

# Sustainable development of the resort regions (areas)

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**Abstract.** The idea of sustainable development of the territory lies in the rational use of existing resources in the process of creating a platform where one can improve the level and long-term quality of life. Indicator systems are an integral element of the implementation of planned regional development measures, since any program document needs an up-to-date monitoring and evaluation system. The relevance of this research lies in the need to identify the indicators that reflect the priorities and problems of sustainable development of resort areas, and in the need to develop common indicators of sustainability for territories of tourist and recreational purposes. The aim of the study was to analyze existing methods for assessing the sustainability of the development of resort areas, analysis and evaluation of indicators and their impact on sustainable development of the resort area on the example of the Krasnodar region. As a result of the study, we examined custom approaches in assessing sustainable development of resort regions, as well as the methods of the UNWTO and the Government of the Russian Federation (as part of strategic planning). The features of resort areas and the main elements of their development are revealed in the research. It is noted that many indicators are currently being used (most of them of the same type - economic and social) and as a result many aspects of the territorial development remain unexamined. It is proved that in order to ensure the sustainable development of resort areas in the constituent units of the Russian Federation, it is necessary to develop a system of indicators that takes into account existing international experience and the specifics of the economic, social and environmental conditions of the Russian regions.

## 1 Introduction

The world community, individual countries, territories and cities are striving to take the path of sustainable development. Programs for sustainable development of territories, industries, and individual enterprises have been developed and are being implemented. Indicator systems in this case are an integral element of the implementation of planned activities, since any program document needs an up-to-date monitoring and evaluation system.

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The key idea of the concepts of sustainable development of the territory is progressive movement (growth), aimed at improving the living standards without doing harm to the environment.

Initially, priority was given to environmental issues in understanding sustainable development, but later the scientific community came to a modern model, reflecting the balance of socio-economic and environmental priorities.

Speaking about sustainable development, one cannot fail to mention the interpretation approved by the United Nations: in 1983, the World Commission on Environment and Development (WCED) was created and in 1987, its definition of sustainable development appeared in its report: "Development that meets the needs of today and does not undermine the ability of future generations to satisfy their own needs" [1]. In 1992, the UN Conference in Rio de Janeiro adopted the "Agenda of the XXI century", which adopted the main directions of sustainability.

In 1996, the UN special committee proposed a system of 132 indicators for assessing progress towards the sustainable development. The system is based on the principle of "topic – subtopic – indicator". The main topics covered at the Rio-92 conference are reflected in the final document - the "Program of Action". The structure of this system can be characterized as three-dimensional, in which all indicators can be "sorted" by spatial, temporal and subject attributes.

The spatial gradation of indicators provides their division into global, interregional (interstate), national, regional and local levels.

After 5, 10 and 20 years, 3 more conferences were held (respectively, Rio-5, Rio-10 and Rio-20) which considered approaches to sustainable development for individual countries or areas. Sustainable development in modern research is a compromise (limiting the needs) of members of the society for the sake of achieving the goals of conservation of resources and the environment while ensuring the satisfaction ("happiness") of the entire population. Moreover, we can talk about the lack of unified approaches to determining the sustainability of the development of the subject at a time, which is associated both with the features of these units (territories), as well as with various justifications for priorities.

From the total of research definitions, it can be concluded that the idea of the sustainable development of the territory consists in the rational use of existing material and natural resources in the process of creating a platform to increase the long-term level and quality of life. The structure of directions of the sustainable development of the territory on the example of the city can be seen in Figure 1.

Green: Harmony with nature (Resource efficiency of the urban economy; nature management and environmental protection). In small font: A city which preserves and develops the environment, uses natural resources efficiently, capable to adapt to the modern society

Yellow: Healthy lifestyle (healthy lifestyle popularization; availability of sport exercises; available health care)

Orange: Culture (cultural development; preservation of cultural heritage; human development; social and political activity)

Red: A world without barriers (reduction of social inequalities). In small font: A city with a high level of human development and various culture functions, offering a variety of possibilities.

Violet: Available means of transportation; comfortable environment

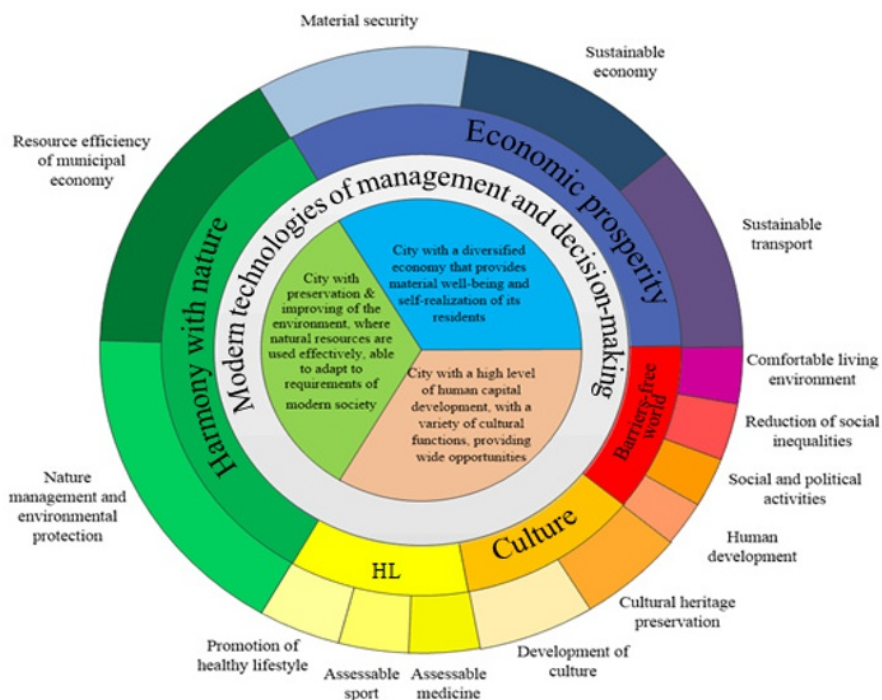
Blue: Economic prosperity (material security; sustainable economy). In small font: A city with a diversified economy, providing material prosperity and means for self-realization.

Grey: Modern technologies of management and decision-making

Analysis of indicators for assessing the sustainable development of the territory requires a clear understanding of the essence of the process being evaluated. Therefore, first of all, it is necessary to clarify the conceptual apparatus.

This study aims to analyze existing approaches to the selection of indicators and indicators of sustainable development of territories with resort and recreational orientation in their development.

The study used materials from Russian and foreign periodicals, as well as publicly available Internet resources. Empirical and theoretical research methods, such as collecting, studying and analyzing data, generalizing, comparing and classifying, were used in the study in order to achieve the set goal.



**Fig. 1:** The structure of directions of sustainable development of the territory on the example of the city.

## 2 Existing approaches to assessment of sustainable development of resort areas

The features of sustainable development of territories (regions) are covered in the works of Kornienko E. L., Pastukhova E. A., Belyaev A.V., Edwards S. and in the works of many other scientists. Aspects of sustainable development of tourism and tourist areas, the definition of indicators were considered in the works of Woodley (1993), Miller (2001), Tanguay A., Rajaonson J. & Therrien (2013), Torres-Delgado, Saarinen, J. (2014) and others [2-4]. In addition to the research base, the theoretical foundations of sustainable development are also reflected in Russian and international legislative acts, reports and program documents.

Let us consider several approaches to the definition of the studied concept. According to Kornienko E. L. sustainable development of the territory is to ensure security and favorable

conditions for human life, balanced development of human potential, ensuring the protection and rational use of natural resources, taking into account the needs of present and future generations [3]. Thus, the author focuses on the long-term development, highlighting the social, economic and environmental aspects. Pastukhova E. A. in turn, defines sustainable development as the mode of functioning and development of the self-organizing local system, focused on harmonizing the life of the community and the environment, provided by economic reproduction in order to increase the level and quality of life [5]. Belyaev A. E. [2] has an interesting point of view, in which he emphasizes that sustainable development should be regarded as a global phenomenon, since in full measure, this category can exist only on the scale of the entire human civilization and territorial entities are separate structural units of this system. By analyzing all the mentioned above we can conclude that it is necessary to include indicators of global development in the methodology when assessing the development of a specific territory.

Three “blocks” are most often distinguished as key elements of sustainable development of a territory to be evaluated in scientific and publicist literature: social, economic, and environmental. Obviously, depending on the specialization and potential of the region, the parametric characteristics of assessing the sustainability of development may vary. In the regions of industrial specialization, it will include such indicators as the industrial production index, volumes of manufactured and sold products, while in the tourism-oriented region, it is more relevant to assess the magnitude of the demand for tourism products. Since this study is dedicated to the territories and regions of resort and recreational destination, we will examine in detail the features of the development of these regions.

Natural resource potential is often the main resort-forming factor for these territories and in this regard, the environmental component of sustainable development is even more important. S. Edwards [6] substantiates the need for a detailed study of sustainable development in relation to tourist territories with the fact that tourism is primarily an economic activity, and the activity of industry entrepreneurs can often contradict the environmental and cultural goals of sustainable development of the society [7]. It is imperative to avoid the exploitative use of natural, cultural and other tourism resources and to preserve them for future generations.

To identify the features of sustainable development of resort regions, one must first determine the interpretation of the concept of resort and recreational territory. Traditionally, a resort is usually understood as “a specially protected natural area used for therapeutic and preventive purposes” [8], provided with necessary natural resources and infrastructure. Many researchers adhere to the interpretation

The tourist-recreational resort region also can be referred to as the territory of the organization of recreation and tourism, represented by a set of enterprises in the field of tourist and recreational services and related industries, united by horizontal links, the synergy of which should lead to an increase in the functioning efficiency of this aggregate as a whole, as well as its individual components.

In the above interpretations, there is no emphasis on the social significance of these territories and the need to take into account the safety and renewability of the recreational resources used in the region. At the same time, resort and recreational areas are the basis of tourist and recreational systems, have a significant impact on the economic development of the region, and affect the spiritual development of a person, meeting the needs for relaxation, replenishment of strength and personal development. The resort area, as a unique object, has the following characteristic features that must be taken into account when assessing the sustainability of its development:

1. The specialization of tourist and recreational areas is directly related to its natural and recreational resources.
2. Hard “renewability” of natural resources.

3. The probability of overlapping interests of local people and tourists.
4. The lack of diversified sources of income for the region is a highly specialized economy that exists due to the conditions created and introduced in this territory.
5. Relationship between the sustainable development of the economic, socio-cultural, natural, institutional subsystems and the sustainable development of the recreational and tourism sector in the region, which includes elements of all of these subsystems.
6. Dependence of other economic entities (trade, entertainment, etc.) on the workload of the resort and recreation system in the region.

Considering in detail the sustainable development of the resort and recreation area, based on its main specialization and needs, it is possible to expand the traditional typology of the elements of sustainable development of the territory (Figure 2).



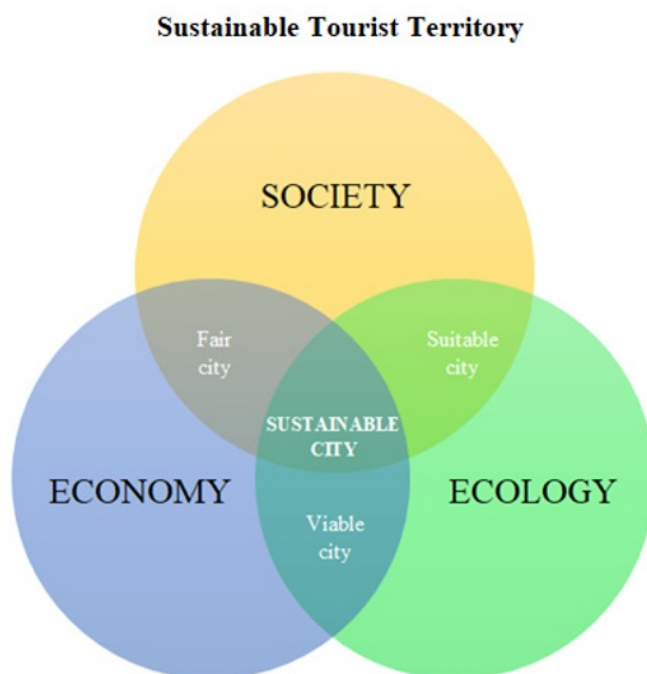
**Fig. 2:** Elements of sustainable development of resort areas: Development of social and economic structures; Cultural and spiritual development; Administrative development; Economic development; Landscape and recreational development; Environmental protection; Social and demographic development.

Only the aggregate sustainable development of all the presented directions can ensure the balanced development of the territory taking into account all the interested parties. In general, the sustainable development of resort and recreational areas can be described as a long-term process of development of the tourism sector within the region, as a result of which socio-economic and other goals are achieved, without prejudice to the natural and cultural heritage and the local population.

That is, speaking of sustainable development, it is worth paying attention to such a thing as “moderation / limitedness” - in the consumption of water, energy and other regional recreational resources, environmental pollution, tourists visiting nature protection zones and so on. Getting unlimited benefits from the exploitation of natural and cultural resources, only a few people think about the consequences. And sustainability involves the development of a territory without degradation and depletion of the resources on which it is based.

The totality of the theoretical and methodological base is reduced to determining the sustainable development of tourism and recreation areas as a balanced long-term development of the region with moderate spending of natural and cultural resources, taking into account the interests of both the local population and consumers of the tourist product. There-

fore, one of the important conditions for sustainable regional development, especially resort and recreational areas, is the condition for the preservation and ensuring the renewability of existing regional resources (primarily natural, recreational and cultural). Therefore, one of the most important components of the sustainable development of the resort region can be its recreational resources. At the same time, emphasis should be placed on the optimal use of resources, which allows achieving and maintaining the values of sustainable development indicators. In this case, a sustainable tourist territory (city) can be represented in the form of a diagram in Figure 3, defining it as an environmentally friendly region oriented towards tourism and recreational activities, developing taking into account long-term socio-economic goals [9-11].



**Fig. 3:** Sustainable tourist territory (Society – Economy – Ecology; Just city – Convenient city – Viable city – Sustainable city).

On this basis, we are considering what methods can be used to assess the sustainability of the development of such territories

According to the official UNWTO methodology, the following indicators can estimate the sustainability of the development of tourist destinations [12]:

- 1) Total number of tourist arrivals (tourist flow)
  - 2) Income from tourism (% of the region's GRP)
  - 3) Level of satisfaction of the local population
  - 4) Level of tourist satisfaction
  - 5) The number and dynamics of employment in the industry.
  - 6) The following indicators can be added:
    - The ratio of the number of tourists to local residents
    - The social expenses of the region related to tourism
- 1) Travel expenses (on average per 1 tourist)
  - 2) Occupancy rate of tourist infrastructure
  - 3) Tourism sector employment rate

- 4) Tourist energy consumption
- 5) Tourist water consumption
- 6) The amount of waste from tourism activities, etc.

The social aspects of tourism development, the assessment of which is impossible through statistical accounting, are described using questionnaires. In total, the UN methodology has 132 indicators, divided into 4 groups: environmental (55), social (41), economic (26), organizational (10).

The Strategy of tourism development in the Russian Federation for the period until 2020 [1] (which is based on the principles of sustainable development) identifies the following target indicators:

- 1) Number of foreign tourists
- 2) Number of persons served in collective accommodation facilities
- 3) Number of hotels and other accommodation facilities
- 4) One-time capacity of accommodation facilities
- 5) The volume of paid services provided by hotels and other accommodation facilities
- 6) Investments in fixed assets of hotels and similar accommodation facilities.

D. A. Masserov proposes to classify development indicators by the nature of the problems and processes that they display, dividing them according to hierarchy levels from global (mandatory for all entities) to local (for individual agglomerations) [4]. O. Y. Shevchenko includes the human development index in the methodology in addition to socio-economic, cultural and environmental indicators [11]. In practical studies devoted to the analysis of the sustainable development of specific areas of resort and recreational orientation, indicators of statistical categories such as population, employment, entrepreneurship and others are used. Therefore, for example, Sulemanova N. V. [10] identifies the following indicators for the resort city of Kislovodsk:

- 1) Average salary
- 2) The ratio of per capita income to the cost of living
- 3) The ratio of the average wage and the cost of living
- 4) Number of employees
- 5) Number of vacationers
- 6) Number of beds in spa organizations
- 7) Revenues of spa facilities
- 8) The share of spa services in the total volume of paid services to the population

Aisanov R.M. [8] includes indicators of sustainable development for the resort city of Anapa: the number of vacationers; number of staff places at industry enterprises; average occupancy; number of health resorts, private hotels, travel agencies; tax revenues from the spa sector to the local budget. Oborin M. S. [5] when studying the resort and recreational complex of the Udmurt Republic adds:

- 1) Number of spa organizations
- 2) The number of places and nights in spa organizations
- 3) Revenues, expenses and profits of health resort organizations
- 4) Level of distribution costs
- 5) Real cash income of the population

In general, the sustainable development of the resort area is based on three aspects: economic, socio-cultural and environmental, and accordingly, indicators should be determined precisely in these categories. According to Mowforth and Munt, sustainable community development is associated with additional aspects: environmental, institutional or political, cultural, national, regional, local communities, etc [12-14].



### 3 Discussions

A review of the calculated indicators used showed a clear shift in focus on economic and social data. Most indicators assess the economic development of the region, affecting some social aspects, environmental assessment is extremely rare. The popularity of certain indicators (number of vacationers, level of wages, number of accommodation facilities) used for assessment is not surprising, since there are open statistics for these indicators. While the assessment of the cultural, environmental or institutional direction of development is hampered by the lack of a comprehensive material base. To date, the applicable methods lack indicators that characterize:

1. The conservation and reproduction of natural recreational resources
2. Taking into account the interests of the local population
3. The quality of tourism services
4. Changes in the environmental situation, the implementation of environmental planning
5. Economic and social benefits per capita
6. Percentage of tourism jobs that are seasonal
7. The percentage of people who receive all or part of their income from tourism
8. The percentage of companies supplying food, drinks, goods and services of local production
9. The amount of money spent on marketing the tourist and recreational area
10. Percentage of events that focus on traditional / local culture and heritage
11. Satisfaction with tourism at the local regional level.

Based on the features of the development of resort areas and the essence of sustainable development, the following groups of assessment indicators can be distinguished: economic and social, environmental, indicators of anthropogenic pressure on the territory and tourist indicators. In accordance with these groups, it is possible to form indicators characterizing the sustainable development of the resort territory on the example of the Krasnodar Territory (Table 1).

**Table 1.** Indicators of sustainable development of the resort area (on the example of the Krasnodar Territory).

<b>Economic and social regional indicators</b>	<b>Environmental indicators in the Krasnodar Territory</b>
1. GRP - total (at current prices; million rubles) 2. Volume of GRP per capita (rubles) 3. Growth rate of GRP in % 4. Volume of investment in fixed assets, billion rubles. 5. Unemployment rate (%) 6. Dynamics of real income, % 7. Dynamics of nominal incomes, rubles. 8. Ratio of average monthly income and living wage 9. Real salary, in% of the previous year 10. CPI, in % 11. Budget costs per capita, thousand rubles / person. 12. Poverty level, % 13. Average age of the population, years 14. Natural population growth, people per 1000 population 15. Life expectancy at birth, years	1. Volume of emissions of pollutants into the air from automobile transport in the Krasnodar Territory by type, tons 2. Proportion of water samples of the Black Sea that do not meet hygienic standards 3. Dynamics of pollutant emissions from stationary sources in the Krasnodar Territory, thousand tons. 4. Area of specially protected natural territories, thousand ha 5. Discharge of polluted wastewater, total, millions of cubic meters 6. Emissions to the atmosphere, total, thousand tons
Tourist indicators of the Krasnodar Territory	Anthropogenic load indicators on the territory
1. Indicators of the tourism and recreation sector:	1. Population density, people / km <sup>2</sup>



<b>Economic and social regional indicators</b>	<b>Environmental indicators in the Krasnodar Territory</b>
2. Number of tourists in total, million 3. Dynamics of the volume of services of the tourist and recreational sector, billion rubles 4. Number of persons accommodated in hotels and similar accommodation facilities, people 5. Number of overnight stays in hotels and similar accommodation facilities, units 6. Number of places in hotels and similar accommodation facilities, place 7. Number of places in spa, place 8. Number placed in spa, people 9. Average number of employees of collective accommodation facilities, people	2. Number of settlements, thousand units 3. Recreational load, the number of people or person-days per unit area or recreational facility for a certain period

One of the indicators characterizing the sustainable development of tourist areas is the presence of natural resources unaffected by human activities. Let us dwell in more detail on the indicators of anthropogenic load on the coastal territory of the resorts of the Krasnodar Territory. The main types of anthropogenic impact on the coastal zone of the sea and their possible consequences are presented in table 2.

**Table 2.** The main types of anthropogenic impact on the sea coast zone

<b>Impact</b>	<b>Substance or active ingredient</b>	<b>Main anthropogenic source</b>	<b>Possible effect</b>
Pollution	Biogenic substances	Domestic, agricultural, industrial wastewater	Eutrophication
	Pathogens	Domestic, agricultural, waste water	Infectious diseases and fish mortality in the coastal zone
	Oil	Industry, ships, highways and cars	The appearance of an oil film on the surface of the sea, infection of animals, birds, disruption of photosynthesis and oxygen exchange with the atmosphere, reduction in the number of beach areas
	Synthetic organic matter	Industry, domestic wastewater, agriculture, wood processing	Disturbance of the functioning of marine ecosystems
	Radioactive components	Nuclear testing, Nuclear production and landfill	Disturbance of the functioning of marine ecosystems
	Heavy metals	Industry, domestic wastewater, ocean dumping areas, cars	Disturbance of the functioning of marine ecosystems
	Municipal solid waste	Recreational activities, ship discharges	Mechanical effects on aquatic organisms, habitat disturbance
	Liquid inorganic and organic waste	Industry, domestic wastewater, cars	Decreased oxygen dissolved in seawater
Environmental change	Human development in coastal areas	Construction, industry, tourism and leisure development	Reduced natural landscapes, coastal erosion
Natural resource	Fishing	Fish capture	Imbalance in marine ecosystems

Impact	Substance or active ingredient	Main anthropogenic source	Possible effect
extraction			
Air pollution	Carbon dioxide, sulfur dioxide and other pollutants	Energy, transport, agricultural, industry	Deterioration of habitat, decrease in sea productivity, increase in sea level

Biogenic substance pollution (wastewater, municipal solid waste from recreational activities), environmental changes resulting from the development of tourism and recreation and air pollution from transport are of particular importance for resort areas of the Krasnodar territory. Strategic management is usually based on the principle of sustainable development. This principle presupposes efficient nature management along with maintaining social and environmental priorities. In developing and implementing regional development programs, the consideration of environmental parameters is of particular importance. Moreover, such consideration of environmental parameters should relate to both the regional development program and individual local tasks. The principles for implementing the concept of sustainable development [15] directly imply the inclusion of an environmental component in strategic planning. Therefore, the Strategy of socio-economic development of the Southern Federal District until 2020, involves the priority of the ecology of living systems and rational nature management, the maintenance of which is achieved through balanced consumption, the development of advanced technologies and the appropriate reproduction of the country's natural resource potential [16].

## 4 Conclusions

The majority of indicators found in specialized literature can be divided into 4 categories: socio-economic, environmental, human impact and tourism. Only a comprehensive assessment of all aspects of the sustainable development of the territorial system allows us to obtain a reliable assessment. It is also worth noting that sustainable development is a global process, the participants of which are all economic entities, cities and countries. Therefore, it is extremely important to develop in harmony with other elements of the global system.

Thus, in the course of the study, author's approaches to assessing the sustainable development of resort regions were examined, the methods of the UNWTO and the Government of the Russian Federation were studied (as part of strategic planning). The features of resort areas and the main elements of their development are revealed. In conclusion, we can say that the research community uses many indicators, most of which are of the same type (economic and social), as a result of which many aspects of development that determine its sustainability remain unexamined. To ensure sustainable development of resort areas in the constituent entities of the Russian Federation, it is necessary to develop a system of indicators that takes into account existing international experience and the specifics of the economic, social and environmental conditions of the Russian regions.

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## References

1. E. Belyaev, *Actio pro. sus. Devel. Terri.*, **No.2(5)**, 19-21 (2012)
2. E. L. Kornienko, *Formation of the rules for increasing the sustainable development of territories on the basis of internal factors* (2010)

3. D. A. Masserov, I. Kant, Bull. Baltic Fe. Uni., **Vol. 1**, 147-150 (2013)
4. M. S. Oborin, *Sus. Devel. Re. Recre. Comp. Fac.*, **27**, issue **4**, 34-47 (2017)
5. E. A. Pastukhova, *Suc. Mod. Sci.*, **No. 5**, 91-93 (2007)
6. N. V. Strachkova, *Recre. Terr.*, **Volume 27 (66). No. 3**, 21-30 (2014)
7. O. Yu. Shevchenko, *Formation of a system of indicators for sustainable development of municipal territories, Engineering Herald of the Don*, <https://cyberleninka.ru/article/n/formirovanie-sistemy-indikatorov-ustoychivogo-razvitiya-munitsipalnyh-territoriy> (2012)
8. S. N. Bobylev, S.N. Bobylev, *Indicators of sustainable development: a regional dimension. A guide to regional environmental policy*, 60 (2007)
9. S. Choi, E. Shirakaya, *Sustainability indicators for managing community tourism*, **No.27**, 1274-1289 (2006)
10. M. Miller, *Development of indicators for sustainable tourism: Delphi tourism researchers research results*, **No. 22**, 351-362 (2001)
11. M. Twinning, L. Ward, *Monitoring for sustainable tourism Transition: The challenge of developing and using indicators*, **1** (2005)
12. Torres Delgado. G. Saarinen, *The use of indicators to assess the sustainable development of tourism: a review*, **No. 16 (1)**, 31-47 (2014)
13. M. I. MaufortMount, *Tourism and sustainability: development, globalization and new tourism in third world countries*, **3** (2009)
14. P. Kauppila, J. Saarinen, R. Leinonen, *Scandin. J. Hospit. Tour.*, **9(4)**, 424-435 (2009)
15. E. A. Zaliznyak, *Indicators of environmental aspects of sustainable development of the tourism industry: European experience*, 11 (2014)
16. E. McLaughlin, J. Hanrahan, *Planning local tourism in Ireland: an environmental perspective*