SELECTION OF STRATEGIC PRIORITIES FOR SUSTAINABLE DEVELOPMENT OF TOURISM IN A MOUNTAIN REGION: CONCENTRATION OF TOURIST INFRASTRUCTURE OR NATURE-ORIENTED TOURISM

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Abstract. The paper discusses options for tourist development of the Altai-Sayan region. For this purpose, a comparison is made between the current state of tourism and sustainable development of tourism. This makes it possible to propose five stages for the strategy of sustainable tourism development in the Altai-Sayan mountain region. The preservation of biodiversity and ethnic characteristics of the territory underlie the ethnoecological type of tourism, being the most consistent with the principles of sustainable development and promising in the studied mountain region. Functional zoning is considered as an important method for balancing and optimizing environmental management. It is proposed to use the landscape-adaptive principle as a basis for spatial planning of tourist service in the mountainous region. The spatial elements of the tourist network of the mountain region were analyzed. This made it possible to reveal the predominance of the linear structure in connection with the mountain-valley relief. There are also examples of radiation, dispersion, focal and linear-perpendicular structures of tourist networks. This allowed highlighting the priorities of tourist development for different territories. Functional zoning of the Altai-Sayan region with the identification of priorities in the development of the territory was proposed. This allowed identifying the spatial distribution of areas of intensive tourist use and areas of nature preservation and ecotourism. In addition, zones of weak economic development were identified with a predominance of tourist routes, as well as those of medium economic development with local tourist centers.

Keywords: sustainable development of tourism; functional zoning mountain region; tourism; the Altai-Sayan Mountains

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1. Introduction

Tourism makes a significant contribution to the sustainable development of regions. However, positive economic impacts are only part of what tourism brings. It is also able to change the basis of the natural tourist attractiveness and take away the identity from the inhabitants of the mountains (Messerli, 1999).

It is now recognized that the uncontrolled growth of the tourism industry, which aims to achieve quick profits, often has negative consequences, because it causes damage to the environment and the population, destroying the resource basis of tourism (Sharpley, 2009; Miller et al., 2005).

The UN WTO identifies a number of reasons why national and regional tourism planning needs to be carried out. They are related to the fact that, on the one hand, tourism contributes to economic development, socio-cultural reproduction, environmental preservation, and on the other hand, a significant list of aspects of the negative impact of tourism can be identified. In the absence of a long-term science-based concept of tourism development, the negative consequences are more pronounced: excessive consumption of resources, environmental pollution; esthetic pollution, changes in the habitual way of life and traditions; conflicts of tourists and local residents; the increase in crime, price growth, seasonality, economic dependence on tourism and much more (World Tourism Organization, 2004).

Sustainable development of tourism ensures the unity of the three components: development of tourism in conjunction with the main environmental processes; economic sustainability is achieved by the role of tourism as one of the ways to develop the local economy through balanced resource management; socio-cultural sustainability allows increasing employment and incomes of the population, preserve historical and cultural monuments, strengthen local identity and the established way of life (Gulyaev, Selivanov, 2008; Orynbassarova et al., 2019).

The concept of sustainable tourism development is generally recognized in leading countries of the world and in a number of international organizations, including the World Travel and Tourism Council (WTTC), the International Federation of Tour Operators (IFTO) and others.

Taking the Altai-Sayan mountain region as a case study, the authors propose to consider the choice of priorities for the tourist development of territories. For this, it is necessary to work out successive stages in the formulation of a strategy for the tourist development of territories. First of all, it is necessary to analyze the prerequisites for the development of tourism. Then, existing tourism may be assessed for compliance with the principles of sustainable development. Further, using the methods of spatial analysis and modeling, one can reveal a variety of tourist priorities depending on the territory (Goryushkina et al., 2018; Bozhkova et al., 2019; Akhmetshin, 2017; Shevyakova et al., 2019; Titova et al., 2019). However, only a comprehensive analysis of tourism in the mountainous region will make it possible to identify strategic priorities for different territories (Dunets et al., 2019; Sharafutdinov et al., 2018; Korableva et al., 2019a; Voronkova et al., 2019).
The aim of this study is to identify some priorities for the spatial development of tourism and to identify which areas can be stable, taking into account the high concentration of tourist infrastructure and, on the contrary, to reveal where natural tourism is promising.

The Altai-Sayan region due to its location in the center of Eurasia in different eras united various ethnic groups and cultures. The region has some prerequisites for the formation of single tourist space. These include the natural and ethnocultural similarity of the territory, the need for joint protection of the natural heritage, the proximity to the markets of neighboring countries, the economic benefits of trade and economic cooperation, the organization of cross-border tourism, the search for sustainable development of border areas, etc. (Plyusnin, et al. 2002).

2. Methods

Since the end of the 20th century, in many academic papers, the development of the territorial structure of tourist destinations has been examined from the perspective of the sustainable development concept. This paradigm has identified changes in the research of tourist activities. Sustainable regional development is aimed at reaching a compromise between global, national and regional development priorities. The key concepts of sustainable development are the equality of relations, equilibrium, balance, and consistency (Kotlyakov et al., 1997). Drozdov (1998) notes the development of trends in ecologization and sociologization of research in the field of tourism. Yakovenko (2003) considers the optimization direction of most developments, i.e., the geographical justification for making management decisions to rationalize environmental management, as a characteristic phenomenon in the study of tourism. Under the optimization, he understands the choice of the most effective ways of development of tourist systems, in order to increase the economic effect and reduce the negative environmental consequences (Ghosh and Ghosal, 2019; Sycheva et al., 2019; Mandal and Sanyal, 2019; Ige, 2019; Lafer and Tarman, 2016, 2019; Neizvestnaya et al., 2018).

For sustainable development, the method of functional zoning is used. This is a division of the territory into zones, with the aim of ensuring the maximum compliance with the use of tourist resources with the needs of tourists and preserving the attractiveness of the territory (Rodoman, 1999). As the main tool of strategic management, functional zoning of the territory is declared with the allocation of corridors and development zones and preferred specializations. Through the tools of public-private partnerships and subsidies, it is proposed to use the regulation of territorial priorities of business development (Baburin and Goryachko 2009).

Tourism development planning is defined as one of the management functions consisting in developing plans to identify the future state of tourist destinations, as well as methods and means of achieving it in the context of resource constraints.

In planning documents, authorities and designers often consider tourism in general and ignore the opinions of local residents, who are the main author of recreational activities and the condition for the functioning of tourism. Also, short-term tourism and recreation are usually excluded from the plans of local authorities, due to the complexity of their planning (Veal, 2002).

Hall notes that a sustainable tourism approach can be combined with an economic spatial one; locally oriented; standardized; modeling (Hall, 2008).
3. Results

A tourism development strategy can be adaptive in nature, when tourism activities tend to organically blend in with the natural and socio-cultural environment, and constructive, when the natural environment is actively transformed to more closely match tourism needs (Yakovenko, 2003; Korableva et al., 2019b; Kuznetsova et al., 2019; Kilinc et al., 2018).

Many mountain valleys of the Altai-Sayan region became accessible due to the growth of tourist needs. Tourism provided local people with additional income and employment, opened up new career opportunities, and created markets for traditional agricultural products.

The traditional development of tourism contributes to the emergence of a number of problems related to an increase in land value, seasonal employment and lower positions for local employees, intensive use of resources, water pollution, increased waste and loss of agricultural land, small financial flows for the host party, collision of material and spiritual interests.

Comparison of regional programs for the development of tourism, the actions of the authorities of the administrative regions of the Altai-Sayan region and the recommendations of the UN WTO allowed a comparison of the traditional and sustainable development of tourism (table 1).

| Comparison points                                      | Current tourism state       | Sustainable tourism development                          |
|--------------------------------------------------------|-----------------------------|----------------------------------------------------------|
| Balance of economic, environmental, and social interests| Missing                     | Present                                                  |
| Economic, environmental and social risks                | Present                     | Minimized, preventive measures                            |
| Development priorities                                 | Scaling up and cost-effectiveness | Rational organization of tourist areas, meeting tourist needs, preserving the natural environment, the economic effect |
| Regional strategy for the development of tourist destinations | Priority to regional development goals | Interrelation of regional goals with national and international ones, differentiation of models of organizing tourist areas and types of tourism, taking into account regional features and their compatibility |
| Managing the development of tourist destinations        | Episodicity and discretion of attention to the development of tourist destinations, multidirectional management actions | Continuity, preventive measures, integration, consideration of regional peculiarities in tourism policy |

To justify and develop a strategy for sustainable tourism development in the Altai-Sayan region, the authors have identified five stages.

1. An analysis of the prerequisites for sustainable development of tourism in the mountainous region. For this purpose, the features of tourist activity, its dynamics and seasonality are studied. The main trends in the development of tourism and their interaction with the natural and social organization of the territory are identified. It is necessary to analyze tourism resources, study the political, socio-cultural, environmental and economic aspects of the impact of tourism in the region. An important component of the study of the prerequisites for the development of tourism is the identification of features of the tourism management system in the region.

2. Creating a system of indicators of sustainable tourism development, taking into account the peculiarities of the mountain region. Evaluation of the legal, economic development of tourist destinations, the interaction of tourism with the socio-cultural environment, the degree of transformation of the natural environment. Identification of the most urgent problems and their territorial differences.
3. Methodological substantiation of spatial development and development of models for the sustainable development of tourist destinations. Identification of regional models of tourist destinations. Cartographic, mathematical, simulation modeling of tourism development. Identification of target functions, parameters, restrictions, development of a geoinformation system of tourist destinations.

4. Development of strategic solutions for the sustainable development of regional tourist destinations. Forecasting the sustainable development of various types of tourist destinations in the context of options for the development of the situation in the region. Selection and justification of development priorities. The rationale for the balanced development of various types of tourist destinations and types of tourism. Development of recommendations for the prevention of conflict situations with economic entities of related industries and local residents, development of recommendations on a balanced relationship between the processes of operation and restoration of tourist resources. Justification of the mechanism of management of tourist destinations.

5. Implementation of management decisions in tourist destinations, their adjustment taking into account possible situations, indicative monitoring, and planning.

The organization of tourism should be implemented in the regions, taking into account the landscape-adaptive principle. This applies to the construction of buildings, the creation of tourist routes, the justification of permissible tourist loads, the allocation of protected areas, etc. The development of tourism in the mountains should be based on a comprehensive solution of issues related to the conservation of biodiversity.

In the Altai-Sayan region, a significant part belongs to special protected natural areas, where, with the observance of the requirements of environmental legislation, the formation of a special type of tourist zones is promising. The development of an adequate strategy for the development of a border mountain region is associated with the integration of territorial and socio-economic planning of the area.

For the rational organization of tourist destinations, it is important to take into account the regional peculiarities, tourist and geographical position. In the territorial strategy of tourism development, it is necessary to identify the diversity of perception of the places (tourist areas). It is necessary to take into account all possible characteristics of any place: history, nature preservation, favorable habitat for humans, biodiversity, cultural significance, landscape-aesthetic appeal, the value of resources, and systemic interrelations.

The development of tourism in the mountainous region is conditioned by the peculiarities of the relief, the climatic conditions, the uniqueness of landscapes, the importance of specific objects for local residents, the architecture of buildings and structures, including the use of materials and the skill of builders, historical and cultural heritage (Hall, Butler, 1995). The organization of tourism should be consistent with the natural features of the region, the traditions of the local population, opportunities and prospects for economic development (Gret-Regamey, Bishop, Bebi, 2007).

The development of tourism is a priority for many administrative areas of the Altai-Sayan region. However, the ideas about the most important types of tourism differ among administrative authorities. The main goal in the development of tourism in the regional administrations of the Russian part of Altai is associated with the intensive development of tourist activities in several zones, where there are some prerequisites for the creation of tourist clusters.

Nyamdavaa (2009) notes that the development of ethno-tourism is of great importance for Mongolia. The most important part of special protected natural areas can be protected border areas, which are necessary for the comprehensive protection of migratory species of ungulates and migratory birds, the joint study of their habitats and the development of cross-border tourism. For the first time, a protected border area was created with the participation of the Katun Reserve (Russia) and the Katon-Karagai National Park (Kazakhstan).
In the Altai District of China, the intensive development of tourism is associated with particular functional zones of protected natural areas. The main area of tourism development in the Chinese part of Altai is the Kanas National Park. It is divided into three functional zones: the main, the buffer and the scientific and experimental zones. The development of tourism is implemented mainly in the area of the Kanas Lake and in the southern scientific and experimental zone (Di, Yang, 2009).

Rural settlements dominate in the border areas of the Altai-Sayan region, where agrarian production plays a significant role in the economy. Traditional use of nature in most areas is advisable to be complemented with tourism. Taking into account the natural and socio-economic features, the development of rural tourism is promising, which can become an important type of additional economic activity of the local population.

In the authors’ opinion, ethnoecological tourism, which has good prospects in the region, most fully corresponds to the principles of sustainable development. This type of tourism implies traveling to the areas with a slightly changed natural and cultural environment, to the places of traditional residence of certain ethnic groups with educational purposes (Dunets, Indyukova 2015). Based on its name, this type of tourism satisfies all three components of sustainable development (Fig. 1).

Social development is associated with the preservation of ethnic diversity, the support of the local population, the preservation of traditions, etc. Ecological development is caused by the need to preserve natural complexes, to develop the network of protected areas, etc. Economic development is determined by the understanding of tourism as a sphere of the economy, which has some prospects in the Altai-Sayan region.

![Fig.1. Title Interrelation of components of sustainable development and ethnoecological tourism](image-url)
Many rivers are used to organize water routes and tourist paths pass along their banks. In the process of tourist development of the territory, a network of tourist routes is being developed. Tour centers in the region are connected by a linear-network structure.

The analysis showed that the most common type of tourist network in the conditions of the Altai-Sayan region is linear, which is formed on the basis of natural dominants; in intermountain basins, along the banks of large aquatic reservoirs, in river valleys, and also on the basis of transport communications (for example, the Katun River, the Irtiysh River, the Yenisei River, the Chuisk Highway). The dominant natural “axes” – the rivers – clearly highlighted the priority functions of such zones, and the integrity of the territory ensures the continuity of traveling. The riverside landscape complexes during the historical period of development contributed to the concentration of settlements and numerous cultural monuments. The Altai-Sayan region is characterized by the presence of large intermountain basins where rivers flow or lakes are located.

Given the mountainous nature of the territory of the Altai-Sayan region, the linear-striped structure of tourist networks is the most promising. Distant territories may have dispersed and focal structures. The ray structure is characteristic for the development of the valleys of the tributaries of large rivers. The linear-perpendicular structure of tourist networks is found in the places of development of the coast of lake and the river valley flowing out of it (development of the northern coast of Lake Teletskoye and the upper valley of the Biya River), and also when the valley of the river enters the plain area at the foot of the mountains, the perpendicular structure of tourism is formed. Examples of this are in the Russian part of the Pre-Altai Plain (resort of Belokurikha), the Tunkinskaya depression (resort of Arshan).

The most important tool for the strategic management of tourism in the spatial aspect is the functional zoning of the territory with the allocation of corridors and development zones of preferred specializations in the territory. At the level of the Altai-Sayan region, it seems appropriate to identify functional areas with some priorities for tourist use. Creating a promising spatial structure of tourist networks can be implemented with due regard for the principles of sustainable development and adaptation of types of tourism organization to the territorial-situational environment. Such an approach will contribute to the improvement of socio-economic cooperation, the development of culture and the preservation of biodiversity in the Altai-Sayan region. The authors recommend creating spatial tourism options subject to the adaptation to socio-economic and high-altitude landscape conditions, their ecological state and modern features of tourist development. In Fig. 2, the authors propose the allocation of the main functional areas of the Altai-Sayan region, taking into account the priority of various types of tourism organization.

Regions have a different level of economic development. For example, the Krasnoyarsk Territory or Kemerovo Region have much more developed infrastructure and industrial development than the Republic of Altai. It is difficult to compare Mongolia and China between each other. In this regard, for each region, the authors have identified a weak, medium and high level of economic development. However, the low level in the Kemerovo Region will be high for Mongolia. This approach allowed showing on the map the different levels of economic development and the corresponding priorities of tourism in each territory. A cartographic analysis shows the location of protected suitable areas near state borders. These areas are also attractive for the development of ecotourism. In addition, the main tourist centers are highlighted, surrounded by the areas of intensive tourist development.
4. Discussion

In all border areas of the Altai-Sayan region, special protected natural areas are located. The development of ecotourism is promising in those territories. Rural and ecological tourism should be priority types of tourism for most of the remote border areas of the Altai-Sayan region. Prospects for tourism development are determined by a combination of environmental activities with regulated agricultural production and preservation of ethnocultural identity.

The organization of tourism in the Altai-Sayan region provides for the search for rational use of protected areas in tourism, which constitute the natural heritage of the region. The mountainous region can become the largest center of international ecotourism, scientific research, cultural relations and rational use of resources. To this end, work is needed to expand interstate cooperation based on the principles of mutual benefit and strengthening security in the region. Transport and other infrastructure will play an important role in socio-economic development and rational use of resources (Hu, 2009).

Taking into account global trends in the formation of demand in global tourism, associated with increasing attractiveness of territories with a well-preserved ethnocultural environment, it is advisable for authorities and businesses to develop ecological, ethnic, health-improving and adventure types of tourism (Goloshchapova et al.,
2018; Trofimova et al., 2019; Polyakova et al., 2019; Plaskova et al., 2017). Only the accessible valleys of low-mountain areas are most suitable for active tourist development and mass tourism.

Border administrative areas need to conduct a coherent information policy, responsible marketing and coordinate the stakeholders of tourism activities to ensure the spatial and temporal balance of tourism.

Sustainable tourism development is a combination of processes characterized by spatial heterogeneity and controllability. Only with the help of conscious regulation, one can come closer to a balanced combination of compromises between objects and subjects of tourist activity.

The transition of mountain regions to sustainable development requires a revision of the directions in the state regulation of the tourism sector, the strengthening of its indirect components, seeking to create favorable conditions for the formation of tourist infrastructure, attracting investment, strengthening economic ties (Prodanova et al., 2019a, b). It is necessary to strengthen the measures of state support aimed at creating favorable conditions for organizations associated with the development of tourism in the border mountainous areas.

**Conclusions**

Every year, tourism is becoming an increasingly important source of income for residents of the Altai-Sayan region providing a rare opportunity for them to participate in the global economy. Natural and socio-cultural resources can provide an opportunity for significant tourist development. However, the growth of tourism does not necessarily lead to a stable development of the mountains, since the territory is significantly differentiated, which also applies to its development. Formulation and implementation of tourism development strategies should be based on a systematic understanding of tourism and its relationship with many elements in the mountain region.

Thus, the mountain region is characterized by a number of structural features. Therefore, the choice of zones of active development, where tourism can most effectively develop, is important for the development of the regional economy. For the sustainable development of tourism in the region, a regional territorial planning strategy for tourist activities should be identified to be implemented at the international level. Therefore, it was proposed to allocate different functional areas depending on the prospects for tourist development.

The mountainous region can become the largest center of international eco-tourism, scientific research, cultural relations and rational use of resources.

Tourism makes a significant contribution to the sustainable development of mountain regions. The development of tourist destinations in a cross-border region is associated with the implementation of specific projects on the basis of the principles of sustainable development and interstate cooperation. These projects primarily include ecotourism development in special protected natural areas, cross-border routes, tourist infrastructure. The integrated tourist development of border areas leads to an increase in interaction effects in the cultural, social, and economic spheres.
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