

Tourism, Socioeconomic Transformation and Sustainable Development Challenges in High-Mountain Border Regions (the Cases of Khevi, Khevsureti and Tusheti)

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Abstract. This paper explores socioeconomic transformation in Georgia's high-mountain border regions of the Eastern Caucasus (Khevi, Khevsureti, and Tusheti) within the context of tourism development. Based on in-depth interviews with 45 respondents, the study indicates that the surveyed population perceives tourism as the most effective instrument for economic stabilization. The paper analyses the impact of tourism on the prevention of depopulation, the rational use of local resources and ecological sustainability. Furthermore, the study examines the attitudes of the population in Georgia's high-mountain border regions toward the prospects of tourism development over the next decade alongside the role of the state as a facilitator. The forms of tourism that most closely correspond to local geographical and socioeconomic realities have been identified. © 2026 Bull. Georg. Natl. Acad. Sci.

Keywords: Georgia, high-mountain border regions, sustainable tourism development, depopulation, protected areas

Introduction

For the mountainous regions of Georgia, where demographic outmigration and limited economic activity remain significant challenges, tourism is considered one of the most effective drivers of development (Kvirkvelia et al., 2025), (Nadareishvili et al., 2025). The multiplier effect of tourism, together with tourism infrastructure, stimulates sectors such as transport, construction, and agriculture, thus contributing to the reduction of

population outmigration. However, due to the vulnerability of mountain ecosystems, it is essential to manage these processes according to the principles of sustainable development, which require balancing ecological, economic, and socio-cultural factors to secure long-term stability (WTO, 2005), (Nadareishvili et al., 2025).

According to the UNWTO guiding principles, sustainable tourism should be oriented toward 12 key objectives, including local prosperity, employ-

ment quality, and the protection of cultural heritage. Mountain tourism, which accounted for 9-16% of international visits in 2019, includes both “standard” (agro, eco, and cultural tourism) and “extreme” activities (FAO, 2023).

It is noteworthy that in the post-pandemic period, global tourism markets have experienced increased demand for less mass tourism and more authentic environments, creating new opportunities for developing countries, which are expected to account for 57% of international visits by 2030 (WTO, 2014).

The high-mountain regions of the Eastern Caucasus of Georgia (Khevi, Khevsureti, Tusheti) possess unique natural resources for the development of adventure and ecotourism. Each region contains protected areas that support the development of adventure tourism. Although all three regions are located on the main ridge of the Greater Caucasus, they differ significantly in terms of biodiversity and landscape characteristics, as well as in their management models. For example, Tusheti is characterized by pine forests, making it unique within Georgia (Kvachakidze, 1996). The altitudinal (hypsometric) distribution zone of the local pine forests is among the highest in Europe. The region is also known for its endemic plant and animal species. The Pshav-Khevsureti National Park is characterized by a relatively complex relief. The landscape includes both alpine zones and glacial landforms (e.g., the Roshka boulders). The main characteristic of Kazbegi National Park is its volcanic and glacial landforms. The area is entirely high-mountainous (100%). Forests are present only in small, fragmented areas (birch stands). The main focus is on the protection of Mkinvartsveri (5,054 m) and the surrounding high mountain ecosystems (APA, 2026).

The study region is rich in historical-cultural and ethnographic anthropogenic tourism resources, which is why it is border one of the most attractive regions in Georgian tourism (Arabuli, 2011). Tusheti Protected Areas and the local villages

(Dartlo, Diklo, Omalo) form a coherent organic entity. Ecotourism here is most strongly integrated with cultural heritage. In Pshav-Khevsureti, particular attention is devoted to the conservation of the natural landscape surrounding the historic fortress-villages of Shatili and Mutso. In comparison with Kazbegi, the area is characterized by a wilder and less intensively developed for tourism. In Kazbegi National Park, anthropogenic pressure is at its highest level. Due to the presence of a major highway, this protected area is the most accessible, thereby creating a dual condition: a development opportunity and an environmental challenge (waste, noise).

The mountainous regions of the Eastern Caucasus of Georgia (Khevi, Khevsureti, Tusheti) possess the resources necessary for the development of all forms of “standard” tourism activities. The region is rich in resources for agro, ecological, wellness, cultural, ethnographic, gastronomic, and sport tourism. It offers opportunities to explore local architecture, traditions, and gastronomic heritage, as well as for hiking, fishing and hunting, horseback riding, skiing, wildlife watching and birdwatching. The latter activities can be grouped under the umbrella of adventure tourism. For sustainable growth, it is a priority to reduce of seasonality (through the implementation of gastronomic and wellness tourism products), to strengthen public-private partnerships, and to ensure the active involvement of local communities in the planning process. The ultimate goal is to develop a tourism product model that minimizes negative environmental impacts and ensures efficient resource management (Romeo et al., 2021; FAO, 2023).

Materials and Methods

The object of this research is the high-mountain border regions of Eastern Caucasus of Georgia – Khevi, Khevsureti and Tusheti. The three historical-geographical areas of Georgia are characterized by difficult natural-geographical conditions, peripheral location relative to economic centers, harsh

climatic environment, and ongoing depopulation trends (Neidze, 2003).

The aim of the study is to conduct a comprehensive assessment of the socio-economic impact of tourism in high-mountain border regions; to perform a comparative analysis of tourism development rates and quality across the regions; to identify both the positive and negative effects of tourism; an assessment of regional development sustainability in relation to existing human resources and levels of education. The study also seeks to forecast the tourism potential of high-mountain regions from the perspective of local communities. Identify priority tourism products tailored in line with regional specificities of Tusheti, Khevi, and Khevsureti.

A qualitative research method was used in this study through in-depth, semi-structured interviews. Surveying 45 respondents in high-mountain border regions, where the population density is low, creates a statistically reliable picture and makes it possible to draw generalized conclusions about the region's development trends.

Despite the significant findings of the research, there are certain limitations that may influence the generalization of the data. For example, seasonal accessibility.

The findings of the study largely reflect the attitudes of economically active individuals and may insufficiently capture the views of passive groups who are not involved in tourism at all.

Although 45 respondents provide a qualitative picture, generalizing quantitative findings to the entire high-mountain region requires additional, large-scale studies.

Scientific novelty and relevance. Within the framework of this study, tourism is conceptualized as an effective strategy for the survival of mountainous border regions and as an instrument for preventing depopulation. Tourism is no longer considered as a supporting sector of economic activity, but rather as a strategic guarantor ensuring population retention in border regions. The study identi-

fies a new model of tourism, which is based not on large-scale infrastructure, but on the commercialization of authentic cultural capital. The research develops a concept according to which touristically active and populated mountainous regions represent a fundamental basis for national security.

The settlement of border zones is of strategic importance for the country, while tourism represents almost the only employment alternative in these areas; the study addresses the question of what type of support the population expects from the state.

Results and Discussion

The findings of the study provide a basis for assessing the demographic stability of border regions. For example, in Tusheti, the seasonal mobility of 91.7% of the population indicates that the region “freezes” during the winter months. There is a significant risk that temporary settlements may eventually become completely depopulated. In Khevsureti, a balance between permanent and seasonal population (50/50) is preserved, which creates a mixed economic model. The case of Khevi shows that a high proportion of permanent residents (63.3%) indicates that relatively better infrastructure and a transport route connecting Georgia and Armenia with Russia are directly linked to population retention in the area. It may be assumed that, in Khevi, the retention of permanent population is partly supported by legally established social benefits (pension supplements and utility subsidies) (Parliament of Georgia, 2015).

Tourism plays a particularly important role, as it performs a lifeline function. The study data indicate a high level of dependence on tourism (especially in Khevi – 91%). This raises the question of how safe it is for a region to depend on a single sector? A reduction in tourist flows, as experienced during the pandemic, could result in economic collapse in the region. The example of Khevsureti shows that a relatively diversified model combining tourism with agriculture (livestock farming) exists.

This appears to be a more resilient and sustainable form of development.

It is noteworthy that there are gender differences across border regions. For example, in Khevsureti, men dominate among the respondents (80%). Due to the weak provision of social services (kindergartens, schools, healthcare), women often relocate to lowland areas with children, while men remain primarily engaged in household activities. In Tusheti, the high proportion of women (70.8%) indicates that the guesthouse sector is largely based on female labor.

In Khevi, 45.5% of respondents believe that migration has decreased. This confirms that tourism is directly linked to the demographic survival of the region. In Tusheti, this effect is weaker (8.3%) due to seasonality. Therefore, it can be argued that tourism alone cannot prevent migration unless it becomes a year-round activity and permanent living conditions are created.

The survey results indicate that 60% of respondents have higher education, representing an underutilized resource. In border mountainous regions, employment is mainly oriented toward the

private sector (tourism, agriculture). However, long-term development requires restoring demographic balance and retaining young skilled workforce. If tourism is profitable, why do young people not return? Income alone is not sufficient. Young people need internet access, leisure opportunities, education and development prospects, which are insufficiently reflected in current mountain policy frameworks.

The highest level of engagement in the tourism sector was recorded in Khevi (91%), while in Tusheti and Khevsureti it reaches 70%. In Khevsureti, 60% of respondents were also engaged in the agricultural sector, compared to 25% in Tusheti. The public sector, pensions, social assistance and remittances represent a significant financial support base for local households.

The relatively low share of vocational education in Tusheti (15.6%) suggests that tourism in this region is transitioning into a more structured and conscious phase, whereas in other regions service provision remains largely intuitive and less professionalized.

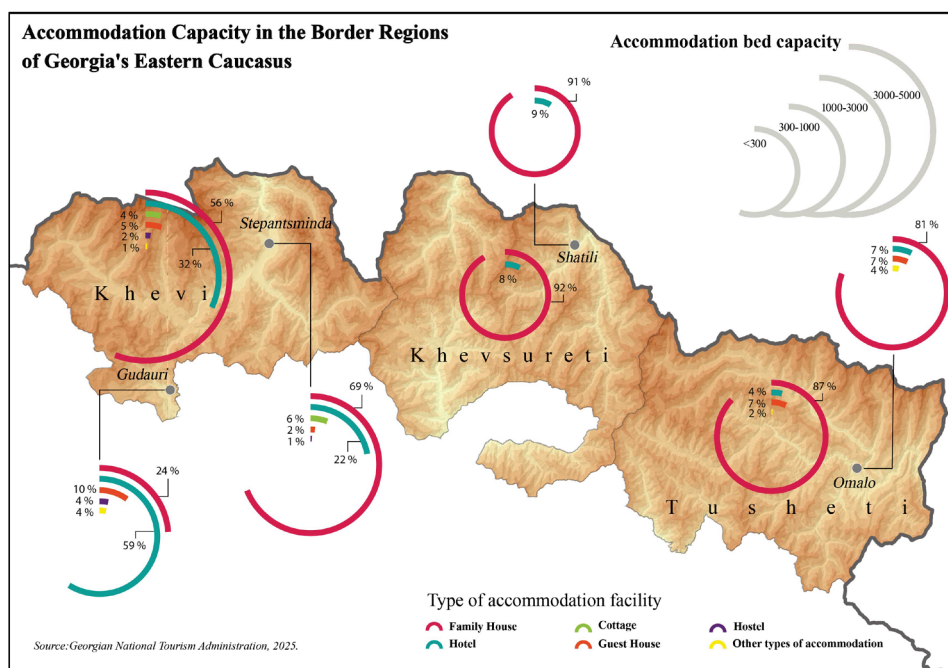


Fig. Accommodation capacity in the border regions of Georgia's Eastern Caucasus.

The spatial distribution of accommodation facilities provides an overview of the level of tourism infrastructure development and the specific characteristics of the service sector in the studied regions (see Fig.). The map clearly shows that in Kazbegi Municipality (Khevi), large-capacity hotels dominate, reflecting the intensive and more commercialized nature of tourism. In contrast, Tusheti and Khevsureti are dominated by small-scale family guesthouses, reflecting the ethnographic and ecotourism orientation typical of these regions.

While 86% of the population express satisfaction with tourism development, environmental pollution is identified as the most significant problem (44.4%). It is crucial for the region to preserve economic benefits without degrading the natural capital that attracts tourists. A key issue for future research is the determination of tourist carrying capacity. For example, how many tourists can Tusheti or Khevi accommodate without causing ecosystem degradation. Approximately 55-60% of the respondents identify job creation and income growth as the main benefits of tourism. Furthermore, 75% believe that tourism has positively transformed their traditional way of life. These findings challenge the widespread stereotype that tourism development in mountainous regions can contribute to the erosion of local cultural traditions. On the contrary, local communities perceive tourism as a means of preserving traditions (e.g., storytelling, handicraft workshops, and culinary masterclasses). This allows for discussion of the positive aspects of the commercialization of cultural identity. The relationship between local residents and tourists is positively evaluated by 87% of respondents. This indicates the readiness of mountainous regions to actively engage in the service sector and sustain hospitality traditions.

The research data show that infrastructural improvements are perceived more strongly in Tusheti (41.7%) than in Khevi (9.1%). In Khevi (Stepantsminda), tourism operates at a large scale, however, the respondents express dissatisfaction

with infrastructure. This indicates that state investment does not correspond to the pace of tourist inflows. The non-systematic rehabilitation of infrastructure increases local dissatisfaction. Rising prices for food and services (35.6%) represent a serious challenge. Tourism increases income for those engaged in the sector, but worsens the socio-economic conditions of pensioners or those not involved in tourism. This creates social polarization within the region.

Tourism in the mountainous regions of Georgia has spontaneous success, which requires systematic management (education, waste management, and planned infrastructure) so that short-term economic benefits do not turn into long-term ecological and social crises. A total of 51% of the surveyed population expect an increase in the volume of tourism in the future without sustainability. Local communities do not expect the state to implement a structured tourism development strategy. If development continues in an inertial manner, the regions may reach a point of “tourism overuse”, where resources are depleted, the environment becomes polluted and the quality of services does not improve.

The finding that 87% of respondents support the harmonization of the interests of tourists and local residents is especially remarkable. This can be interpreted as an economic transformation of the traditional culture of hospitality. The mountainous border regions are not willing to become mere “museums” or “touristic showcases”; rather, they aim to establish themselves as equal stakeholders, which constitutes a rare example of social sustainability.

Local residents express a strong demand for financial support (48%), but show little willingness to accept regulations (5%). This reveals a significant contradiction. Sustainable tourism (eco-standards and waste management) is inconceivable without strict regulatory mechanisms. The findings indicate a clear deficit of trust between the state and the local population. Residents fear that regulation may serve not as a tool for environmental protec-

tion, but rather as a mechanism for creating additional barriers for local communities.

The dominance of adventure and eco-tourism (63%) identified in the study is not accidental. Local communities demonstrate a notable degree of pragmatism. Residents are aware that in remote mountainous regions characterized by avalanche risks and limited infrastructure, investment in trail-marking initiatives and family-run tourism activities is considerably more beneficial than financing costly large-scale infrastructure projects, such as ski resort complexes.

The examples of Juta and Omalo demonstrate that significant potential exists for off-piste skiing, but limited accessibility and the necessity of helicopter restrict this activity to elite tourist groups. If the state recognizes this sector as a strategic area of interest, the expansion of winter tourism may support the continuous revitalization of border regions throughout the year, thereby contributing to a decline in seasonal migration.

Respondents' references to workshops and masterclasses in Diklo, such as carpet weaving, show that local residents are becoming more aware of the value of cultural heritage. This represents a pathway toward high-value tourism development. Instead of attracting large numbers of low-spending visitors, the region has the potential to host fewer but higher-spending tourists who are willing to pay for unique and authentic experiences.

Conclusions

The conducted study demonstrates that tourism represents the principal driving force for the survival and development of Georgia's highmountain border regions (Khevi, Khevsureti, Tusheti), although though its impacts on these regions are heterogeneous.

The pronounced differences between regions (strong seasonality of Tusheti and the more stable permanent population in Khevi) indicate that economic activity alone is insufficient to ensure demographic balance. Improving social services and infrastructure is therefore crucial to reduce the out-migration of youth and women.

Tourism is seen as a "lifeline", but the case of Khevi shows that excessive dependence on a single economic sector increases regional vulnerability. The most effective sustainable model is a combination of tourism and traditional agriculture, namely agritourism, together with adventure and ethnographic tourism.

Highly educated local human capital is a major resource that the state has not fully used. The shortage of professional training limits the transformation of traditional, experience-based hospitality into modern, high-quality, technology-driven services.

To move from spontaneous regional development to a sustainable model, a systemic approach is necessary. Infrastructure rehabilitation must consider not only tourism needs but also the requirements of permanent settlement. Moreover, human capital development is essential, including the establishment of vocational education centers directly within the regions. Support for specific forms of winter tourism could help the region function and develop throughout the entire year.

Ultimately, the formula for long-term success lies in establishing a partnership between the state and local communities that ensures a balanced integration of economic benefits, cultural authenticity, and environmental protection.

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Contribution

Assistance in preparing the visual materials for the article (Map: Accommodation Capacity of the Border Regions of Georgia's Eastern Caucasus) was provided by the project's GIS specialist Gvantsa Tsirghvava.

საზოგადოებრივი გეოგრაფია

ტურიზმის გავლენა საზღვრისპირა მაღალმთიანი რეგიონების სოციალურ-ეკონომიკურ ტრანსფორმაციაზე (ხევის, ხევსურეთისა და თუშეთის მაგალითზე) და მდგრადი განვითარების გამოწვევები

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(წარმოდგენილია აკადემიის წევრის რევაზ გაჩეჩილაძის მიერ)

ნაშრომში განხილულია საქართველოს აღმოსავლეთ კავკასიონის საზღვრისპირა მაღალმთიანი რეგიონების (ხევი, ხევსურეთი, თუშეთი) სოციალურ-ეკონომიკური ტრანსფორმაცია ტურიზმის განვითარების კონტექსტში. კვლევა, რომელიც ეყრდნობა 45 რესპონდენტის სიღრმისეულ ინტერვიუს, ცხადყოფს, რომ ტურიზმი აღქმულია როგორც ეკონომიკური სტაბილიზაციის უალტერნატივო ინსტრუმენტი. ნაშრომში გაანალიზებულია ტურიზმის გავლენა დეპოპულაციის პრევენციაზე, ადგილობრივი რესურსების რაციონალურ ათვისებასა და ეკოლოგიურ მდგრადობაზე. გარდა ამისა, სტატიაში განხილულია: საქართველოს საზღვრისპირა მაღალმთიანი რეგიონების მოსახლეობის დამოკიდებულება ტურიზმის განვითარების პერსპექტივებთან მომავალ 10-წლიან პერიოდში; სახელმწიფოს, როგორც ფასილიტატორის როლი; ასევე, გამოვლენილია ტურიზმის ის სახეობები, რომლებიც ყველაზე მეტად შეესაბამება ადგილობრივ გეოგრაფიულ და სოციალურ რეალობას.

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