



## THE 2014 SUMMER SEASON IN REPUBLIC OF SRPSKA, BOSNIA AND HERZEGOVINA



Despite the fact that August 2014, as the hottest month in the year, was the coldest one in last nine years in Republic of Srpska, it had been warm to extremely warm summer, because of high humidity, even though the mean temperature ranged around normal in the most places of. The rainfall total has shown positive trend of nearly 70% in average, according to 1981-2010 climatology. August, with surplus of above 100 percentages, was most rainy month in JJA period. Floods in some parts of the territory on 6th and 7th Aug were worse than the May ones. The period April-August 2014 was the wettest on record. Floods in May and August caused about 25 human victims, 10 people missing (about 600,000 € material damage).

### Temperature

According to the Consensus Statement of SEECOF-11 for JJA 2014, mean temperature value for BH was expected to be *normal or above normal with the same probability of 35% and 30% for below normal*. In the southern area the probability for hotter or inside average summer was 40%. **The recorded mean temperature ranged around normal values in almost whole territory of RS, what means the seasonal prediction was correct for this element (tab. 1).**

Tab 1: distribution of the terciles categories compared to observed JJA 2014 values for Air Temperature in Republic of Srpska, Bosnia and Herzegovina

Mean air temperature for JJA in Srpska, BH					
Station in RS	33,33%	median (50,00%)	66,67%	summer 2014	difference from midpoint
Бања Лука B. Luka	20.60	20.80	21.50	21.13	0.33
Бијељина Bijeljina	20.90	21.22	21.80	21.85	0.63
Билећа Bileća	20.08	21.20	20.87	20.60	-0.60
Добој Doboј	20.00	20.43	21.00	20.75	0.32
Приједор Prijedor	20.03	21.10	21.07	21.25	0.15
Соколац Sokolac	15.80	16.32	16.90	16.54	0.22
Требиње Trebinje	23.47	23.52	24.40	23.08	-0.44
Чемерно Čemerno	13.76	14.20	14.12	14.79	0.59
Гацко Gacko	16.43	17.05	16.93	17.32	0.27

### Precipitation

Rainfall total was not predictable for the 2014 summer season (no clear signal, probability for all of three categories). The measurements had shown the *significant exceeding of the upper tercile* for this meteorological element across the entire RS (fig 1, tab 2). Precipitation height ranged from 248 in Kalinovik to 523 mm/JJA in Doboј; extremely wett conditions were in Doboј, B.Luka and Novi Grad areas for JJA in average.

Tab 2: distribution of the terciles categories compared to observed JJA 2014 values for Rainfall in Republic of Srpska, Bosnia and Herzegovina

Serbian Republic, 2014					
Met. Station	33,33%	50,00%	66,67%	JJA 2014	trend %
Бања Лука	221	265	313	513	101.18
Приједор	198	219	271	348	58.71
Нови Град	210	245	274	452	86.01
Добој	215	272	321	523	92.03
Бијељина	216	255	278	287	12.50
Соколац	204	231	257	359	57.08
Билећа	144	175	196	365	108.81
Гацко	158	184	222	398	116.48
Чемерно	172	198	246	437	121.15
Требњиње	133	161	229	378	134.86

August was the most rainy summer month in 2014 (Fig 2). Meteorological station at the middle part of country, Doboј, occurred the highest rainfall surplus of 300% (B.Luka 259%, Visegrad 223%, Ribnik and Drinic 192%...). It was the coldest August from 2007, but combined high values both of temperatures and humidity gave a feeling of much more heat.

The monthly exceeding rainfall in percentage, according to the recorded values in RHMS of RS: Jun 29,8; July 85,7; August 125,6.

Doboј recorded absolute monthly maximum of rainfall amount of 288mm in August on record.

In Banja Luka, recorded 276mm in August means the second highest precipitation total in last 134 years.

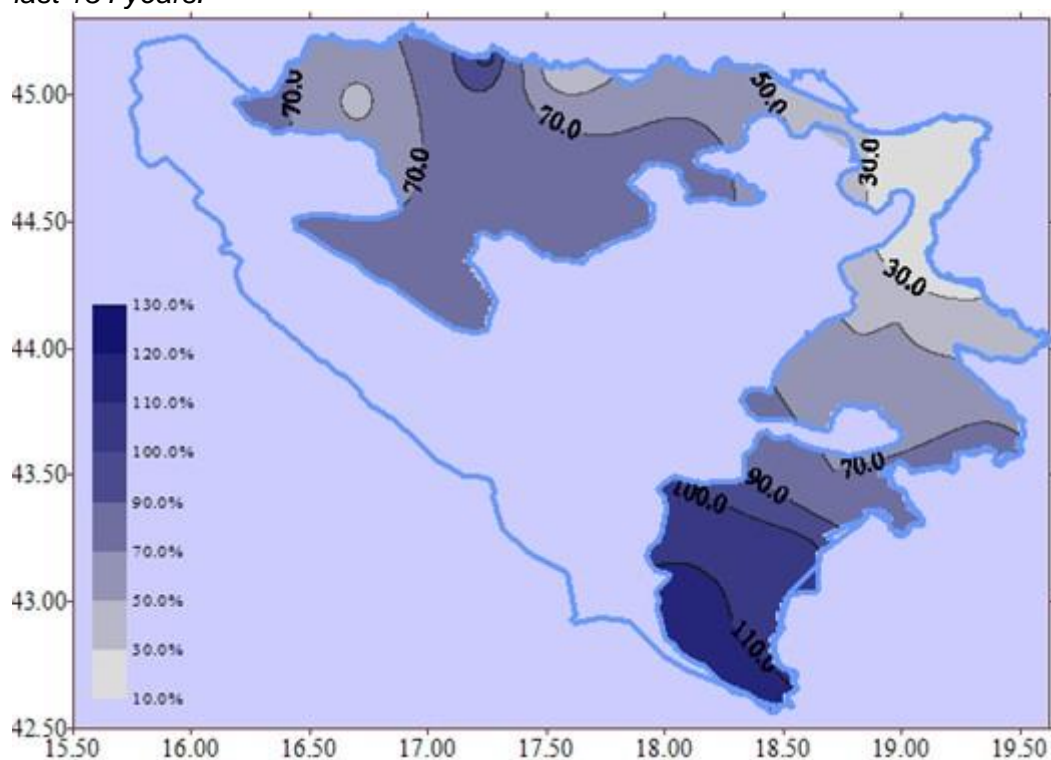


Fig 1: Spatial distribution of rainfall positive change (surplus up to 120%) for JJA 2014 in Serbian R.

The greatest daily intensity of above 50mm was measured on **6<sup>th</sup> and 7<sup>th</sup> Aug**, when it is recorded absolute daily maximum in at least 60 years (Drinic, Srbac, Bijeljina, Zvornik...). The maximum of intensity was in area of Banja Luka (Celinac) and Doboje where it is recorded 79mm and 73mm respectively.

The spatial distribution of August total precipitation amount is shown below (Fig 2) shows the highest precipitation height in mid northern areas.

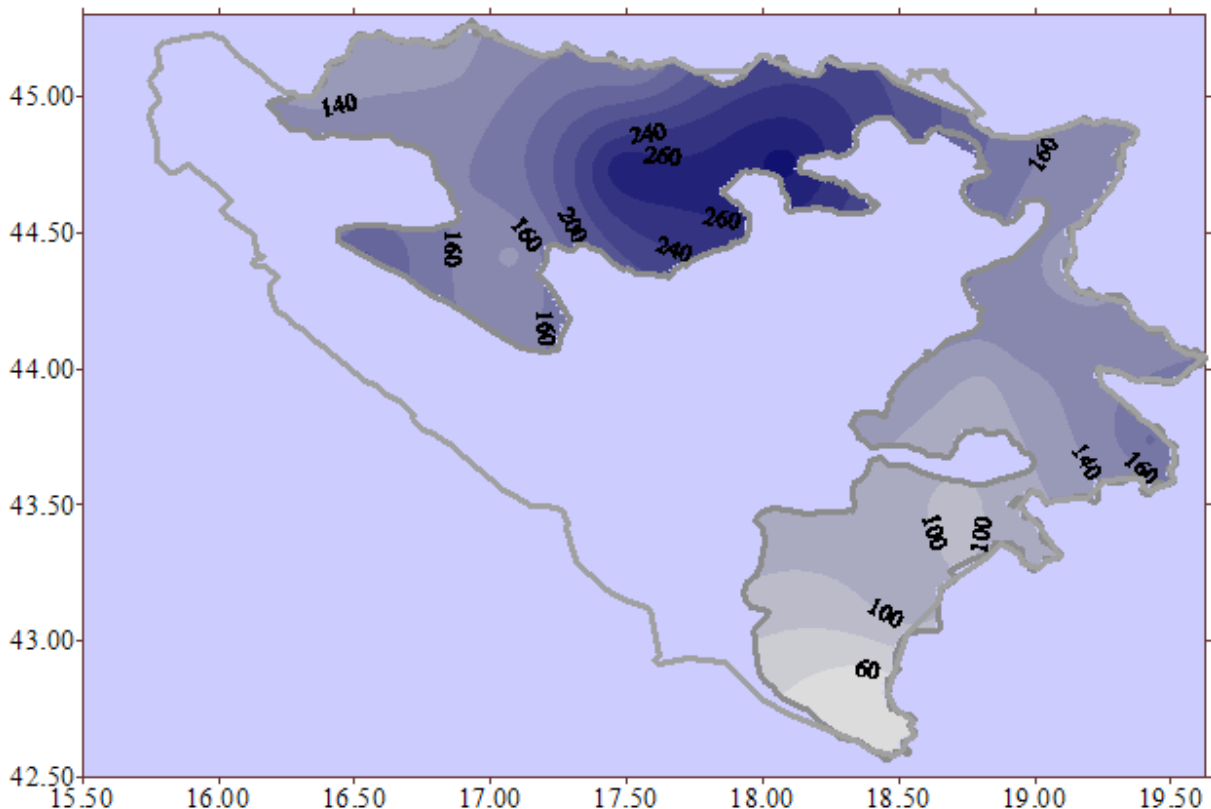


Fig 2: Spatial distribution of August 2014 sum of precipitation (mm/month) in Serbian Republic, BH

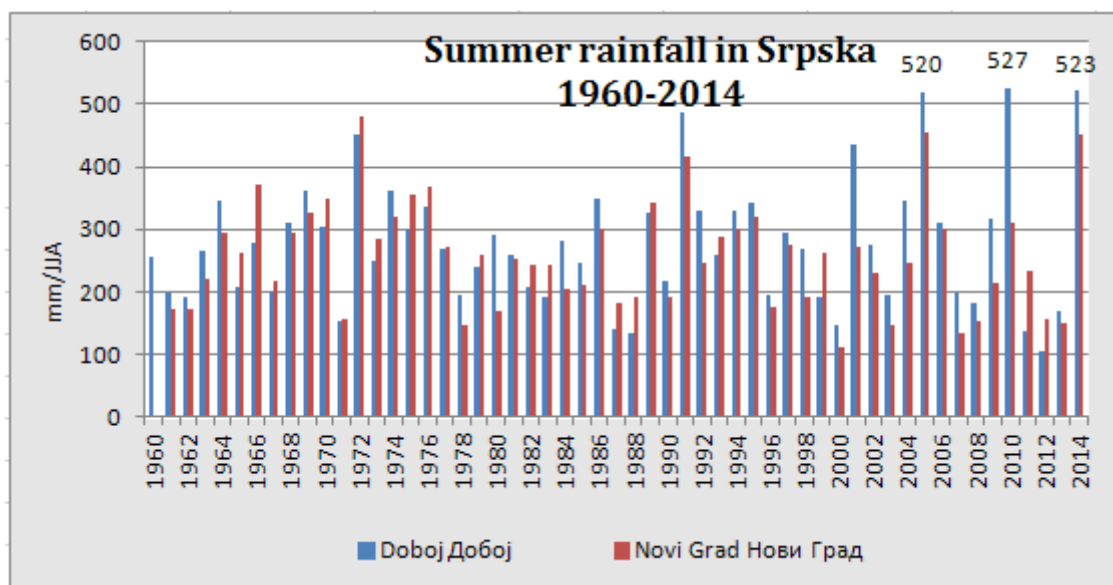


Fig 3: JJA total rainfall amount 1960-2014 in SRPSKA

The statistics regarding both of meteorological elements and assesment of the climate outlook are shown below in tab 3 and 4.


Tab 3: distribution of the terciles categories and observed JJA 2014 values for Air Temperature and Rainfall in Republic of Srpska, Bosnia and Herzegovina

Season: JJA014	Air Temperature (°C)				Precipitation (mm)			
	33	67	50	Observed value	33	67	50	Observed value
Бијељина Bijeljina	20.9	21.8	21.2	<b>21.8</b>	216	278	255	<b>287</b>
Добој / Doboј	20.0	21.0	20.4	<b>20.8</b>	215	321	272	<b>523</b>
Соколац / Sokolac	15.8	16.9	16.3	<b>16.5</b>	204	257	231	<b>359</b>
Требиње / Trebinje	23.4	24.5	24.0	<b>23.1</b>	141	241	193	<b>378</b>
Бања Лука Banja Luka	20.6	21.5	20.8	<b>21.1</b>	221	313	265	<b>513</b>

### Assessment of the SEECOF 11 Climate outlook for the JJA2014 summer season

Tab 4.

Country	Seasonal temperature (JJA)		Seasonal precipitation (JJA)		High impact events*
	Observed	SEECOF-11 climate outlook for temperature	Observed	SEECOF-11 climate outlook for precipitation	
R.Srpska, BH	<b>normal</b>	normal or above normal (30,35,35) - in the southern area with the more probability of (20,40,40)	<b>~ +72% above average (1981-2010)</b>	no clear signal (33 33 33)	severe floods 6 <sup>th</sup> and 7 <sup>th</sup> Aug with about 4 human dead and a great material damage, especially in agronomy.  <i>14-20th May floods caused about 20 dead victims, 10 missing and about 600 000 000 € material damage</i>



*Note: Data base in HMS RS is under developing, starting from this year and are not homogenised/interpolated all data regarding to missing periods, so some difference in presentation them may occur. Some stations have incomplete period 1981-2010.*