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SUSTAINABLE TOURISM DEVELOPMENT ACCORDING TO EU INDICATORS, IN THE FUNCTION OF ECONOMIC GROWTH OF NIŠKA BANJA

Abstract

According to the indicators of sustainable development, tourism in Niška Banja is not based on the principles of sustainable development. Economic, social and cultural indicators show a worrying situation that requires urgent measures while environmental indicators show a tolerable situation. Specificity and attractiveness, infrastructure facilities and accessibility, with the construction of hotels, sports grounds, catering facilities, and other supra-structural capacities, would enable the Niška banja to become an exclusive model of sustainable tourism. At the same time, it is necessary to constantly promote and propagate the advantages of this development, with the increase in tourism, better utilization of existing resources and other tourist potentials. On the other hand, the development of tourism can cause great damages to Niška Banja. Therefore, careful and efficient planning, management and rigorous monitoring are needed to ensure that tourism in Niška Banka is truly successful and sustainable, while respecting the natural, social and cultural components of the environment.

Key words: sustainable development, tourism, indicators, growth, Niška Banja

JEL classification: O1, Q56, Z32.

ОДРЖИВИ РАЗВОЈ ТУРИЗМА ПРЕМА ИНДИКАТОРИМА ЕУ У ФУНКЦИЈИ ПРИВРЕДНОГ РАЗВОЈА НИШКЕ БАЊЕ

Апстракт

Према индикаторима одрживог развоја, туризам у Нишкој бањи се не заснива на принципима одрживог развоја. Економски, социјални и културни индикатори показују забрињавајуће стање које захтева предузимање хитних мера, док индикатори стања животне средине показују подношљиво стање.

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Специфичности и атрактивности, инфраструктурна опрењеност и доступност, уз изградњу хотела, спортских терена, угоститељских објеката, и других супра-структурних капацитета, омогућило би да Нишка бања постане ексклузивни модел одрживог туризма. Паралелно са тим, неопходно је константно афирмисати и пропагирати предности оваквог развоја, уз повећање туристичког промета, боље искоришћавање постојећих ресурса и других туристичких потенцијала. С друге стране стихијни развој туризма може изазвати велику штету Нишкој бањи. Због тога, потребно је пажљиво и ефикасно планирање, управљање и строги мониторинг како би туризам у Нишкој бањи био заиста успешан и одржив, уз поштовање природне, друштвене и културне компоненте животне средине.

Кључне речи: одрживи развој, туризам, индикатори, раст, Нишка бања

Introduction

Tourism is one of the economic branches, which in the last few decades has recorded a very dynamic and high development with many positive direct and indirect effects. The direct positive effects of tourism affect the economic growth of the national economy, while the indirect impact the improvement of living standards and the quality of life of the population.

The large mass and mobility of tourists have affected the endangerment and devastation of the environment of many tourist destinations. The high pressure of tourists on tourist destinations has caused the degradation of natural resources urban, degradation of the living space of the inhabitants of the local community and, highly endangered their traditional way of life, socio-cultural heritage, and environment.

The expressive trend of tourism development has induced worry in many relevant worlds, national, scientific organizations, and individuals who have approached the quest for an appropriate solution to mitigate and eliminate these negative impacts. In the quest for a resolution in overcoming the adverse effects of tourism, adopted the concept of sustainable development. Sustainable development of tourism implies preservation and valorisation of tourist resources with constant improvement of the quality of the tourist product, i.e., performing economic activities within the ecological and socio-cultural parameters. So, the development of tourists is based on the criteria of sustainability, economic sustainability in the long run, and socially and ethically equal for all domicile people of the tourist destination. All three aspects of sustainable development, conservation of natural resources and cultural and historical heritage, economic sustainability, and social justice can be analysed and measured using indicators adopted by the European Union. The adopted indicators of sustainable development of the EU by adjusted to the characteristic features of each tourist destination, which by based on ecological, socio-economic, and tourist parameters.

Indicators of sustainable tourism development are not only important for assessing the condition of a tourist destination but are also essential elements in the process of planning the growth and development of tourism. As a result, a large number of countries around the world are increasingly committed to implementing the principles of sustainable tourism development in their strategic plans. A goal needs special attention and is supported as much as possible through development plans and strategies. Sustainable development of tourism

does not endanger the present but does not jeopardize the development of perspectives and opportunities of future generations. In a word, sustainable development is a new philosophy of thinking based on integral and complex development. A new philosophy that achieves efficient use of natural resources preserves the identity of the local community and cultural and historical heritage, achieves socio-economic benefits, strengthens the economic growth of complementary industries, and improves the quality of life of the domicile population.

A spa is an especially form of protection of natural and cultural-historical values. In most cases, they represent significant tourist values and existing and potential opportunities for the growth of several types of tourism. One of the most famous and attractive spas on the territory of the Republic of Serbia is Niška Banja, which according to the richness of tourist potential, represents an independent and complex tourist motive.

Tourist potentials of Niške Banje

Niška Banja is located, in the immediate nearness by the town of Nis, at the tenth kilometre, east located on the extreme branch of Dry Mountain, on the slopes of Koritnjak hill. By connected to Corridor 10, which goes to Sofia and Istanbul. Also, by linked with Nis by railway and City Boulevard. The proximity of Nis, which is at the crossroads of the most important Balkan and European turnover routes, leading from the north from Belgrade, and separating into two branches, towards Skopje, Thessaloniki, and Athens, and towards Sofia, enables good turnover linked and accessibility. Also, the regional road to Gadžin Han by separated from the area of Niška Banja. The populated places of the municipality by linked with about 60 kilometres of roads, and city and suburban bus turnover by organized.

The natural tourist values of Niška Banja are two very attractive gorges, Sićevačka and Jelašnička. Sićevačka gorge is six kilometres from Niška Banja on the road to Sofia, in the Nišava valley between Old and Dry mountain, where 68 endemic species of plants and over 30 species of birds have by registered, some of the very much rare, dry eagle and griffon vulture. On a five km from Niška Banja, in the direction of the ski centre Bojanina Voda, behind the village Jelašnica, there is a gorge, where there are famous stone shapes, dolomite teeth, as well as an attractive waterfall known as "Ripaljka". It has an ideal configuration for natural climbing areas, as well as the challenging peaks of Dry Mountain for hiking; Porch (1810m), Falcon Stone (1553m), Maiden's Tomb (1317m), Kolov Stone (1361m), and Mosor (984m).

The cultural and historical tourist values (anthropogenic tourist values) of Niška Banja are diverse, especially since Nis Spa is almost by linked Nis, which is rich in these landmarks from different historical times.

Niška Banja has characterized a temperate continental climate with an average annual temperature of 12, 2 degrees. The hottest month is July month an average temperature of 21, 2 degrees, and the coldest month is January, with an average temperature of 0.2 degrees. The average annual rainfall is 576, 25 mm. average wind speed is less than 3 Beaufort, and the average value of air pressure by 992, 74 mill bars.

Nišava is the based watercourse on the territory of the municipality Niška Banja, and the Jelasnica River and the Kutina River flow into it. The banks of these rivers are partially regulated, and during the sudden melting of snow and heavy rains, they cannot always prevent damage from floods. The most lag number of settlements is covered the city water

supply system, while part of the household have local water supply systems, while some use individual sources. Drinking water is very high quality, primarily from the Gornja Studena spring. There is no central heating system, and the facilities of the Institute for Cardiovascular Diseases (Radon, Zelengora, Terme, and the Health Station) receive thermal energy from the central heating plant in Radon. The Institute uses heat pumps during the transition period.

The healing properties of Niška Banja are mineral, thermal and radioactive waters. These waters by used for healing bathing treatment, drinking water, and mud treatment. The radioactivity of the water of the mainspring by first discovered by our famous scientist Marko Leko in 1909. At that time, the radioactivity of water at a temperature of 37.5 C0 was 9.69 units. He was the first to perform a chemical analysis of water, and an extensive study promulgates in the Voice of the Serbian Academy of Sciences. According to the results of detailed chemical analysis, which is 1965 performed by Ljiljana Zečević from the Geoinstitute in Belgrade, the water of the source has a specific gravity of 1,00023 reactions (pH) 7,33, the dry residue at a temperature of 180C0 0,2788 g / l. The source of Suva Banja is the second of utmost important springs in Niška Banja. It gives 14 to 42 liters of water per second, whose temperature is 12 to 37C0. According to the balneological classification, the water of Suva Banja belongs to radioactive hypothermia. This water is a feature of significant fluctuations in temperature, yield, and radioactivity.

Methodology of work

In the analysis of sustainable development of the tourist destination, Niška Banja applied five groups of indicators of sustainable tourism development economic, tourist satisfaction, cultural, social, and environmental indicators. These indicators of sustainable tourism development show the current condition of the tourist destination and the possibilities of tourism development in a particular area. Also, sustainable development indicators by used when evaluating the impact of tourism on the quality of the environment. The valuation of the real impact of tourism on the environment by based on three principles of sustainable development, ecological, socio-cultural, and economics. For each indicator, limits values by are defined the state of tourism in the analysed tourist destination appraised as critical, tolerable, and sustainable. In addition, three zones have by determined to determine the limit values of each indicator: red zone (critical situation and the need to take measures), yellow (the tolerable situation with preventive measures), and green zone (sustainable development of tourist destinations).

The group of comparative indicators, shown in the previous table, will be applied in the analysis of sustainable tourism development to the tourist destination Niška Banja. In the statistical analysis of sustainable development indicators, available data were used, collected from secondary sources, i.e., data from the Statistical Office of Republic Serbia and the Tourism Development Service of the Municipal parliament of Niška Banja. The limiting factor in the analysis is the deficiency of data related to the indicator of tourist satisfaction for two reasons: the first that so far the Service for Tourism Development in local government, and long tourism entities did not conduct surveys and the second, which is the period it is impossible to survey tourist satisfaction due to the small number of visitors, and the research sample would not be representative. In addition, the period since the outbreak of the KOVID-19 pandemic has not to be analyzed because we believe that it is irrelevant.

In the context of the pandemic, the tourism industry has suffered significantly, as evidenced by the reduction in the number of tourists coming by 65% globally in the first half of 2020 (Motsa, etc., 2020)

Table 1. Comparative indicators of sustainable development

Type indicator	Indicator	Explanation
Economically	Seasonal turnover:% of full season visits (three months)	<40% green zone 40-50% yellow zone >50% red zone
	Relationship between overnight stays and accommodation capacities	>150 green zone 120-150 yellow zone <120 red zone
Tourist satisfaction	Repeated visits:% of repeated visits over a period of five years	> 50% green zone 30-50% yellow zone <30% red zone
Cultural	Relationship between accommodation capacities and number of local population	< 1,1:1 green zone 1,1-1,5:1 yellow zone >1,6:1 red zone
	Tourism intensity: number of nights (000) according to population (00)	< 1,1:1 green zone 1,1-1,5:1 yellow zone >1,6:1 red zone
Social	Participation of tourism in the local net social product	
	% of tourists who do not come through a tour operator	> 70% green zone 50-70% yellow zone <50% red zone
Indicators environmental conditions	Participation of tourism in the local net social product	<10% green zone 10-20% yellow zone >20% red zone
	% of tourists who do not come through a tour operator	>20% green zone 10-20% yellow zone <10% red zone

Source: Jovicic, D, Ilic, T., Indicators of sustainable tourism development, Glasnik Srpskog geografskog drustva 2010

The collected data will be analysed quantitatively and qualitatively, by applying statistical-mathematical methods as well as measuring variables through simple mathematical formulas. Also too, this method, descriptive statistics methods, induction and deduction methods, and the comparative method. We will measure the variables by grouping them into dependent and independent. Dependent variables include variable variables on capacity utilization and tourist turnover intensity, while independent variables include the number of nights, number of beds, and number of inhabitants. The measurement of variables was done by first grouping them into dependent and independent ones. Dependent variables refer to capacity utilization and tourist turnover intensity, while independent variables include some nights, number of beds, and number of inhabitants. With a lack of data for the indicator of tourist (visitor) satisfaction, other available data will be for a comparative analysis of economic, cultural, and social indicators.

Research results and Discussion

By applying comparative indicators of sustainable tourism development, based on collected and available data, we will investigate the real impact of tourism on the environment of Niška Banja by measuring physical and socio-cultural variables that originate exclusively from tourism.

Economic indicator. Economic indicators include new models of education and sustainable business of modern companies to achieve competitive advantage through optimal use and increase the productivity of available resources. Economic indicators indicate the economic effects achieved by the development of tourism. The archive effect is visible through the seasonal character of the tourist business, the ratio of the number of tourist nights and accommodation capacities, and the coefficient of local tourists increase.

a. Seasonal character of tourism business 2019

Table 2. Number of tourists with the number of overnight stays in 2019.

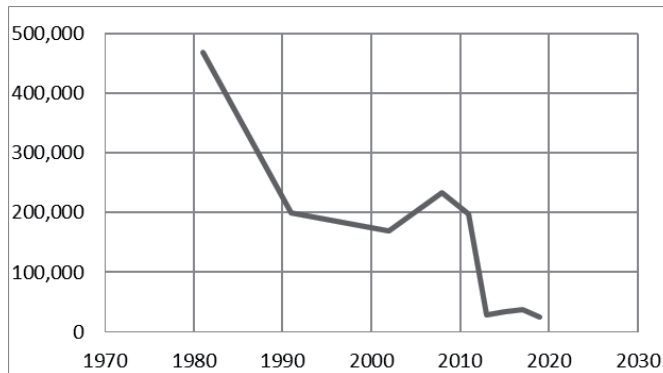
Months	Number of visitors	Number of nights
January	33	310
February	99	654
Mart	147	1.112
April	237	1.321
May	300	2.191
June	440	3.008
July	563	3.422
August	394	2787
September	419	3.444
October	405	3.329
November	372	3.307
December	319	1006

Source: Tourist turnover, by months for 2019, Republic Statistical Office of the Republic of Serbia

According to the available data from Table 1, it is noticeable that the realized tourist turnover, in terms of the number of visitors and the number of overnight stays, in 2019, does not have a pronounced seasonal character. According to EU experts, a seasonal concentration of 40% during the three most visited months enables the sustainable development of the destination. Data for 2019 show that in the area of Niška Banja, during the three summer months, 35.60% of the total number of overnight stays was realized. According to EU standards, the economic indicator, the seasonal nature of turnover, is in the green zone of sustainability for the tourist area of Niška Banja, which represents a satisfactory situation with the adoption of appropriate measures to increase the number of visitors. Tourist turnover to the area of Niška Banja is most pronounced during the two summer months of June and July, somewhat lower in August and unexpectedly, the realized tourist turnover, out of season, in September, October, and November. The lower tourist turnover has been realized in the winter months of December, January, and February. Uneven distribution and low level of tourist turnover, by months and seasons, is a consequence of low-quality accommodation

capacities which are primarily owned by individual households, without the existence of high category hotels and other accompanying tourist and other infrastructure. . Due to the shortcomings and low-quality accommodation capacities, Niška Banja, since 2013, has recorded a drastic decline in tourist turnover, which can be seen in the following chart.

Graf 1. Number tourist night



Source: Author based on RZSRS data

b. Relationship between the number of nights and accommodation capacities

Economic indicator of the relationship between the number of nights and the number of accommodation capacities shows the degree or level of utilization of available accommodation capacities of the tourist destination. In that sense, if the ratio between these two variables is less than 120 nights per bed, capacity utilization is unsustainable, from 120-150 utilization is at an acceptable level and above 150, and capacity utilization is at sustainable development. This company was the carrier of tourism development in Niška Banja and the owner of all hotels whose status has not been resolved, despite attempts at several privatizations unsuccessful. As a result, the accommodation facilities of this company were ruined and not for use. At the same time, no new, modern accommodation capacity has by built because there is no interest from domestic and foreign investors. The limiting factor in the construction of new tourist capacities is the status of the Niške Banje itself, it is a municipality of the city of Nis, which does not pay any attention to the development and improvement of tourism in this spa.

Table 3. Relationship between the number of nights and the number of accommodation capacities, the degree of capacity utilization

Year	Number of nights	Number bed	Indicator
1981	467.725	8.231	56,8.:1
1991	199.402	7.841	25,4.:1,
2002	169.721	1.537	110.4:1
2008	233.321	1.874	124.5:1
2011	198.606	2.205	99,0.2:1
2013	29.649	1.228	24.4:1

2015	34.406	796	43,2:1
2017	36.899	796	46,3,:1
2019	25.891	410	63,1:1

Source: Author, based on the Statistical Yearbook of the Republic of Serbia for selected years, and the Republic Bureau of Statistics of the Republic of Serbia

The presented results of the research indicate, of aspect the utilization of accommodation capacities, a negative trend. In the analysed period, capacity utilization, with the point of the number of overnight stays and accommodation capacities, was only acceptable in 2008, yellow zone > 120 . In other, analysed years by retained the tendency of the negative trend of utilization of tourist capacities (red zone). In particular, a marked decline in the degree of utilization of tourist capacities is evident from 2011 until today. The drastically declining trend, the utilization of tourist capacities is a consequence of the poorly executed privatization of the social enterprise “Serbia-tourist”.

The coefficient of local tourist increase is an economic indicator, which shows the effects of tourism on the economy and local population of a particular tourist destination. It shows how much other local economic activities of a tourist destination are involved in the tourist business. (Jovičić, Ilić, 2010) As this indicator has not yet developed, it can analyse in terms of the impact of tourism on other economic and non-economic activities the feedback effect of these activities on tourism development.

Therefore, the analysis out of this indicator is, conducted directly, a relation of the relationship between tourism and other activities, which are must integrate into the integral-selective tourist bid of Niska Banja. In between, the remaining activities, turnover, and agriculture are of very importance its, the impact is degree activity on the level of the coefficient of local tourist increase.

Turnover links are a significant element of tourist movements. The turnover-functional connection within Niška Banja with the surrounding area is satisfactory. Inhabited places on the territory of Niska Banja are linked with 60 km of roads, with Nis by a local road in the length of 10 km. Besides, the needs of tourism buildings are walk paths, trim tracks, post office parking, etc.

Particularly improvement is expected by connecting Niška Banja and Sićevačka gorge with the eastern branch of Corridor 10, i.e., the road Subotica-Belgrade-Dimitrovgrad on the Malčanska loop in the length of 1.4 km to the settlement Prosek. The precondition for the direct connection of Niška Banja with Corridor 10 is the construction of a bridge on the river Nišava near the equestrian club.

Agriculture as a complementary activity represents a particular potential for the growth of the surrounding rural areas and the improvement of the living standard of the domicile population. There is an increasing number of registered agricultural farms that are mainly engaged in the production of cereals, but the production of vegetables, fruits, and grapes, which are sold in smaller quantities to tourists through the green market, is not far behind. Also, part of the farm is engaged in cattle breeding. However, due to the small number of tourist arrivals, the advantages of agricultural production have not been sufficiently used hence, the functional relations between agriculture and tourism have been to a minimum.

II. Tourist satisfaction. Tourist satisfaction is an indicator that indicates the degree of tourist satisfaction with the quality of services provided. The analysis of tourist satisfaction

includes an extensive survey of tourists on the quality and other parameters significant for assessing and planning the future development of Niška Banja in a more realistic framework. (Momirović, 2009) Surveys of this type and scope by not been conducted, so we cannot say anything about them.

III. Cultural indicators of sustainable development show the preservation of the cultural identity of the local community under the influence of tourists who come from areas with different cultural characteristics. (Jovičić, et. 2010)

a.Relationship between accommodation capacity and population

The indicator of the ratio of accommodation capacities and the number of the local population indicates the extent to which the impact of tourism can affect the sustainability of the cultural identity of a tourist destination. That is, how these impacts affect the change in the urban appearance of the tourist destination and how they affect the construction of the necessary infrastructure, and what are implications for local budgets? If the number of beds about the number of inhabitants is higher than the ratio of 1.6: 1, then the local community suffers a lot of pressure from intensive tourist construction. A relationship of less than 1.5: 1 is much more favourable for the local community because, in these dimensions, the impacts of tourism are minimal and acceptable.

Table 4. Accommodation capacities and number of local population

Year	Accommodation capacities (number of beds)	Number of inhabitants	
1981	8.231	3.854	2,1:1, red zone
1991	7.841	4.179	1,9:1, red zone
2002	1.537	4.437	0,3:1, green zone
2011	2.205	4.380	0,5:1, green zone
2015	796	4.320 ¹	0,1:1, green zone
2017	796	4.400 ¹	0,1:1, green zone
2019	410	4.500 ¹	0,09:1 green zone

Source: Statistical Yearbook of the Republic of Serbia for the period 1981-2019 and the RZSRS Population Estimate¹

The research results show that the ratio between the number of accommodation capacities and the local population between 1981 and 1991 was in the red zone. With aspect this indicator, in the analysed period, the local community suffered from the pressure of urban and infrastructural changes. From 2002 to 2014, the number of beds decreased drastically, as a result of poor privatization of the tourist company “Serbia Tourist” which was the wearer of tourism development, failure to meet the conditions of private accommodation to obtain categorization and change the status of “Radon” in the Institute for Treatment and Rehabilitation “Niška Banja “.

Therefore, period 2002 to 2019, the relationship between the number of beds and the local population indicates the sustainable development of tourism in Niska Banja. By should be noted that this indicator is not a relevant indicator of sustainable tourism development in Niška Banja because it is not the result of successful implementation but is a consequence of poor governance and partly status changes. At the same time, no new

accommodation capacity by building. Some privately owned facilities have been renovated, which has improved accommodation conditions. Renovated privately owned facilities have by categorized as quality accommodation.

b.Intensity of tourism.

The intensity of tourism is an indicator that shows the relationship between the number of tourist nights and the population of the tourist destination. It represents the degree of tourist saturation and points out that the high intensity of tourism development harms local authorities, in the sense, of defining “the boundaries between tourism and general organization for the needs of the local population.” (Marković, Perić, Mijatov,) Expressing the intensity of sustainable tourism development will be by displaying the relationship between the colours of overnight stays expressed in thousands. However, the application of this indicator should be careful, especially since, depending on the type and specifics of the tourist destination, the ratio between the number of nights and the number of the local population shows significant oscillations.

Table 5. Ratio of the number of overnight stays and the number of inhabitants

Year	Number of nights	Number of inhabitants	Indicator
1981	467.725	3.854	12,1:1, red zone
1991	199.402	4.179	4,7:1, red zone
2002	169.721	4.437	3,8:1 red zone
2011	198.606	4.380	4,5:1 red zone
2017	36.899	4.400 ¹	0,8:1, green zone
2019	25.891	4.500 ¹	0,5:1, green zone

Source: Statistical Yearbook of the Republic of Serbia for selected years, and Population Estimate, Republic Statistical Office of the Republic of Serbia

The indicator of tourism intensity in the observed period indicates the red zone. The intensity of tourism is equally distributed and shows a distinctly negative impact tourism on local self-government in the direction of urban and infrastructural arrangements for tourism than for the general needs of the domicile population. However, this research result should be taken with great caution because in that period, despite the high degree of tourist saturation, the urban degradation of Niška Banja is visible, but not in the direction of renovation and construction of new tourist facilities but for the local community. However, we cannot conclude with certainty that the high level of tourism intensity in Niška Banja in the observed period is the outcome of rapid growth. But could be understood as better and more efficient use of available accommodation capacities in the social and private sector and mass tourism stimulated by the Pension and Disability Fund of the Republic of Serbia. The argument for this attitude stems from the statistical data on the number of tourist overnight stays, which fell drastically in 2012 with some trends of further growth until 2017, but six times lower than before that year. Also should not be forgotten that in the analysed period, capacities by the Rehabilitation Institute “Radon” were registered as tourist capacities. Also, we believe that the cultural identity of Niška Banja and its inhabitants has not to be damaged and that it is an attractive

tourist destination with exceptional thermo-mineral and other potentials that have yet to be grown in terms of tourism and economy.

IV. Social indicators. Social indicators show the social integrity of the local community are observed through the participation of tourism in the net social product and through the percentage of tourists who come through agencies. . (Marković, etc., 2010)

a. Participation of tourism in net social product

The participation of tourism in the local net social product is an indicator that shows the benefits and effects that the local community achieves from the development of tourism. In other words, this indicator indicates the contribution of tourism to the growth of the net social product of the tourist destination and its effect by conditioned by the degree of dependence of the local community on tourism. Therefore, to have a clearer view of its impact, it is necessary to compare this indicator with the level of employment of the local population in tourism.

The analysis of this indicator is not comprehensive because it was not possible to obtain data on the net social product of Niška Banja, so for these reasons, the made analysis is based on employees in tourism.

Table 6. Number of employees in the tourist economy of Niška Banja

Year	Employed	Employed in tourism	% employed
2001	2.618	680	26%
2015	2.090	101	0,4%
2016	2.480	121	0,5%
2017	2.418	121	0,5%
2019	2.412	119	0,4%

Source: Municipalities and regions in the Republic of Serbia by selected years, SORS of the Republic of Serbia

According to available data, in 2001, the total number of employees in the tourism industry of the city of Niška Banja was 680, which in the structure of the total number of employees is 26%. After 15 years of transition, due to social and political changes, the number of employees in the tourism of Niška Banja has drastically decreased. In 2015, the share of employees in the tourism of Niška Banja in the total number of employees amounted to 0.04%. In 2016 and 2017, it increased by a symbolic 0.5%, and finally, in 2019 reached the level of 2014% again.

c. % of tourists who do not come through a tour operator

The second indicator of the social indicators of sustainable development, expressed through the percentage of tourists who come under the auspices of the agencies, is, according to estimates, the Tourism Development Service of Niška Banja modest and does not exceed 20%. In the area of the town of Niška Banja, there is only one agency that deals more with organizing annual vacations of the municipality's population and accommodating tourists who came by themselves and asked for help from it. In recent years, several tourists who have visited this spa have used incentive vouchers from the Ministry of Trade and Tourism of the Republic of Serbia, which has, impacted a modest increase in the number of tourists and

the number of overnight stays. In addition, according to the same service, part of the tourists come for several years in a row due to the treatment whose costs they bear.

V. Environmental indicators.

Environmental indicators measure the interaction between tourism and the environment relationships monitor the environmental sustainability of tourism development. In other words, they indicate the impact of tourism on some segments of life.

a. Percentage of land on which construction is allowed but not realized.

The percentage of land on which construction is allowed but not realized is an indicator that indicates possible future accelerated and uncontrolled construction. To avoid the danger of future land, degradations it is necessary to compare spatial and urban plans with maps that show the density of constructed buildings. Planned areas for tourist construction exceed 20% of the total area of agricultural land, then such a situation is assessed as alarming. Therefore, it is necessary to give up further building of tourist facilities he's been changing the urban plan. It is a way that reduces the planned agricultural areas for the construction of tourist facilities and turns them into green or protected areas. In the territorial of Niška Banja, agricultural land has by repurposed for 30 hours for the needs of the construction of tourist facilities. The land is separated for development tourism, building the turnover, and other necessary tourist infrastructures. Two tenders were enouncing by build to planned tourist facilities, but both failed because there were no interested domestic and foreign investors. Considering the present urbanization and degradation of space in the canter of the Niška Banja and the impossibility of changing the existing condition, the conversion of part of agricultural land for the needs of tourism development by justified. In addition, the percentage of conversion of agricultural land for the needs of tourism development is far below 20%. Further growth should be based, on the exploitation of natural resources, primarily on the development of sustainable tourism and the utilization of renewable energy sources. (Raicevic, Marjanovic, Djordjevic, 2020)

b. Percentage of land use and occupation.

Percentage of land use and occupation is an indicator that shows the impact of tourism on changing the purpose of agricultural and other land use over five years. Experience shows that any conversion of agricultural land for other purposes over five years is more than 2% worrying. The part of the agricultural land that extends to the right of the entrance to Niška Banja, known as the Lozni Kalem, has been renamed (changed purpose) into a tourist zone within 30 hours. By turnover and other infrastructures have been built for the needs of tourism and an investor is being sought by the building of a spa centre and other tourist facilities. In the territory of Niška Banja, the agricultural land extended the lower field, towards the valley of the river Nišava, and to the right of the entrance, to the spa in the area by 7,408 h.

The total percentage of occupations of agricultural land is 0.04%, which according to the Indicator of use and occupation of land is not worrying, since it does not exceed 2%. However, it should be data that in the total area of Niška Banja, agricultural land occupies 127h. If we use this data to express the change in the purpose of agricultural land in town Nis, then the result obtained is more than worrying and amounts to 19%. If we use this data to express the change in the purpose of agricultural land in Nis, then the result obtained is more than worrying and amounts to 19%.

c. Percentage of tourist arrivals that do not come by private car

The percentage of arrivals of tourists who do not come by private car is an indicator that shows the potential turnover congestion of the tourist destination, parking problems,

noise levels, and air quality. Therefore, it is much more desirable for tourists to use public and, where possible, railway turnover. However, experiences in the world show that the number of tourists travels by their car with a tendency to further increase in the future.

According to the analysis of the Tourism Development Service of Niške Banje, the percentage of tourists who come by private vehicles is about 50%. The low level of use of other types of turnover is a consequence of weak and bad connections of Niška Banja with other receptive places. If there is one direct line Niska Banja-Belgrade, during the season, then it is clear why the arrival in a private direction is big. Therefore, especially in the summer season, this tourist destination is very occupied by turnover, with not enough parking places, loud car noise, and worrying emissions of harmful gases. According to this indicator, the sustainable development of tourism in Niška Banja does not exist.

Conclusion

Even though not all indicators of sustainable tourism development have been fully considered, due to the lack of certain groups of data, we can conclude that tourism in Niška Banja is not growing on the principles of sustainable development.

Economic indicators of sustainable development show the non-sensuality of the concentration of tourist turnover, by accepted as a tolerable situation with the suggestion of taking urgent preventive measures to increase the number of overnight stays and more even distribution of tourist turnover throughout the year. The utilization of accommodation capacities is at a low level, in the red zone, which is not only worrying but also alarming, having in mind that the number of beds has drastically decreased after 2013, which has resulted in an enormous drop in the number of nights.

The indicator of tourist satisfaction stood not analysed because the competent authorities for tourism development did not consider it necessary to have such an analysis. Therefore, it is not surprising that many think that tourism in Niška Banja is developing spontaneously, left to itself, without identifying the needs and satisfying tourists.

The fivefold decline in tourist overnight stays in 2019 compared to 2011, almost the uniform estimate of the number of inhabitants in 2019 as in 2011 influenced the indicator of tourist intensity by the green zone. At first glance, it seems that if this indicator by viewed in isolation, sustainable development is achieved. However, that is a wrong conclusion because the intensity of tourism is not a consequence of innovations and business improvements but a drastic drop in the number of overnight stays.

The decreased number of beds and the number of overnight stays, with low changes in the number of inhabitants, certainly could not have a destructive effect on the cultural identity of the local population but has been confirmed with certainty that it has not been disturbed. Cultural indicators of sustainable tourism development in Niška Banja show that due to the small number of visitors, the cultural identity of the local community by the not endangered relationship is in the zone of sustainability.

There was not much pressure by tourists to change urban and infrastructural changes and buildings. Care should be taken with the estimate of the indicator of tourism intensity, even though it is located in the red zone and shows a very negative impact of tourism on the local population. The decline in the number of employees has causally and consequently affected the decline in the net social product in the total net social production of Niška Banja.

The existence of only one travel agency and the fivefold decrease in employees in tourism in the total number of employees speaks when a question to social indicators that tourism is unsustainable. At the same time, it emphasized that the low level of employees and probably the low level of the net social product indicate that the local community achieves lower effects and benefits from tourism.

The impact of tourism on the condition of the environment is enduring and does not significantly endanger the ecosystem. The conversion of agricultural land for the needs of tourism growth is under the prescribed minimum satisfies the criteria of sustainable development. The percentage of arrivals of tourists who do not use private vehicles is less and less to be expected in the future, which is a trend not only in Serbia but also in the world. This trend must improve through direct line road and rail turnover to receptive areas.

Niška Banja, with the protected area and other preserved natural attractions, should look for a chance the further develop tourism on the principles of sustainable development, especially since it is a comparative advantage, strength, development opportunity perspective. Therefore, it is necessary for local spatial and regulatory plans, among other activities, to base the development of tourism on the principles of sustainable development as a new philosophy.

On the other hand, the spontaneous development of tourism can cause heavy damage to Niška Banja. Therefore, it is necessary to carefully and efficiently plan growth tourism and good manage it. Also needed strict monitoring of how, will be tourism successful and sustainable while respecting the natural, social and cultural components of the environment.

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