# SUSTAINABLE DEVELOPMENT THROUGH THE PRISM OF TOURISM AND CONSUMERS IN THE TOURISM MARKET - CASE STUDY OF VLASINA LAKE

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#### **ABSTRACT**

The concept of sustainable development represents an inexhaustible topic of research, which gains additional importance in the conditions of the current energy crisis. In this sense, the attention of the scientific and professional public is directed towards greater use of renewable energy sources in tourism. The aim of the work is to research the attitudes of consumers towards the use of renewable energy sources and the application of the principles of sustainable tourism on Vlasina Lake. The first part of the paper contains a review of the professional literature, while the second part of the paper presents the results of research on consumer attitudes towards the application of renewable energy sources on Vlasina Lake. Statistical analysis was performed using the SPSS software package. The importance of the work is reflected in the potential implications for the development of the strategy for the sustainable development of tourism in Southeast Serbia.

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#### 1. INTRODUCTION

Sustainable development is a concept that has been in the focus of interest of academics for the last decade. It is based on the necessity of establishing a balance between meeting the growing needs of the population, using limited natural resources and improving the quality of life.

Meeting current needs without compromising the ability of future generations to meet their needs requires accepting sustainable development as a dominant philosophy respected by every individual in the global economy (Dražić, 2020).

The application of the concept of sustainable development requires fundamental changes in business behavior, management methods in all sectors of economic activity, as well as the way natural resources are managed and used. Due to the necessity of changes in business behavior at the global level, in 1992, at the UN Conference on the Environment and Sustainable Development in Rio de Janeiro, a binding agreement was adopted in which the principles of sustainable development were defined and Agenda 21 was adopted as a development action plan for member states.

Twenty years later, at the World Summit in Rio (Rio+20) there was a discussion over the application of the principles of sustainable development in practice, with a focus on the institutional framework of sustainable development, on the one hand, and the green economy in the context of sustainable development and poverty reduction, on the other. At the RIO+20 conference, held in 2012, 17 sustainable development goals 2015 - 2030 were adopted, as a series of individual goals aimed at achieving the basic goal of sustainable development.

The Agenda for Sustainable Development until 2030 with 17 sustainable development goals provides the basis for realizing the vision of sustainable development, as well as short-term and long-term goals in all three categories of sustainable development (environmental, economic and social). Within the framework of the implementation of the Sustainable Development Agenda until 2030, continuous monitoring and measurement of progress in achieving the goals of sustainable development is one of the key factors (Statistical Office of the Republic of Serbia, 2020).

The Republic of Serbia was actively involved in the definition of sustainable development goals, as a member of the Open Working Group on Sustainable Development Goals and the Intergovernmental Committee of Experts on Sustainable Development Financing. It also showed its commitment to the achievement of the goals set in the 2030 Agenda and, accordingly, submitted the Report on progress in achieving the goals of sustainable development by 2030 in the Republic of Serbia in December 2020 (Statistical Office of the Republic of Serbia, 2020).

The report contains progress assessments based on data from the Republic Institute of Statistics for 83 indicators within 17 sustainable development goals, according to Eurostat's methodology in the European Union. Given that in Serbia the stated goals are not quantitatively expressed, progress is measured on the basis of data for a certain indicator in the initial year, and then the movement of progress in a positive or negative direction is measured.

Thus, the report shows the results for goal 12 - Ensure sustainable patterns of consumption and production, within the Resource Productivity indicator for the period 2015 - 2018. Moderate progress was made in achieving the goals of sustainable development, while significant progress was made for the period 2010 - 2018. When it comes to the indicator Domestic consumption of materials for the period 2015 - 2018, a significant deviation from the achievement of the goals of sustainable development was achieved, while for the period 2010 - 2018, a moderate deviation was achieved.

Results for goal 15 - Protect, restore and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, fight desertification, stop and reverse the process of land degradation and stop the loss of biodiversity. Based on the indicator Area under forests as a share of the total land area results, show for both considered periods 2015 - 2020 and 2000 - 2020 moderate progress in achieving the goals of sustainable development, while for the indicator Official development assistance for the preservation and sustainable use of biodiversity and ecosystems, the results show significant progress in achieving the goals of sustainable development for the period 2015 - 2018 and 2002 - 2018 (Statistical Office of the Republic of Serbia, 2020).

Stefanović and Azemović (2012) believe that the application of the concept of sustainable development in practice implies maximum emphasis on the positive characteristics of the goals of sustainable development, while negative repercussions need to be minimized.

The difference between the earlier understanding of tourism and the concept of sustainable tourism is that earlier the importance of the economic component and the realization of economic profit was emphasized, while in the model of sustainable tourism, the importance of environmental protection is primarily emphasized.

The application of the concept of sustainability is very important for all economic branches. Within tourism, sustainability implies the satisfaction of tourists with the necessity of a balance between the ecological, socio-cultural and economic components, which achieves the optimal development of tourism with the rational use of resources, the possibility for future generations of tourists to satisfy their needs, respect for tradition, socio-cultural heritage, fostering intercultural understanding, as well as achieving long-term economic growth and profitability (Dražić, 2020).

Sustainable tourism implies a responsible attitude towards the environment and cultural heritage, along with increasing employment and the possibility of making a profit. The World Tourism Organization and the UN Environment Program define sustainable tourism as achieving a balance between meeting the needs of tourists and preserving tourist destinations with the possibility of future generations of tourists meeting tourist needs, which indicates the need for the concept of sustainable development to be a key factor in the management of tourist activity, concludes Jovičić (2000).

In 1996, Agenda 21 for the Travel and Tourism Industry was adopted by the World Council for Tourism and Trade including 12 goals for the development of sustainable tourism, which are primarily aimed at preserving and improving the environment and rational use of natural resources in tourism. The satisfaction of tourists is the goal that needs to be fulfilled along with the protection of cultural heritage.

The application of the concept of sustainable tourism requires an integral approach to traditional management strategies, determining the destination with a tourism development plan. Concretely, it is necessary to adequately plan traffic infrastructure, land exploitation, economic development, marketing while adapting to the capacities of the tourist destination and the offer of new attractive contents, so as not to cause environmental pollution and the destruction of the destination's cultural heritage (Stefanović & Azemović, 2012).

Modern business conditions impose the need for energy growth of around 1.5% per year with a forecast of acceleration up to 3 times by 2055 (Dražić, 2020). As a significant aspect of tourism activity, Luyando, Jaramillo, Zabaloy & Guzowski (2020) state energy consumption for products, services and visitor experiences, which leads to the conclusion that the growth of tourism activity leads to increased energy consumption.

The current, global energy crisis has additionally focused on the interest in renewable energy sources. Also, the fact that non-renewable sources are not inexhaustible, as well as the fact that the use of fossil fuels and the emission of carbon dioxide with the greenhouse effect affect environmental pollution are factors that direct the population towards the use of renewable sources.

The benefits of using renewable energy sources are huge, but due to economic limitations regarding the cost of purchasing equipment, the share of energy from renewable sources is relatively low both globally and nationally.

Čekrlija (2012) believes that natural resources (forests, agricultural lands, fossil fuels and minerals, rivers, lakes and the sea) represent the natural wealth of individual countries as well as the whole world and that it is necessary to create

a quality strategy for the planned management of renewable resources after analyzing the collected data.

Luyando et al. (2020) state that the use of renewable energy sources is a significant factor for increasing the eco-efficiency of tourist destinations and suggest that energy efficiency plays a key role and provides added value in the sustainable development of tourism, with the conclusion that Mexico's tourism sector has improved its position in the world by investing in a more efficient and sustainable energy management model that provides competitive advantages over other industries.

Mehmood et al. (2022) explore the impact of economic growth, tourism and renewable energy in Pakistan, India, Nepal and Sri Lanka. The research results confirmed that the use of renewable energy sources improves air quality in Pakistan, India, Sri Lanka and Nepal. Regarding tourism, the obtained results show that tourism improves air quality in Pakistan and Nepal, while in Sri Lanka and India it has a negative effect, i.e. it increases the emission of carbon dioxide. The authors' conclusion is that greater use of renewable energy sources is needed in the tourism sector, in order to reduce possible negative implications.

Vasić and Radović (2021) point out that there is a difference between sustainable and ecotourism and state that the concept of sustainable tourism needs to be applied in all segments of tourism, and that ecotourism is a special segment of tourism that is based on the application of sustainable development.

A similar position is stated by Bradić-Martinović and Miletić (2018), who believe that sustainable tourism is aimed at minimizing the negative impact of tourist travel on the environment and the local community, while ecotourism emphasizes the preservation of nature and the education of tourists about the destination.

The mutual connection between tourism and sustainable development is strong, given that tourism has both positive and negative impacts on the concept of sustainable development. The positive impact is reflected in the development of the economic area, the growth of employment, the encouragement of investments, the support of local communities, the definition of the economic value of natural and cultural resources, the development of intercultural understanding and tolerance. On the other hand, the degradation of the ecosystem, the disruption of the flora and fauna as well as the ecological and social characteristics of the tourist area, the pressure on the traditions of the local community, the irrational consumption of natural resources, and greater environmental pollution represent the negative impacts of tourism on sustainable development (Dražić, 2020).

Milošević, Ilić and Popović (2021), and according to the source (Globalecotourism1, 2016) cite as negative consequences of ecotourism: the pressure of people on local infrastructure, pollution, noise, waste, endangerment of water, profit that is realized does not bring enough benefits to the local community, population disturbance, competition for natural resources.

The preservation of the environment is negatively affected by the increase in the number of inhabitants, the use of fossil fuels, deforestation, and the development of tourism, so in this context, the development of ecotourism, the development of ecological awareness of the population and education about the importance of protecting natural resources and biological diversity are important, as Bradić-Martinović and Miletić (2018) point out.

Riojas-Díaz, Jaramillo-Romero, Calderón-Vargas and Asmat-Campos (2022) conclude in their research that tourism is the main factor of economic activity in La Florida, employing more than 32% of the population. Also, it was determined that there is a positive influence between sustainable tourism and local development in the sense that the development of tourism contributes to improving the quality of life of the local population, increasing employment and economic development.

Observed at the level of total economic activity, in many countries around the world tourism plays an important role and affects economic development, income and employment (Luyando et al. 2020) and in that context tourism should be viewed in such a way that the offer and demand in tourism is influenced by a number of external factors: political, economic, technological, socio-cultural, legislative and environmental factors (Sharpley, 2009).

The World Travel & Tourism Council presents reports on the economic impact of travel and tourism on economic development and employment for 185 countries and 25 regions in the world. Before the pandemic, the travel and tourism sector accounted for 1 in 4 new jobs in the world. The latest annual survey of the World travel & tourism council shows (World Travel & Tourism Council, 2023):

- After a 50.4% decline in GDP in 2020 (a loss of almost 4.9 trillion US\$), the contribution of travel and tourism contributed to a 21.7% increase in GDP (\$1 trillion) in 2021.
- In 2019, the travel and tourism sector contributed with 10.3% to global GDP; after a decrease of 5.3% in 2020 due to permanent restrictions on mobility, the share was increased to 6.1% in 2021.

- Compared to 333 million in 2019, in 2020 with a decrease of 18.6%, 62 million jobs were lost and the number of employees reached 271 million.
   The year 2021 brings an increase of 6.7%, or 18.2 million jobs.
- After a decrease of 47.4% in 2020, the consumption of domestic visitors increased by 31.4% in 2021,
- After a 69.7% decrease in 2020, spending by international visitors increased by 3.8% in 2021.

When it comes to the Republic of Serbia, the research shows the following data:

- The share of travel and tourism in GDP was 5.9% in 2019, while in the following years the share was reduced primarily due to movement restrictions, in 2020 to 3.7% and in 2021 to 3.6%.
- In 2019, the number of employees in tourism was 6.2% of the total number of employees, in 2020 the number of employees was 5.5%, while the year 2021 brought a slight increase in the absolute number of employees, but also a decrease in percent to 5.4%.
- The consumption of domestic tourists in 2019 was 31%, and shows an increase to 34% in 2021.
- The consumption of international tourists had a decreasing trend, so the consumption in 2021 amounted to 66%, while in 2019 it amounted to 69%.

Milošević, Ilić and Popović (2021) state that ecotourism had a slight growth tendency, but after the COVID-19 pandemic, it recorded a decline. However, they believe that the benefits of ecotourism will be recognized and that in this context, ecotourism will quickly recover with the finding of solutions by the local community in the context of encouraging the preservation and protection of nature, cultural diversity and heritage destinations.

### 2. PREVIOUS RESEARCH - LITERATURE REVIEW

In their research, Milošević, Ilić and Popović (2021) analyze the attitudes of public opinion on ecotourism and conclude that a change in attitudes, continuous education and development of the ecological awareness of the population is necessary in order to enable the application of the principles of ecotourism. The results of the research show that 57% of respondents are informed about ecological tourism, while 50% of respondents believe that nature conservation is the most significant effect of ecotourism. It should be pointed out that after informing respondents about ecotourism on websites, the change in respondents' attitudes was significant, and even 97% of respondents declared that they had a

positive opinion and attitude about the application of ecotourism, as Milošević, Ilić and Popović (2021) point out. The result obtained in this way points to the conclusion that additional information and constant education of the population is necessary.

When it comes to the environment, residents of La Florida show a positive awareness of protecting their natural environment (Riojas-Díaz et al., 2022). The authors also state that professional marketing support is needed for greater use of renewable energy sources, given that there is sufficient local potential in La Florida for the use of solar and wind energy using solar panels and wind generators. As an example, they cite the creation of sustainable accommodation, the satisfaction of energy needs by using renewable energy sources that affect the reduction of energy supply costs, which would increase the likelihood of tourists' stay longer than one day, which ultimately affects the realization of higher income for residents (Riojas-Díaz et al., 2022).

Grubor, Milicević and Djokić (2019) in their research on the analysis of tourists' behavior and their intention to visit green rural hotels highlight the importance of green rural tourism for sustainable development. Using the dynamic approach of the theory of planned behavior, they analyzed the influence of attitudes, subjective norms, perceived behavioral control on the intention to visit a green rural hotel, in the context of three different phases of behavior in which the respondents are (pre-decision phase, pre-action phase and action phase). The obtained research results show that there are significant positive effects of attitudes, subjective norms and perceived behavioral control observed at the level of the whole model, while observed by phases, attitudes have a positive effect only in the second phase, subjective norms in the first phase and perceived behavioral control in the third phase.

Luyando et al. (2020) confirm that there is a connection between the hotel category and the level of energy efficiency, i.e. that four- and five-star hotels are the most motivated to implement energy efficiency measures and use renewable energy sources based on their ability to invest in energy efficiency projects with the aim of reducing business costs, in relation to incentives from local self-governments or the state. The reason for this behavior, the authors explain, is the existence of an adequate level of profit for investments, on the one hand, and the possibility of promotion as a socially responsible company, on the other, in order to attract tourists from developed countries with developed environmental awareness and greater purchasing power.

The aim of the research by Djokic et al. (2023) is to analyze the student's intention to use e-bikes in the context of their attitudes, subjective norms,

perceived behavioral control and financial incentives. The results show that financial incentives have the strongest influence on the intention to use e-bikes on students. Also, attitudes and subjective norms have a positive influence on the intention to use e-bikes. The obtained results can be a guideline for the future activities of the state in the form of financial incentives for greater use of e-bikes, as well as the significant influence that the media has on shaping the behavior of students.

Bradić-Martinović and Miletić (2018) state that ecotourism is a specific part of the concept of sustainable development and a chance for the development of tourism in the Republic of Serbia, full of natural resources needed to be nurtured and preserved. However, the authors state that in the Republic of Serbia, ecotourism is still at a very low level of representation. That is why it is necessary to educate and develop the ecological awareness of the population about the benefits of sustainable development and ecotourism, as well as invest in sustainable forms of tourism, in order to increase the demand for ecotourism in the Republic of Serbia.

#### 3. RESEARCH RESULTS

Vlasina, viewed in a wider geographical context, means a vast mountain plateau, the river Vlasina and Vlasina Lake. It is located in the southeastern part of the Republic of Serbia. The lake is located at an altitude of 1,210 meters and as such represents the potential for the development of various types of tourism. The characteristic of this mountain plateau, together with the lake and the river, is a diversified and rich ecosystem.

Dealing with the problems of the tourism industry, Stefanović and Azemović (2012) state that the level of environmental preservation directly affects the possibilities of development, primarily of recreational tourism, and in this context, the key potential advantage of the Vlasin Plateau is ecologically based forms of tourism, which should be promoted with the aim of achieving long-term destination development.

The research is based on the application of the Theory of Planned Behavior with the aim of analyzing the views of respondents on the use of renewable energy sources on Vlasina Lake. The same was conducted using an online questionnaire on a sample of 127 respondents from the territory of southeastern Serbia.

Descriptive analysis shows that of the total number of respondents, 59.8% (76) are female respondents, while 40.2% (51) are male respondents. When looking at the age of the respondents, the average age of the respondents is 42.5 years

(standard deviation 9.716), where the youngest respondent was 18 years old, and the oldest was 69 years old. The largest number of respondents (50.4%) were 40-50 years old. In terms of education, the largest number of respondents, 77.2%, have higher or high education, 6.3% are students and 16.5% are respondents who have completed secondary school (standard deviation 0.758).

The questionnaire used in the research was devided into two parts. The first part of the questionnaire refers to the respondent's gender, age and education as a sociodemographic characteristic of the respondent. Questions related to the research of attitudes towards the use of renewable energy sources at Vlasina Lake were covered in the second part of the questionnaire. At the same time, attitudes were measured based on five statements:

Table 1. Answers of the respondents

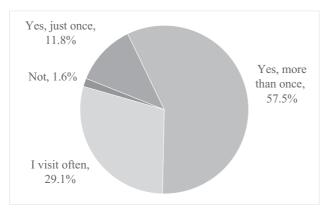
Variables and Assertions	Average	Standard deviation
I think that using renewable sources of energy is good.	3.58	1.300
I think that the use of renewable energy sources is positive.	4.24	1.106
I believe that the use of renewable energy sources is desirable.	4.27	1.123
I think that using renewable energy sources is easy.	3.43	1.124
I believe that using renewable energy sources is wise.	4.28	1.067

Source: Authors' calculation

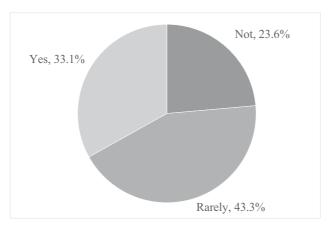
By answering the questions, the respondents expressed their views using a five-point Likert scale (from "totally disagree" to "totally agree"). Respondents mostly agreed with the statement that using renewable energy sources is wise, desirable and positive (average score 4.2), and the least with the statement that using renewable energy sources is easy (average score closest to 3.4).

The t test of independent samples was used to compare respondents of different sexes, while Pearson's correlation was used to determine the existence of a correlation of age and education with the respondents' attitudes.

Chart 1 shows the answer to the question of whether respondents have ever visited Vlasina Lake, and indicates that the largest number of respondents have visited the specified destination more than once, while Chart 2 shows whether respondents believe that renewable energy sources are used at Vlasina Lake.



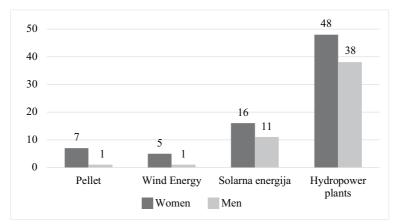
**Chart 1.** Have you ever visited Vlasina Lake? Source: Authors' calculation



**Chart 2.** Do you think that renewable energy sources are used at Vlasina Lake? Source: Authors' calculation

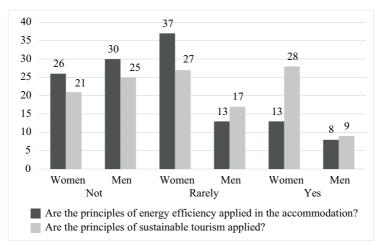
When asked which renewable energy source is most often used on Lake Vlasina, respondents gave preference to hydropower plants (67.7%), given that the surroundings of Vlasina are rich in rivers and water potential, as well as that a couple of mini hydropower plants have been built in the last couple of years. The second place is taken by solar energy (21.3%), the third by pellets (6.3%) and the last one by wind energy (4.7%).

When we consider gender, 48 women believe that hydropower plants are the most frequently used source of energy compared to 38 men. When it comes to solar energy, 16 women gave a positive answer compared to 11 men (Chart 3.)



**Chart 3.** Which renewable energy source is used most at VlasinaLake? Source: Authors' calculation

When it comes to the application of energy efficiency principles in Vlasina accommodation units, 44.1% believe that they are not applied, 39.4% that they are rarely applied, and only 16.5% gave a positive answer. For the application of the principles of sustainable tourism in Vlasina, in relation to the application of the principles of energy efficiency, a greater number of respondents believe that they are applied, 29.1%, that they are rarely applied, 34.6%, and 36.2% that they are not applied. Graph 4 shows the respondents' responses based on the sex of the respondents, which indicates that a greater number of female respondents gave a positive response compared to men to both questions.



**Chart 4.** Are the principles of energy efficiency and sustainable tourism applied?

Source: Authors' calculation

When asked which form of ecotourism would be the best choice for promoting Vlasina Lake, half of the respondents believe that it would be a recreational vacation (summer and winter), and sports-recreational tourism is in the second place (Chart 5).

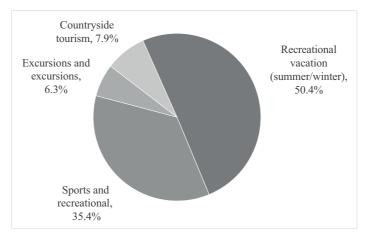


Chart 5. Which form of ecotourism would be the best choice for promoting Vlasina Lake?

Source: Authors' calculation

Results of the t test: t(125) = -1.267; p = 0.208 > 0.05 show that men and women do not statistically significantly differ in their attitudes towards the use of renewable energy sources at Vlasina Lake.

Pearson's correlation results: r = -0.083; p = 0.351 > 0.05 show that there is no correlation between the age of the respondents and attitudes towards the use of renewable energy sources at Vlasina Lake.

Pearson's correlation results: r = 0.177; p = 0.047 > 0.05 show that there is a positive and statistically significant correlation between the respondents' education and the respondents' attitudes towards the use of renewable energy sources on Vlasina Lake.

#### 4. DISCUSSIONS

Theoretical considerations in the paper indicate the importance of applying the concept of sustainability and greater use of renewable energy sources in tourism. The aim of the work is to analyze the attitudes of consumers towards the use of

renewable energy sources and the application of the principles of sustainable tourism on Vlasina Lake.

Identifying the consumer's perception according to the variables investigated in the paper gives the possibility of comparison with the obtained results of previous research. The research results provide insight into consumer perceptions of renewable energy sources and show that there is awareness and positive attitudes about the advantages and importance of using renewable energy sources (the use of renewable energy sources is wise, desirable and positive), in accordance with the research of Grubor, Milićević and Djokić (2019) that there are significant positive effects of attitudes on the intention of tourists to visit green rural hotels, as well as in accordance with the results obtained by Djokic et al. (2023) that attitudes have a positive influence on the intention of students to use an e-bike.

Also, the data obtained from the analysis of consumer attitudes show that consumers are aware that it is not easy to start using renewable energy sources, which is somewhat clear considering the standard of living of consumers in the Republic of Serbia, and partly in accordance with the statements of Luyando et al. (2020) that there is a connection between the category of the hotel, the level of energy efficiency of the hotel and the attraction of environmentally conscious tourists with greater purchasing power.

Respondents' answers about the application of the principles of energy efficiency and sustainable tourism in Vlasina indicate that a greater percentage of respondents believe that they are not applied or rarely applied, which is not in line with the results of the research by Luyando et al. (2020) who point out that the use of renewable energy sources is a significant factor for increasing the ecoefficiency of tourist destinations. They state that energy efficiency is a dominant factor in creating additional value in the sustainable development of tourism.

In the context of socio-demographic characteristics, the results point to the conclusion that respondents with a higher level of education have more positive attitudes towards the use of renewable energy sources in Vlasina and, on that basis, can represent the target group for developing a marketing strategy.

Also, the results of the empirical research indicate the identification of recommendations for the adoption of the principles of sustainable tourism and a higher level of the use of renewable energy sources.

Namely, despite the existence of positive attitudes of respondents about the use of renewable energy sources, it is necessary to improve marketing activities in terms of increasing information and educating consumers about the benefits of using renewable energy sources, as well as consistent positioning of the concept

of sustainable development and ecotourism in the minds of consumers, in accordance with Bradić-Martinović and Miletić, (2018) and Milošević, Ilić and Popović (2021).

The scientific contribution of the paper, in addition to indicating the importance of using renewable energy sources in tourism, is also reflected in recommendations for directing marketing activities in the direction of creating strategies for improving the quality of the environment, human health and efficient use of natural resources

#### 5. CONCLUSIONS

Sustainable development, renewable energy sources, energy efficiency, ecotourism represent concepts that, at the moment when the energy crisis has entered the world stage, are gaining more and more importance every day. Previous research shows that the principles of sustainable development have begun to be applied in the Republic of Serbia, but they are still not at a satisfactory level. When it comes to the development of sustainable tourism and ecotourism, it is also at a low level, but with a tendency to develop.

The results of the research show that there are positive attitudes of respondents towards the use of renewable energy sources in the function of developing sustainable tourism in the Vlasina area.

However, planned and continuous information and education of the population about the benefits of sustainable development and sustainable tourism is necessary.

Considering the low percentage of positive answers to the question of whether the principles of energy efficiency are applied in the accommodation facilities of Vlasina Lake, the results of the research indicate the need for incentives from the political and economic authorities of the area for the application of energy efficiency. This type of incentives, primarily in the hotel context, would also have a secondary effect. It is about the promotion of socially responsible companies, which would attract a larger number of tourists with a developed environmental awareness. This is already an established practice of a developed tourist destination, and the ultimate goal would be to introduce the principle of energy efficiency by the owners of households that provide rental services.

In the context of the issue of choosing the best form of ecotourism, given that the majority of respondents opted for recreational vacations and sports-recreational tourism, the local development and tourism strategy can be based on financial

support for the use of e-bikes. Due to the natural and health characteristics of the property's surface, which have a positive impact on people's health, in addition to the above, it is necessary to direct financial incentives towards energy-efficient housing capacities.

Future research may include a larger number of respondents, as well as respondents from different parts of the Republic of Serbia.

## **Conflict of interests**

The authors declare there is no conflict of interest.

### REFERENCES

- Bradić-Martinović, A., & Miletić, B. (2018). Odgovorni i održivi razvoj turizma u Srbiji Ekoturistički park Palić. *Ecologica*, 25(92), 777-781. https://www.researchgate.net/publication/349821780\_Odgovorni\_i\_odrzivi\_razvoj\_turizma\_u\_Srbiji\_Eko-turisticki\_park\_Palic\_Responsible\_and\_sustainable\_tourism\_development\_in\_Serbia\_-Eco-tourist\_Park\_Palic
- Čekrlija, S. (2012). Turizam kao faktor održivog razvoja opšti pristup odnosu ulaganja i siromaštva. *SVAROG*, *5*, 249-257. https://doi.org/10.7251/SVR1205249C
- Djokic, N., Milicevic, N., Kalas, B., Djokic, I., & Mirovic, V. (2023). E-Bicycle as a Green and Physically Active Mode of Transport from the Aspect of Students: TPB and Financial Incentives. *International Journal of Environmental Research and Public Health*, 20(3), 2495. https://doi.org/10.3390/ijerph20032495
- Dražić, G. (2020). Održivi turizam. Univerzitet Singidunum, Beograd
- Globalecotourism1. (2016). Public Perceptions of Ecotourism: Eco-tourism or Eco-exploitation? https://sites.google.com/site/globalecotourism1/public-perceptions-of-ecotourism.
- Grubor, A., Milicevic, N., & Djokic, N. (2019). Social-psychological Determinants of Serbian Tourists' Choice of Green Rural Hotels. *Sustainability*, *11* (23), 6691. https://doi.org/10.3390/su11236691
- Jovičić, D. (2000). Turizam i životna sredina. Zadužbina Andrejević, Beograd.
- Luyando, R. J., Jaramillo, V., Zabaloy, M. F., & Guzowski, C. (2020). Linking energy and tourism: energy efficiency in hotels of northeast of Mexico. *Revista Interamericana de Ambiente y Turismo 16*(2), 106-115. http://dx.doi.org/10.4067/S0718-235X2020000200106
- Mehmood, U., Tariq, S., Ul Haq, Z., Azhar, A., & Mariam, A. (2022). The role of tourism and renewable energy towards EKC in South Asian countries: fresh insights from the ARDL approach. *Cogent Social Sciences*, 8(1), 2073669. https://doi.org/10.1080/23311886.2022.2073669
- Milošević, D., Ilić, D., & Popović, J. (2021). Analiza stavova javnosti o ekoturizmu i predikcija njegovog daljeg razvoja nakon pandemije COVID-19. *Ecologica*, 28(104), 573-580. https://doi.org/10.18485/ecologica.2021.28.104.12.

- Riojas-Díaz, K., Jaramillo-Romero, R., Calderón-Vargas, F., & Asmat-Campos, D. (2022). Sustainable Tourism and Renewable Energy's Potential: A Local Development Proposal for the La Florida Community, Huaral, Peru. *Economies*, 10(2), 47. https://doi.org/10.3390/economies10020047
- Sharpley, R. (2009). *Tourism Development and the Environment: Beyond Sustainability?* Routledge, London. https://doi.org/10.4324/9781849770255
- Statistical Office of the Republic of Serbia. (2020). Progress Report on the Implementation of sustainable development goals by 2030 in the Republic of Serbia. https://www.stat.gov.rs/media/5682/izvestaj-o-napretku-u-ostvarivanju-ciljeva-odrzivograzvoja-do-2030-godine-u-srbiji\_web.pdf
- Stefanović, V., & Azemović, N. (2012). *Marketinške aktivnosti u turističkoj privredi*. Geografski fakultet, Beograd.
- Vasić, I., & Radović, N. (2021). Ekoturizam u uslovima pandemije COVID-19 na primeru Donjeg Podunavlja. *Ecologica*, 28(103), 417-425 https://doi.org/10.18485/ecologica.2021.28.103.12
- World Travel & Tourism Council. (2023). *Economic Impact Reports*. https://wttc.org/research/economic-impact

# ОДРЖИВИ РАЗВОЈ КРОЗ ПРИЗМУ ТУРИЗМА И ПОТРОШАЧА НА ТУРИСТИКОМ ТРЖИШТУ – СТУДИЈА СЛУЧАЈА ВЛАСИНСКОГ ЈЕЗЕРА

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## САЖЕТАК

Концепт одрживог развоја представља неисцрпну тему истраживања, која додатно добија на значају у условима тренутне енергетске кризе. У том смислу, пажња научно-стручне јавности је усмјерена ка већем коришћењу обновљивих извора енергије у туристичкој дјелатности. Циљ рада јесте истраживање ставова потрошача према коришћењу обновљивих извора енергије и примјена принципа одрживог туризма на Власинском језеру. Власинско језеро дио је ширег географског појма — Власинска планинска висораван. Ова географска област налази се на југоистоку Србије и територијално припада Пчињском округу. Први дио рада садржи преглед кредибилне литературе. У обзир су узета актуелна истраживања ове врсте како у свијету, тако и у Србији. Одрживи развој све више добија на значају и међу носиоцима политичке и економске власти, а туризам је препознат као потенцијално водећи сектор у промоцији одрживог развоја. То је разлог

зашто се све више теоретичара интересује за ову истраживачку област. Други дио рада је емпиријске природе. Овде су приказани резултати истраживања ставова потрошача према примјени обновљивих извора енергије на Власинском језеру. Истраживање је обухватило 127 потрошача са територије југоисточне Србије. Резултати до којих су аутори дошли огледају се у истовјетности мишљења оба пола по основу коришћења обновљиве енергије на територији Власинског језера. Оно што је веома битно и што ће у будућности дати добру основу за развој одрживог туризма јесте позитивна и статистички значајна корелација у погледу образовања и ставова потрошача (испитаника). Иако су екскурзије и излети, међу анкетираним испитаницима, најмање заступљени облик еко-туризма, истраживање наводи на закључак да ће у будућности овај вид туризма имати перспективу. Ово се изводи из чињенице о високој корелацији образовања и ставова испитаника. Статистичка анализа је спроведена помоћу софтверског пакета SPSS (The Statistical Package for the Social Sciences). Значај рада се огледа у потенцијалним импликацијама за развој стратегије одрживог развоја туризма југоисточне Србије и туристичке дестинације која обједињује Власинску област, а у чијем епицентру се налази Власинско језеро. Аутори ће настојати да популаризују питање одрживог развоја кроз туристичку и научну дјелатност и проширење интересних група на представљену тему на територији цијеле Србије.

**Кључне речи**: одрживи развј, туризам, обновљиви извори енергије, ставови потрошача, Власинско језеро.