

CLIMATOLOGICAL ANALYSIS

SEASON

SUMMER 2021



BOSNIA AND HERZEGOVINA
FEDERATION OF BOSNIA AND HERZEGOVINA
FEDERAL HYDROMETEOROLOGICAL INSTITUTE

CLIMATOLOGICAL ANALYSIS SEASONE SUMMER 2021.

Sarajevo, October 2021.

Mean air temperatures during the climatological summer 2021 (1st June – 31st August 2021.) ranged between 20,9 °C in Livno and 27,2°C in Neum. On the mountain areas air temperatures were in the range of 11,7 °C on Bjelasnica to 18,0 °C on Ivan-sedlo. Temperature deviations from the normal values during the summer, which covers the period (1991.-2020.) were above normal. Deviation of the mean temperature than the average summer temperature ranged from 1,2 °C on Ivan-sedlo to 2,3 °C on Bjelasnica. By percentage temperature values are classified into the category of warm and very warm.

STATION	DEVIATION (°C)				PERCENTILES
	JUNE	JULY	AUGUST	SUMMER	
Bihać	2,4	2,6	0,4	1,8	93
Bjelašnica	1,3	2,2	0,6	1,4	87
Bugojno	2,4	3,0	1,4	2,3	98
Drvar	2,2	2,3	0,3	1,6	89
Gradačac	2,8	2,5	0,2	1,8	91
Ivan-sedlo	1,2	1,9	0,4	1,2	90
Livno	2,0	1,6	0,7	1,5	88
Mostar	1,8	2,2	0,3	1,4	90
Neum	1,5		1,2		
Sarajevo	1,9	2,5	1,1	1,8	97
Sanski Most	2,2	1,8	0,1	1,4	89
Tuzla	1,5	2,1	0,3	1,3	83
Zenica	1,9	2,1	0,6	1,6	94

Table 1 Deviation middle of winter air temperatures in relation to cli standard normal and the corresponding percentiles

STATION	MOUNTH			STANICA	MOUNTH		
	June	July	August		June	July	August
Bihać	extremely warm	very warm	warm	Livno	extremely warm	very warm	warm
Bjelašnica	warm	very warm	warm	Mostar	warm	very warm	warm
Bugojno	extremely warm	very warm	warm	Neum	warm	very warm	warm
Drvar	warm	very warm	warm	Sarajevo	extremely warm	very warm	warm
Gradačac	extremely warm	very warm	warm	Sanski Most	extremely warm	very warm	warm
Ivan-sedlo	warm	very warm	warm	Tuzla	warm	very warm	warm
Jajce	warm	very warm	warm	Zenica	warm	very warm	warm



Table 2 Overview of marks mean temperature during the winter months by the method of percentiles

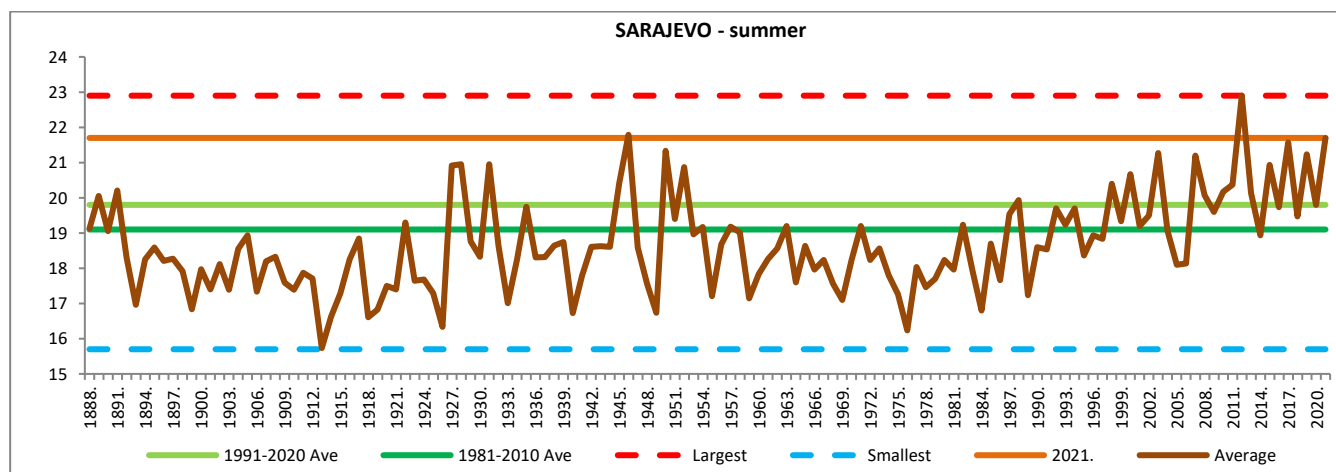
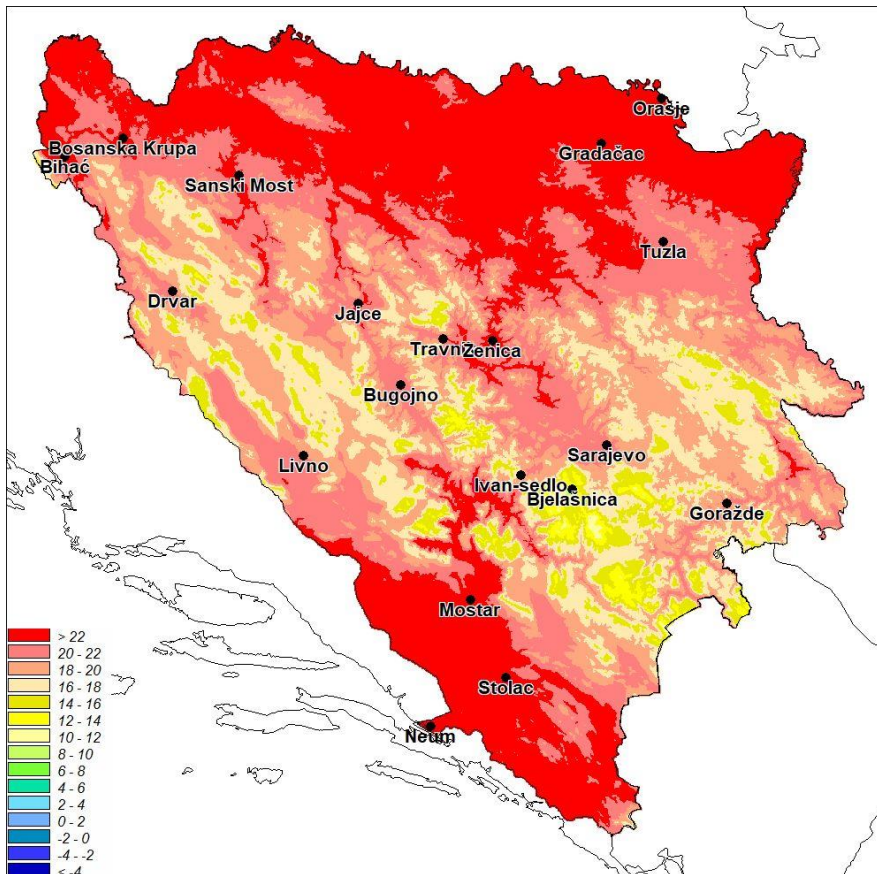
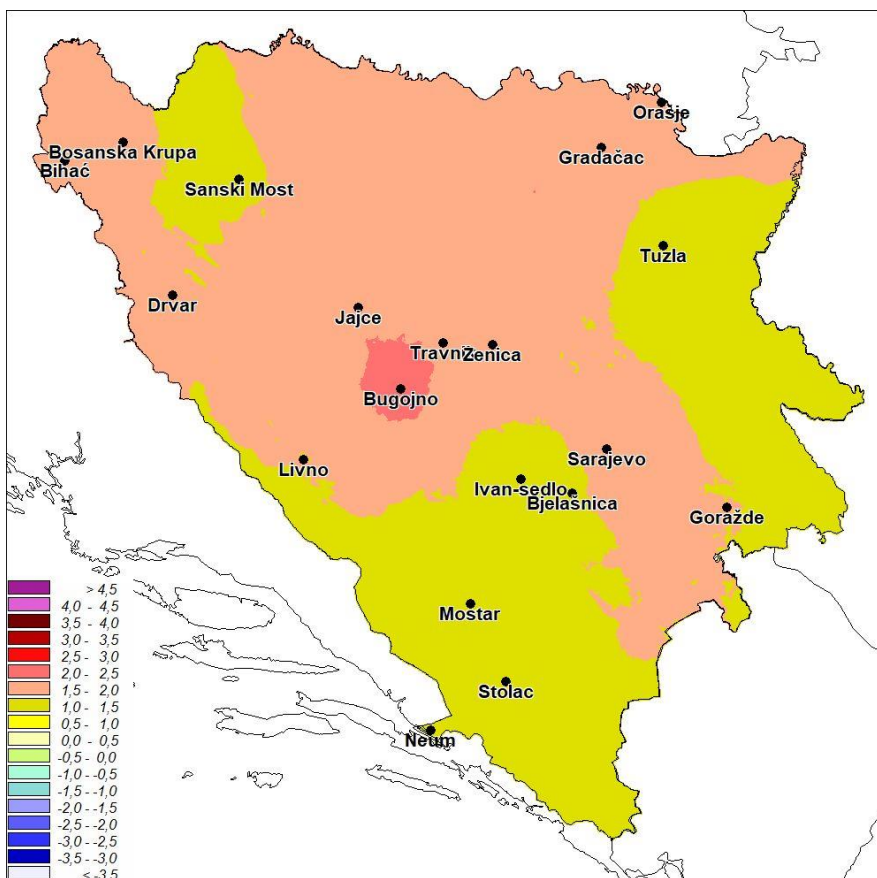


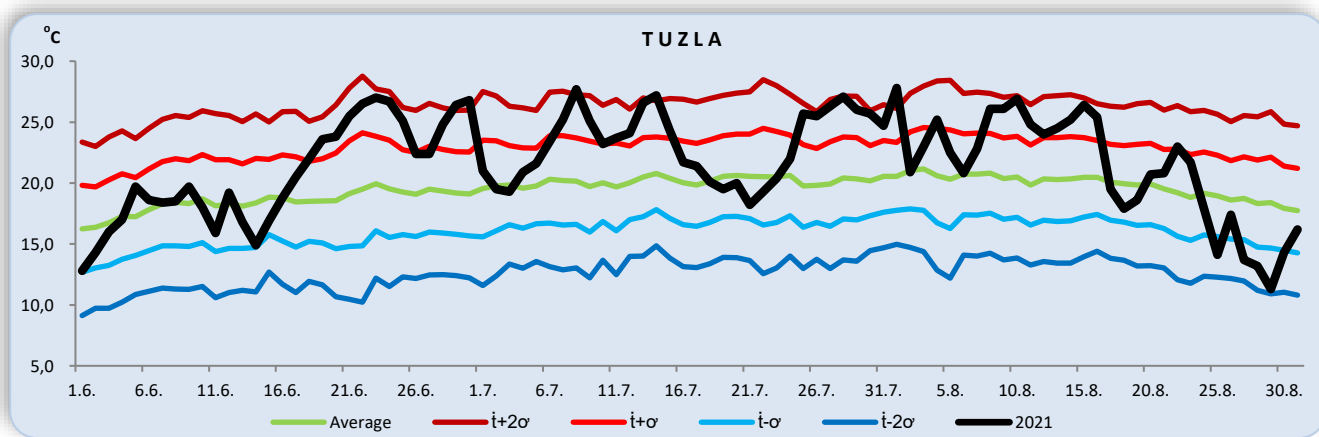
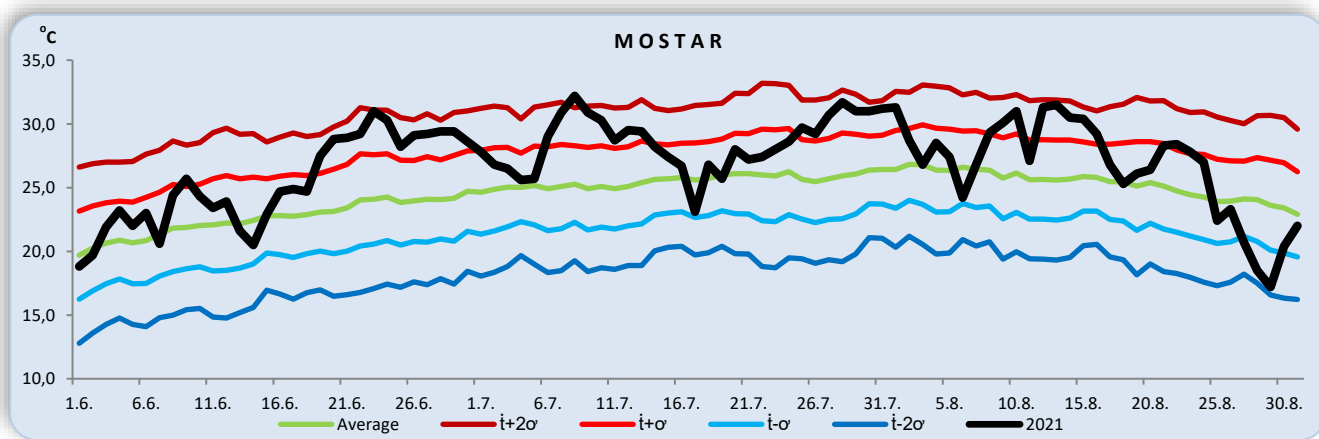
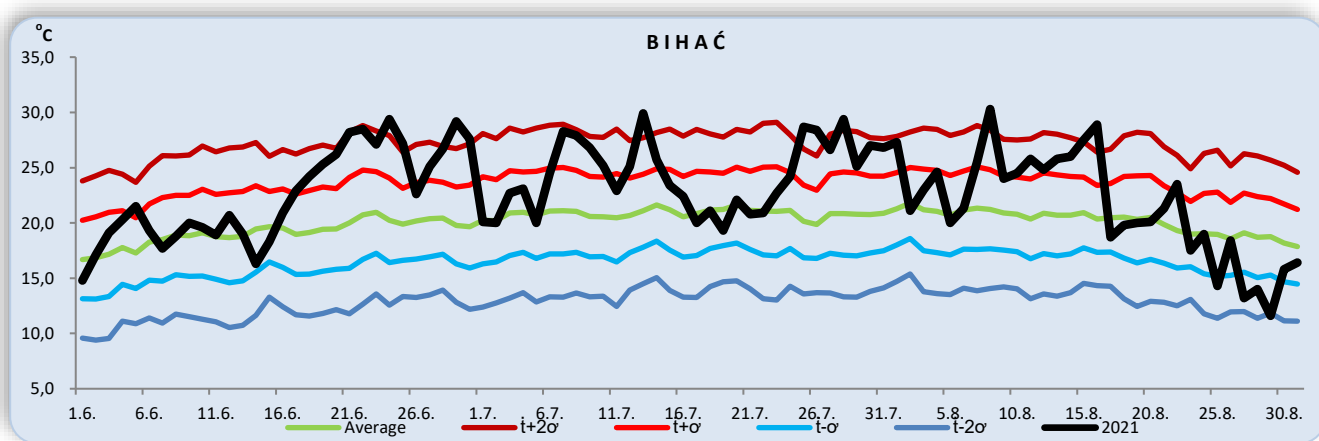
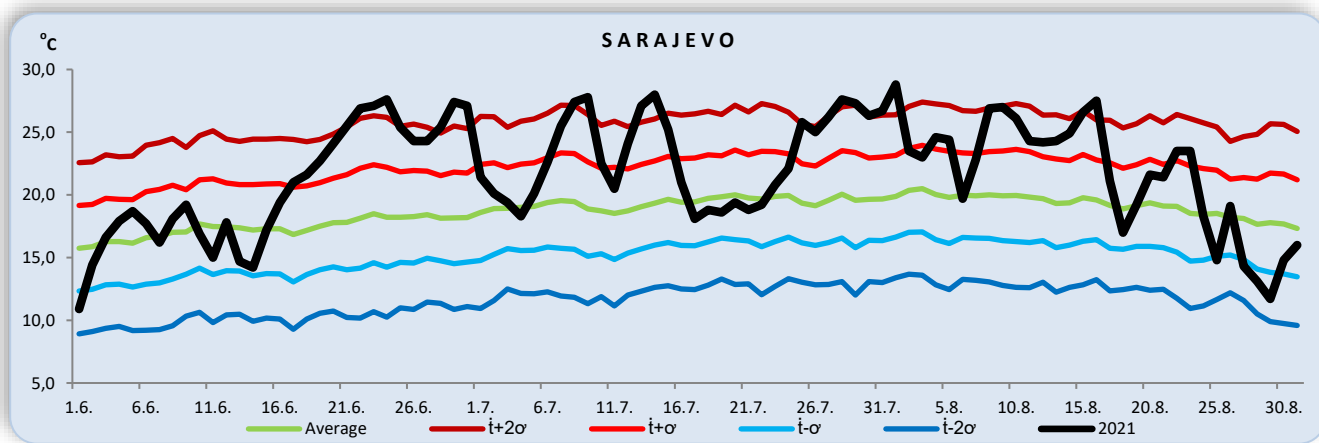
Table 3 Summer temperature in Sarajevo



Map 1 Mean air temperature summer 2021. year (°C)



Map 2 Air temperature during summer 2021. using percentile method compared to the 1991-2020 base period



Graph 1-4 Mean daily air temperatures during summer 2021. Year

Analysis of the monthly amount of precipitation expressed in % of average values shows that during the summer 2021, deviations from normal precipitation amounts ranged from 37,3 % in Bugojno, to 87,6 % in Bihac. By percentage amounts of precipitation are classified into categories of very dry, dry and normal.

The measured amounts of precipitation were in the range of 80,1 mm in Bugojno to 242 mm in Bihac.

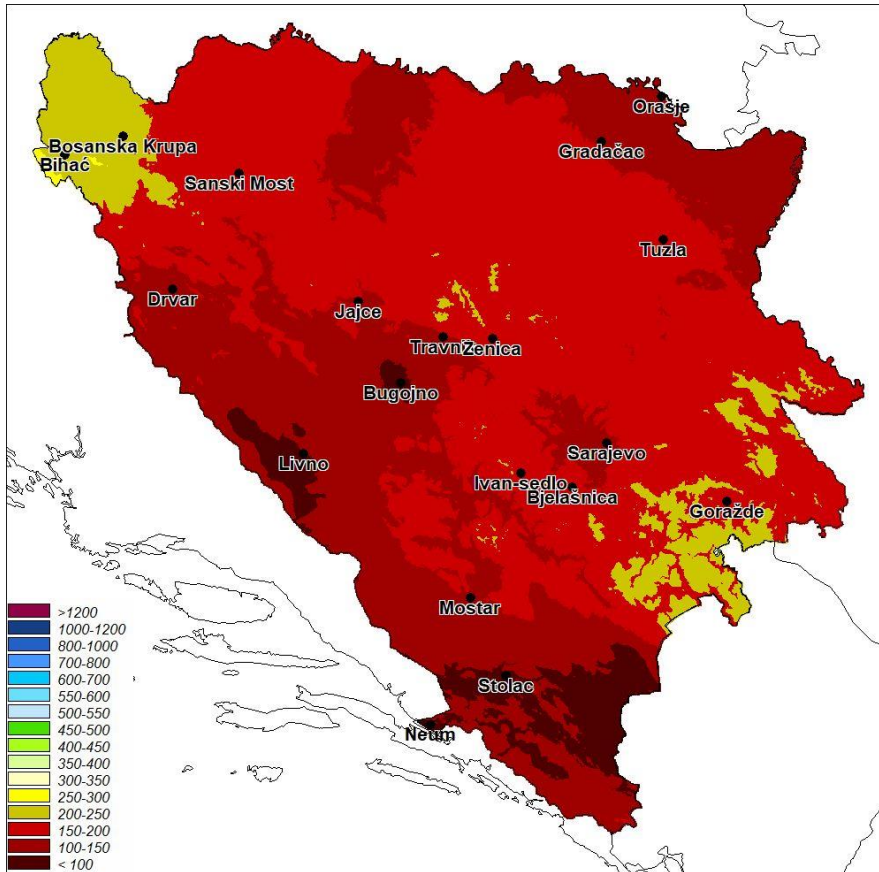
STATION	DEVIATION (%)				PERCENTILES
	JUNE	JULY	AUGUST	SUMMER ¹	
Bihać	46,4	135,6	86,9	87,6	42
Bjelašnica	35,2	63,4	84,0	58,8	9
Bugojno	32,0	34,7	47,6	37,3	2
Drvar	8,2	100,1	53,5	50,9	10
Gradačac	36,9	77,4	75,1	59,5	13
Ivan-sedlo	24,0	80,7	110,8	67,3	15
Livno	6,7	57,9	94,7	48,8	7
Mostar	8,1	12,5	192,9	67,6	22
Neum	8,8		201,6		
Sarajevo	31,2	75,5	76,1	58,4	7
Sanski Most	8,8	151,9	64,9	68,4	24
Tuzla	51,3	54,2	74,5	58,1	10
Zenica	54,0	100,1	67,5	74,3	25

Table 5 Deviation summer precipitation in relation to the climatological standard normal and the corresponding percentiles

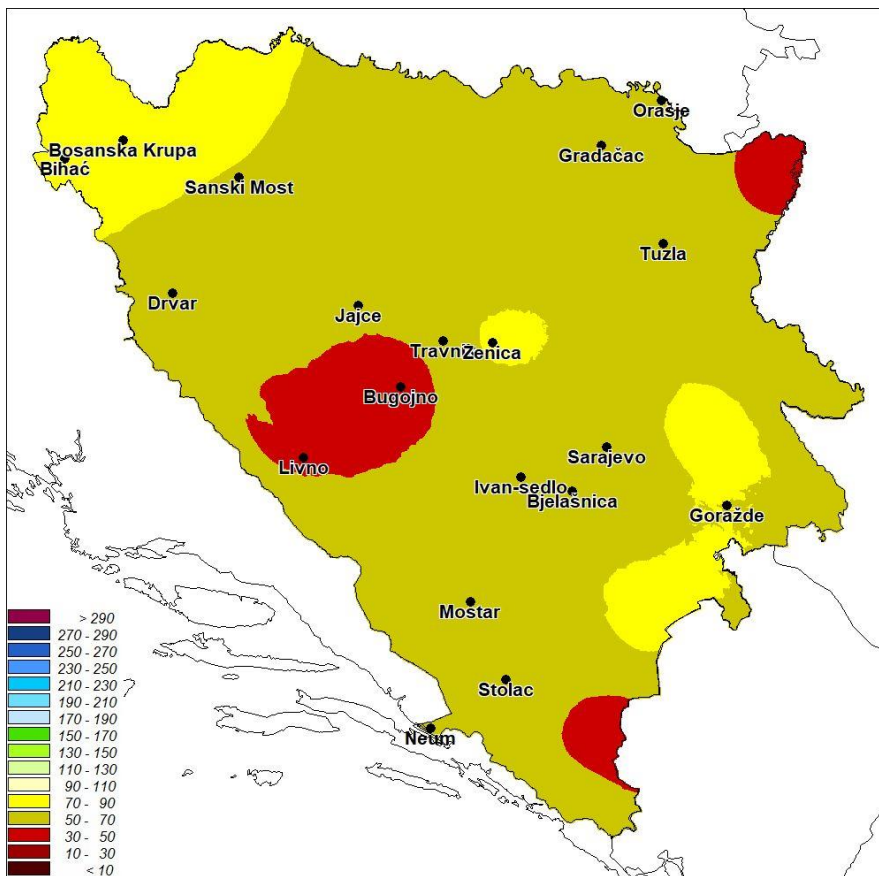
STATION	MOUNTH			STATION	MOUNTH		
	June	July	August		June	July	August
Bihać				Livno			
Bjelašnica				Mostar			
Bugojno				Neum			
Drvar				Sanski Most			
Gradačac				Sarajevo			
Ivan Sedlo				Tuzla			
Jajce				Zenica			

	Extremely dry		Very dry		dry		normal		wet		Very wet		Extremely wet
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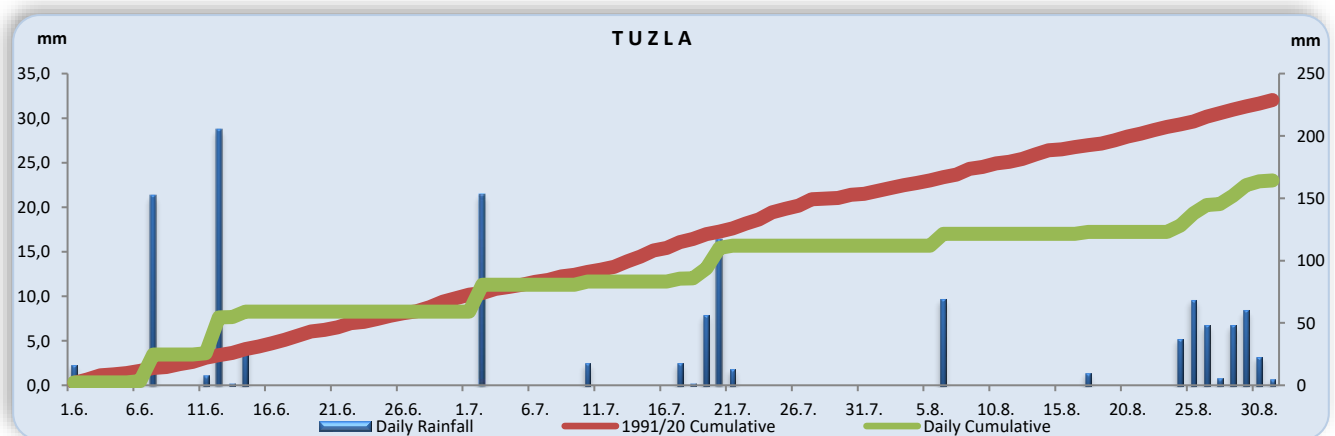
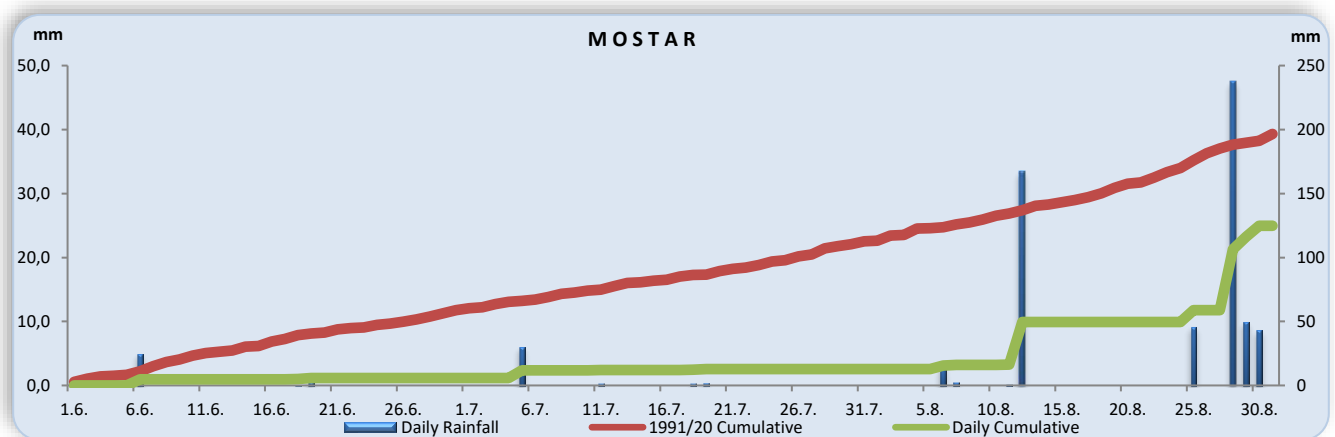
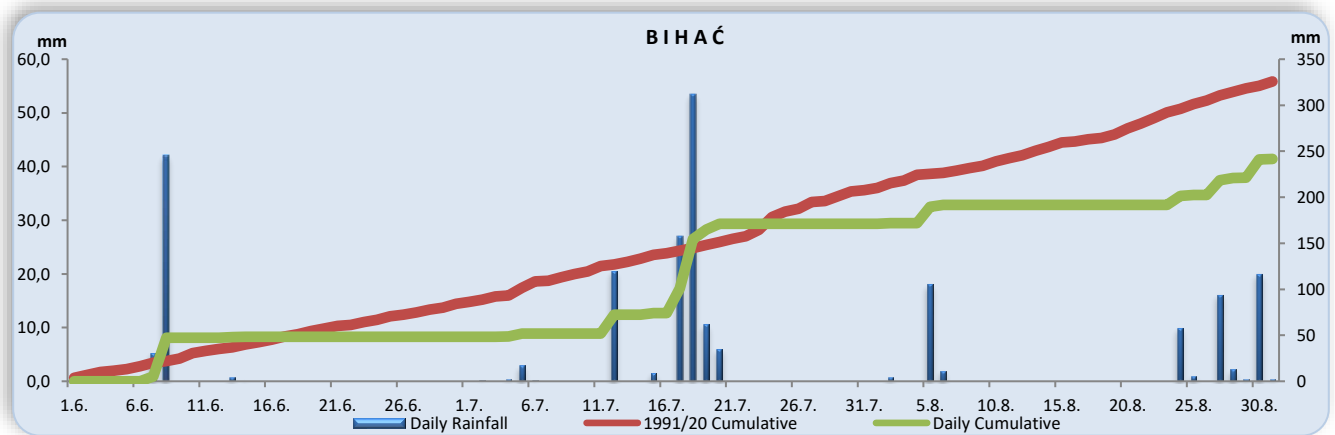
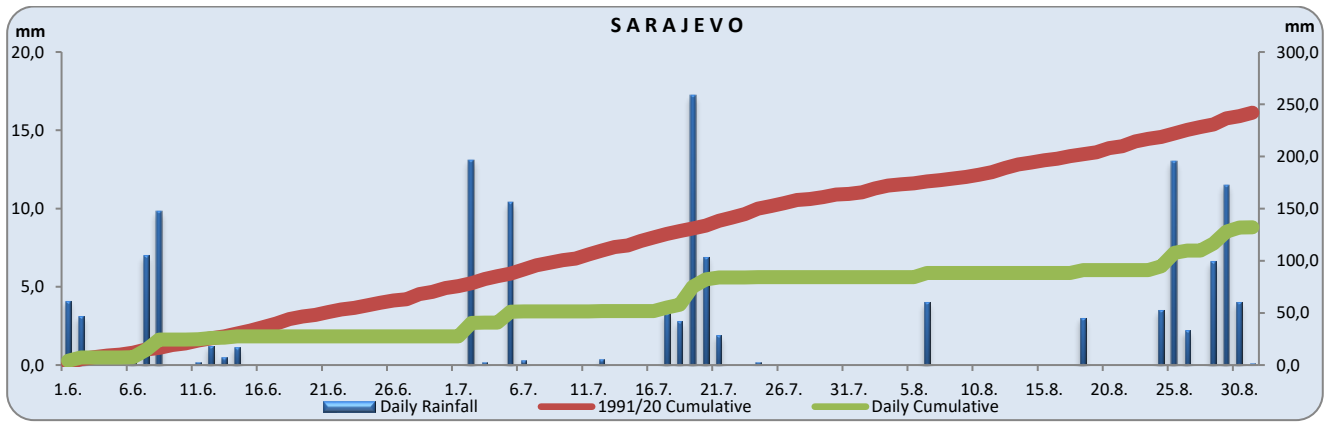
Table 6 Overview of marks on precipitation by month basis percentile



Map 3 Amount precipitation – summer 2021. year (mm)



Map 4 Precipitation sums using percentile method during summer 2021 compared to the base period (1991 – 2020)



Graph 5-8 daily and cumulative rainfall in the summer 2021 year.

Season	Rank*	Air Temperature (°C)				Rank**	Precipitation sums (mm)			
		33	50	66	Observed value		33	50	66	Observed Value
Sarajevo	1	19,6	19,2	18,7	21,7	30	258	228	202	132,0
Mostar	2	25,1	4,6	24,3	26,8	23	189	158	141	124,8
Bihać	2	20,6	20,2	19,8	22,7	20	325	274	232	241,6
Tuzla	3	20,2	19,5	19,0	21,6	28	332	282	251	164,3
Zenica	2	20,8	20,0	19,6	22,5	23	265	242	193	171,6
Bugojno	1	19,2	18,5	18,1	21,6	30	248	201	186	80,1
Gradačac	2	21,9	21,1	20,8	23,9	29	258	240	227	144,4
Livno	2	19,3	18,6	18,3	20,9	30	211	185	158	88,6
San Most	2	20,6	19,9	19,6	22,0	27	299	262	228	167,5
Bjelašnica	2	10,3	9,8	9,4	11,7	30	336	278	247	174,8

*Rank – 1981-2010. (period) – warmest season

**Rank – 1981-2010. (period) – highest seasonal precipitation

Country	Seasonal temperature JJA		Seasonal precipitation JJA		High Impact Events
	Observed	SEECOF - 25 climate outlook for temperature	Observed	SEECOF - 25 climate outlook for precipitation	
Bosnia and Herzegovina (FBiH)	Above normal in almost entire Bosnia and Herzegovina (very warm and extremely warm)	Above normal (10, 30, 60) In Bosnia and Herzegovina)	Below normal in almost entire Bosnia and Herzegovina;	Below normal (33,33,33)	Summer - At several stations during the summer, precipitation fell below 90 mm - June Temperature record on meteorological stations: Sarajevo, Bugojno, Zenica, Gradacac, Jajce I Bjelasnica - July Temperature record on meteorological station Sarajevo Extremely warm west and central part.

¹ The actual amount of precipitation compared to the average sum

Photo: Jasmin Šuvalija

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Analisis prepared: Dženan Zulum