

TOURISM DEVELOPMENT IN SPECIALLY PROTECTED NATURAL AREAS IN THE MOUNTAINOUS ZONES OF AZERBAIJAN

Gunesh R. Agakishiyeva

Ministry of Science and Education Republic of Azerbaijan Institute of Geography
named after academician H.A.Aliyev, 115 H. Cavid Avenue, AZ 1143 Baku, Azerbaijan

<https://doi.org/10.30546/209805.2026.3.1.2015>

Abstract

The primary objective of the study was to examine the tourism potential of specially protected natural areas in the mountainous zones of Azerbaijan and the potential for its use. To achieve this goal, theoretical approaches to specially protected natural areas were examined and statistical data on all types of specially protected natural areas were analyzed. The study utilized literary sources from various authors, all types of specially protected natural areas in the mountainous zones of Azerbaijan, the legislative framework, and statistical data from the State Statistical Committee of Azerbaijan. Systematic and assessment methods were also employed. Based on the legislative framework and statistical data from the State Statistical Committee of Azerbaijan, conclusions and proposals were made. The results obtained can be used to organize tourism activities in specially protected natural areas in the lowlands of Azerbaijan.

Keywords: *national parks, state natural reserves, state natural wildlife refuges, ecotourism, tourism potential, landscapes*

*Corresponding author.

E-mail address: guneshagakishiyeva@gmail.com (Gunesh Agakishiyeva)

Orcid ID: <https://orcid.org/0000-0002-8200-7278>

INTRODUCTION

Regional recreational potential is a complex of ecological, landscape, social, infrastructural, and other characteristics that influence the development of tourism in the regions. Landscape potential includes an assessment of the quantitative and qualitative characteristics of specially protected natural areas [1].

Specially protected natural areas are designated to preserve unique and typical natural complexes and sites, landmark natural formations, flora and fauna, and their genetic resources. Specially protected natural areas are withdrawn from economic use, either fully or partially, by decisions of state authorities [2].

Currently, it is impossible to find natural complexes unaffected by human impact. In this regard, the establishment and development of specially protected natural areas plays a crucial role in the conservation and study of wildlife. This, along with protecting the environment, biodiversity, and the ecosystem as a whole, facilitates its study [3].

In most cases, specially protected natural areas are the only structures capable of planning, managing, and monitoring tourism activities, which is essential for the development of ecotourism. Global experience shows that ecotourism is most effective at the local and regional levels. Therefore, specially protected natural areas can become a source of jobs and income for the local economy [4].

Given that the exploitation of natural resources of specially protected natural areas in the mountainous zones of Azerbaijan has increased pressure on them and there is a risk of their degradation, studying them is of importance. The study will identify optimal options for the sustainable development of specially protected natural areas in the mountainous zones of Azerbaijan, based on the protection and management of natural landscapes, rather than simply their exploitation.

Methods:

The object of the study is the tourism potential of specially protected natural areas in the mountainous zones of Azerbaijan. A systematic method was used to effectively study specially protected natural areas in the mountainous zones of Azerbaijan, followed by an assessment method to identify the spatial differentiation of all three types of specially protected natural areas in the mountainous zones of Azerbaijan.

The statutes of national parks and state natural reserves, as well as the laws "On Environmental Protection" and "On Specially Protected Natural Areas and Objects," form the legal and regulatory basis for addressing issues related to the tourism potential of specially protected natural areas and its use [5].

Statistical data and information on specially protected natural areas in the mountainous zones of Azerbaijan served as the source of information. All calculations were performed and graph and tables were compiled.

The general methodological framework of the study consisted of the following sequential stages:

- 1) programmatic (analysis of literary sources and the legislative framework, determination of the object, goals, and objectives of the study);
- 2) information (collection and processing of statistical data and information on specially protected natural areas in the mountainous zones of Azerbaijan, creation of a database);
- 3) cartographic (compiled of graph and tables based on the results of processing statistical data and information on specially protected natural areas in the mountainous zones of Azerbaijan).

Discussion and analysis:

One of the goals of ecotourism development is to support specially protected natural areas. Specially protected natural areas offer significant potential for the development of ecotourism. They are one way to address environmental protection and the rational use of natural resources, fostering a culture of interaction with nature and facilitating the socio-economic development of the state as a whole.

Nature and ecotourism are also closely linked to the protection of rare and endangered species, as many of them are exotic and become the focus of ecotourism. This applies not only to animals and plants, but also to ecosystems and natural complexes as a whole. On the other hand, inadequate planning can lead to the extinction of individual species and the disruption of natural resources, leading to the extinction of species and the destruction of natural resources. Rare species and ecosystems can be considered a vital resource for local communities, and their protection is therefore linked to cultural protection [6].

To further enhance the tourism potential of regions, ecotourism should not be limited to natural sites. Combining ecotourism routes with historical and cultural heritage sites creates more attractive opportunities for tourists. Ancient monuments, ethnographic villages, historic fortresses, and architectural examples can be featured as integral parts of ecotourism packages. This not only increases tourist interest but also creates an additional source of income for local communities [7].

Specially protected natural areas have been established and are operating in Azerbaijan to protect existing natural complexes and study the natural processes. Specially protected natural areas are a national treasure of the Republic of Azerbaijan and have ecological, scientific, cultural, and aesthetic value [8].

Although the number and size of specially protected natural areas in Azerbaijan are large compared to other countries, our country attracts fewer tourists due to the different infrastructure of the service sector [9].

There are 44 specially protected natural areas in Azerbaijan with a total area of 892.9 thsd. ha. In mountainous zones, these figures are 20 and 472.7 thsd. ha, respectively (Table 1).

Table 1.
Economic indicators of specially protected natural areas

Specially Protected Natural Areas	Mountainous Zones	Azerbaijan
National Parks		
- Number	4	10
- Area, thsd. ha	197.1	421.4
State Natural Reserves		
- Number	4	10
- Area, thsd. ha	65.1	120.7
State Natural Wildlife Refuges		
- Number	12	24
- Area, thsd. ha	210.5	350.8

Source: Environment in Azerbaijan. Statistical yearbook. (2025). Baku: State Statistical Committee of Azerbaijan, 140 p.

Mountainous zones account for 40% of the total number of national parks in Azerbaijan and 46.8% of the total area of national parks. For state natural reserves, these figures are 40% and 53.9%, and for state natural wildlife refuges, 50% and 60%, respectively.

There are four national parks, four state natural reserves, and 12 state natural wildlife refuges in the mountainous zones. The establishment dates of specially protected natural areas in the study area range from 1929 to 2009 (Table 2).

Table 2.
Specially Protected Natural Areas in Mountainous Zones of Azerbaijan

Specially Protected Natural Areas	Location	Year of establishment
National Parks		
- Goygol	Goygol, Dashkasan, Goranboy	2008
- Shahdag	Ismayilli, Gabala, Guba, Gusar, Oghuz, Shamakhi	2006
- Altiagach	Khizi, Siyazan	2004
- Zangezur named after Academician Hasan Aliyev	Ordubad	2003
State Natural Reserves		
- Ilisu	Gakh	1987
- Garagol	Lachin	1987
- Zagatala	Zagatala, Balakan	1929
- Basitchay	Zangilan	1974
State Natural Wildlife Refuges		
- Lachin	Lachin	1961
- Gusar	Gusar	1964
- Zuvand	Lerik, Yardimli	1969
- Ordubad	Ordubad	1969
- Ismayilli	Ismayilli	1969
- Gubadli	Gubadli, Lachin	1969
- Dashalti	Shusha	1988
- Gizilca	Gadabay	1984
- Gabala	Gabala	1993
- Gakh	Gakh	2003
- Zagatala	Zagatala, Balakan	2008
- Rvarud	Lerik	2009

Source: Environment in Azerbaijan. Statistical yearbook. (2025). Baku: State Statistical Committee of Azerbaijan, 140 p.

State Natural Reserves are nature conservation, scientific research, and environmental education institutions aimed at preserving and studying the natural processes and phenomena, the genetic resources of flora and fauna, individual plant and animal species and communities, and typical and unique ecological systems. State Natural Wildlife Refuges are areas of particular importance for the preservation or restoration of natural complexes or their components and the maintenance of ecological balance [6].

The Garagol State Natural Reserve is located in the southern part of the Garabakh volcanic plateau, on the slopes of Mount Ishigli (3552 m) at an altitude of 2650-2700 m above sea level, and has an alpine landscape complex. Lake Garagol is of significant hydrological and economic importance; its water is

used in various fields of human activity, including agriculture, including crop and livestock farming, as well as fisheries and tourism. The reserve area around the lake consists of alpine meadows, typical of the mountain zone, with sparse vegetation. As befits a high-altitude lake, the surrounding landscape of Garagol is complex, consisting of ravines and cliffs in the northern, northwestern, and western parts and plains on the other side.

The Zagatala State Natural Reserve, whose purpose is to protect the forests, flora, and fauna of the southern slope of the Greater Caucasus, as well as to protect settlements and agricultural lands from natural disasters, consists of forests, subalpine and alpine meadows, and high rocky cliffs. Situated on the southern slope of the Greater Caucasus at an altitude of 650-3646 meters above sea level, the reserve has a very complex topography. In the reserve, where the forests of the lower and middle mountains give way to alpine and subalpine meadows, subnival and nival belts, the mountains are cut by deep river valleys. The rivers flowing through the reserve have also formed beautiful waterfalls and impassable gorges.

The Basitchay State Natural Reserve, created to protect the landscape complex, particularly the rare plane tree forest, is located in a mountainous area at an altitude of 600-800 meters above sea level. The reserve's dominant tree species, where the mountains are separated by tributaries of the Basitchay River, is the oriental plane tree. Due to the significant importance of the oriental plane tree, listed in the Red Book of the Republic of Azerbaijan, and the favorable natural conditions within the reserve for the growth and development of this tree, Basitchay was declared a protected area. An alluvial plain extends along the valleys of the Basitchay River and its tributary, the Shihauzchay River, which flow through the reserve. The right bank consists of steep mountains, while the left bank consists of lowlands.

The Ilisu State Natural Reserve, with its steep slopes and areas cut by river valleys, is home to endemic and rare plant species. Its purpose was to protect endangered animal species, restore forests to their former glory, and prevent soil erosion and flooding. Some plant species common in the reserve are listed in the Red Book of the Republic of Azerbaijan. The rivers flowing through the reserve, characterized by landscapes typical of the Greater Caucasus, are also rich in various fish species.

The natural complexes of the Lachin State Natural Wildlife Refuge, whose primary purpose is to protect and increase the population of mammals and birds, consist of forests. The Gusar State Natural Wildlife Refuge, which protects mammals and birds of game importance, also includes forests and shrub thickets.

The main purpose of the Zuvand State Natural Wildlife Refuge, located at an altitude of 1400-2000 meters above sea level, is to preserve the biodiversity of the mountain-steppe landscape. Herbaceous plants and various species of birds and mammals are widespread within the reserve. The Ordubad State Natural Wildlife Refuge was established to protect and increase the population of rare and valuable animals, including various species of mammals and birds.

The vegetation of the Ismayilli State Natural Wildlife Refuge, created to protect and increase the population of animals living there, consists of alpine and subalpine mountain meadows and forests. The ecological conditions of the Gubadli State Natural Wildlife Refuge, created to protect mammals and various bird species living in the mountain-steppe regions, are highly valued for their habitat.

The Gizilca State Natural Wildlife Refuge, created to protect the region's natural complexes, particularly endangered animal and plant species, encompasses forest and mountain-steppe areas. The Gabala State Natural Wildlife Refuge was created to protect the landscapes of the southern slopes of the Greater Caucasus.

The Dashalti State Natural Wildlife Refuge, rich in forests, shrubs, and herbaceous vegetation, is known for its endemic and rare species, including medicinal plants. The Gakh State Natural Wildlife Refuge, located in the highlands, was created to protect and increase the population of endangered animal species. Subalpine and alpine meadows and subnival vegetation are widespread within the reserve.

The Zagatala State Natural Wildlife Refuge, established to protect biodiversity, also protects the migration routes of rare and endangered animal species. The Rvarud State Natural Wildlife Refuge was created to protect herbaceous plants, various bird and mammal species.

The most common form of organizing a protected area is the creation of national parks. Parks are established in areas where ecosystems have not been significantly impacted or altered by human economic activity, and where flora and fauna have been preserved in their original form. Parks are established by decision of the highest state authorities or with their consent. Such decisions prohibit economic activity, exploitation of natural resources, mining, and settlement within the designated area designated as a national park. At the same time, visits to the park are permitted within limited, controlled areas for scientific purposes, as well as for tourists seeking aesthetic enjoyment and cultural appreciation.

Goygol National Park encompasses mountain-forest, mountain-steppe, subalpine, and alpine mountain-meadow landscapes; Altiagach National Park encompasses mountain-forest, mountain-meadow, and forest-steppe landscapes; Zangezur National Park named after Academician Hasan Aliyev encompasses mountain-forest, mountain-meadow, and rocky landscapes; and Shahdag National Park encompasses mountain-forest, alpine meadows, and rocky landscapes.

As in many countries, national parks in Azerbaijan have long been used for recreational purposes. The number of tourists traveling along their roads and trails grows every year. Just a few years ago, national parks were visited primarily by independent tourists. Then, national park administrations based on the country's legal framework, regulated tourism activities and implemented conservation measures [10]. The State Statistical Committee of Azerbaijan provides information only on the number of visitors to the country's national parks. However, these statistics are presented for the entire park, not for individual national parks [11]. Between 2010 and 2024, the number of visitors to national parks both increased and decreased. The largest increase was 73.339 in 2014-2015, while the largest decrease was 52.358 in 2019-2020. The increase was due to targeted tourism development measures, while the decrease was due to the spread of COVID-19 (Figure 1).

The results of anthropogenic impacts are visible in the surrounding areas of the Shahdag National Park, especially around the settlements and in the mountain meadows. This leads to the transformations and fragility of natural ecosystems in these areas. However, within the Shahdag National Park, the application of a special protection regime accelerates the process of natural recovery. The increase in dense forest ecosystems within the Shahdag National Park from 2.2% to 9.2% of the total can be considered a positive development. This is due to the serious and effective organization of the security regime in the Shahdag National Park [12].

The assessment shows that ecosystems and rich biodiversity are considered to be of the highest priority in the Shahdag National Park. From this point of view, ecological promotion and ecotourism education can be considered as key factors for sustainable development. Given the high potential of national tourism, it is possible to create useful business opportunities for local communities and entrepreneurs. Encouraging the participation of local residents and communities in development programs, infrastructure construction, as well as tourism projects can also have more positive results. The participation of the locals in the production of original and national handicrafts, protection of cultural heritage will

be additional support for social and cultural revival in the surrounding areas of the Shahdag National Park [13].

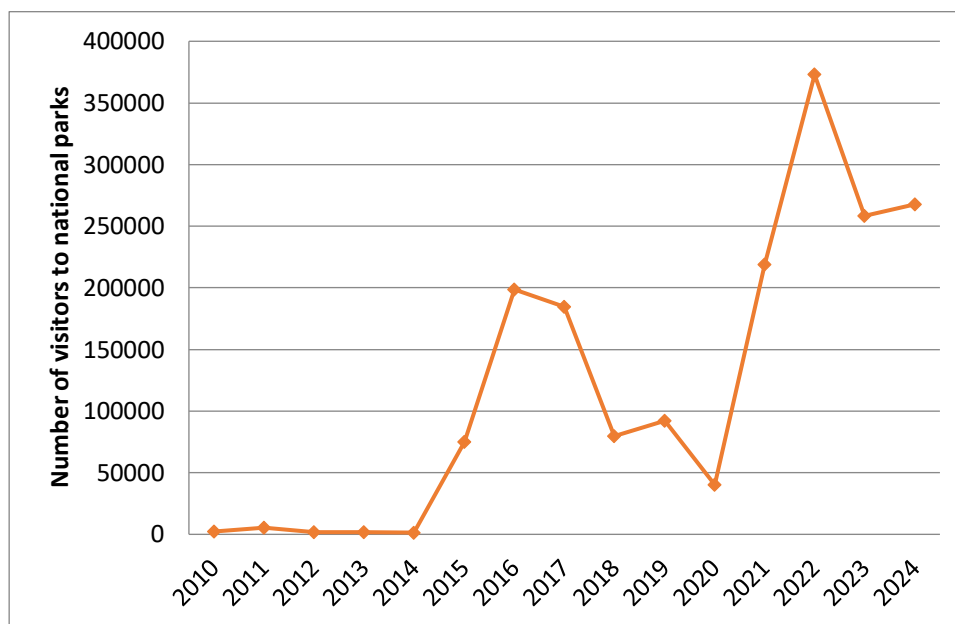


Fig. 1. Dynamics of development of the number of visitors to Azerbaijan National Parks (2010-2024)
 Source: Environment in Azerbaijan. Statistical yearbook. (2025). Baku: State Statistical Committee of Azerbaijan, 140 p.

Currently, the rational use of natural resources for tourism has become one of the mechanisms regulating the socioeconomic development of regions. Natural resources used for various tourism purposes, especially geotourism, ensure not only socioeconomic development but also the preservation and further economic growth of the country. These resources, as natural monuments, stimulate tourism and lead to its development [14].

Tourists should be offered excursions to mountains, forests, and rivers in protected areas. Please note that the number of hiking trails and daily excursions in protected areas is limited. Guides with varying language skills, as well as tour operators who create tours with various themes, are available to organize ecotourism in protected areas. The Azerbaijan University of Tourism and Management plays an important role in training professional guides who meet international standards. Tourism development in Azerbaijan, including the activities of tour operators, is seen as an alternative to the oil industry, along with agriculture, and is planned for the near future [15].

To accelerate tourism development in specially protected natural areas, tourist routes have been created. These tourist routes, organized by the Ministry of Ecology and Natural Resources of the Republic of Azerbaijan, cover only national parks. Among the national parks located in mountainous areas, Goygol National Park has 10 tourist routes, Altiagach National Park has 8, and Shahdag National Park has 25 [16].

Since the Lachin, Gubadli, and Shusha districts are located in areas liberated from occupation, the war has also impacted the tourism resources and their use in these areas. Large-scale restoration work is underway in four protected areas (including one State Natural Reserve and three State Natural Wildlife Refuges) located in areas liberated from occupation as a result of the 44-day war. Following large-scale restoration work in the areas liberated from occupation, the protected areas will resume their activities

in accordance with their status. The presence of protected areas provides an opportunity to develop ecotourism in the study areas [17].

Reconstruction of historical and cultural monuments of world and national importance, as historical and cultural resources, restoration of museums, libraries, galleries, cultural centers, cinemas, as the main part of the tourism infrastructure, creation of tourism products and development of tourist routes, is the main goal of the Azerbaijani government in the territories liberated from occupation [18].

In the future, it would be advisable to create tourist routes that include state natural reserves and state natural wildlife refuges in mountainous areas. Also, starting tourist routes from nearby villages and including visits to historical and cultural monuments could stimulate the attraction of local and foreign tourists.

CONCLUSION

1. Statistical indicators were analyzed, and the share of specially protected natural areas in mountainous zones in the total area of specially protected natural areas in Azerbaijan was determined for all three types – national parks, state natural reserves, and state natural wildlife refuges.
2. It is advisable to organize scientific expeditions to specially protected natural areas for students majoring in geography, tourism, and ecology, including high school students, as well as active tourism routes under the guidance of professional guides and according to a pre-prepared program.
3. Tourism development in specially protected natural areas should be regulated, which can be achieved through functional zoning of the territory, the preparation and marking of tourist routes, and the effective placement of infrastructure facilities.

REFERENCES:

- [1] Gulyayev, V.G., Selivanov, I.A. (2008). *Tourism: economics, management, sustainable development*. Moscow: Soviet sport, 280 p.
- [2] Pogodina, V.L., Filippova, I.G. (2012). *Geography of tourism*. Moscow: INFRA-M, 256 p.
- [3] Askerov, A.T., Bilalov, B.A., Gulaliyev, Ch.G. (2011). *Ecological tourism*. Baku: Publ. Adilogly, 276 p.
- [4] Kuskov, A.S. (2008). *Tourist resource management*. Moscow: Publishing center "Academy", 208 p.
- [5] *Collection of Legislation of the Azerbaijan Republic*. (2020). Baku, 10 p.
- [6] Kuskov, A.S., Golubeva, V.L., Odintsova, T.N. (2005). *Recreational geography*. Moscow: Flinta, 493 p.
- [7] Orujova, P.A. The impact of ecotourism development on the economic situation in the Gazakh-Tovuz and Ganja-Dashkasan economic regions. *Proceedings of the IV International Scientific-Practical Conference, "Modern Problems of Geography: Integration of Science and Education, Dedicated to the 80th Anniversary of the Institute of Geography within the Framework of the Year of the Constitution and Sovereignty,"* Volume 3, Baku, November 13-14, 2025, pp. 77–80.
- [8] Soltanova, H.B. (2015). *Tourism in the Republic of Azerbaijan and Its Development*. Baku: Publ. AzTU, 475 p.
- [9] *The strategic roadmap development of specialized tourism industry in Azerbaijan*. (2017). Baku, 100 p.

[10] Agakishiyeva, G.R., Aliyeva A.M. (2025). Using the Tourism Potential of Shahdag National Park of Azerbaijan. *Regional Geosystems*, 49(3), 561–572.

<https://reg-geosystems-journal.ru/index.php/journal/article/view/283/289>

[11] Environment in Azerbaijan. Statistical yearbook. (2025). Baku: State Statistical Committee of Azerbaijan, 140 p.

[12] Jabrayilov, E.A. (2022). Monitoring of Fragile Ecosystems with Spectral Indices Using Sentinel-2A MSI Data in Shahdag National Park. *Geography, Environment, Sustainability*, 15(1), 70–77.

<https://doi.org/10.24057/2071-9388-2021-006>

[13] Jabrayilov, E.A. (2022). A'WOT Analysis for Sustainability of Biodiversity and Tourism in Shahdag National Park, Azerbaijan. *Journal of Geology, Geography and Geoecology*, 31(2), 302–310.

<https://doi.org/10.15421/112228>

[14] Zeynalova, K.Z. Geological and geomorphological natural monuments of the East Zangezur economic region. Proceedings of the international scientific and practical conference on the topic "The Impact of Modern Climate Change in Azerbaijan on Natural Complexes and the Economic System", held in connection with the announcement of 2024 as the "Year of Green World Solidarity" in the Republic of Azerbaijan, Baku, June 5-6, 2024, pp. 149–152.

[15] Agakishiyeva, G.R., Aliyeva, A.M. Tourism development opportunities in Protected Areas of the Greater Caucasus physical geographical province. Proceedings of the All-Russian Scientific and Practical Conference with International Participation, Dedicated to the 90th Anniversary of the Faculty of Geography, Geoecology, and Tourism at Voronezh State University, "Geography, Ecology, Tourism: New Research Horizons," Volume 2, Voronezh, October 10-12, 2024, pp. 202–205.

[16] <https://eco.gov.az/> Ministry of Ecology and Natural Resources of the Republic of Azerbaijan

[17] Agakishiyeva, G.R. (2024). Geographical features of tourism development in various high-altitude zones of mountainous areas of Azerbaijan. *Journal of the Belarusian State University. Geography and Geology*, (2), 72–90.

<https://journals.bsu.by/index.php/geography/article/view/5633/8060>

[18] Agakishiyeva, G.R., Ismayilova, E.A. (2024). Socio-economic problems of the development of tourist and recreational complexes in Azerbaijan. *Journal of Geology, Geography and Geoecology*, 33(2), 209–221.

<https://doi.org/10.15421/112419>