

National Climate Bulletin and the assessment of the SEECOF-28

Climate outlook for NHMS for summer 2021/22

Highlights

(prepared by Slavica Micev)

Assessment were done with respect to climatological normal 1981-2010.

According to the percentiles, average temperature for summer 2021/2022 across Montenegro was in category **“warm”**, **“very warm”** and **“extremely warm”**. Summer precipitation was in category **“normal”** and **“dry”**.

Air temperature anomalies

Average temperature was in range from 16.7 °C in Žabljak to 29.1 °C in Podgorica (i.e. +3°C higher than normal for 1981-2010). Temperature anomalies were positive and in range from + 2 °C in Berane (northern mountainous region) to + 3.6 °C in Budva (coastal region).

Comparing to the highest average summer temperature, average temperature in 2022 was the highest in coastal region (Bar, Budva, Herceg Novi and Ulcinj), while in the rest of the country it was within 10 warmest years.

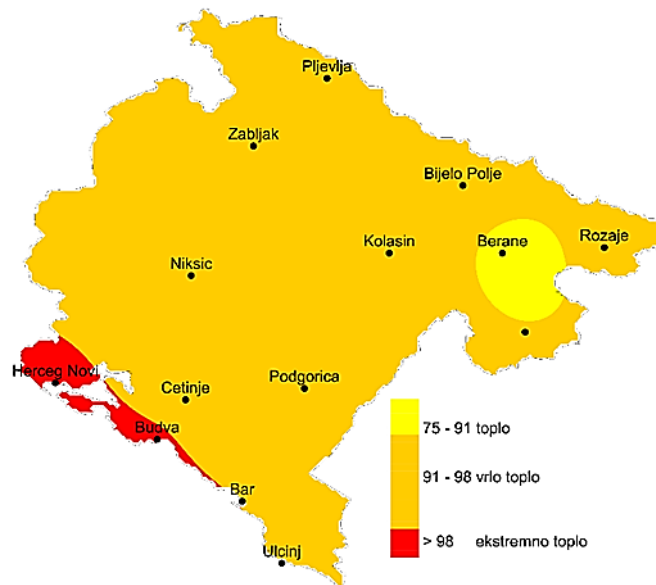


Figure 1. Spatial distribution of percentile for summer temperature anomalies with respect to the 1981-2010 climatological mean

The number of tropical days ($T_x \geq 30$ °C) was in range from the 4 days in Žabljak (1450 m asl, northern mountainous region) to the 83 days in Herceg Novi and in Podgorica (80 days). Comparing to the maximum number of tropical days, these days was in the 1st rank in Herceg Novi, Budva and Nikšić this summer, while in the rest of the country they were within 10 warmest summers.

The number of tropical nights ($T_n \geq 20^\circ\text{C}$) was in range from the 3 nights in Nikšić to the 52 in Ulcinj, 63 in Herceg Novi, 76 nights in Bar (+6 more than in 2019), 77 in Budva and 88 nights in Podgorica (+6 more than in 2003).

Anomalies of winter precipitation

Total amount of precipitation was in range from the 58 mm in Podgorica to the 253 mm in Rožaje. Anomalies of precipitation were in range from the 39% in Podgorica to the 109% in Rožaje.

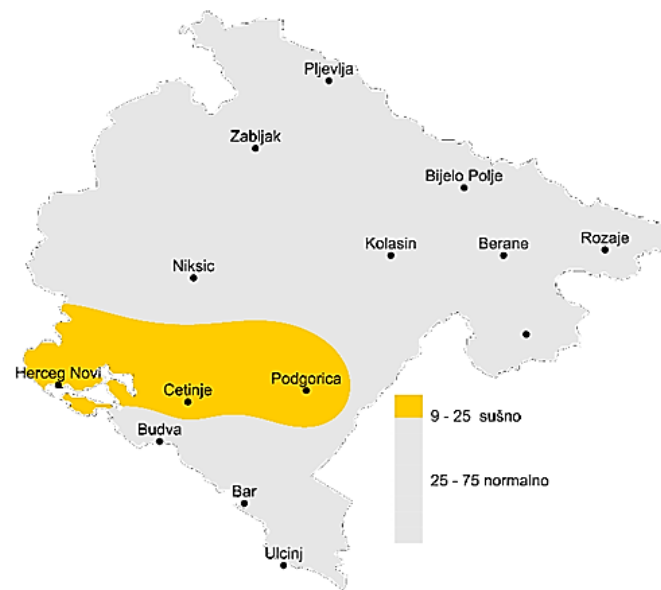


Figure 2. Spatial distribution of percentile for the summer precipitation anomalies with respect to the 1981-2010 climatological mean

SEECOF – 28 Climate outlook validation for the summer

(prepared by Mirjana Ivanov)

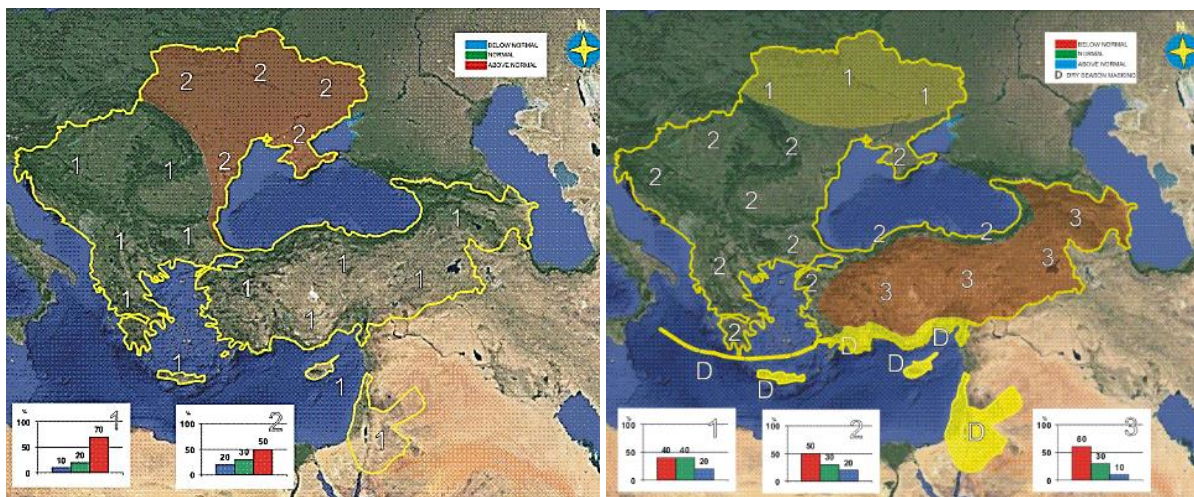





Figure 3. Graphical presentation of the climate outlook for the summer 2022 for the SEECOF region; Temperature outlook (left) and precipitation outlook (right)

Climate outlook for the summer temperature shows higher probability for the temperature above normal. That matches with observed temperature in whole country.

Climate outlook for the summer precipitation shows higher probability for the precipitation below normal what matched with observed precipitation in the belt from Podgorica over Cetinje to Herceg Novi (figure 2). In the rest of the country precipitation was in normal range.

Country	Seasonal temperature (DJF)		Seasonal precipitation DJF		High Impact Events
	Observed	SEECOF-28 climate outlook for temperature	Observed	SEECOF-28 climate outlook for precipitation	
Montenegro	Above normal	70% above normal 20% normal 10% below normal	Normal in the large part of Montenegro; Dry in the belt from Podgorica – Cetinje – Herceg Novi	No predictive signal (50, 30, 20)	<p>The 23rd June: storm weather in central and north region – in Podgorica with heavy precipitation and hail affected:</p>  <p>- the largest fruit plantation and vineyards of AD “Plantaže” enterprise. Costs of losses were large, over million of euros; https://www.vijesti.me/vijesti/drustvo/610215/vid-eo-jaka-kisa-i-grad-pogodili-podgoricu-vietar-obarao-i-stabla</p> <p>- crops in the suburbs;</p>  <p>- crashed the trees.</p>

					 <p>Photo: Portal DAN</p> <p>In Tuzi, heavy precipitation and hail destroyed watermelon plantation https://www.vijesti.me/tv/emisije/610279/un-istene-lubenice-u-malesiji-poljoprivrednici-pozvali-jokovica-abazovica-i-djeljosaja-da-reaguju</p> <p>In Pljevlja (northern region) heavy precipitation and hail destroyed many orchards in the surrounding villages.</p>
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