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The Bukov Do Village on the Krivaja River: Life in a way of Sustainability

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Abstract

Kriva Rijeka is the name for a group of villages in the municipality of Olovo located in the Krivaja river valley along its course from the canyon Krsevi, geographical coordinates: 44°07'54.13"N, 18°33'22.36"E, to the locality Kamenica, geographical coordinates: 44°13'09.65"N, 18°29'33.17"E, below the village of Cunista. The term „Kriva Rijeka“ is in unofficial use today, and it appears in documents for the name of the cadastral municipality.

The Bukov Do village is one of the largest villages in the Kriva Rijeka area, and by its geographical-political position,

resources and history (mentioned in the Ottoman Defter from 1604) is an example of people's lives in continuity, and is a good example of sustainability.

The main resources of the Bukov Do village are: geographical position (along the road Olovo-Zavidovici), Krivaja river, spacious ports along the Krivaja river, two abundant streams, sources of drinking water, gardens and orchards within the narrower physical structure of the village, fields and meadows in many wide area of the village, vast meadows and pastures of that forest.

Keywords: Krivaja, Kriva Rijeka, Bukov Do village, Sustainability, Water, Fields, Orchards, Forest

1. Introduction

The Bukov Do village (geographical coordinates: 44°11'02.07"N, 18°33'27.93"E, altitude: 721 m) is located in a slight plateau below Bijeli vrh, on the right bank of Krivaja, about 1 km air distance from rivers (Fig 1.). The area of the village extends to the Krivaja river, in the west, Zunovski potok (and partly further, along the right bank of Krivaja), in the south, Crni potok and Zaratje (locality in the Milankovici village, below the pass Mladosevac), in the north. To the east of the village rises Bijeli vrh (1271 meters above sea level), (Fig 2, 10). The village is 2.2 km away from Solun on the Krivaja river, and 6.5 km from Olovo (by air). An asphalt road was built to the village, which continues to the macadam road to the Milankovici village.

According to the 2013 census, there were 113 people living in Bukovo Do, which is significantly less than the population (160), according to the 1991 census^[1]. Several families live in Bukovo Do: Kljajic, Ejubovic, Colakovic and Alikadic.



Source: Left: https://upload.wikimedia.org/wikipedia/commons/8/88/Bosnia_and_Herzegovina_in_Europe.svg, accessed 10/04/2021, Right: Google Earth, accessed 10/04/2021

Fig 1: Bukov Do. Location



Source: Author (5.21.2020.)

Fig 2: View of Bukov Do from the road Hadre-Glavicno (left) and view from Dren's head (right)

2. Environment

By „environment“ we mean any possibility in space in which man can realize his existence ^[2].

2.1 Natural environment

By natural environment we mean all those features provided by nature, on which man (mostly) has not achieved his influence: geographical location, geomorphology, watercourses and water reservoirs, flora and fauna, available soil, climate ^[2] ...

In morphostructural terms, the Krivaja river basin mainly belongs to the central ophiolite zone of the Dinarides. This ophiolite complex, one of the largest in the Dinarides, is represented by classical rocks of Jurassic-Cretaceous age. In the Krivaja river basin, there are Triassic limestones and dolomites that occur along dislocation zones and predominantly in the areas of tectonic contact of ultramafic massifs and Jurassic volcanic-sedimentary formations. Whether ophiolite melange (hornblende, sandstone, breccia, clay, diabase, hornbeam and periodotite) was formed by the uplift of the oceanic crust or a large intrusion of ultramafics in the continental crust, its deposits lie over the Middle Triassic limestones, and in some parts of the Triassic basin are drawn over them. This position significantly reflects on the specific hydrological function in the Krivaja basin ^[3]. In the Kriva Rijeka area there are different geomorphological forms: steep relief (hill, valley, ridge, watershed), mountain relief (mountain range, mountain), erosion relief (canyon, hip, cave), river relief (valley, estuary, spring, riverbed), meander, swamp, alluvial plain, island, beach, cave, ravine, canyon).

Kriva Rijeka is located in a zone of warm and temperate climate. This climate is considered Cfb (according to the Köppen-Geiger classification of climates) which is characterized by four more or less differentiated seasons - spring, summer, autumn and winter ^[4]. The springs are mostly mild and rainy, followed by the frequent outpouring of Krivaja from its bed¹. It happened that spring came early, when in March a long series of warm days stimulated the vegetation and flowering of the fruit, and then, the frost destroyed the behar of the fruit trees, and thus their entire annual crop. As a rule, spring sowing begins in the middle and ends in late April. Here, too, it happened that the frost in the first half of May destroyed the already advanced vegetation of crops (corn and beans), when it was necessary

to go for re-sowing. Summers are, as a rule, warm, with lots of clear and sunny days. It happened that the spring rains lasted until the beginning of July, and there were also dry periods, when the rain did not fall at all from May to September. As a rule, mowing the grass and drying the hay ends in mid-July, harvesting and threshing cereals by mid-August, and harvesting corn and harvesting potatoes in late September. In September, there is a second mowing of grass (Ottawa), which sometimes reaches the level of yield of the first mowing. Autumn is, as a rule, slightly warm, with the well-known period of 'Miholj's summer' ('miholjsko ljeto'). It lasts from the beginning of September to the beginning of December. Sometimes the autumns are mild and dry, and sometimes rainy, which, on the one hand, causes floods in Krivaja, and on the other hand - they bring snow, as early as mid-November. The first frosts occur in mid-October. Autumn is the period of fruit harvesting, processing (drying, making sweets, pickles) and storage in cellars. The first snows fall in mid-November, usually in late November. It happens that the first snow remains until spring, but also to dig, fall again and dig and so on, until the beginning of January. Sometimes winters are full of snow (over one meter high), relatively cold, and sometimes they are completely without snow. Winter temperatures sometimes drop to -20 °C when the surface of Krivaja in some places completely freezes. It also happened that at the beginning of February, when the temperatures are usually the lowest, the temperatures will be +20 °C. Despite the rare extreme deviations, the differentiation of the seasons is clear and thus determines individual human activities, arranging them into established life cycles.

Precipitation is significant, even during the driest month. The average annual temperature in Olovo is 10.0 °C. The amount of precipitation is about 936 mm / m² per year. Lead lies at 534 m above sea level, while the average altitude of Kriva Rijeka is about 620 m.

The most important resources of the Bukov Do village are: the position of the village in the geographical area (Fig 1.), the abundance of drinking water sources (Fig 3.), the convenient location of gardens and orchards near houses (Fig 6), fields and meadows (Fig 7, 8), pastures (Fig 9), private and state forests (Fig 10).

There are many, abundant, sources of drinking water in the village itself and its immediate surroundings. According to the place and the way of situating in the geographical space, the Bukov Do village is a typical example of locating a settlement in the Krivaja valley. The physical structures of the village are built next to the forest above the village, in a

¹ One of the biggest floods happened in 1962, when Krivaja overflowed to the embankment of the railway.

place with abundant water sources, while a wide area of fields and meadows stretches below the village, to the Krivaja river [5, 6, 7, 8]. Near the village, on the edges of fields and meadows, there are several deciduous forest sites (Drenova glava, Dragolas, Sinja glava), where everyone could feel smaller pieces of wood in the fields (haystack, haymaking material) a special construction, similar to a soybean, on which hay was burned under which there was a

hiding place for shepherds), sticks for beans, weeds and tomatoes, stakes and sticks for fencing the field...

The main summer grazing took place in the forest and forest glades on Bijeli vrh and further in the direction of Kladanj. Residents of Bukovo Do (and Milankovici) had large complexes of quality meadows at the Bebrova site, in the Konjuh mountain, Kladanj municipality.



Source: Author (9.15.2020.)

Fig 3: Many sources of drinking water on the slopes of Bijeli vrh above Bukov Do



Source: Author (5.21.2020.)

Fig 4: Public fountains along the Zunova-Bukov Do Road and in the Bukov Do village

In the middle of the village there is a yew tree which is believed to be more than three hundred years old (geographical coordinates: 44°11'02.07"N, 18°33'28.44"E, altitude: 727 m), (Fig 5). The inhabitants of Bukovo Do keep this tree and are very proud of it, as they are convinced that it protects them from various misfortunes².

² The people have preserved the belief about the prophylactic (protective) power of yew to defend an area from storms and ice. That is why it is considered a great sin to cut down her tree. The yew tree was „hidden“ in the garden for small children, in order to protect it from 'spells'. It was always seen that some of the plow accessories were

made of yew, and that a small piece of wood was pressed against the horn of the cattle, especially the oxen, as a defense against all evil. For the same purpose, the price was especially a stick or a wooden bowl for beating butter made of this wood, because of the belief that no witch would be able to take the milk of a cow or anyone to curse it.



Source: Saima Hadrovic (5.21.2020.)

Fig 5: Large yew in the Bukov Do village (about 300 years old)



Source: Author (5.21.2020.)

Fig 6: One household in Bukovo Do (in the background you can see the Kovacici village and the Velika glava mountain at the top of which is the Ligatici and Mizunovici villages)



Source: Author (5.21.2020.)

Fig 7: Gardens and orchards near houses



Source: Author (5.21.2020.)

Fig 8: Fields and meadows



Source: Author (5.21.2020.)

Fig 9: Pastures



Source: Author (5.21.2020.)

Fig 10: Bijeli vrh, a symbol of Kriva Rijeka Forest in the locality of Zaratje (between the villages of Bukov Do and Milankovici). Forests

2.2 Social environment

The social environment represents everything that man has created and that separates him from the world of other living beings [2]. It includes both physical structures (various material, more or less ordered products of their activity) and the immaterial world that we know through intellect (science, philosophy, religion, law, morality) through an ordered system of abstract symbols (letter, signs) [9, 10, 11, 12, 13, 14, 15].

In 2000, a translation of the 1604 Census of the Bosnian Sandzak (translated by Adem Handzic) was published by the Bosniak Institute Zürich-Sarajevo (Adil-beg Zulfikarpasic Foundation), mentioning the Bukov Do village [16]. In the mentioned defter, precise data on the inhabitants of Bukovo Do, their income and tax liabilities are given³.

³ Although this source (p. 234) mentions the Bukov Do village in the Olovo nahija, its description does not correspond to the well-known Bukov Do village in Kriva Rijeka. We list it here though.

78. The Bukovi Dol village, belongs to Olovo:

A bridge was built on the Biostica river, which flows near the villages of Dusina, Medjupalez, Bukov Dol and Crvotina. Since the river is constantly blue, passengers going in the direction of Buda, Belgrade and Sarajevo, go around for three days.

The inhabitants of the mentioned villages undertook the obligation to repair and maintain (that bridge), and for that service they were released from all usual charges.

As before they will maintain the said bridge and for that service, according to the earlier custom of being a muaf. According to the honorable order, and on the basis of the royal decree that arrived on the 4th day of Ramadan in 1008, their release was introduced in the new defter.

Kurd, Firuza; Besir, Pir-Alije; Uvejs, Junusa; Osman, Mehmeda - on the heritage of Veselin; Gazi, Timurhana; Heritage of Miloš Radivoje, in the possession of Timur, son of Oručev; Saban, Nesuha; Korkud, Sabana; Ibrahim, Sinana; Hussein, Timur - on his father's inheritance; Pir-Mezid, Ferhada - on his father's inheritance, instead of Pir-Alija; Behram, Balije; Timur, Vladka - on his father's inheritance; Heritage of Milorad, in the possession of Komlen, now in the possession of Pir-Ali, son of Nesukh; Heritage of Vladonja, in the possession of Besir Iskender; Memihan, Alije; Kurd, Timura; Milashin, Radivoje - on heritage; Abdi, Balije; The heritage of Vukosav, in the possession of the inhabitants of the village, now in the possession of Besir Firuzov; Jahja, Firuza;

Muslims with heritage 19, non-Muslim 1;

Income:

resmi pair and bennak 420

ispndja 25

wheat, kejla 9, amount 198

mixed breed, kejla 20, amount 260

oats, keila 15, amount 105

wider, medri 4, amount 28

vegetable soup 5

ushur of flax and hay 35

ushur from hives 30

ushur of garlic and red onion 204

1 mill, fee 15

half of the badihava, mladjarina, poljačina and tapija taxes on the land 319

Total: 1600

Towards the end of the Ottoman rule in Bosnia and Herzegovina, a certain hodja, Jusuf Kisić and his family, moved from Bukovo Do to Turkey, since when nothing has been known about them.

The Bukov Do village (together with the Zunova and Recica villages) has its own prayer. Originally, the religious ceremony was performed at the 'doviste' (a place on a forest glade to perform collective prayer, on Bijeli vrh), and the entertainment part in the village of Zunova, near the mekteb building.

3. Man

The term 'man' is a huge question whose essence he himself tries to decipher within his own limits, within the limits of the Earth and the limits of the Universe [2]. Together with the rest of the living world, it participates in the process of circulating matter and energy in nature, sharing with it the same destiny, giving birth and dying against its will. Being endowed with reason, will and feelings, he is, the only one in the living world, able to discover the given laws of the structure of nature.

Bukov Do is known for masters of various specialties. The most famous were the stone masons, Ibrahim Kljajić with his sons-Idriz, Safet, Sifet and Mirsad. Ibrahim's fourth son, Ahmet-Ahmo, was a primary school teacher in Solun on Krivaja and then a postmaster in Olovo, where he built a house and started his own family⁴.

The first young man from the Bukov Do village to receive a university education was Hasan Alikadić (born 1950), who graduated from the Faculty of Forestry in Sarajevo. He found employment in Tesanj, where he still lives today.

From the 1992-1995 war, a large number of young people, both boys and girls, obtained a university education at the universities of Sarajevo and Tuzla. Mostly, they find employment there, start their own families and live permanently, while in Bukov Do they come to visit their parents and on vacation.

4. Boundaries: architecture as a framework of life

Houses, stables and auxiliary facilities in Bukovo Do were built according to the principles that are common to all villages in the Kriva Rijeka area. There are still preserved houses built after World War II and the 1960s (Fig 11). The houses are developed vertically through the basement (warehouse/'magaza'), ground floor and first floor. Wood is the basic building material, and stone was used to make the walls of the basement (warehouse/'magaza'), which was the main pantry of the household. Some houses have been reconstructed, adapted and equipped with modern installation systems and are very comfortable to live in. Some have been abandoned and are not inhabited.

⁴ Ahmet-Ahmo married Nizara (a native of Rozaje, Montenegro), a Russian language teacher



Source: Author (5.21.2020.)

Meho Kljajic's House (famous and rich host in Bukovo Do, today the house of his son Kemal)

Fig 11: Houses in Bukovo Do built in the 1960s

After the 1980s until today, the houses are designed according to the project, with a modern layout, construction and materialization. In terms of architectural design (similar

to houses from this period in other Kriva Rijeka villages), houses generally have nothing to do with the indigenous tradition (Fig 12.).





Household of Dzemat Kljajic (younger son of Meho Kljajic)



Source: Author (5.21.2020.)

House with a courtyard and auxiliary facilities of a household in Bukovo Do.

Fig 12: Houses in Bukovo Do built in the 1980s to the present day



Source: Author (5.21.2020.)

Fig 13: Stables and auxiliary facilities in Bukovo Do

In the Bukov Do village, a new mosque was built (2005) in which the basic religious instruction of children is performed and prayer is performed, mainly during the

month of Ramadan. In the harem of the mosque, an old stone pillar for cereals is kept (the first phase in the preparation of the famous dish 'keshke'), (Fig 14).





Source: Author (5.21.2020.)

Fig 14: Mosque in Bukovo Do

The Bukov Do village has a wide main village street with several extensions (village squares) where both older and younger people gather, talk and spend their free time

relaxing (Fig 15). In some squares, trade takes place, where vehicle dealers (mobile shops) stop and sell their goods.



Source: Author (5.21.2020.)

Fig 15: Free space within the physical structures of the village

It is interesting that all close families in the village of Bukov Do have their own family cemeteries. All cemeteries are located along the main road whereby the villagers keep the

memory of their ancestors with the teaching of prayer (El Fatiha), (Fig 16).



Source: Author (5.21.2020.)

Fig 16: Cemetery in Bukovo Do

5. Conclusion

The natural environment is more or less a given reality that man can preserve, change or devest (change) to the extent that it becomes a 'new natural reality'. These changes, as a rule, on the other side of long-term human needs, are rarely beneficial, both in the short and long term [2].

The dominant value of the Bukov Do village is the Krivaja river. Preservation of its water potential, purity, natural features (canyons, waterfalls, quiet parts of the stream) and biodiversity will depend not only on the indigenous population living in its catchment area, but also on the development of awareness of narrower and wider communities (from local communities to countries and the European Union). Krivaja itself is not only the result of

relief, but the existence of forests in its catchment area. In order to ensure the lasting values of the natural environment, spatial plans should be made, from the municipal level to the state level, which would regulate the way of resource management and the place of man in the natural environment (possible interventions in terms of infrastructure, economy, settlements, recreation).

The multitude of streams is a huge resource of the Bukov Do village that needs to be preserved. Streams are already in danger after the uncontrolled capture of their sources, and even after, after the uncontrolled drainage of wastewater and the uncontrolled formation of garbage dumps. The already mentioned spatial plan should be accompanied by appropriate legislation (with an emphasis on the

environmental component), which would regulate human behavior in the environment⁵.

Forests are an important resource of the area of the Bukov Do village. So far, they have been treated as a source of wood pulp (technical wood, firewood), while neglecting the ambiguity of their place in the environment (environment that ensures biodiversity, drinking water source base, climate regulator, basis for healthy food sources). Adequate treatment in the future spatial plan should ensure the diversity of the forest, which will be ensured by appropriate legislation through all levels of social organization.

Available arable land is a natural constant. Raising the level of its creditworthiness should be done and monitored with the help of science and the profession, in a way that ensures organic food production.

Rural tourism could have a significant place in the life of the Bukov Do village in the future. Already at this moment, this type of tourism is practiced⁶, and in order to become continuous throughout the year, the management infrastructure (travel agencies) should be regulated, from the local community to the highest state level. It seems that only membership in the European Union of Bosnia and Herzegovina can raise the level of awareness of the existence and those business opportunities that, although obvious, now seem utopian.

In the conditions of globalization of the world, the social environment is primarily determined by general social tendencies on the global world plan, the plan of Europe and the place of Bosnia and Herzegovina in that world. In addition, the very arrangement of Bosnia and Herzegovina can further regulate the importance of resources, as well as the possibility of manifesting human capabilities in all spheres of life.

Since the area of the Bukov Do village is located near Sarajevo, it will always be an attractive place to live. Already today, it is a place of weekend stay, summer and winter vacation for families permanently residing in Sarajevo, and this stay, in addition to hedonistic, has many practical dimensions (growing fruits and vegetables, for example).

World globalization has not bypassed Bosnia and Herzegovina or any part of its territory. By graduating from the faculty, both in Bosnia and Herzegovina and in the world, the young generations of the Bukov Do village do not determine their existential space territorially, but according to the assessment of their possibilities and chances on the open world market. There will be those descendants who, in accordance with their nature and professional orientation, will remain in their villages and achieve a high level of existence, in accordance with the narrower and wider social context in which the Bukov Do village is now, or in what context it may be in the future. There will also be those descendants who will remain in the Bukov Do village living by inertia, without thinking about perspectives, adapting to each situation, in a similar way as previous generations did. Regardless of the needs that will be generated for existential reasons, future generations of the Bukov Do village will

⁵ Rafting regattas have already started to be organized on the river Krivaja. A sport fishing championship could be organized in a similar way.

⁶ Guests from Sarajevo and Tuzla come to the shores of Krivaja on weekends and use local products of the indigenous population in their diet.

have more or less pronounced aesthetic and psychological needs for contacts with this area, which will confirm those layers of their personality that stand in front of every practical action. Here, too, it should be underlined that the perspectives of man in future generations of the Bukov Do village are determined by the relative proximity of Sarajevo and Tuzla, so as such they are certainly broad and meaningful.

The history of the Bukov Do village so far has shown that the natural environment primarily determined the perspectives of man and the perspectives of borders on all new ones, while the social environment determined the intensity of life.

The entry of Bosnia and Herzegovina into the European Union would make meaningless the rigidity of belonging to an ethnic group, as a fundamental input in the complexity of life, and affirm all other inputs that enable the all-round development of both the individual and his collectives.

In the conditions of open possibilities, both the development and affirmation of specificity will reach its natural expression, in accordance with its immanent strength, in the conditions of competition. The a priori imposition and institutionalization of particularity has already proved to be a means by which the completely pragmatic interests of individuals and the collective are realized.

6. References

1. Demografija/Demography 2015, TB 02, Agency for Statistics of Bosnia and Herzegovina, Sarajevo, 2016. http://www.bhas.ba/tematskibilteni/TB%20Demografija%202015_BS_ENG_www.pdf, Accessed: 7/15/2022 (in Bosnian-Croatian-Serbian)
2. Hadrovic A. Defining Architectural Space on the Model of the Oriental Style City House in Bosnia and Herzegovina, Serbia, Montenegro, Kosovo and Macedonia, Booksurge, LLC, North Charleston, SC, USA, 2007, p9.
3. Skopljak F, Alic F, Zigic I. Thermal waters in the Krivaja river basin, Geoloski glasnik no. 37., Federal Institute of Geology, Sarajevo, 2008, 229-246. (In Bosnian)
4. Olovo Climate. <https://en.climate-data.org/europe/bosnia-and-herzegovina/olovo/olovo-26489/> Accessed: 5/2/2020.
5. Hadrovic A. Hadre, The Evolution of Bioclimatic Architecture, Booksurge, LLC, North Charleston, SC, USA, 2009, 6-7.
6. Hadrovic A. Kriva Rijeka in the Krivaja river valley: life in a sustainable way, Faculty of Architecture, University of Sarajevo, Sarajevo, 2020, 128-155 (In Bosnian)
7. Hadrovic A. Bioclimatic Architecture, Searching for a Path to Heaven, Booksurge, LLC, North Charleston, SC, USA, 2008, p16.
8. Hadrovic A. Water and man in autoshthonous symbiosis in Bosnia and Herzegovina, Avicena, Sarajevo, 2014, p1.
9. Malcolm N. Bosnia, a short history, Buybook, Memory Library, Sarajevo, 2011, p29.
10. Beslagic S. Stecci-culture and art, "Veselin Maslesa", Sarajevo, 1982. (In Bosnian)
11. Cvijic dr J. The Balkan Peninsula and South Slavic countries, Beograd, 1922, 281-282. (In Serbian)
12. Hadziabdic F. Stecci from the area of Olova: Bosnian

- medieval monuments live in their material and spiritual edifice. (In Bosnian)
<https://intelektualno.com/stecci-sa-podrucja-olova-bosanski-srednjovjekovni-spomenici-zive-u-svome-materijalnom-i-duhovnom-zdanju/>, Accessed: 7/15/2022.
13. Hasanspahic M. Mramorovi olovskog kraja. Zbornik radova: Rijeka Krivaja kroz prošlost. Institut za istoriju u Sarajevu-Udruzenje za modernu historiju, Sarajevo, 2016.
https://issuu.com/umhis/docs/rijeka_krivaja_kroz_pro_lost, Accessed: 7/10/2022.
14. Hasanspahic M. Nisani i stara mezarja na olovskom podrucju, 2016.
http://iitb.ba/wpcontent/uploads/2016/07/Mirnes_Hasan_spahic_Glasnik_5_6_2016.pdf Accessed: 7/10/2022.
15. Dedic E. Podrucje rijeke Krivaje kroz medievalnu produkciju, Zbornik radova: Rijeka Krivaja kroz prošlost, Institut za istoriju, Sarajevo, 2016.
https://www.researchgate.net/publication/331382481_Podrucje_rijeka_Krivaje_kroz_medievalnu_produkciju_Zbornik_radova_Rijeka_Krivaja_kroz_proslost_Institut_za_istoriju_Sarajevo_2016, Accessed: 5/2/2020.
16. Obradio: Handzic A. Opsirni Popis Bosanskog Sandzaka Iz 1604, 2000.
17. Godine, Tomus septimus, Serija II, Defteri, Knjiga 4, sv. I/I. Bosnjacki Institut Zurich - Odjel Sarajevo Orijentalni Institut U Sarajevu (Monumenta Turcica Historiam Slavorum Meridionalium Illustrantia), 2000, 234-235.