

ANALYSIS OF LOCATION FACTORS IMPORTANT FOR DEVELOPMENT SPA TOURISM IN SREBRENICA

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Abstract

Analysis of location factors important for development Spa tourism in Srebrenica

In this paper, location factors important for the development of Spa tourism in Srebrenica was analyzed. Crni Guber Spa is located at 596 meters above sea level and is the highest spa and climatic place in northeastern Bosnia. Until the beginning of the war in 1992 in Bosnia and Herzegovina, the backbone of the economic development of the municipality of Srebrenica was the development of spa tourism. Spa Crni Guber in Srebrenica was a well-known health resort for anemic diseases. The accommodation capacities of this Spa complex were damaged by the war, so this health resort is currently in stagnation. We single out the time after 1995 as a special period, because there are no conditions for tourist movements towards the Crni Guber Spa in Srebrenica. Conducted research indicates that for the launch of the Crni Guber Spa and the adequate use of medicinal waters for medical purposes, it is necessary to resolve property and legal issues related to accommodation facilities and medical equipment of this Spa as well as the issue of concessions regarding the exploitation of medicinal water. Analyzing the importance of location factors and other factors important for the development of Spa tourism, in addition to local development policy in the municipality of Srebrenica, author believes that hydrographic and climatic resources, accommodation capacities and the touristic market are of special importance. The analysis of the spatial distribution of medicinal waters presents their economic value and proposes guidelines for further use and protection of these resources. For this type of tourist activity in Srebrenica, the tourist policy of local and state authorities is of great importance, as well as the connection between tourist organizations in order to attract visitors for treatment, recreation and rest. This paper presents a contribution to theoretical and practical research for the development of Spa tourism in the municipality of Srebrenica.

Key words

Healing waters of the Crni Guber Spa, planned management

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1. Introduction

The municipality of Srebrenica is located in the northeastern part of Bosnia and Herzegovina. It stretches along the central part of the Drina River. It borders the municipality of Bratunac in the north and northeast, the municipality of Milići in the west and the municipalities of Rogatica and Višegrad in the southwest. The southern border of Srebrenica is part of the central course of the Drina River and it is also part of the state border between Bosnia and Herzegovina and the Republic of Serbia. It has an area of 526.83 km² with a population of 13,490 (2013 census). Srebrenica is connected with Zvornik, Bijeljina, Tuzla and Sarajevo, and across the bridge on the river Drina with the municipality of Bajina Bašta (Republic of Serbia).

The municipality has a favorable geographical position towards the larger city centers of Sarajevo and Belgrade, primarily due to the distance of up to 200 km. The movement of visitors from the area of Northern Bosnia towards Srebrenica is directed through the Tuzla valley, which is 92 km away. The connection of Srebrenica to Northern and Central Bosnia is expressed by the main roads M-4 Zvornik, Tuzla and M-19 Srebrenica, Vlasenica, Sarajevo. In the erosive extension of the river Križevica, at 370 meters above sea level, the city center of Srebrenica stretches in a south-north direction for 4 km.



Fig. 1: Summer climatic ambience of the spa resort Srebrenica.
Source: Tourist Organization, Srebrenica, 2020.

During the Roman rule, mining developed in this area. This is evidenced by numerous abandoned trenches and ditches up to 5 km long, 10 m high and 250 m wide. Springs that erupt to the surface have appeared in the places of mining excavations in dark clay shales. Examination of the therapeutic values of Crni Guber mineral springs confirmed their healing properties, after which a spa complex was built. Healing waters and pleasant climate enabled that the Spa Crni Guber become a famous tourist destination in the treatment of anemic diseases during the last century.

2. Research methodology

The research in this paper required an analysis of location factors that are important for the development of Spa tourism in Srebrenica. The aim of this analysis was to point out the factors that are important for the return to the function of the Spa Resorts in Srebrenica. The paper identifies the healing waters and climatic characteristics of the area, then analyzes the tourist infrastructure and market. In the final part of the paper, are given guidelines on how to return the Crni Guber Spa to the function of a health resort. Along with each of the factors discussed in this paper, cartographic thematic contributions are presented. The methodology of the paper required the application of a combined qualitative and quantitative comparative method and methods of analysis and synthesis. The complexity of the research required the use of data from various sources, in addition to professional literature, planning documents, maps, field sketches and statistical indicators were used. According to their structure, the collected working material and data were processed by modern geographical methods, including GIS technology for the presentation of the geographical reality of the area.

3. Results and discussions

3.1. Location factors important for the development of Spa tourism

Analyzing the importance of individual location factors and other broader factors for the development of spa tourism, in addition to local development policy in the municipality of Srebrenica, the author believes that water and climate resources, accommodation and market are of special importance.

3.1.1. Medicinal and mineral source

The water of Crni Guber binds its origin to the geological base and the minerals that are distributed in it, as well as the flowing waters that have dissolved it. Previous research has confirmed 48 mineral springs, of which Kožna voda, Mali Guber, Sinusna voda, Ljepotica, Crni Guber, Očna vodica, Mala and Velika Kiselica have been medically treated and registered as medicinal waters. The mineral springs are located one after the other next to the Crvena Rijeka, into which they flow with the highest altitude location of Očna vodica to the Kožna voda of the lowest location. The mineral springs of Crni Guber were of the greatest importance in the development of Spa tourism.

Mali Guber is 300 m away from the medical center "Argentarija", located right next to the promenade. According to the degree of minerality, it contains twice as much iron as Black Guber. The flow of the Mali Guber spring is 30 l / min. Veliki Guber is 1.300 m away from M.C.Argentarija, has a flow of 163.6 l / min, its located at 596 m above sea level, and its one of the most healing springs in the region of Northeast Bosnia. The water of the Veliki Guber spring was tested in a therapeutic sense, as fresh and at the spring, as canned-stabilized (bottled) at the institutes in: Vienna, Sarajevo, Zagreb and Belgrade.

The last research was conducted in 1980 and agrees with the physico-chemical analysis of S. Mihalić from 1976. Guber's springs are natural cold, arsenic-iron waters with a total mineralization of 772 mg / l and can be drunk in their natural state without dilution (Miholić 1955). Iron and arsenic give a basic feature to Guber 's water (Crni Guber Archive 1976).

Physical properties: Water temperature 12.4 ° C, specific gravity is 1.00116, at 0 ° C, it has a refreshing acidotropic taste, odorless, acid reaction (litmus, pH value 5). Color: due to the small proportion of suspended matter, Očna voda spring has a bluish greenish color, while other sources of Crni Guber are colorless.

Chemical properties: Among the cations, the dominant place is occupied by: iron (0.123 g/l), aluminum, calcium, sodium and magnesium. Of the anions, Guber's water is characterized by: sulfates, hydroarsenates and chlorine.

Of the trace elements there are: copper, manganese, zinc and cobalt. These elements are very important in the resorption of iron in the human body. Total radioactivity is 17.19 Mach units (Center for Physical Rehabilitation and Blood Diseases 1991).

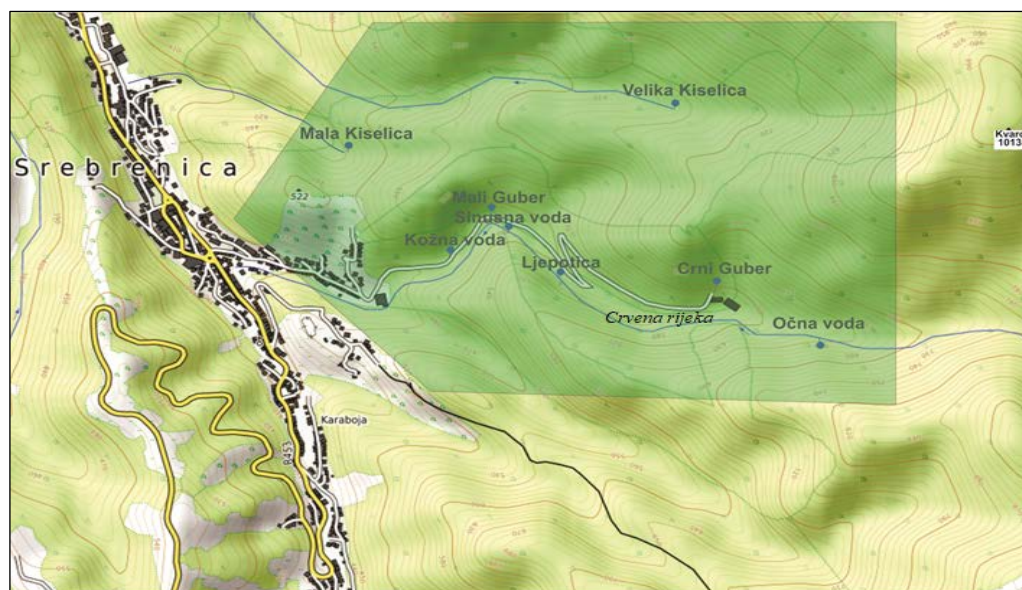


Fig. 2: Spatial distribution of healing waters in Srebrenica.

Source: Spatial distribution of the source Crni Guber was done by the author.

Medicinal properties: Examination of therapeutic values confirmed the medicinal properties of Crni Guber water that can be used as an adjunct in treatment: secondary hypochromic anemia (anemia due to large iron loss), acute and chronic bleeding, insufficient iron resorption, mucosal damage, headaches, endocrine disorders in women, weight loss, fatigue, tiredness and chronic skin diseases. Analyzes performed for many years in the Spa Guber and in internal clinics in Belgrade and Sarajevo, showed that the mineral water Crni Guber is one of the best drugs in the treatment of anemia and other diseases mentioned above (Proceedings of the company for tourism, recreation and treatment "Guber " 1976).

The healing water of Crni Guber enabled the development of health tourism, which was confirmed by the construction of a Spa complex. (Project for revitalization of the hotel at Vrelo Guber, Srebrenica, 2002). Spa Crni Guber in Srebrenica started operating in 1951, and bottling of medicinal water with the use of vitamin C in 1956.

Tab. 1: Physical and chemical properties of Crni Guber water.

Cations (+)	mg/l	Anions (-)	mg/l
H	0,01657	Cl	0,0153
Na	0,1969	SO4	5,324
K	0,1314	HAs	0,05752
Ca	0,2538	Sil.oks	0,9306
Mg	0,1599		
Sr	0,00003		
Ba	0,0018		
Al	1,552		
Fe	2,206		
Mn	0,01571		
Zn	0,1089		
Pb	0,00022		
Cu	0,00163		
Ni	0,00033	Total mineralization: 772mg/l	

Source: Archive of the Spa Crni Guber business company, 1991.

The beauty of Guber's springs is complemented by wooded surroundings. Coniferous forests with their recreational functions significantly affect visitors, especially in the summer months when high air temperatures cause lush vegetation, easier accessibility and weather suitable for tourist movements. The Kvarc mountain has an exceptional tourist value because it is rich in clean air and lush vegetation, and has the characteristics of a climatic air spa. The landscape of the Kvarc mountain stretches along a 1.300-meter-long promenade that leads to the Veliki Guber site. On the eastern slopes of the Kvarc mountain, the wooded surroundings of conifers create a beautiful natural environment. The locality is very attractive, this is especially true in autumn, when the natural harmony and harmony of colors do not leave indifferent visitors to this area, especially the elderly. (Nezirović 2018). The site is very attractive, which is confirmed by numerous visits by nature lovers, of which organized groups of tourists from Bosnia and Herzegovina and neighboring countries should be highlighted. It can be classified as a complementary tourist resource. For the complete valorization of this locality and the development of spa tourism, the tourist infrastructure is necessary, which primarily refers to the construction of the tourist capacities of Crni Guber.

3.1.2. Capacities of Crni Guber Spa

The Crni Guber Spa was located at the foot of the Kvarc Mountain, surrounded by a coniferous forest and had an attractive ambience. It was about 1 km away from the city center of Srebrenica. The Spa consisted of: the Argentaria Center for Physical Medicine, the Domavija Hotel and the Vrelo Motel next to the Veliki Guber spring. (Project for revitalization of the motel at Vrelo Guber, 2002). In terms of accommodation capacity, the Spa had 135 rooms, with 304 beds and 680 seats. The provision of better spa services began in 1967, when the Domavija "B" category hotel was built and the motel at Vrelo Guber was renovated. The Argentaria Center for Physical Medicine, Rehabilitation and Spa Treatment was built in 1982. Hotel Domavija, located in Crni Guber Street, directly in the city center of Srebrenica, enabled the reception of a larger number of visitors, both for spa treatment and multi-day stay of sports teams for preparation and training, as well as for skiing and other winter sports. (Crni Guber Spa Archive in 1991).



Fig. 3: Landscape area on the slopes of the mountain Kvarc towards the source Veliki Guber

Tab. 2: Structure of accommodation capacities of Banja Crni Guber Spa in 1991.

Capacities	Number of rooms	%	Beds	%	Seats	%
Hotel Domavia	113	82,4	244	80,2	530	77,9
Stationary Argentarija	14	10,2	40	13,2	-	-
Motel Vrelo	10	7,4	20	6,6	150	22,1
Total Crni Guber	137	100	304	100	680	100

Source: Crni Guber Spa Archive in 1991.

The average capacity utilization of the Spa during 1991 was 48%. Accommodation capacities had the maximum utilization during the summer season from June to September. Autumns in Srebrenica are warmer than springs, so capacity utilization in September was 74%. Due to the lack of hotel capacity, patients were forced to use private accommodation in private houses and apartments. (Project for revitalization of the hotel at Vrelo Guber Srebrenica 2002) (Fig. 4).

During the last war, the accommodation facilities of this Spa complex were damaged, so that this health resort is in stagnation. We single out the time after 1995 as a special period, because there are no conditions for tourist movements towards the Crni Guber Spa in Srebrenica. The unfavorable standard of the population, the consequences of the devastation of accommodation capacities, the war-conditioned migration of the population and the lack of funds, significantly influenced the stagnation of spa tourism in Srebrenica. The basis of spa tourism in Srebrenica is the construction of new facilities at nearby mineral springs, with equipped physiotherapy and medical treatment and packaging of mineral water (as medicine) for the market.

In recent years, on the site of the former spa complex "Argentarija" as well as on the plateau of Guber, work has begun on the construction of a spa complex and spa center. Due to unresolved property and legal relations and privatization, the construction of these capacities was stopped.

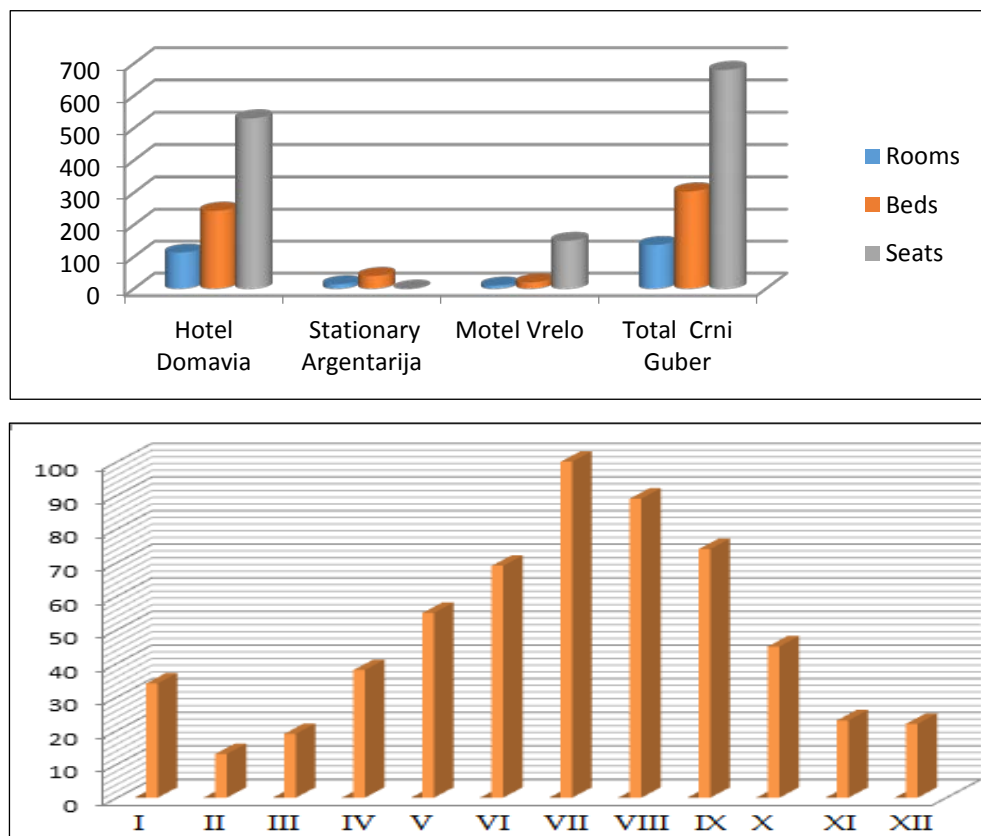


Fig. 4: Structure and utilization of accommodation capacities in Srebrenica until 1991. Source: own calculations.

3.2.3. Market

The spa based its activity on the exploitation of Crni Guber water, which created conditions for the development of spas for people suffering from anemia, as well as other diseases. Treatment with mineral water was performed: by drinking, medical treatment with inhalers and through baths. Water drinking therapy was performed for: anemia, fatigue and headache. Interest in the use of the Spa was great, most visitors for treatment came from Posavina. If we analyze the stay of visitors from the second half of the twentieth century when Spa tourism recorded a rise in development, we see that the number of visitors and overnight stays was constantly increasing, which was mostly influenced by health motives, coming to treatment, recovery and rehabilitation.

Since 1975, the number of patients and overnight stays has been constantly increasing, always exceeding 5.000 (Statistical Yearbooks of Bosnia and Herzegovina Statistical Office of the Republic of Sarajevo, 1991). The average length of stay of

patients in 1991 was 6.2 days for domestic and 10.1 days for foreign visitors. Domestic visitors dominated the total tourist traffic with 98.1%, foreign with 1.90%.



Fig. 5. Banja Guber, in the construction of a model of tourist facilities.

Source: Archives of the Municipality of Srebrenica, 2019.

Due to the demand for medical services, 64.686 overnight stays were realized in tourist traffic in 1985, while in 1991 the number of visitors increased to 10.898 who realized 68.660 overnight stays. (Archive of Enterprises of the Municipality of Srebrenica, 1981-1991). It should be noted that this area was visited by 15 organized groups of visitors from Bosnia and Herzegovina, Serbia and Croatia in 1991. This is the most intensive time of spa tourism development in Srebrenica. The provision of quality physical therapy services has enabled Crni Guber to become the most famous health resort in Northeast Bosnia (Nezirović 2008). Everyone who came to Banja once returned again the following year, because they felt an improvement in their health. (Nezirović 2012).

Tab. 3: Tourist traffic in Srebrenica, in the period 1975 - 1991- 2015.

Year	1975	1980	1985	1991	2011	2012	2013	2014	2015
Total visitors	5.637	6.768	7.844	10.898	896	757	830	946	1.245
Domestic	5.602	6.709	7.779	10.700	277	302	313	383	422
Foreign	35	59	65	198	619	455	517	563	823
Total nights	34.133	26.372	64.686	68.660	1.496	1.308	1.513	1.579	2.145
Domestic	34.097	26.040	63.874	66.667	387	503	739	634	606
Foreign	216	332	812	1.993	1.109	805	774	945	1.539

Source: Tabular presentation made by the author according to the sources.



Fig. 6: Providing services in CFM Argentina until 1992.

The information available to the Tourist Organization of Srebrenica is the sum of all announced one-day individual and group visits to the city of Srebrenica, in a tour of the cultural motives of this area. Also, many visitors come unannounced, so the actual number of visits is even higher. According to the data obtained by the author from the Tourist Organization, in 2016, about 30.000 visitors visited Srebrenica, but it is impossible to determine the exact number, since the official statistics register only visitors who spent the night.

By returning the Spa to function, the tourist offer could include other tourist facilities in the municipality, which provide numerous meadows with fragrant plants and forest complexes at the foot of Sušica, the Perućac reservoir and the Drina canyon. Therefore, what is provided by Spa Crni Guber and other valuable ambiances of Javor and Osat in natural contents, is no less valuable than what is provided by the most representative localities, Zlatibor and Divčibare, in the neighboring Republic of Serbia.

4. Conclusion

Analyzing all the above factors that are important for the development of the Spa Crni Guber in Srebrenica, the author came to the following results. According to the altitude of 596m, as the highest health resort in Northeast Bosnia, it has a large amount of clean air and is a climatic health resort. The climate is suitable for recreation, because the treatment is based on the remediation of anemic diseases. Srebrenica's forest ecosystems provide immeasurable contact with nature, revitalizing fatigue and establishing working capacity for future activities. Although it has a good natural-geographical position and a wonderful environment for rest and relaxation,

for the complete valorization of Spa Crni Guber, tourist infrastructure is necessary, which primarily refers to the construction of tourist capacities of the Spa and other accompanying facilities for health tourism development.

Spa Crni Guber with equipped infrastructure has great tourist opportunities. This is especially true of the specifics and rarity of mineral water, which is a balneological attraction. It is the only one in Europe registered as a medicine for anemic diseases. Given that it is unique in its mineral composition, it is clear what role it can play in the development of Spa tourism in Srebrenica. The waters of Crni Guber were declared medicinal in 1956, although they have a natural decline and are suitable for exploitation, they are now not used. By capturing the source, their therapeutic values would be significantly expanded. In addition to spa treatment, water can also be bottled and marketed as a medicine. The representatives of the authorities of the municipality of Srebrenica emphasize that the waters of Crni Guber are the economic potential of the municipality, but certain obstacles have arisen that need to be solved, such as the issue of the concession related to the exploitation of medicinal water. That agreement has not yet been reached.

Today, the spa is in stagnation, apart from the fact that the construction of accommodation capacities and a medical center has been stopped, a political problem has arisen due to unresolved property and legal relations, so that more than two decades of millions of liters of medicinal water flow into Crvena Rijeka.

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ANALYSIS OF LOCATION FACTORS IMPORTANT FOR DEVELOPMENT SPA TOURISM IN SREBRENICA

Summary

The research in this paper required an analysis of location factors that are important for the development of Spa tourism in Srebrenica. The municipality of Srebrenica is located in the extreme northeastern part of Bosnia and Herzegovina. It stretches along the central part of the Drina River. Until the beginning of the war in 1992 in Bosnia and Herzegovina, the backbone of the economic development of the municipality of Srebrenica was the development of spa tourism. The Crni Guber Spa in Srebrenica was a well-known health resort for anemic diseases.

Due to the demand for medical services, 64.686 overnight stays were realized in tourist traffic in 1985, while in 1991 the number of visitors increased to 10.898, who realized 68.660 overnight stays. It should be noted that this area was visited by 15 organized groups of visitors from Bosnia and Herzegovina, Serbia and Croatia in 1991. This is the most intense time for the development of Spa tourism in Srebrenica. Providing quality physical therapy services has enabled Crni Guber to become the most famous health resort in Northeast Bosnia. Everyone who came to Banja once returned again the following year, because they felt an improvement in their health. During the war, the accommodation capacities of the spa complex were damaged, so that the health resort is in stagnation. We single out the time after 1995 as a special period, because there are no conditions for tourist movements towards the Crni Guber Spa in Srebrenica.

The basis of spa tourism in Srebrenica is the construction of new facilities at nearby mineral springs, with equipped physiotherapy and medical treatment and packaging of mineral water (as a medicine) for the market. In recent years, works on the construction of a spa complex and spa center have begun on the site of the former spa complex "Argentarija" as well as in the area of Veliki Guber. Due to unresolved property and legal relations and privatization, the construction of the mentioned capacities was stopped. Today, the spa is in stagnation, apart from the fact that the construction of accommodation capacities and a medical center has been stopped, a political problem has arisen due to unresolved property and legal relations, so that more than two decades of millions of liters of medicinal water flow into Crvena Rijeka. By returning the Spa to function, the tourist offer could include other tourist facilities in the municipality, which provide numerous meadows with fragrant plants and forest complexes at the foot of Sušica, the Perućac reservoir and the Drina canyon. Therefore, what is provided by Spa Crni Guber and other valuable ambiances of Javor and Osat in natural contents, is no less valuable than what is provided by the most representative localities, Zlatibor and Divčibare, in the neighboring Republic of Serbia.

