

ASSESSMENT OF OPPORTUNITIES FOR THE DEVELOPMENT OF ALPINE SKIING TOURISM IN BALAKAN DISTRICT

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Summary. Balakan District, located in northwestern Azerbaijan, is characterized by diverse natural and geographical conditions that provide considerable potential for the development of ski tourism. Its mountainous terrain, favorable climatic conditions, and location along the border with Georgia create opportunities for developing winter tourism and associated recreational activities. This study aims to assess the suitability of the natural and geographical conditions of Balakan District for ski tourism, evaluate the potential for developing relevant tourism infrastructure, and identify existing constraints and risks. Particular attention is given to identifying suitable mountainous areas for the establishment of a ski resort. The study analyzes statistical indicators of tourism development in Balakan and applies ArcGIS-based spatial analysis to identify areas potentially suitable for ski tourism development. The identified areas may provide a practical basis for tourism planning, infrastructure development, and strategic decision-making. The findings demonstrate that Balakan possesses considerable potential for developing a competitive ski tourism destination and diversifying the tourism sector of northwestern Azerbaijan.

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Introduction

Tourism is one of the most significant sectors of economic activity worldwide, characterized by its broad scope and rapid growth. Although tourist arrivals constitute an important indicator of the sector's development, the significance of tourism extends beyond quantitative measures. Tourism generates impacts at local, regional, national, and global levels and, at the same time, reflects contemporary lifestyles, cultural preferences, and broader characteristics of (post)modern society (Pender & Sharpley, 2005, pp. 6–13).

Sports tourism is one of the major forms of tourism and has attracted increasing academic attention over the past fifteen years. As an independent and socially oriented field, sports tourism represents a lifestyle shared by a considerable segment of society and provides opportunities for both the physical and personal development of tourists (Gozalova et al., 2014). It integrates a range of economic, social, environmental, and health-related dimensions. In recent years, its development has become particularly evident in outdoor and adventure tourism, skiing, and other winter sports.

Among the various forms of tourism, winter tourism is particularly important because it not only promotes recreational activities during the winter season but also contributes to the modernization of tourism infrastructure in mountainous and remote regions. Ski tourism, as a major component of winter tourism, can increase tourist flows, stimulate regional economic activity, and create employment opportunities. Moreover, ski resorts can support tourism and recreational activities during warmer months, thereby facilitating the transition toward year-round tourism. Consequently, ski tourism has increasingly become an important

catalyst for economic and social development (Sharpley, 2002). Realizing this potential requires an attractive regional investment environment and a scientifically grounded assessment of tourism and recreational attractiveness (Imrani et al., 2025).

During the 2023–2024 winter season, more than 366 million skier visits were recorded worldwide. The United States, France, Switzerland, Canada, Italy, and Austria are among the countries with the most highly developed ski tourism industries (International Report on Snow & Mountain Tourism, 2025). In Azerbaijan, the principal ski tourism destinations include Shahdag in Gusar, Tufandag in Gabala, and Aghbulag in Shahbuz.

The infrastructure and service sectors developed around ski resorts contribute directly to the economies of mountainous regions and can significantly improve the socio-economic well-being of local communities (Nepal & Chipeniuk, 2005). In this context, the development of ski tourism in Balakan would not only create new sources of economic revenue but also contribute to the diversification of Azerbaijan's tourism product and strengthen its competitiveness in the international tourism market.

Located on the southern slopes of the Greater Caucasus Mountains, Balakan District is distinguished by its unique natural conditions, ethnocultural diversity, and considerable tourism potential (Imrani et al., 2024). Despite its mountainous landscapes, extensive forest resources, and villages characterized by distinctive local traditions, the district's winter tourism potential remains largely underutilized. Therefore, this study focuses on assessing the ski tourism potential of Balakan, examining the existing infrastructure, and identifying priority directions for tourism development and its potential economic impacts. The development of ski tourism in Balakan could attract both domestic and international visitors while stimulating local economic development through job creation, expansion of the service sector, and improvement of tourism-related infrastructure.

Literature review

Alternative forms of tourism reflect the diversification of global tourist interests and provide travelers with more authentic and sustainable experiences. In particular, alternative forms of sports tourism have gained increasing popularity in recent years, as they combine engagement with the natural environment, physical activity, and opportunities to support the development of local communities. Ibraimi et al. (2025) define sports tourism as a travel experience based on sporting activities in which tourists participate either actively or as spectators. The authors further report that sports tourism accounts for approximately 10% of tourism expenditure and emphasize the complementary relationship between sport and tourism, identifying sports tourism as one of the rapidly developing segments of the tourism industry.

Mountain tourism has also experienced substantial growth in recent years and is generally associated with tourism activities that utilize the natural characteristics and recreational opportunities of mountainous environments. It is particularly important in terms of stimulating regional economic development and generating employment. Wang et al. (2022), examining ski tourism in Chongli, China, demonstrated its positive contribution to regional economic development and poverty reduction. Their findings emphasize that appropriate policy frameworks, efficient use of local resources, and sustainable planning are essential for the successful development of mountain sports tourism. From a geographical perspective, Higham (2003) highlights the importance of altitudinal zonation, landscape attractiveness, and seasonal accessibility in determining the tourism appeal of mountain regions.

However, the long-term sustainability of ski tourism depends not only on the stability of natural snow cover but also on the capacity of destinations to adapt to climate change. Scott et al. (2006) demonstrate that increasing temperature variability and declining snow availability can substantially shorten ski seasons in many destinations, creating a need for adaptation measures such as snowmaking technologies and the diversification of ski resorts toward year-round tourism activities.

Among Azerbaijani researchers, Bayramli (2024) and Imrani et al. (2024) emphasize the considerable tourism potential of the northwestern districts of Azerbaijan, including Balakan, Zagatala, Gakh, Shaki, Oghuz, and Gabala, and highlight the importance of utilizing these resources to enhance the socio-economic well-being of the region. Mammadova (2022) similarly identifies substantial opportunities for the development of various forms of mountain tourism in the Shaki-Zagatala tourism region, one of Azerbaijan's border regions, and argues that ski tourism could generate significant economic benefits for the regional economy.

Overall, the existing literature and theoretical approaches indicate that ski tourism can contribute to local economic development when supported by integrated planning, environmental sensitivity, and stakeholder participation. However, the limited empirical research specifically addressing the ski tourism potential of Balakan District reveals an important research gap. The present study seeks to address this gap by providing an

empirical assessment of Balakan's potential for ski tourism development, thereby contributing to both the academic literature and evidence-based regional tourism planning.

Methodology

The study employed statistical analysis to assess the potential for ski tourism development in Balakan District. The analysis was based on tourism statistics covering a 19-year period, including data on the number of visitors accommodated in hotels and hotel-type establishments in Balakan District and Azerbaijan as a whole. The statistical data were organized into comparative tables and used to construct a scatter plot for the Shaki-Zagatala Economic Region, enabling the temporal dynamics of tourism activity in Balakan to be examined within the broader regional context.

Natural and geographical conditions of Balakan district

Balakan District is located in northwestern Azerbaijan, on the southern slopes of the Greater Caucasus Mountains and within the Ganikh-Ayrichay Valley. It borders the Russian Federation (Republic of Dagestan) to the north, Georgia to the west and southwest, and Zagatala District to the east. The district covers an area of 923 km². Of its total land area, 709 ha are classified as state reserve lands, 8.4 thousand ha as municipal lands, and 25 thousand ha as privately owned lands (State Statistical Committee of the Republic of Azerbaijan, 2024). The topography varies considerably, from predominantly mountainous terrain in the north and northwest to lowland areas in the south, with elevations ranging from approximately 200 to 3,500 m above sea level. This pronounced altitudinal variation has a substantial influence on local climatic conditions, vegetation patterns, and tourism potential (Budagov, 2003).

The mountainous areas of Balakan are predominantly forested, while the highest peaks may retain snow cover until August, creating favorable natural conditions for mountain tourism and, in particular, ski tourism development. Mount Guton, the highest peak in the district, reaches an elevation of 3,648 m and is characterized by prolonged snow cover during the winter season. Areas located at elevations of approximately 1,200–2,000 m, with moderate slopes of 15–30°, are considered potentially suitable for the development of ski slopes (Budagov, 2003). Climatic conditions also vary considerably with altitude: the lowland and foothill zones are characterized by a moderately warm and semi-humid to humid subtropical climate, whereas the high-mountain areas experience colder and more humid conditions (Mammadov et al., 2012).

Mountain tourism potential of Balakan district

Mountain areas rank second only to coastal destinations among the geographical environments used for tourism worldwide, accounting for approximately 15–20% of global tourism areas (Richins & Hull, 2016). Within this context, winter mountain tourism, particularly ski tourism, has become one of the most widespread and economically significant forms of sports tourism.

Azerbaijan's diverse natural landscapes provide considerable opportunities for the development of this tourism segment, and Balakan District represents one of the country's promising mountain tourism destinations. An analysis of tourism statistics for the 2006–2024 period (Table 1) indicates that Balakan has experienced notable dynamics in tourism activity within the Shaki-Zagatala Economic Region. This potential is supported by the district's rich cultural and historical heritage, diverse natural landscapes, and favorable mountain environment.

As shown in Table 1, tourism activity in both Azerbaijan as a whole and Balakan District has generally followed an upward but uneven trend since 2006. In Balakan, the number of visitors accommodated in hotels increased markedly after 2011, although substantial year-to-year fluctuations were observed. The decline recorded in 2020–2021 coincided with the COVID-19 pandemic, after which tourist numbers began to recover. Based on these statistical data, the tourism dynamics of Balakan District and the Shaki-Zagatala Economic Region are illustrated in Figure 1.

As illustrated in Figure 1, the Shaki-Zagatala Economic Region experienced a substantial increase in the number of persons accommodated in hotels after 2014. This growth coincided with the development of the Tufandag Winter-Summer Tourism Complex in Gabala, which contributed to strengthening the region's tourism infrastructure and attractiveness. Similarly, the establishment of a mountain sports complex in Balakan could contribute to increasing tourist flows and strengthening tourism activity at the district, regional, and national levels.

Balakan District possesses considerable potential for mountain tourism, particularly for the development of ski tourism during the winter season, which could contribute to increasing tourism revenues. The northern and northeastern parts of the district, particularly the foothill areas of the Guton and Tinov-Rosso peaks along

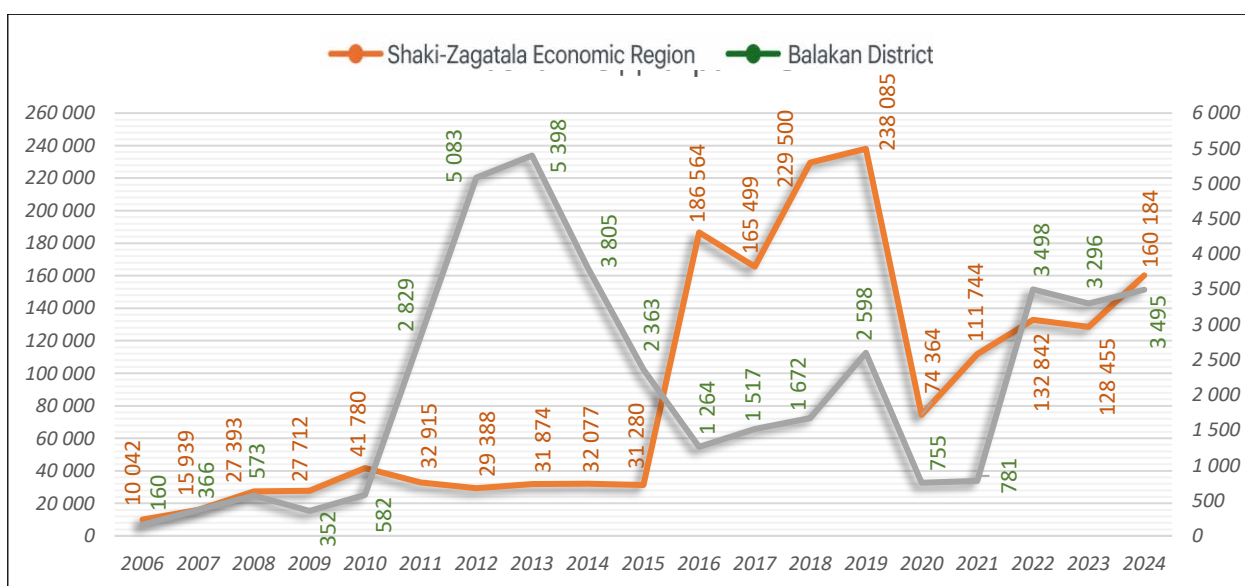
the watershed of the Greater Caucasus Range, offer favorable opportunities for ski tourism development. Moreover, integrating these mountainous areas with the natural landscapes of the Balakan, Mazim, Katekh, and Ganikh rivers could support tourism diversification by combining winter ski tourism with hydrotourism and other nature-based recreational activities during the summer season.

Table 1

Number of Persons Accommodated in Hotels and Similar Establishments, persons

İl	Azerbaijan	Balakan District
2006	291,617	160
2007	305,483	366
2008	431,574	573
2009	424,237	352
2010	438,479	582
2011	510,162	2,829
2012	624,924	5,083
2013	666,348	5,398
2014	672,345	3,805
2015	838,145	2,363
2016	1,122,068	1,264
2017	1,414,708	1,517
2018	1,749,475	1,672
2019	1,919,765	2,598
2020	668,813	755
2021	1,172,123	781
2022	1,697,358	3,498
2023	1,945,059	3,296
2024	2,380,247	3,495

Source: <https://www.stat.gov.az/source/tourism/>



Mənbə: <https://www.stat.gov.az/source/tourism/>

Fig. 1. Number of persons accommodated in hotels in the Shaki-Zagatala Economic Region and Balakan District, 2006–2024

Conclusion

The findings indicate that Balakan District has considerable potential for the development of ski tourism. The statistical analysis demonstrates an overall increase in tourism activity, suggesting favorable conditions for further diversification of the district's tourism sector through mountain and winter tourism. In this context, the development of ski tourism could enhance the attractiveness of Balakan as a tourism destination and contribute to increasing tourism-related revenues. However, several constraints may hinder this development, including insufficient tourism infrastructure, narrow and difficult-to-access roads, seasonal accessibility problems in mountain villages, and limited investment opportunities.

Overall, the findings demonstrate that Balakan possesses favorable natural and socio-economic conditions for ski tourism development. Nevertheless, the effective utilization of this potential requires sustainable and strategic planning, investment attraction, infrastructure improvement, and active participation of local communities.

Recommendations

To realize the ski tourism potential of Balakan District, strategic planning of ski routes and associated tourism infrastructure should be undertaken in accordance with internationally recognized sustainable tourism practices. Particular attention should be given to maximizing the economic and social benefits of tourism development for local communities.

Priority areas should include the development of tourism infrastructure, improvement of the investment environment for winter tourism, and efficient utilization of human resources. These measures would contribute to establishing a competitive and sustainable ski tourism destination in the district.

In areas identified as having potential for ski tourism development, priority should be given to road reconstruction and improvement, snow removal and safety measures, the establishment of small-scale eco-friendly accommodation facilities, and ski equipment rental services. These measures are essential for improving accessibility, visitor safety, and the overall quality of tourism services in Balakan District.

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ОЦЕНКА ПЕРСПЕКТИВ РАЗВИТИЯ ГОРНОЛЫЖНОГО ТУРИЗМА В БАЛАКЕНСКОМ РАЙОНЕ.

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Резюме. Балакенский район, расположенный на северо-западе Азербайджана, характеризуется разнообразными природно-географическими условиями, создающими значительный потенциал для развития горнолыжного туризма. Горный рельеф района, благоприятные климатические условия и приграничное положение с Грузией формируют возможности для развития зимнего туризма и связанных с ним рекреационных видов деятельности. Цель исследования заключается в оценке пригодности природно-географических условий Балакенского района для развития горнолыжного туризма, определении потенциала создания соответствующей туристской инфраструктуры, а также выявлении существующих ограничений и рисков. Особое внимание уделяется определению горных территорий, подходящих для создания горнолыжного курорта. В исследовании анализируются статистические показатели развития туризма в Балакенском районе и применяется пространственный анализ на основе ArcGIS для выявления территорий, потенциально пригодных для развития горнолыжного туризма. Выявленные территории могут служить практической основой для планирования туристской деятельности, развития инфраструктуры и принятия стратегических решений. Полученные результаты свидетельствуют о том, что Балакенский район обладает значительным потенциалом для формирования конкурентоспособной горнолыжной туристской дестинации и диверсификации туристского сектора северо-западного региона Азербайджана.

Ключевые слова: природно-географические условия, спортивный туризм, горнолыжный туризм, туристическая инфраструктура, устойчивый туризм

BALAKƏN RAYONUNDA DAĞ-XİZƏK TURİZMİNİN İNKİŞAF İMKANLARININ QIYMƏTLƏNDİRİLMƏSİ

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Xülasə. Azərbaycanın şimal-qərbində yerləşən Balakən rayonu xizək turizminin inkişafı üçün əhəmiyyətli potensial yaradan müxtəlif təbii-coğrafi şəraitlə səciyyələnir. Rayonun dağlıq relyefi, əlverişli iqlim şəraiti və Gürcüstanla sərhəddə yerləşməsi qış turizminin və onunla əlaqəli rekreasiya fəaliyyətlərinin inkişafı üçün imkanlar yaradır. Tədqiqatın məqsədi Balakən rayonunun təbii-coğrafi şəraitinin xizək turizmi üçün əlverişliliyini qiymətləndirmək, müvafiq turizm infrastrukturunun inkişaf potensialını müəyyənləşdirmək, eləcə də mövcud məhdudiyyətləri və riskləri aşkar etməkdir. Xizək kurortunun yaradılması üçün əlverişli dağlıq ərazilərin müəyyənləşdirilməsinə xüsusi diqqət yetirilir. Tədqiqatda Balakən rayonunda turizmin inkişafına dair statistik göstəricilər təhlil edilir və xizək turizminin inkişafı üçün potensial əlverişli ərazilərin müəyyənləşdirilməsi məqsədilə ArcGIS proqramı əsasında məkan təhlili aparılır. Müəyyən edilmiş ərazilər turizmin planlaşdırılması, infrastrukturunun inkişafı və strateji qərarların qəbul edilməsi üçün praktiki əsas rolunu oynaya bilər. Əldə edilən nəticələr Balakən rayonunun rəqabətqabiliyyətli xizək turizmi destinasiyasının formalaşdırılması və Azərbaycanın şimal-qərb bölgəsində turizm sektorunun şaxələndirilməsi üçün əhəmiyyətli potensiala malik olduğunu göstərir.

Açar sözlər: təbii-coğrafi şərait, idman turizmi, dağ-xizək turizmi, turizm infrastrukturunu, dayanıqlı turizm