

## Recreational Zoning in the Degree of Attractiveness of Natural Landscapes on the Example of the Pavlodar Region of Kazakhstan

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**Abstract:** The article deals with theoretical and methodological issues of tourist and recreational zoning in the degree of attractiveness of natural landscapes within the administrative boundaries of the areas identified the most promising areas for priority development and the development of tourism and recreation on the example of the Pavlodar region of Kazakhstan.

**Key words:** Theoretical • Methodological • Tourist

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### INTRODUCTION

Zoning is an objective process that lasts for centuries in the framework of development of the territory, which is based on a rigorous theory and methodology. It has two aspects: epistemological and applied. The first is connected with the knowledge of, study of the territory, the second of its organization. These studies largely determined the boundaries of the system of geographical Sciences in General. Any geographical researches are conducted within a certain space. In most cases the result of the work is the zoning of the territory.

Depending on the goals and tasks may be carried out various variants of zoning of the territory. For the implementation of applied zoning of a problem is detected as forming regions signs may be adopted different characteristics. The choice of forming regions signs depends on the scale of the studied territory. It can be determined at the level of the administrative district or the country as a whole. Recreational zoning of the territory is quite important as the solution allows efficiently as possible, not at the expense of other economic sectors, and with minimal impact on nature uses certain territory for rest of people. Development of scientific principles of recreational zoning and their further development allow to identify new recreational resources and other prerequisites for development of tourism in undeveloped areas, allocate and create new tourist areas

of a different order, to correctly define their tourist specialization, to transfer the experience of tourism development from one location to another with similar terms and conditions.

Important in the study of tourism of any territory is the issue of zoning. Zoning since its origination always occupied in geographical science special place. However, due to the high status of this area of research in geography has developed a wide range of views on the theoretical-methodological essence of zoning. Zoning is «obligatory» part of any geographical research, so here involved a large number of geographers, that solved its key questions along the way, thereby further aggravating the situation. Getting recreational zoning of the territory, it is necessary to consider its key theoretical and methodological problems [1]. The works of many scientists geographers devoted to this issue: Likhanov, Preobrazhensky; Vedenin; Kotlyarov; Zorin; Suprunenko, physical geography, geoscience, paleogeography, geobotany (Dokuchaev, Berg, Isachenko, Milkov, Trube, Friedman, Bakanin, Bennett, I. Bouwma and others).

**Methods of Research:** Zoning as a universal method of ordering and systematization of territorial systems widely used in Earth Sciences, including landscape science.

Landscape-recreational zoning is based on the natural basis and plays an important role in the knowledge of the natural properties of any territory.

Table 1: Landscapes of Pavlodar region

Class	Subclass	Types					
		Forest	Forest-steppe	Steppe	Dry steppe	Semi-desert	
Plains	Related to low plains		26	16.17.23, 28.29.32, 34.36.38	67.68.69.70 71.72.73.74 76.88.89.90 91.97.98.99 100.10.107.109	181.190.193.195	
		Related to uplifted plains			136.138.139 141.143.149 150.151.		
			Small bald mountains			153.154.155 163.166.	221
		Low-mountains	379		418 424 425		
	Valley landscapes						
	478		479	480			
	Types of landscapes, total		56				

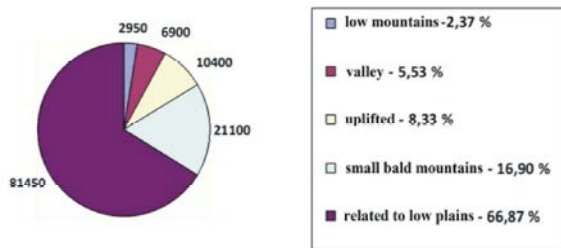


Fig. 1: Diagram of Pavlodar region landscapes' subclasses

Landscape zoning, as well as other natural zonation has a multi-stage character, it uses conventional taxonomic units - county, district, region, province, area, country.

The basic principles zoning are: objectivity, territorial integrity, complexity, uniformity, the genetic unity and combination of zonaland azonal factors.

Landscape zoning can be made only on the basis of landscape maps. Allotment landscape zoning characteristic of maximal information content, accuracy and objectivity.

On the territory of Pavlodar region peculiar combine forest, forest-steppe, steppe, dry-steppe, semi-desert and lowland terrain types. Geldyeva and Veselova [2] have identified two classes of landscapes: the plains and mountain, part of the plain of class allocated subclasses: relatively low plains, uplifted plains, small bald mountains.

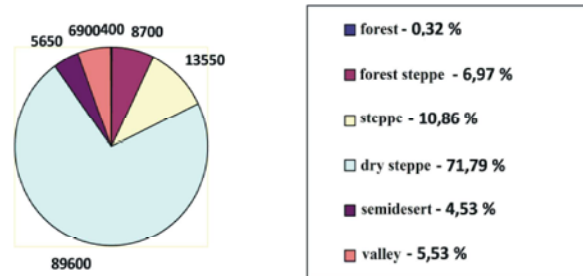


Fig. 2: Diagram of landscapes' types of Pavlodar region's area

In the structure of mountain-class isolated mountain subclass. In addition allocated three subclasses of lowland landscapes.

Depending on the local physical and geographical conditions and processes associated with the nature of the geological structure, the manifestation of tectonic movements, characteristics of topography, soils, vegetation inside types allocated types of landscapes. Within the Pavlodar regional allocated 56 landscape types (Table 1).

On the basis of the landscape map [3], our method mosaic composed diagram of the area subclasses and types of landscapes through the region (Figures 1, 2).

In modern landscape structure clearly expressed latitudinal differentiation of types of landscapes, which is connected with long territory in the meridional direction.

From north to south increases the amount of solar heat and a simultaneous decrease in atmospheric moisture and accordingly changing land cover. The close relationship and interdependence of natural factors leads to the isolation of various types of forest-steppe landscapes of the north, to the steppe and dry steppe in the south. Types of landscapes that include 2 - types of forest-steppe landscapes of relatively low plains, 9 - types of steppe landscapes relatively low plains, 3 - types of the steppe landscape of the lowlands. Dry steppe landscape includes 20 - types relatively low plains, 8 - types of theuplifted plains, 5 - types small bald mountains landscape. Semi-desert landscape is represented by 4 -types regarding low plains, 1 - types small bald mountains landscape. Forest landscapes represented in 1 -type of lowlands. Lowland landscapes are represented by 3types.

Forest-steppe type of the landscape is presented lacustrine-alluvial flat plain and Aeolian dune-hilly plain.

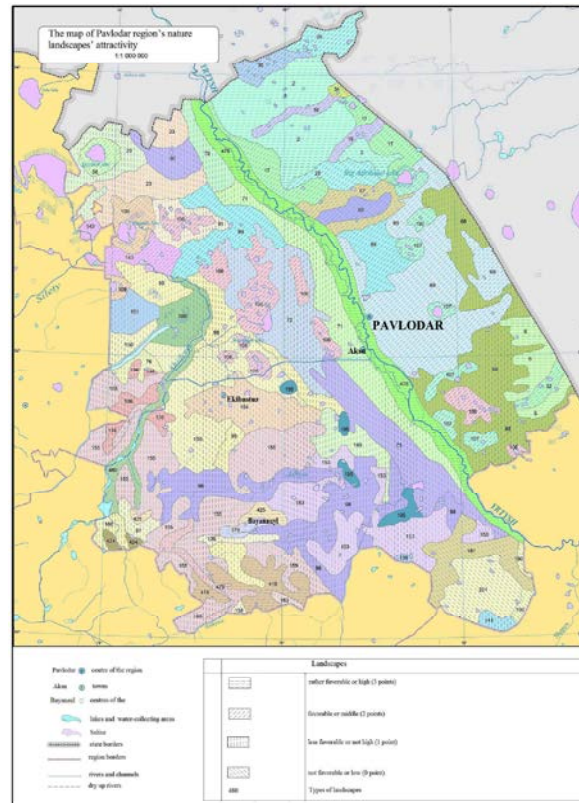
The steppe landscape is formed on the lacustrine-alluvial flat or undulating plain on the altitudes from 110 to 140-150m. The surface of plain complicated by the basins of many lakes and shallow sloping hollows. The steppe landscape is formed in conditions of a more arid climate than the forest-steppe. Steppe type is represented by a landscape of alluvial and lacustrine-alluvial plains.

In the landscape structure of the Pavlodar region defining a dry-type landscape, uniting 20types. This type of landscape is formed by alluvial, lacustrine-alluvial plain and within lake terraced basins. Characteristic landscape elements which are ridges with a relative height of 15-25m, hollows salt lake basins, flat sloping lowlands with 1-3m depth. In respect of climate, this area refers to areas of lack of precipitation.

To intrazonal landscapes landscapes attributed Irtysh River valley and small lowered lake. In the structure of the valley stand natural floodplain complexes with numerous oxbow lakes and residual three floodplain terraces.

Natural regional features, properties of the landscape of the region have always been targeted by a recreational studies as part of the recreation system. Based on the analysis of the landscape map we made a map of the attractive natural landscapes Pavlodar region (Annex 1).

Prospectively and effectiveness of research landscapes for tourism and recreation are determined by the contemporary trends of development of the recreational sector. Ecologically adaptive suggestions will help travel agencies to choose optimal strategy of activity and to understand the prospects of development of this or that region. The development of tourism at the regional



Annex 1:

level presupposes the presence of the answers to the following questions: how can assess the condition of the tourist areas and major problems of its development (landscape marketing, landscape planning); what are the basic directions of tourism best meet the interests of the region, where and what is most effective to invest money (landscape management, landscape planning, landscape ecology, models in landscape research); how to improve the image and to increase the attractiveness of the region for tourists (aesthetics and design of the landscape, the evolution of landscapes, functioning and dynamics of the landscape structure and organization of the landscape models in landscape research); by means of the development of tourism boost socio-economic development of the region (landscape planning, models in landscape studies, landscape-ecological education)[4].

## RESULTS AND DISCUSSION

For the CIS recreational zoning performed by many authors. The most recognized is the zoning proposed by Preobrazhensky andLikhanov and zoning conducted in 1996. Scientists of the Russian International Academy of

Tourism (Zorin, Kvartalnov). Among the former can be distinguished work of Kotlyarov on the zoning of the Republic of Azerbaijan for recreational purposes. Which adopted the four-stage system of taxonomic units recreational zoning: Republic (county, region), area, recreation area, recreation district. By Kotlyarov under the recreational area defined territorial economically interrelated set of recreational enterprises specializing in servicing recreants allowing best suit their needs, using the existing natural and cultural- historical complexes territory and its economic conditions [5].

The prospectivity of the area for tourism development depends on many external and internal factors: security, infrastructure development, popularity on the domestic and international tourist market and other. The degree of development of the area is largely dependent on recreational policy regarding tourism: with the support of the local administration and with the establishment of the economic favorable for investments in tourism sphere in the area can dramatically increase the number of entertainment enterprises.

The issues of zoning of the territory of the Republic of Kazakhstan have been studied by many authors, among which are the work Erdavletov [6]. Zoning of the territory of Kazakhstan according to the degree of attractiveness of natural landscapes for development of recreation and tourism. Popov recreational zoning of the Northern Tien-Shan. Also, a series of regional work, which examines issues of zoning of areas for tourism purposes. The role of ecological tourism in sustainable development of the RK on the example of Almaty region, Tursinbayeva tourism development of the Karaganda region, Kubesova. Evaluation of recreational resources of the Aktobe oblast for the purposes of the development of recreation and tourism, Titova. Problems and prospects of development and territorial organization of tourism Akmola oblast and a number of other authors. Structure and some methodological techniques, which are taken as a basis of this work.

Tourist-and-recreational zoning is the basis for planning and management of tourism industry. In the framework of tourism zoning, defines the basic directions of its development, are estimated territorial preconditions for public effective growth of material-technical base of tourism [7].

Examining the various methods of zoning, we attempt to zoning of the territory of Pavlodar region by the degree of attractiveness natural landscapes. Zoning of the territory of Pavlodar region based on the analysis of the recreational resources covers not only the developed and

perspective area in terms of the development of recreation, conducted within the administrative districts of the region. The positive aspect of the zoning within the administrative districts considered in detail in the work Aliyeva [8].

In assessing natural conditions for recreation the most important criterion is the diversity of the natural environment that are put forward as the main object of the recreational assessment of landscapes. The landscape is natural area, which contains appropriate and coherent set of local natural conditions of life of the people. Natural complexes, allocated as a result of landscape studies may be used for such functions, related to the main kinds of outdoor activities like health, educational, sports and medical [8].

Identifying natural prerequisite for the development of recreation requires learning physiographic characteristics of the region.

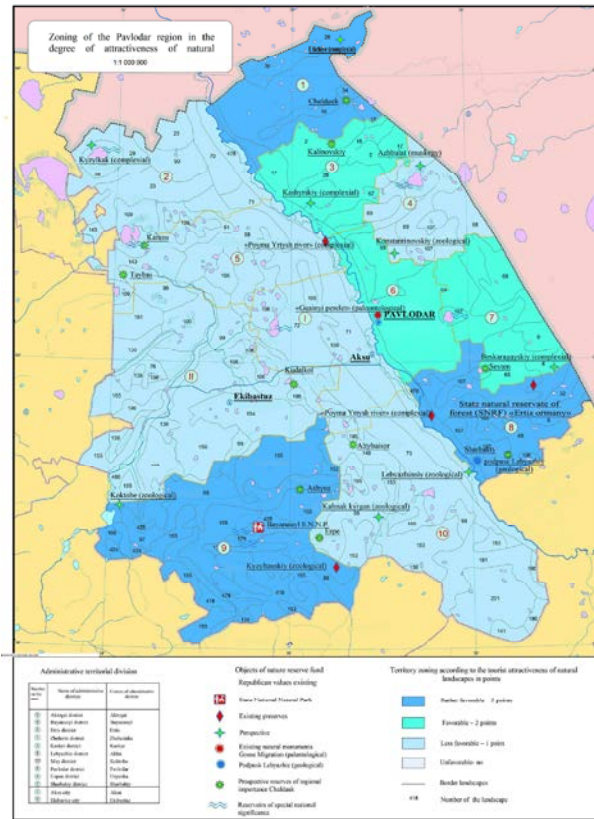
Studies on the identification and zoning of the area by the degree of attractiveness of natural landscapes, based on the study of the landscape map of Kazakhstan [3] and maps of natural reserve fund of Kazakhstan [9].

For convenience, zoning and evaluation of the region according to the degree of attractiveness of natural landscapes (Annex 1), we used the technique Erdavletov S.R. Using the methods of S.R. Erdavletov we have adopted the following graduation rated attractiveness of natural landscapes: very favorable or high (3 points), favorable or moderate (2 points); little favorable or low (1 point); adverse or low (0 points);

An evaluation of each of the types of landscape factors based on the availability of the necessary recreational properties, was assigned 1 point. Set of points identified in the study of the region and the world assigned to each object, shows the number of points by which to judge the natural conditions of the area of each region.

The most important factors that were considered in the recreational assessment of landscapes, were: relief, his morphometric properties that affect the recreational specialization of the region; climate (duration of the beneficial period, the number of favorable days); water as a factor defining the conditions for swimming, balneotherapy, fishing tourism; vegetation, in particular forests as a factor of aesthetic perception, a factor which has a huge cognitive value; wildlife (hunting and fishing animals).

Additional number of points awarded for each object of interest in tourist-and-recreational these included, first of all, the objects of natural reserve Fund or specially



Annex 2:

protected natural areas which are essential for the conservation and sustainable use of biological diversity. Because the data territory in the system of the developed concepts of sustainable development should perform specific functions: the cores monitoring of both natural and natural-anthropogenic; reference objects comprehensive study, functioning, development and improvement of the geographical environments; in places of spiritual and aesthetic upbringing, education, recreation and tourism [10].

Therefore, conservation of different ecosystems, rare species of flora and fauna on the basis of protected natural territory is possible through the organization of ecological, educational and other types of tourism, with the conservation of biodiversity and receive certain benefits.

From the analysis of landscape map, the map of natural reserve Fund, climatic indices and the extent of the vegetation (forest) and animal world (hunting dogs) and research of natural recreational resources[11,12,13]. We identified the most attractive natural landscapes on administrative districts of the region. The result was drafted the scheme of «Zoning and estimating the degree

of the territory attractiveness of natural landscapes» (Annex 2) and classification of types of natural landscapes of Pavlodar region by the degree of their attractiveness for tourism and recreation and tourism which revealed the following number of points (Table 2).

Evaluation analysis shows, among administrative districts of the region a high degree of attractiveness of natural landscapes stand (Bayanaul, Lebyazhinsky and Zhelezinsky ) areas. Regions have peculiar orographic features, significant water basin suitable for recreation (Bayanaul scenic lake, river Irtysh with its tranquillinnacles, numerous salt lakes with medicinal properties ), diverse vegetation ( pine forests Bayanaul island, unique tape Shaldaiya forests, birch and aspen groves Zhelezinka and beautiful floodplain forest Irtysh ), a rich variety of wildlife. Areas have the greatest appeal and picturesque. For these areas favorable period on average 90-100 days. Within these areas is concentrated 4 existing and 8 of the perspective objects of natural reserve Fund of the region and Republic. For data territory is characterized by the presence in the relief of unique geomorphological and geological objects (landscape reserve «Chaldau», the geological nature monument Podpusk Lebyazhye). The territory of the districts have landscapes with very favourable conditions (3 points) for long-term and all kinds of short-term rest in all major areas for any category of tourists[14].

The second category is formed of (Kashyarsky, Pavlodarsky and Sharbaktinsky ) areas, landscapes selectively favourable conditions (2 points), conducive for all kinds of short-term individual and mass rest. For data steppe landscapes are typical in the relief of unique objects (paleontological monument of nature «Goose flight»); unique pine wood; favorable weather and climatic conditions (the number of favorable days in a year 100-109 days) for recreational activities throughout the year; the presence of lakes with medical properties; Irtysh River with picturesque floodplain landscapes, an abundance of hunting animals [15,16].

The third category of the form areas (Ekibastuz, Aktogay, Maisky, Ertis, Uspensky, Aksu) landscapes with little favorable conditions for the organization of some popular kinds of tourism and forms of recreational activities, but suitable for the development of hunting tourism, recreational fishing, informative and medical tourism. For this category characteristic of a point spread recreational resources. Landscape features unique objects of nature both Republican and regional importance numerous lakes habitat of waterfowl, of the Deposit of mineral waters and manifestations of therapeutic muds [17].

Table 2: Classification of types of natural landscapes of Pavlodar region by the degree of their attractiveness for tourism and recreation

Category	Natural landscapes	Number of points					Additional attractive objects	Total points
		Terrain	Climate	Water resources	Forests	Wildlife		
1	2	3	4	5	6	7	8	9
Bayanaul region								
1	Mountain and foothill landscapes	3	2	3	2	3	3	16
2	Low-hill arrays	2	2	1	1	2	2	10
3	Forest-steppe	---	---	---	---	---	---	0
4	Steppe	1	0	0	0	1	0	2
5	Semi-deserts and deserts	---	---	---	---	---	---	0
Total points 28								
Lebyazhinsky region								
1	Mountain and foothill landscapes	---	---	---	---	---	---	0
2	Low-hill arrays	---	---	---	---	---	---	0
3	Forest-steppe	2	2	2	2	2	---	10
4	Steppe	2	2	1	3	3	3	14
5	Semi-deserts and deserts	---	---	---	---	---	---	0
Total points 24								
Zhelezinsky region								
1	Mountain and foothill landscapes	---	---	---	---	---	---	0
2	Low-hill arrays	---	---	---	---	---	---	0
3	Forest-steppe	2	2	1	3	3	2	13
4	Steppe	2	2	2	2	2	1	11
5	Semi-deserts and deserts	---	---	---	---	---	---	0
Total points 24								
Kashyrsky region								
1	Mountain and foothill landscapes	---	---	---	---	---	---	0
2	Low-hill arrays	---	---	---	---	---	---	0
3	Forest-steppe	2	2	1	3	2	1	11
4	Steppe	2	2	2	2	2	1	11
5	Semi-deserts and deserts	---	---	---	---	---	---	0
Total points 22								
Pavlodarsky region								
1	Mountain and foothill landscapes	---	---	---	---	---	---	0
2	Low-hill arrays	---	---	---	---	---	---	0
3	Forest-steppe	2	2	1	2	1	0	8
4	Steppe	2	2	2	2	2	3	13
5	Semi-deserts and deserts	---	---	---	---	---	---	0
Total points 21								
Sharbaktinsky region								
1	Mountain and foothill landscapes	---	---	---	---	---	---	0
2	Low-hill arrays	---	---	---	---	---	---	0
3	Forest-steppe	---	---	---	---	---	---	0
4	Steppe	2	2	2	3	3	3	15
5	Semi-deserts and deserts	---	---	---	---	---	---	0
Total points 15								
The territory of Ekibastuz city administration *								
1	Mountain and foothill landscapes	---	---	---	---	---	---	0
2	Low-hill arrays	2	2	2	1	1	2	10
3	Forest-steppe	---	---	---	---	---	---	0
4	Steppe	1	0	1	0	1	0	3
5	Semi-deserts and deserts	---	---	---	---	---	---	0
Total points 13								

Table 2: Continued

		Number of points						Total points
Category	Natural landscapes	Terrain	Climate	Water resources	Forests	Wildlife	Additional attractive objects	
1	2	3	4	5	6	7	8	9
Aktogay region								
1	Mountain and foothill landscapes	---	---	---	---	---	---	0
2	Low-hill arrays	---	---	---	---	---	---	0
3	Forest-steppe	---	---	---	---	---	---	0
4	Steppe	2	2	2	2	2	2	12
5	Semi-deserts and deserts	---	---	---	---	---	---	0
Total points 12								
Maisy region								
1	Mountain and foothill landscapes	---	---	---	---	---	---	0
2	Low-hill arrays	1	0	1	0	2	1	5
3	Forest-steppe	---	---	---	---	---	---	0
4	Steppe	1	0	1	1	1	1	5
5	Semi-deserts and deserts	1	0	0	0	1	0	2
Total points 12								
Ertis region								
1	Mountain and foothill landscapes	---	---	---	---	---	---	0
2	Low-hill arrays	---	---	---	---	---	---	0
3	Forest-steppe	---	---	---	---	---	---	0
4	Steppe	2	2	2	2	2	2	12
5	Semi-deserts and deserts	---	---	---	---	---	---	0
Total points 12								
Uspensky region								
1	Mountain and foothill landscapes	---	---	---	---	---	---	0
2	Low-hill arrays	---	---	---	---	---	---	0
3	Forest-steppe	---	---	---	---	---	---	0
4	Steppe	2	2	1	2	2	3	12
5	Semi-deserts and deserts	---	---	---	---	---	---	0
Total points 12								
The territory of Aksu city administration *								
1	Mountain and foothill landscapes	---	---	---	---	---	---	0
2	Low-hill arrays	---	---	---	---	---	---	0
3	Forest-steppe	---	---	---	---	---	---	0
4	Steppe	2	2	2	1	1	2	10
5	Semi-deserts and deserts	---	---	---	---	---	---	0
Total points 10								

The territory of Aksu city administration \*

The territory of Ekibastuz city administration \*

Landscapes with little favorable conditions for recreation form a dry steppe low-hill, dry-steppe lowland landscapes.

Landscapes with unfavorable conditions for recreation semidesertic areas of Maisky region. Landscapes with unfavorable conditions for recreation semidesertic areas of Maisky region.

Composed map of " Zoning of Pavlodar region in the degree of attractiveness of natural landscapes " (Annex 2) provides visual information about the areas of

concentration of natural recreational resources. Landscapes with very favorable conditions for the development of tourism and recreation with a score equal concentrated in Bayanaul, Lebyazhinsky and Zhelezinsky areas; favorable landscapes Kashyrsky, Pavlodarsky and Sharbaktinsky; little favorable - in Ekibastuz, Aktogay, Maisky, Ertis, Uspensky, Aksu district. Analysis of natural prerequisite for the development of recreation and tourism areas and types of terrain classification according to the degree of



attractiveness shows: Pavlodar region has a fairly significant and diverse recreational potential. High degree of tourist attractiveness have mountain, valley and partly steppe landscapes.

Very favourable and attractive natural recreational resources are peculiar for Bayanaul, Lebyazhinsky and Zhelezinsky areas. The base of these resources constitute Bayanaul low mountain forest oasis, relict forest belt Lebyazhinsky area, picturesque lowland forests, birch-aspen forests (forest outliers) Zhelezinsky area and others.

The most attractive recreational resources and sufficiently well-developed concentrated in Bayanaul area. Picturesque lowland forest landscapes, a favorable climate and orographic conditions and availability of Bayanaul State National Natural Park /BSNNP/turned the area not only in the zone of mass recreation and tourism, meet all the requirements of territorial recreational systems (TRS) national scale, but also created conditions for scientific-research works. When appropriate approach to tourism activities, infrastructure development, bringing roads linking with large agglomerations in normal conditions, would organize here (TRS) of the international rank. Favorable natural recreational resources are characteristic of Kashyrsky, Pavlodarsky and Sharbaktinsky areas. The presence of water bodies, nature monuments, picturesque landscapes and other objects, cause cognitive and aesthetic value of these areas for organization of various on character of tourist routes, the availability of mineral springs and therapeutic mud, favorable climatic conditions are important conditions for the development of mass rest and treatment within these areas. Little favourable natural recreational resources of such areas, as Ekibastuz, Aktogay, Maisky, Ertis, Uspensky, Aksu district.

Deposits of mineral waters, the treatment with therapeutic muds, the presence of specially protected territories and a number of interesting natural objects of the point spread allow the organization of educational and recreational and sporting and hunting tourism oriented mainly to the domestic consumers.

### CONCLUSION

Thus, recreational zoning is an important methodological techniques to identify differences between the territories for security recreational resources of infrastructure, promotion of recreational needs. Recreational zoning allows deeper understanding of tourism as an object of study.

During our study examined the theoretical and methodological aspects of recreational zoning map drawn attractiveness of natural landscapes, zoning of the area held by the degree of attractiveness of landscapes, as well as in point form given characteristic recreational districts.

Based on these results it can be concluded that the area of Pavlodar region is favorable for the development of tourism and recreation, as it has quite a variety of attractive natural and recreational resources of regional and national importance. Picturesque landscapes of low Bayanaul area, floodplain forests Ertis, tape and forests Lebyazhinsky and Sharbaktinsky areas have developed infrastructure and a huge potential for the development of many kinds of recreational activities can be the basis of territorial recreation systems ( TRS ) of Pavlodar region. Analysis allows us to talk about the possibility of organizing public recreation in the region. For their regional planning or proper placement of the individual boarding houses, camping, tourist bases in the best conditions by its microclimate and relief in already planned recreation areas. You can confidently say that, on the basis of recreational zoning and knowledge of the trends of the recreational market, you can effectively plan and implement investments at the level of individual tourist companies and banks.

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