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SUSTAINABLE ECOLOGICAL TOURISM DEVELOPMENT IN THE REPUBLIC OF KAZAKHSTAN: PROBLEMS AND PROSPECTS

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Abstract. This article is devoted to problems of development of sustainable ecotourism in Kazakhstan. The methodological part made it possible to show the potential for sustainable ecotourism in the country. The practical part is dedicated to identifying and solving the problems of the development of this type of sustainable tourism. Also, works were carried out to determine the maximum capacity of specially protected natural areas.

Key words: Kazakhstan, sustainable tourism, ecotourism, ecotourism potential, protected areas.

Ecotourism focuses on local cultures, wilderness adventures, volunteering, personal growth and learning new ways to live on our vulnerable planet. It is typically defined as travel to destinations where the flora, fauna, and cultural heritage are the primary attractions.

In Kazakhstan, as well as in the CIS countries as a whole, the term “sustainable tourism” is not appreciated and is almost unknown to most. It is not even used at the government level and would not seem to have a place in other sectors of tourism development.

The greatest potential in the development of ecological tourism is the Especially Protected Natural Territories, but there is a need to choose the priority areas for the development of ecotourism.

In 2017, Kazakhstan strengthened its position on the map of international tourism. Last year, the republic was visited by a record number of foreign tourists - 5.8 million people. During the previous 5 years, the indicator of inbound tourism did not exceed (or slightly exceeded) the mark of 5 million people. Comparing with the number of visitors to Kazakhstan in January-September 2016 showed the increasing by 18.1% or 894 people against the last year level [3].

Ile-Alatau National Park was created in 1996 and covers about 200,000 ha. It is situated in the mountains south of Almaty between Gorge Turgen in the east and the Chemolgan River in the west. The National Park borders Almaty Nature Reserve, which is located around Peak Talgar.

Big Almaty Lake is set high up in a gorge of the Bolshaya Almatinka River, 2511 meters above sea level and 28.5 km south of Almaty. It lies in a hollow like a gleaming mirror, surrounded on all sides by majestic peaks. Three main peaks tower above the lake and can be seen from the northern end of the dam: Sovetov (4317 m) to the south-east, Ozyorny (4110 m) to the south, further up the river valley, and the forested slopes of Turist (3954 m) to the south-west [1].

The relationships between the volume of its tourists visiting an area and the state of its ecosystems, the physical condition of its environment, social impacts and the total utility obtained by visitors may all be of different forms. For example, total utility obtained by visitors may continue to rise with an increase in the number of visitors even after ecosystems show some deterioration or the physical state of an area declines. This non-uniqueness was highlighted by Mathieson and Wall (1982) in the following terms: “A recreation site or tourist resort, be it natural, man-modified or man-made, does not have a set carrying. The capacity will reflect goals established for the national park, and these should specify the level of environmental modification which is unacceptable and the nature of the experiences to be provided” [4].

For classification and identification of environmental routes in all regions of Kazakhstan, first we must calculate the potential capacity for sustainable tourism. The calculation of the visitor carrying capacity considers three levels: the physical carrying capacity (PCC), the real carrying capacity (RCC), and the effective carrying capacity (ECC). Each level constitutes a corrected estimation of the previous one based on the specific factors involved in each case studied. The relationship can be represented as follows: $PCC > RCC \geq ECC$ [2].



The physical carrying capacity is the maximum number of visits that is possible to admit during a day. The figure is given by the relationship between the available space in the walking trail and the number of hours available to visit the site. A very simple equation is used:

$$PCC = S/sp \times NV,$$

where S is available surface, sp is the area used per person and NV number of times the site can be visited in a given day. This is calculated with: $NV = Hv/tv$. Where: Hv: Open hours, tv: required time to walk every trail.

We calculate the maximum physical carrying capacity using the example of the Ili-Alatau National Park, particularly Big Almaty Lake. Big Almaty Lake area is 1,6 km square (1600 m²). The National Park is open from 8:00 -17:00. This means that it is available 9 hours every day. Hiking to Big Almaty Lake will be 1,5 hours. From this it follows that using the PCC formula you can identify the maximum number of visitors per day:

$$PCC = 1600 \div 3,8 \times 9 \div 1,5 = 2526,3 \text{ visits/day}$$

Currently, there are methods for assessing the recreational and ecological potential of the territories. The formation of such a methodology requires the definition of classification characteristics of the assessment of the ecotourism potential. E.A. Kotlyarov unites them in three groups:

1. Primary, including natural conditions and resources;
2. Secondary, including socio-cultural conditions and resources;
3. Limiting conditions [5].

Researching the problems of development of ecotourism, in particular in Kazakhstan, the authors used this method of E. A. Kotlyarov. The methodology requires the adaptation of criteria for assessment of the tourist potential of ecologically-oriented natural objects located on the territory of the country. At the first stage, the signs were analyzed and their assessment was made for compliance with Kazakhstan ecotourism signs (table 1).

Table 1 - Classification signs of assessment of ecotourism potential of the territory of Kazakhstan

| Primary conditions | Secondary conditions | Limiting conditions |
|---|---|--|
| Diverse climatic conditions | A sharp continental climate (the possibility of developing summer and winter tourism) | Complicated climate transition |
| Ecological attractiveness of landscape elements (mountains, rivers, ponds, glaciers, canyons, natural parks, waterfalls, caves) | Travel comfort: availability and condition of roads, transport accessibility | Ecological state of lands, forests, waters, air |
| Biodiversity: plants, rare animals | Availability of emergency medical care | Dangerous and poisonous species of plants, animals, bloodsucking and parasitic insects |
| Recreational opportunities (beaches, ecotours, rivers, lakes) | Availability of well-maintained infrastructure elements, information support | Pollution of recreational areas: environmentally polluting emissions, discharges |
| Natural monuments | Diversity of natural monuments | Preservation of environmental safety |
| Culture: local customs, preservation of traditional way of life | | |

Based on the analysis of natural resources and recreational opportunities in Kazakhstan, such signs as favorable climatic parameters, ecological attractiveness of elements, recreational opportunities, biodiversity, availability of natural monuments, culture were determined. Such an analysis made it possible to adapt the E.A. Kotlyarov method for assessing the ecotourism potential of Kazakhstan.

Sustainable ecotourism emphasizes on the natural and cultural integrity, sustainability, educational activity, contributes to local community and preserving the conservation and environment. Ili-Alatau National Park and Big Almaty Lake in Kazakhstan have been identified as potential ecotourism sites for their natural beauties, recreational facilities and tourism activities. Generally, ecotourism ensure sustainable development in

terms of social, economic and environmentally in the study areas. There was also positive attitude of local communities towards ecotourism development for the dimensions of preservation of cultural tradition, sustainable community development and ecotourism planning and management.

References

- [1] Erdavletov S R 2000 The Geography of Tourism in Kazakhstan. pp. 86-147. Almaty, Kazakhstan
- [2] Kuss F, Graefe A, Vaske J 1990 Visitor Impact Management, *National Parks and Conservation Association*, 256 p.
- [3] Statistics of tourism in Kazakhstan 2018 URL: <http://stat.gov.kz> (Accessed 20 January 2018)
- [4] TuAnhTrinha, Thi Phuong, LinhLeb, ThiQuynh, Mai Tranc 2015 Assessment of Sustainable Ecotourism Development: A Case Study of GaoGiong Ecotourism Park, Vietnam, *Proceedings of the Eastern Asia Society for Transportation Studies*, **10**. Vietnam
- [5] Zadevalova S V, Butova T G, Zadevalov V I 2013 Ecotourism as a factor of sustainable development of territories, *Bulletin of the Buryat State University*, **13**, p. 53-56. Russia

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