

HISTORICAL-GEOGRAPHICAL AND CLIMATIC FACTORS OF THE TOURISM RESOURCES OF THE KAKHETI REGION

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Abstract. Historical-geographical and climatic factors significantly affect the tourism resources of the Kakheti region in Georgia. Located in the eastern part of the country, Kakheti is distinguished by its unique and diverse landscape, shaped by the Greater Caucasus Mountains to the north and the Alazani Valley running through its heart. This geographical configuration has historically facilitated the development of diverse cultural practices, especially viticulture, and provided a strategic location for settlements and fortified structures. The region's churches, monasteries, fortresses, and other archaeological sites are cultural relics from various eras, including early Christianity, the Golden Age of Georgia, and periods of foreign rule, and constitute a significant part of Kakheti's cultural tourism offering.

Climatically, Kakheti is characterized by a humid subtropical climate with hot summers and mild winters. The Alazani Valley creates a favorable microclimate for grape growing, which underpins the region's wine industry. Seasonal variations in temperature and precipitation directly affect tourism activities. Summer is the peak season for visiting vineyards, outdoor recreation, and festivals, while autumn is the time for grape harvest and winemaking. Spring offers pleasant temperatures for visiting historical sites and enjoying lush landscapes. Winter, although less popular for general tourism, attracts visitors interested in winter sports in mountainous areas and provides a more favorable opportunity to explore or experience cultural heritage.

The interaction of Kakheti's distinctive historical-geographical environment and its favorable climate has created a diverse and attractive set of tourism resources. First of all, it is the region's unique history, which is reflected in numerous cultural heritage sites. Also, the climate ideally suited for viticulture, along with the offer of distinctive seasonal experiences, forms the basis of its tourist appeal, starting from cultural and historical research and ending with agrotourism and outdoor activities.

Keywords: Kakheti, Signaghi, Tsinandali, Alaverdi Temple, Shuamta Temple, tourism.

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Introduction to the article. Geographically, Kakheti's location is strategically important. It is bordered by the Greater Caucasus Mountains to the north and Azerbaijan to the southeast. The region is dominated by the fertile Alazani Valley, which has been a vital source of agriculture and settlement since ancient times. This diverse topography, which ranges from high mountain peaks and alpine meadows to rolling hills and vast plains, provides a stunning backdrop for a wide range of tourist experiences, from hiking and nature exploration to enjoying breathtaking landscapes. The geographical isolation created by the mountains has also played a significant role in preserving unique cultural elements throughout history. Historically, Kakheti is distinguished by a rich and multi-layered past, which is inextricably linked to the

development of the Georgian state and its cultural identity. As one of the historical regions of Georgia, it has witnessed significant events, from the adoption of Christianity and the Middle Ages to periods of foreign invasions and resistance. This long and complex history is physically reflected in the region's numerous architectural treasures, including ancient churches, monasteries, castles, and archaeological sites, each of which tells the story of a bygone era and offers invaluable information about the region's heritage.

In addition, Kakheti's climate plays a significant role in determining its tourist appeal. Characterized by a humid subtropical climate, the region has distinct seasons that influence both agricultural practices and tourist activities. Warm summers are ideal for outdoor activities and enjoying the lush landscapes, while mild winters, especially in the valley, allow for year-round access to many places. Most importantly, the climate, combined with the fertile soil of the Alazani Valley, creates ideal conditions for viticulture, making Kakheti the heart of Georgian wine production. The annual grape harvest is a cultural phenomenon and a major tourist attraction, highlighting the deep connection between climate, agriculture, and regional identity.

In essence, Kakheti's tourism resources are a direct product of its historical evolution, unique geographical location, and defining climatic characteristics. These factors have not only shaped the physical environment, but also facilitated a cultural development that is deeply intertwined with agriculture, especially winemaking, and a strong sense of regional identity.

Methods. To study the historical-geographical and climatic factors affecting the tourism resources of the Kakheti region, we used a mixed methods approach that combines the analysis of qualitative data with the synthesis of existing quantitative information. The research design is structured in such a way that we collected and interpreted information obtained from various sources to provide a comprehensive understanding of the interaction between these factors and tourism.

Discussion. The development of tourism in Georgia and its individual regions depends on the potential of tourism resources that a particular region has. The potential of tourism resources is significantly determined by historical, geographical and climatic factors. In terms of historical factors, it is necessary to consider the history of each tourist object and the important cultural values of these monuments, while geographical and climatic factors include the number of sunny and dry days, the duration of sunlight, the air temperature determining heat, the wind regime, etc. These climatic indicators are important for the planning and development of all types of tourism. These include cognitive tourism, recreational tourism, sports tourism, ecological tourism and other types of tourism (Elizbarashvili, 2007).

Kakheti is known for its interesting and diverse history, home to ancient civilizations dating back to the Colchian and Iberian periods. The region is rich in historical sites, such as ancient churches, monasteries, and fortresses, which attract history buffs and visitors interested in cultural tourism.

Kakheti is often referred to as the „wine region“ of Georgia. The region's winemaking tradition dates back over 8,000 years, making it one of the oldest wine-making regions in the world. The region is famous for its traditional Georgian winemaking methods, in particular, the ancient method of winemaking in qvevri, which is unique to the region and offers tourists a fascinating experience.

The region is represented by a diverse range of Georgian folklore, music, and dance. Local festivals and traditional celebrations create unforgettable impressions for visitors.

Kakheti's geography is characterized by diverse landscapes, including fertile plains, rolling hills, and perpetually snow-capped mountains. The Alazani River Valley is particularly notable for its fertile lands, where vineyards and hazelnut plantations are cultivated (Elizbarashvili E. Varazanashvili O. , 2008).

Kakheti is relatively close to Tbilisi, the capital of Georgia, and the main connecting point is the Gombori Pass, which is beautiful at all times of the year and has become a source of inspiration for many tourists. It makes the region easily accessible to both domestic and international tourists. This proximity makes the region even more attractive.

Kakheti has a relatively mild climate with warm summers and cool winters. This climate is favorable for outdoor activities all year round (Prospects for Tourism Development in Georgia, 2020).

Our goal is to study the tourist resources, climatic factors of the Kakheti region and assess the prospects for the development of the main types of tourism.

To achieve this goal, we selected the following main tourist sites in the Kakheti region:

1. Alaverdi – an architectural monument of the 11th-17th centuries, Alaverdi Cathedral;
 2. Gremi – an architectural ensemble of fortresses of the 16th century;
 3. Kvareli – an ancient monument of architecture of the 6th century. I. Chavchavadze State Museum.
- K. Marjanishvili House-Museum;
4. Signaghi – an 18th-century fortress-wall, a museum of local lore;
 5. Shuamta – architectural monuments of the 5th-7th, 11th-12th and 16th centuries;
 6. Udabno – an architectural monument of the 6th-18th centuries;
 7. Tsinandali – A. Chavchavadze House Museum, Dendropark;
 8. Shilda – VI-VIII Monastery Complex and Shilda Wall (18th century)

For the listed objects, climate factors such as the number of sunny days, duration of sunlight, average air temperature and number of days without precipitation were assessed (Elizbarashvili, Droughts in Easter Georgia, 2011).

The assessment of these parameters was based on reference materials, thematic atlases and other literary sources. The research used cartography and linear interpolation methods. The results are presented in the table.

Table. 1. Climatic factors of tourism resources (average annual data):

Tourism potential	Climatic factor			
	Number of sunny days	Duration of sunlight, hours	Average air temperature	Number of days without precipitation
Alaverdi	311	2150	11,6	215
Gremi	309	2200	12,5	235
Kvareli	309	2200	12,5	235
Signaghi	309	2200	11,1	225
Shuamta	311	2250	11,0	225
Edabno	309	2300	10,4	265
Tsinandali	311	2250	12,1	225
Shilda	309	2200	12,5	235

A sunny day is considered a day when the sun shone for at least a short time, that is, it was not a completely cloudy day.

As can be seen from the table, the tourism potential of the Kakheti region is characterized by favorable climatic conditions (Prospects for Tourism Development in Georgia and World Experience, 2016).

The annual sunshine period here is quite long, the number of sunny days is frequent, the average annual air temperature is high, and the number of days without precipitation is frequent, which contributes to the rational and effective use of these factors in all types of tourism (Prospects for Tourism Development in Georgia and World Experience, 2016). If we compare the climatic factors of individual tourist facilities with each other, we will see that in terms of the frequency of sunny days and the duration of sunlight, the advantage belongs to Alaverdi, Shuamta and Tsinandali, where the number of sunny days is the largest (311 days), while the sun shines the longest in the desert (2300 hours), Shuamta (2250 hours) and Tsinandali (2250 hours). The number of dry days is also the largest in the desert (265 days).

The identified climatic and geographical factors of tourist resources allow us to assess the prospects for the development of the main types of tourism for the tourist facilities presented in the table.

The climatic and geographical conditions characteristic of Alaverdi and Gremi, as well as the architectural ensembles of the 11th-17th centuries, allow for the broad development of cognitive tourism, which mainly involves visiting the sights. At the same time, the tourist potential of Alaverdi and Gremi includes the historical-cultural sector of ecological tourism (Prospects for Tourism Development in Georgia and World Experience, 2016).

Today, the tourist potentials of Kvareli and Signaghi, the existing architectural ensembles and monuments there, are oriented towards the development of cognitive tourism in two municipalities of modern Kakheti.

A wide range of tourism types is possible to develop in Shuamta. Starting from cognitive tourism, which involves visiting architectural monuments of the 5th-7th, 11th-12th and 16th centuries or other sights, as well as getting to know the beautiful Shuamta forest and its surrounding area (recreational tourism – relaxation in nature) and ending with ecological and sports tourism (Prospects for Tourism Development in Georgia, 2020).

The territorial potential of Tsinandali, first of all, meets the requirements of cognitive tourism. Acquaintance with the architectural monument and the Al. Chavchavadze House-Museum, at the same time the Tsinandali Decorative Park is promising for the development of ecological tourism, since it thematically represents a cultural-historical park.

The tourist potential of Shildi meets the requirements of cognitive tourism. At the same time, its potential is promising for the development of ecological, recreational, country and agrotourism.

Historical-geographical factors:

Location: The favorable geographical location of Kakheti – between the main ridge of the Caucasus and the Alazani Valley – determined its importance historically as a transit route and trade hub. This historical past is reflected in the region's cultural heritage, including numerous fortresses, churches, and monasteries.

Winemaking: Kakheti is known as the cradle of Georgian winemaking. The tradition of winemaking here dates back thousands of years and is distinguished by the unique qvevri method. This historical and cultural heritage makes Kakheti an important center of wine tourism. Numerous wineries, wineries, and family-run farms allow wine lovers to learn about traditional technologies and taste unique Kakhetian wines.

Diverse Landscape: The geographical diversity of the region – high mountains, fertile fields, rivers and forests – determines the diversity of tourist activities. It is possible to hike in the mountains, ride horses in the Alazani Valley, travel along rivers and enjoy the breathtaking views of nature.

Cultural monuments: Kakheti is rich in historical and cultural monuments. Medieval fortresses (e.g. Gremi, Nekresi), churches and monasteries (e.g. Alaverdi, Shuamta) testify to the rich history and architectural heritage of the region. These monuments attract tourists who love history and culture.

Climatic factors:

Temperate climate: The climate of Kakheti is mainly temperate, which is favorable for tourism almost all year round. Summers are warm, but not too hot, and winters are mild, with snow in the high mountains.

Plenty of sunny days: The region is distinguished by its abundance of sunny days, which is especially favorable for wine tourism and outdoor activities.

Seasonal diversity: Each season in Kakheti is attractive in its own way. In spring, the fields bloom, summer is ideal for outdoor activities, autumn is the time for grape harvest and wine festivals, and in winter, you can enjoy the snow-capped landscapes in the mountains.

The combination of these factors makes Kakheti a diverse and attractive tourist destination, attracting tourists with different interests – wine lovers, researchers of history and culture, nature lovers, and those looking for active recreation.

Further development of Kakheti's tourism resources involves the effective use of these historical-geographical and climatic factors, improvement of infrastructure and diversification of tourism products.

Significant work has been carried out in recent years on the development of the tourism resources of the Kakheti region, however, much remains to be done to exploit the region's full potential.

What has been done:

Infrastructure Improvement: Road infrastructure has been improved, which facilitates the movement of tourists in the region. Hotels and family-type hotels have been built and renovated, which increases accommodation opportunities.

Wine tourism development: Special attention is paid to wine tourism. The number of wineries and wineries offering tours and tastings has increased. Wine routes and tours have been created, which allow tourists to get acquainted with the wine culture of Kakheti.

Restoration and popularization of cultural monuments: Restoration and conservation of many historical and cultural monuments have been carried out (e.g., Gremi, Nekresi). Popularization of these monuments and accessibility of information about them have increased.

Creation of new tourism products: New tourism products have been created, including ethnographic tours, gastronomic tours, adventure tours (hiking, horse riding).

Marketing and Promotion: Marketing of Kakheti as a tourist destination has been intensified both in the local and international markets, information materials, websites and social media campaigns have been created.

What needs to be done in the future, recommendations:

Further improvement of infrastructure: Further development of infrastructure is needed, especially in rural areas, where there are still problems with roads, water supply and sanitation (some work has been done, but work in this direction needs to be improved).

Tourism diversification: Although wine tourism is important, it is necessary to diversify tourism and develop other directions, such as ecotourism, adventure tourism, agrotourism.

Reduction of seasonality: It is necessary to plan events and activities that will attract tourists at different times of the year in order to reduce seasonality and distribute the flow of tourism more evenly.

Training of qualified personnel: It is necessary to improve the qualifications of those employed in the tourism sector, including guides, hotel staff, and service personnel (to meet modern requirements).

Protection of natural and cultural heritage: Tourism development should not occur at the expense of damaging the natural environment and cultural heritage. The principles of sustainable tourism need to be introduced.

Involvement of local populations: It is important to involve local populations in the tourism development process so that they can benefit from the benefits of tourism and be motivated to receive tourists (a certain part of the local population is employed in this direction, but it would be better to employ more local people).

Improving the marketing strategy: It is necessary to develop a more targeted and effective marketing strategy that will reach the target tourist segments.

Use of digital technologies: To improve tourism services and increase the accessibility of information, it is necessary to use digital technologies more widely (online booking, mobile applications, virtual tours).

The Kakheti region has enormous potential for tourism development. Historical-geographical and climatic factors create a solid foundation, but a successful future depends on proper planning, investments and adherence to the principles of sustainable development.

Conclusion. We have studied the deep and interconnected role of historical-geographical and climatic factors in the formation of the tourism resources of the Kakheti region. The analysis shows that the attractiveness of Kakheti as a tourist destination is not the result of isolated elements, but is a synergistic result of its deep historical roots, defining geographical features and favorable climatic conditions.

Geographically, Kakheti's diverse topography, characterized by the Greater Caucasus foothills and the fertile expanse of the Alazani Valley, provides a physical arena for a wide range of tourism activities. The valley itself is the heart of the region's renowned viticulture, which is the cornerstone

of its agrotourism and wine tourism. The surrounding mountains offer opportunities for hiking, nature enjoyment, and perhaps even winter sports in specific locations. Geographical features also influence accessibility, the formation of transport routes, and the ease of navigation and exploration of the region by tourists.

Climatically, Kakheti's humid subtropical climate, particularly the microclimate of the Alazani Valley, is fundamental to its identity as a wine region. Hot summers and mild winters, with seasonal variations, directly influence the timing and nature of tourism. Summer is the peak season for general tourism and outdoor activities, while autumn, with the grape harvest, is a major draw for wine lovers. Climate determines the rhythm of the agricultural calendar, which in turn determines the rhythm of much of the region's tourism.

The tourism resources of the Kakheti region are a direct product of the complex interplay of its historical development, geographical location, and climatic conditions. Historical sites are rooted in the land; agricultural practices are conditioned by climate. The visitor experience is influenced by the interaction of these factors. Recognizing and exploiting this fundamental connection is essential for the development of sustainable tourism and effective marketing. Recognizing how history has shaped cultural conditions, how geography determines physical environments and activities, and how climate affects seasonality and agricultural production allows for a more targeted approach to promoting Kakheti as a destination that offers a rich mix of cultural, historical, and oenological experiences year-round. Continued research into the specific interactions between these factors and their impact on emerging tourism trends will be essential for the future success of tourism in this historically significant and climatically blessed region.

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