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EXPLORING BIRDWATCHING TOURISM IN THE SPECIAL NATURE RESERVE ZASAVICA: INSIGHTS INTO VISITORS' PERCEPTIONS

Abstract

Birdwatching tourism is a rapidly growing segment of nature-based tourism that offers both recreational and educational opportunities while supporting biodiversity conservation. This paper examines the main features, development potential, and economic effects of birdwatching tourism, with a particular focus on lessons from international examples and their applicability to the Special Nature Reserve Zasavica in the Republic of Serbia. Using literature review and case studies from countries such as Colombia, Alaska and Poland, the study highlights how strategic planning, infrastructure development, and community involvement can enhance the success of birdwatching destinations. The analysis emphasizes that economic benefits for local communities and the protection of natural habitats are closely linked, and that the richness of bird species alone is not sufficient for development of birdwatching tourism. Special attention is given to the Special Nature Reserve Zasavica as a model for applying international lessons locally. In addition, the paper presents the results of a survey conducted among visitors to Zasavica in November 2025, aimed at exploring their awareness, experiences, and perceptions of birdwatching tourism development.

Key words: *birdwatching tourism, sustainable tourism, economic development, biodiversity conservation, Zasavica*

JEL classification: *Q26, Q57, L83*

ИСТРАЖИВАЊЕ BIRDWATCHING ТУРИЗМА У СПЕЦИЈАЛНОМ РЕЗЕРВАТУ ПРИРОДЕ ЗАСАВИЦА: УВИД У ПЕРЦЕПЦИЈЕ ПОСЕТИЛАЦА

Апстракт

Birdwatching туризам је сегмент туризма заснованог на природи који брзо расте и пружа како рекреативне, тако и едукативне могућности, исто-

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времено подржавајући очување биодиверзитета. Овај рад проучава главне карактеристике, развојни потенцијал и економске ефекте бирдwатцхинг туризма, са посебним фокусом на лекције из међународних примера и њихову примену Специјални резерват природе Засавица у Републици Србији. Прегледом литературе и студија случаја из земаља као што су Колумбија, Аљаска и Пољска, истраживање истиче како стратешко планирање, развој инфраструктуре и укључивање локалног становништва могу побољшати успех дестинација бирдwатцхинг туризма. Анализа наглашава да су економске користи за локално становништво и заштита природних станишта уско повезани, и да сам број врста птица није довољан за развој бирдwатцхинг туризма. Посебна пажња посвећена је Специјалном резервату природе Засавица као моделу за примену међународних лекција на локалном нивоу. Поред тога, рад приказује резултате истраживања спроведеног међу посетиоцима Засавице у новембру 2025. године, са циљем испитивања њихове информисаности, искустава и перцепција о развоју birdwatching туризма.

Кључне речи: *туризам посматрања птица, одрживи туризам, економски развој, очување биодиверзитета, Засавица*

Introduction

Birds are an important part of biodiversity and the food chain, and because they are sensitive to changes in the environment, they serve as good indicators of ecosystem health. Their visibility and abundance make them useful for tracking ecological changes, even in cities (Zhang et al., 2023). As environmental problems grow, people are increasingly seeking ways to reconnect with nature. Birdwatching is one such activity, helping people understand the connection between humans, animals, and the environment (Just, 2022).

Tourism has expanded to include more nature-based activities, and birdwatching has become one of the most popular. It offers visitors both enjoyment and learning opportunities, while also creating economic benefits for local communities and tourism companies. Birdwatchers are often well-educated and belong to higher-income groups (Schwoerer & Dawson, 2022).

Although birdwatching tourism has been widely studied, there is still a lack of research focusing on visitors' perceptions and their willingness to financially support its development in less explored destinations. In Serbia, and particularly in the Special Nature Reserve Zasavica, this form of tourism has not been sufficiently examined from the perspective of visitors. This creates a gap in understanding how visitors perceive its potential and whether they are willing to contribute to its further development.

This study examines birdwatching tourism, its main features, and development potential, with particular focus on the Special Nature Reserve Zasavica in Serbia. In addition to reviewing international examples and best practices from destinations such as Colombia, Alaska, and Poland, the research includes an empirical component, a survey conducted among visitors to Zasavica. The purpose of the survey was to explore visitors' awareness, experiences, and perceptions of birdwatching tourism, as well as their willingness to financially support its development in Special Nature Reserve Zasavica.

Based on this purpose, the following hypotheses were formulated:

Main hypothesis (H1):

Visitors of the Special Nature Reserve Zasavica recognize its potential for the development of birdwatching tourism and show willingness to financially support such activities.

Supporting hypotheses:

H1a: Most visitors perceive Zasavica as having a high potential for birdwatching tourism development.

H1b: Visitors are willing to spend money on birdwatching-related activities (guided tours, equipment, guides) in Special Nature Reserve Zasavica.

H1c: Visitors believe that birdwatching tourism could contribute to local economic development in Special Nature Reserve Zasavica.

The underlying assumption of this study is that visitors' perceptions, experiences, and willingness to support birdwatching tourism are central to its successful development, alongside natural and infrastructural resources. Research by Callaghan et al. (2022) indicates that birdwatchers' perceptions and motivations strongly influence their choices of destinations at local, national, and international levels. For example, casual and hardcore birdwatchers prioritize different factors, such as the chance to see rare species, well-planned itineraries, or the quality of infrastructure. These findings highlight the importance of tourists' perceptions and preferences in shaping birdwatching tourism, providing a clear rationale for examining visitors' perceptions and willingness to pay in Zasavica.

Theoretical Background

Although birds inhabit nearly every part of the world, providing countless opportunities for observation, there are still differences and overlaps in how the terms birdwatching, ornithological tourism, and avitourism are used. Birdwatching usually refers to the activity of simply observing birds, which can take place anywhere, from urban parks to remote natural areas. Ornithological tourism generally involves traveling to natural habitats to experience both birds and their ecosystems, while avitourism focuses on travel aimed specifically at seeing certain bird species, sometimes in very specific or even urban settings. In both scientific and popular contexts, the term birdwatching is often used broadly, as a synonym for birdwatching tourism (Afanasiev, 2022). According to the UNWTO (2014), birdwatching belongs to the category of wildlife watching tourism, as it is based on the non-consumptive observation of birds in their natural environments.

Birdwatching tourism relies on bird diversity and the quality of their habitats, while requiring minimal physical effort and equipment. Closely connected to sustainability, it is linked with environmental protection, ecotourism, and other forms of nature-based tourism that aim to reduce negative environmental impacts (Padilla-Delgado et al., 2025). As a tourism form, it can be described as travel motivated by the desire to detect, identify, and observe wild, free-living bird species for personal satisfaction or educational purposes (Mohammadi et al., 2024, p. 214). Birdwatching tourism is expanding rapidly worldwide, but its success depends not only on the richness of bird species, but also on factors such as visitor safety, accessibility of sites, appropriate infrastructure, and qualified guides (IDB et al., 2015).

When analyzing birdwatching tourism, it is also important to understand the demand for this form of tourism and the characteristics that shape birdwatchers' choices and experiences. Birdwatchers differ significantly in their motivations, influencing the type and intensity of their activities (Großmann et al., 2025). The choice of destination is mostly determined by natural features, landscapes, and ecosystem diversity. Enthusiastic birders are usually motivated by the opportunity to see many species and enjoy unique landscapes, while less experienced birders tend to consider other aspects, such as additional tourist facilities, accessibility, and the availability of non-birding activities (Padilla-Delgado et al., 2025). Research also shows that birdwatchers prefer tours of medium duration, good interpretive guidance, organized transport, and opportunities to see rare or endemic species. They also value affordable pricing and are willing to pay more for higher-quality and more diverse birdwatching experiences, which underlines the need for well-developed and sustainable ecotourism services (Lee et al., 2010).

Birdwatching as a part of ecotourism programs has become particularly popular in North America and Western Europe, and interest has recently been growing in Russia as well (Afanasiev, 2022). On a global scale, the countries that attract the largest number of birdwatching tourists are those with high bird diversity and good infrastructure, such as Colombia, Costa Rica, Mexico, Peru, Ecuador, Brazil, and Australia. In contrast, some tropical countries with exceptionally rich avifauna, including the Democratic Republic of Congo, Venezuela, Bolivia, Madagascar, and Papua New Guinea, still receive relatively few visitors due to political, infrastructural, or safety-related constraints (Soergel, 2025).

Birdwatching tourism brings significant economic benefits through increased tourist spending, job creation, and overall contribution to local and national economies. It also plays an important role in supporting conservation initiatives and local development (Glowinski, 2008; Maldonado et al., 2018). In the United States, for instance, birdwatching generates approximately $108 billion annually through the purchase of equipment, travel expenses, accommodation, and related services. It supports around 1.4 million jobs and provides about $90 billion in labor income, while contributing $38 billion to various levels of tax revenue. In rural regions, birdwatching can be an important driver of economic activity, as the presence of rare or highly wanted bird species attracts large numbers of visitors and stimulates local businesses (BirdWatching Daily, 2025). Globally, birdwatching tourism is estimated to generate around US$13 billion in revenues that contribute directly to nature conservation efforts (Slater et al., 2019).

However, even though birdwatching is considered a non-consumptive activity, it is not entirely without impact. Birdwatchers, especially photographers, can sometimes disturb birds and cause stress, leading certain species to alter their natural behaviour or exhibit stronger escape reactions (Slater et al., 2019). Moreover, tourism in general, even when not directly related to birdwatching, can pose various risks to bird populations through habitat disturbance, noise, or pollution (Steven & Castley, 2013). Nevertheless, some researchers argue that birdwatching tourism, when properly managed, can play a positive role in protecting species and habitats by increasing awareness and generating financial support for conservation (Puhakka et al., 2011).

In tourism, which is considered an unpredictable environment, tourists often seek assurance that the services provided will meet their needs and expectations (Leković et al., 2025). Visitors' perceptions are a key factor in the development of birdwatching

tourism. Research shows that tourists provide important feedback on the quality and completeness of facilities, infrastructure, information centers, and the equipment used during birdwatching activities (Suyantri et al., 2024). Their opinions help improve the overall experience and ensure that the destination meets visitors' expectations. In addition, successful birdwatching ecotourism requires the involvement of multiple stakeholders, including local communities, tour operators, and conservation organizations, to ensure both positive visitor experiences and the protection of wildlife. For instance, studies at Hornøya, a protected bird cliff in Northern Norway, show that inadequate visitor management and limited presence of guides or enforcement personnel can lead to behaviours that disturb birds, highlighting the need for coordinated stakeholder involvement in ecotourism management (Aas et al., 2023). Considering visitors' perceptions and preferences in planning not only enhances satisfaction but also supports conservation efforts and sustainable development of the site. These insights underline the importance of examining visitors' perceptions and willingness to financially support birdwatching tourism.

International Case Studies of Birdwatching Tourism Development

Colombia is home to more than 1,900 bird species, accounting for almost 20% of all bird species worldwide. The country holds the world record for the highest number of bird species (Colombia Travel, 2025). Among them are 443 rare species highly valued by birdwatchers. Due to these factors, Colombia has recorded a steady increase in birdwatching tourism over the past decades (Ocampo-Peñuela & Winton, 2017, p. 1). Through various strategies and programs, efforts are being made in Colombia to ensure that birdwatching tourism benefits both local communities and biodiversity (Mu´nera-Rolda´n & Ocampo-Peñuela, 2022). One such initiative is the Vision Amazonia project, which aims to stimulate the local economy and promote regional development in a sustainable way, while at the same time reducing climate change and preventing deforestation in the Colombian Amazon (Vision Amazonia, 2025). Local communities that generate income from birdwatching tourism are required to protect bird habitats, develop the necessary specialized infrastructure, organize training programs for local residents, and ensure the safety of tourists (Winton & Ocampo-Peñuela, 2018). It is also worth mentioning the project "The Northern Colombia Birding Trail," which encompasses a network of trained birding guides and specialized birding tour operators, key birding sites such as national parks and nature reserves, as well as small businesses and support services for the development of birdwatching tourism (National Audubon Society, 2025). The project aims to use birdwatching as a tool for economic development and biodiversity conservation in northern Colombia. Through professional training sessions organized within the project, 44 local residents, including members of native ethnic groups, have been qualified to work as bird guides. A special emphasis within the project was placed on English language skills. Some of the most significant birdwatching destinations in this area are Eco-parque Los Besotes (home to over 210 bird species), Perijá Mountains (habitat of endangered and endemic bird species), Los Flamencos Flora and Fauna Sanctuary (a coastal wetland and dry forest reserve created to protect a large population of American flamingos, also home to 185 other bird species, 80% of which

are migratory), Tayrona National Park (the most visited national park in Colombia, home to over 280 bird species), and the Santa Marta Mountains (habitat for more than 600 bird species, including 19 endemic ones) (Northern Colombia Birding Trail Project, 2025).

Alaska is home to the highest concentration of coastal birds in the world, hosting more than one-third of the global population of these species, some of which nest nowhere else and are threatened by habitat loss and climate change (Alaska Shorebird Group, 2019, p. 1). From large birds such as eagles to tiny hummingbirds, around 500 bird species can be found in Alaska. Although birds can be observed throughout the year, the main birdwatching season lasts from late April to middle of September (Travel Alaska, 2025). Through birdwatching tourism, Alaska strives to diversify and further develop local economies and attract new revenue to remote and underdeveloped parts of the state, which are predominantly inhabited by rural indigenous populations. In these remote areas, birdwatching tourism provides opportunities for employment and income generation for local residents (Goldsmith, 2007). Many migratory and resident bird species have high conservation status and significant cultural importance (Schwoerer & Dawson, 2022). Some of the most notable birdwatching destinations in Alaska include Glacier Bay National Park (around 240 bird species), Kenai Fjords National Park (around 190 species), Pribilof Islands (around 220 species), Denali National Park and Preserve (167 species), and Kodiak Island (more than 240 species). Birdwatching is an extremely popular form of tourism in Alaska, and the state organizes numerous birding festivals throughout the year. For example, in early May, the Copper River Delta Shorebird Festival takes place, attracting around five million coastal birds. In November, the Haines Bald Eagle Festival is held, where over 3,000 bald eagles can be observed along a 6.4 km stretch of the Chilkat River. During the third week of August, the Tanana Valley Sandhill Crane Festival celebrates the beginning of the fall migration of the sandhill crane, featuring artists, guides, and numerous activities and workshops for all ages (Travel Alaska, 2025).

When it comes to Europe, Białowieża Forest in Poland is one of the most famous birdwatching sites. In 2016, this area recorded around 14,000 birdwatchers, who spent nearly 2.2 million USD (Czeszczewik et al., 2019, p. 2967). Białowieża Forest is a World Heritage Site located on the border between Poland and Belarus. It comprises a diverse complex of protected forest ecosystems, as well as a number of connected non-forest habitats, including wet meadows, river valleys, and other marshy areas. It is home to the largest population of European bison and more than 250 bird species. Situated within the watershed of the Baltic and Black Seas, this transboundary property offers exceptional opportunities for biodiversity conservation (UNESCO, 2025). The most prominent tourist village is Białowieża, which annually attracts between 120,000 and 200,000 visitors, many of whom come for birdwatching, as Białowieża Forest contains forest bird species not found elsewhere in Europe (Wesołowski et al., 2015). It is the only site in Poland listed as a UNESCO World Heritage Site based on natural values and represents a true paradise for birdwatchers. According to research by Czeszczewik et al. (2019, p. 2971), birdwatching contributes approximately 2,170,374 USD annually to the local economy, most of which comes from foreign visitors. Birdwatchers tend to spend more than other tourists, as they hire licensed professional guides who can show them various species of woodpeckers and owls. Many specialized agencies offer tours accompanied by professional ornithologists who guide tourists through diverse habitats. These tours

allow participants to learn how to identify bird species by call and song, including rare woodpeckers. In addition, professional optical equipment (binoculars and telescopes) is available for rent (Poland Travel, 2025; Nature Tours to Poland, 2025). Some programs last up to a week, making a significant contribution to the improvement of the local rural economy. Tourists spend their money on accommodation in local guesthouses, sampling local cuisine, and purchasing local souvenirs and other products.

Special Nature Reserve Zasavica - Case Study

The Special Nature Reserve Zasavica is located in the south-western part of Vojvodina, within the municipalities of Sremska Mitrovica and Bogatić. This wetland area consists of floodplain meadows and forests. The Zasavica River, approximately 30 km long, is a calm and gentle watercourse that has enabled the survival of a rich and diverse flora and fauna. In order to preserve this natural wealth, Zasavica and its surrounding area have been placed under state protection as a natural asset of category I, *of exceptional importance*.

It is one of the most significant bird conservation areas in Serbia, with around 216 bird species recorded (Zasavica Special Nature Reserve, 2025), more than 120 of which are active breeders. This diversity makes Zasavica extremely important for scientific research, as well as for nature enthusiasts and birdwatchers. Artificial nesting platforms have been installed at 20 selected locations to provide optimal conditions for bird breeding. This project greatly contributes to the preservation and growth of populations of rare and protected bird species.

Visitors can observe how birds prepare for seasonal migrations, care for their young, and coexist with other species in this rich ecosystem. The most notable event is the organized birdwatching and bird ringing during the European Birdwatching Days, traditionally held on the first weekend of October across Europe. This event offers tourists the opportunity to closely observe various bird species that reside in or migrate through Zasavica. Experts ring birds to monitor their migrations, contributing to both their conservation and research, while also educating visitors about the importance of bird ringing and protection.

For tourists, several activities are available, including a 7 km tourist boat ride that allows observation of rare wetland and forest bird species in their natural habitats, a photo safari boat ride through Zasavica, and guided educational walking tours led by professional guides. The reserve also features a Tourist-Educational Centre with a Visitor Centre built in an ethno style, made of wood to blend harmoniously with the surrounding environment.

Within this centre stands an 18 meter high observation tower with 150 seats, offering a panoramic view of the widest and most beautiful part of the Zasavica River. Accommodation within the reserve is modest, consisting of two apartments located in the Visitor Centre and the Zasavica auto camp with 42 camping spots. In the surrounding area, tourists can stay at rural households, traditional farmsteads (*salaši*), or private apartments (Birdingplaces.eu, 2025).

Methodology

The research was conducted using a questionnaire designed to collect data about visitors' experiences and perceptions of birdwatching tourism in the Special Nature Reserve Zasavica. The questionnaire was developed based on previous studies by Đorđević et al. (2025), Stemmer et al. (2022) and Lee et al. (2010), which examined visitor preferences and willingness to pay in the context of birdwatching and nature-based tourism. The questionnaire was distributed in early November 2025 using Google Forms and a convenience sampling method. To ensure the relevance of responses, an eliminatory question was included, only participants who had visited Zasavica could proceed with completing the questionnaire.

A total of 146 respondents participated, but only 102 valid responses were included in the analysis, as these participants confirmed visiting the Special Nature Reserve Zasavica. The questionnaire consisted of both closed-ended questions covering socio-demographic characteristics, frequency of visits, awareness of birdwatching, and perceptions of the potential development of birdwatching tourism.

The data collected were processed using descriptive statistical analysis (frequencies, percentages, and mean values) to summarize and interpret the main findings. This approach provided a clear overview of the visitors' profiles, experiences, and opinions regarding the potential of Zasavica for birdwatching tourism development.

Results

Only those who have visited the Special Nature Reserve Zasavica (n = 102) were included in further analysis. Among these visitors, the majority were male (68), while 34 were female. The largest age group consisted of visitors aged 40-50 years (42), followed by those aged 30-40 years (22) and 20-30 years (21), indicating that middle-aged adults represent the dominant group of visitors. In terms of education, most respondents held a Bachelor's degree (43), while 27 had a Master's degree and 14 completed College of Applied Studies, suggesting a generally well-educated sample. The majority of participants were employed (84), and regarding their place of residence, 64 came from other parts of Serbia, 38 lived near Zasavica (within 50 km), and only 2 were from abroad (Table 1).

Table 1. Socio-demographic characteristics of respondents

		Frequency	**Percent**
Have you ever visited the Special Nature Reserve Zasavica?	Yes	102	66.7
	No	44	33.3
Gender	Male	68	66.7
	Female	34	33.3

Age	20-30	21	20.6
	30-40	22	21.6
	40-50	42	41.2
	50-60	10	9.8
	60-70	4	3.9
	>70	3	2.9
Education	High school	12	11.8
	College of Applied Studies	14	13.7
	Bachelor's degree	43	42.2
	Master's Degree	27	26.5
	Doctorate	6	5.9
Employed	Yes	84	82.4
	No	18	17.6
Place of residence	Near Zasavica (within 50 km)	38	37.3
	In another part of Serbia	64	62.7
	Outside Serbia	2	2.0

Source: Authors

Most respondents were occasional visitors, with 45 (44.1%) visiting only once and 38 (37.3%) visiting two or three times. Fewer participants had visited more frequently, with 14 (13.7%) reporting four to ten visits and only 5 (4.9%) more than ten times. Despite the varying frequency of visits, the majority of respondents noticed a rich variety of bird species: 89 visitors (87.3%) reported seeing different birds, while 8 (7.8%) did not, and 5 (4.9%) could not remember. This indicates that Zasavica generally provides good opportunities for birdwatching, even for first-time or infrequent visitors. Awareness of birdwatching was high among respondents. Out of 102 participants, 91 (89.2%) knew exactly what birdwatching is, while 11 (10.8%) had heard of it but did not know much about it. No participant reported hearing about birdwatching for the first time, suggesting that most visitors were already familiar with the concept (Table 2).

Table 2. Descriptive statistics

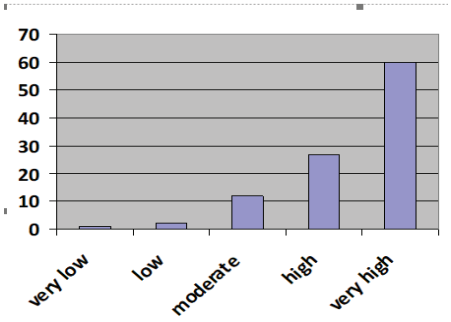
Question	Response	Frequency (f)	Percentage (%)
How many times have you visited Zasavica?	Once	45	44.1
	2–3 times	38	37.3
	4–10 times	14	13.7
	More than 10 times	5	4.9

During your visit, did you notice the presence of various bird species?	Yes	89	87.3
	No	8	7.8
	I don't remember	5	4.9
Have you heard of the term "birdwatching"?	Yes, I know exactly what it means	91	89.2
	I have heard of it, but I don't know much about it	11	10.8
	No, this is the first time I hear about it	0	0.0

Source: Authors

Respondents were very optimistic about Zasavica's potential as a birdwatching destination. When asked to rate the potential, 60 (58.8%) considered it very high, 27 (26.5%) rated it high, 12 (11.8%) moderate, 2 (2.0%) low, and only 1 (1.0%) very low (Figure 1). This suggests that visitors believe the reserve is well suited for birdwatching tourism. Regarding the facilities and services that could support this type of tourism, respondents highlighted trained guides and organized tours as most important (32.4%), followed by promotional activities such as advertising and websites (24.5%) and accommodation and catering facilities (23.5%). Viewing platforms and marked trails (12.7%) and information boards or brochures (6.9%) were considered less critical.

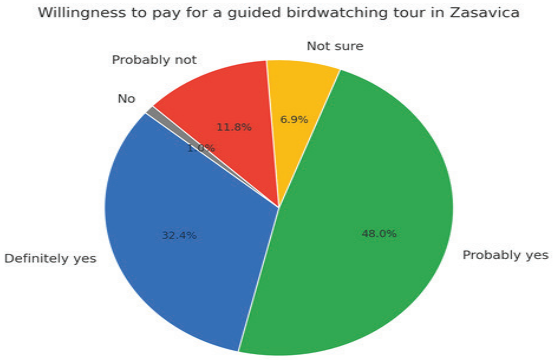
Figure 1. Zasavica's potential as a birdwatching destination



Source: Authors

Most respondents expressed willingness to pay for guided birdwatching tours, with 33 (32.4%) saying they would definitely pay and 49 (48.0%) saying they would probably pay. Seven (6.9%) were unsure, 12 (11.8%) would probably not pay, and only 1 (1.0%) would refuse (Figure 2). When asked about how much they would be willing to spend on a one-day visit, 42 participants (41.2%) chose €6-15, 32 (31.4%) up to €5, 19 (18.6%) between €16-30, 5 (4.9%) more than €30, and 4 (3.9%) would not pay at all. This suggests that birdwatching in Zasavica is considered affordable by most visitors, with moderate spending being the most common preference.

Figure 2. Willingness to pay for guided birdwatching tours



Source: Authors

The survey results show generally positive views on developing birdwatching tourism in Zasavica. Respondents rated how they believe birdwatching tourism would affect the local economy, the quality of life of the local community, and the environment. The evaluation was conducted using a five-point Likert scale, where 1 represented the lowest and 5 the highest level of agreement. They think such development would help the local economy, as shown by the high average score of 4.2. The impact on the quality of life for the local community was also seen as positive, with a slightly lower average score of 3.8, which suggests that social benefits are recognized but may be perceived as less direct than economic ones. The highest score, 4.3, was recorded for the contribution of birdwatching tourism to biodiversity and environmental protection, showing strong awareness of ecological benefits. Overall, the results indicate that developing birdwatching tourism in Zasavica is seen positively for the economy, the community, and the environment (Table 3).

Table 3. Impacts of birdwatching tourism

Items	Average rating
Developing birdwatching tourism in Zasavica would contribute to local economic development	4.2
Developing birdwatching tourism in Zasavica would contribute to the quality of life of local community	3.8
Developing birdwatching tourism in Zasavica would contribute to biodiversity conservation and environmental protection	4.3

Source: Authors

Discussion

Birdwatching tourism can provide important economic benefits (Callaghan et al., 2025), especially for local communities (Nella & Stergiou, 2025). It encourages the development of small businesses such as accommodation, guiding services, local transport, and traditional food production. These activities can create new sources of income, especially in rural areas with limited employment opportunities. In addition, birdwatching tourists usually travel outside the main season and stay longer, which contributes to a more stable local economy throughout the year. Therefore, the economic effects of birdwatching are not limited to direct spending, but also include indirect benefits through the promotion of local culture and products. Birdwatchers can also bring financial benefits to remote areas, helping local people to diversify their income and at the same time contribute to the protection of bird habitats (Schwoerer & Dawson, 2022). Since birdwatching is one of the fastest-growing forms of ecotourism, it can play an important role in strengthening local economies, particularly in regions rich in bird species (Czeszczewik et al., 2019). Because the benefits of birdwatching tourism often outweigh the costs for local communities, many governments in biodiverse tropical countries support it as a way to create low-impact jobs and promote economic development while using natural resources sustainably (Ocampo-Peñuela et al., 2025).

International examples show that the success of birdwatching destinations often depends on strategic planning and cooperation between tourism organizations, nature protection authorities, and the local population. Countries such as Colombia, Poland, and Alaska have developed well-organized birdwatching routes, visitor centres, and educational programs that help link tourism with conservation goals. These examples highlight the importance of investing in infrastructure that supports sustainable visits, such as marked trails, observation towers, information boards, and accessible facilities for all visitors. However, the potential for sustainable birdwatching tourism is often not fully used because of social, economic, and political challenges that can limit development. According to Maldonado et al. (2018), countries such as Colombia, which has faced armed conflict in the past, are now starting to develop birdwatching tourism as an important part of their local economy. Examining why some countries succeed in developing birdwatching while others do not can show where this form of ecotourism contributes to conservation and where its potential remains unfulfilled (Stronza et al., 2019).

In the context of Serbia, and particularly the Special Nature Reserve Zasavica, similar approaches could be applied. The reserve already has valuable natural resources and a recognizable image, but additional efforts are needed to improve infrastructure, promote specialized guiding services, and engage the local community in tourism development. The results of the conducted survey support this view, as most visitors (58.8%) rated Zasavica's potential for birdwatching tourism as very high. Most respondents expressed a willingness to spend money on related activities and believed that such tourism could contribute to local economic development. Therefore, the main hypothesis (H1) and all supporting hypotheses (H1a, H1b, and H1c) were confirmed. International research also indicates that birdwatchers' motivations and levels of engagement vary considerably. In a study of the largest national park in Poland, birdwatchers were primarily middle-aged urban males, motivated by the desire to be close to nature and fascination with birds (Janeczko et al., 2021). The study highlighted that well-developed infrastructure

is essential for enabling interactions with the objects of observation, while engagement tends to increase with frequency of trips and personal commitment. These findings support the results for Zasavica, emphasizing the importance of providing high-quality infrastructure, guided tours, and educational programs to cater to both amateur and highly engaged birdwatchers.

Rural areas are increasingly shifting away from the traditional paradigm of being exclusively tied to agriculture, embracing new opportunities related to tourism, recreation, and the promotion of local products (Dimitrijević, 2025). Ensuring destination sustainability requires the active involvement and collaboration of all relevant stakeholders, including local residents, tourism organizations, and conservation authorities (Ivkov et al., 2024). By applying lessons from international experiences, Zasavica could strengthen its position as a sustainable birdwatching destination that contributes both to local economic growth and to biodiversity conservation.

The discussion confirms the initial assumption that the richness of bird species alone is not sufficient for the success of birdwatching tourism. Well-developed infrastructure, quality visitor experience, and active involvement of local residents are essential for achieving long-term sustainability and economic benefits. Additionally, the success of birdwatching tourism depends on basic and specialized infrastructure, such as access to habitats, lodging, food, guidance, and comfort, which politically unstable or conflict-affected countries often lack, limiting visits to only the most adventurous birdwatchers (Echeverri et al., 2022).

Conclusion

Birdwatching tourism represents a form of sustainable tourism that combines environmental protection with local economic development. The analysis has shown that this type of tourism can create multiple benefits for rural areas, especially by supporting small businesses and extending the tourist season. However, to achieve its full potential, it is necessary to develop appropriate infrastructure, ensure professional guiding services, and include local residents in planning and decision-making. Birdwatching tourism can become an important driver of sustainable local development if managed responsibly and supported by cooperation between conservation institutions, tourism stakeholders, and local communities. The survey conducted among visitors to Zasavica supports this potential, as most respondents rated the reserve's birdwatching tourism potential as very high and expressed willingness to pay for guided tours and related services, while recognizing its contribution to local economic development.

International examples demonstrate that destinations with a clear management strategy, adequate facilities, and community participation are more successful and more attractive to visitors. These experiences can serve as useful guidelines for improving birdwatching tourism in Serbia. In the case of the Special Nature Reserve Zasavica, applying these principles could enhance both its ecological value and its economic contribution to the region.

The study provides valuable insights into visitors' perceptions, but it also has some limitations. The sample included 102 visitors, and the survey was conducted online, which left out some potential respondents. In addition, the study focused only on visitors,

without including local stakeholders, tourism operators, or conservation authorities. Despite these limitations, combining the survey results with lessons from international examples gives a clearer picture of the opportunities and challenges for birdwatching tourism in Zasavica. The findings point to clear ways to support sustainable development, such as improving visitor-friendly infrastructure, offering guided services, engaging the local community, and running educational programs. By continuing to track visitor behaviour and economic impacts, birdwatching tourism in places like Zasavica can help local economic growth, involve the community, and protect biodiversity. Future research could include a larger sample, multiple stakeholder perspectives, and look at the long-term effects of birdwatching tourism on the local economy and environment.

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