Prospects for the use of balneological and climatic resources of the liberated territories in health tourism

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Abstract. The study reveals aspects of the development of health tourism on a global scale, current trends in this area, and the spread of medical tourism. The presence of abundant resources for the development of health tourism in the recently liberated territories, including plentiful thermal and mineral waters, a favorable microclimate, and the potential for organizing phytotherapy using medicinal plants, necessitates a comprehensive resource assessment. The global upswing in demand for health and spa tourism, coupled with an increasingly competitive landscape, underscores the need for a more comprehensive exploration of the existing potential. A new approach and methodology in health tourism and its place in international tourism are being investigated. Methodological approaches show new trends and competitiveness in health tourism. In the article, the evaluation of balneological climate resources in the liberated regions, the possibilities of their use in health tourism, and analysis of the current situation are made based on multi-criteria evaluation. The effects of healing mineral waters, microclimate and landscape factors from the region’s balneological climate resources on the development of health tourism are being investigated. It is stated that the balneological climatic resources of Kalbajar, Lachin and Shusha regions enable the formation of a competitive health tourism industry. At the same time, the current situation of health tourism in Azerbaijan, supply and demand analysis, development directions and main customer base are examined. Based on the tables, the advantages of mineral and thermal waters in the region are shown by comparing them with similar ones. The technological approach and the conceptual model proposed in the study identified the participation of relevant parties, investment resources, opportunities for joint use with other types of tourism, as well as aspects of mutual development with other sectors of the economy. The authors came to the reasonable assertion that the available climatic, balneological and therapeutic mineral resources open wide prospects for the development of health tourism in such villages as Istisu and Zulfugarli of Lachin district and Dashalti village of Shusha district.

Keywords: health tourism, mines and thermal springs, balneological climate, destination, holiday destination, medical tourism.

Перспективи використання бальнеолого-кліматичних ресурсів звільнених територій в оздоровчому туризмі

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Анотація. Дослідження обумовлено значущістю різноманітних аспектів розвитку оздоровчого туризму у світовому масштабі, сучасні тенденції у цій сфері та поширення медичного туризму. Наявність значних ресурсів для розвитку оздоровчого туризму на нещодавно звільнених територіях, серед яких багаті запаси термальних і мінеральних вод, сприятливий мікроклімат, потенціал для організації фітотерапії з використанням лікарських рослин, зумовлює необхідність комплексної ресурсної оцінки. Глобальне зростання попиту на оздоровчий та спа-туризм у поєднанні зі зростаючою конкуренцією підкреслює необхідність більш комплексного вивчення наявного потенціалу. Досліджується новий підхід і методологія в оздоровчому туризмі та його місце в міжнародному туризмі. Методичні підходи показують нові тенденції та конкурентоспроможність в оздоровчому туризмі. У статті на основі багатокритерійної оцінки проведено оцінку бальнеологічних кліматичних ресурсів
Introduction

Worldwide, there is a growing demand for health tourism, primarily driven by the need to provide people with access to high-quality medical services. Beyond medical treatment, health tourism encompasses physical and mental rejuvenation, specialized care, and various beauty-oriented services. On a global scale, the direct contribution of health services to the tourism sector exceeds 10%, while the value generated through the multiplier effect approaches 20%. In Azerbaijan, the direct contribution of the tourism industry to the GDP stands at 4.5%, with an additional 3.3% in indirect contributions (OECD Health Statistics, 2022). Over the past decade, the development of international tourism in the country has more than doubled, surpassing 2.8 million visitors, thereby fueling the emergence of new tourist destinations beyond Baku city within the regions. While the health sector’s share within the spectrum of tourism in Azerbaijan may be relatively small, it does offer a wealth of international-grade healthcare services. This commitment to its development is underscored by the enactment of key legislation, such as the Law of the Republic of Azerbaijan titled «On Natural Healing Resources, Healing Places, and Resorts», the «State Program for the Development of Resorts in the Republic of Azerbaijan (2009-2018),» and the «Specialized Tourism in the Republic of Azerbaijan,» which was passed in 2016. These legislative measures, in alignment with the «Strategic Road Map for the Development of the Tourism Industry,» highlight the priority assigned to this sector. Azerbaijan boasts a substantial natural resource base, including Naftalan oil, therapeutic mud, mineral-thermal springs, and a favorable microclimate. Furthermore, it possesses a robust substructure, both socio-economically and within the tourism domain, comprising treatment and health centers, sanatoriums, and more. All of these factors contribute to the appeal and viability of health tourism in the country (Strategic Roadmap of the Republic of Azerbaijan..., 2016).

Health tourism stands as a sector that propels the growth of medical institutions, capitalizing on the worldwide demand for international healthcare services aimed at restoring health. In the era of globalization, bolstered by cross-border collaboration, the freedom of travel, and increased accessibility, the expansion of healthcare services across various regions of the globe leads to enhanced funding, both at the individual and budgetary levels, for healthcare resources. Despite the considerable advancement of health tourism in numerous nations, countries such as the United States, India, Thailand, and Hungary spearhead the development of this industry, with other nations struggling to match their prowess due to their relatively nascent healthcare sectors. An analysis of countries that reported balance of payments data related to health-related travel imports in 2015 reveals that citizens of developed nations dominate this field. International health tourism is predominantly favored by individuals from the United States, Canada, Western European countries, and the Gulf States, indicative of their stronger financial capabilities and inclination towards seeking medical and healthcare services abroad. According to the World Tourism Organization (WTO), in 2018, health tourism revenues amounted to $22.5 billion in the United States and €54.2 billion in Europe. Furthermore, countries such as Hungary and the Czech Republic generated over $1 billion in revenue from this sector. Health tourism contributes to 5.8% of tourism earnings in European Union countries, 9.2% in the American subregion, and 5.6% in all Asian subregions (OECD Health Statistics, 2022). Health tourism fosters synergies with other sectors, and investments in this field contribute to overall economic progress within the country.

Health tourism should be considered in the context of broader concepts of ecotourism, sustainable development and green consumption. The ecotourism potential of Azerbaijan should be transformed into an attractive tourist product by using the rich ecotourism resources and ecocultural heritage resources of the
liberated regions in the development of sustainable tourism (Dargahov et al., 2023). Health tourism should play a significant role in this, as it is an important component of ecotourism. Understanding the great prospects of the tourism potential of the liberated territories is largely based on the concept of ecotourism, driven by global trends of increasing attention to the principles of sustainable development and the formation of a culture of green consumption (Vysotska et al., 2021; Vysotska & Vysotskyi, 2022). Health tourism as a form of ecotourism can ensure sustainable development of the economy, social sphere, and communities. Wellness tourism, which is associated with treatment with natural factors, should become sustainable tourism, i.e. sustainable practices of the tourism industry aimed at minimizing negative impacts and maximizing positive impacts on the environment (Imrani, et al., 2021; Imrani, et al., 2022).

The presence of abundant resources for the development of health tourism in the recently liberated territories, including plentiful thermal and mineral waters, a favorable microclimate, and the potential for organizing phytotherapy using medicinal plants, necessitates a comprehensive resource assessment. The region’s wealth of mineral and thermal waters creates a conducive environment for thermal tourism and resort-based tourism, benefitting from the favorable microclimate, unique landscapes, natural landmarks, and the prolification of medicinal herbs. The global upswing in demand for health and spa tourism, coupled with an increasingly competitive landscape, underscores the need for a more comprehensive exploration of the existing potential. The scientific rationale behind establishing a competitive tourism sector in the region and the utilization of international best practices in crafting health tourism destinations within the framework of tourism recreation zones organization underscores the pressing nature of this problem.

The main purpose of the article is to assess the possibilities of using significant resources for the development of health tourism in the recently liberated territories.

Material and Methods

The research methodology is founded upon the existing legislative framework, presidential decrees and orders in the Republic of Azerbaijan, state programs pertinent to this domain, the Strategic Road Map, statistical data from the State Statistical Committee (SSC), and decisions taken by the State Tourism Agency (STA) within the realm of health tourism. Additionally, data and online resources from the World Tourism Organization, the State Tourism Agency, Tourism Bureaus, Tourism Destination Management Centers, as well as health and treatment institutions under the purview of the “Kurot” Closed Joint Stock Company, were employed.

An analysis of stakeholders in the field of health tourism was conducted, along with an examination of customer feedback on international aggregators. Furthermore, the current situation, future prospects, and challenges were delineated based on an online survey conducted within healthcare institutions.

In terms of the development of health tourism and the provision of medical services, the United States, Brazil, Colombia, Costa Rica, Cuba, Mexico, Panama, Croatia, Hungary, Spain, Turkey, France, and Germany in Europe, along with the United Arab Emirates (UAE), Jordan, India, South Korea, Malaysia in Asia, and the Philippines, Singapore, and Thailand, have been drawing an increasing number of foreign participants. These countries also exhibit variations in terms of the contribution of this sector to their balance of payments. Over the past five years, revenues from health tourism have shown dynamic growth in the United States, South Korea, Turkey, Thailand, Malaysia, and India. This surge can be attributed to heightened investments in the health tourism industry, the establishment of new infrastructure facilities, an augmented array of services, and proactive marketing efforts promoting health tourism packages (OECD Health Statistics, 2022).

Countries participating in the health tourism industry can be categorized into two distinct groups. The first group comprises nations where extended waiting times for medical services are commonplace, a situation often observed in the United States and European Union countries. High expectations for surgical procedures, the relatively elevated cost of treating certain medical conditions, the absence of coverage for aesthetic surgeries under medical insurance, and their steep prices prompt citizens of these countries to seek superior and more affordable services abroad.

In the second group, the lack of accessible medical services or the desire for a more proficient approach to specific diseases and organ transplantation in foreign countries motivates individuals to engage in health tourism. When citizens of these countries opt for medical care abroad, they consider factors such as pricing (which is often more economical compared to their home country), treatment quality and specialization, the competence of medical staff in clinics, and the reputation of healthcare facilities, among others. Simultaneously, this group of individuals also selects thermal sanatorium and resort services to achieve
health rejuvenation and rehabilitation purposes (Ob-orin, 2015).

Finding out the features and prospects of using the liberated territories in terms of health tourism required the application of the concept of geographical determinism (Vysotskyi et al., 2022; Vysotskyi et al., 2023a; Vysotskyi et al., 2023b), which involves taking into account geographical specifics when studying the technological possibilities of tourism in Azerbaijan.

Review of previous research

Within the realm of scientific literature, medical and wellness tourism are commonly regarded as sub-categories of health tourism. In this context, individuals embarking on medical tourism journeys arrive in a country seeking treatment for various ailments, including dental procedures or surgical interventions (such as cosmetic surgeries). In essence, the primary target demographic for medical tourism comprises patients in need of medical treatment. Their primary motivation for visiting a particular country is to receive medical care or undergo surgical procedures (Vetitnev, & Kuskov, 2010).

Health tourism, on the other hand, adopts a proactive stance towards the well-being of tourists. In this scenario, individuals travel with the goal of assessing their health status, bolstering their overall health, and “rejuvenating vitality”. Consequently, the primary focus of health tourism is tourists who are not afflicted by specific illnesses. On occasion, travelers may combine business trips with the opportunity to partake in wellness services. Typically, these tourists opt for hotel accommodations rather than medical facilities, indulging in comprehensive packages that encompass fitness programs, beauty treatments, wholesome nutrition, meditation, and mental enrichment activities (Exploring Health Tourism, 2018).

Some researchers conflate health and medical tourism as a unified phenomenon. For instance, P.Carrera and J.Bridges define health tourism as “organized travel to and from a local setting for the purpose of maintaining, enhancing, or restoring an individual’s mental and physical well-being” (Carrera, & Bridges, 2006). This definition encompasses medical tourism, which involves travel to local or foreign destinations for medical interventions aimed at improving or restoring one’s health, separately from the aspect of organized travel.

However, it’s important to note that not all categories of medical services fall under the purview of this type of tourism. A primary reason for this distinction is that spa and other therapeutic services provided within the context of health tourism can often meet accepted standards in a hotel setting rather than a hospital environment. Therefore, it becomes necessary to categorize the range of medical services offered. Furthermore, it is not accurate to classify certain surgical procedures as comprehensive medical tourism services, especially when they are performed for reconstructive purposes. For example, in 2010, the Organization for Economic Co-operation and Development (OECD) excluded cosmetic surgery procedures from the realm of medical tourism due to their primarily reconstructive nature, categorizing them instead as a facet of health tourism.

Researchers advocating for the examination of stakeholders in health tourism have highlighted the constructive aspects of development through collaboration. This perspective elucidates the roles played by governmental bodies, local authorities, communities, non-governmental organizations (NGOs), and labor unions in facilitating various facets of health tourism (Jabbari, et al., 2013).

On the other hand, those who prefer to consider the demand and supply indicators in health tourism typically classify them into two groups. The first group comprises countries characterized by prolonged waiting times for medical services, a common scenario in the United States and European Union countries. High expectations for surgical procedures, the relatively costly treatment of certain medical conditions, the absence of medical insurance coverage for aesthetic surgeries, and their associated high prices prompt citizens of these nations to seek superior and more cost-effective services abroad.

In the second group, the lack of accessible medical services or the presence of better-organized and professional treatment options for specific diseases and organ transplants in foreign countries lead individuals to embark on health tourism journeys. When residents of such countries opt for healthcare abroad, they carefully consider factors such as cost (often lower than their home country), treatment quality and specialization, the competence of medical staff in clinics, reputation, and more. Simultaneously, this group of individuals also selects thermal sanatorium and resort services to achieve health rejuvenation and rehabilitation goals (Adabi, et al., 2017).

Discussion

The main customer segment for health tourism in the country remains the citizens of the country. Thus, the number of people who use health care services in the country is close to 200 thousand people, of whom
63.9 thousand people are foreign tourists. 68% of those who use medical and health tourism services are citizens of the country (Health Tourism Action Plan Covering the Years 2017-2020, 2020).

Citizens of the country go to modern spa centers that offer individual health services, taking advantage of the concessional trips of the Trade Union Organization. The use of treatment services of sanatoria is based on the traditional preferential trips (ptyovka) in the country allows the employees of state and private enterprises to use the treatment and health facilities under the control of the Resort Joint Stock Company.

The majority of foreign tourists using health tourism are guests from the CIS. Among them, citizens of Russia, Kazakhstan, Ukraine, Belarus, and Uzbekistan benefit more from health tourism services in Azerbaijan. The mentioned segment prefers health care services and traditionally choose predominantly Naftalan resorts. At the same time, a small part of guests from the CIS choose Galaalti, Duzdag, and Absheron sanatoriums. In addition to health restoration being the main requirement for this segment, the number and quality of services are also considered important.

In accordance with the country’s health tourism policy and the specialization of enterprises operating in this sector, they can be categorized as follows, as outlined in the «Health tourism in Azerbaijan» Report by the State Tourism Agency (DTA) in 2021:

- Resort facilities offering wellness-spa services: Notable examples include Lankaran Springs and Wellness, Galaalti, Qafqaz Thermal Hotel, Shenot Palas, and Duzdag Hotel.
- Resort establishments providing treatment and health services: This category includes Chinar, Gashalti, and Karabakh, which operate in the Naftalan region.
- Resort establishments offering traditional sanatorium services: These encompass Healing Baths in the city of Naftalan, Miraculous Naftalan, Kapaz, Beautiful Naftalan, Sehirli Naftalan, the specialized clinic of the Scientific Research Medical Rehabilitation Institute, and Absheron sanatoriums (Shikh, Bilgah, Guneshli, Absheron, Garangush). Additionally, the Surakhani Medical Rehabilitation Center and the Shafa Treatment Boarding House in Gakh district fall under this category.
- Resort establishments providing relaxation and spa services: Prominent examples are Markhal Resort-Spa, Guba Palas, and Shakhdag Hotel, among others (Health tourism in Azerbaijan, 2021).

The health tourism resources in the liberated territories are characterized by their diversity and abundance. The region boasts favorable natural conditions, abundant sunlight, mineral water resources, and a wealth of medicinal plants, all conducive to the development of tourism and health resorts. Particularly, healing mineral waters are concentrated in mountainous and foothill areas, with Kalbajar and Lachin being well-endowed in this regard. Additionally, Shusha and Zangilan feature therapeutic water sources (Table 1).

Within the region, mineral springs such as Istisu and Minkend, along with the climate and balneological conditions, as well as mountain forests, offer opportunities for resort and recreational purposes. The temperature of thermal waters in the region ranges from 60 to 100°C. The mineral water resources found across the Karabakh volcanic plateau vary in chemical composition. Notably, Kalbajar and Lachin districts hold 33% of Azerbaijan’s total mineral water reserves, with a combined daily reserve of 7,393 m³, with 42% allocated to Lachin and 58% to Kalbajar. The Tartar River basin in Kalbajar alone houses over 400 mineral water deposits (Soltanova, et al., 2017).

A joint scientific expedition of various institutes of ANAS was organized for the last time in 1988 to study the chemical composition, discharge and healing properties of mineral waters. It was determined that the flow rate of therapeutic water is high, and its chemical composition and temperature do not change.

Among them, the Istisu mineral springs were formed as a result of the swelling and cracking of the earth during a strong earthquake in 1138. The water of the spring is hyperthermal, carbon dioxide, hydrocarbonate-chloride-sulfate-sodium. Istisu mineral springs consist of 12 springs. Large deposits of mineral water sources are available in Yukhari and Ashaghi Istisu, Turkhun, Keshdak, Koturlu (Kalbajar) and the Minkend cold water type mineral spring (Lachin). The potential reserve of these springs, the attractiveness of the nature of the area where they are located are favorable natural factors for the creation of a resort-treatment complex.

The balneological and climatic resources within the liberated territories also lend themselves to the establishment of resort and health complexes. The number of days with an average daily air temperature exceeding 10°C varies, with 210 days in the plains, 190 days in the middle highlands, and 50-120 days in the highlands. Annual solar radiation levels range from 132-136 kcal/cm² in the lowland and mid-mountain regions, increasing to 140-144 kcal/cm² in the highlands. Precipitation levels vary, with 300-600 mm in the medium mountainous areas and 700-800 mm in the high mountainous zone (Soltanova, et al., 2017).

Within these regions, three areas stand out, each distinct in terms of their macro slope exposure. These

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areas include Goygol - Hajikand, Shusha - Kalbajar, and Lachin - Minkend districts. Goygol-Gadabey district boasts resort and recreational spots such as Hajikand and Goygol. Even during the hottest period of the year, the equivalent effective temperature at 1 pm fluctuates between 8-17ºC in the shade in most cases (82%). However, owing to the intense mountain sun-rays in June to August, the radiation equivalent effective temperature on sunny days often falls within the comfort range from 11 am to 4 pm. This temperature difference also impacts the recurrence of the effective temperature. Nevertheless, October tends to be slightly more humid and rainy compared to April. Rainfall is the sole meteorological factor that can limit recreational activities and hiking during the summer resort season. The number of rainy days is as follows: 10 in May, 11 in June, 9 in July, 6 in August, 12 in September, and 5 in October.

The most favorable conditions for climate therapy in the region can be found in the Shusha-Kalbajar area. Shusha’s climate, coupled with Tarshsu mineral water, offers an ideal setting for a climate-balneological resort. Similar to Goygol, Shusha enjoys cool and pleasant weather during the summer months. The prevalence of sunny weather in Shusha during the summer resort season is as follows: 36% in May, 48% in June, 52% in July, 62% in August, and 42% in September. Consequently, the most optimal period for relaxation and treatment in Shusha is from June to August.

Shusha experiences a relatively cold winter (-3º to +4º) and a cool and sunny summer (+18º). The average monthly temperature fluctuates between -2.2 degrees in January and +13.3 degrees in June. Relative humidity typically falls within the range of 70-80 percent. The average annual precipitation measures 630-660 millimeters, with the majority occurring in the summer months. The average wind speed in Shusha ranges from 4 to 6 meters per second, with relatively strong winds (12 meters per second) occurring rarely, approximately 4-6 times a year. Shusha experiences an average of 80 foggy days annually (Soltnova, et al., 2017).

Table 1. Main indicators and analogues of healing springs of Kalbajar, Lachin and Shusha regions

<table>
<thead>
<tr>
<th>The name of the mineral source</th>
<th>Water temperature at the source ºC</th>
<th>Discharge Min l/day</th>
<th>Therapeutic importance</th>
<th>Analogue</th>
<th>Country</th>
<th>Current state of analog usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bagirsag</td>
<td>15</td>
<td>2000</td>
<td>nervous system, cardiovascular, gynecological diseases, therapeutic table water</td>
<td>Brambach</td>
<td>Germany (Saxony)</td>
<td>Spa-treatment and SPA centers</td>
</tr>
<tr>
<td>Goturlu</td>
<td>18</td>
<td>70</td>
<td>Skin, gastrointestinal diseases</td>
<td>Narzan Pyatigorsk</td>
<td>Russia</td>
<td>Spa-treatment and SPA centers</td>
</tr>
<tr>
<td>Qarasu</td>
<td>21</td>
<td>700</td>
<td>Gastrointestinal diseases, therapeutic table water</td>
<td>Pyatigorsk Malkinsky</td>
<td>Russia</td>
<td>Spa-treatment and SPA centers</td>
</tr>
<tr>
<td>Mozchay</td>
<td>19</td>
<td>150</td>
<td>medicinal table water</td>
<td>Saghveri Lastochkink</td>
<td>Georgia</td>
<td>Spa-treatment centers</td>
</tr>
<tr>
<td>Istisu (Upper and Lower Istisu)</td>
<td>61</td>
<td>3200</td>
<td>Gastrointestinal diseases, medicinal table water</td>
<td>Karlovy Vary, Zheleznovodsk</td>
<td>Ukraine (Crimea)</td>
<td>Spa-treatment and SPA centers</td>
</tr>
<tr>
<td>Tutgun</td>
<td>43</td>
<td>600</td>
<td>Gastrointestinal, musculoskeletal, anthrax, biliary tract, skin diseases, Therapeutic table water</td>
<td>Karlovy Vary, Zheleznovodsk</td>
<td>Czech Republic</td>
<td>Spa-treatment and SPA centers</td>
</tr>
<tr>
<td>Minkend</td>
<td>29</td>
<td>430</td>
<td>Gastrointestinal, musculoskeletal, anthrax, biliary tract, skin diseases, Therapeutic table water</td>
<td>Karlovy Vary, Zheleznovodsk</td>
<td>Czech Republic</td>
<td>Spa-treatment and SPA centers</td>
</tr>
<tr>
<td>Sirlan</td>
<td>11</td>
<td>150</td>
<td>Gastrointestinal, musculoskeletal, anthrax, biliary tract, skin diseases,</td>
<td>Narzan</td>
<td>Russia</td>
<td>Resort-sanatorium complexes</td>
</tr>
<tr>
<td>Turshsu</td>
<td>9</td>
<td>300</td>
<td>Gastrointestinal, musculoskeletal, anthrax, biliary tract, skin diseases,</td>
<td>Narzan Russia (Caucasus mineral waters)</td>
<td>Resort-sanatorium complexes</td>
<td></td>
</tr>
</tbody>
</table>

The Shusha resort area is abundant in ornamental and fruit-bearing trees. Due to its unique combination of resort factors, including air purity, cleanliness, and therapeutic properties, the Shusha resort can be likened to the world-renowned Davos resort in Switzerland. The favorable microclimate indicators of the Shusha-Turshsu recreation zone, coupled with its abundant healing springs, make it particularly suitable for the treatment of cardiovascular, respiratory tract, gastrointestinal, liver, biliary tract, and urological diseases using mineral waters. Within the resort zone, you’ll find high-flowing springs like Turshsu, Shirlan, Isabulagi, Zamanpeyasi, and Dashalti. Among these, Turshsu and Shirlan springs stand out for their confirmed therapeutic properties. These mineral waters are rich in trace elements, primarily carbon dioxide-hydrocarbonate-magnesium-sodium-calcium. The presence of iron in the acidic mineral water makes it suitable for treating anemia patients (Type II). Shirland’s mineral waters, with their ample iron content, offer significant therapeutic value and can be effectively used in the treatment of gastrointestinal, liver-gallbladder diseases, and anemia.

During the summer treatment and relaxation period (June-August), the Lachin-Ahmadli resort zone, characterized by a mountain-meadow landscape, experiences drier and sunnier weather. The surrounding areas of Minkend enjoy a sunnier and less rainy climate compared to Shusha. The serene, frosty, and snowy winter months bear a striking resemblance to the winter season in Kislovodsk. On crisp, clear winter days, the captivating sight of steam columns rising like fountains from Minkend mineral springs adds to its appeal. Minkend and its environs hold significant potential for the establishment and development of Azerbaijan’s premier climate-balneological resort, capitalizing on favorable climatic and balneological factors.

An analysis of the microclimatic conditions in the region reveals favorable opportunities for the establishment of balneological-climatic resorts (Table 2). The potential for expanding the network of mountain climate and climate-balneological resorts in the Shusha, Kalbajar, and Lachin regions is grounded in the microclimate and abundant balneological resources. In the multi-criteria decision-making analysis regarding the utilization of health tourism resources in the Karabakh and Eastern Zangezur regions, destinations such as Kalbajar-Istisu-Zulfugarli and Minkend-Ahmedli were assessed as high, while Korchabulag-Shalva and Turshsu-Shusha were considered favorable and moderately favorable destinations.

The summer treatment and relaxation period (June-August) in the Lachin-Ahmadli resort zone, characterized by a mountain-meadow landscape, experiences drier and sunnier weather. The summers in the vicinity of Minkend are sunnier and less rainy compared to Shusha. The serene, frosty, and snowy winter months resemble the winter season in Kislovodsk. On clear, crisp winter days, the sight of steam rising like fountains from Minkend mineral springs has a pleasant effect on first-time visitors. Minkend and its surroundings deserve development as Azerbaijan’s premier climate-balneological resort, thanks to favorable climatic and balneological factors.

In addition to its comfortable and cool climate conditions, the area is renowned for its beautiful sub-

### Table 2. Areas selected based on their microclimate

<table>
<thead>
<tr>
<th>Health resort, balneological treatment, aerotherapy</th>
<th>Health resort, balneological treatment, aerotherapy</th>
<th>Health resort, balneological treatment, aerotherapy</th>
<th>Health resort, balneological treatment, aerotherapy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kelbajar-Istisu-Zulfugarli</strong></td>
<td><strong>Kelbajar District</strong></td>
<td>Average annual temperature: 6.7°C Spring months: 18.1°C Winter months: -6°C to -1°C Relative humidity: 67% Therapeutic springs, mountain-forest, and mountain-grassland landscape</td>
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</tr>
<tr>
<td><strong>Korchabulag-Shelva Lachin</strong></td>
<td><strong>District</strong></td>
<td>Average annual temperature: 6.8°C Spring months: 19.1°C Winter months: -5°C to -1°C Relative humidity: 67% Therapeutic springs, mountain-forest, and mountain-grassland landscape</td>
<td>Average annual temperature: 6.8°C Spring months: 19.1°C Winter months: -5°C to -1°C Relative humidity: 67% Therapeutic springs, mountain-forest, and mountain-grassland landscape</td>
</tr>
<tr>
<td><strong>Minkend-Ahmedli Lachin</strong></td>
<td><strong>District</strong></td>
<td>Average annual temperature: 6.8°C Spring months: 18.3°C Winter months: -5°C to -3°C Relative humidity: 65% Therapeutic springs, mountain-forest, and mountain-grassland landscape</td>
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<tr>
<td><strong>Turshsu-Shusha Shusha</strong></td>
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<td>Average annual temperature: 7.2°C Spring months: 19.2°C Winter months: -5°C to +1°C Relative humidity: 58% Therapeutic springs, mountain-forest, and mountain-grassland landscape</td>
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alpine and alpine meadows, mountain ranges, and refreshing springs. The altitude factor contributes to clean air, high levels of direct solar radiation, and an abundance of ultraviolet rays. An analysis of climatic conditions reveals that Kalbajar, Lachin, and Shusha possess all the natural prerequisites for the creation of a climate-balneological resort. The extensive forested and mountain-meadow landscapes surrounding areas with notable balneological-climatic potential, along with the presence of natural landmarks, create a conducive environment for the development of health tourism.

The landscape of the region is predominantly characterized by alpine and subalpine meadows and forests. The forested area, featuring rare trees, covers 92 thousand hectares, constituting 9% of the total forested area in the republic. Of this, 72% consists of tourism-recreational mountain forests situated in the Kalbajar and Lachin administrative regions. The widespread presence of medically significant plants in the region, distributed across various altitudinal zones, facilitates the organization of phytomedicinal tourism. Additionally, there exists a favorable environment for the production of herbal teas.

It is crucial to attract local and foreign investors with state support to harness the recreational health resources in the region (Fig. 1). State support is directly linked to financial investments, the establishment of health facilities (notably, the ongoing restoration of the Istisu sanatorium), the creation of economic incentives for entrepreneurs, and the development of sub-infrastructure.

Ensuring the active participation of stakeholders in the utilization of health resources will foster increased economic activity in this sector. In particular, involving business entities, trade unions, and local communities in health tourism will contribute to the formation of a competitive development landscape. Implementation of digital marketing, the creation of specialized destinations, and the engagement of business entities are vital steps to enhance competitiveness in health tourism.

Conclusions

The liberated territories possess abundant resources for health and resort tourism, encompassing thermal, spa-wellness, resort-health, climatic-balneological, and phyto-health opportunities within the realm of health tourism. The development of specialized destinations is essential to foster competitive health tourism in the region. Our analysis underscores the significance of the Kalbajar and Lachin regions, where health and balneological climate resources are concentrated, enabling the provision of comprehensive health and treatment services. Additionally, the establishment of infrastructure around settlements in these regions rich in healing miner-

![Fig. 1. Conceptual model of the use of recreation and health resources in the liberated territories](image-url)
al waters will lead to the creation of resort-rest and mountain climate resorts within the health tourism landscape. Drawing from international experience, the promotion of complex health treatments, mountain-climate-balneological resorts, resort-recreation, and ecological tourism will drive the growth of these sectors. Extensive resort-health services, modeled after the Czech approach and based on balneological-climatic and thermal sources, can be established.

References


Imrani, Z., Zeynalova, K., Mammadova, G., & Vysotskyi, O. (2022). Opportunities and prospects for the development of speleotourism in Azerbaijan. Journal of Health tourism destinations should be developed in villages such as Istisu, Zulfugarli (Tutgun), in Lachin district, and Dashalti village in Shusha district, building upon the existing climate-balneological and healing mineral resources.

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