

Recreational Zoning of the Coastal Territories Using the Example of the Odessa Region

Abstract

This article analyzes the recreational potential of the Odessa region with the implementation of recreational zoning. The evaluation of the recreational potential proposed is based on selected indicators, reflecting the presence of certain recreational resources in the Odessa region, which is located on the Ukrainian Black Sea coast. The zoning of the geosystem of the territories is carried out by combining several tools and methods according to the indicators of the recreational potential identified in the corresponding zones. Based on the assessment results completed in 2019, the territorial units were grouped into the recreational areas proposed according to their suitability for the main recreation functions. The results obtained identify five recreational zones in the Odessa region with the most promising strategy for recreational use. This will become the basis for developing priority strategies for investing into the recreational sphere and determining the types and objects of investment.

Keywords

Odessa region • recreational potential • recreational zoning • recreational resources

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Introduction

Recreational potential is an important resource for economic development, and its proper assessment increases the efficiency of its use. In addition, the ecological aspect of recreational development is important. As noted by A. Krzymowska-Kostrowicka (1986), the analysis of the spatial structure of tourist and recreation phenomena on both the micro- and macroscale is one of the basic tasks of the geography of tourism. For information about spatial systematization, the landscape approach can be used for recreational potential allocation (see Krzymowska-Kostrowicka 1993; Richling 1992, 2002), or for zoning. In our study, we carry out zoning based on administrative boundaries, as the results are directed primarily to the authorities to make adequate management decisions. Moreover, zoned territories can be useful for investment companies or economic associations (Sukhova et al. 2016).

The method of data processing and visualization chosen in this study is the GIS method. This method has been successfully tested in many spatial studies, including those aimed at the study of recreational resources and the corresponding zoning of the territory (see Abdullah et al. 1994a, 1994b).

The object of the study was the Odessa region of Ukraine, which is difficult in terms of the history of its formation. These areas of this region differ greatly from each other due to natural, geographical, and socio-geographical features. This region of Ukraine is simultaneously one of the richest in terms of quantity and diversity of recreational resources and has the lowest level of recreational activity (Butko & Shabardina 2011). So, we can conclude that the Odessa region has a strong recreational potential, which has not yet been implemented.

The potential of recreational development in the Odessa region is affected not only by its geo-climatic features, due to

its location in the Northern Black Sea region, but also by the availability of natural healing and recreational resources, tourist sites, and the historically developed resort infrastructure of marine recreation. The priority given for the development of this particular area in the region is justified in the main strategic documents adopted by local authorities.

Today, the main types of tourism in the Odessa region are event-based, gastronomic, culture-related, and business. Cultural tourism and entertainment, ethnic tourism, educational, wellness, and many other types are also present. Based on its tourist and recreational potential, the city of Odessa, and the Odessa region, is one of the leading sites in Ukraine.

Nevertheless, the tourist and recreational potential of the Odessa region are currently not fully realized. Among the internal weaknesses of this industry in the region, experts highlight the difficulties of organizing cruise tourism, a critical reduction in the sanatorium and resort base and the poor quality of service in existing enterprises, the mismatch between the price and quality of tourism services in the region, and the slowdown in the industry's growth rate by type of travel. From the external environment, the sources of threats to tourism and recreation are the increase in anthropogenic, environmental and technological pressures, pollution from solid household waste and air pollution, the constant reduction of the public beach area, the insufficient number of professional personnel in the tourism sector, and the constant growth of competition from other regions.

To implement the general strategic direction for the development of tourism and recreation in the region, several activities are proposed such as creating a comfortable environment for tourists, developing the information infrastructure

of tourist services, and promoting and positioning the city as an international tourist center that is interesting to visit all year round. The most important task for the development of tourism and recreation for local authorities is to use innovative technologies to attract investment into industry, which will contribute both to the development of tourism and the regional economy as a whole. Thus, the recreational potential analysis of the Odessa region, and the implementation of its recreational zoning, which aims to define promising directions for its development, can be chosen as an actual focus of research in the recreation industry. This is what this study aims to do.

Theoretical approaches to assessing recreational resources of territories

Research into tourism resources has been carried out by scientists, and sites have been identified as natural or anthropogenic, with the qualities to satisfy the healing, recreational, cognitive, business, or leisure needs of tourists (Alexova 2019). So, tourism resources include recreational resources. But not all types of tourism can be conveniently combined with recreation, since the latter is considered as leisure time, restoring energy spent by people while working, as well as the accumulation of a certain energy margin for further activity and development of physical and intellectual potential (Ilev at al. 2017). Thus, there is a need to define the most relevant directions for the tourist and recreational potential development for each specific region in order to ensure its economic development. The potential of tourism as a promising key factor in the growth of the local economy was noted by researchers for such diverse regions as Asia (Wu & Wu 2019), the cross-border region of Great Altai (Sukhova at al. 2016), Poland (Durydiwka 2013), the Mediterranean (Tugcu 2014), and Africa (Obadiah at al. 2012).

In this study, the recreational potential of a particular area means the amount of its recreational resources that can be used for the organization and development of recreational activities in the specified area. It is important for Ukraine to ensure the maximum effect from investments in recreation by considering the existing potential of specific territories, based on a combination of a number of different factors – from climatic characteristics and the availability of natural healing resources to the presence of cultural heritage sites, event tourism, and gastronomic and other types of tourism. To determine the most promising types of activities and locations for investing in the tourist and recreational area, it is necessary to evaluate the recreational potential of the region, which can be represented in the form of a recreational zoning scheme that reflects the suitability of the territories for the implementation of certain recreational functions.

An analysis of publications devoted to the problems of recreational zoning and regionalization showed the complexity and ambiguity of this problem. The methods proposed by various Ukrainian researchers demonstrate the ambiguity in the selection of regionalization criteria, the tendency toward in-depth detailing of these schemes, as well as the presence of a subjective moment in the approach to the problem (Horun 2012).

There is also very little unity in the methods and approaches of assessing recreational resources and recreational zoning in studies by foreign scientists. For example, back in the 1970s, a method for assessing certain types of recreational resources associated with outdoor recreation was proposed for use in regional planning (Brown at al. 1978). There are also more recent studies on ecological recreational systems and assessing the benefits that people derive from landscapes and the natural environment (Hermes at al. 2018).

In general, these and many other studies related to the assessment of recreational resources often focus on one of the types of recreation, which significantly limits the possibility of

using the proposed methods for a comprehensive recreational assessment of territories. However, the value of such an assessment increases significantly when a more complete evaluation of all criteria is considered, including components of nature and society, as well as their mutual influences. Such assessments make more relevant decisions on recreational development possible, and increase the effectiveness of investments in such developments.

As for the region directly considered in this study, the coastal part of the Odessa region, resort-recreational zoning was carried out at the level of resort-recreational areas based on the following criteria: the presence of sanatorium-resort institutions, their specialization, capacity, amount of recreational load, and the presence of natural healing resources (Topchiiev 2003). Later K. Belenkiy (2006) carried out the zoning of the coastal strip of the Odessa region based on the criteria of the availability of health resort institutions and natural healing resources. Nevertheless, this researcher supplemented the list of evaluation criteria with landscape indicators and transport availability. Based on the differentiation of resort and recreational use of the territories of the coastal strip of the Odessa region, the author identified three types of territories: those with a developed resort and recreational infrastructure; those where the resort and recreational industry is developing; and territories where the development of the resort and recreational industry is promising.

Most Ukrainian authors performed resort-recreational regionalization of the coastal strip with sanatorium-resort facilities and infrastructure located on it based on the analysis of climatic and balneological resources. The authors did not consider the entire list of landscape indicators, natural protected areas, or the value of recreational and technogenic load, and did not fully take into account the characteristics and indicators of historical and cultural objects.

According to the methodology for complex landscape and recreational intra-region regionalization of the Odessa region territories, developed by V. Horun (2012), the assessment of the region's area was carried out based on the analysis of an even wider range of factors and indicators: climatic, landscape, the availability of mineral waters and peloids, the assessment of the recreational potential, and the assessment of the recreational and technogenic loads of the studied area.

Despite the extensive consideration of various factors affecting recreational activities, in her methodology, V. Horun did not consider such important aspects as assessing the recreational potential of the Odessa region, or the complex ecological state of the environment, including the pollution of water bodies and soils, or the location of hazardous industries and landfills for household waste. Factors important for the development of recreation were not considered either, such as the placement of other objects of implicit tourism infrastructure – campsites, fishing and equestrian clubs, festivals, and holiday resorts.

A further methodological extension of the factors for assessing tourism and recreational potential can be the methodology for the integrated assessment of the tourist and recreational potential of the regions of Ukraine proposed by the team of the Odessa National Economic University (Herasymenko at al. 2016). The list of factors (determinants) that determine the tourist and recreational attractiveness of the region was supplemented by such new elements as the political conditions and the ability of the territory to introduce innovations, as well as the cultural and historical conditions and transport accessibility of the resort territories. Among the objects of tourist infrastructure, they also identified two main groups – explicit (hotel business, tour operators) and implicit (museums, zoos, national natural parks, SPA centers, etc.). However, this technique also implies subjectivity. According to the authors, the list of assessment indicators “in most cases

is established on the basis of the analysis of the problem being solved and the informal considerations of the researcher.”

As one of the most important trends of the last decade, experts note the use of GIS technologies in the analysis of tourism resources, which allow not only to visually present the results of the assessment in a cartographic way, but also to automate the assessment process. Information on natural resources and the environment can be considered as salient factors, and best determines zoning strategy, and an application of GIS is a better approach to manage, process and analyze immense data efficiently (Abdullah et al. 1994a, 1994b).

All this gives reason to say that further improvement of the methods for the recreational assessment of territories is required, which will provide more complete information and objectively consider the whole spectrum of the most important factors affecting recreational activities, as well as use modern tools for assessing recreational resources. Therefore, the urgent issue is to improve a comprehensive method of recreational zoning of territories with the subsequent implementation of this method using the example of performing recreational zoning of the territories of the Odessa region using GIS technologies.

The recreational zoning of the territories of the Odessa region using GIS technologies

As a methodological basis, a comprehensive systematic approach was chosen that allows the zoning of the geosystem of the territories of the Odessa region based on a combination of several tools and methods according to the indicators of the recreational potential identified in the corresponding zones.

The concept of “recreational area” can be considered within the framework of the recreational system concept, according to which the term “regionalization” means the identification of internally integral areas, and “zoning” is the identification of homogeneous zones. Thus, recreational zoning can be represented as a process of identifying homogeneous zones of different territories according to similar recreational features. Accordingly, a recreational zone can be represented as a territory with a specific set of recreational features, which differs from others in its suitability for implementing several different types of recreational activities in their unique combination within the allocated zone.

The very concept of recreational activities implies a system of activities related to the use of people’s free time for their health, culture-related, and sporting activities in specialized territories outside their permanent residence. The basis for the formation of recreation is the most rational use of available recreational resources and the possibility of combining them. At the same time, recreational resources are considered as natural and anthropogenic geosystems, bodies and natural phenomena, artifacts that have comfortable properties and consumer value for recreational activities and can be used to organize recreation and recovery of a certain contingent of people at a certain fixed time using technology and available materials.

Then, the formation of the recreational potential of the region will be determined by the possibility of using the dominant recreational and tourist resources in the organization and developing recreational activities in a certain territory.

To perform recreational zoning in the Odessa region based on the previously proposed method (Herasymenko et al. 2016), two components of the region’s recreational potential were identified – natural-geographical and socio-historical. Assessment of these components of the recreational potential of the region was carried out for each district of the Odessa region. Districts are upper-level administrative-territorial units in the regions of Ukraine. At the time of the study, the Odessa region had twenty-six districts. The general assessment scheme is given in Table 1.

To compile a list of components for each part of the recreational potential, as well as the corresponding indicators for their assessment, the method of expert assessments was used (Karasev & Mukanina 2019). The method of expert assessments is a method of organizing work with experts and processing their opinions to obtain information for making decisions. The expert group included a team of researchers with the involvement of specialists from the Department of Tourism, Recreation and Resorts of the Odessa Regional State Administration. For selection, the experts were offered a list of possible characteristics of the recreational potential, presented by category, as well as relevant indicators for their determination. It was also possible for experts to propose their own characteristics and indicators. The survey was conducted in three rounds. Consistency of expert opinion was determined by the value of the concordance coefficient.

During further research, the recreational zoning of the territories of the Odessa region was considered within the framework of the recreational system concept (Pirozhnik 1976) as a process of identifying homogeneous zones of different territories according to similar recreational features.

According to the relevant Ukrainian legislation, the result of such a process in urban planning is a zoning plan, which determines the conditions and restrictions on the use of the territory within certain functional zones. However, in the recreational sphere, the result of zoning will be a scheme setting out the recreation type, and which development has the highest priority for a particular area given its recreational potential.

For the analysis of recreational features and their territorial localization, GIS technologies were used. The geoinformation model of recreational zoning was built using the ArcGIS Online resource.¹ The model contains distributed recreational resources presented on relevant layers by their main types with corresponding estimates. Each type of resource is presented by a Building Information Modeling object with a level of detail sufficient to identify the resource and the necessary information about it. The GIS model obtained in this way served as the basis for expert assessments of the recreational potential and the implementation of recreational zoning.

The recreational zoning of the Odessa region was carried out in three main stages based on an analysis of the suitability of the territories for various types of recreational activities. The first and main factor in the differentiation of zones is the level of favorable natural and geographical conditions for the implementation of the main functions of recreation in the territory – biomedical, sports, cognitive.

At the first stage of the analysis, in accordance with the integrated assessment of the natural-geographical recreational potential (hereinafter NGRP), a grouping of areas into zones was carried out with their suitability for the main function of recreation – biomedical, including such types of recreational activities as therapeutic and rehabilitation.

At the second stage of the analysis, based on the integrated indicators for assessing the socio-historical recreational potential (hereinafter SHRP), a grouping of areas into zones suitable for the implementation of cognitive and sports recreational functions in the corresponding territory was performed.

The third stage of the analysis was an expert assessment of the possibilities of realizing the potential of unused resources within certain functional types of recreational areas for their suitability to perform additional recreational functions – the development of tourism types that are provided with their recreational potential.

The approach of recreational zoning is presented in Figure 6.

¹Map of Odessa region was provided by ArcGIS Online Mapping and analysis: location intelligence for everyone.

Table 1. Scheme for assessing the recreational potential of the Odessa region

SUBJECT OF ASSESSMENT	ASSESSMENT COMPONENTS	MAIN GROUPS OF ASSESSMENT INDICATORS	INDICATORS OF ASSESSMENT	DATA SOURCES OF INDICATOR VALUE
Recreational potential of the Odessa region	Natural and geographical recreational potential	Climate resource assessment	<ul style="list-style-type: none"> – average air temperature for July; – average sea water temperature; – air humidity; – total solar radiation intensity; – duration of solar radiance over the year; – number of days with an average air temperature of more than 15 °C; – average annual wind speed; – duration of the heliotherapy period; – duration of the swimming season. 	DSTU-N B B.1.1-27: 2010 “Protection against hazardous geological processes, harmful operational effects, fire. Construction climatology” ¹
		Assessment of geomorphological resources	<ul style="list-style-type: none"> – density of the dismemberment of the relief; – depth of the relief dismemberment; – steepness of the slopes; – access to water, beaches, shores, shallows; – percentage of meadow lands. 	Maps of Ukraine ²
		Assessment of balneological resources	<ul style="list-style-type: none"> – sources of mineral water; – sources of therapeutic mud (peloids); in terms of localization, quantitative and qualitative characteristics, as well as possible directions for their further use. 	The Ecological Passport of the Odessa region ³
		Assessment of the structural elements of the eco-network	<ul style="list-style-type: none"> – ASSESSMENT OF OBJECTS OF THE NATURAL-RESERVED FUND: – share of the eco-network in the total area of the rayon; – share of natural-reserved fund objects in the total area of the rayon; – rate of attraction of the natural-reserved fund. 	Regional ecological network of Odessa region (sketch map) ⁴ List of territories and objects of the natural-reserved fund of national and local significance in the Odessa region ⁵

¹Protection against hazardous geological processes, harmful operational effects, fire. Construction climatology: DSTU-N B B.1.1-27: 2010 [in Ukrainian]. Available from: <https://dbn.co.ua/load/normativy/dstu/dstu_b_v_1_1_27_2010/5-1-0-929/> [28 March 2022].

²Ecological passport of Odessa region for 2018. Department of Ecology and Natural Resources [in Ukrainian]. Available from: <<https://mepr.gov.ua/news/34452.html>> [28 March 2022].

³Maps of Ukraine [in Ukrainian]. Available from: <<https://geomap.land.kiev.ua/relief-2.html>> [28 March 2022].

⁴Regional ecological network of Odessa region (sketch map). Odessa Regional State Administration [in Ukrainian]. Available from: <<https://ecology.odessa.gov.ua/montornrg/>> [28 March 2022].

⁵List of territories and objects of the natural-reserved fund of national and local significance in the Odessa region [in Ukrainian]. Available from: <<https://ecology.odessa.gov.ua/perelk-teritorj-ta-obktv-prirodno-zapovdnogo-fondu-odesko-oblast-stanom-na-01012018/>> [28 March 2022].

Continued Table 1. Scheme for assessing the recreational potential of the Odessa region

SUBJECT OF ASSESSMENT	ASSESSMENT COMPONENTS	MAIN GROUPS OF ASSESSMENT INDICATORS	INDICATORS OF ASSESSMENT	DATA SOURCES OF INDICATOR VALUE
		Assessment of the environmental status	<ul style="list-style-type: none"> – population density; – density of tourists; – density of emissions of harmful substances; – volumes of territory pollution with waste of I - III hazard class; – dynamics of emissions into the air; – the existence of objects of increased danger, their location and class of danger; – volumes of polluted wastewater discharged into surface water bodies; – storage of prohibited and unsuitable pesticides; – number of landfills, butts, solid waste landfills, included not certified. 	The Ecological Passport of Odessa region ⁶
	Socio-historical recreational potential	Assessment of cultural and historical resources	<ul style="list-style-type: none"> – number of historic monuments; – number of urban planning and architectural monuments; – number of archaeological monuments; – number of extremely popular objects having a cultural, cognitive and/or historical value. 	State Register of Immovable Monuments of Ukraine ⁷ Google Maps search engine of Odessa region ⁸
		Assessment of natural and social resources	<ul style="list-style-type: none"> – area hunting grounds; – reservoirs, including artificial, with fishing bases, clubs; – objects of gastronomic tourism; – ethno-tourism objects; – horse-riding clubs. 	Google Maps search engine of Odessa region ⁸
		Assessment of event-attractational resources	<ul style="list-style-type: none"> – number of annual festivals; – number of stable mass cultural events; – number of entertainment facilities. 	Google Maps search engine of Odessa region ⁸

Source: own elaboration

⁶Ecological passport of Odessa region for 2018. Department of Ecology and Natural Resources [in Ukrainian]. Available from: <<https://mepr.gov.ua/news/34452.html>> [28 March 2022].

⁷State Register of Immovable Monuments of Ukraine. Department of Ecology and Natural Resources [in Ukrainian]. Available from: <<https://mkip.gov.ua/content/derzhavniy-reestr-neruhomih-pamyatok-ukraini.html>> [28 March 2022].

⁸Sights of Odessa region [in Ukrainian]. Available from: <<https://www.google.com/maps/search/%D0%B4%D0%BE%D1%81%D1%82%D0%BE%D0%BF%D1%80%D0%B8%D0%BC%D0%B5%D1%87%D0%B0%D1%82%D0%B5%D0%BB%D1%8C%D0%BD%D0%BE%D1%81%D1%82%D0%B8+%D0%9E%D0%B4%D0%B5%D1%81%D1%81%D0%BA%D0%BE%D0%B9+%D0%BE%D0%B1%D0%BB%D0%B0%D1%81%D1%82%D0%B8/@46.4478866,30.550249,11.5z>> [28 March 2022].

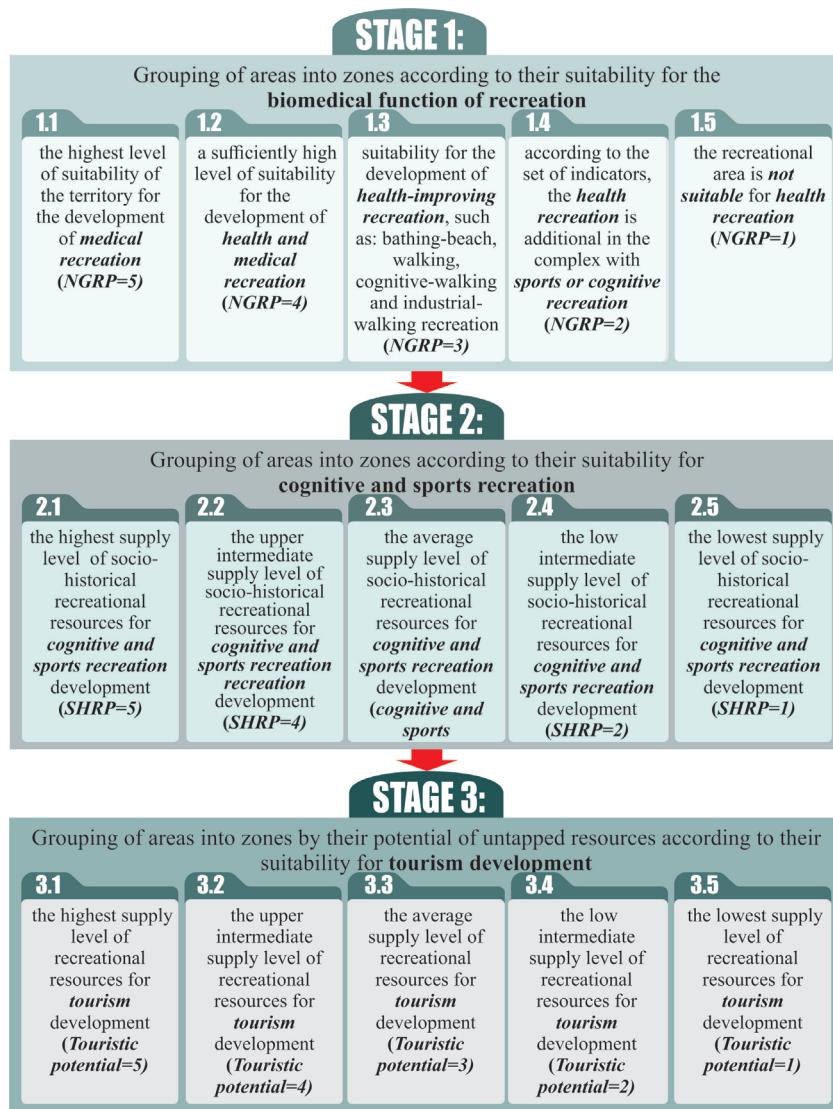


Figure 1. The stages of recreational zoning implementation
Source: own elaboration

Results and discussion

The analysis of regional features of the recreational potential formation served as the basis for highlighting the following factors of natural recreational resources: bioclimatic; geomorphological; structural elements of the ecological network; balneological resources, as well as the current environmental status. For each group of factors, a list of indicators was established, based on which an assessment was made. The values of the relevant indicators were obtained from climatological normative documents posted for public access.

An analysis of the structural elements of the ecological network was carried out based on an assessment of the objects of the natural-reserved fund of the Odessa region (Fig. 2). The data was obtained from the list of territories and objects of the natural-reserved fund of national and local significance located in the Odessa region, provided by the Odessa region administration.²

The analysis of balneological recreational resources was carried out based on estimates of mineral water sources and

therapeutic muds or peloids (Fig. 3). The informational basis of this analysis was the data of the State Cadaster of Natural Medicinal Resources provided by the State Institution “Ukrainian Scientific-Research Institute of Medical Rehabilitation and Balneology of the Ministry of Health of Ukraine.”

As a basis for assessing the ecological state of the Odessa region, the method of point assessment was used (Beydik 2001), which was supplemented by several indicators in the environmental sphere. The informational basis for assessing the ecological state of the region (Fig. 4) was statistical data and the data of the Ecological Passport of Odessa region.³

The results of the assessment of climatic and geomorphological resources of the Odessa region by selected indicators are presented in Figure 5.

If the criteria and methodology for assessing natural recreational resources are well developed, then there is no generally accepted scheme for assessing historical and cultural resources. Therefore, to determine the socio-historical

²Regional ecological network of the Odessa region (sketch map) was provided by Odessa Regional State Administration 2020

³Ecological passport of the Odessa region for 2018 was provided by the Department of Ecology and Natural Resources.

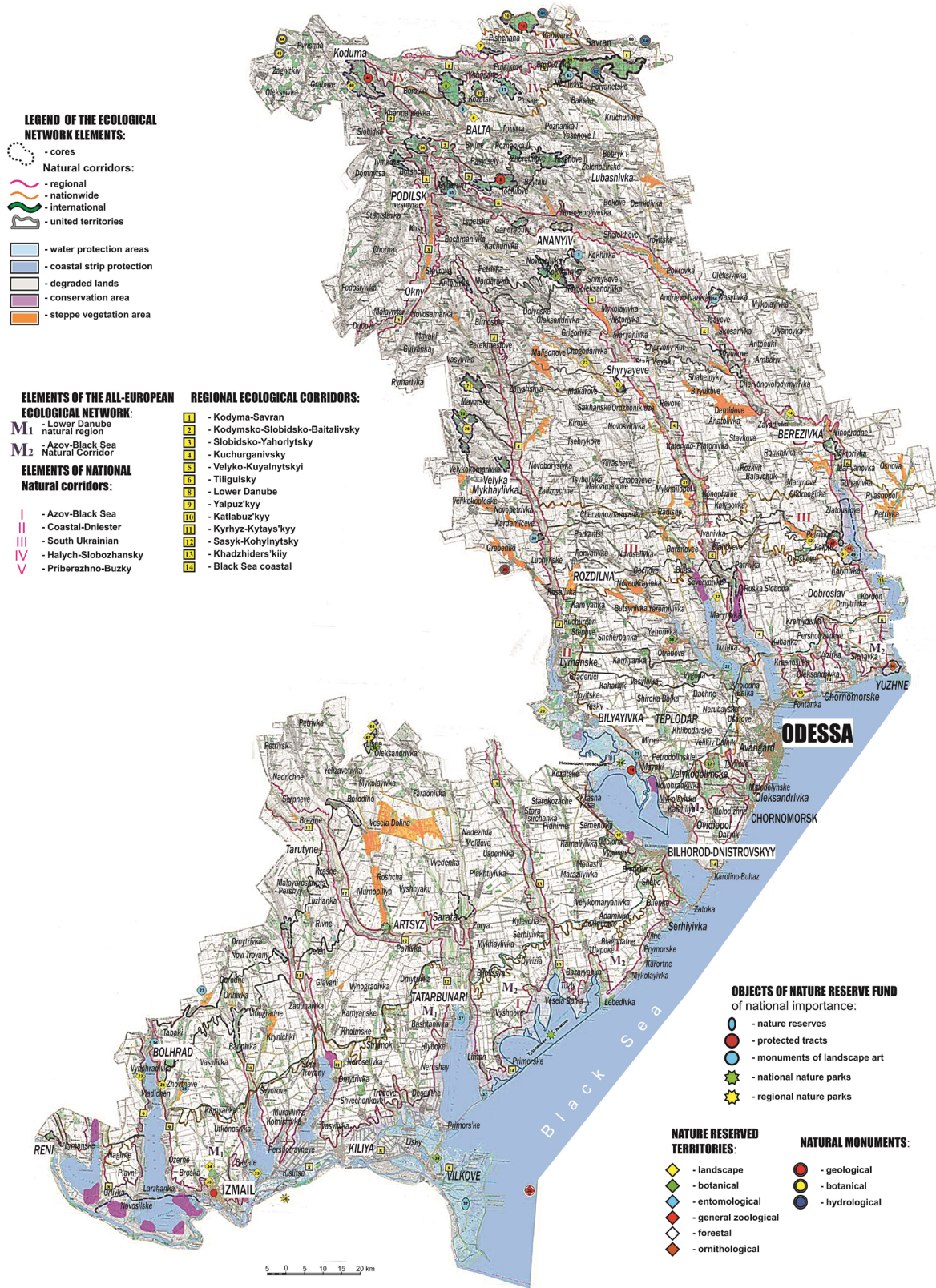


Figure 2. Layout of structural elements of the ecological network of the Odessa region
Source: own elaboration



Figure 3. Layout of balneological resources of the Odessa region
Source: own elaboration

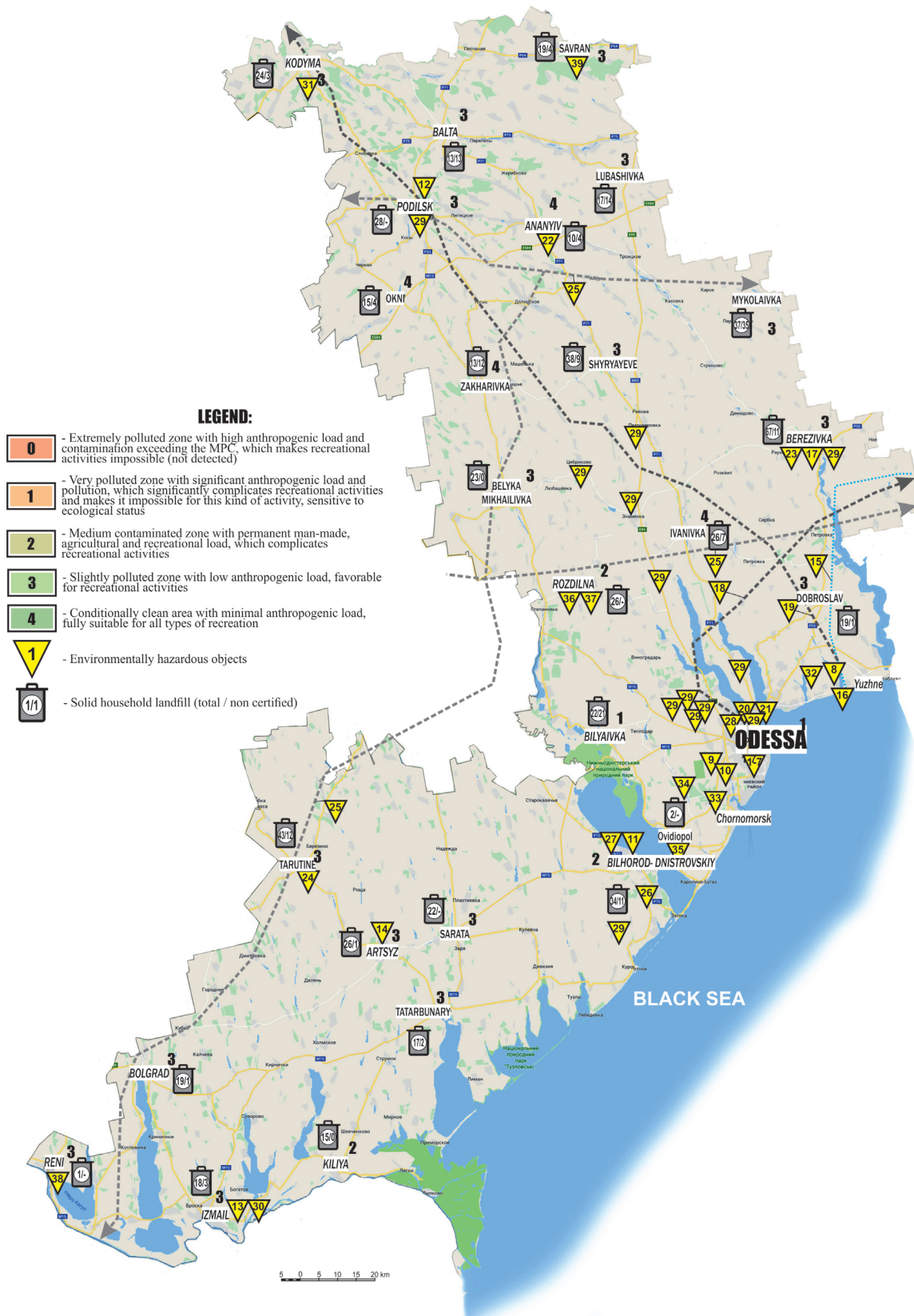


Figure 4. Environmental assessment scheme of the Odessa region
 Source: own elaboration

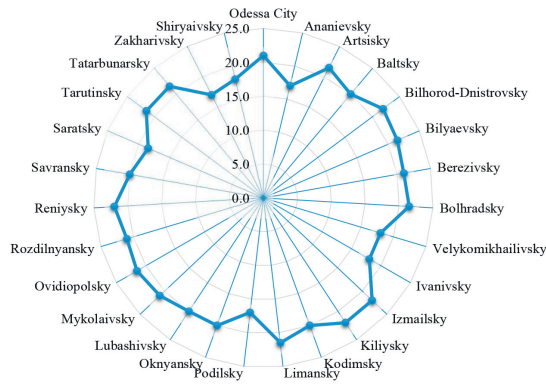


Fig. 5a. Climate Resource Assessment (in points)

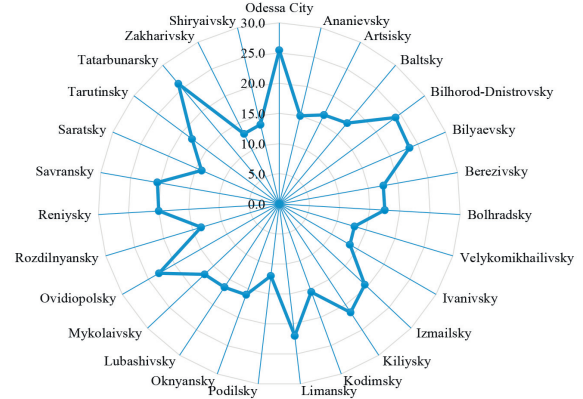


Fig. 5b. Assessment of geomorphological resources (in points)

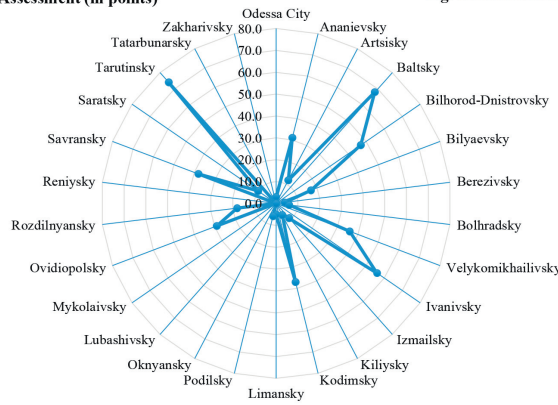


Fig. 5c. Assessment of balneological resources (in points)

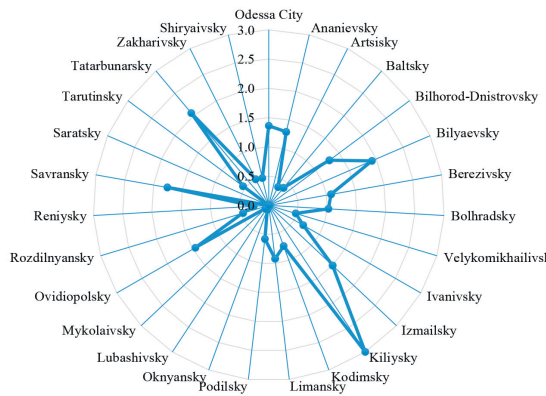


Fig. 5d. Assessment of the structural elements of the eco-network (in points)

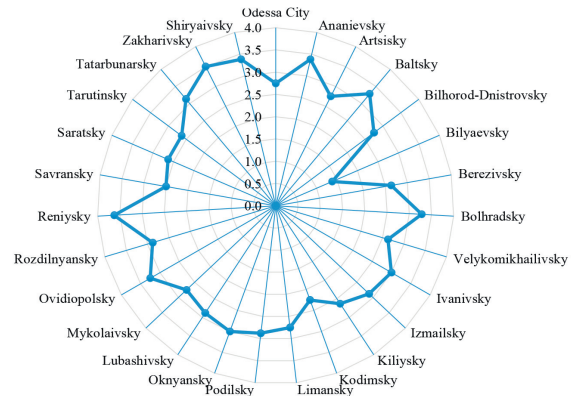


Fig. 5e. Assessment of the environmental status (in points)

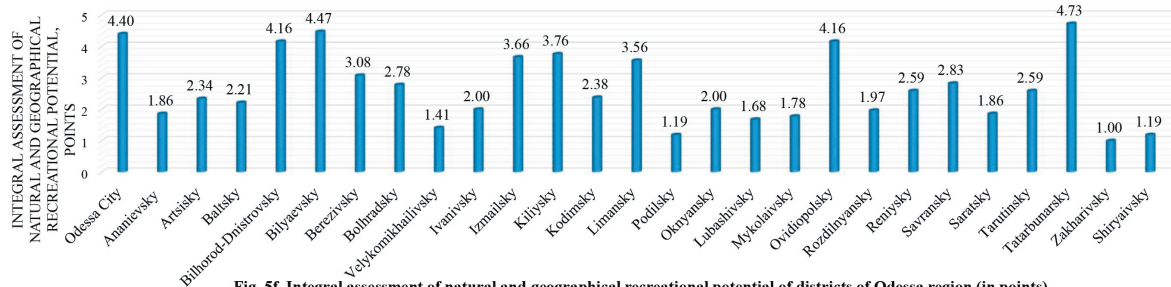


Fig. 5f. Integral assessment of natural and geographical recreational potential of districts of Odessa region (in points)

Figure 5. Assessment results of the natural and geographical recreational potential of the Odessa region
Source: own elaboration

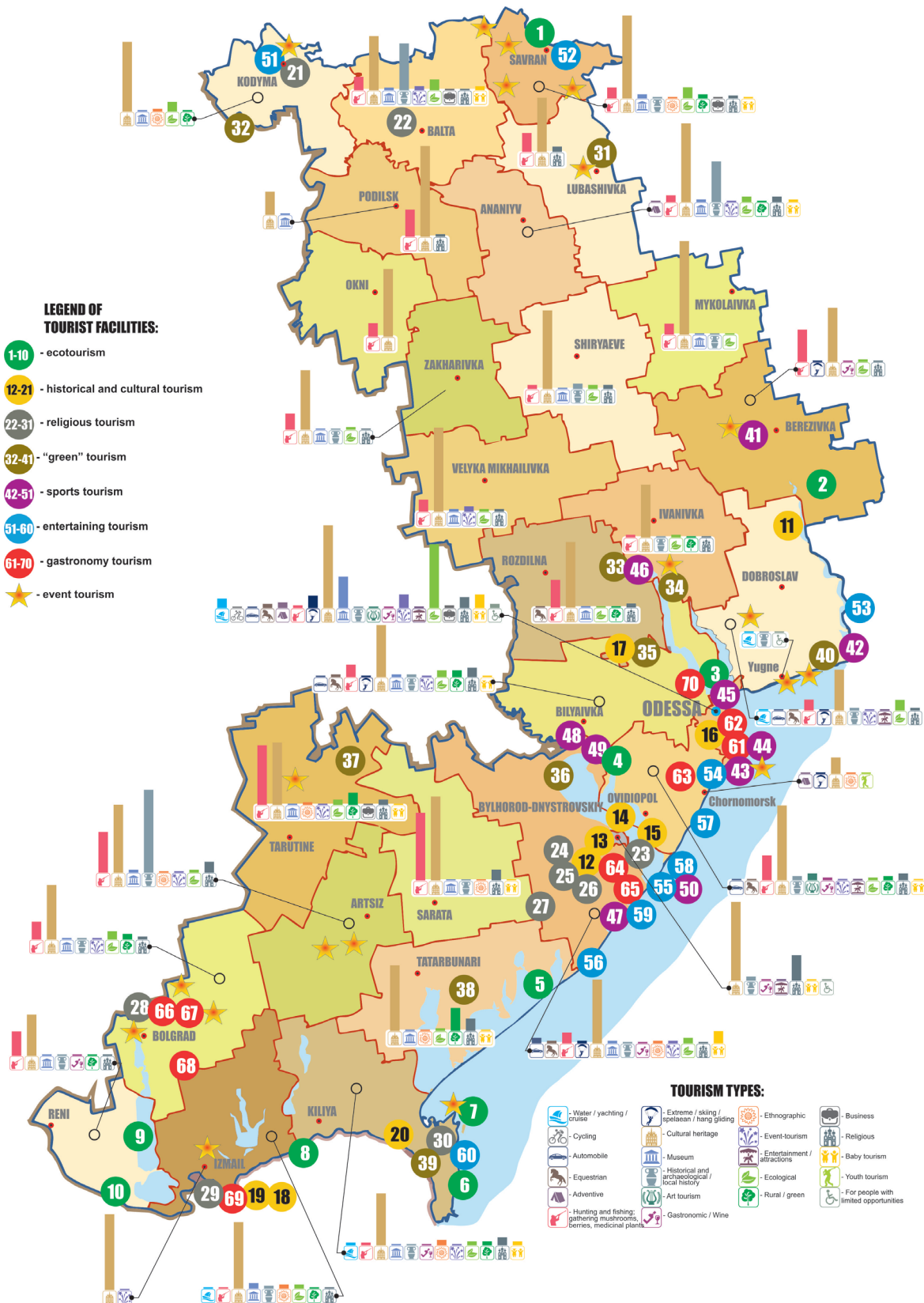


Figure 6. Assessment scheme of socio-historical resources of Odessa region
Source: own elaboration

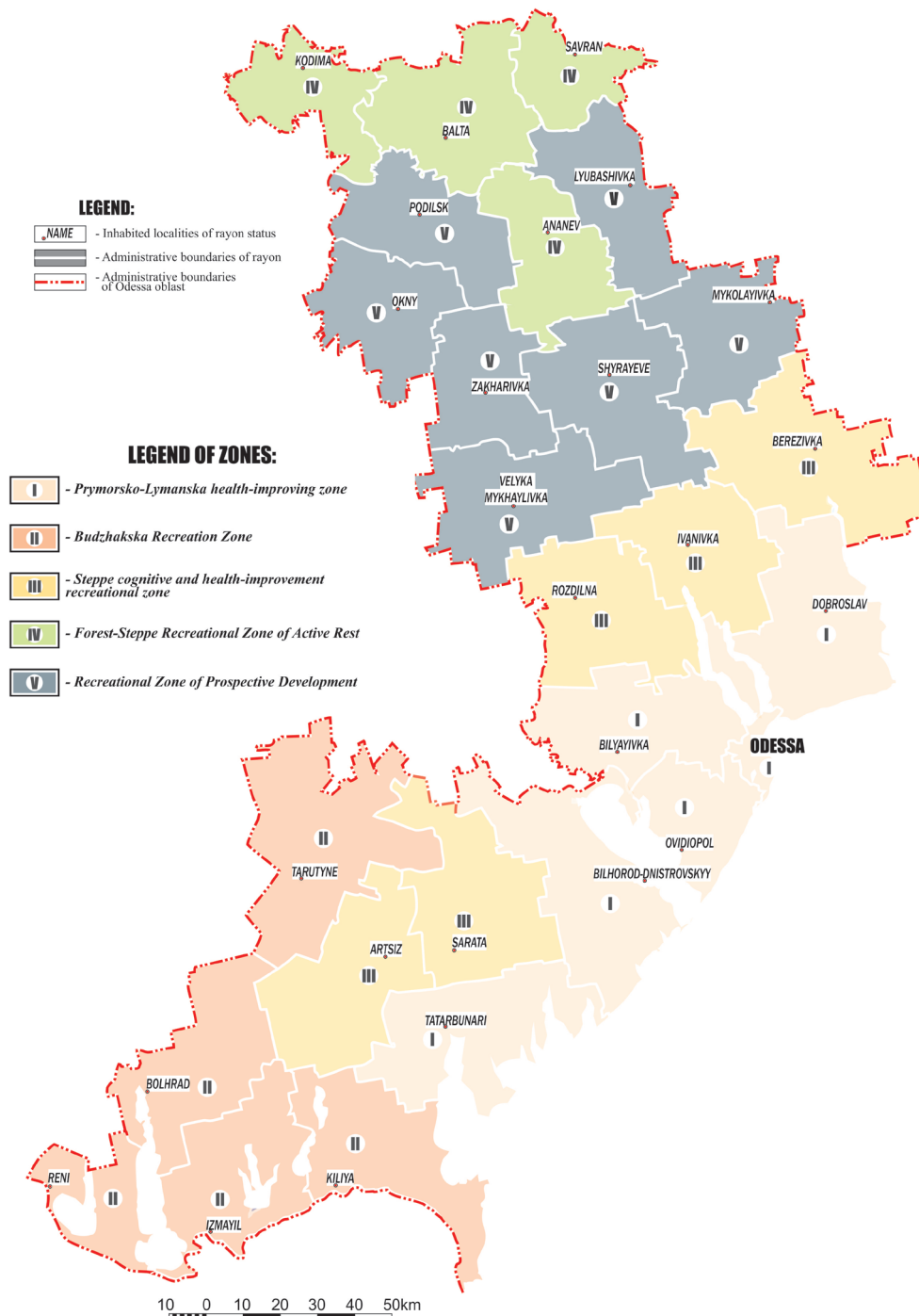


Figure 7. Recreational zoning scheme of the Odessa region
Source: own elaboration

recreational potential of the administrative units of the Odessa region, an expert assessment was carried out highlighting the following components: cultural and historical recreational resources, natural and social recreational resources, event-attraction recreational resources (Fig. 6).

When assessing the cultural and historical resources of the administrative units of the Odessa region, indicators of cognitive values of cultural and historical, archaeological, urban planning, and architectural monuments were used. Information on the

relevant objects was obtained from the State Register of Real Estate Monuments of Ukraine⁴ and other sources.

To assess the natural and social recreational resources of the administrative units of the Odessa region, information on the location and type of objects obtained from open sources was used.

⁴State Register of Real Estate Monuments of Ukraine was provided by the Ministry of Culture of Ukraine.

To assess the event-attraction recreational resources of the administrative units of the Odessa region, the following indicators were used: number of annual festivals; number of stable mass cultural events (fairs, holidays); number of entertainment facilities (water parks, theme parks). When analyzing some components of the recreational potential, a technique was used that allows various absolute and relative quantitative estimates to be recategorized into qualitative ones (Horun 2012), using a three-point scale – “favorable,” “relatively favorable,” and “unfavorable” for recreation. Detailed metadata on the localization of recreational resources in the Odessa region can be obtained upon request from the corresponding author.

The construction of a geoinformation model of recreational zoning in the Odessa region as part of the typing of recreational zones of the Odessa region made it possible to geographically localize all the considered recreational resources and justify the boundaries of the obtained recreational zones. The geoinformation model of recreational zoning is presented in Figure 7.

According to the functional orientation, taken as the main classification feature for recreational activities, the following recreational functions were identified:

- 1) biomedical – includes treatment and rehabilitation. Sanatorium-resort treatment is aimed at restoring the health of people who have had a disease and require the continuation of the treatment process (including rehabilitation). Improvement is aimed at restoring human working capacity. The need for improvement is determined by the fact that while working or carrying out household activities, even a healthy person goes through a state of fatigue – a temporary decrease in working capacity. The main factors that highlight this functional area are the presence of natural healing factors (climate, peloids, mineral waters) and their compliance with biomedical standards;
- 2) sports – aimed at developing the physical strength of a person;
- 3) cognitive – aimed at developing the spiritual potential of an individual.

Conclusions

Assessment of the recreational potential of the territory serves as the basis for optimizing and rationalizing the sustainable spatial development of territorial recreational systems, determining the value of individual resources, identifying territorial differences in resource availability, determining ways of rational use of resources and balanced development of the territory, including through innovation.

In the course of the study, some existing methods were improved, and a comprehensive method was proposed for analyzing the recreational potential of territories with the

implementation of their recreational zoning. The scientific novelty of the proposed method consists in considering, along with natural-geographical factors, such an important characteristic as the socio-historical recreational potential, with the allocation of relevant indicators for its assessment. This makes it possible to fully consider the contribution to the recreational potential of such components as the presence of cultural and historical monuments, sights with ethnic or gastronomic themes, festivals, fairs, and other events. The addition of previously existing methods with a comprehensive assessment of the current ecological state of the territories developed within the framework of the proposed method allows us to further evaluate and ensure the sustainability of the development of the recreational industry in the considered areas in the environmental sphere.

The practical value of the proposed method was confirmed during its application when performing recreational zoning of the territories of the Odessa region. The method made it possible to distinguish five recreational zones from twenty-six administrative units of the Odessa region, for which the most promising strategy for their functional use with the aim of carrying out recreational activities was justified. The obtained scientific and practical research results were transferred to the Department of Tourism, Recreation and Resorts of the Odessa Region State Administration for the further development of an investment model for the integrated development of recreational areas, which will identify priority investment strategies in the recreational sphere, as well as types and objects of investment. These tasks are the following burning issues in the field of strategic planning of tourism development and recreation in the Odessa region.


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