

ECOGEOGRAPHY

DEVELOPMENT FEATURES OF NATIONAL PARKS AND PROSPECTS OF REGIONALIZATION

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**Abstract**

National parks are recognized as areas with significant tourism potential, offering diverse recreational resources that attract visitors seeking natural experiences and relaxation. In addition to tourism, these parks serve multiple functions, including nature conservation, education, scientific research, cultural preservation, and economic development. National parks play a critical role in protecting unique natural areas by implementing strategic measures aimed at addressing existing challenges and fostering sustainable tourism development. In recent years, efforts to establish a sustainable tourism infrastructure have facilitated the functional zoning of national parks. Functional zoning allows for the assessment of physical parameters to determine spatial similarities and define land-use values according to specific objectives. This process considers the distinctive characteristics of each territory, identifies promising recreational zones with varying degrees of ecological stress, and results in the creation of maps that reflect natural, historical, and tourism-recreational features. The present study examines the developmental characteristics of national parks, with a specific focus on the functional zoning of Samur-Yalama National Park as a case study.

**1. Introduction**

Although the evaluation of tourism resources has traditionally been a core topic within tourism research, it has gained renewed theoretical and practical significance in recent years. This type of assessment is particularly valuable for informing the development of regional tourism strategies and spatial planning concepts [2]. The technological dimension of resource evaluation enables the identification of the most promising forms of tourism activity across different seasons [1]. The concept of placement and planning of tourism facilities is considered the beginning of the initial stage of integration by involving socio-economic potential in tourism turnover from a regional perspective. Because tourism is a means for the efficient use of natural resources, the involvement of labor resources in tourism turnover, the promotion of production and tourism products, the improvement of service areas over time, and the introduction of tourism infrastructure to the world

market in line with modern standards. It is from this perspective that national parks in the world and in Azerbaijan are considered as objects with a complex territorial structure and requiring a multifunctional management system. Their use must ensure the preservation of the natural, aesthetic, and cultural-historical values attributed to both the legal landowners and the economic entities operating within the parks. A key instrument in shaping the long-term development and management strategies of national parks is the delineation of park boundaries and the implementation of functional zoning.

**2. Material and method**

The analysis conducted in this study was based on field research, supported by a range of scientific literature, archival materials from the Institute of Geography, and the application of Geographic Information Systems (GIS) technologies. Both empirical and theoretical research methods were employed to generate new knowledge.

Empirical methods were utilized for observation, comparison, and modeling, while theoretical approaches were applied to achieve logical interpretation, systematic structuring, synthesis, functional zoning, regionalization, and other forms of analytical assessment.

### 3. Analysis and discussion.

The determination of the boundaries of national parks and the scientific justification of these boundaries characterize the development features of the national park in the future. Because the boundaries of national parks should be based on the efficiency of management of the territory, should be aimed at its protection, stimulation of land use and determining the nature of relations with them. However, the implementation of zoning in national parks is studied in a comprehensive manner, taking into account the standards adopted in local and international practice.

The development characteristic of each national park must necessarily include, based on the criteria of certain typical natural, historical and cultural complexes within its territory, rare natural monuments and valuable anthropogenic objects that are distinguished by their unique landscape and aesthetics, and that help preserve ecological integrity [5]. Therefore, the zoning of national parks is of great importance. When zoning national parks, their borders should run along landscape types to the maximum extent, taking into account all natural complexes. In this case, the borders should be clearly drawn and they should be consistent with river beds, forest areas, roads, and appropriated lands. Along with this, perspective areas should be taken into account in accordance with the future development directions of national parks. These areas should be included in important and multifunctional procedural rules. Because they play a role as an intermediary in making certain decisions, such as choosing their future activities and areas that bring income to the economy.

In the process of developing schemes for various activities within the boundaries of national parks, it is essential to consider not only the protected core areas but also the surrounding buffer zones, ensuring that no harm is caused to the natural environment. Any proposed changes aimed at promoting overall development within these territories must comply with national legislation, relevant regulatory frameworks, and the specific statutes governing each national park. Land use planning should take into account the diversity of natural complexes, the presence and operations of economic entities, the lifestyle and

needs of the local population, the expected number of visitors, and other relevant environmental and socio-economic factors.

National park areas are defined as a sustainable strategy for conserving biodiversity, but in some cases their purpose is to provide services and value to multiple users. Zoning is the main tool used to manage these value requirements [3]. Important conditions for the development or use of zoning include the following [6]:

- decision-making through management programs;
- constant public support;
- emergence of subjective and contradictory values;
- availability of inadequate primary resource information, etc.

In general, the territories of national parks are characterized by significant spatial and ecological heterogeneity. As a result, initial planning efforts are typically undertaken to guide land use and the development of necessary infrastructure. However, in certain cases, conflicting objectives within national parks give rise to serious management challenges. A prominent example is the tension between the need to preserve pristine natural monuments and the simultaneous demand to provide unrestricted access to those same sites for tourism purposes. To address such conflicts effectively, it is essential to implement optimal architectural and functional zoning strategies that balance conservation priorities with sustainable visitor access and use.

Zoning within national parks is undertaken to ensure their more efficient and sustainable use. From a methodological standpoint, many researchers delineate zones primarily on the basis of landscape maps; however, aesthetic, cultural, and recreational values of the territory are also important considerations in this process. Subsequent stages of zoning involve specialized assessment work to identify and characterize key elements such as biodiversity, fauna, natural monuments, and sites of significant cultural value within the proposed park area. Additionally, it is crucial to consider the extent of ecological and economic use already occurring within the territory. In the zoning of each national park, particular attention is paid to maintaining an ecologically healthy environment while simultaneously maximizing the functional benefits derived from the land.

The zoning of national parks is closely linked to territorial management and involves the planned use of natural complexes, including the prior identification, protection, and regulation of areas

accessible to different groups of visitors. Effective zoning requires careful consideration of specific natural conditions and their individual components, as well as the strategic objectives of national park management. However, in such cases, it is not always necessary to implement overly complex functional zoning schemes; instead, a balanced and pragmatic approach tailored to the ecological and managerial context of the park may be more appropriate.

The primary purpose of zoning in national parks is to ensure the effective protection and management of functionally distinct areas. This requires the restructuring of land use based on varying levels of ecological integrity and economic activity. Within the framework of simplified management planning, the successful implementation of zoning plays a critical role in guiding conservation and development efforts. Moreover, the long-term development prospects associated with zoning should be aligned with national-level strategies, incorporating both the distinct characteristics of each zone and contemporary management policies. In this context, conducting targeted assessments during the zoning process enhances the relevance and effectiveness of sustainable tourism strategies, ensuring a balance between environmental protection and visitor engagement [7]. The zoning of protected areas designated for tourism use is theoretically grounded in the principle of efficient land use rather than the imposition of restrictive measures solely for management purposes. In such cases, the emphasis is placed more on the potential and availability of resources than on

strict biophysical constraints. Objective criteria are applied in the determination of functional zones, which may include the evaluation of alternative zoning schemes and the adoption of approaches based on natural conditions, landscape features, and resource availability. This resource-oriented perspective allows for greater flexibility and adaptability in planning, while still aligning with broader conservation and tourism development goals [4]. The primary criteria for determining the boundaries of functional zones within national parks are the predefined conservation objectives, which simultaneously serve as a foundation for addressing existing management weaknesses.

Both internationally and within Azerbaijan, national park territories are typically divided into various functional zones, each with distinct purposes and regulatory frameworks. To facilitate a more comprehensive analysis and practical implementation of these zones, this study proposes a conceptual framework entitled the “Sustainability Model of Functional Zones of National Parks” (Fig. 1). This model enables the identification of the activity focus for each functional zone and provides a basis for evaluating their management structures and overall sustainability.

- Reserve Area – observes the process of nature development in order to preserve the naturalness of nature without human intervention, completely eliminates economic and recreational impacts on the ecosystem, allows for scientific research, environmental monitoring and special environmental measures.

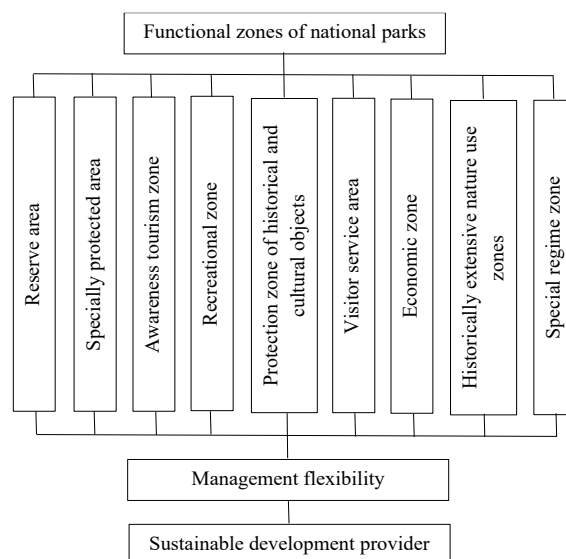


Figure 1. Sustainability model of functional zones of national parks

- Specially Protected Area – includes rare natural complexes, areas with unique and attractive recreational potential, natural monuments characterized by a high degree of sensitivity, for which it is impossible to establish a reserve regime, but which are considered extremely valuable from an ecological point of view, and constitute the ecological core of the protected area.

- Awareness Tourism Zone – shows visitors the diversity of the most valuable natural and historical and cultural monuments along specially organized tourist routes, organizes environmental education work, and also provides for the provision of tourists with places for overnight stays and recreation.

- Recreational zone – a form of organizing short-term and long-term recreation using the components of nature without affecting biological sustainability.

- Protection zone of historical and cultural objects – historical and cultural objects that are specially protected and registered as state monuments are presented to tourists without disturbing the appearance of the landscapes.

- Visitor service area – is created near the road and transport infrastructure to present the aesthetic values of the area and organize the comfortable rest of the guests, organizes various types of services: reception, accommodation, catering, organization of exhibitions, information service, sports games, socio-cultural events and others.

- Economic zone – regulates the efficient use of natural resources and ensures environmental protection, controls the activities of economic entities without harming nature.

- Historically extensive zone – of natural resource management are territories in which the local population has historically and currently carried out economic activities within the framework of relevant regulatory acts (in some sources they are called ethnoeconomic territories).

- Special regime zone – the location of a protected object in connection with the protection and management of borders.

The borders and regime of the functional zones of national parks are variable, and some adjustments may be made to them over time. Although these regulatory mechanisms are proposed on the basis of long-term monitoring observations, the final decision is approved at the state level. That is, the abolition of the borders and regime of functional zones or the increase in powers is

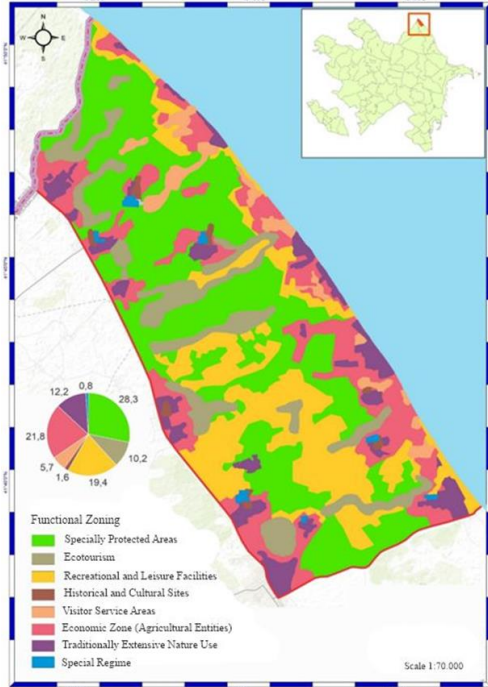
carried out after amendments are made to their use and protection.

#### 4. Conclusion

The application of the proposed model and the generalizations derived from this research indicate that the structure of functional planning in national parks necessitates a comprehensive environmental management regime. This includes the development of tourism and recreational activities, the organization of tourist routes, the allocation of administrative and operational areas, and the facilitation of scientific research and environmental monitoring. For functional planning to be effective, zoning must be clearly defined and strategically aligned with the broader developmental objectives of the national park. High-value natural complexes should, as much as possible, be concentrated within a single zone to ensure their protection. Other zones should be designated for complementary functions such as environmental education, infrastructure development, tourism and recreation services, and leisure facilities. This approach ensures both the conservation of ecological assets and the sustainable development of tourism within national parks. These efforts necessitate the development of automated systems for the preparation and management of spatial databases, primarily through the use of Geographic Information Systems (GIS) technologies. GIS enables the schematic division of national park territories into functional zones, thereby supporting more precise and data-driven planning. The work undertaken in this context should be regarded as a long-term strategic planning document. In this study, we have applied functional planning methodologies using the case of Samur-Yalama National Park. We believe that the proposed planning approach will significantly enhance the future operational efficiency and sustainable management of the park.

As a result of our research on the functional zoning of Samur-Yalama National Park using a GIS-based approach, a detailed zoning map was developed (Figure 2). The analysis revealed that 28.3% of the park's total area is designated as specially protected zones, aimed at preserving ecologically sensitive and high-value natural areas. Economic zones, which encompass tourism-related enterprises, constitute 21.8% of the territory. Recreational areas account for 19.4%, while 12.2% of the land comprises historically utilized areas reflecting extensive human activity in earlier periods. Cognitive tourism zones, focused on educational and interpretive activities, represent 10.2% of the area. Visitor service zones

make up 5.7%, historical and cultural heritage sites occupy 1.6%, and special regime areas-subject to specific regulatory controls-cover the remaining 0.8%. This zoning distribution provides a foundation for sustainable management and balanced land use within the national park.



**Figure 2. Functional zoning map of Samur-Yalama National Park**

It should be emphasized that the primary planning decisions involve establishing the necessary regimes for the protection and utilization of the territory, encompassing both environmental and economic measures. These, along with other essential tasks, are codified within the principal planning document of the national park and serve a supportive function in guiding all subsequent management decisions. Effective planning delineates the overarching strategic directions for the national park as an integrated system, facilitating the coordination of all land users within its boundaries to contribute constructively to the preservation of ecological conditions.

## REFERENCES

1. Asgarov, A.T. Bilalov, B.A., Gulaliev, C.G. (2011) Ecological tourism / A.T. Asgarov., Baku: Adiloglu. 276 p. (in aze.).
2. Dargahov, V.S. Karimov, R.N., Safarov, R.S. (2015) Theoretical and methodological foundations of the assessment of tourism resource potential and its application in National Parks // – Baku: Tourism and hospitality research. Vol. 4, No. 3, pp. 27-34. (in aze.).

3. Gilg, A.W. (1981) Planning for nature conservation: a struggle for survival and political respectability // Planning for Conservation, New York: pp. 97-116.

4. Kohl, J., Herrera-Fernandez, B. (2021) Condition Based-Protected Area Zoning Tied to Conservation Planning and Targets // PARKS. No. 27(1), pp. 43-56. DOI:10.2305/IUCN.CH.2021.PARKS-27-1JK.en

5. Popov, V.L. How to create a national park / V.L.Popov, Yu.V.Dobrushin, N.V.Maksakovsky (2001) Moscow: Wildlife Conservation Center, 23 p. (in rus.)

6. Sabatini, C., Verdiell, A., Iglesias, R. [et al]. (2007) A quantitative method for zoning of protected areas and its spatial ecological implications // Journal of Environmental Management, No. 83(2), pp. 198-206. doi: 10.1016/j.jenvman.2006.02.005

7. Thede, A.K., Haider, W., Rutherford, M.B. (2014) Zoning in national parks: are Canadian zoning practices outdated? // UK: Journal of Sustainable Tourism, Vol. 22, No. 4, pp. 626-645. <https://doi.org/10.1080/09669582.2013.875549>

## MİLLİ PARKLARIN İNKİŞAF XÜSUSİYYƏTLƏRİ VƏ RAYONLAŞDIRILMASI PERSPEKTİVLƏRİ

A.M. Əliyeva

**Xülasə.** Milli parklar zəngin turizm potensiyasına malik olan ərazi hesab olunur. Turistlər milli parklarda təbiətdən zövq almaq və istirahət etmək üçün rekreasiya ehtiyatlarına müraciət edir. Bu zaman təbiəti mühafizə, maarifçilik, elmi, mədəni, iqtisadi və digər istiqamətli tədbirlər həyata keçirilir. Milli parklar həmçinin unikal təbiət əra-zilərinin mühafizə prinsiplərini həyata keçirir, mövcud problemlərin aradan qaldırılması üçün tədbirlər paketi işləyin hazırlayır və turizmin perspektiv sahələrini inkişaf etdirir. Son illər bu istiqamətdə görülən işlər və davamlı turizm infrastrukturunun yaradılması üçün milli parkların funksional zonallaşdırılması və rayonlaşdırılması aparılır. Funksional zonallaşdırılma yolu ilə fiziki parametrlərin oxşarlıq səviyyəsi müəyyən edilir, təyinatı üzrə dəyər prinsipləri işlənilib hazırlanır. Rayonlaşdırılma aparıldıqda isə ərazinin yerli xüsusiyyətləri nəzərə alınmaqla onun fərqləndirici xüsusiyyətləri aşkar edilir, ekoloji cəhətdən müxtəlif dərəcədə gərginliyə malik olan perspektivli rekreasiya zonaları müəyyən olunur, təbii və tarixi xüsusiyyətlər, eləcə də turizm-istirahət mərkəzləri nəzərə alınmaqla xəritə tərtib edilir. Bu baxımdan, təqdim olunan tədqiqat işində milli parkların inkişaf xüsusiyyətləri araşdırılır, bir nümunə kimi Samur-Yalama Milli Parkının funksional zonal-laşdırılma üzrə rayonlaşdırılması verilir.

**Açar sözlər:** milli park, turizm, turizm infrastrukturunu, funksional zonallaşdırılma, rayonlaşdırılma.