

# Ecotourism potential within the sustainable territory development: regional aspect

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**Abstract.** Nowadays ecological or «green» tourism is an actual direction for the natural and recreational territory potential development. Ecotourism is able to provide the sustainable development as certain regions and in the Russian Federation as a whole. The difficulties connected with the ecotourism formation and organization reveal the need in new decisions for the creation of the comfortable eco-touristic space for the customer at the current stage of the economic development. Novosibirsk region has a rich natural and recreational potential and consider as perspective territory for the ecotourism formation and development. The region has favourable temperate continental climate, developed hydrographic network, presence the attractive natural objects including specially protected natural areas (SPNA). It is necessary to position the region as a new eco-touristic destination and implement by stages the best practices of the eco-oriented tourism. The main goal of the study is to analyze and estimate the touristic and recreational potential of the Novosibirsk region to justify the ecotourism development directions in the region. This study is characterized and presented by the analysis of the natural and recreational potential of the Novosibirsk region for the ecotourism development. The estimation of the regional climate conditions and natural resources is conducted. The most attractive districts for the ecotourism development are defined. The author proposes the districts' specialization by subtypes of the eco-oriented tourism that need to takes into account the determination of the touristic territory development trajectories.

## 1 Introduction

At present ecotourism is a global trend and the most powerful tool for the domestic tourism development in the Russian Federation. There are 20238 Protected areas of Russia, including 109 reserves, 65 national parks and 11 recognized as world heritage sites by UNESCO. 226 territories of these objects have 612 tourist routes. In 2022 according to FSBO «Roszapovedcentr» data the quantity of the visitors of reserves and national parks were more than 13 975 000 people. The volume growth of ecotourism in 2022 was 39,75 % compared to indicators in 2021. Thus, Russian eco-tourist potential allows to realize successful entrepreneurial activity in the tourism sphere, scale current eco-projects by using uniqueness, hugeness and diversity of natural landscapes didn't affected by urbanization

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and intensive agricultural production. In Russian Federation was made a fundamental work concerning the tourist infrastructure development, creation the tourist and recreational cluster and devoting enormous amounts of resources for various touristic projects financing in the last decade. The solution of actual economic problems linked to high probability of causing irreparable damage to environment, ecology, cultural heritage and habitation of small nations and native minorities. The sustainable development concept promotes to decision of these tasks. Therefore, the regions of the Russian Federation should use nature-oriented type of tourism, especially, ecotourism.

Ecotourism is the activity on organization of journeys including all forms of nature tourism in which the primary motivation is the observation and introduction to nature by desire to preserve it [1]. There are some preconditions to development of the contemporary ecotourism:

- growth in demand for tourism because the number of visitors of protected areas influence the increase the potential damage for nature;
- rationalization of touristic flows in SPNA and increase the importance of the care for the environment;
- necessity and aspiration to for partnership between visitors and nature conservation areas defenders;
- change of priorities in tourist preferences, reoriented from beach and resort holidays to active and cognitive journeys at solitary nature [2].

Ecotourism should be considered as the kind of journeys that realizes the opportunity to touch the pristine nature whereas we contribute to the environment. The ecotourism organization requires the comprehensive approach to the environment formation from the ecotours organizers which actively engage local community for preservation of authentic culture and pristine nature.

Ecotourism formation in Russia begin to gather pace. The trigger to those changes was at the period from 2020 to 2022 during the coronavirus pandemic restrictions and outbound tourism sanctions. It is important to note that business and government need to concentrate their efforts on this market segment for the favorable legal environment of ecotourism development, stimulation project activity and investment attraction for the construction of infrastructural facilities and eco-tourist clusters formation.

The main problems of the Russian ecotourism are the immaturity of legal control in ecological tourism, restrictions and prohibitions on visiting some protected areas, insufficient funding, lack of interest from tour operators to organize tours with ecological orientation and safety issues eco-touristic routs. High anthropogenic load which connected with unregulated tourism poses a threat for the pristine nature. The absence of the safety infrastructure, padded eco-routes and eco-paths and information and warning stands leads to environmental and touristic disruption. The successful tourism development is possible in such places where the regional administration plans to realize certain tourism direction in accordance with its resource potential.

## **2 Materials and Methods**

In authors' opinion, the tourism development should be realized on the modern scientific base with determination of touristic specialization in accordance with natural and recreational potential and the loading capacity accounting. I used natural and climate resources' integral assessment methods with considering potential components to analyze natural potential for the ecotourism development in Novosibirsk region:

- environmental friendliness (favorable for recreational activities);
- comfortable natural and climate conditions;
- contrast (landscape diversity, exoticism of natural system elements)

- territory recreational potential (diversity of the recreational activities forms in various seasons);
- presence of the balneological resources (sources of mineral and thermal waters, muds etc.);
- presence of the nature reserves SPNA;
- uniqueness (originality of the natural system elements);
- attractiveness of the resources for the recreants and tourists;
- recreational load on the natural systems and degree of cultivation the territory for the recreation [3–11].

The author has made the phased evaluation of the resource potential of the municipalities in Novosibirsk region and calculated the level indicators of the territory touristic potential for the development of the eco-oriented tourism types.

The region is located in the south-east part of the West Siberian plain in the Ob-Irtysh interfluvium and in the south part of the Vasyuganskaya plain of the Baraba Lowland and in the East joins Salair Ridge. It is a flat plain with fluctuations of absolute heights at close range. On the West fluctuations are from 5 to 20 meters, on the east from 50 to 100. The region territory increases from West to East gradually and forms some steps. Novosibirsk region hydrography is moderately developed river network with dominating river course to south-west and north-east. The region has about 350 rivers. The main rivers are Ob, Inya and Berd. Ob river valley divides the region territory into left and right banks. The typical parts of the landscape are about 3000 steppe lakes and ponds. Moderately developed river network and valuable lakes give tourists the opportunity to rest near the water and enjoy natural landscapes and original landscapes of river valleys, diverse vegetation that has formed in the river floodplain and get knowledge and impressions by watching over the ponds' flora and fauna. Some lakes are the most attractive because of its therapeutic value and significant for the region recreation potential [3].

The region is located in the temperate climate zone and sharply continental climate. The region climate is characterized by huge fluctuations of the monthly average and absolute temperatures, severity of all four seasons with long winter, short warm summer and short transitional seasons as spring and autumn. Average temperature in January -14 on south to -20 °C on northern districts and in July +18 to +20 °C. The average annual temperature 0,2 °C. Absolute maximum and minimum temperatures are +37 °C and -51 °C. Usually frosts on the ground start in second part of the September and finish at the end of the May. The duration of frost-free period is 178 days, warm – 188 days and frost-free – 120 days. Amount of precipitation is 425 mm. 20% of it is in the May and July, in particular, during the April till October precipitation falls about 330 mm, during the November till March precipitation falls about 95 mm. On average, Novosibirsk region has 93 sunny days, 84 cloudy days and 186 overcast days. Because of the openness of the territory to the North, it is available to invasion of Arctic air masses that have low temperatures and low air humidity. We can assume that tourism in Novosibirsk region, especially in the cold period, might be uncomfortable due to the climate conditions.

The land cover is characterized by latitudinal zonation from the North to the South. The revealing of the natural conditions and relation of the lands to landscapes in the region is divided into taiga-forest zone, taiga and subtaiga zone; forest - steppe zone; steppe zone; northern, central and southern zones.

There are four forest economic areas in the region which based on the features of the forest fund and specialization of the territory:

- Northern (the purpose is the logging). It consists of the Kyshtovskoe, Northern, Ubinskoe, Kargatskoe, Chulymskoe and Kolyvanskoe forestry;
- Eastern (the purpose is the logging). It consists of the Mirnovskoe and Maslyaninskoe forestry;

– Central (the purpose is the recreation). It consists of the Suzunskoe, Cherepanovskoe, Iskitimskoe, Novosibirsk, Moshkovskoe and Bolotninskoe forestry;

– Southwestern (the purpose is the farmland protecting and meeting the local population needs of the wood). It consists of the Kujbyshevskoe, Chanovskoe, Barabinskoe, Tatarskoe, Zdvinskoe, Dovolenskoe, Krasnozerskoe, Kupinskoe, Karasukskoe and Kochenevskoe forestry.

According to the forest plan od 2018, the total area of forest in Novosibirsk region is 6675,5 hectares or 36,4 % from region total area.

Novosibirsk region is the territory that is favourable for the rest and climate treatment. The region has a huge natural resources as mineral waters, muds and forest plantations. It also has ethnocultural objects, developing tourist and excursion routes and medical tours. The existence of the lakes, mineral springs, muds, clay and sanatorium-resort complexes with modern equipment gives the citizens and visitors opportunity to health improvement all the year round. The resort «Lake Karachi», «Krasnoozerskij» and «Dovolenskij» sanatorium are known for natural factors and the effectiveness of the mud therapy.

The forests recreational potential with the diversity of the landforms, plant and animal world, water objects, hydromineral resources and favorable economic and geographic location is huge. Forests near the Novosibirsk and other settlements are the favourable rest places for the people. These recreational forests protect the environment and recreate, restore the physical and mental health and meet the emotional human demand in communication with wildlife.

There are 82 SPNA with a total area of 1747480,13 hectares. It protects rare species nesting, places of rare plants growth, unique landscapes' elements and rare bitter-salty lakes with therapeutic factors: water, brine, mud, peculiar fragments of forest and swamp ecosystems etc. Depending on their purpose and protection regime of the natural resources and objects in the Novosibirsk region the SPNA divided into following categories:

- State Nature Reserve «Vasyuganskij»;
- State Nature wildlife sanctuary of the federal significance «Kirzinskij»;
- 24 State Nature wildlife sanctuaries of the regional significance as «Mangazerskij», «Chikmanskij», «Manujlovskij» etc.;
- 54 monuments of regional significance as «Ulantova gora», «Silishinskij ryam», «Sharchinskaya step» etc.;
- Specially protected natural areas of the local significance as city park «Berd Spit» and «City park in the Rechkunovskoj recreation area in Berdsk».

It is necessary to note the favorable factors for the ecotourism development as developed hydrography, the presence of the various SPNA, relatively rich flora and fauna, strongly pronounced all four seasons, moderate weather severity in winter and favorable climate in the summer. The main barriers to ecotourism development are the distance of the reserves from the developed infrastructure, environmental pollution, vanishing of flora and fauna, especially, endemics, decrease the valuable forest species area and water and land erosion.

The Novosibirsk region is really developed, rich with natural resources and defined as perspective for ecotourism. Nevertheless, at present the complex proposal for the meeting the eco-tourists needs is absent.

Ecopathes «Zverboj» and «Vodopad Buchilo», natural monuments as «Bugotak Hills» in Toguchinsky District, «Belovskij vodopad» in Iskitimsky District, «Gorkoye» Lake in Baganskij District, «Abrashinskij mramornyj kar'er» in Ordynsky District and other could be very attractive for the tourists in this region. Independent tourists can use the touristic portal and app «Novosibirsk region» to choose and form the eco-route through the attractive natural objects of the region. Nowadays in the Novosibirsk region the projects of the eco-oriented tourism are following:

- Touristic cluster «Obskie parki» can unite the coastal areas of the Ob and Novosibirsk Reservoir, are located in the five districts of the region and Berdsk and Novosibirsk;
- Eco-park «Homutina» is an infrastructural touristic object in Maslyaninsky District.

The way of the ecotourism favourable development in the region is determined by rich natural potential and presence of the natural objects that can attract the attention of the visitors and local citizens. Ecotourism as a trend in the touristic sphere in the last years promotes to regions development because of the territory distance from the urban environment. It corresponds to the sustainable principles development by the ecological journeys organization and presents as favourable environment for the friendly-tourism types development [12–13].

Thus, the region has underdeveloped touristic infrastructure and transport accessibility in districts, the territory brand is absent and there is no regional and municipalities image system. The building of the legal field will promote to the ecotourism development and popularization of the careful attitude to nature by excursions, hiking, walking by eco-paths, eco-touristic volunteering etc. To sum up, the state support plays a significant role in the ecotourism development. It allows to match the safety norms, the world examples of the successful organization and standards of the ecological journeys.

The development of the regional projects and infrastructure requires to strength the links of the public and private partnerships for the financing attraction to the projects of the gentle tourism with eco-oriented infrastructure. It is necessary to establish active cooperation between districts and neighboring regions by creation the big projects, for instance, touristic clusters in the natural parks by attraction tourists and investment. These projects allow to multiplier effect in the ecotourism because of the increasing complexity of complementary touristic services that exist at the intersection of tourism directions. It can meet the needs of the contemporary consumer. The scaling effect of successful regional projects for creating eco-friendly infrastructure plays a significant role. The universalism of the infrastructure facilities creation will improve the conditions and increase the eco-tours availability by taking into account the authenticity and area climate conditions.

### **3 Results and Discussion**

The author revealed the most attractive districts for the ecotourism development due to the integral assessment of the natural and recreation region potential such as Kolyvansky District, Maslyaninsky District, Toguchinsky District, Ordynsky District and Kochenyovsky District. Districts' specialization by subtypes of the eco-oriented tourism are proposed. The most prospective subtypes of ecotourism for Toguchinsky and Maslyaninsky District are agrarian, for the Kochenyovsky District is cognitive and for the Ordynsky and Kolyvansky Districts is recreational. Combined ecotourism routs with various subtypes and orientation to the different customer segments might give the best value for the ecotourism organizers.

It is proposed to realize following recommendations for ecotourism in Novosibirsk region development: to develop legal field concerning the region ecotourism organization; to diversify touristic regional product and make a districts' specialization by subtypes of the ecotourism hence natural and recreational potential of every municipality as eco-touristic destination; to form general culture attitude towards nature among region residents and increase the level of the environmental education; to stimulate and support the project activity in the ecotourism sphere in this region etc.

To develop ecotourism in this region it is necessary to form eco-oriented infrastructure, create new ecological routs and popularize ecotourism actively. The research results can be used by the regional governments for the formation of the ecotourism directions development, stimulation and selection the eco-oriented regional infrastructure projects.

## References

1. Strategy for the Development of Tourism in the Russian Federation in the Period up to 2035 (2019)
2. A. B. Lukichev, Russian Journal of Ecotourism, **1**, 3–6 (2011)
3. R. Fletcher, Journal of Sustainable Tourism, **27**, 522–535 (2019)
4. A. A. Kazakov, Ye. I. Denisevich, A. A. Sultanova, Trends in the development of science and education, **61/4**, 36-41 (2020)
5. M A. Ryndach, Ekonomika: vchera, segodnya, zavtra, **7(6)**, 231-242 (2017)
6. L. Xu, C. Ao, B. Liu, Z. Cai, Environment Development and Sustainability, **25**, 1–27 (2022)
7. D. Kim, J. Jin, Land Urban Planning, **178**, 1-11 (2018)
8. M. L. Blau, T. Panagopoulos, Land, **11**, 15952022 (2022)
9. B. Bernhard Fabian, Journal of Destination Marketing & Management, **19**, 100389 (2021)
10. M A. Ziyeviddinovich, American Journal of Social and Humanitarian Research, **3(9)**, 65-69 (2022)
11. K. Thapa, D. King, Z. Banhalmi-Zakar, A. Diedrich, The International Journal of Sustainable Development and World Ecology, **29**, 1–16 (2022)
12. E. O. Ushakova, A. V. Dubrovsky, V. N. Moskvina, S. A. Vdovin, IOP Conference Series: Earth and Environmental Science, **459** (2020)
13. E. O. Ushakova, M. E. Tsoy, V. Y. Shchekoldin, IOP Conference Series: Earth and Environmental Science, **204**, 012046, 3 (2018)