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E. G. Radygina

Ural State University

ABSTRACT

An increase in interest in ecological tourism, together with a decrease in the tourist flow in other directions (including international ones), has influenced a significant increase in interest in specially protected natural areas. The increase in the flow of visitors affects the ecological state of natural systems, which makes it necessary to search for factors to reduce the anthropogenic load. The article discusses the economic aspects of reducing the anthropogenic load on specially protected natural areas.

Keywords: specially protected natural area, anthropogenic load, ecological tourism, economic efficiency, sustainable development.

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ABSTRACT

An increase in interest in ecological tourism, together with a decrease in the tourist flow in other directions (including international ones), has influenced a significant increase in interest in specially protected natural areas. The increase in the flow of visitors affects the ecological state of natural systems, which makes it necessary to search for factors to reduce the anthropogenic load. The article discusses the economic aspects of reducing the anthropogenic load on specially protected natural areas.

Protected natural areas account for 12% of the world's land surface and are the main targets of all national and international strategies supported by the Government and international agencies.

The author argues that in order to reduce the anthropological burden, it is necessary to combine the efforts of public authorities, entrepreneurs and the population of the region. To reduce the anthropogenic load, the creation of economic mechanisms for rationing the flow of visitors to specially protected natural areas, the creation of infrastructure facilities, and the development of a system of additional paid services are proposed.

The development of economic mechanisms of nature management is associated with the development of ecological tourism, which will be provided by the economic and ecological development of recreational resources without prejudice to natural areas, the preservation of forests and water bodies, and the reduction of anthropogenic load should be provided by regulating the flow of visitors to protected areas.

It is necessary to take into account the importance of environmental regulation of anthropogenic loads to maintain the ecological balance of natural ecosystems, each of which has its own "economic capacity", which should not be exceeded.

Keywords: specially protected natural area, anthropogenic load, ecological tourism, economic efficiency, sustainable development.

Author: Candidate of Pedagogical Sciences, Associate Professor, Acting Head of the Department of Tourism Business and Hospitality, Ural State University of Economics, 62, 8 Marta str., Yekaterinburg, 620144, Russia. E-mail: radygina@bk.ru

I. INTRODUCTION

Consideration of environmental problems is becoming more and more relevant in the modern world, attention to ecological forms of management and ecological tourism is growing. This is due not only to the influence of the natural environment on the quality of human life, but also to the use of natural areas for the development of new types of tourism.

The change in the political situation has led to an increase in interest in domestic tourism. There is a reorientation of the tourist flow to the internal territories, the tourist development of the country's space. Ecological tourism is a priority area of tourism development in the country. Even despite the pandemic, this segment shows a growth trend of about 7% per year [5].

Unfortunately, the development of eco-tourism is associated with an increase in anthropogenic load

on natural landscapes. Considering that independent (unorganized) types of tourism are developed in Russia, it is relevant to use the possibilities of organizing the flows of independent tourists, as well as increasing the environmental responsibility of tourists using social mechanisms.

Among the directions of reducing the anthropogenic load are usually called: regulatory, technological, economic and others. Economic factors are only part of the overall environmental safety strategy. However, they can affect not only the reduction of the level of anthropogenic influence, but also the efficiency of the use of various technologies.

The purpose of the study is to identify the economic factors of reducing the anthropogenic load on specially protected natural areas used as objects of ecological tourism.

II. MATERIALS AND METHODS

Methods of analysis, synthesis, generalization, classification were used to conduct the theoretical stage of the study. The content of the concept of "specially protected natural area", "ecological tourism", "anthropogenic load", "sustainable tourism" is analyzed.

The content of the concept and features of specially protected natural territories were studied in the works of N.M. Reimers and F.R. Shtilmark, V.V.Dezhkin, A.N. Ivanov, V.P. Chizhova, O.Y.Gurievsy, E.A. Galinovskaya and others.

The economic mechanisms of nature management were studied in the works of Baysultanova L. B., Karasheva A. G., Ilyinov S. V. and others.

Specially protected natural territories are areas of land, water surface and air space above them, where natural complexes and objects that have special environmental, scientific, cultural, aesthetic, recreational and health-improving significance are located [4].

There are provisions according to which natural objects receive the status of "special protection".

Therefore, when allocating protected areas, the following criteria are met:

- The legislative framework, that is, protected areas must be specially allocated by law or regulatory act. Protected areas can have federal, regional and local significance, for each of which there is a legislative framework.
- The existence of special protection regimes that go beyond the universal environmental requirements and norms [2].

The concept, structure and principles of ecological tourism were investigated on the basis of the provisions of the World Tourism Organization, the works of O.A. Almukhamedova, M.I. Vasilyeva, A.B. Kosolapov, A.V. Tikhomirova. O.P. Burmatova, V.N. Krasnoshchekov, V.V. Kundius, A.I. Ponomarev studied anthropogenic load and applied methods of its assessment. The structure and development of ecological consciousness were studied by A.S. Odegov, E.A. Sorokoumova and E.A. Cherdynova.

A.B. Kosolapov understands ecological tourism as "tourism compatible with environmental and social requirements, responsible to nature, contributing to its protection, enhancing the culture of travelers, performing an educational function, taking care of traditional cultures and local communities" [7, p. 69]. The main objectives of eco-tourism are observation and familiarization with nature, as well as the reduction of anthropogenic impact on the environment.

O.A. Almukhamedova highlights the features of eco-tourism: the focus on environmental education of travelers, the use of natural resources of the territory, reducing the negative impact on the environment, preserving authentic local culture and ensuring the economic development of the destination [8].

Thus, the concept of eco-tourism is associated with a careful attitude not only to natural landscapes, but also to the indigenous population and its culture, with rational interaction with the natural and social environment. The development of ecological tourism is associated with the allocation of natural attractions attractive for the

development of tourism, their protection and effective economic use.

Based on the materials studied, the anthropogenic load on the natural territory is understood by us as a human impact that leads to undesirable changes or destruction. There are quite active discussions in the literature on standards and factors for reducing anthropogenic load. The main directions of anthropogenic impact are: air, water resources, soils [13, 19].

In the scientific literature, the factors of biological, chemical and physical effects on natural landscapes have been sufficiently studied. However, not enough attention is paid to the study of the economic mechanisms of reducing the anthropogenic load on the territory.

The state of natural territories and prospects for the development of ecological tourism in the Sverdlovsk region were considered on the basis of regulatory documents provided by the Ministry of Natural Resources and Ecology of the Sverdlovsk Region, as well as statistical reports.

III. RESULTS

In accordance with the Federal Law on Specially Protected Natural Territories, it is provided for the allocation of the main categories of protected territorial objects:

State nature reserves - full protection of nature and the natural course of natural processes;

National parks are a category of federal significance, which combines the tasks of preserving natural and historical and cultural objects with the organization of regulated active cognitive recreation;

Natural parks are a form of specially protected natural territories of regional or local significance, within which the tasks of preserving natural landscapes and historical and cultural objects are combined with the organization of regulated educational recreation and tourism, including mass;

State nature reserves – territories with temporary or permanent protection that are of particular

importance for the preservation or restoration of natural complexes or their components and the maintenance of ecological balance;

Natural monuments – full protection of unique, irreplaceable, valuable in ecological, scientific, cultural and aesthetic relations of natural complexes, as well as objects of natural and artificial origin; dendrological parks and botanical gardens - protection and reproduction of rare species of flora and fauna, preservation of diversity and enrichment of the plant world [2].

The area of all protected natural territories of the Russian Federation significantly exceeds the area of any country in the world. Only in terms of the area of biosphere reserves, Russia ranks second in the world.

Natural territories are often evaluated in terms of their commercial benefits, which, of course, turns out to be low. Often, natural areas are more attractive as objects of purely private interests - as places of elite construction or organization of elite recreation. But the directorates of territories, in search of funds to ensure the implementation of the direct functions of protected areas, are also looking for possible options for combining the protection regime and commercial activities. It is found in the expansion of tourism and recreation in the territories. At the same time, both the consequence and the cause of what is happening can be considered that a consistent state environmental policy that would give clear answers about the role of the system of specially protected natural territories in the new conditions has not yet been formed. But this is also due to the lack of a single fully verified concept of creating a system of protected areas (nature reserve fund) in Russia [3, pp. 32-33].

The legislation also calls the territories of traditional nature use of indigenous small-numbered peoples of the North, Siberia and the Far East of the Russian Federation as specially protected natural territories [9]. Although, as you know, traditional nature management is a type of economic activity. It is difficult, in our opinion, to call in its purest form the territory of nature conservation therapeutic areas and resorts. The

listed territories and the natural objects included in them certainly deserve special protection from the legislation and the state. But it seems that the very purpose of these objects and the peculiarities of their protection and use deserve a special approach, up to the allocation of them into a special type of protected areas.

Ecotourism is considered as a socio-economic activity that combines elements and directions of various types of tourism activities and reflects the objectives of ecotourism.

Ecological tourism has specific features, it simultaneously performs economic, social, political, cultural, humanitarian and communication functions. The economic functions of ecotourism are expressed in replenishing the revenue side of the budget; multiplicative impact on the relevant sectors of the economy, the development of regional and municipal economies. Social functions are expressed in the organization of recreation and health improvement of the population, the creation of new jobs and solving the problem of unemployment, ensuring socio-economic and political stability. Humanitarian and communication functions include interpersonal, interethnic and international communications, introduction to culture, physical and intellectual development of the individual.

Within the framework of ecological tourism, the following types can be implemented:

Scientific tourism (for the purpose of studying flora and fauna);

Historical tourism (acquaintance with history and original culture);

Active tourism (in order to get unique impressions);

Rural tourism (living in rural areas and getting acquainted with the values of folk culture).

The influence of ecotourism on the economic development of the territory allows to increase the gross domestic product of the region, affects the development of infrastructure, improves the quality of life. Tourism is one of the driving factors of socio-economic development and has a

multiplicative effect on the economy of the region, has an impact on the development of transport infrastructure, trade, folk arts and crafts. Ecotourism offers a unique solution that will provide jobs and consistently high incomes for the population and preserve the wildlife of Russia intact.

On the territory of the Sverdlovsk region there are 98 villages and settlements and 1,800 rural settlements, some of which have cultural and historical significance. The remoteness of these settlements from the central regions of Russia allowed preserving cultural identity and authenticity, which is significant in the direction of rural tourism development.

The hydrological resources of the Sverdlovsk region include 18,414 rivers with a total length of more than 68.0 thousand km, the largest of which are Tura, Ufa, Tavda, Pelym, Lozva, Sosva, Iset, Pyshma, Chusovaya, Sylva, Tagil, as well as more than 2.5 thousand lakes with a total mirror area of 1,100 sq. km (the largest Pelymsky Fog, Big Indra, Vagilsky Fog, Isetskoye, Tavatuy).

The composition of the land fund is dominated by the lands of the forest fund (70%), the lands of specially protected territories and objects (5%). There are also 529 specially protected natural territories (protected areas) located on the territory of the Sverdlovsk region with a total area of 1307.4 thousand hectares (of which: 5 - of federal significance, 506 - of regional significance and 18 - of local significance. The most significant are: the state nature reserves "Visimsky" and "Denezhkin stone", the national Park "Pripyshminsky forests", the natural parks "Deer streams", "Chusovaya River", "Small Source", the natural and mineralogical reserve "Rejevskoy" [13]. They are objects of tourist interest, as they include not only unique natural objects, but also objects of historical and archaeological value. At the moment, the index of the reserve of the Sverdlovsk region (the area of reserves and national parks as a percentage of the area of the region) It is 7.04%, which is lower than the average for Russia, which in 2020 was at the level of 13.9% [14, pp. 66-70]. During the pandemic, the number of visitors to nature parks has

increased significantly. Thus, the Nature Park "Deer Streams" in 2020 was visited by 17,000 more people than in 2019, and the number of visitors to the park "Bazhovsky places" increased by 27,000 [7].

The high sensitivity of ecosystems to anthropogenic impacts is a serious limitation for the development of ecological tourism in the Sverdlovsk region. Such a number of visits leads to degradation of the natural environment, increased load on the infrastructure of parks, has an adverse effect on ecosystems: the air is polluted by exhaust gases, natural landscapes suffer from household waste and human waste products, as well as industrial waste. Industrial areas of the Sverdlovsk region are saturated with enterprises that, due to the nature of the technologies used, cause great damage to the natural environment. The main pollutants of environmental objects are mining enterprises, motor transport and thermal power engineering. At the same time, 55% of all atmospheric pollution is accounted for by road transport.

The anthropological burden on natural landscapes is caused by:

A significant concentration of environmentally hazardous industries;

Using outdated technologies and equipment, high resource and energy intensity of production;

Insufficient level of environmental responsibility among the population.

To achieve environmental goals, transformations in society are necessary - a transition to sustainable production and consumption processes in order to limit climate change and preserve ecosystem functions for future generations [1]. The main mechanisms for the implementation of environmental objectives are:

Involvement of all interested parties in the process of protection and use of natural resources, including by informing about planned and ongoing events in the mass media, the Internet, social networks [12]. Information is necessary for the formation of public interest in ensuring environmental safety;

Support of volunteer activities and implementation of civic initiatives aimed at solving environmental problems of the Sverdlovsk region;

Attracting the population to participate in mass environmental actions;

Formation of public and expert councils and commissions in order to involve the public in discussing issues of improving the environmental situation.

To reduce the anthropological burden, it is necessary to combine the efforts of public authorities, entrepreneurs and the population of the region.

In terms of regulatory regulation, it is necessary to create a mechanism for the introduction of the best available technologies. The concept of "the best available technology" is provided for by Federal Law No. 219-FZ of July 21, 2021 "On Amendments to the Federal Law "On Environmental Protection" and Certain Legislative Acts of the Russian Federation" [19]. This mechanism is aimed at modernizing outdated production facilities through the activities of legal entities and individual entrepreneurs, as well as taking measures to reduce the negative impact on the environment.

Reduction of anthropogenic load is also possible with the organization of recreational space in places intensively visited by tourists. To this end, by 2023, it is planned to improve the creation of infrastructure facilities in eight specially protected natural territories of regional significance. It is planned to expand the network of roads and paths in specially protected natural areas, increase the number of places for recreation and regulate the flow of visitors [17].

According to the study, young people from 18 to 25 years of age (with higher education) have the highest level of environmental responsibility, they are more informed about the negative anthropogenic impact on the environment, as well as well-oriented in the application of new environmentally neutral technologies, aimed at an ecological lifestyle. Accordingly, the formation of

environmental and social responsibility should occur among younger people and the older generation. Great importance should be given to environmental education and the formation of environmental and social responsibility of the population through:

Competitions (for example, such as "Yekaterinburg is the city of the future", "Environmental Initiative of the Sverdlovsk region", "My city is my concern", implemented in Yekaterinburg) [12];

Educational campaigns ("Green Tram" and "Green trolleybus" in order to reduce the carbon footprint when visiting nature parks);

Popularization of eco-friendly consumption and lifestyle ("Ecological Lifestyle" project);

Organization of mass environmental festivals ("For a clean and healthy city", "Let's save the planet Earth and our city", "The Green Ring of the Metropolis");

Organization of environmental actions, educational events, social advertising.

One of the ways to reduce anthropogenic impact is the development of tourist infrastructure necessary to limit the negative impact of tourists on the natural environment (arrangement of controlled ecological tourist routes, ecological trails, observation decks, bivouac glades). It is also important to preserve the traditional way of life of the local population: support for folk arts and crafts, folklore, attraction of the local population to the provision of tourist services.

IV. DISCUSSION

Discussion of the research results took place within the framework of scientific and practical conferences and round tables held in offline and online formats.:

International Conference on Economics, Management and Technologies 2021 (ICEMT 2021), Yalta, Russia, May 17-19, 2021;

XVII All-Russian Scientific and Practical Conference "Innovative research: experience,

problems of implementation of results and solutions", Chelyabinsk, August 13, 2021;

V International Conference of Teaching staff "Actual problems of Humanities and Natural Sciences", Kazan, March 19, 2021.;

All-Russian Scientific and practical conference of students, undergraduates, postgraduates and teachers "Actual problems of the humanities" (Nizhnevartovsk, February 20, 2021

V. CONCLUSION

Ecological tourism has specific features, it simultaneously performs economic, social, political, cultural, humanitarian and communication functions. Within the framework of ecological tourism, the directions of scientific, historical, active and rural tourism can be implemented. The common goal for these areas is the use of natural landscapes for recreation while taking care of environmental protection.

The Sverdlovsk region, despite the development of industry, is a promising region for the development of ecological tourism, a significant limitation for which is the sensitivity of natural systems to anthropogenic impact. The development of ecological tourism is hindered by the imperfection of environmental legislation, the lack of qualified specialists in the field of environmental protection, insufficient attention of society to environmental problems, as well as the lack of developed infrastructure, transport services, competitive tour operator services, low level of service.

The main factors in reducing the anthropogenic load on natural territories are:

The formation of an ecological type of nature management through regulatory regulation and the introduction of the best available technologies;

Creating an information field and forming public opinion in the direction of an eco-friendly lifestyle;

Combining the efforts of public administration bodies, entrepreneurs, social organizations and the population;

Organization of environmentally oriented interaction of state, industrial, and the population of the region;

Organization of recreational spaces in places intensively visited by tourists.

Great importance should be given to environmental education and the formation of environmental and social responsibility, an ecological lifestyle of the population, the development of environmentally oriented activities.

With a rational organization, eco-tourism can provide real financial support for environmental protection and increase the importance of natural resources.

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