

Analysis of the Highest and Best Use in the Course of Implementation of Investment and Construction Projects for the Development of Tourism Clusters

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Abstract. This article studies the existing approaches to the analysis of the highest and best use, defines the specifics of the industry, and considers the main aspects of the analysis. A comprehensive methodology for the analysis of the highest and best use in the course of implementation of investment and construction projects for the purposes of tourism clusters infrastructure development is presented. The aim of the study is to improve the mechanism for the development of tourism clusters infrastructure based on the analysis of the highest and best use of investment and construction projects. The relevance of the article is substantiated by problems and underdevelopment of the tourist infrastructure during the creation and development of territorial clusters. In addition, constituent entities of the Russian Federation do not create favorable investment conditions in the course of construction of various objects of tourist use. The existing approaches to the analysis of the highest and best use of investment and construction projects need to be improved taking into account modern conditions, factors and industry specifics. The article offers an analysis of the current state of domestic tourism in Russia and abroad, identifies factors hindering the functioning and development of investment and construction projects for the purposes of tourism clusters infrastructure development, identifies factors that have a positive impact on the domestic tourism market. Measures are proposed to determine the highest and best use in the course of implementation of an investment and construction project for the tourism cluster of the North Caucasian recreational region and to calculate its effectiveness. An element of scientific novelty and the result of the study is the improvement of approaches to the analysis of the highest and best use of tourism clusters for infrastructure development. The practical significance lies in the application of an improved mechanism for the development of investment and construction projects for tourism clusters objects in Russia.

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1 Introduction

Today, one of the main problems in the creation and development of territorial clusters is the underdevelopment of the tourist infrastructure. In addition, favorable investment conditions are not created during the construction of various tourist facilities in constituent entities of the Russian Federation. There should be not only the temporary accommodation facilities, entertainment centers within the framework of the tourism cluster, but also facilities of the transport network (railway, airports, etc.), social and communal infrastructure, as well as other real estate objects that contribute to the formation of a favorable environment for tourists (for example, [1, 2]).

The analysis of the highest and best use allows identifying the most profitable use of the property when implementing investment and construction projects. This analysis can be presented as a search for the optimal combination of the purpose and functional planning solutions. Unlike the standard analysis of the highest and best use, which is used in real estate appraisal and where empirical methods are mainly used (the method of discounting cash flows does not make any sense), the analysis of the highest and best use of investment and construction projects for the purposes of tourism cluster infrastructure development requires a comprehensive approach and a combination of several methods (for example, [3]). Real benefits from the creation and development of a cluster manifest themselves over a long period of time (more than 5 years), i.e. the cluster approach to the development of the region is a long-term project that can be successful only if there is an agreed and formalize in legislation regional development strategy, therefore, the Ministry of Economic Development of the Federal Agency of Tourism of Russia developed a Tourism Development Strategy until 2035 and presented it to the government of the Russian Federation [4]. There are targets for the development of tourism in the Russian Federation until 2035 below (Table 1).

Table 1. Target indicators for the development of tourism in the Russian Federation for the period up to 2035.

Target	Unit	2017	2025	2035
1. Tourism industry gross value added (GVA)	Billion RUB	3,158	6,039	16,306
2. Increasing the availability of tourism for citizens of the Russian Federation	units	0.4	0.6	1
3. Export of tourism services	Billion USD	8.9	16.7	28.6
4. Investment in tourism (2017 - 100%)	per cent	100	150	300

The “product” of tourism in the post-industrial time has changed significantly, since conventional forms of tourism transformed into the spiritual sphere, where the consumer's perception of everyday life, nature and culture is the primary factor (for example, [5, 6]). In this regard it is necessary to develop new approaches to the creation and development of tourism products in order to meet the needs and impressions of tourists. It is necessary to strengthen the relationship between the creation, promotion and sale of tourism products.

If you systematize different approaches, you can consider the cluster as a set of territorially localized and interdependent structures of entrepreneurial activity, which is aimed at obtaining satisfaction from the provision of tourist services, as well as increasing the level of competition of domestic tourism, including in the world market.

According to scientists, it is necessary to highlight the conditions responsible for the attractiveness of tourist facilities.

Attractors are a collection of facilities that are located on a single territory and are of interest to tourists forming an idea of the tourism cluster. Attractions are a significant element of the tourist activity. They help to develop consumer interest in certain areas of tourism, diversify the list of tourist activities, and also act as one of the main sources of income.

The attractiveness of a destination within the framework of a tourism cluster is largely determined by the development of its infrastructure, including trunk infrastructure, transport infrastructure, tourist infrastructure, providing infrastructure, and communal infrastructure.

The creation of new recreational territories entails a change in the existing ties (labor, material and financial). The main task comes down to choosing the shape of the cluster, the intensity of the use of the territorial potential, and the choice of the most suitable option for the development of the cluster, which is substantiated by a multi-criteria assessment system for the determination of the highest and best use options for tourism clusters. The choice of the option for territory development is based on a multi-criteria approach.

2 Methods

The article is based on the existing methodology of the highest and best use analysis; the following methods are also used in the paper:

- Qualitative: expert method, relative comparative analysis
- Quantitative: regression analysis, method of financial and economic modeling
- Combined, including several methods
- Existing methodology of the highest and best use analysis

A comprehensive analysis of the highest and best use should begin with a description of a specific cluster, its main recreational features, problems, since the more information about the cluster is available, the more correct the subsequent assessment will be.

The next stage will determine the most promising development region. This analysis proposes the use of the method of regions rating taking into account the political weight. The integral indicator of cluster development can be presented as follows (each criterion is evaluated from 1 to 5 points):

$$I_{\max} = K1 + K2 + K3, \quad (1)$$

where I is an integral indicator of cluster development, the final result of which is maximum.

$K1$ - the potential of recreational and tourist resources, criteria of integral indicators of development

$K2$ - the level of development of infrastructure and economic resources

$K3$ - the anthropogenic impact on the environment, population density

After determining the priority region for the development, options for infrastructure development are determined, the most promising is the method of multi-criteria assessment. For this purpose, five criteria were identified on the basis of which the following subcriteria are determined depending on the geographical location: social, economic (functional), landscape composition, which determines the prestige of the place and ecological. The total number of points is calculated according to the criterion and the weighted average value is determined using the method of expert assessment from 1 to 5 points.

Qualitative methods are based, as a rule, on the comparison of analogous facilities, identification of the relationship between parameters and information received from experts regarding the use of these relationships to conduct an assessment in accordance with the technology of the method chosen for the assessment.

Special attention should be paid to quantitative methods, in particular the method of quantitative adjustments. Comparative elements in this method are pricing factors;

differences are identified and adjusted in accordance with differences for each element and analyzed again. The essence of the method lies in the fact that the analysis is based on a part of the cost of the analogue in each of the elements (for example, [8]).

As mentioned earlier, the analysis of the highest and best use involves the identification of the most profitable option. As a rule, when determining the market value of the facility this information is fundamental for an appraiser.

This work is based on a qualitative assessment of the property expressed in points. This assessment is advisable at the pre-design stage of the life cycle of the property. It is advisable to include this stage at the initial stages of business plan development.

The model of multi-criteria assessment of territory growth and development determines the principles of territorial policy and management of territories development (taking into account the amount of natural and territorial resources).

The criteria for multi-criteria assessment are presented in **Fig. 1.**:

Economic	Social	Landscape	Environmental
Land value factor, along with the cost of engineering and technical indicators of utility svstems	Reflects the factor of tourist satisfaction with the environment	Reflects the relationship of future development with the surrounding landscape, as a rule, the following criteria are taken into account: water environment, relief, landscaping, historical center	Reflects the quality of the habitat and takes into account the criteria for assessing the state of water, air, land, and snow cover

Fig. 1. Multi-criteria assessment criteria.

To assess the location, let's select a scale that will be used to determine the gradation of the criterion quality:

- Excellent - 10 points.
- Good - 8 points.
- Satisfactory - 4 points.
- Unsatisfactory - 0 points.

The highest score is determined by the presence of such qualities as favorable ecology, transport accessibility, proximity to the city center, the presence of historical sites, etc. Opposite qualities, as a consequence, are determined by unsatisfactory assessments: the effect of various kinds of pollution on the assessed place, the absence of parking lots, the presence of a large number of low-rise buildings without a specific function, etc.

Let's imagine the model of place assessment in points as follows:

$$Q_k = \sum_{j=1}^m \times \sum_{i=1}^{n_j} (Q_{ij}/n_j)w_j \quad (2)$$

where Q_k - the score in points of the i -th indicator of the j -th criterion.

n_j is the total number of indicators of the j -th criterion.

w_j is the weight of the j -th criterion.

m is the total number of criteria.

i is the indicator of the j -th criterion.

j is the criterion.

The main problem is that any measures aimed at assessing the land and property complex at the pre-design stage (additional costs for the analysis of the highest and best use, the formation of an expert council, etc.) significantly increase the initial design costs, but at the same time this measure is necessary to eliminate possible risks. As mentioned earlier, the main idea of this mechanism is that it is better to spend more time and resources on the initial development (at the conceptual stage of the recreational area infrastructure development) than later face the inappropriate use of land and property complex.

In general, the algorithm of measures aimed at the implementation of the concept of the highest and best use of the land and property complex in order to create tourism clusters can be presented in the form of a diagram presented in **Fig. 2.**:

Let's define the advantages of this methodology:

1. The accuracy of the calculation due to a large number of considered criteria.
2. Adapted for tourism clusters and their specifics.
3. More complete information about the output cluster.
4. Allows improving existing strategies.

3 Results

Approbation of the methodology developed by the authors and its results are systematized in the form of tables. The results are presented using the example of the North Caucasus Federal District. Methodological developments are considered on the example of the tourism cluster of the North Caucasian Federal District.

The recreational resources of the North Caucasus remain underdeveloped due to a number of objective and subjective reasons. For example, these are lack of investment, imperfect management methods, lack of supply engineering and transport infrastructure. The main difficulties hindering the powerful development of tourist and recreational zones and other means of tourist accommodation are the deterioration of fixed assets of a huge number of resort complexes, as well as weak internal infrastructure, imperfect pricing and ineffective management, etc (for example, [9-10]).

Thanks to the target program for the development of the region, in 15 years it is planned to bring the North Caucasus Federal District to “balanced socio-economic development”, i.e. make a self-sufficient constituent entity of the federation out of a subsidized region.

Initially, it is necessary to rate the competitiveness of the regions of the North Caucasus Federal District and select the most investment-attractive regions.

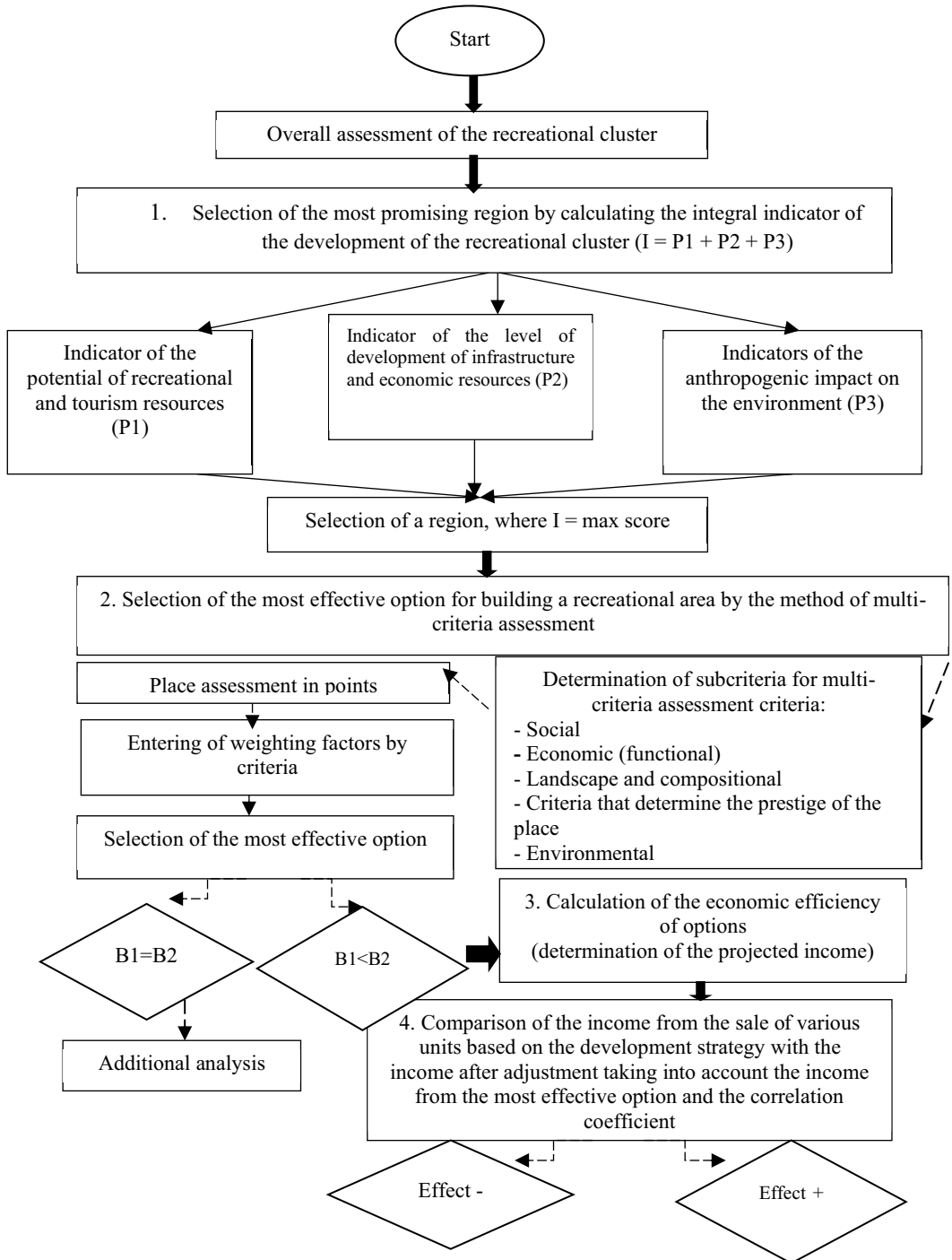


Fig. 2. The scheme of analysis of the highest and best use for the development of the tourism cluster infrastructure

Table 2. Rating of the competitiveness of the ski resort of the North Caucasus Federal District.

Parameter	Republic				
	Kabardino-Balkaria Republic	Karachai-Cherkess Republic	North Ossetia	Ingushetia	Chechen Republic
Infrastructure and economy	25	19	16	8	12
Recreational resources	14	13	15	9	17
Environmental situation	17	17	13	15	14
Total:	56	49	44	32	43
Kremlin rating of Russian governors (January 2019)	4	3	4	2	5
Total:	58	52	48	34	48

According to the results of an integrated assessment of the development of the ski cluster of the North Caucasus, the most promising is the Kabardino-Balkarian Republic, since the tourist and recreational resources of the territory are quite well developed, there is a prospect for the development of the hospitality infrastructure (more than 50 points in total).

The Karachai-Cherkess Republic, Chechen Republic and North Ossetia-Alania are ranked second - a total of 40 to 50 points, which corresponds to the "good" mark. The development of tourist and recreational resources of the territory is at an acceptable level, but the hospitality infrastructure is poorly developed.

The Republic of Ingushetia has less than 40 points, the mark is "satisfactory". The tourist and recreational resources of the territory are poorly developed and the hospitality infrastructure is not developed.

The most promising region is the Kabardino-Balkarian Republic, since the tourist and recreational resources of the territory are quite well developed, there is a prospect for the infrastructure development.

Let's consider "Prielbrusye" resort, which is the center of ski and sports tourism. Today the resort has the following infrastructure: 15.4 km of equipped ski trails, 7 ski lifts, about 800 accommodations of various levels of comfort (including the private sector).

At the moment "Prielbrusye" resort is under a huge load associated with unresolved infrastructure issues. An increase in the number of tourists in the Kabardino-Balkarian Republic in 2019 relative to 2018 is 37%, the main share of tourists (79%) is accounted for "Prielbrusye" resort. To determine the highest and best use in the implementation of an investment and construction project for the purpose of infrastructure development, it would be advisable to consider several options for the planned development: an entertainment and hotel complex with a parking area. Today, there are a large number of huts, shelters, trailers, and hotels at the resort, the level of service and condition of which are not always satisfactory. There are practically no entertainment complexes; cafes and rental points are located in unsuitable premises, there are no parking areas. Every year the growth in the number of tourists necessitates the construction of hotels and entertainment areas. Analysis of the highest and best use in the implementation of investment and construction projects based on a multi-criteria assessment allows determining what is a priority in the development of the infrastructure of a ski resort. Table 3 examines two strategies for development in "Prielbrusye" resort and introduces the following criteria weights.

Table 3. Weights of the options considered.

Option	Social criterion %	Functional and economic, %	Landscape and compositional, %	Prestige of the location, %	Environmental criterion %
Hotel complex with a parking area	0.25	0.27	0.10	0.18	0.20
Entertainment center with a ground parking area	0.20	0.40	0.10	0.20	0.10

As a result of the calculations the following indicators were obtained for various strategies of the facility location use:

- Hotel complex with a multi-level parking area - 5.69
- Entertainment center with a ground parking area - 5.58

According to the results of the analysis, it can be concluded that the types of the facilities under consideration when using a system of weighting criteria show approximately the same indicators, and the hotel complex prevails by only 0.11 points. As can be seen from the results the implementation of a hotel complex with a multi-level parking area on “Prielbrusye” resort land plot is the most attractive option.

Table 4. Assessment of the facility use option.

Criteria	Entertainment complex	Hotel complex with a multi-level parking area
Legislative permission	1	5
Physical feasibility	5	5
Economic feasibility	4	5

The legislative permission for the construction of a hotel complex is justified by the Resolution of the Presidium of the Supreme Court of the Kabardino-Balkarian Republic.

As for the physical feasibility, physical, soil and landscape capabilities allow constructing a building of sufficient area and with a sufficient number of storeys.

The calculation of the economic feasibility showed that during the construction of a hotel complex consisting of 264 rooms with a multi-level parking area, the projected income will be 4,921.6 million rubles by 2035, while the profit for 2024 will amount to 903 million rubles, and incase of selling the shopping complex, the total income by the same period will amount to 1,643.46 million rubles.

Table 5. Calculation of the maximum efficiency of a facility for various purposes.

Functional purpose	Facility area, m ²	Number of parking lots, pcs.	Projected income (NPV), rubles
Entertainment center with a ground parking area	2,600	58	833 461 401.16
Hotel complex with a multi-level parking area	63,578	642	4 921 610 478.41

Despite the fact that costs for the implementation of the hotel complex are significantly higher, given the peculiarities of the resort and the urgent need for parking spaces,

temporary accommodation and food courts, the construction of a multifunctional hotel with a parking area is the most effective option for using the land and property complex "Prielbrusye", because thanks to the construction of this complex, several problems are solved at once: an increase in jobs; a large number of accommodation facilities, which entails an influx of tourists; a large area where cafes, restaurants, a gym, etc. ; a parking area for 642 cars.

However, as mentioned earlier, this concept does not take into account the high annual influx of tourists (more than 20% higher than the forecast) and in this regard the problem of infrastructural insufficiency arises, and the implementation of new development strategies is aimed at spending budgetary funds step by step, while today there is no plan for priority development regions. According to the target indicators of the "State program of the Kabardino-Balkarian Republic "Development of the tourist and recreational complex of the Kabardino-Balkarian Republic"" in the period from 2019 to 2025, a number of measures are planned to increase the number of foreign tourists, press tours, exhibitions and forums, the number of persons employed in the tourism sector and to ensure infrastructure accessibility.

4 Discussion

In the course of the study, the cluster was analyzed according to the following criteria: the uniqueness of natural and climatic conditions, special measures of state support, the possibility of developing any types of tourism, special development institutions for the North Caucasus Federal District, transport accessibility, labor supply and development of the agro-industrial complex. It was determined that the potential of the North Caucasus is not fully used; the mechanism for promoting individual constituent entities of this territory (Stavropol Territory, the Republic of Dagestan, the Republic of Ingushetia, the Kabardino-Balkarian Republic, etc.) has not been worked out.

The difference between the methodology of the most effective option for the development of the cluster infrastructure developed in this paper from the existing ones is that the standard analysis of the highest and best use, which is used in real estate appraisal and where empirical methods are mainly used (the method of discounting cash flows does not make any sense), the analysis of the highest and best use of investment and construction projects for the purposes of tourism cluster infrastructure development requires a comprehensive approach and a combination of several methods.

The results obtained in the paper can be used in the future for the implementation of investment and construction projects aimed at the development of tourism clusters.

5 Conclusions

The main idea of this concept is that it is better to spend more time and resources on the initial development (at the stage of developing the strategy concept) than later face the inappropriate implementation of investment and construction projects and related problems using the examples of implemented clusters - the underdeveloped infrastructure. In subsequent stages conducting research again and finding potential investors will require even more time and resources.

This methodology allows comprehensively considering the development of the cluster, identify the shortcomings of the development strategy and propose a development option for "Prielbrusye" resort. The advantages of this methodology:

- Selection of the priority region.
- Accuracy of calculation due to a large number of considered criteria.
- Adaptedness to tourism clusters and their specifics.
- More complete information about the output investment and construction project.

So, we can say that the use of a comprehensive analysis of the highest and best use in the implementation of investment and construction projects allows correctly choosing the best option for developing the infrastructure of a ski resort as part of the tourism cluster of the North Caucasus taking into account the specifics and main problems.

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