Analysis of ecotourism infrastructure within the nature-protected areas of the Transcarpathian region (on the example of National Nature Park “Synevyr”)

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Abstract: The article is devoted to the study of the development of ecotourism in the protected areas of the Transcarpathian region. The peculiarities of ecotourism development in the period of globalization are considered and the insufficient involvement of nature protection territories and their potential for the development of domestic and international tourism is pointed out. The problem of poor implementation of sustainable tourism forms is singled out. The main accents of the relationship “urban society – holiday-maker (tourist) – environment” have been identified. A number of works of domestic scientists, legislative, normative-legal, strategic and program documents regulating tourist movement within the protected areas are analyzed. The essence and potential of the studied territory on the possibilities of ecological tourism development and preconditions for the functioning of ecotourism infrastructure have been revealed. The structural elements of ecotourism infrastructure have been singled out, namely: ecological and educational trails, tourist routes, visit-centers, information tourist points and centers, specially equipped zones, historical and cultural objects, accommodation and catering establishments, etc. For example, a detailed analysis of the ecotourism infrastructure of the National Park “Synevyr” located within the Carpathian region of the Transcarpathian region has been given. On the basis of a thorough analysis the natural, historical and cultural attractions have been studied and the most popular tourist routes within the research area have been identified. In addition to interesting tourist sites (natural or historical and cultural), the current state of ecological trails and tourist routes, as well as the mode of their use has been determined. The main problems and limiting factors of tourism are used and conservation of protected areas have been described. A detailed characteristics of the National Park “Synevyr” functioning has been given and the latest material of natural, historical and cultural attractions, ecological and educational trails and tourist routes have been collected and analyzed. It is proved that within the studied area the village Kolochava is the most popular tourist destination with proper infrastructure and information and advertising support. We have proposed a number of recommendations on encouraging and regulating tourist traffic, improving ecotourism infrastructure, optimal territorial management and the approximation of protected areas to the requirements of sustainable tourism development in the protected areas of the Transcarpathian region.

Keywords: ecotourism, protected areas, tourist infrastructure, sustainable development of the territory.

Аналіз екотуристичної інфраструктури в межах природоохоронних територій Закарпатської області (на прикладі Національного природного парку «Синевир»)

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Анотація. Стаття присвячена дослідженню питання розвитку екологічного туризму на природоохоронних територіях Закарпатської області. Розглянуто особливості розвитку екотуризму в період глобалізації, вказано на недостатнє залучення природоохоронних територій та їх потенціалу для розвитку внутрішнього та міжнародного туризму, використано проблему слабкого впровадження форм сталого туризму. Визначено основні акценти взаємозв'язку «урбанізоване суспільство – рекреант (турист) – природне середовище». Проаналізовано низку праць вітчизняних вчених, законодавчих, нормативно-правових, стратегічних та програмних документів, що регулюють туристичний рух в межах природоохоронних територій. Розкрито суть та потенціал території дослідження щодо можливостей розвитку екологічного туризму та пересування функціонування екотуристичної інфраструктури. Використано структурні елементи екотуристичної інфраструктури, а саме: екологічно пізнавальні стежки, туристичні маршрути, візит-центри, інформаційні туристичні пункти та центри, спеціально обладнані зони, історико-культурні об'єкти, заклади розміщення і харчування туристів тощо. Наведено, як приклад, детальний аналіз екотуристичної інфраструктури національного парку «Синевир», що розташований в межах Карпатського регіону Закарпатської області. На основі грунтовного аналізу
Introduction

The globalization of life in the XXI century leads to a significant deterioration of the environment and determines the growing role of ecotourism (green tourism) comparing to other services in the recreation and entertainment sector. Ecotourism is one of the most dynamic sectors of the tourism industry in the world with the annual profit of 10 to 30% (before the pandemic) (Perederko, 2016).

The growth of urbanization, the expansion of industrial zones of medium and large cities provide the increasing needs for residents to escape from urban noise to the environmentally friendly areas and these trends reflect the essence of the ecotourism. Modern tourists prefer not only the existing tourist objects, but also seeking for comfort while staying in the environmentally friendly areas. We emphasize that hiking in the mountains or living in a tent for a person accustomed to living in a computerized society is a real feat, and for most of them the level of tourism infrastructure development is rather important. Therefore, the issues of research and ecotourism infrastructure development are relevant and require further scientific research.

Materials and methods of research

In the course of the research the essence of ecotourism and its place in the system of tourist and recreational activity, the legislative and legal mechanism and preconditions for the development of ecotourism within national, regional and landscape parks have been analyzed. We have studied the Draft of the Environmental Program of the Transcarpathian Region for 2021–2023, schemes of eco-nets in the districts and statistical data of the Department of Ecology and Natural Resources of the Transcarpathian Regional State Administration.

The following methodological tools have been used in the study: methods of analysis and synthesis, historical, statistical and comparative analysis.

Results and their analysis

Being located within the Carpathian region Transcarpathia borders in the countries of the European Union (Poland, Slovakia, Hungary and Romania) and has a significant natural resource potential as 80% of its territory is occupied by mountains and only 20% – by plains. The predominance of mountain landscapes contributes to the development of the active types of tourism, among which ecotourism is becoming increasingly popular. There are a lot of definitions of ecotourism. They contain, in our opinion, the closest to the modern interpretation of this concept is the definition given by such well-known scientists as (Hetman, 2007); (Taranovsky, 2014); (Vorobyova, 2012); (Dutchak, 2007), (Shandor, 2012), (Zima, 2011), (Misichenko, 2010), (Savitska, 2017), (Posokhov, 2019) and others. From the above statements the essence of ecotourism (that is, ecological tourism) follows as a branch of tourism industry in which holiday-makers are inseparable from the natural environment and have to minimize their impact on it, preserving ecosystems. Scientists (Dutchak and Dutchak, 2007) consider that the main features of ecotourism are:

1) the activity of a tourist (holiday-maker) in the natural environment that has appropriate restrictions;
2) respect for the way of life and traditions of the local population;
3) educational activity concerning the problems of protection of natural, historical and cultural environment (Dutchak and Dutchak, 2007).

According to the authors’ opinion, three main components, namely: cognitive, environmental and cultural should be identified in ecotourism.

Social and economic development of the Transcarpathian region is closely connected with the state of the environment and the environmental problems. An integral condition for the sustainable development of the studied area is a sufficient level of attention to the state of the environment, the rational use of natural resources, and ensuring the environmental safety. That is why the policy aimed at achieving harmonious interaction of society and landscape areas should be implemented in the region.

The draft of the Environmental Protection Program of the Transcarpathian region for 2021–2023 having been developed by the Department of Ecology and Natural Resources of the Transcarpathian Regional State Administration includes such important components as legal aspects and the most urgent problems of environmental protection and use of natural resources.
of Transcarpathia from the standpoint of farms, that is, territorial communities.

The key issue of this article is the development of not only ecotourism, but also its integral component – ecotourism infrastructure within the protected areas of the Transcarpathian region. It should function in such a way as not only to meet the requirements of a comfortable holiday of a holiday-maker in the nature, but also to preserve the state of landscape areas as much as possible. That is, the recreational function of ecotourism infrastructure should be subordinated to the environmental protection. In the Transcarpathian region there are 34 objects of nature reserve fund of national importance located on the area of 167.250 hectares, including: Carpathian Biosphere Reserve, National Nature Parks “Synevyr”, “Enchanted Land” and “Uzhansky”, which make up 15.09 % of its total area.

According to the Draft Program, additional funds are provided for the implementation of the most important environmental protection measures in the territory of the Carpathian Biosphere Reserve and national natural parks of the region. Work has been carried out on the existing objects of the nature reserve fund in the territories which are the subjects to protection, preservation and restoration as the objects of special, scientific, aesthetic and recreational value. Additional three objects of virgin forests located on the area of 223.3 hectares have been declared as the objects of the natural reserve fund of local importance. The main tasks to be solved in the near future are:

1) preservation and reproduction of biological and landscape diversity, natural complexes, water, land and forest resources and expansion of the regional ecological network;
2) improving the quality of the environment in the natural and urban areas of the Region;
3) development and improvement of systems and means of protection of territories from natural disasters, man-made disasters and global climate change, etc.

Transcarpathian Regional State Administration in accordance with the letter of the Ministry of Ecology and Natural Resources of Ukraine dated 26.07.2019 No 5/4.1–8/8269–19 approved the Draft Decree of the President of Ukraine “On changing the Boundaries of the Carpathian Biosphere Reserve” and Amendments to the Decree of the President of Ukraine as of April 11, 1997 No 325 97 “On expansion of the territory of the Carpathian Biosphere Reserve” on the area of 8381.6 hectares.

In the studied territory the measures to implement the Decrees of the President of Ukraine dated April 11, 2019 No 133 “On Changing the boundaries of the National Nature Park “Synevyr”, No 134 “On Changing the boundaries of the National Nature Park “Enchanted Land” and No 135 “On Changing the boundaries of the National Natural Park “Uzhansky” on the total area of 11716.2 hectares have been carried out systematically. The Fig. 1 shows the dynamics of the natural reserve fund objects changing in the Transcarpathian Region for the period of 2009–2020.

![Fig. 1. Dynamics of development of objects of nature reserve fund in Transcarpathian region (according to statistics data of the Department of Ecology and Natural Resources of the Transcarpathian Regional State Administration, 01.01.2020)](image-url)

By the order of the Head of the Transcarpathian Regional State Administration as of the 29th March 2019, the regulations on new objects of the nature reserve fund were approved, in particular: forest reserve “Teresvianska Dolya”, protected tract “Borzhava Virgin Forests”, protected tract “Berezyntsyk Virgin Forests”, protected tract “Ust-Chorniansky Virgin Forests”, forest reserve “Pryborzhavsky”, forest reserve “Zhdymerzky”, forest reserve “Temnatyk”, forest reserve “Tesannyk”, forest reserve «Privodolinny», protected tract “Chevona Dolya”, Botanical Reserve “Kholmovetska Mountain”, geological monument of nature “Skeli”, Botanical Reserve “Silash”, Botanical Reserve Ardov, Botanical Reserve “Kosonska Mountain”, protected tract “Zaluzh”, etc (Zvit SEO Habc...
Rehionalnoi stratehii rozvytku Zakarpatskoi oblasti na period 2021–2027 rok, 2019).

Ecotourism infrastructure in the territories of the nature reserve fund is formed by:

1) ecological and educational trails; 2) tourist routes; 3) visit centers; 4) information and tourist centers and points; 5) specially equipped recreational zones; 6) historical and cultural objects; 7) accommodation and catering facilities for tourists; 8) tourist equipment rental points; 9) rental points for bicycles and other types of ecological transport.

It should be noted that there are marking, traffic signs and information stands or tables along ecological and educational tourist routes as well as alcoves, benches, signboards, rain canopies, etc.

Recreants’ visits to nature protected areas cannot be spontaneous or too massive in terms of the number of visitors. The certain rules are applied there and they limit the interference of visitors in natural ecosystems. These rules include certain permitted types of activities (photography, observation, video recording).

Accommodation and catering facilities in the area should be environmentally friendly, which could be proved by the obtained certificates or by their belonging to a certain network of environmental institutions. In the Transcarpathian region, such facilities are mostly represented by private estates and mini-hotels. The design of restaurants and cafes, as a rule, is performed in ethnic style. They also promote eco-products. The establishments located in resort and tourist centres are the exception, because there are different types of institutions (by size, by purpose: health and medical, skiing, entertainment, etc.) which do not always match the concept of ecotourism (Habchak et al., 2018).

Visit centres of environmental institutions, informational points, museums, open-air museums (skansen), separate collections, etc. are extremely important for eco-tourism. These facilities meet information and educational needs of visitors and perform an educational function: in fact, they acquaint people with the environment (natural, historical and cultural aspects). They often present three-dimensional models of the territory, dioramas on natural and ethical subjects, various maps and images, local stuffed animals, herbaria, historical artifacts, souvenirs. Such elements of ecotourism infrastructure are aimed at promoting the uniqueness of the visited area and highly contribute to environmental protection and tourism (Habchak et al., 2018).

There are 3 national parks (“Synyvr”, “Uzhanskyi”, “Zacharovan’yi krai” (“Enchanted Land”), two regional landscape parks (“Prytysianskyi”, “Syniak”) and the Carpathian Biosphere Reserve in the Transcarpathian region.

In the process of our Authors in their research, made an attempt of a detailed analysis of the ecotourism infrastructure within the nature reserve fund of NNP “Synyvr” (Tabl.1)

| Table 1. Ecotourism infrastructure within NNP “Synyvr” (authors’ own research) |
|---|
| **Synyvr National Nature Park (Natsionalnyi pryrodnyi park “Synyvr”)** |

| Brief description | NNP “Synyvr” was established in 1989 for the purpose of preservation, reproduction of natural resources, complexes and objects within various high-altitude zones of the south-western macroslopes Gorgany. |
|---|---|
| **Ecological trails** | 1. “Tract Chervonyi – Lake Synevyr” – a pedestrian area, the approximate time of the route is 1.5–2 hours. Recommended for all categories of tourists without restrictions (Ekolohichna stezhka “Urochyshe Krasnyi – Synevyrsko okr.озero”, 2021) |
| | 2. “Hreblia – Ozirna” (“Wild Lake”) – a pedestrian area, the total length of about 4 km, stretches through the locality at the altitude of 800–1050 metres. Recommended for visitors experienced in hiking in the mountains (Ekolohichna stezhka “Hreblia – Ozirna” (Dyke ozero), 2018) |
| | 3. “Kolochava” – located in the south of the NNP on the Kvasovets Environmental Research Department territory at the altitude of 500–1540 metres above sea level. Recommended for visitors experienced in hiking in the mountains (Ekolohichna stezhka “Kolochava”, 2021) |
| **Tourist attractions on ecological trails** | “Tract Krasnyi – Lake Synevyr” |
| | – Apostles Peter and Paul’ chapel; |
| | – Lake Synevyr; |
| | – the drinking water source 400 metres southwest of the Lake Synevyr observation platform; |
| | – the architectural monument “Syn and Vyr”; |
| | – the stream Rakhnytsia, which flows from the western part of Mount Ozirna; |
| | – marking: 1000 metres above sea level; |
“Hreblia – Ozirte” (“Wild Lake”)
- the Timber Rafting Museum – a historical monument founded in 1868;
- the mountain stream with drinking water – 500 meters from the Timber Rafting Museum;
- the observation post on Mount Kamyanka and a young spruce forest;
- Ozirte (“Wild Lake”) – one of the best eco-preserved places of NNP “Synevyr”
- the local name “Burkut”;
- the Arpad line – a complex of World War II time engineering constructions and the Historical
  and Military museum of the same name;
- the drinking water source in the beech wildwood; from this place the trail runs through
  the forest to the Mount Chevona meadow;
- Krasiv Verkh is one of the peaks of the Mount Chernova meadow;
- Mount Topas – the highest peak on the route – a magnificent view of Tereblianska valley;
- the Prisilp mountain meadow – a hollow between the mountains, which is the border between
  Mizhhiya and Tiachiv districts;
- Tract Stav is the final stop in the residential area of Kolochava village

Tourist routes

1. “Synevyr Pass – Mount Kamyanka – Lake Synevyr” – a walking route about 8 km long runs
   through the medieval spruce forest. Recommended for visitors experienced in hiking in the
   mountains (Turystychniy marshrut “Synevyrskyi pereval – h. Kamyanka – Synevyrskyi ozero”)
2. “Arpad Line” – the route runs at the foot of Mount Kamyanka, 1,5 km along medieval spruce
   forests. Interesting for its fortifications. Recommended for all categories of visitors without
   restrictions (Turystychniy marshrut “Linia Arpada”)
3. “Ostriki – Hreblia” – a walking route 3 km long, it is possible to travel by bicycle, horse or
   car on a dirt road at the altitude 800 metres above sea level. Recommended for all categories of
   visitors and adjusted for the mode of movement (Natsionalnyi pryrodnyi park “Synevyr”: pryroda
   ta istoria, 2015)
4. “Ostriki – Mount Hrebin” – a walking route runs along the south-eastern slope of Pishkonia
   ridge at the altitude 800–1511 metres above sea level. Recommended for visitors experienced
   in hiking, for photo tourists (Natsionalnyi pryrodnyi park “Synevyr”: pryroda ta istoria, 2015)
5. “Negrovec village – Mount Horb – Mount Negrovec – Mount Sygla – Mount Prysolipsc – Tract
   Sukhar – Kolochava village” – a two-day route 40 km long with the elevation difference
   of 600–1707 metres above sea level. Recommended for visitors physically fit and experienced
   in mountain crossing (Melika, I., 2012)
6. “Hluhania – Mount Kosyi Verkh” – 5 km long route runs south-west of the Synevyr National
   Park at the altitude 603–956 metres above sea level through the largest upland sphagnum
   oligotrophic swamp Hluhania in Gorgany. Recommended for all categories of visitors and
   adjusted for the mode of movement (Turystychniy marshrut “Hluhania – h. Kosyi Verkh”)

Tourist attractions on tourist routes

“Synevyr Pass – Mount Kamyanka – Lake Synevyr” – Synevyr Pass
- mountain spring in a spruce forest;
- Mount Kamyanka;
- Mount Ozirte;
- Lake Synevyr

“Arpad Line”
- 39 pieces of fortification constructions;
- Beligerative constructions;
- the theme motel “Bunker”

“Ostriki – Hreblia”
- the visit center “Synevyr”;
- the bunkers of the Arpad line on the banks of the Chorna River (the Black River);
- Tract Sokolovets;
- the destroyed dam of the Timber Rafting Museum

“Ostriki – Mount Hrebin”
- Mount Hrebin;
- Synevyr, Negrovec, Kolochava villages panoramas;
- the Pishkonya ridge panorama.

“Negrovec village – Mount Horb – Mount Negrovec – Mount Sygla – Mount Prysolipsc –
Tract Sukhar – Kolochava village”
- the village of Negrovec;
- St. Archangel Michael’s Church of the XVIII century;
- Mount Negrovec;
- Mount Sygla;
- Tract Sukhar;
- the village of Kolochava

“Hluhania – Mount Kosyi Verkh”
- Swamp Hluhania;
- Prysolipsc – Synevyr and Negrovec observation post;
- the well and recreation area on the slope of Mount Kosyi Verkh
The NNP “Synevyr” was created in 1989 within the landscape belts of the south-western macroslopes of Gorgany. It includes the landscape reserve of state importance – the “Lake Synevyr” (1974) and a number of other valuable natural objects of the Tereblyanska valley source in the north-eastern part of the Mizhhirya district of the Transcarpathian region. Currently, the area of the national park is 42,704.0 hectares, stretching from north to south for 30 km, and from east to west – for 20 km (Natsionalniy pryrodnii park “Synevyr”: pryroda ta istoriia, 2015).

The territory of the park covers the Gorgany highlands of the Watershed Verkhovyna Carpathians with low-mountain and alpine landscapes. Climatic conditions in the mountains vary from moderate humid in the valleys to cold-humid in the highlands (Synevyr NPP. Pryrodno-zapovidnyi fond Ukrainy). It should be noted that the richness of flora and fauna of the area explored, 45 species of its rare plants are listed in the Red Book of Ukraine. The fauna is represented by typical Carpathian species, 41 of them are listed in the Red Book and 9 species – in the European Red List (Synevyr NPP. Pryrodno-zapovidnyi fond Ukrainy).

The analysis of the Table 1 enabled to identify the following natural tourist attractions within the NNP “Synevyr”: Lake Synevyr, Lake Ozirce (Wild Lake), Swamp tops Hluhanya, sphagnum oligotrophic swamp Zamshatka, Mount Strymba, Pishkonia ridge (Fig. 2–3). The ecological trail “Tract Red – Lake Synevyr” – a hiking trail that is recommended for all categories of tourists without restrictions – is in the greatest tourist demand. As for the state of the trail, it is in good condition, equipped with decorative informational boards on wooden poles at a distance of 100–150 metres from each other. The boards inform about local ecotourism attractions provided that the trail is passed independently.

The mode of using the eco-trail limits making a fire, allows photographing and walking. It is forbidden to pollute the environment, swim in the lake, break the silence, fish and crayfish and lay out tents.

Tourists with experience of hiking in mountainous areas choose the tourist route “Synevyr Pass – Mount Kamyanka – Synevyr Lake”. This route is about 8 km long, by foot, the route is in good condition and has white and green markings, equipped with informational boards, signs and quickly erected structures in recreation areas. The mode of use is the compliance with the norms similar to the previous route.

The NNP “Synevyr” is the centre for the preservation and popularization of local historical and cultural values, folk traditions and crafts, typical for this territory. It is the village of Kolochava that is a tourist point with proper infrastructure, informational and advertising support. There are 10 museums here, in which thousands of authentic exhibits are collected, namely: an open-air museum of Kolochava architecture and everyday life “Old Village”, museums “Kolochava Narrow Gauge Railway” and “Kolochava Bokorash”, pedagogical museums “Soviet School” and “Czech School”, historical and military museums “Arpad Line”, museum–memorial “For Soldiers – Internationalists” and the museum of local rebels “Staier’s Bunker”, a museum-monument of Baroque architecture of the late XVIII century. The “Church of the Holy Spirit” and the school ethnographic museum of Ivan Olbracht. There are more than 50 memorial sites in the village, 20 of which are sculptures, among which there are interesting monuments to “Zarobitchany (guest workers or working immigrants)” and “Vivchar (Shepherd)”, etc.
They publish the newspaper “New Kolochava”, produce their own tourist stamps and there is the only school of sheep breeding in Ukraine in the village. It should be noted that this tourist point has an established image and brand not only in Transcarpathia, but far beyond its borders, the famous Riplanka Festival takes place here every year.

The village of Synevyr, which is the second largest tourist destination in the national natural park of the same name deserves attention. An interesting attraction is undoubtedly the Museum of Forest and Timber Rafting on the Chorna Rika (the Black River), which was destroyed by the catastrophic flood in 1998 and is currently 90% restored. An interesting fact is that there are only two timber rafting museums in the world – in Ukraine and Canada.

The village of Synevyrska Poliana has the largest number of tourist accommodation facilities within the NNP “Synevyr”: 3 hotel complexes, 36 rural estates, 6 restaurants, trout farm “Arnika” with a recreation complex, a travel agency with a variety of offers for tourists, including the famous Arpad Line etc.

A score assessment of the main indicators characterizing the environmental infrastructure within the NNP “Synevyr” was held. For the convenience of evaluation, the minimum and maximum criteria (1–5 points) were determined. We analyzed the following indicators: (Table 2)

1) informational and educational support (availability of visit centers, informational boards, booklets, diagrams, interactive support);
2) tourist and recreational support (the eco-trail or route condition, signposts, quickly erected structures, recreation areas, observation decks, photo areas);
3) complexity of visiting / passing (length of the route or eco-trail, height difference);
4) attractiveness (availability of tourist attractions, observation points, variability of landscapes, etc.).

The analysis of the Table 2 demonstrates that the NNP “Synevyr” has a fairly well-developed educational infrastructure, tourist and recreational facilities and attractiveness. It’s concluded that Kolochava eco-educational trail is of the greatest tourist demand (18 points). The new eco-trail “Brown Bear Center” – eco-park “Valley of the Wolves” (15 points) and the ecotourism routes – “Synevyr Pass – Mount Kamynka – Lake Synevyr” (16 points) are almost as attractive.

Table 2. Score assessment of the ecological infrastructure of the NNP “Synevyr” (author’s research)

| No | Name of eco-educational trail / ecotourism route | Information and educational support | Tourist and recreational support | Difficulty of visiting / passage | Attractiveness | Total points |
|----|-------------------------------------------------|------------------------------------|--------------------------------|--------------------------------|---------------|-------------|
| 1. | “Tract Krasnyi Chervony – Lake Synevyr” | 3 | 4 | 3 | 4 | 14 |
| 2. | “Hrebia – Ozirtse” (“Wild Lake”) | 3 | 5 | 4 | 3 | 15 |
| 3. | “Kolochava” | 4 | 5 | 4 | 5 | 18 |
| 4. | “Brown Bear Center” – eco-park “Valley of the Wolves” | 2 | 5 | 3 | 5 | 15 |
| 5. | “Berezovets” | 2 | 4 | 4 | 3 | 13 |
| 6. | “Kychera” | 2 | 4 | 4 | 2 | 12 |
| 7. | Synevyr pass – Mount Kamynka – Lake Synevyr | 3 | 5 | 4 | 4 | 16 |
| 8. | “Arpad Line” | 3 | 5 | 3 | 2 | 13 |
| 9. | “Ostriki – Hrebia” | 3 | 4 | 3 | 5 | 15 |
| 10. | “Ostriki – Mount Hrebin” | 3 | 3 | 3 | 3 | 12 |
| 11. | “Negrovets village – Mount Horb – Mount Negrovets – Mount Sygla – Mount Prisloptsi – Tract Suhar – Kolochava village” | 4 | 3 | 4 | 3 | 14 |
| 12. | “Hlukhania – Mount KosyiVerkh” | 2 | 4 | 3 | 2 | 11 |

Recommendations for improvement of the environmental infrastructure in the territory of the NNP “Synevyr”:
- the concept of the active tourism development within the natural park;
- training courses for staff on the development of sustainable tourism;
- encouraging sponsors to increase investment activities in the studied area: purchase of garbage cans and containers, the area marking, clearing, renovation, setting up a new ecological and educational path “Brown Bear Center – Eco-Park “Valley of the Wolves”;
- organization and running of promotional events: thematic special edition of the magazine, a series of radio programs on the topic of active recreation without harm to the environment, promotional video;
- ecological workshop, extras and updates of the website, etc.

It can be concluded firm the above that ecotourism is the only type of tourism suitable for implementation.
in the territories with a nature conservation status. The example of the NNP “Synevyr” shows that the development of ecotourism is a good chance to support traditional settlements located far from civilization in the mountainous areas. Natural, historical and cultural objects, traditions and customs of locals become the objects of tourism there, and even the type of tourism itself becomes the main source of income for most of them. When planning the development of ecotourism within the studied area, it is necessary to think carefully about the forms of ecotourism that can be introduced for a given area, minimizing the impact of ecotourists themselves on it.

Conclusions

Laid and marked ecological trails and ecological routes with a correspondingly provided information and tourist infrastructure of territories and particular attractions are of great importance for the development and control of tourist flows. A comparative analysis of protected areas in terms of the provision of ecotourism infrastructure showed that the “Synevyr” checkpoint has a full range of elements and is one of the most developed (existing eco-educational trails, marked ecotourism routes, information centres and points, museums, recreation areas, observation decks, informational stands and traffic signs).

Thus, the expansion of the range of ecotourism activities is relevant for the territory of the NNP “Synevyr”, namely: specialized (floral, faunal) trips for specialists and amateurs, horse carriage excursions, photopleners and the like. According to the authors, it is important to start communicating with visitors and locals in social networking communities, and, for example, create separate groups such as “Friends of the NNP “Synevyr” in which everyone can publish impressions, suggestions and comments after visiting these sites.

References

Vorobiova, O.A., 2012. Ekolohichni turyzm yak chynnyk staloho rozvytku prirodno-zapovidnych terytorij [Ecological Tourism As a Factor of Sustainable Development Of Nature Reserves]. Ekolohichni nauky: naukovo-praktichni zhurnal, 2, 119–129 (In Ukrainian).

Hetman, V.I., 2007. Ekoturyzm na terytoriyakh ta objektyakh prirodno-zapovidnoho fondu [Ecotourism On the Territories and At the Objects Of the Nature Reserve Fund]. Ekoturyzm i stalyy rozvytok u Karpatakh: mater. Mizhnar. nauk.-prakt. konf. (m. Rakhiv, 10–12 zhovtnya 2007 roku) [vidp. red. Hamor F.D.]. Rakhiv, 56–57 (In Ukrainian).

Dutchak, S.V., Dutchak, M.V., 2007. «Ekoturyzm» z pozysk orhanizatora turystsko-rekreatsiinoi diialnosti [“Ecotourism” From the Standpoint Of the Tourist and Recreational Activities Organizer]. Ekoturyzm i stalyy rozvytok u Karpatakh: mater. Mizhnar. nauk.-prakt. konf. (m. Rakhiv, 10–12 zhovtnya 2007 roku) [vidp. red. Hamor F.D.]. Rakhiv, 107–111 (In Ukrainian).

Ekolohichna stezhka «Hreblia – Ozirtse (Dyke ozero)» [Ecological trail «Hreblia – Ozirtse (Wild Lake)»]. Ekolohichni stehzhy NPP «Synevyr». Retrieved from: http://www.npp-synevir.net.ua/footpath_ozirtse.html (In Ukrainian).

Ekolohichna stezhka «Kolochava» [«Kolochava» Ecological Trail]. Ekolohichni stehzhy NPP «Synevyr». Retrieved from: http://www.npp-synevir.net.ua/footpath_kolotchava.html (In Ukrainian).

Ekolohichna stezhka «Urochyshe Krasnyi – Synevyrskoe ozero» [Ecological trail «Krasnyi Tract – Lake Synevyr»]. Ekolohichni stehzhy NPP «Synevyr». Retrieved from: http://www.npp-synevir.net.ua/footpath_synevir.html (In Ukrainian).

Habchak, N.F., Dubis, L.F., Melnyk, A.V., Chyr, N.V., 2018. Ekolohichni turyzm na prirodnookhoronnykh terytoriiahakh Zakarpatskoi oblasti: monohrafiia [Ecological Tourism In the Protected Areas of the Transcarpathian Region: a monograph]. Uzhhorod: Vyd-vo UzhNU «Hoverla», 392 s. (In Ukrainian).

Zyma, O.H., 2011. Ekolohichni turyzm yak providyvnyi faktor rozvytku turyzmu [Ecological Tourism As a Leading actor In Tourism Development]. Ekonomika rozvytku, Kharkiv, 1(57), 43–46 (In Ukrainian).

Zvit SEO Rehionalnoi stratehii rozvytku Zakarpatskoi oblasti na period 2021–2027 roky. 2019. [Report of the CEO of the Regional Development Strategy of the Transcarpathian region for the period from 2021 to 2027]. Retrieved from: /sites/default/files/imce/191018_pstr-rsr-seo.pdf.pdf (In Ukrainian).

Kolochava: Ofitsiina storinka sela [Kolochava: Official site of the village]. Retrieved from: http://kolochava.com/ (In Ukrainian).

Natsionalnyi pryrodnyi park «Synevyr» [Synevyr National Nature Park]. Retrieved from: http://www.npp-synevr.net.ua/ (In Ukrainian).

Natsionalnyi pryrodnyi park «Synevyr»: pryroda ta istoriia, 2015. [Synevyr National Nature Park: nature and history]. Ekoloho-osvitnii almanakh. Departament ekolohii ta pryrodnykh resursiv Zakarpatskoi oblasnoi derzhavnoi administratsii, 12, Uzhhorod, 38 s. (In Ukrainian).

Perederko, V.P., 2016. Rozvytok infrastruktury ekohotyrmu v Karpatskomu rehiony za spryjannia proektiv mizhnarodnoi tekhnichnoi dopomohy [Development of Eco- and Geotourism Infrastructure in the Carpathian Region with the Assistance of International Technical Assistance Projects]. Ekonomika i suspilstvo, 2, 418–424 (In Ukrainian).

Posokhov, I.S., Sahaidachna A.V. 2019. Perspektyvy rozvytku ekolohichnho turyzmu v Ukraini. [Prospects for the development of ecological tourism in Ukraine]. Visnyk Kharkivskoho nats. un-tu im. V.N. Karazina. Seriia: Mizhnarodni vidnosyny. Ekonomika. Krainoznavstvo. Turyzm, 9, 203–212 (In Ukrainian).
Melika I., 2012. Pishkonia, Nehrovets, Darvaika: Mandrivka Pryvodorodilnymy Horhanamy (17–18.11.2012) [Pishkonia, Negrovets, Darvayka: Journey through the Pryvodorodilni Gorgany (November 17–18, 2012)]. Podorozhuiemo ta fotografuemo razom. Retrieved from: http://igormelika.com.ua/shhodennik-mandrivnika/pishkonya-negrovec-darvajka-mandrivka-privodorodilnimy-gorganami (In Ukrainian).

Mishchenko, O.V., 2010. Teoretychni osnovy vyznachennia sutnosti ekolohichnoho turyzmu. [Theoretical bases of definition of essence of ecological tourism]. Visnyk Volynskoho natsionalnoho Un-tu im. L. Ukrainky. Heohrafiia turyzmu. Vyd-vo «Volynskyi Un-t», 3, 155–160 (In Ukrainian).

Savitska, O.P., Savitska N. V., Pohrebnia L. V. 2017. Ekoturyzm yak vazhlyva skladova rozvytku Ukrainy. [Ecotourism as an important component of Ukraine’s development]. Elektronne fakhove vydannia Mykolaivskoho nats. u-t im. V.O. Sukhomlynskoho. Seria. Hlobalni ta natsionalni problemy ekonomiky, 15, 122–128 (In Ukrainian).

Synevyr (selo). [Synevyr (village)]. Retrieved from: https://uk.wikipedia.org/wiki/Synevyr_(Mizhhirskyi_raion) (In Ukrainian).

Synevyr NPP. Pryrodo-zapovidenyi fond Ukrainy [Synevyr NPP. Nature Reserve Fund of Ukraine]. Retrieved from: http://pzf.menr.gov.ua/synevyr-npp.html (In Ukrainian).

Taranovskyi, V.I., Kovalov, B.L., Portianka, A.H., 2014. Naukovo-metodychni pidkhody do vyznachennia definitissi «ekoturyzm» [Scientific and Methodological Approaches to the Definition of “Ecotourism”]. Mechanism of Economic Regulation, 2, 30–37 (In Ukrainian).

Turystychni marshrut «Hlukhania – h. Kosyi Verkh» [Tourist route «Hluhania – Kosyi Verkh»]. Turystychni marshruty NPP «Synevyr». Retrieved from: http://www.npp-synevyr.net.ua/footpath_hluchanja.html (In Ukrainian).

Turystychni marshrut «Synevyrskyi pereval – h. Kamianka – Syneyvrske ozero» [Tourist route «Syneyvyr Pass – Kamyanka – Lake Syneyvyr»]. Turystychni marshruty NPP «Synevyr». Retrieved from: http://www.npp-synevyr.net.ua/footpath_kamjanka.html (In Ukrainian).

Turystychnyi marshrut «Linia Arpada» [Tourist route «Arpad Line»]. Turystychni marshruty NPP «Syneyvyr». Retrieved from: http://www.npp-synevyr.net.ua/footpath_arpada.html (in Ukrainian).

Unikalne boloto Hlukhania «obladnali» ohliadovym maidanchykom. Mizhhirya portal. [Hlukhania unique swamp was “equipped” with an observation post. Mizhhirya portal]. Retrieved from: http://xn-c1afrs9etbc.com/%7E%20i=1200 (In Ukrainian).

Shandor, F.F., Kliap, M.P., 2012. Suchasni riznovydy turyzmu: pidruchnyk [Modern Varieties Of Tourism: a textbook]. Kyiv: Znannya, 334 s. (In Ukrainian).