Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development
Vol. 19, Issue 1, 2019
PRINT ISSN 2284-7995, E-ISSN 2285-3952

METHODOLOGICAL FUNDAMENTALS OF THE ASSESSMENT OF THE RECREATIONAL TERRITORIES RESOURCE POTENTIAL

Nazar STUPEN

Lviv Polytechnic National University, Ukraine, 6 Karpinskogo Street, Lviv, Lviv region, 79000, Phone: +38 067 370 66 82; E-mail: nazstupen@gmail.com

Corresponding author: nazstupen@gmail.com

Abstract

The methodological approach to the comprehensive assessment of the recreational territories resource potential which implies an integral index use that takes into account the system of indicators according to the following components: nature and resource, historical and cultural, social and economic and ecological ones, has been made on the basis of the analytical generalizations and identified problems in the recreational resources study. Applying the proposed methodological approach according to type and component principle will enable to identify regions with similar natural properties, social and economic state, infrastructure support with the purpose of effective spatial planning of the recreational sphere development, as well as to determine the strategic directions of the recreational territories resource potential implementation. On the basis of the developed methodical approach, an assessment of the level of the recreational territories resource potential in Ukraine has been done. According to the calculations of the integral index, conducted in the regions of Ukraine, they have been grouped as to the following levels of the recreational territories resource potential: high, medium, low and very low. It is established that the Autonomous Republic of Crimea (final assessment 0.78) has the optimal conditions for the implementation of resource potential and the development of recreational territories among the regions of Ukraine. The potential is lower in Lviv (index – 0.61), Odesa (0.54) and Transcarpathian (0.51) regions. At the same time, most regions of Ukraine have a low level of the recreational territories resource potential compared to the best analogs in the country.

Key words**:** *recreational territories, resource potential, integral index use, spatial planning*

INTRODUCTION

To begin with, the recreational territory has been formed by a recreational offer based on the high density of attractors, special characteristics (nature, scenery, and landscape), developed tourist infrastructure, social and economic potential, favorable environmental conditions, etc. The territory undergoes a priority or perspective transformations under the limited financial capacity of the region, depending on the level of development of the listed factors.

Recreational territories development modeling means the implementation of such an algorithm of research: inventory of recreational resources and capacity of the territory (at this stage it is supposed to find out the quantity, mutual location, the specificity of attractor objects that have already been used or the potential ones); spatial grouping of attractor objects aimed at detecting the nodes of the tourist and recreational network and its boundaries within the territory; the selection of certain recreational territories (at this stage, it is supposed to indicate the priority of the development for each of them as to the recreation, the justification of specialization, the pointing out of the most promising directions of its development). Moreover, at this stage, the conclusion is made about the level of the possibility (impossibility) of the development of the territory as a recreational one together with objectively existing manifestations of nature use at that time. As a result, one can also sum up about the full or partial reorientation of nature use in the territory.

The balanced development of recreational territories is indissolubly related to the use of recreational resources and recreational potential of these territories in general. Based on the assessment and classification of recreational resources, recreational zoning of the territory is carried out according to certain

characteristics, which is the most crucial instrument for the territorial planning of the recreation development and it should be taken into account in the schemes of territorial planning.

MATERIALS AND METHODS

Today, there are plenty of methodological approaches to the assessment of recreational resources and the potential of recreational territories (recreational potential). The ecosystem (environment), the system of recreation within the defined territory as a whole, its components and their constituents can be assessed. Mainly, the recreational potential of a certain territory can be assessed using natural indicators, based on the definition of its capacity, occupied area, as well as cost assessment. The assessment of the recreational potential of the territory carried out by the use of such natural indicators allows solving the problem of organizational measures of planning and location of recreational establishments, as well as the relevant spheres, determining the degree and correlation of their development. In addition, this assessment has a clear application [3].

In our opinion, the tasks of the resource approach to exploring the potential of recreational territories are the following ones: studying the quantitative and qualitative composition of the recreational territory resources, assessing the availability of recreational potential according to the relevant resources, determining the level of the relevance of the spatial configurations of the diversity of natural resources potential and the existing recreational functionally directed zoning of the territory, assessing the intensity level of natural resources use and its social and ecological and economic efficiency, identifying directions of the actuality of existing recreational resources during the exaltation of these territories.

Other scientists (for example, S. Boholiubov, M. Iliina, V. Kyfiak) suggest the resource potential of the territories to be assessed on the following positions [2; 5; 8]: numerical resources assessment based on their attractiveness, survey time, ecological load, as well as number of tourists per unit of resource; qualitative assessment of resources, which will allow to realize the optimization of the available potential of recreational territories; research of resources, which have not been used yet, considering the social and economic stability of specific recreational territories.

The authors of the provided methodology suggest the formation of a cadastre of recreational territory resources, based on their economic or environmental assessment. According to their vision, one should make this assessment on the basis of the specialists' considerations on this issue (that is, using mark assessment), as well as taking into account the tourists' views, and ultimately identifying the strengths and weaknesses when implementing the potential of recreational territories. Thus, the foundation for assessing the potential of the territories is a cadastre of recreational resources, which may be incorporated into the concept or the target program for the development of recreational services of the territory.

S. Shabalina, V. Rubtsov, and E. Baibakov consider that the complex recreational potential assessment contains an algorithm for this assessment, including the individual components. Methodological approaches, proposed by the authors, provide for the division of the territory into operational and territorial units for each of the selected indicators. Then their totality is ranked in accordance with the properties that characterize this indicator. Then the interrelation of these indicators is established by the factors of influence on the use of the territory resource potential [12].

Methodological foundations of the recreational territories resource potential assessment for the recent years have been enriched by the approach, proposed by the professor of Kyiv National University named after Taras Shevchenko O. Beidyk [1], who carried out an integrated assessment of the recreational resources of Ukraine and formed a resource and recreational rating of the regions of Ukraine on this basis.

Yu. Shabardina [13, p. 55], having studied the recreational potential, proposes to make its diagnosis through the prism of two components: an assessment of recreational activity, in particular, via activity indicators to meet the recreational needs for health and recreation, services of historical and cultural objects, and tourism services; recreational potential assessment through indicators of historical and cultural heritage, natural and recreational, infrastructure, innovation and investment resources, and the state of the environment.

In addition, D. Stechenko and I. Bezuhlyi offer recreational potential assessment to be carried out in two stages. At the first stage, one should single out the recreational potential of the territory as a

whole and define its territorial boundaries. Only those components of the environment and cultural and historical objects, which are used or can be used for recreational purposes, are provided in such a research. At the second stage, one analyzes the component structure of the recreational potential of the territory, particularly, natural and cultural and historical recreational resources from the point of view of the development of various types of recreation and their role in the structure of the economy of the region [14].

O. Samko recommends to assess the recreational potential using the integral method, assessing certain components, in particular, infrastructure, intellectual, cultural and historical, information ones [11]. It is worth agreeing with the possibility of using the integral method for assessing the recreational territories resource potential, but the source data, used by the author, need further justification.

In Yu. Khudenkyi's view, an integrated assessment of the tourist and recreational potential of the territory is a normative and comparative method of assessing marks of the potential of the territory [7]. The assessment has been done on the basis of normatively-established, publicly available, reliable indicators. It reduces the influence of the subjective researcher's representations while trying to take into account all the diversity of components of the potential, which only complicates the assessment and increases the risk of mistakes at a certain stage [4]. Therefore, suggest using a minimum set of the most representative indicators. It gives an opportunity, with less time consuming, to assess the potential of one territory relative to another one, which allows you to determine the share of each territory, both in a separate component and in their totality in the region.

All in all, one can conclude that all of the above-mentioned methods are distinct, usually associated with the transfer of potential elements based on the selected profile of research (natural, economic, social and cultural, etc.). Thus, despite the scientists' significant contribution and their achievements in the field of methodology of assessment approaches to the research of the recreational territories resource potential, their application is accompanied by a weak elaboration of a plenty of theoretical and methodological problems, in particular the selection of the subject and object of assessment at the territorial level, the criteria and assessment indicators in terms of potential components, completeness of information provision in assessing indicators, bringing assessment indicators to a single measurement system, methods of the defining the importance of a component in the structure of the integral indicator.

RESULTS AND DISCUSSIONS

Generally, the major requirements for the assessment conducting of the characteristics of territories for recreational zoning include: the necessity to build an integral indicator of the assessment of recreational territories in order to identify and rank the most attractive recreational territories; the integration of statistical and expert approaches in the course of rating assessment; combining quantitative and qualitative marks; the consolidation method use of assessment (ranking) of attractive recreational territories for ensuring its simplicity and appropriateness for managers, etc.

The main reason for recreational territories resource potential assessment lies in the fact of the possibility to identify and assess reserves, the economic efficiency of cost on the reproduction of its constituent elements. The setting of research purposes of recreational territories resource potential assessment provides for the delimitation of the observation object and development of indicators system that characterizes it. Based on the obtained data regularities of the processes of the recreational potential use are revealed and relationships between the studied indicators, qualitative analysis of which is the basis for the development and efficient managerial solutions, are identified [10; 15].

At the same time, the expediency of the analysis methods application implies the selection of a number of certain requirements that allow assessing the level of recreational potential of territories systematically and, on this basis, applying the instruments of their effective influence on the effectiveness of the recreational sphere. One should evaluate the structural elements that are part of recreational territories resource potential in order to assess and analyze it. This representation can be obtained by establishing the best interrelation of dynamic characteristics of indicators. In the standard result, the indicators should be

higher in comparison to the original indicators as to the major system elements. Thus, the dynamic system of indicators becomes the most valuable normative condition for the movement of the distinguished characteristics that govern the final results.

To assess the effectiveness of the recreational territories resource potential by constructing a dynamic norm, it is indispensable:

(i)to determine a set of indicators that characterize the resource potential of the territory;

(ii)to identify the most informative indicators in this set;

(iii)to develop a method for assessing the real result compared to the standard.

On the basis for the methodology for constructing a dynamic standard one can apply a method of rank assessment of the effectiveness of certain parameters, which allows adjusting the diverse indicators of the recreational potential of the territory. Mathematical tools of rank statistics are based on a comparative analysis of two sets of numbers, one of which is ordered (normative), and the other one is unordered (actual).

The comprehensive assessment of the recreational territories resource potential involves identifying the natural, social and economic, historical and cultural and ecological resources that exist in a certain territory. The complex character is manifested in the component structure of the recreational potential, since each group of resources has been divided into components of lower orders, and those ones can be also divided. However, taking into consideration the specific property of the information and analytical support of the recreational sphere, a list of indicators that reveal the criteria, can not be discovered due to the lack of relevant data. In accordance with it, the relation of the component affiliation of the recreational territories resource potential can be derived from the indicators, provided in Table. 1.

Table 1. Components of recreational territories resource potential

Components	Indicators of the 1st order	Indicators of the 2nd order
Natural and Resource	Index of Natural and Resource Potential	–
Historical and Cultural	Index of Historical and Cultural Potential	Number of monuments of cultural heritage of national importance
		Number of monuments of history, archeology, urban planning and architecture, monumental art
		The share of the most significant monuments from their total number
		Number of notable historical events
Social and Economic	Index of Social and Economic Potential	Regional Human Development Index
		An average number of staff members in collective means of accommodation
		Revenue from services, provided by specialized means of accommodation
		Number of collective means of accommodation
Ecological	Index of Ecological Potential	Emissions of pollutants into atmospheric air
		Dump of contaminated water into natural surface water objects

Source: it is done by the author.

The model of the assessment of the attractiveness of the territories for recreational nature use, based on the methodological approach to the assessment of the recreational territories resource potential, is presented in Fig. 1. The vital element of the methodological approach is the integral index of the level of the recreational territories resource potential.

Integral Index of the level of the Recreational Territories Resource Potential (Irrp) includes aggregate indicators of the major components of this potential, namely, nature and resource, historical and cultural, social and economic and ecological. It is calculated according to the following formula:

$$Irrp = \sqrt[4]{Inrp \cdot Ihkp \cdot Isep \cdot Iep}, \quad (1)$$

where Irrp – Integral Index of the level of the Recreational Territories Resource Potential;

Inrp – aggregate index of natural and resource potential;

Ihkp – aggregate index of historical and cultural potential;

Isep – aggregate index of social and economic potential;

Iep – aggregate index of ecological potential.

An indicator assessing the nature and resource potential of recreational territories is a

principal one when constructing an integral index and in its turn includes a large set of components that characterize the main groups of natural and recreational resources that can become the objective for visiting by tourists. Its value is defined as the sum of all components. The central criteria for the determination of the nature and resource component may be a diversity of elements (basic ones from the point of tourism and recreation development) of the nature and resource potential of the territory and the possibility of the influence of these elements on the perspectives for the tourism and recreation development. Indicators that are of vital importance for the development of the recreational sector (the existence of the seaside; the network of internal reservoirs; the location of forests, parks, gardens; the characteristics of landscapes; balneological resources that can provide development of certain types of tourism) in order to calculate the coefficient of nature and resource potential among the total set of its elements in a certain territory. The more elements include a particular territory, the higher is its nature and resource diversity.

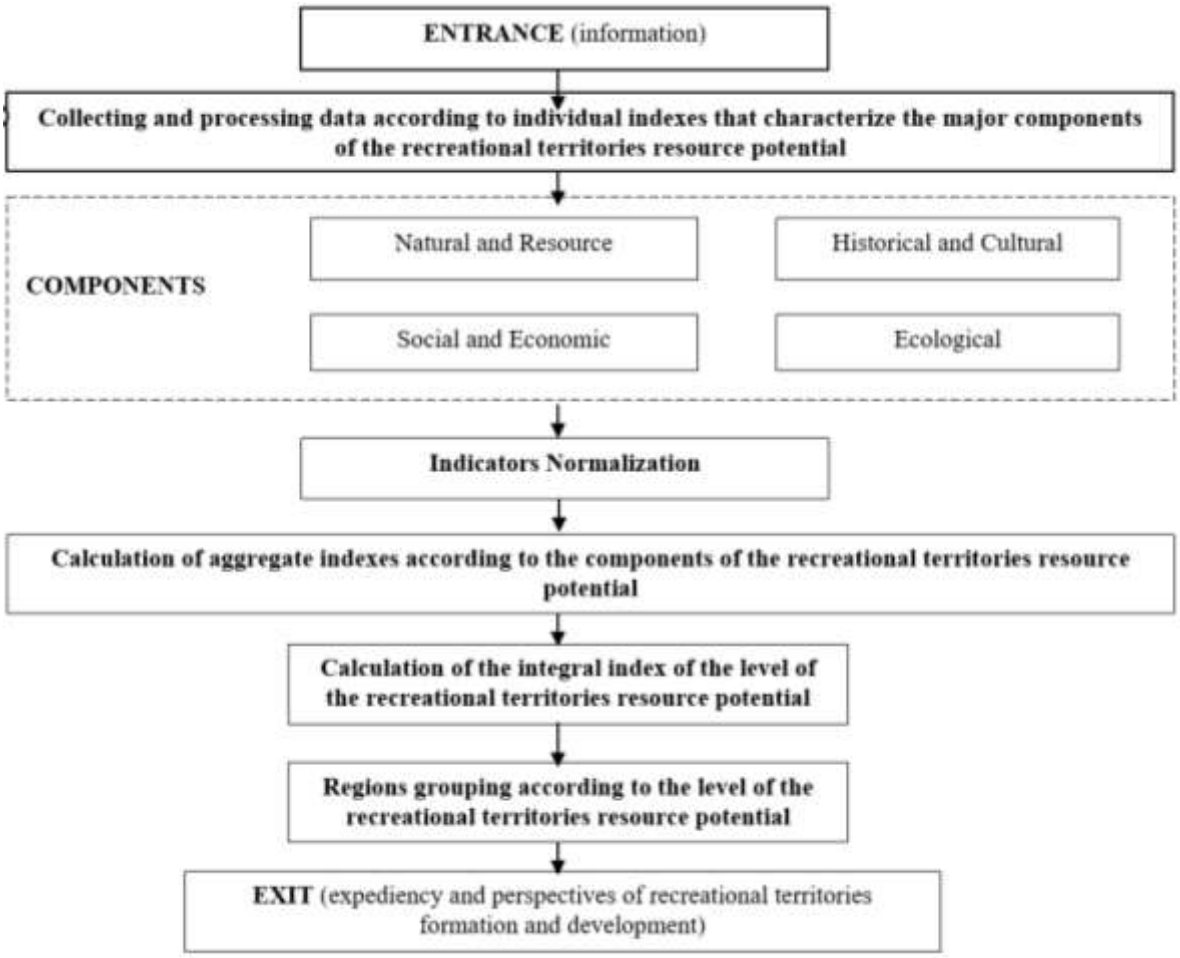

Fig. 1. The model of the assessment of the attractiveness of the territories for recreational nature use.
Source: it is done by the author.

Undoubtedly, methods for the assessment of the nature and resource potential of recreational territories in the future should be further developed (improved) by profound studies of this problem. Thus, instead of the given coefficient of the possible influence of elements of nature and resource potential on the development of the recreational territory, one can use another one – an indicator of qualitative assessment – tourist and recreational suitability of the fundamental elements of nature and resource potential. In the forest sector, for example, this indicator depends on the following environmental

indicators: forest type; composition of the tree state; permeability; fire danger; contamination; resistance to anthropogenic loads [7]. Each of the indicators is determined according to a 5-mark scale.

The qualitative assessment of crucial natural objects is generally carried out using the important factors that are calculated by the expert method considering the level of significance of natural objects at each of the levels – international, national, regional, local (municipal).

It is worth highlighting the methodology of the component and integral economic assessment of nature and resource potential of the territory, proposed by V. Rudenko. According to his methodology, component assessment implies «an economic assessment of the use of the potential of certain types of natural resources as a characteristic of their public consumption value, which was conducted annually on the basis of a single criterion – the saving of social labor and a generalizing indicator – the value of gross output, expressed in national or (if there is not a such one) regional cadastre prices, calculated by the method of ranking of reduced costs. Gross output characterizes the aggregate productivity of all natural resources of the territory» [9, p. 86-87]. Therefore, propose an analysis of nature and resource potential of recreational territories of Ukraine to consider as a level of natural and recreational potential, proposed by V. Rudenko. It will allow us to take into account the potential possibilities of recreational territories to meet the needs of tourists and to determine the prospects for the recreational nature use development.

Other component groups of the recreational territories resource potential are provided to calculate as to indicators of the 2nd order (see Table 1). The aggregate index of a separate component group Ik (Inrp, Ihkp, Isep, Iep) is calculated as the average normalized values of the above-mentioned indicators:

$$Ik = \frac{\sum_{j=1}^{n} x_{ij}}{n} \quad (2)$$

where x_{ij} – normalized value of j indicator for i region;

n – quantity of indicators, applied at the calculation.

In most cases, the formation of the normalized indicator is based on the requirement of representing all the signs as stimulants. The sign xi is called a stimulator, if it is characterized by the growth simultaneously with higher quality (that is, the higher value of the sign corresponds to the highest quality of the object). If the quality grows, the sign xi decreases, then such a sign should be considered as a de-stimulator. In this case, one can maintain a positive relation with the quality that is the object of the study. Considering the above mentioned, the value of the integral indicator also does not depend on the measurement unit of the signs.

It is necessary to carry out the standardization (unification of the scales) according to which the primary measurements have been made in order to the fulfillment of these conditions [6]. This process involves transforming the scale (changing the point of counting or scale) so that the area of possible measurement values remains within the interval (0; n), where the number n is chosen by the researcher, depending on his/her profound considerations. In this case, the null value, that is transformed, should correspond to the lowest level of quality according to this property, and the value n is the highest respectively. The normalized indicator is always constructed so that its value is within the range from 0 to 1. It creates opportunities for meaningful interpretation of the value of such an indicator and facilitates the process of its comparison with different objects. To do this, the value n should be chosen as equal to 1 in the process of unifying the scale. If the sign is a stimulant, then the normalized values are calculated by the formula:

$$x_{ij} = \frac{x_{ij} - x_j^{min}}{x_j^{max} - x_j^{min}} \quad (3)$$

where x_{ij} – actual value of j indicator for i region;

x_j^{min} – minimal value of j indicator;

x_j^{max} – maximum value of j indicator.

If the sign is a de-stimulator, then the normalized values are calculated by the formula:

$$x_{ij} = \frac{x_j^{max} - x_{ij}}{x_j^{max} - x_j^{min}} \quad (4)$$

The disadvantage of such an approach is the fact that the calculated integral index has no longer relevance to the major indicators, which greatly complicates the formation of objective conclusions. However, the mentioned approach allows solving the tasks of ranking objects, comparing them, studying their structure, etc., which fully meets the requirements for the aggregate and the integral indicator.

To determine the coefficient of historical and cultural potential from the whole set of elements of historical and cultural diversity of the territory, the most significant ones for the development of certain recreation types on the territory can be selected: monuments of architecture and urban development; archeological monuments; monuments of art; museums; monuments of history; the names of the great citizens whose activity was connected with a specific territory, etc. Monuments of the cultural heritage of national importance, as well as monuments of history, archeology, urban planning and architecture, monumental art, are the most important (in terms of tourism and recreation development) of significant objects of history and culture.

An essential resource component of recreational territories and the development of recreational potential are largely determined by the level of infrastructure development (including transportation), collective and specialized catering establishments, revenues from location, staff, etc. Skilled workers (managers), who can serve tourists with high quality, are crucial in the process of providing tourist services. It is significant to assess both the actual staff potential and its use according to the required level for the assessment of the staff potential of the territories. The staff potential of recreational territory should be assessed in the following directions: assessment, which involves calculation of the existing number of staff potential; assessment, associated with the use of human resources; an assessment, suggesting that the existing staff potential corresponds to its required level in accordance with the strategic goals of the development of recreational territories.

Unfavorable anthropogenic processes, amplified under the influence of the production factor, complicate the ecological situation; provoke environmental risks and threats, which, for instance, can cause the reduced duration of the holiday season or recreational flow. To the greatest extent, a number of environmental indicators characterize the negative impact of destabilizing factors on the successful formation of recreational nature use. These indicators include the level of man-made pollution; the level of harmful substances emissions into the atmosphere; dump of pollutants into natural surface water; accumulation of industrial toxic waste, etc.

On the basis of the calculating results of the integral index of the level of recreational territories resource potential, one can assess the object (region, district, area, recreational activity subject) according to the proposed classification (Table 2).

Table 2. Classification of the level of the recreational territories resource potential

The level of the resource potential	Integral index value (or separate indicator)
High	0.76–1.00
Medium	0.51–0.75
Low	0.26–0.50
Very low	0.01–0.25

Source: it is done by the author.

As a result, a number of ranked recreational areas are built up, and then a decision is made on the number of priority territories that are being planned to be selected for the purposes of granting them the status of a recreational zone with the regime of the largest economic and investment promotion. The basis of the project for the creation and development of zones is the idea of increasing the flow of tourists due to the providing annual access to tourist centers, infrastructure development, and the formation of a modern tourist complex.

That is why one can use the significant recreational potential of the territory and involve it in international logistics. At the same time, the centers of such zones should

be the points of localization of tourist and recreational clusters, which are characterized by a range of properties: a high level of concentration of interconnected objects, tourist displays, which allows creating a considerable value added due to combining them in diverse thematic and complex tours; a relatively high level of concentration of labor resources with an appropriate level of specialization and qualification; developed tourist, engineering, transport, social, energy infrastructure; the existence of branched cooperative ties among enterprises of the tourist complex, which are in the internal competitive environment.

Based on the proposed methodical approach, calculations of aggregate indexes of the main components and the integral index of the level of the recreational territories resource potential have been done, which made it possible to rank the regions of Ukraine depending on the values of these indicators (Table 3).

Table 3. Calculation results of the integral index of the level of the recreational territories resource potential, 2017

Region	Aggregate index of natural and resource potential	Aggregate index of historical and cultural potential	Aggregate index of social and economic potential	Aggregate index of eecological potential	The integral index of the level of the recreational territories resource potential
Autonomous Republic of Crimea	1.00	0.48	0.88	0.88	0.78
Vinnytsia	0.11	0.28	0.32	0.95	0.31
Volyn	0.09	0.37	0.15	0.99	0.27
Dnipropetrovsk	0.26	0.16	0.27	0.36	0.25
Donetsk	0.35	0.18	0.15	0.03	0.13
Zhytomyr	0.09	0.19	0.05	0.98	0.17
Transcarpathian	0.61	0.22	0.52	0.99	0.51
Zaporizhzhia	0.20	0.12	0.46	0.57	0.28
Ivano-Frankivsk	0.22	0.30	0.38	0.92	0.39
Kyiiv	0.09	0.69	0.35	0.68	0.35
Kirovohrad	0.41	0.06	0.04	0.98	0.18
Luhansk	0.22	0.12	0.05	0.91	0.19
Lviv	0.30	0.73	0.71	0.90	0.61
Mykolaiiv	0.09	0.15	0.26	0.84	0.23
Odesa	0.39	0.37	0.65	0.92	0.54
Poltava	0.11	0.22	0.30	0.85	0.28
Rivne	0.07	0.21	0.07	0.99	0.35
Sumy	0.11	0.15	0.09	0.71	0.18
Ternopil	0.07	0.21	0.15	0.98	0.22
Kharkiv	0.37	0.30	0.29	0.73	0.39
Kherson	0.13	0.14	0.26	0.90	0.26
Khmelnytsk	0.09	0.32	0.07	0.98	0.21
Cherkasy	0.13	0.22	0.10	0.95	0.23
Chernivtsi	0.11	0.18	0.26	0.99	0.27
Chernihiv	0.20	0.35	0.04	0.97	0.23

Source: it is done by the author.

Table 4. Ranking of the regions of Ukraine as to the level of the recreational territories resource potential

The level of the resource potential	Region
High (higher than 0.76)	Autonomous Republic of Crimea
Medium (0.51–0.75)	Lviv, Odesa, Transcarpathian
Low (0.26–0.50)	Kharkiv, Ivano-Frankivsk, Kyiiv, Rivne, Vinnytsia, Zaporizhzhia, Poltava, Chernivtsi, Volyn, Kherson
Very low (lower than 0.25)	Dnipropetrovsk, Mykolaiiv, Cherkasy, Chernihiv, Ternopil, Khmelnytsk, Luhansk, Sumy, Kirovohrad, Zhytomyr, Donetsk

Source: it is done by the author.

Taking into account the proposed of the classification of the levels of the recreational territories resource potential and based on the results of calculations of their integral index, conducted in the context of regions of Ukraine, they have been grouped (Table 4).

The analysis of Table 4 shows that Autonomous Republic of Crimea (final assessment 0.78) has the optimal conditions for the implementation of resource potential and the development of recreational territories according to the aggregate of the considered components. The potential is lower in Lviv (index – 0.61), Odesa (0.54) and Transcarpathian (0.51) regions. Instead, most regions of Ukraine have a low level of the

recreational territories resource potential compared to the best analogs in the country.

CONCLUSIONS

All in all, a profound approach to the assessment of the attractiveness of territories for recreational nature use, based on a comprehensive assessment of the recreational territories resource potential, in contrast to existing ones, implies the integral index use that takes into account the system of indicators according to the following components: nature and resource, historical and cultural, social and economic and ecological. The qualitative analysis of indicators of the recreational territories resource potential is the basis for development and adoption of efficient managerial decisions. The aggregate index of a separate component group is calculated as the average of normalized values of the indicators included in these indexes.

To conclude with, the normalization process involves the transformation of the scale (changing the point of counting or scale) in such a way that the scope of possible measurement values remains within the range from 0 to 1. It creates opportunities for meaningful interpretation of the value of such an indicator and facilitates the process of its comparison with different objects. This approach allows performing tasks of ranking objects, to compare them, to study their structure, which fully meets the requirements for aggregate and integral indexes.

REFERENCES

[1]Beidyk, O., 2001, Recreational and Tourist Resources of Ukraine: Methodology and Methods of Analysis, Terminology, Zoning: monograph, Kyiiv, 2001. 395 p.

[2]Boholiubova, S., 2010, Ecological and Economic Assessment of Recreational Resources, International Journal of Experimental Education, 3: 27–28.

[3]Cherchyk, L., Kolenda, N., 2008, Strategic Potential of the Recreational System of the Region: Theory, Methodology, Assessment: monograph; Lutsk, 224 p.

[4]Didyk, Ya., Syniakevych, I., 1992, The Planning of Forest Recreational Resources Use, Forestry, Forest, Paper and Wood Processing Industry, 23: 104–106.

[5]Iliina, M., 2013, An Integral Assessment of Tourist and Recreational Sphere of Territories of Diverse Types, Economics. Management. Innovations, 2. URL:http://nbuv.gov.ua/UJRN/eui_2013_2_31.

[6]Hryhoruk, P., Tkachenko, I., 2012, Methods of Constructing Integral Indicator, Journal "Business Inform", 4: 34–38.

[7]Khudenkyh, Yu., 2006, Approaches to Territory Tourist Potential Assessment on the Example of the Regions of Perm Territory, Geography and Tourism: Collection of Scientific Papers. Perm, Issue 2: 217–230.

[8]Kyfiak, V., 2010, The Strategy of Territorial Recreational Systems Development: Theory, Methodology, Practice: monograph; Kyiiv, 427 p.

[9]Rudenko, V., 2010, Geography of Nature and Resource Potential of Ukraine. In 3 parts, Chernivtsi, 552 p.

[10]Russell, R. V., Riddick, C. C., 2014, Research in Recreation, Parks, Sport & Tourism, Sagamore Publishing, 314 p.

[11]Samko, O., 2010, Region Tourist Potential Assessment and the Level of its Use, Economic Sciences. Series «Regional Economy». Collection of Scientific Papers, Lutsk, Issue 7(27), Part 4: 129–134.

[12]Shabalina, S., Rubtsov, V., Baibakov, Ye., 2015, Teritorial Aspects of Tourism Development in the Republic of Tatarstan, Kazan, 160 p.

[13]Shabardina, Yu., 2011, The Recreational Potential as a Component of Productive Forces of the Regional Economic Space: Thesis of Candidate of Economic Sciences,Chernihiv, 20 p.

[14]Stechenko, D., Bezuhlyi, I., 2009, Theoretical Aspects of the Research of Natural and Recreational Potential, Scientific Herald of Chernihiv State Institute of Economics and Management, 2(3): 65–76.

[15]Wennergren, B., Nielsen, D., 1970, Probability estimates of recreation demands, Journal of Leisure Research, Vol. 2. No. 2: 155–167.