

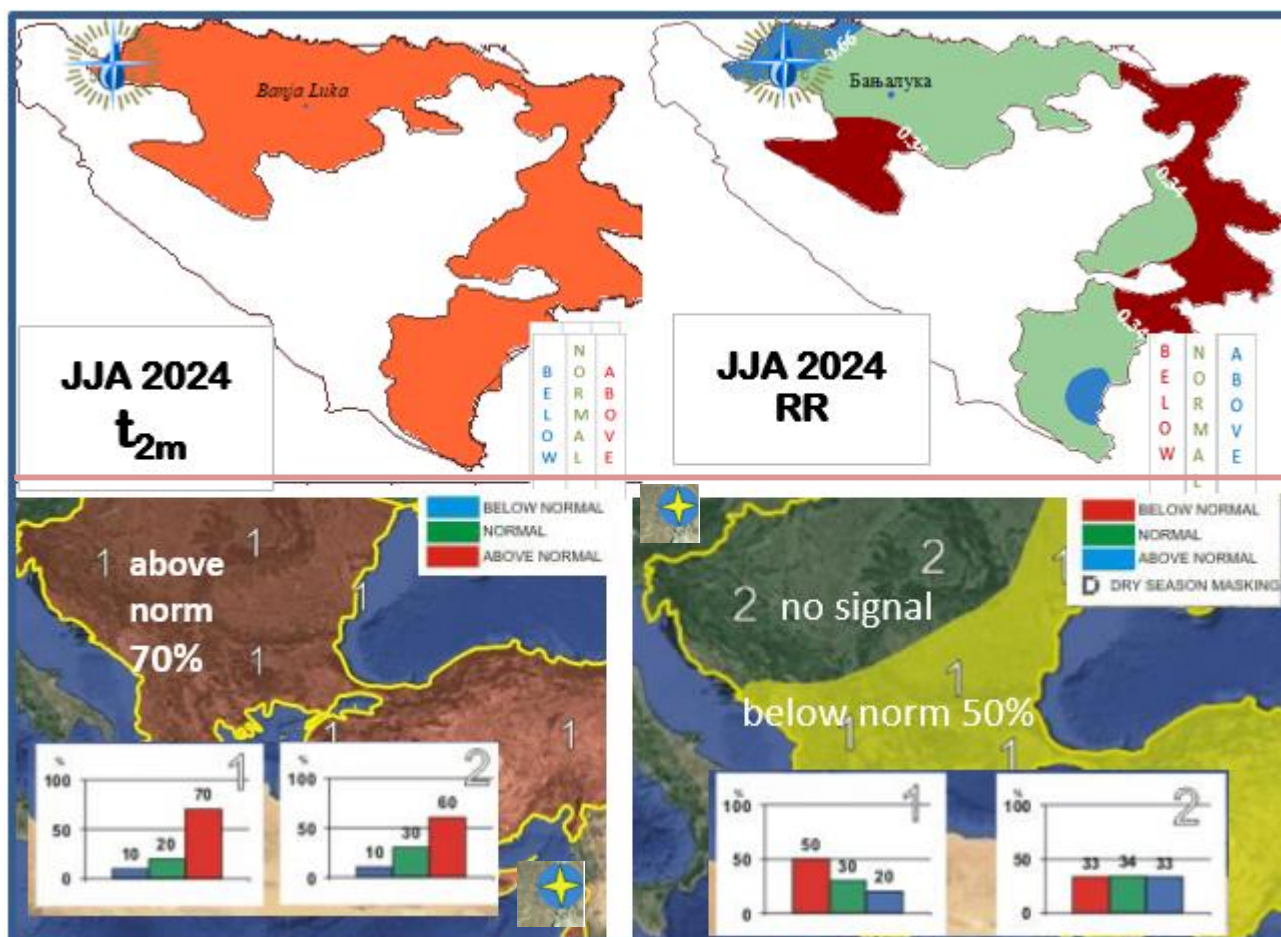


Verification of the the JJA 2024 SEECOF outlook over The Republika Srpska, Bosnia and Herzegovina

1. SEECOF-31 Consensus Statement of the Climate Outlook for summer 2024.

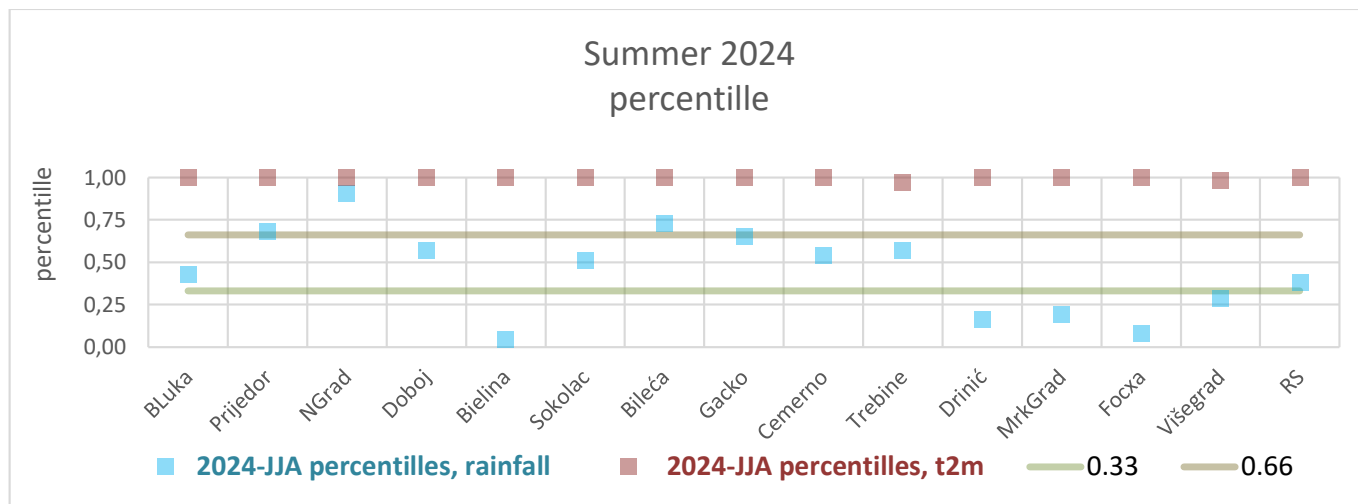
Temperature and Precipitation

According to the seasonal outlook, based on tercile ranks and climate classification ratings, thermal conditions over the Republika Srpska for 2024 summer had been described as warmer than normal (the portion 1, down left). According to observed values, this climatological prognosys was excellent over entire Republic of Srpska. Precipitation forecast was with „no signal“ and below normal southern (the portion 2 and 1, down right). Analyse based on observations across the territory shows normal weather pattern over the most area, and drier in the eastern and south west; due to a convective unstability, locally was wetter in the north-western and souhern places. The precipitation outlook was correct, giving chances for usual climate weather pattern and ocured rainfall trends, also for huge convective rainfall, locally.



Temp (left) and PRC tot (right) for Summer 2024 outlook (below) and observed values (above)

- According Tmean percentille categories of air temperature, most summer days were extremelly above normal values.
- Hottest July and August since 1950 with Tmean monthly deviation from 2.67 °C (South) to 4.86 °C (North).
- Record high rainfall in August in the northwest (Novi Grad, Prijedor).



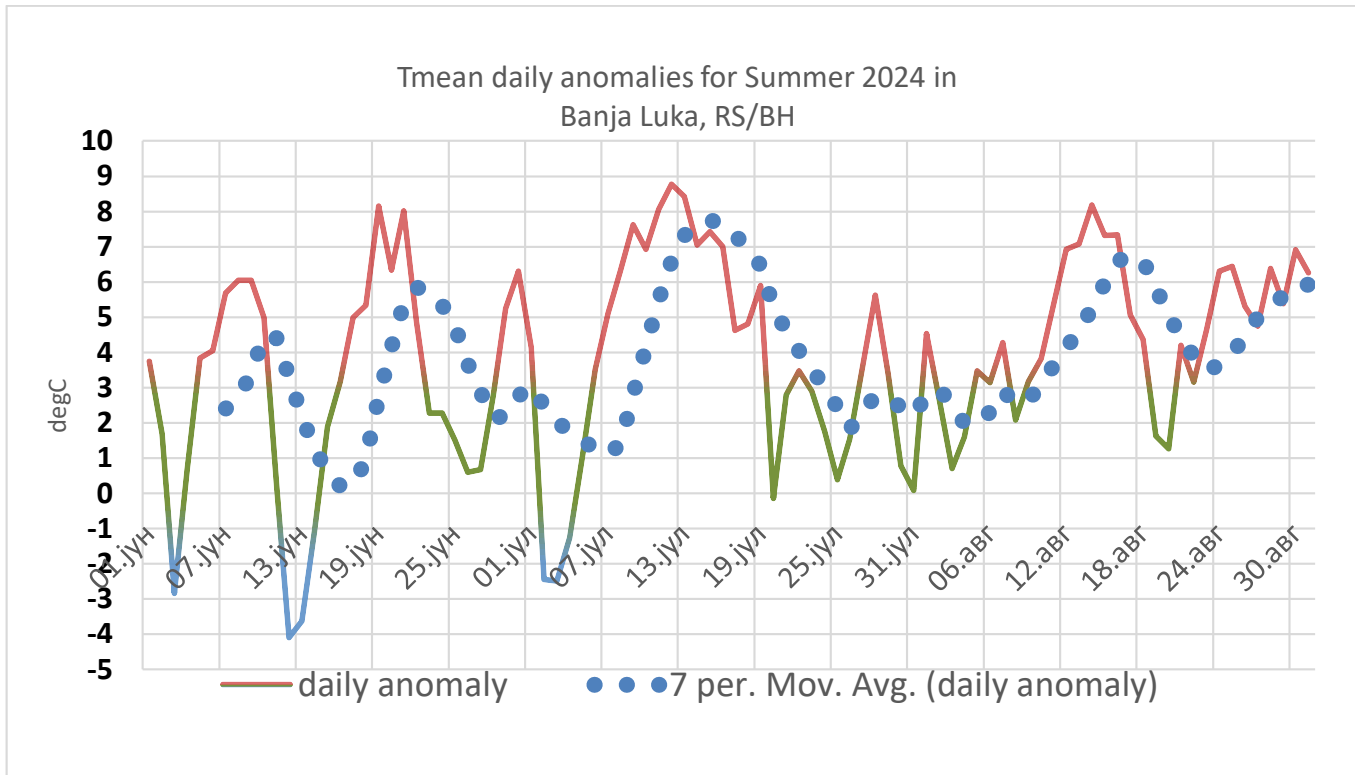
- **Analysis of the 2024 Summer season**

Thermal conditions

A more comprehensive statistical overview of thermal occasions is presented in the following table and graphs.

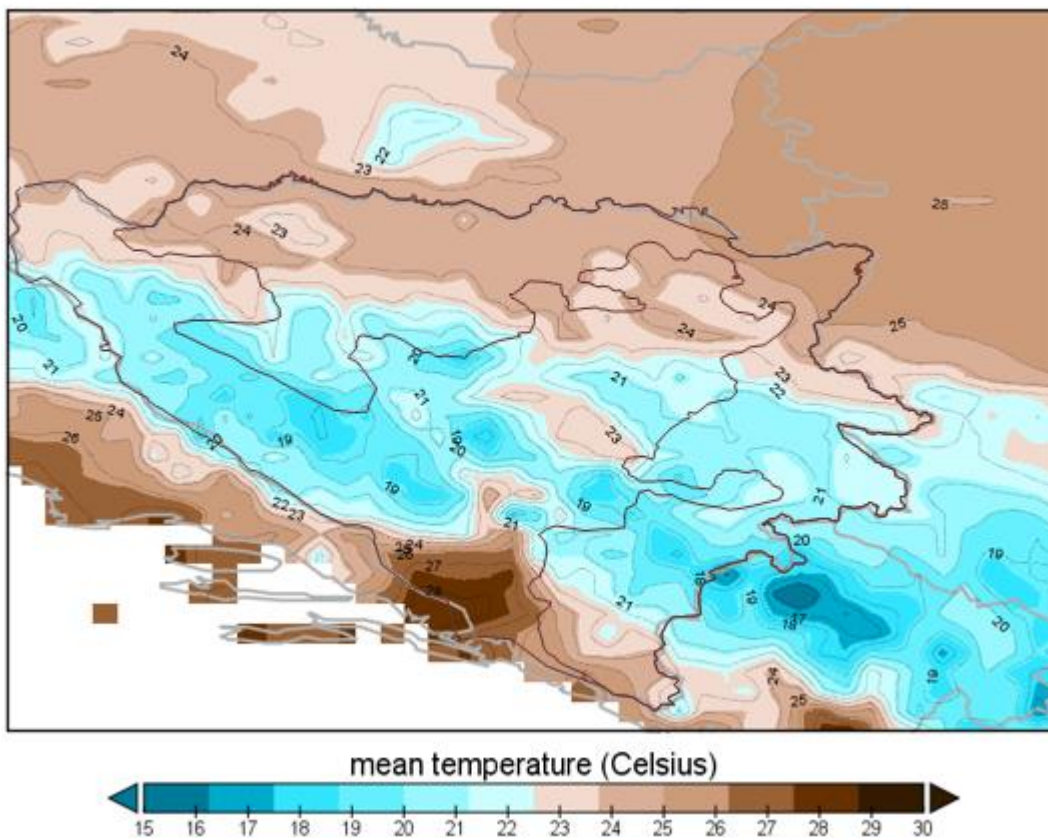
t_{mean} - statistics for the JJA-2024 with reference to (ref 1981-2010) in Republika Srpska (°C)

Station	jja1981-2010	STD	z (SPI)	NORMSDIST (z) (percentile)	PercRank 2024	JJA 2024	% jja2024 (ref1981-2010)	suf/def %	33,33	66,67	50,00	tercile anom.catg
Бања Лука Bana Luka	21	1	3.55	1.00	1.00	24.7	118	17.7	21	21	21	above
Приједор Priedor	21	1	3.09	1.00	1.00	24.5	116	16	21	22	21	above
Нови Град NoviGrad	20	1	3.39	1.00	1.00	24.0	119	19	20	21	20	above
Добој Doboy	20	1	4.23	1.00	1.00	24.7	121	21	20	21	20	above
Бијељина Vijeljina	21	1	3.79	1.00	1.00	25.8	121	21	21	22	21	above
Соколац Sokolac	16	1	3.23	1.00	1.00	19.6	120	20	16	17	16	above
Билећа Bileca	18	7	0.82	0.79	1.00	24.5	133	33	21	21	21	above
Гацко Gacko	17	1	4.15	1.00	1.00	21.0	122	22	17	18	17	above
Чемерно Schemerno	15	1	4.07	1.00	1.00	18.6	125	25	14	15	15	above
Требње Trebine	23	1	2.44	0.99	0.97	26.1	112	12	23	24	23	above
Дринић Drinic	17	1	2.75	1.00	1.00	20.2	118	18	17	17	17	above
Фоца Focxa	19	1	3.19	1.00	1.00	22.6	116	16	19	20	19	above
МркГрад MrkonicG	18	1	3.25	1.00	1.00	21.7	119	19	18	19	18	above

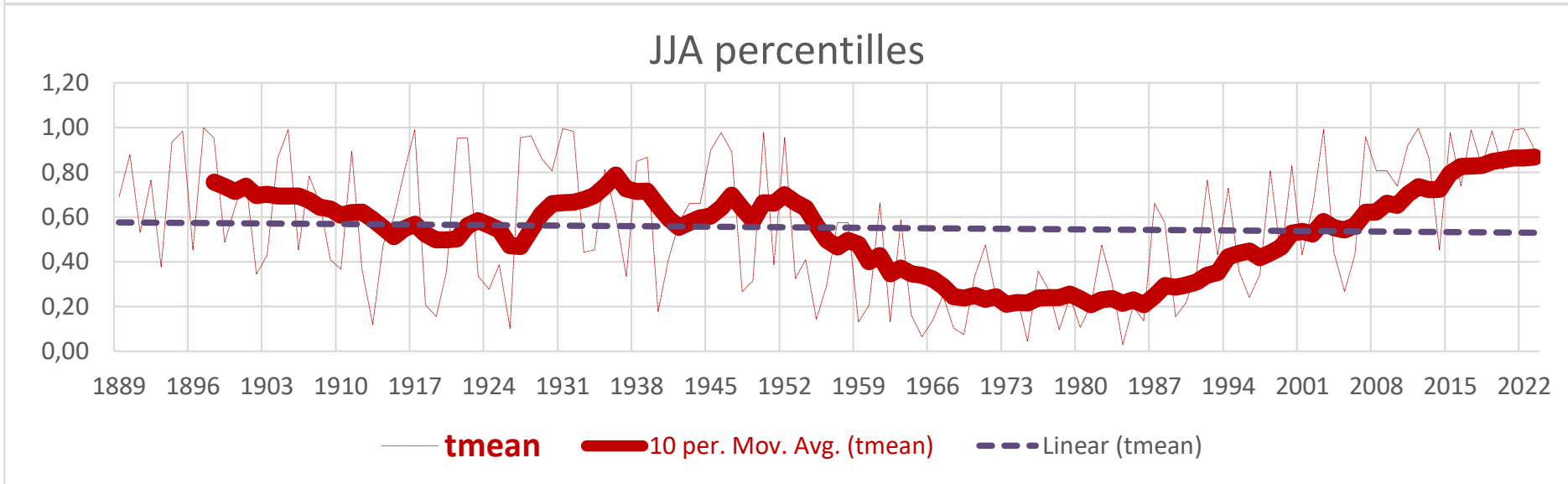
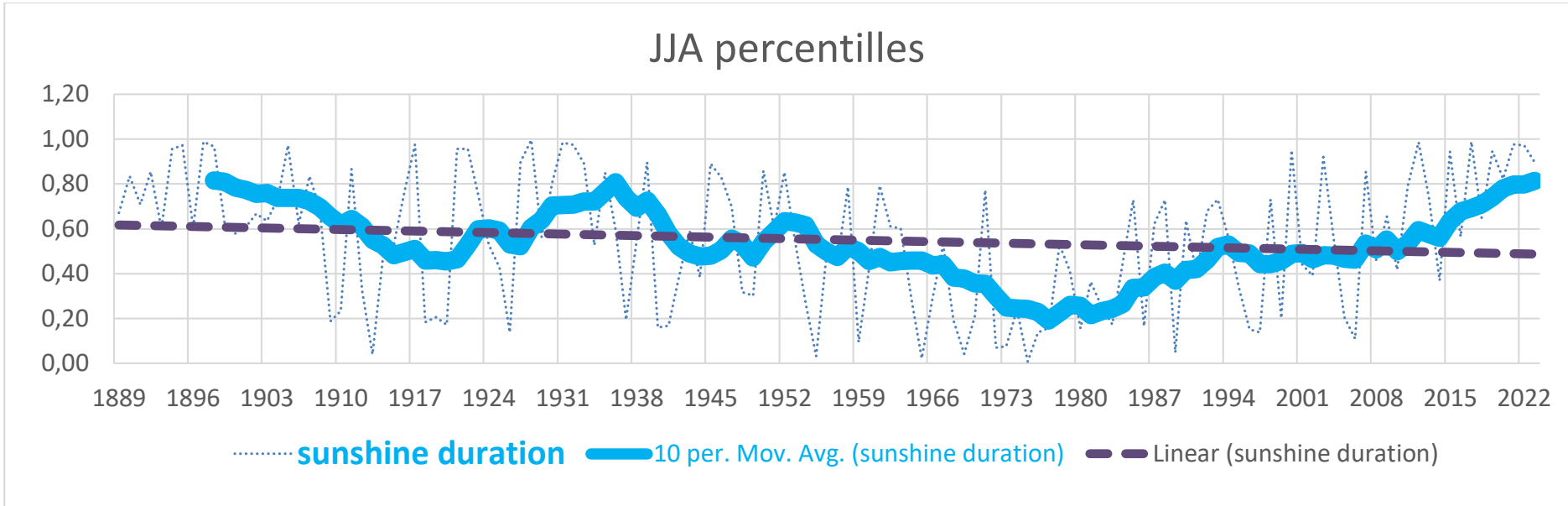


Tmean Summer days anomalies in Banja Luka, the RS/BiH

mean temperature JJA 2024



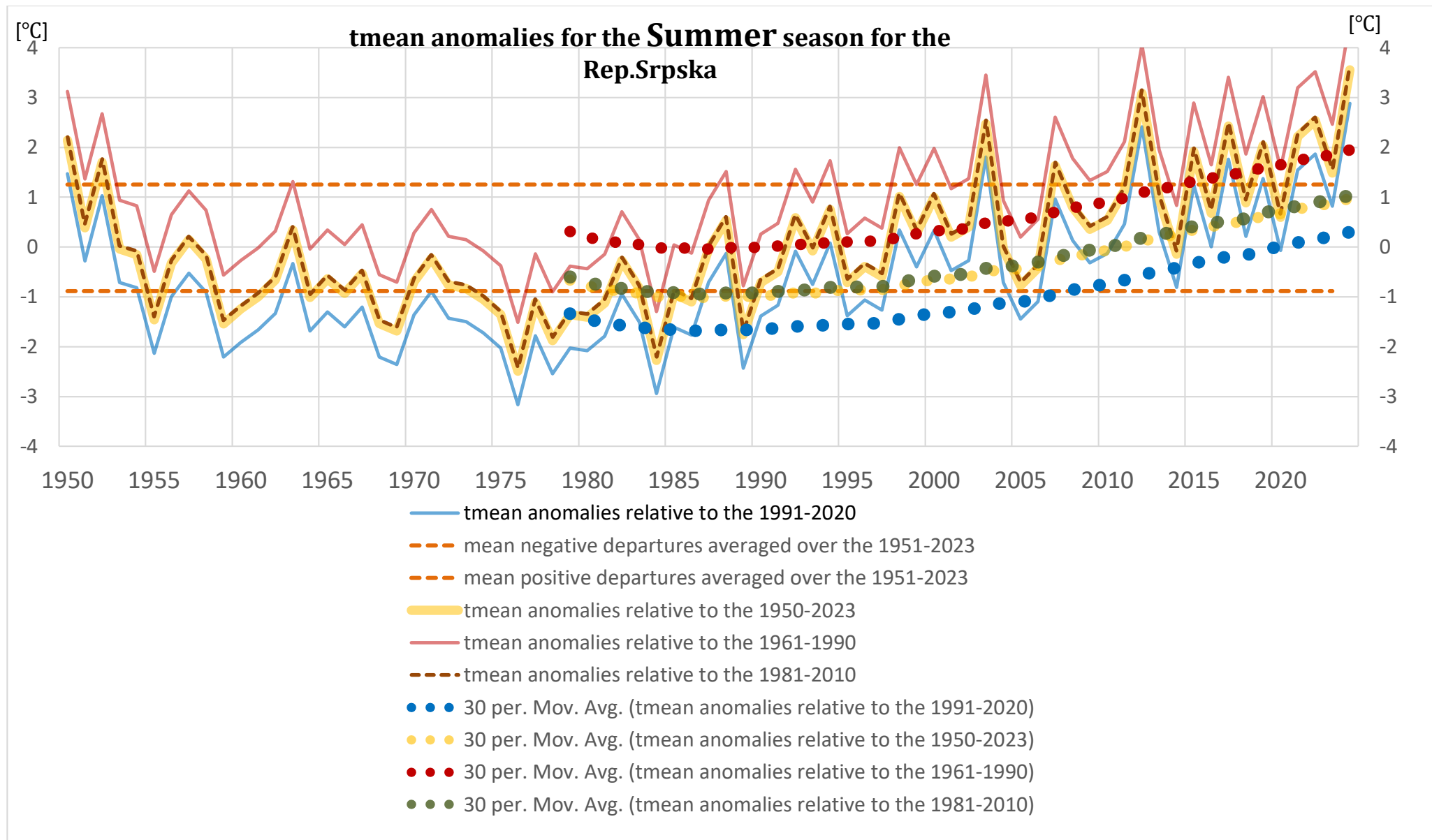
Spatial distribution of tmean according to COPERNICUS data source of daily data 01.06.2024-31.08.2024 analysed by RHMS RS/ climatology



Percentilles of sunshine (above) and tmean (below) for Banja Luka 1889-2023. Correlation of tmean/sunshine: 0.84

Regarding measured temperature and Sunshine duration, there is high correlation inbetween them

The following graph represents the dependence of the mean 30-year deviation (climate) for different reference periods, and the reason why the norm 1981-2010 is representative of the Republic of Srpska (coincides with climatology 1950-2020).



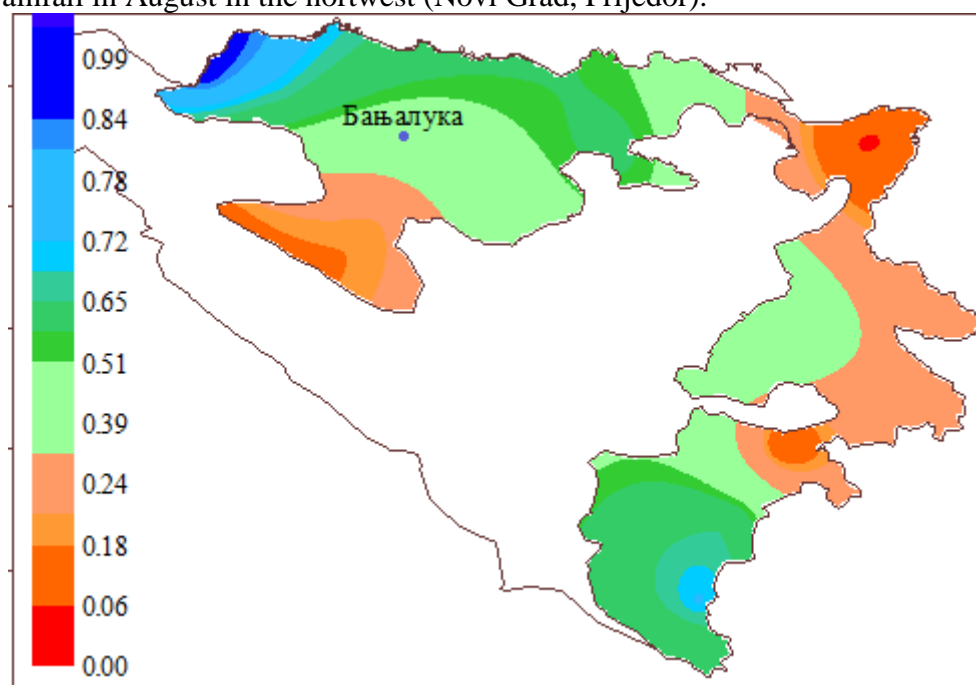
Rainfall

A more comprehensive statistical overview of thermal occasions is presented in the following table and graphs.

JJA-2024 precipitation statistics over the RS (ref 1981-2010);

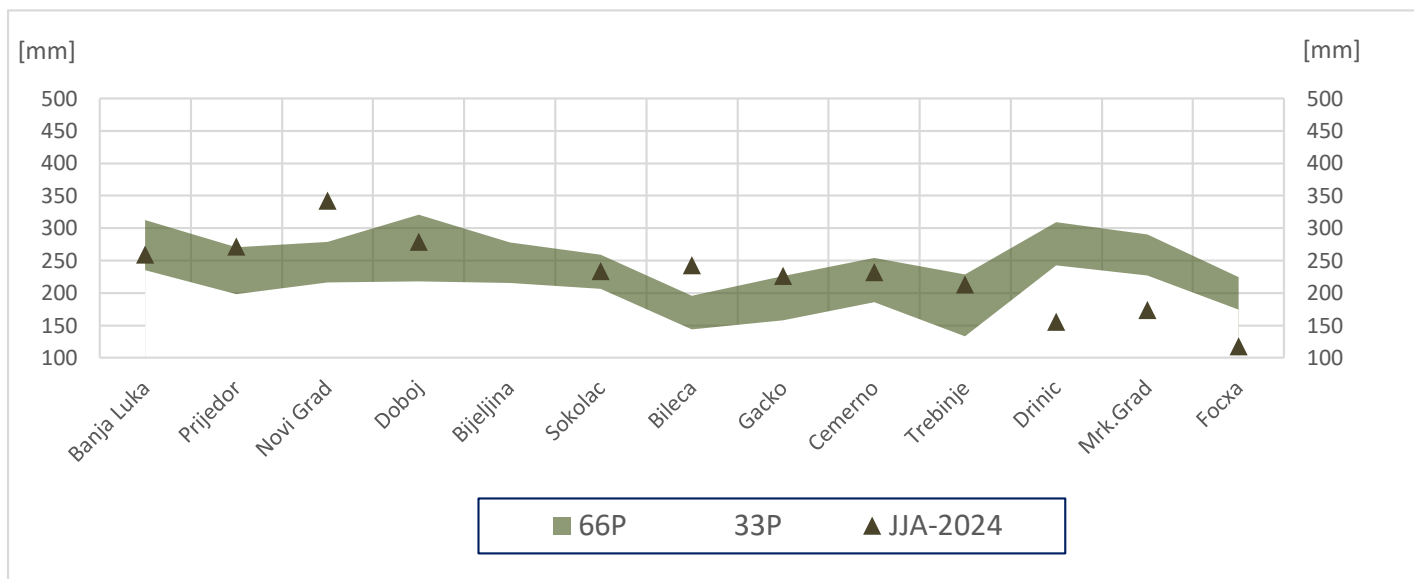
Station	jja1981-2010	STD	z (SPI)	NORMSDIST (z) (percentile)	PercRank 2024	JJA 2024 (mm)	% jja2024	suf/def %	33,33	66,67	50,00	tercile anom.catag
Бања Лука Bana Luka	276	81	-0.20	0.42	0.43	259	94	-6.0	235	313	273	normal
Приједор Prijedor	243	76	0.37	0.64	0.68	271	112	12	198	271	219	above
Нови Град NoviGrad	247	71	1.34	0.91	0.90	342	139	39	216	279	246	above
Добој Doboy	284	104	-0.05	0.48	0.57	279	98	-2	218	321	272	normal
Бијељина Bijeljina	243	78	-1.95	0.03	0.05	92	38	-62	216	278	255	below
Соколац Sokolac	238	64	-0.07	0.47	0.51	233	98	-2	207	259	239	normal
Билећа Bileca	179	71	0.89	0.81	0.73	243	135	35	144	196	175	above
Гацко Gacko	200	84	0.32	0.62	0.65	227	113	13	158	226	198	normal
Чемерно Smeterno	224	98	0.08	0.53	0.54	232	104	4	186	254	203	normal
Требиње Trebine	179	97	0.35	0.64	0.57	213	119	19	133	229	161	normal
Дринић Drinic	272	87	-1.34	0.09	0.16	156	57	-43	243	309	251	below
Фоча Foca	215	81	-1.21	0.11	0.08	117	55	-45	175	225	204	below
МркГрад MrkonjicG	264	102	-0.88	0.19	0.19	174	66	-34	227	291	265	below

Record high rainfall in August in the northwest (Novi Grad, Prijedor).

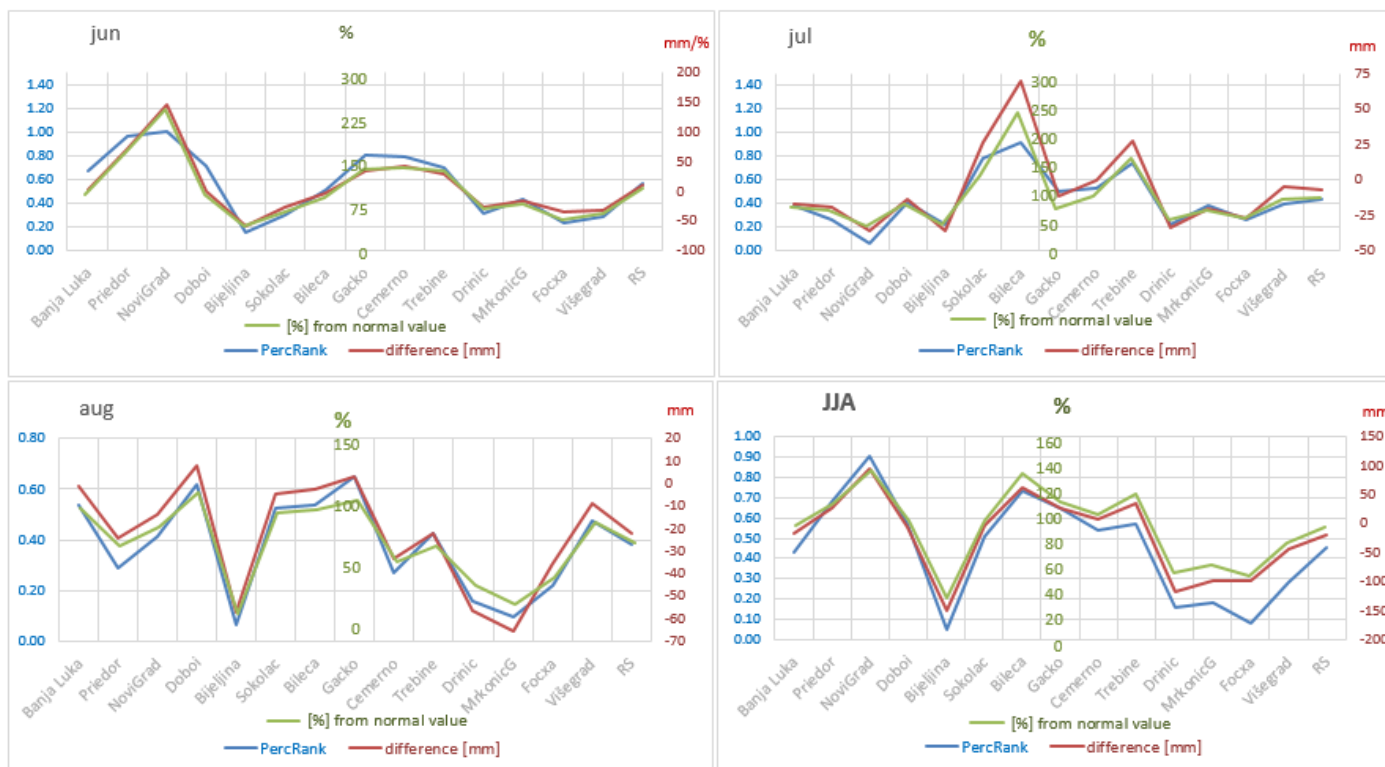


Spatial presentation of the JJA-2024 rainfall percentiles over the Republic of Srpska station network

Total JJA rainfall from 141mm in the southeast to 233mm in the northwest. The average deficit for the area of Srpska is about 10% (depending on the reference period of the analysis). Monthly deviation ranges from -83 mm (northeast) to +21 mm (South). Years with the least amount of rainfall: 2012; 1952; 1950; 2017; 2000; 2003 ... years with the highest summer rainfall 1969; 2014; 1959; 1976; 1972...



Statistical indicators of weather conditions when it comes to rainfall amounts (percentiles, deviation and percentage of achievement from normal) are shown in the chart below, for representative meteorological stations in the Republic of Srpska.



2. High impact events:

High impact events: long lasting heat waves and extremely high summer temperatures, caused water shortage, drought at eastern places; most of wild fires occurred at the Southern area (Eastern Herzegovina). A record high rainfall in August in the northwest caused torrential flooding.

3.Verification of the climate outlook for the 2024 summer

Country	Seasonal temperature (JJA)		Seasonal precipitation (JJA)	
	Observed	SEECOF, MedCOF <i>climate outlook</i>	Observed	SEECOF, MedCOF <i>climate outlook</i>
The Republika Srpska, Bosnia and Herzegovina	<i>Above normal</i>	<i>Above normal</i>	Normal, below; locally above	<i>No signal or drier</i>

Assesment:

Extremelly hot weather observed in Republic of Srpska, normal-drier conditions. Locally, in the southern (Bileća, Novi Grad) record breaking rainfall amount, due to convective unstability.

The outlook was correct for both climate prognosys, temperature and precipitation (according actual climate trends).