

## ECOTOURISM AND PROMOTION AS A KEY TO DEVELOPMENT OF BIOSPHERE RESERVES

**Katarína Vitálišová** (*Matej Bel University, Slovakia*)<sup>1</sup>

**Mária Vavrušová** (*Matej Bel University, Slovakia*)<sup>2</sup>

### Abstract:

The paper presents the case study on the biosphere reserve and the role of ecotourism and promotion in their development. The biosphere reserves are presented as model territories based on the harmony of human and nature, and that is why the social and economic development in this areas has to be properly managed and in line with the principles of sustainable development. The case study on the examples of Slovak biosphere reserves explain the possible solutions of their further development based on the ecotourism and promotion of their uniqueness. It points out various effects of tourism that bring positive but also negative effects on the quality of the territory.

**Keywords:** *biosphere reserves, ecotourism, sustainable development, Slovakia, questions.*

**JEL Classification:** L83, Q01

## ECOTURISMO Y PROMOCIÓN COMO CLAVE PARA EL DESARROLLO DE LAS RESERVAS DE LA BIOSFERA

### Resumen:

El documento presenta el estudio de caso sobre la reserva de la biosfera y el papel del ecoturismo y la promoción en su desarrollo. Las reservas de la biosfera se presentan como territorios modelo, basados en la armonía del ser humano y la naturaleza, por lo que el desarrollo social y económico de estas zonas debe gestionarse adecuadamente y en consonancia con los principios del desarrollo sostenible. El estudio de caso sobre los ejemplos de las reservas de biosfera de Eslovaquia explica las posibles soluciones de su desarrollo posterior basado en el ecoturismo y la promoción de su singularidad. Señala diversos efectos del turismo que traen efectos positivos pero también negativos sobre la calidad del territorio.

**Palabras clave:** *reservas de biosfera, ecoturismo, desarrollo sostenible, Eslovaquia, preguntas.*

---

<sup>1</sup> Faculty of Economics, Matej Bel University, Tajovského 10, 975 90, Banská Bystrica, Slovakia, [katarina.vitalisova@umb.sk](mailto:katarina.vitalisova@umb.sk), <https://orcid.org/0000-0002-5830-4862>

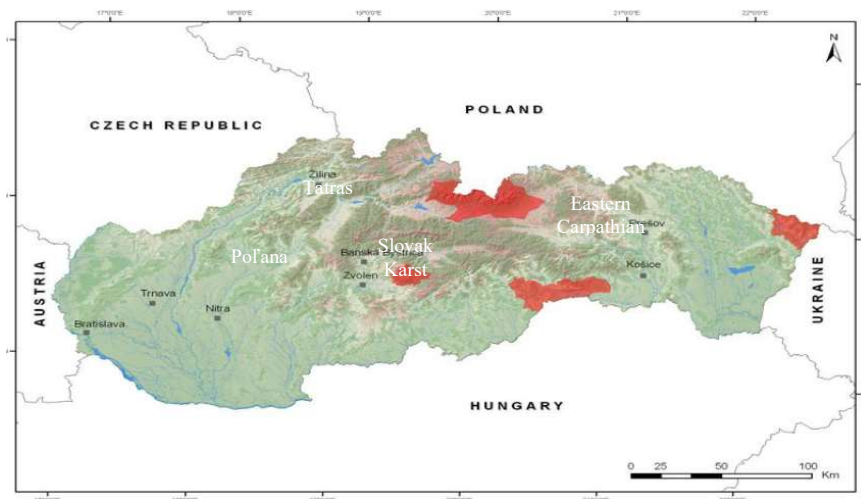
<sup>2</sup> Faculty of Economics, Matej Bel University, Tajovského 10, 975 90, Banská Bystrica, Slovakia, [maria.vavrusova@student.umb.sk](mailto:maria.vavrusova@student.umb.sk)

## 1. Introduction

The biosphere reserves are specific types of territories designated by UNESCO as a world natural heritage because of their natural and cultural uniqueness. Their research helps understand and manage changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity. All biosphere reserves around the world create The World Network of Biosphere Reserves of the Man and Biosphere (MAB) that actively supports the sustainable development of biosphere reserves, primarily by promoting the interaction between people and nature, through participatory dialogue, sharing knowledge, reducing poverty, improving people's well-being, respecting cultural values, or society's ability to cope with changes, which they face in today's world. With its activities, this network contributes to the fulfilment of the goals of sustainable development, the so-called SDGs and Agenda 2030. According to the latest data, the MAB program registers 738 biosphere reserves in 134 countries. This network covers an area of 6,812,000 km<sup>2</sup>, with population of 257 million people. This territory is roughly comparable to the size of Australia. (UNESCO, 2022)

In the case study, we focus on the example of four Slovak biosphere reserves (Poľana, Slovak Karst, Eastern Carpathians, Tatras) and identify a role of ecotourism and promotion in their development. Firstly, we define the biosphere reserves and recommended development activities. Subsequently, we present the current state of biosphere reserves in Slovakia and their problems in socio-economic development. In the last part of the paper, we propose possible solutions through ecotourism and promotion, but also specifically for each biosphere reserves the conditions that should be observed. Biosphere reserves in Slovakia represent unique territories, combining exceptional fauna and flora, rare and diverse characters of territories preserving the signs of traditional folk culture. These territories, which are one of the most attractive parts of Slovakia, reach an area of 241,167.2 ha (figure 1).

**Figure 1.** Map of the Slovak biosphere reserves



Source: UNESCO (2022).

Within them, however, we perceive a number of challenges, conditions and measures that should be applied in order to manage them and actively develop in contrary to conservative nature protection. One of the possible solution is a development of ecotourism. The biosphere reserves are suitable areas because of their environmental system and the socio-cultural system that make each of them exceptional, attractive, rich and interesting for potential visitors. Conditions and measures that would reflect the limits of the territories but at the same time strengthen their development, through ecotourism, are defined and explained in more detail in the paper, with respecting the need of preservation and protection of core area (usually the protected natural area) as well as participative governance of local communities and relevant stakeholders.

## 2. Case development

### 2.1. *Biosphere reserves and ecotourism development*

The biosphere reserve represents the territory that consists of terrestrial, marine and coastal ecosystems. It is an internationally recognized territory that is nominated by the national government, but it is determined within the intergovernmental program Man and Biosphere (MAB) by the Director General of UNESCO, based on the decision of the MAB International Coordination Council. The vision of the MAB program is presented by UNESCO (2022) as follows: "our vision is a world where people are aware of their shared future and their interactions with the planet and act collectively and responsibly to build prosperous societies in harmony within the biosphere." The biosphere reserve links social and ecological systems and creates a learning space for understanding, managing changes and interactions between these systems. This space is created primarily for the purpose of strengthening sustainable development and supporting local solutions to global challenges, through connecting and preserving biodiversity with its sustainable use and development (UNESCO, 2022).

The biosphere reserve is a link between examples of cultural and natural landscapes, in which man and his activities play an important role. The task is not only to preserve the natural heritage of the territory, but also cultural components in the form of traditions and a lifestyle of the people in the given territory, or their behaviour and socialization within the society belonging to this territory. The biosphere reserve fulfils three functions. The first function, which has a greater impact on biological diversity and the system, is a protection of biodiversity, ecosystems and the landscape. The second function affecting the social or cultural system is a sustainable socio-economic development of the locality. The third, no less important function, is a support of science, research and education with an emphasis on building partnerships at the local, regional and international level, which primarily supports sustainable development in the territory (ŠOPSR, 2022).

In the sustainable development of the territory, it is important to pay attention to the interaction of its systems, both economic and socio-cultural. By strengthening each of them, we can achieve the ecological principle of spatial development. The ecological principle explains the assumption that the development of the territory is based on the rational use of the land and its resources, which represents the principle of sustainable territory. (Lepeška, 2012) Currently, there are several examples of biosphere reserves in which biological and cultural or social diversity are mutually reinforcing, which is essential in determining how biosphere reserves will be developed in the future around the world. (Bridgewater 2002).

By the Framework Statutes of biosphere reserves there include 3 types of zones. The first zone (nuclear zone) is the most protected and most valuable part of the territory in terms of natural values. It is a protected natural area that conserve the landscape, ecosystems, species. There are allowed the research activities, activities oriented on environmental protection and rehabilitation. The second zone (buffer zone) surrounds the nuclear zone and can be used for environmentally compatible activities. This zone also reduces the impact of human activities on the nuclear zone and is essential to preserving biodiversity and cultural diversity. It promotes a biological link that acts as a natural corridor between the nuclear zone and the transition zone. The third zone (transition zone) is suitable for the socio-culturally and ecologically sustainable economic and human activities respected the principles of sustainable development (Vitálišová, Vaňová, & Rojíková, 2022).

To the possible development activities implemented in transition zone belong also tourism recognising the biological and cultural heritage of the given territory According to Robinson, Lück and Smith (2020), tourism represents a system in which travellers depart from the travel-generating region to the destination tourist region, through the area of the transit route, by which they subsequently return back. However, evidence from practice shows that tourism at an above-average rate devalues our world's natural and cultural wealth and thus has a negative effect on the territory. Fennell (2008, p.16) states that: "tourism, from the point of view of practice in developing countries, is a mirror in which we can see possible errors that can be identified retrospectively in the development and wasteful consumer lifestyle of the West." Reflecting these threats, also the new concept of tourism was development – ecotourism.

Ecotourism helps finding a reasonable balance between the size of the tourist flow, environmental protection and the well-being of the local population. It develops the relationship between tourists, host communities, businesses, attractions, and environment, and protecting, and enhancing the tourism attraction for the future generations. That is why ecotourism is also the suitable development activity in case of biosphere reserves.

The International Ecotourism Society (2022) has defined ecotourism as responsible travel to natural areas that protects the environment, maintains the well-being of local people, and includes interpretation and education. Ecotourism is a unique combination that includes sustainable travel and protection of nature and communities living in the given territories reflected by eight principles for the participants of ecotourism. The first principle is a minimization of physical, social, behavioural and psychological impacts that could arise during ecotourism. The second principle is a building of environmental and cultural awareness and respect, regarding the environmental integrity and protection of the territory, the preservation of biodiversity, but also the social and cultural integrity of the community in the territory. A great benefit in the context of this principle is a cultural exchange between visitors and the community in the area and its positive effects. Another principle is to provide a positive experience to both visitors and hosts. The fifth principle includes a creation of direct financial support for the preservation and protection of nature and the creation of financial support for local people, but also for private industry in the territory. This principle can lead to the development of economic vitality in the territory and development of infrastructure and the organisational framework on the ecological principle, which will support the development of the local community.

The development of the economic area in connection with increasing the rate of ecotourism can increase employment in the area and reduce the outflow of young people for work to more developed areas. The number of created, offered and presented services can also be increased, e. g. by creating new facilities for guest accommodation, for services in food industry, or facilities for culturally oriented activities. It boosts also the participation of local community which thanks to the new possibilities and offered services, will learn new skills, but their living standard and financial status will also improve. The sixth principle is a provision of unforgettable interpretable experiences to visitors, which will help increase sensitivity to the political, environmental and social climate of the host country. The penultimate principle is a design, construction and operation of equipment with a low negative impact on the environment, primarily by creating environmentally friendly buildings, using renewable energy and minimizing waste generation. The last principle is a recognition and strengthening of the human rights and spiritual beliefs of the indigenous community of the given territory and mutual cooperation to strengthen their position, also within the framework of social justice and equity (International Ecotourism Society, 2022).

The goal of ecotourism is focused on several areas. The first is conservation and protection, where ecotourism brings long-term solutions to market issues, provides effective economic incentives to preserve and strengthen bio-cultural diversity and helps protect the natural and cultural heritage of our planet. The second area is a community. Within the community living in the given territory, ecotourism is an effective mean for increasing local capacities and job opportunities, strengthening the position of local communities worldwide in the fight against poverty and achieving sustainable development. Ecotourism focuses also on enrichment of personal experiences and environmental awareness through interpretation, as ecotourism promotes a greater understanding and appreciation of nature, local society and culture. The combination of these areas suggests to us that the main goal of ecotourism is to protect and preserve a biodiversity and environmental integrity of the territory, which will offer visitors an unforgettable experience in a form of services on the ecological principle, to increase their understanding and awareness, which can make the community more economically vital (International Ecotourism Society 2022).

The success and rate of growth of ecotourism also depends on cooperation, mutual communication and the involvement of various main stakeholders. According to Diamantis (2018), the key stakeholders in ecotourism are tourists, suppliers, local government, accommodation providers, tourist agencies, local communities, non-governmental organizations, various ecologically oriented groups, etc. Activities carried out through ecotourism often depend on the nature of the territory to which visitors come. However, their planning and implementation should not cause disruption of sensitive systems of the environmental, economic or socio-cultural area of the territory. Examples of nature tourism may include nature trips, flora and fauna observation, cultural and local heritage tourism, volcano tourism, cycling, bird watching tourism, kayaking, walking, hiking, cold water tourism, park visits, sightseeing driving,

photo tourism, camping, beach travel, snorkelling, relaxing travel, self-improvement travel, planting rare trees and plants, etc. (Kiper, 2013; CBI, 2020)

Ecotourism is also unique in terms of the experience offered to visitors, who can find exceptional natural scenery in places that still have their integrity, spirit and specific culture, which can be incredibly rewarding for them. Through ecotourism, visitors can see pure fauna and flora in their natural beauty, in their natural environment, not in cages, zoos, or museums. Together with the wealth of the territory and cultural experiences that are offered by local communities, they gain a new point of view on the world and new perspectives, thanks to the mutual cultural exchange with minimal costs. In this way, we can support specific communities and specific sustainable development directly in the visited territories. Finally, ecotourism is a great benefit for the preservation of these unique territories for our future generations as well. Das & Chatterjee (2015) therefore recommend that ecotourism should be implemented with proper monitoring, evaluation and management of ecotourism sites, with the aim of enhancing their long-term protection.

As it was already mentioned, the important part of the ecotourism development is a promotion and building environmental. Promotion should include the activities from the identification of needs and wishes of visitors through selling the product and after sale communication with the aim to persuade the customer to buy the product, or in our case to visit a place, to inform the public about the territory and its unique selling points, to awake interest or to engage local community (Lee, 2022). In case of biosphere reserves, the managers should understand tourists' perceptions as external audience as well as local community perceptions while promoting habitat conservation. The strategic communication should engage and involve them in development decision making process as well as enhance local and social capacity within the community. For this purpose, it is inevitable to prepare a comprehensive promotion strategy. It includes the activities of traditional communication tools as well as innovative ones. Their suitable combination makes possible to reach target segment; to maintain the interest of target segments; to convey individually tailored information and obtain feedback and significantly contributes to the increasing awareness on biosphere reserves as internationally important localities.

## *2.2 The case of biosphere reserves in Slovakia*

Four biosphere reserves are declared on the territory of Slovakia. The first biosphere reserve, which was declared in 1977, is the Slovenský kras. The fauna and flora of this territory, which is one of the richest in Central Europe, extends over 74,500 ha. However, there is high rate of unemployment and poorly developed tourism infrastructure, which needs to be reconstructed or finished to increase the quality of the services provided.

The second biosphere reserve in Slovakia is Poľana, which was established in 1990 and is ranked among the best managed areas in the world. This territory with an area of 24,158.23 ha is the highest volcanic mountain range in Slovakia with a unique geological and geomorphological character, which is the result of volcanic activity in the period since 13-15 million years ago. From the view of folklore and ethnography, it ranks among the most important regions in Slovakia. We also register a low number of job opportunities here, but recently the importance of tourism has increased.

The third, the only trilateral biosphere reserve in the world, which was established in 1998, is the Východné Karpaty. An important part of this 40,689.92 ha area are exceptional old beech forests and beech primeval forests, which is one of the reasons why this biosphere reserve is one of the most attractive parts of Slovakia from the view of tourism. Around 25,000 visitors visit it annually, and this trend is still growing. In this area, we notice an ever-improving infrastructure.

The last, fourth bilateral reserve, declared in 1992, consists of the Tatry, which are exceptional precisely because of their high mountain character and preserved signs of traditional folk culture. It covers an area of 101,819.05 ha. The first mention of tourism in these areas such as spas or relaxation activities dates as early as 1871, which is also the reason why most local people work in this industry. During the season, 3.5 - 4 million tourists visit this biosphere reserve (Vitálišová, Miňová y Vaňová, 2021).

Biosphere reserves Slovak Karst, Eastern Carpathians and Poľana are oriented more towards agriculture and forestry. They can be characterised by the specific scattered settlements – lazy. It contributes to a uniqueness of the space for the application of ecotourism and opens also the possibilities of rural tourism.

There can be identified many unique selling points of these biosphere reserves. In case of Slovak Karst it can be a system of karst caves, gorges and waterfalls sources (Hochmuth, 1997). However, the Slovak Karst is a part of the districts with negative economic development (high unemployment, outflow of the young people to work to more developed regions, high share of low-income groups of inhabitants). That is why the ecotourism development can be one of the possible solution to initiate the changes in the territory. Probably, it will be possible only by some kind of external investment into the territory in combination with the active networking and engagement with local stakeholders, that can establish an attractive offer for tourists. Inspiration can be a Hungarian part of the biosphere reserves – National Park is one of the biggest employers in the region (Nestorová Dická, Gessert, Bryndzová & Telbisz, 2020).

In case of Eastern Carpatians, the exceptional value of the territory is created by the old beech forests and mountain meadows known as poloninas. The territory is covered by the educational tourist trails, but also with historical monuments, e. g. from the First and Second World Wars. Thanks to sparse population of the territory the locality is known as the part of darkest sky so it is very suitable for astro-tourism too. The typical inhabitants belong to Ruthenians, who are specific also by own habits, traditions and culture.

However, in both cases of biosphere reserves, there is missing sufficient services infrastructure to attract and retain the tourists in the territory more as for a few days of hiking and especially better promotion of the territories. Even the availability of information is weaker. The Slovak tourists are able to collect information from various web portals, but the foreign tourists find only some basis information. Both biosphere reserves (or national parks which they overlap) have their own website, but they are only in Slovak. Negative factor is also accessibility of these biosphere reserves for tourists. To reach them by the public transport is possible only by a few local buses because of their peripheral positions close to the borders. That is why the most convenient mode of transport is own car. (Machiniak, 2010),

The case of Poľana is different. The biosphere reserve is situated in the centre of the Slovak Republic. The territory contains relatively good offer of the private accommodation facilities including also hotels, chalets and cottages. It includes 4 main tourist trails, the routes in administration of Forests Slovakia Company across the biosphere are suitable for cycling. However, there is missing some tourist points with basic infrastructure (e. g. toilet, parking lots as starting points for trails). The municipalities within the biosphere reserve are very famous by the preservation of the habits and traditions via folk music groups and traditional folk festivals. The managers of the biosphere reserve are important stakeholders of the regional development and are accepted by public. By the tools of participative governance they actively support the economic and social development activities but taking into account the identity of the territory and its culture. Moreover, the territory has a great potential for winter sports, especially cross skiing and in the past, there were also the ski lifts directly on the mountain Poľana but not used any more (Švajda, Káčerová, Kohler, Meessen, 2013). Currently, there are a few smaller ski centres (e. g. Čierny Balog) as well as National Biathlon Centre in Ostrblie. The biosphere reserve is actively presented itself via own web page, Facebook profile, videos on Youtube as well as by the regional partners as Destination Management organisation Novohrad and Podpoľane and municipalities within the territory.

Currently, the real tourism destination is a biosphere reserve Tatras. The Tatras are primarily a tourist-oriented area, where massive tourism is the biggest factor of development. During last 15 years, the rapid progress in construction of hotel facilities and developer activities threatens the unique of the territory and in the next years can be a source of its degradation. By Gajdošík (2015) in High Tatras operates 69 hotels, 58 pensions, 43 catering facilities, 5 sport and recreational facilities, 9 tour operators and 2 tourism organisations. The major investor in tourism is the company of Tatry Mountain Resorts. The territory is very popular tourism destination during whole year, during summer for hiking, during winter for various types of skiing. Due to Covid 19 pandemic during last 2 years the number of tourists has decreased, but still is relatively high, e. g. in 2021 the number of overnights was 558 552, before Covid 19 in 2019 1 091 211. During last 10 years, the Tatras are visited more by Slovak tourists (69,53 %) (tatry.sk) even the promotion of Tatras is in high quality including the international promotion activities. Because of the weakly regulated mass development of tourism it starts having negative effects on the territory and its originality. The touristic trails are overcrowded during summer, and ski lifts during winter, the fauna and flora suffer by impolite tourists which do not respect the rules of national parks. The traditional architecture of the mountain villages is disturbed by the modern hotels and various fun attractions (zorbing, karbin tracks, etc.) not very fitting into the natural environment. In the case of High Tatras, we see ecotourism as a suitable form of tourism that can contribute to eliminate the consequences of mass tourism to the extent that does not degrade the natural wealth and does not disturb the environment.

In cases of all biosphere reserves, it is necessary to implement certain steps in ecotourism development and comply with local conditions. Reed and Price (2020) state that it is important to take care to involve people who value the protected area, no matter how far away they are from it. These people are important stakeholders in the management, decision-making, planning and development of biosphere reserves and it is necessary to involve them. Also important is inclusive and transparent governance, shaped through dialogue and agreement between key stakeholders through mutual cooperation and participation. No less important is the cultural and spiritual significance of the protected area, which is based on the relationship between people and the environment, which forms this area and makes it exceptional and attractive to visitors. One of the conditions is an integration of the management of protected areas into the wider context of larger ecosystems and cultural ties, also with the possible goal of creating partnership ties and exchanging good practice and experience with other areas. The final condition is successful management that contributes to sustainable means of supporting local communities that protect the protected area and its significance. Through these conditions, an increased rate and a properly chosen way of promoting these areas, together with the involvement of main stakeholders, these biosphere reserves could reach sustainable development through ecotourism.

For development of the ecotourism it is also important to establish the operational framework that settles the rules and measures to regulate the tourism activities in balance with the nature protection and preservation. They can define the number of expected visitors, the number and restructuring of accommodation units, closing mountain areas and strictly limiting and consistent planning the time of entry to some zones, for the sake of environmental protection, better maintenance of hiking trails or selection of development projects.

As the practice shows the promotion and especially building awareness of inhabitants, visitors and other stakeholders on biosphere reserves is also extremely important. The managers of biosphere reserves in cooperation with the local stakeholders should prepare a common promotion strategy that should promote the uniqueness of the natural heritage and present its importance for sustainable development and it should contain much more activities oriented at increasing awareness about biosphere reserves and their specifics through the educational activities on issues of biosphere reserves (e. g. workshops for children and students, volunteering activities for local residents, youth) or videos with more educational purpose explaining the value of the UNESCO label.

### 3. Questions for discussion and conclusions

Based on the previous text, please, answer the questions:

*Question 1: Which positive and negative (if they are) effects can bring development of ecotourism for some territory?*

The ecotourism brings long-term solutions to market issues, provides effective economic incentives to preserve and strengthen bio-cultural diversity and helps protect the natural and cultural heritage of our planet. It is an effective mean for increasing local capacities and job opportunities, strengthening the position of local communities worldwide in the fight against poverty and achieving sustainable development. It contribute to protect and preserve a biodiversity and environmental integrity of the territory, which will offer visitors an unforgettable experience in a form of services on the ecological principle, to increase their understanding and awareness, which can make the community more economically vital.

*Question 2: Try to define the differences between mass tourism and ecotourism and which one do you prefer in case of biosphere reserves?*

The ecotourism is strongly based on active involvement of the local stakeholders and its priority is to support the development activities that do not damage the unique of the territory. Activities carried out through ecotourism often depend on the nature of the territory to which visitors come. Examples of nature tourism may include nature trips, flora and fauna observation, cultural and local heritage tourism, volcano tourism, cycling, bird watching tourism, kayaking, walking, hiking, cold water tourism, park visits, sightseeing driving, photo tourism, camping, beach travel, snorkelling, relaxing travel, self-improvement travel, planting rare trees and plants, etc. On the other hand, the mass tourism refers to the movement of a large number of organized tourists to popular holiday destinations for recreational purposes. It is a phenomenon which is characterized by the use of standardized package products and mass consumption.

To the main features of mass tourism belong extreme concentrations of tourists; the saturation of a destination, travel in organised groups, good accessibility to a destination, media influence, the stage of consolidation and tourists who are described as psychocentric.

*Question 3: Which measures do you recommend to implement in less developed biosphere reserves Slovak Karst and Poloniny to initiate the tourism development?*

Based on the text above, to the challenges of the biosphere reserves Slovak Karst and Poloniny belong the accessibility of the territory, lack of services for tourists and weak promotion. That is why the measures should be oriented on the improving accessibility of the biosphere reserves by means of public transport (especially buses, trains), development of accommodation and catering facilities as well as other additional services (e. g. bike sharing, info-centres). Another potential activity is a support of local producers in agriculture, food industry, hand-made products and develop the market of local products for visitors with biosphere reserve uniqueness.

*Question 4: Which measures do you recommend to implement in High Tatras where the mass tourism has more and more negative effects on the quality of biosphere reserve?*

The Tatras are an important area of Slovakia and known worldwide as a tourism destination. However, there is evident an increasing negative impact on the systems of this biosphere reserve (lost of biodiversity, non-respecting the rules valid in the biosphere reserves by visitors, developer's boom). We therefore recommend the implementation of measures that will include more the involvement, cooperation and participation of important stakeholders who can help this area to improve this situation, primarily to increase its environmental value and protection. It is also important to apply inclusive and transparent management of this territory, as well as its successful implementation. The priority of the future development should reflect more the needs and wishes of the local inhabitants not only tourists.

*Question 5: Which promotion activities do you recommend to increase the awareness on biosphere reserves and to attract the responsible tourist?*

The core of promotion activities should be a common promotion strategy that should promote the uniqueness of the natural heritage and present its importance for sustainable development. It can include various types of activities, e. g. workshops for children and students, volunteering activities for local residents, youth, leaflets, posters or videos with more educational purpose explaining the value of the UNESCO label. To the modern ways of communication belong also communication via social networks (Facebook, Instagram, Twitter, Tiktok, etc.). The experience from abroad shows (e. g. Triglav National Park) as very useful the organisation of cultural and sport events for specific target groups (e. g. Children day in biosphere reserve; common hiking to the highest peak of the biosphere reserve etc.).

#### **4. Conclusions**

The case study is devoted to the basic theoretical definition of terms such as biosphere reserve and ecotourism and to the analysis of conditions in biosphere reserves at the level of Slovakia for the application of ecotourism. Ecotourism is a suitable alternative for all biosphere reserves in Slovakia. Within the framework of the Slovak Karst, Eastern Carpathians and Poľana biosphere reserves, based on its principles, ecotourism could contribute positively to the protection of these territories, but also to their development together with the support of local communities and their well-being.

The biggest challenges in these territories (except High Tatras) are reducing the unemployment rate, increasing the number of job opportunities in the territories, finishing the construction of infrastructure, increasing the quality of services provided, increasing the rate and quality of promotion of these territories and strengthening mutual cooperation, participation and creating partnerships (except Poľana) with competent stakeholders. All these challenges can be applied as an alternative to mass tourism, which respects territories, protects their biodiversity and supports its sustainable development. This alternative is ecotourism, which can attract visitors to these unique biosphere reserves, thanks to proper promotion, management, cooperation, participation and partnerships of key stakeholders. As the number of visitors increases, new services offered in the area can be created to serve the local communities, thereby increasing employment and the number of job opportunities. Thanks to the funds that visitors in the biosphere reserve exchange for the services provided, this territory can complete the infrastructure, improve the quality of the services offered, and increase the rate and quality of the promotion of the



territory. The development in the territory will be sustainable and the importance and value of the territory and its communities will be respected, protected and supported.

The Tatry biosphere reserve is also suitable for the application of ecotourism. However, it would respond to other challenges in this territory. The Tatras are an important area of Slovakia and are known precisely because of tourism, relaxation activities and spas. However, we currently register that this growing trend has a negative impact on the systems of this biosphere reserve, the direction of which could be adjusted, respecting the principles of ecotourism. We therefore recommend the implementation of measures that will also include the involvement, cooperation and participation of important relevant stakeholders who can help this area to improve this situation, primarily to increase its environmental value and protection. It is also important to apply inclusive and transparent management of this territory, as well as its successful implementation. The measures for this area in the context of the protection of the environmental system are primarily a reduction in the number of visitors, the restructuring of the capacities of accommodation units, the transformation of accommodation and catering services as much as possible according to the ecological principle, monitoring, planning and closing mountain and other sensitive areas in this area with strict time limits and entry into some zones, in order not to disturb the rare fauna and flora in this area, primarily in the time and season when it is extremely sensitive to the disturbance of its natural environment, the creation of safe approaches, roads and paths that would take care of the needs of visitors, but also the needs of the environmental system and its protection, the creation of systems for securing rare areas and occurring species in this territory for their preservation and support in their natural environment, limiting private development projects in this territory, respecting the legislative and national demarcation of this territory and complying changing the conditions set for them, or creating new regulations with the aim of regulating visitors, managing their access and limiting the time spent in a sensitive area of the territory.

## 5. References

- Bridgewater, P. B. (2002). Biosphere reserves: Special places for people and nature. *Environmental Science & Policy*, 5(1), 9-12. [https://doi.org/10.1016/S1462-9011\(02\)00018-7](https://doi.org/10.1016/S1462-9011(02)00018-7)
- Das, M., & Chatterjee, B. (2015). Ecotourism: A panacea or a predicament? *Tourism Management Perspectives*, 14, 3-16. <https://doi.org/10.1016/j.tmp.2015.01.002>
- Diamantis, D. (2018). Stakeholder ecotourism management: exchanges, coordination's and adaptations. *Journal of Ecotourism*, 17(3), 203-205. <https://doi.org/10.1080/14724049.2018.1502122>
- Fennell, D. (2008). *Ecotourism: Third edition*. London and New York: Routledge.
- Gajdošík, T. (2015). Network Analysis of Cooperation in Tourism Destinations. *Czech Journal of Tourism*, 4(1), 26-44. <https://doi.org/10.1515/cjot-2015-0002>
- Hochmuth, Z. (1997). The karst phenomenon and its influence on the formation of tourism infrastructure. *Collection of Urban and Landscape Studies*, 2, 116-130.
- International Ecotourism Society (2022). What is ecotourism. <https://ecotourism.org/what-is-ecotourism/>
- Kiper, T. (2013). Role of Ecotourism in Sustainable Development. *Journal of Geoscience and Environment Protection*, 10(4). <https://doi.org/10.5772/55749>
- Lee, Y.J. (2022). Social media capital and civic engagement: Does type of connection matter? *International Review on Public and Nonprofit Marketing*, 19, 167-189. <https://doi.org/10.1007/s12208-021-00300-8>
- Lepeška, T. (2012). Biosphere reserves as models of integrated watershed management. Conference paper: Biosphere reserves in Slovakia IX, Stakčín. <file:///D:/IAPNM/Documents/Downloads/BRakomodelyIMP.pdf>
- Machiniak, D. (2010). The influence of accessibility on the development of tourism in selected regions in Slovakia. *Geographia Cassoviensis*, 4, 114-117.
- Nestorová Dická, J., Gessert, A., Bryndzová, L. & Telbisz, T. (2020). Behavioural Survey of Local Inhabitants: Views and Attitudes about Slovak Karst National Park in Slovakia. *Sustainability*, 12(23), 10029. <https://doi.org/10.3390/su122310029>

- Reed, M. G., & Price, M. F. (2020). *UNESCO Biosphere Reserves Supporting Biocultural Diversity, Sustainability and Society*. London and New York: Routledge.
- Robinson, P., Lück, M. & Smith, S. L. J. (2020). *Tourism: Second edition*. Glasgow: Bell & Bind Ltd.
- Švajda, J., & Káčerová, T., & Kohler, T., & Messen, H. (2013). *Protected Landscape Area and Biosphere Reserve Polana. Baseline Study. Final Draft*. Prepared for development of nature conservation and of protected areas in the Slovak Carpathians. Slovak-Swiss Cooperation Programme. [https://www.sopsr.sk/dokumenty/polana\\_2013.pdf](https://www.sopsr.sk/dokumenty/polana_2013.pdf)
- Vitálišová, K., Miňová, L. & Vaňová, A. (2021). Current problematic issues of biosphere reserves in Slovak Republic. *Journal of Economics and Social Research*, 22 (2), 51-66.
- Vitálišová, K., Vaňová, A. & Rojíková, D. (2022). Marketing as a management tool of biosphere reserves to achieve goals of Agenda 2030. In: Casais, B. & Soares A. M. (eds): *Uniting Marketing Efforts for the Common Good: a challenge for four sectors*. Springer, In print.

**Webgraphy:**

- CBI (2022). Ministry of Foreign Affairs official page. <https://www.cbi.eu/market-information/tourism/nature-tourism/nature-eco-tourism/market-potential>. Accessed on 04/11/2022.
- High Tatras official page. <https://www.tatry.sk/infocentrum/dolezite-informacie/statistiky-navstevnosti/>. Accessed on 09/1/2022.
- ŠOPSR (2022). Biosferické rezervácie. <https://www.sopsr.sk/web/?cl=1600>. Accessed on 04/11/2022.
- UNESCO Biosphere reserves official page. <https://en.unesco.org/biosphere/about>. Accessed on 05/11/2022.