PROSPECTS FOR THE DEVELOPMENT OF ECOTOURİSM İN AZERBAİJAN İN THE CONTEXT OF SUSTAİNABİLİTY

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Abstract. *In the paper, conditions for the implementation of ecotourism in Azerbaijan in the aspect of the challenges of sustainable development are considered. As an increased interest emerges worldwide in eco-friendly travel, Azerbaijan, with its abundant biodiversity, natural assets, and cultural treasures, has great potential for ecotourism. In the article, the current condition of ecotourism is explored, and the leading ecological sites and territories for future development are identified, reflecting the projects introduced by both the state and the private sector in creating an ecologically safe model of activity. It also tackles major challenges of inadequate infrastructure, limited local awareness, and environmental risks. This study is closely linked to the international conference "Sustainable Tourism: Green Dreams, Global Goals" and is meant to offer policy proposals on how an environmentally sustainable ecotourism might contribute to green growth in the context of the global agenda and its role in establishing Azerbaijan as the prime ecotourism destination in the South Caucasus.*

Keywords: *ecotourism, Sustainable tourism, Azerbaijan, Biodiversity, Green development, Community participation*

1. Introduction

With climate change and environmental destruction a reality for all corners of the world, sustainable tourism is at long last not just something dismissed as a trend. One significant aspect of sustainable tourism is the promotion of ecotourism, which results in a reduction of its damaging influence and a focus on environmental awareness, cultural sensitivity, and understanding the ecological aspects of the destination. Most developing countries regard ecotourism as an integral part of their development and environmental policy (Tugba, 2013).

Ecotourism focuses on conserving and sustainably managing ecosystems that contribute to the socio-economic well-being of the inhabitants (Farrell & Runyan, 1991; Bhattacharya et al., 2011). It also contributes to the protection of intangible cultural heritage and promotes better relations between tourists and host communities. This blend of environmental conservation and local interaction underscores ecotourism as an imperative tool for sustainable development, particularly in regions with an array of natural and cultural resources (Patil and Pattanshetti, 2024). In the case of countries like Azerbaijan, with particular emphasis on ecotourism in Azerbaijan, ecology, traditional economy, and rural landscape combine to develop nature-based tourism of high quality and sustainable character based on respect for ecology, economy, and culture, gaining more and more potential.

According to the United Nations World Tourism Organization (UNWTO), the global carbon footprint of tourism was 4.5 $GtCO_2e$ during the period 2009–2013, representing approximately 8%

of total greenhouse gas emissions (Lenzen et al., 2018). These numbers emphasize the urgent feeling that we must make tourism more sustainable worldwide. Moreover, the trend of relocating global tourism preferences to less crowded and more natural destinations has accelerated during the COVID-19 pandemic, providing a good opportunity for promoting ecotourism at the appropriate time (Khanra et al., 2023).

With nine different climate zones and a great number of protected natural resources, the country is well-suited for the establishment of ecotourism (OSCE, 2006). There are national parks—Shirvan, Zangezur, and Shahdag—as well as territories of ecological value in Guba-Khachmaz and Talysh Mountain, with opportunities for sustainable tourism. In the last few years, the country's authorities have begun to take advantage of these potential factors by creating eco-routes, constructing hiking paths, and launching projects like a birdwatcher program (Nevsky International Ecological Congress, 2025).

Even with the advantages, ecotourism in Azerbaijan is still in its embryonic stage. The most important limitations are the current level of infrastructure, the low level of awareness among the local population and visitors, and the degree of implementation of sustainability in tourism policy. In 2023, the flow of foreigners and stateless persons who visited the Republic of Azerbaijan was 1,402,600 people, with 252,485 of them visiting the country's national parks (Azerbaijan Tourism Board, 2023; AZERTAC, 2023). It can be concluded that there is a rare propensity among tourists to be ecotourists in this area, and the space for ecotourism development is still quite large.

This study seeks to explore the answer to the question: *To what extent is it possible to develop ecotourism in Azerbaijan in light of principles of sustainable development that can help maximize the impact of ecotourism for the achievement of the Sustainable Development Goals (SDGs)?*

The key objective of this paper is to identify the current situation of ecotourism in Azerbaijan, identify potential opportunities and challenges for the future development of ecotourism, and provide strategic policy recommendations to adopt international sustainability principles. The central premise is that, under specific investment, policy, and stakeholder collaboration requirements, ecotourism can serve as a prime instrument for conservation, income generation, and the preservation of culture.

2. Literature review

A key subset of sustainable tourism is ecotourism, which aims to preserve the natural environment and foster economic and social benefits for the host community. The International Ecotourism Society (TIES, 2015) describes ecotourism as travel to natural destinations, being responsible for conserving the inhabitants in educational environmental conservation and raising awareness and visiting places that practice the same. Academics often refer to ecotourism not as a single mover, but rather as a two-fronted driver: one of advancing environmental sustainability and another of addressing local people." For instance, Farrell & Runyan (1991) emphasize the necessity of pordecting ecological systems and support economic development through tourism. Similarly, Bhattacharya et al. (2011) Note, the involvement of local people in the decision-making process regarding tourism is an avenue for conservation and income generation. Honey (2008) further maintains that through well-manage ecotourism, cultural values can by preserved and fragile environments relieved of pressure.

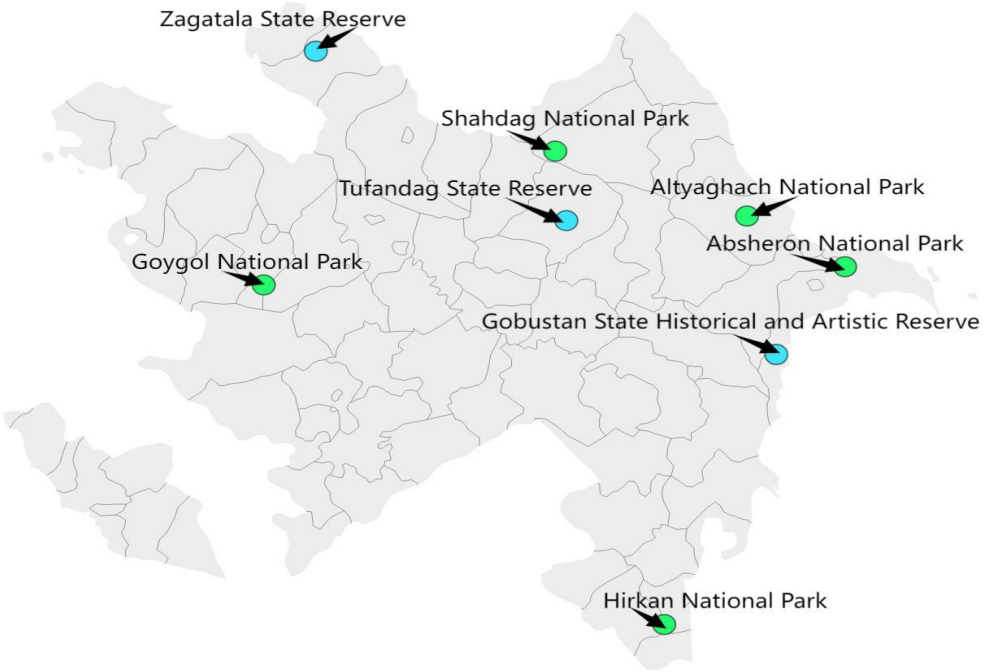
In emerging economies, ecotourism is increasingly acknowledged as a key tool for green growth and achievement of some of the UN Sustainable Development Goals (Weaver, 2001; Gössling & Hall, 2006). Travelers' importance of nature-based tourism according to research, the

growing eco-oriented tourism in the past few years has brought serious attention to nature-based tourism, and this was even intensified considering the advancement in the COVID-19 pandemic, which immediately shifted more of the global travelers to outdoor and eco-friendly travel experiences (UNWTO, 2022). However, some studies also indicate constraints and obstacles to ecotourism including the failure to develop infrastructures, lack of community involvement and illdefined policy direction (Scheyvens 1999; Stone and Wall 2004). They become recurring challenges to sustainability, and the potential conservation, and economic benefits.

3. Data and methodology

This research is qualitative and features the characteristics of both descriptive and comparative analysis designs with a view to investigating the future of ecotourism development in Azerbaijan in relation to sustainability. Through reputable and relatable secondary sources, the methodology will attempt to explore the major trends, challenges, and opportunities within the ecotourism sector in Azerbaijan. The analysis in this research is based on pure secondary data from national and international sources for the purposes of apprehending validity and reliability (Wright, 2005). Key data sources include public sector institutions like the State Tourism Agency of the Republic of Azerbaijan, the Ministry of Ecology and Natural Resources, and international organizations such as the United Nations World Tourism Organization (UNWTO) and the United Nations Environment Programme (UNEP). Supplemental materials were obtained from the statistical databases of the Azerbaijan Tourism Board and official documents like the "Azerbaijan 2030" strategy and the national ecotourism action plans. This study targets especially the regions of Azerbaijan with known environmental value, tourism potential, and policy focus: Shahdag National Park, Guba-Khachmaz, Lankaran-Lerik, and the Talysh Mountains (with the Hirkan Forest). **Figure 1,** shows that these are some of the most ecologically important and tourist-friendly parts of Azerbaijan.

Figure 1. National parks and protected areas in Azerbaijan relevant to ecotourism development.



Source: Authors' own elaboration.

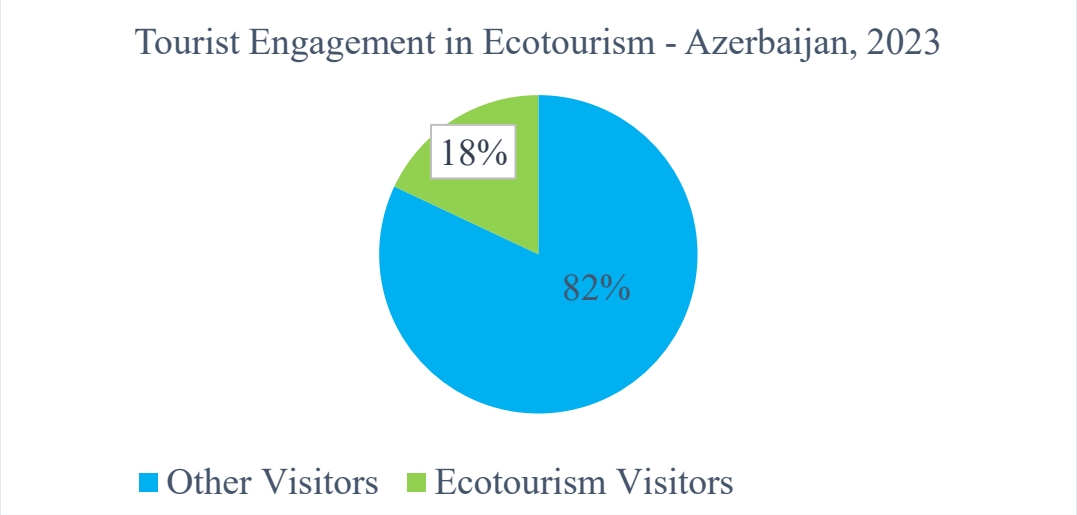
There, the value of areas for ecotourism, based on natural and cultural quality, infrastructure readiness, and community participation, is evaluated. To analyze the data, the following qualitative analytical tools were used: thematic analysis to identify the environmental, economic, and socio-cultural sustainability dimensions; SWOT analysis to identify the target regions' strengths, weaknesses, opportunities, and threats; comparison analysis of foreign (Costa Rica, Georgia, Slovenia) ecotourism models to select and adapt the best international models that are appropriate for Azerbaijan; and content analysis of policy documents on tourism and the environment of the country and policy documents containing resources that had not been previously identified (to the extent of the content).

4. Results

4.1. Ecotourism Participation and Trends

The analyses of recent data on tourism show that among the 1,402,600 foreign tourists visiting Azerbaijan in 2023, about 252,485 of them participated in ecotourism attractions related to national parks, nature reserves, and other protected areas (Azerbaijan Tourism Board, 2023; AZERTAC, 2023). This represents about 18 percent of the total number of international tourist arrivals, indicating an increasing demand for environmentally sustainable and nature-oriented travel. To demonstrate this distribution more clearly, a pie chart was produced to show what percentage of all visitors in 2023 were international visitors and what percentage of these participated in ecotourism-linked activities. This is evident in **Figure 2,** the picture below.

Figure 2. Share of international tourists engaged in ecotourism in Azerbaijan, 2023.



Source: Author's own elaboration.

While less than half may not sound like much, it is still a promising lead for a nation whose ecotourism industry is yet to be fully formalized. With almost one in five of all international tourists being attracted to ecotourism-related experiences, it represents both a positive trend and a clear opportunity to grow the sector through targeted policy and investment interventions. This figure may be put in context by contrasting it with neighboring Georgia. Based on information from

Geostat (2024) and the Georgian Agency of Protected Areas, Georgia hosted about 7,072,220 international tourists in 2023, of whom 1,015,024 visited the protected areas, approximately 14% of Georgia's total arrivals (Geostat, 2024; Georgia Today, 2023).

From this comparative data, we observe that, relatively, Azerbaijan engages more in ecotourism than Georgia, which has a globally well-acknowledged ecotourism brand. However, a significant portion of tourists in both countries still remains outside the ecotourism market, indicating considerable untapped opportunities. The gap between total tourism and ecotourism can be explained through the importance of targeted efforts towards raising awareness, installing infrastructure, and providing accessibility to natural protected areas. Furthermore, global trends following the COVID-19 pandemic indicate a sustained shift in traveler preferences toward sustainable, low-impact tourism, especially in destinations with rich natural and cultural assets. If Azerbaijan can align its development policies with these trends, it is well-positioned to significantly increase ecotourism's contribution to both its economy and sustainable development agenda.

4.2. Regional Ecotourism Potential

In particular, Shahdag, Guba-Khachmaz, Lankaran-Lerik, and the Talysh Mountains are significant because of their high biodiversity, endemism, intact natural environment, and cultural background. These areas are home to national parks and nature reserves of significant value and opportunities for sustainable tourism. Nevertheless, despite their natural and cultural attractiveness, several constraints tend to prevent the full exploitation of ecotourism potential, such as poor infrastructure, low accessibility, and unsatisfactory sustainable tourism services. The successful conversion of these areas into desirable ecotourism venues will now require a holistic approach that combines environmental conservation with investment in facilities that promote low-impact, year-round visitation and community participation.

Shahdag, located near the Greater Caucasus mountain range, is home to Shahdag National Park, established in 2006 and spanning over 130,000 hectares. The region is well known for its seasonal tourism potential, offering a blend of winter sports and summer adventure activities. In 2024 alone, the Shahdag Tourism Center recorded over 278,955 visitors, including skiers and general tourists (Hasanov, 2025). Despite this success, the area remains predominantly focused on winter tourism, and non-winter activities are limited to lighter experiences such as hiking and relaxation, which reduces its competitiveness as a year-round ecotourism destination (Azerbaijan.travel, 2024).

Guba-Khachmaz offers considerable ecotourism value through its scenic forests, river systems, and culturally significant sites such as the Samur-Yalama forest corridor and the ancient mountain village of Khinalig, which is listed by UNESCO as intangible cultural heritage (UNESCO, 2023). This unique combination of ecological and historical resources makes the region ideal for sustainable tourism. Nevertheless, the development of ecotourism is constrained by underdeveloped infrastructure and weak delivery of tourism services at the local level.

In the southern part of the country, the Lankaran-Lerik region and the Talysh Mountains are among the most ecologically valuable in Azerbaijan. Hirkan National Park, which is 99% forested, is home to over 150 species of trees and shrubs, many endemic to the region, highlighting its exceptional biodiversity (AZERTAC, 2019). However, challenges such as poor transportation connectivity, limited conservation planning, and a shortage of eco-certified accommodations continue to obstruct sustainable tourism development.

4.3. Strengths and Barriers to Ecotourism Development

The SWOT analysis highlights a complex landscape. Azerbaijan possesses significant natural and strategic strengths, including its nine climate zones, growing governmental attention, and international tourism interest. At the same time, weaknesses such as underdeveloped infrastructure, limited local engagement, and low visibility in global markets hinder progress. Threats, including climate change and regulatory enforcement gaps, further complicate the development process. This analytical tool categorizes internal strengths and weaknesses, as well as external opportunities and threats. The analysis highlights Azerbaijan's rich ecological potential and growing institutional support, while also revealing critical barriers such as infrastructure gaps, limited awareness, and regulatory challenges. The key insights from the SWOT analysis are summarized in **Figure 3,** outlining the internal and external factors affecting ecotourism development in Azerbaijan.

Figure 3. Ecotourism Development in Azerbaijan: A SWOT Analysis.

Strengths	Weaknesses
• Rich biodiversity and 9 climate zones • National parks and protected areas • Government support through national programs • Regions like Shahdag, Guba, and Lankaran have high ecotourism potential	• Underdeveloped tourism infrastructure • Low local awareness of ecotourism • Limited international visibility of ecotourism offerings • Difficult access to remote areas (transportation issues)
Opportunities	**Threats**
• International support under Sustainable Development Goals (SDGs) • Post-COVID interest in nature-based travel • Job creation and income diversification for local communities • Potential for cross-border ecotourism with countries like Georgia and Turkey	• Risk of environmental degradation due to mass tourism • Weak enforcement of ecological regulations • Political or economic instability affecting tourism • Climate change affecting natural ecosystems

Source: Author's own elaboration.

5. Discussion

The findings from this study highlight the opportunities and challenges in sustainable ecotourism development in Azerbaijan. For instance, the proportion of international travellers going abroad for ecotourism-related purposes is very high (about 18%) in 2023, reflecting a rising international concern for nature-related and environmentally-sound tourism. At a rate higher than that in Georgia, described above, this is impressive given Azerbaijan's relatively recent development of formal ecotourism. Results from the comparisons indicate that while Georgia is more advanced as an ecotourism destination, Azerbaijan can offer a regional model for sustainable tourism development through the development of strategic and cooperative measures.

The regional review demonstrates that there are substantial ecological and cultural assets mainly in the Shahdag, Guba-Khachmaz, and Lankaran-Lerik corridor (which is rich in biodiversity, endemic species, and cultural heritage). However, the existing infrastructure constraints and the absence of eco-certified services do not allow this potential to be fully realized. For example, in

Shahdag, the predominance among tourism of winter sports tourism emblematizes a seasonal specialization that confines the possibilities for the application of sustainable tourism models that are seasonally diffuse. Conversely, in 'environmental rich' areas, like Hirkan and Khinalig, poor transport connections and limited local society involvement prevent the development of a forward-looking approach. These vary from a piecemeal policy implementation style to poor stakeholders' coordination and weak local participatory facilitation factors that undermine ecotourism potential as an inclusive and sustainable development driver.

6. Conclusion

In this paper, the increasing role of ecotourism as a strategy that contributes to sustainable development in Azerbaijan has been emphasized. The country has an impressive platform for a strong ecotourism industry, considering the fact that 18 % of global travelers indulge in nature-based activities. Despite the presence of diverse flora and fauna, climate and land cover types, as well as heritage sites, several problems persist, many of which are of the same character across the region's hotspots, such as inadequate infrastructure, weak stakeholder cooperation, and fragmented policy and regulations. Such barriers not only impede the growth of the sector but could also threaten the sustainability of current efforts.

For the transition from potential to action, a multi-faceted and interconnected strategy is required. It will be vital to prioritize investments in infrastructure and facilitate community-based tourism in all destinations, in particular, whilst putting in place stronger environmental governance and ensuring national strategies actively support international sustainability frameworks, such as the UN Sustainable Development Goals. By overcoming these strategic deficiencies, Azerbaijan can harness the power of ecotourism as a vehicle for environmental protection, rural development, and economic diversification.

In summary, ecotourism in Azerbaijan stands at an important crossroads; it can either stay in its niche or become a transformative vehicle that supports the broader sustainable development agenda in the country. Which path this will follow will depend on policymakers and local communities working together in the years to come.

7. Recommendation

It is concluded that in promoting ecotourism in Azerbaijan, the following measures are going to help enhance ecotourism development in the country based on sustainability. "We need to invest in long-term sustainable infrastructure, in places such as Shahdag, Hirkan, and the Lankaran-Lerik corridor, in the ecologically rich areas". If more direct gateway flights, including, specifically, direct flight services from London, Paris, and Sydney, are opened up (as well as other flight services from the region), development of eco-accredited accommodation, and upgrading of visitor facilities, these things will build a more efficient, lower-footprint tourism.

Just as crucial is the capacity-building of indigenous communities through training, awareness programmes, and community involvement in the decision-making process for tourism. Community-based tourism stimulates local ownership and income opportunities as well as authenticity and sustainability of ecotourism enterprises. This approach must be consistent with national tourism, environmental protection, and rural development policies, but also with international frameworks for sustainability such as the United Nations Sustainable Development Goals. Developing specific indicators for sustainability and fostering eco-certification standards in the industry could further consolidate its credibility and attractiveness.

In order for Azerbaijan to remain known within the competitive worldwide ecotourism landscape, it needs a better use of digital platforms and a strengthening of international collaboration. Success stories from countries such as Costa Rica, Slovenia, and Georgia that have developed successful ecotourism models can be instructive for domestic policy and practice. Last, more studies and systematic surveillance are needed to inform evidence-based policy-making. Although the present research relied on existing data, it is recommended that future research should involve primary data collection and field visits to analyze the actual impacts of these ecotourism projects on the local flora and society.

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