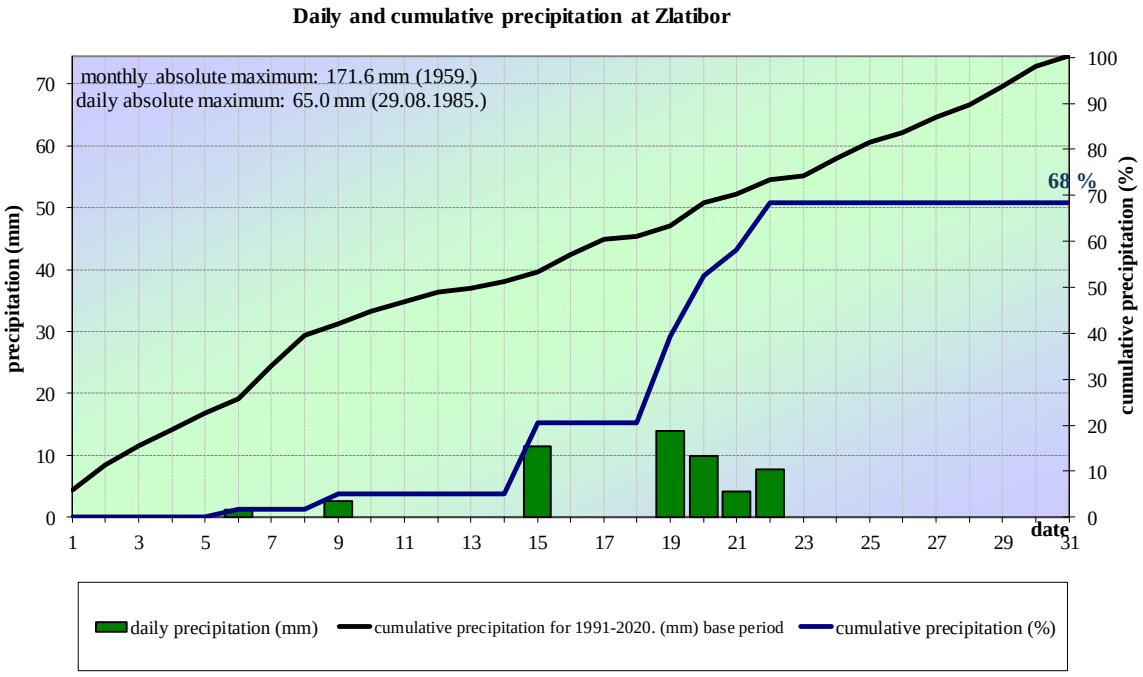
Appendix 42. Daily and cumulative precipitation sums for Loznica



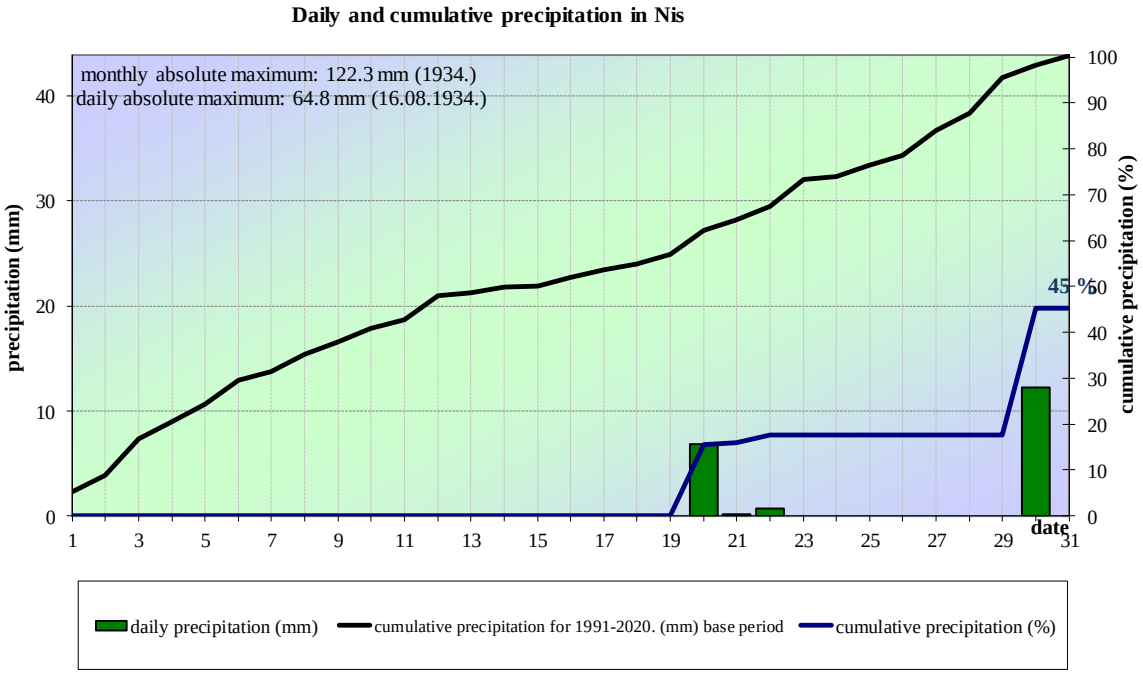
Appendix 43. Daily and cumulative precipitation sums for Kragujevac



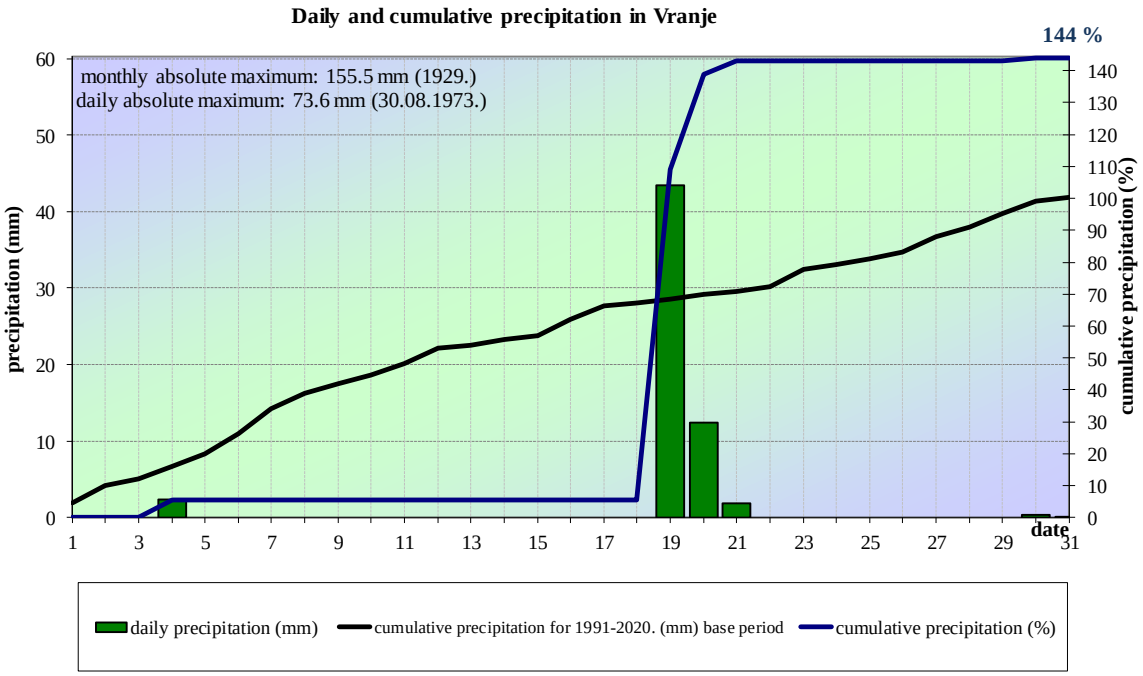
Appendix 44. Daily and cumulative precipitation sums for Negotin



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