

## ARTICLES

**ECOTOURISM IN THE PROTECTED AREAS OF THE FEDERATION OF BOSNIA AND HERZEGOVINA: A CASE STUDY OF NATURAL MONUMENT "TAJAN"****AUTHORS****Amra Banda, Aida Korjenić, Aida Avdić, Amina Sivac***Department of Geography, Faculty of Science, University in Sarajevo, Zmaja od Bosne 33-35, 71 000 Sarajevo, Bosnia and Herzegovina**e-mail: amra-catovic@hotmail.com; aidakorjenic@yahoo.com;**avdic.aida@yahoo.com; aminasivacpmf@gmail.com*

UDK: 911.3:338.48+502](497.6 Tajan)

**ABSTRACT*****Ecotourism in the protected areas of the Federation of Bosnia and Herzegovina: a Case study of Natural monument "Tajan"***

*In the tourism sector, in the last twenty years, a new trend has emerged - ecotourism - in response to overuse and even exploitation of non-renewable natural resources for tourism. When traveling, people want to experience nature, but they need not endanger the natural environment with their stay. Bosnia and Herzegovina have less than 1 % of protected territory, which ranks it in the countries with the least formal protection in Europe. The regional average is 7 %, so the goal, which has lately been supported by international institutions in Bosnia and Herzegovina through various initiated projects, is to expand protected areas and to use their development potential. The motives are the protection of extremely rich biodiversity of global importance, and the economic development of protected areas, local communities, and the state as a whole. The main purpose of this paper is to explain the importance of ecotourism, with particular reference to its development in the protected areas of the Federation of Bosnia and Herzegovina, as an example of the Tajan Natural Monument. The Tajan area is the only protected area in the Zenica-Doboj Canton. According to the IUCN classification, it belongs to the V category of protection. Analyzing the current situation of its present tourist valorization, as well as the possibilities of utilization for tourism purposes in the future development, this paper identifies the basic problems and given guidelines for the promotion of ecotourism in this area.*

**KEY WORDS***environmental protection, Tajan Natural Monument, ecotourism, protected areas.*

## **1. Introduction and methodology**

During the 1990s, the term specific forms of tourism began to be used more and more in theory and practice. There are different types of selective tourism, and their complete classification (typology) is almost impossible. Selective tourism can be defined as different types of tourism that are in harmony with the natural and social values of the local community allowing the host and guests to enjoy, to have a positive and valuable experience through mutual interaction.

The International Ecotourism Society (TIES) defines ecotourism as a responsible journey to natural destinations that contributes to the conservation and enhancement of the well-being of the local population (Weaver, 2008). Maksin (2012) also believes that ecotourism can be defined as ecologically responsible travel and visits to areas of relatively preserved nature, for the enjoyment, study and appreciation of the values of natural and cultural heritage and landscapes (natural or close to natural), promotion and inclusion in protecting and promoting these values, the environment, and local communities. Geic (2011) states that ecotourism can develop within national parks and other protected sites, but also on family farms operating on the principles of organic farming.

Many studies have confirmed that ecotourism is a trend that has emerged in the tourism sector in response to overuse and even the exploitation of non-renewable natural resources to generate tourism traffic. Drešković et al. (2015) state that the “development concept of tourism supply in ecotourist destinations focuses on meeting the specific needs of a small number of tourists, who are mainly homogeneous about the particular expressed interest“. Ecotourism in Bosnia and Herzegovina was also analyzed by Babić-Hodović et al. (2016), who pointed out that Bosnia and Herzegovina place ecotourism and rural tourism development among the five priority types of tourism that should be developed in the coming years.

The local ecotourism market is mainly based on visits to protected natural areas. Although the number of visitors to protected areas is not small, ecotourism in the entire country and the Federation of Bosnia and Herzegovina is still not a significant form of tourism.

## **2. Potentials for the development of ecotourism in protected areas of the Federation of Bosnia and Herzegovina**

The potential for ecotourism development in Bosnia and Herzegovina is great due to its preserved natural resources, but it is still underdeveloped (even in protected natural sites). Ecotourism is distinguished by its emphasis on conservation, education, responsible tourists, and active community involvement.

Responsible ecotourism includes programs that minimize the negative effects of traditional tourism on the natural environment. An important segment of ecotourism is organic farming, which also encourages the development of a local community that is an integral part of ecotourism (Pelikan-Matetić & Pelikan, 2008).

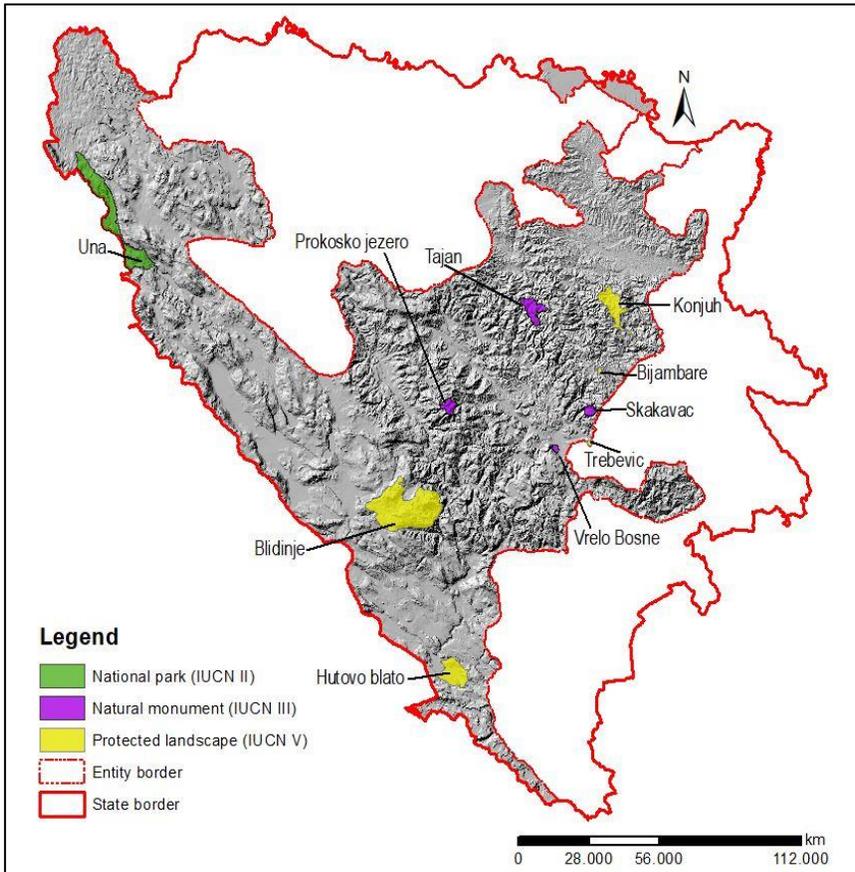
Organic production in all protected areas appropriate to the management objectives should have at least two positive effects: the preservation of the clean environment, necessary for the maintenance of protected areas, and the direct economic profit from the sale of such products. A variety of food and agricultural products can be produced in an environmentally friendly way, such as products of animal origin (meat, milk, and cheese), organic crops and vegetables, medicinal, aromatic, and spicy plants (Bakan & Jaković, 2015). However, such development concepts in protected areas in Bosnia and Herzegovina are still poorly developed. Data for protected areas in the territory of the Federation of Bosnia and Herzegovina can be seen in Table 1 and spatial distribution in Figure 1.

*Table 1: Protected areas in the territory of the Federation of Bosnia and Herzegovina.*

CATEGORY	IUCN CATEGORY	AREA (ha)
NATIONAL PARK		
Una	II	34.685
NATURAL MONUMENT		
Lake Prokoško	III	2.119
Skakavac	III	1.430,70
Tajan	III	5.127
Spring of River Bosna	III	603
PROTECTED LANDSCAPE		
Blidinje	V	35.800
Hutovo blato	V	11.093,98
Konjuh	V	8.016,61
Bijambare	V	367,36
Trebević	V	400,20
TOTAL		99.642,85

The main obstacles for the development of ecotourism in Bosnia and Herzegovina are:

- inadequate supply of adequate accommodation, facilities that do not comply with European standards (ECEAT standards),
- limited amount of information on private rural accommodation,
- lack of experience and poor quality of service,
- lack of general tourist knowledge.



*Figure 1: Spatial distribution of protected areas in the Federation of Bosnia and Herzegovina.*

The ecotourism values of the park are:

- Canyons of Suha, Tajašnica, and Mašica
- Cave Atom;
- Cave Omladinska (Youth cave);
- Luke`s cave
- Lake Mašica (formed in 1985 due to a landslide and a barrier of streams)
- Archeological sites (stone bridges) – architectural heritage (Figure 2).

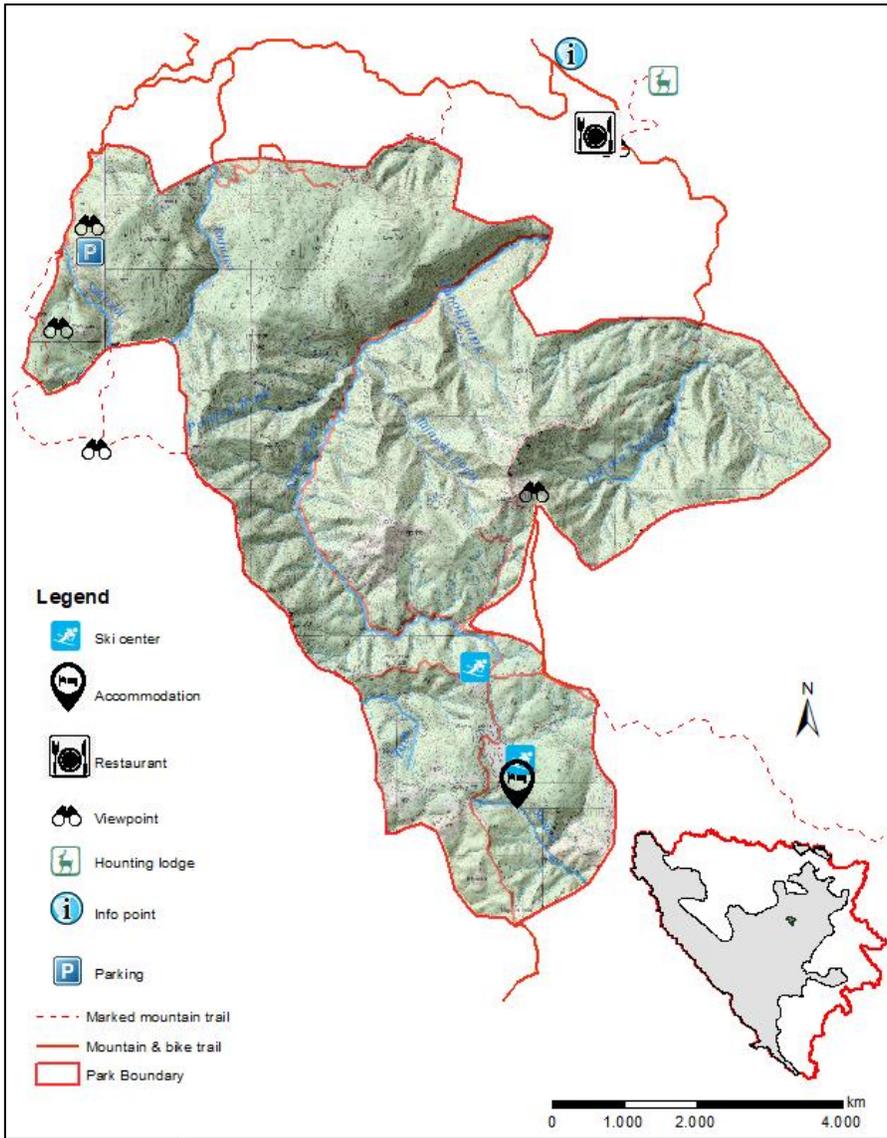


Figure 2: Nature monument "Tajan".

Various tourist events are taking place in the area of the Nature Monument, which by its characteristics, makes it increasingly an ecotourism destination. The existing forms of tourism in Tajan are:

- weekend and picnic tourism,
- hiking
- climbing
- canyoning

- aero sports and cycling
- health tourism
- fishing
- hunting
- collection of medicinal plants (Figure 3).



Figure 3: Entrance to the Natural Monument Tajan.

Source: <http://visitbih.ba/spomenik-prirode-tajan-kod-zavidovica-prelijepa-zelena-oaza/>

The relief of the Natural Monument provides ideal conditions for the development of aero and adrenaline sports, first of all, paragliding, flying sports planes, rafting, mountain biking, canyoning. Gostovic River meets all conditions and represents a significant potential for canyon development. Mountain biking in Tajan has recently become an increasingly attractive and interesting activity for visitors.

The Atom Mountaineering Society organizes a three-day stay and a visit of the Tajan natural resources annually using mountain bikes. Hunting in the mountainous area of Tajan has been known since the dawn of the Illyrian tribes. Tajan is also known for its hunting grounds and high-quality game. Large high-quality game animals of interest to hunters include bear, wild boar, wolf, roe deer, chamois, rabbit, mountain grouse. It is desirable to develop this type of tourism (hunting tourism) because it can take place throughout the year. Rivers such as Gostović, Tajašnica, Suha, Trbušnica, Mašica have ideal conditions for the development of sport fishing. Rivers are rich in brown trout and California trout. Fishing is allowed between IV and X months of the year.

Speleotourism in the area of Natural Monument Tajan is one of the most developed forms of tourism and is a branch of alternative tourism. Numerous archaeological remains (bones of an extinct cave bear, cave hyena, and red deer, about 15,000 years old) from the Paleolithic to the Middle age have been found in special objects at „Tajan“. Much of the Natural Monument is built of massive limestone of the Triassic age. Structurally those limestones are very cracked and karstified with caves, pits, abysses, and springs.

More than 100 speleological objects have been discovered in the Tajan area. Speleological objects of the Cave Atom, Javor cave, Omladinska cave, and Luka's cave are part of the Natural Monument area. Luka's cave is located at the base of the vertical cliff of the rock called Srednja (discovered in May 2003). The cave is accessible to amateurs as well. It is known for its beauty numerous cave decorations, as well as its stalagmite, which is reminiscent of a mother with a child. At the same time, this is the most beautiful cave in Bosnia and Herzegovina and is open for tourist visits.

Various types of insects like reptiles and spiders are inhabitants of caves and pits. A new animal species called “Tajanska pećinska mokrica” has been discovered in the cave of Suha creek, which is found only in Tajan. For this area to become a tourist destination for many tourists, it is necessary to work on infrastructure content enrichment, training of accommodation owners, training of mountain guides, etc.

Thanks to one of the projects that the European Union has financially supported, “TAJAN - Tourism, Adventure, Joy, Attractions, Nature” Tajan tourist supply was enhanced. As part of the project, the reconstruction of Lake Mašica was completed, access roads and entrances are arranged for two caves, two observation posts are installed, a tourist info center is built and equipped, and signaling was improved. The attractiveness of the enhanced facilities of the Tajan area attracts an increasing number of tourists from all over the region, and the supply of boarding accommodation has been enriched within the project.

Ecotourism includes a variety of activities such as traveling through the mountains, visiting unique ecosystems, sightseeing wildlife, learning about local traditions, tasting local food and drinks, and attending events. Mount Tajan and the natural monument itself are under very small anthropogenic influence.

Almost everything that a person has built in this area fits into the natural environment and does not greatly impair the original natural appearance. These are generally smaller structures in the form of mountain houses and homes built of stone and wood. The ambiance of the primeval natural environment, natural values, and rarity with minimal human involvement offer great opportunities for

ecotourism development in the Tajan Natural Monument. That makes it an interesting destination for short stays (Figure 4).



*Figure 4: Tourist info center in Tajan Natural Monument.*

*Source: <https://www.visitmycountry.net>,*

To improve the attractiveness of the supply and the successful sale, it is necessary to work on linking the supply with other destinations, to develop offers of authentic souvenirs, to harmonize the quality of accommodation facilities, as well as to expand accommodation capacities through other types of offers. Some measures and actions are required ecotourism development in this area, such as the collection and removal of garbage in the Kamenica and Ponijeri excursion sites, located in another protected area of the Tajan, which is one of the biggest problems.

There are not enough waste bins at the picnic areas, and in most cases, the waste ends up in the riverbed. To overcome this problem, it is necessary to install more waste bins and containers, and also to create info boards that would indicate the need to dispose of waste in the designated places. For preventive action, when it comes to the risk of fire in this protected area, it is necessary to identify and arrange locations at existing picnic areas where a fire could be safely lit. One of the important activities for the development of this form of tourism is to greatly improve the attractiveness as well as the content of the touristic supply and to establish regular cooperation with travel agencies.

*SWOT Analysis of Sustainable Development of the Natural Monument Tajan is in Table 2.*

*Table 2: SWOT Analysis of Sustainable Development of the Natural Monument Tajan.*

<b>STRENGTHS</b>	<b>WEAKNESSES</b>
<p>The only tourist motif of its kind in the area of Zenica-Doboj Canton</p> <p>A large number of cycling and mountain trails</p> <p>Speleotourism</p> <p>A large number of endemic species of flora and fauna</p>	<p>Insufficient promotion</p> <p>Insufficient awareness of citizens about environmental protection and generally poor attitude towards the environment</p> <p>Insufficiently developed and maintained infrastructure</p>
<b>OPPORTUNITIES</b>	<b>THREATS</b>
<p>Development of ecotourism</p> <p>Healthy food production</p> <p>A steady increase in the number of tourists visiting Bosnia and Herzegovina and the area of the Canton and the municipality where the Nature Monument is located</p> <p>Raising awareness of the value of the area</p> <p>Increasing the quality of life in the destination</p>	<p>Lack of local community initiative for further development</p> <p>Insufficient financial support for infrastructure</p> <p>Similar sites with a similar offer in the region</p> <p>Insufficient catering facilities</p>

### 3. Discussion and conclusion

Ecotourism is primarily marketed as equal to nature-based tourism. From a functional point of view, ecotourism is largely individual on the market or is small-scale tourism (tourist groups of up to 25 people and hotels with less than 100 beds) within which small or medium-sized enterprises operate in nature. It is a market segment that focuses on guiding and accommodating small groups in nature with an educational approach, using guidance materials and specialized local guides.

Many different participants must be involved in its implementation - including entrepreneurs, government, NGOs, and local communities. Local destinations need to be prepared to properly finance ecotourism management or risk disrupting their natural and cultural resources and, ultimately, their position in the fast-growing international market. According to the World Tourism Organization, the main features of ecotourism are the content of educational and interpretation components, the organization of events for small groups of people run by privately owned specialized small businesses, minimizing the negative effects on the natural and socio-cultural environment, and supporting the protection of natural areas (Figure 5).

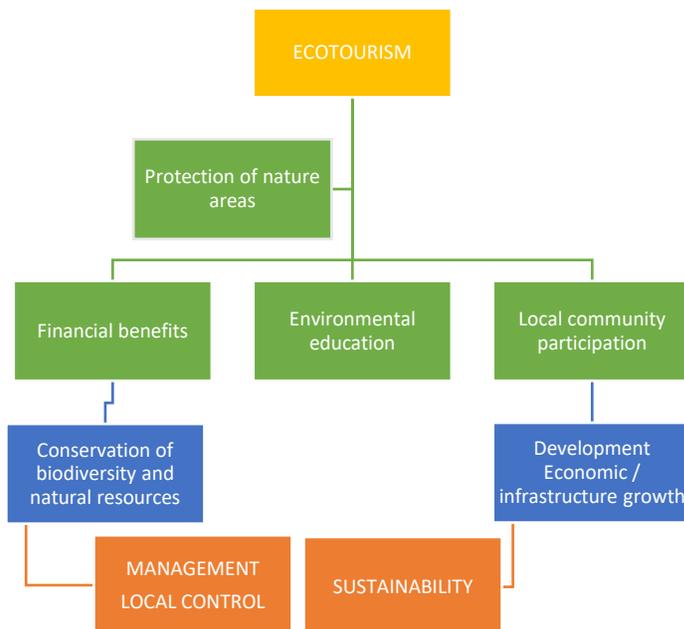


Figure 5: Ecotourism components, functions, and effects.  
Source: Rabić, B., 2012.

Like all forms of sustainable tourism, ecotourism is a dynamic area with new techniques and approaches being developed every year. Eco destinations represent preserved natural attractions within a protected area.

Eco destinations are characterized by:

- Low development density;
- Tourism does not harm nature;
- Development of small local businesses owned by residents;
- Outdoor recreational sites designed to protect resources;
- Improvement of accommodation facilities where hospitality is provided by friendly and motivated staff;
- A variety of local festivals and events that show a sense of pride in the local community.

The eco-hub is a special accommodation facility that offers less comfort than standard hotels because the emphasis of the stay is not on comfort but activities (hiking, horseback riding, bird watching, etc.). It is made of indigenous materials by traditional architecture. These are smaller family houses, peasant households (especially those engaged in organic farming), campsites, Robinson tourism facilities.

Bosnia and Herzegovina have been identified as a destination for all kinds of tourist visits in the field of special tourism. In the protected areas, in addition to the factors of protection, the importance of tourism has recently been emphasized. Tourists are eager for peace and relaxation in nature. Protected areas in the Federation of Bosnia and Herzegovina are increasing in tourist numbers and attracting a wide range of visitors.

Therefore, it is necessary to enable better management of protected areas to avoid their devastation due to too many visitors. Some positive effects of tourism development in protected areas are new jobs, improving standards, building infrastructure, being able to sell local products, etc. In addition to the positive impact, some negative ones, such as environmental pollution, inability to perform some traditional activities (hunting, fishing, deforestation). These effects are often the result of non-cooperation between the park administration and the local community.

Although the number of visitors to protected areas is not small, ecotourism in Bosnia and Herzegovina is still not a significant form of tourism. The main obstacle to faster development is the low level of social and economic development of the country. In addition to that, there is insufficient motivation among those who would potentially develop a tourism product, as well as among travel agencies, primarily due to low profitability.

Organic production in all protected areas, appropriate to the management objectives, should have at least two positive effects: the preservation of the environment for the maintenance of protected areas and the direct economic profit from the sale of such products. The success of ecotourism will depend on the effective coordination of work between all actors involved: the state, local authorities, private companies, and the local population. Given the increasing trend of potential tourists interested in green tourism, it is further contributing to tourism development, one of the fastest-growing sectors in Bosnia and Herzegovina.

Based on the survey conducted among the citizens of Bosnia and Herzegovina (random sample method in Sarajevo), it was found that a large number of respondents were familiar with the term ecotourism and its characteristics. However, the results have shown that very little is being done to promote it. The majority of respondents, 90.7%, believe that ecotourism in the Federation of Bosnia and Herzegovina is not sufficiently promoted as part of the tourist offer. According to the obtained data, respondents have a habit of visiting eco-tourism areas once or twice a year (76.7% of them), while 9% do not visit these areas at all.

The survey was conducted among respondents in Bosnia and Herzegovina and was anonymous. The test method used was the survey self-completion method. The survey contains 10 questions. The socio-demographic profile of tourists in the empirical study was examined through the gender variables and age structure of the respondents. The analysis of information revealed how often the respondents visit ecotourism areas, whether they are familiar with some ecotourism contents and destinations, and what the term "ecotourism" refers to (Figure 6).

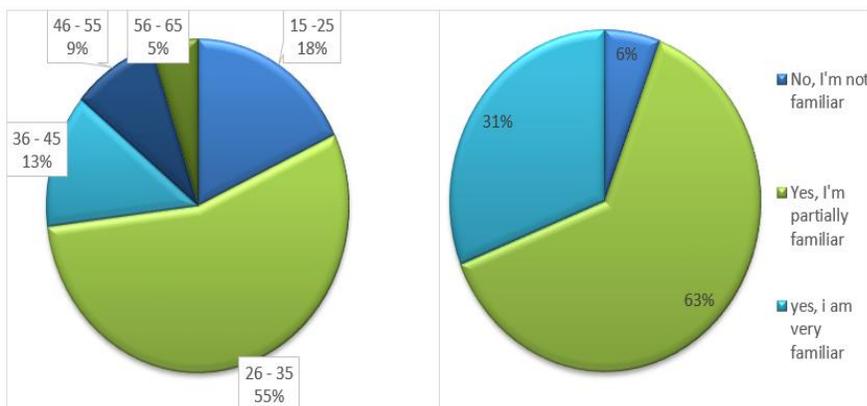


Figure 6: Age structure of respondents (%) Figure 7: Familiarity with the term ecotourism (%)

Further, the survey also revealed the level of environmental awareness of the visitors about what the protected area represents, as an area under strict protection conditions. The survey was conducted on 85 respondents. The gender structure of respondents in the conducted research includes a larger number of female respondents, in the amount of 57 (66.3%), while male respondents include 29 persons (33.7%). In terms of the age structure, the largest number of respondents (55%) are within the age group of 26 – 35 years. The second most represented group is the one of the age range of 15 - 25 years with 16 respondents (18%), the age group 36 - 45 years belongs to 11 respondents (13%), while 8 respondents (9%) belong to the age group of 46-55 years. The least number of respondents – 4 of them (5%), were in the age group of 56-65, while there were no respondents in the age group of more than 65 years.

One of the main goals of this research was to find out whether the respondents were familiar with the term ecotourism. The largest number of respondents, 55 (64%) said that they were partially familiar with the term ecotourism, while 27 respondents (31.4%) were very familiar and 5 respondents (5.8%) said they were not familiar with the term ecotourism. The promotion of tourism is very important for its development. It refers to the entire set of activities, which communicate the product, brand, or service to tourists.

The idea is to provoke interest for them, to give additional information, and to develop consumer preferences for their use. The purpose of promotion of tourist destination and form of tourism is to inform current and potential visitors about tourist offer, present the tourist attractions of the destination, attract as many visitors to the destination, position the destination or form of tourism in the tourism market, or build an image.

The vast majority of respondents, 90.7% of them, believe that ecotourism in the Federation of Bosnia and Herzegovina is not sufficiently promoted as part of its tourist offer. Based on this research, it can be concluded that the promotion of ecotourism in our country is not at a satisfactory level and that special attention should be paid to providing additional information and promoting this form of tourism.

As protected areas are becoming an increasingly important part of the tourist offer in many countries of the world, one of the aims of this study was to determine to what extent citizens are aware of the existing protected areas in the territory of Bosnia and Herzegovina. On that note, we gave our respondents a list of the most famous natural attractions in the analyzed area and asked them to designate the ones which they considered legally protected. Based on their responses, it became clear that a large number of respondents are aware of the protected areas in the Federation of Bosnia and Herzegovina (Figure 7).

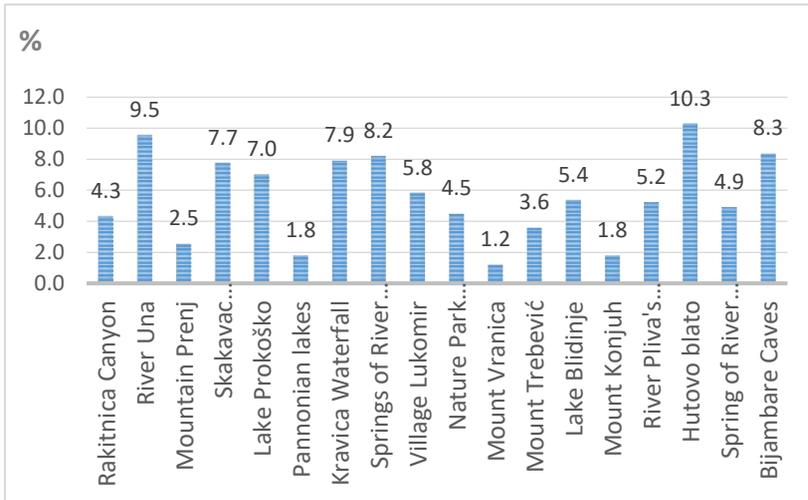


Figure 7: Respondents' awareness of protected areas in the Federation of Bosnia and Herzegovina

The survey was approached by 86 respondents, 80.2% of whom consider Hutovo Blato to be a protected area, 74.4% consider the Una River (Una National Park) a protected area, while 65.1% consider Bijambare a protected area. Springs of River Bosna are considered legally protected by 64% of respondents and waterfall Skakavac by 60.5% of them, while 54.7% of respondents perceive Prokoško Lake as a protected area. However, the survey showed that only 41.9% of the respondents were aware that the protected areas of the Federation of Bosnia and Herzegovina include the Blidinje Nature Park, 34.9% Tajan, 27.9% Trebevic and 14% Konjuh. Interestingly, 35 respondents (40.7%) answered that Plitvice Lakes are included in protected areas, which is not correct. Based on these results, which show that the respondents are well acquainted with the protected areas, it can be concluded that in the Federation of Bosnia and Herzegovina the importance of protecting certain areas is truly recognized.

Figure 8 shows that 40.7% of respondents consider that the main role of protected areas is nature protection. Nature protection is a series of measures and activities focused on preventing damage to nature, natural values, and natural balance. These impairments are most often the result of human activity due to the mismatch of social development and the available natural resources. They gave equal importance to improving the quality of tourist offer (18.6%) and to the conservation of various plant and animal species and their habitats (17.44%) in protected areas. The least significant roles in these areas, according to our respondents, are their impact on education and research (11.63%) and tourism (11.63%).

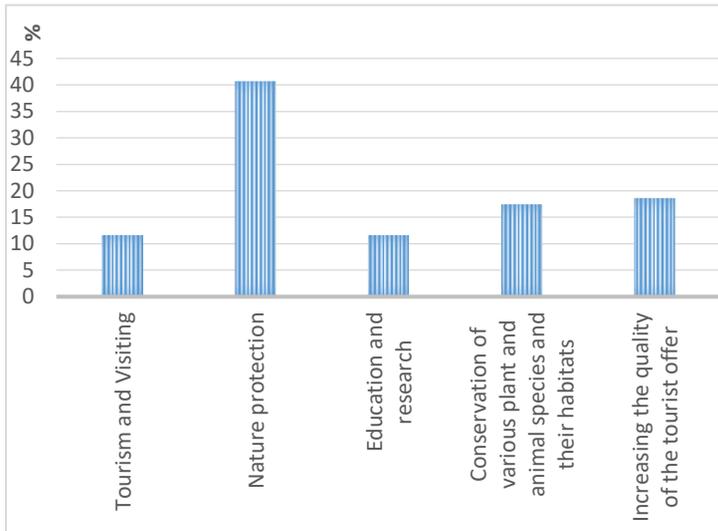


Figure 8. The main role of protected areas.

According to the survey, it is evident that respondents have a habit of visiting eco-tourism areas once or twice a year (76.7%). Only 14% of respondents visit ecotourism areas every month, while 9% of them do not visit ecotourism areas at all. The majority of respondents (80%) prefer active nature holidays, while 20% of them prefer a passive vacation in nature. Eco-tourism in the Federation of Bosnia and Herzegovina has enormous potential, but eco-friendly accommodation makes it possible to raise the quality and diversity of tourist offer. A large number of respondents (33%) consider that the main characteristic of environmentally friendly accommodation is local and organic food.

Local foods grown in the destination they visit and traditional dishes are some of the factors that attract a large number of tourists. Immediately after (30%), they give great importance to the use of renewable energy sources, which involves the installation of solar panels or systems that use wind and other renewable energy sources. Further on, 29% of respondents consider that recycling of waste is a feature of environmentally friendly accommodation, and they consider recycling as a key to conserving energy and protecting the environment. The construction of parking spaces in the ecozones and the use of plastic utensils in the accommodation facility is environmentally unacceptable and does not represent a feature of environmentally friendly accommodation.

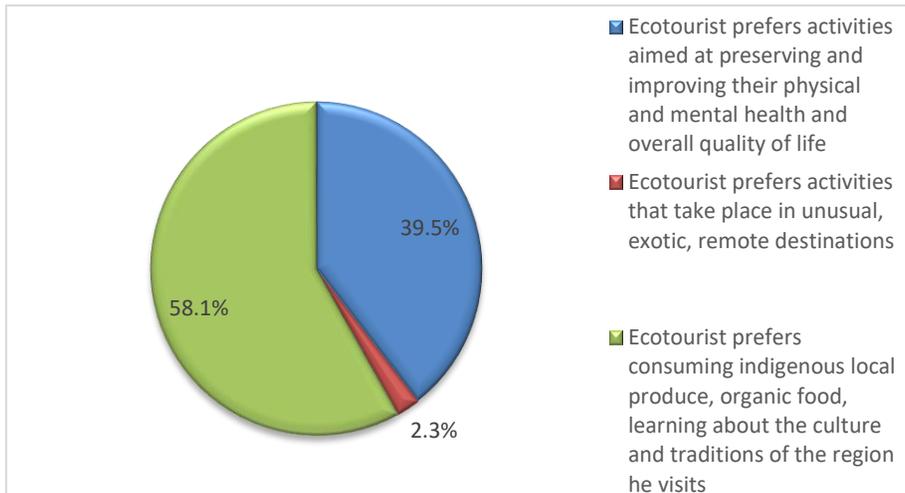


Figure 9. The main characteristics of ecotourists (%).

Respondents were asked in the survey what they considered the main characteristics of ecotourists, involving the three options (Figure 9). The majority of respondents, 58,1% gave the correct answer that an ecotourist is a person who prefers consuming local indigenous products, organic food, getting acquainted with the culture and tradition of the region he visits. However, 41,9% of our survey respondents gave an incorrect answer. This can be justified by the similarity of the other answers offered (health and adventure), since the other two forms of tourism are closely related to the features of ecotourism.

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