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ANALYSIS OF THE CURRENT STATE OF CLIMATE AND THALASSOTHERAPY RESOURCES IN THE KARABAKH ECONOMIC REGION

Abstract

The development of thalassotherapy tourism in Azerbaijan begins in the 12th century. Thus, the passage of the Great Silk Road through the territory of Azerbaijan has led to a rapid increase in the number of tourists who want to use Naftalan healing oil. It should be noted that Azerbaijan's thalassotherapy resources are not limited to therapeutic Naftalan oil. At the same time, the natural and mineral resources of Azerbaijan, especially the Karabakh economic region, have made the development of thalassotherapy tourism a necessity for this economic region. The fact that the Karabakh economic region has been under Armenian occupation for many years has become a major problem in the development of thalassotherapy tourism in these areas of the Republic of Azerbaijan. The liberation of the Karabakh economic region from the Armenian occupation by the Azerbaijani army, similar to the Second Karabakh War, revealed the priority of effectively using the available thalassotherapy resources in these areas.

The main purpose of the article is to analyze the current situation of the climate and thalassotherapy resources of the Karabakh economic region, to identify the problems that hinder the development of thalassotherapy tourism, and to investigate ways of solving these problems. In this regard, the Karabakh economic region acts as the research object of the article. Analysis, synthesis, induction, deduction methods as well as comparative analysis methods were widely used in the writing of the article. The lack of statistical data on the thalassotherapy resources of Karabakh economic region is the main limitation of the article.

Keywords: tourism, thalassotherapy tourism, natural resources, climate resources, tourism potential

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Qarabağ iqtisadi rayonunun iqlim və talassoterapiya resourslarının mövcud vəziyyətinin təhlili

Xülasə

Azərbaycanda talassoterapiya turizminin inkişafı XII əsrdən başlayır. Belə ki, Böyük İpək Yolunun Azərbaycan ərazisindən keçməsi Naftalan müalicəvi neftindən istifadə etmək istəyən turistlərin sayının sürətlə artmasına səbəb olmuşdur. Qeyd etməliyik ki, Azərbaycanın talossoterapiya ehtiyatları yalnız müalicəvi naftalan nefti ilə məhdudlaşmır. Eyni zamanda da Azərbaycanın, xüsusən də Qarabağ iqtisadi rayonunun təbii və mineral ehtiyatları bu iqtisadi rayon üçün talassoterapiya turizminin inkişafını zərurətə çevirmişdir. Qarabağ iqtisadi rayonunun uzun illər erməni işğalında olması Azərbaycan Respublikasının bu ərazilərdə talassoterapiya turizmini inkişaf etdirməkdə böyük aktual problemə çevrilmişdir. II Qarabağ Müharibəsi ilə şablı Azərbaycan ordusunun Qarabağ iqtisadi rayonunu erməni işğalından azad etməsi ilə bu ərazilərdə mövcud talassoterapiya resurslarından səmərəli istifadə olunması prioritetini ortaya çıxarmışdır. Məqalənin əsas məqsədi Qarabağ iqtisadi rayonunun iqlim və talassoterapiya resurslarının mövcud vəziyyətini təhlil etmək, talassoterapiya turizminin inkişafına əngəl yaradan problemləri müəyyənləşdirmək və bu problemlərin həlli yollarını araşdırmaqdır. Bu baxımdan da məqalənin tədqiqat obyekti kimi Qarabağ iqtisadi rayonu çıxış edir. Məqalənin yazılmasında analiz, sintez, induksiya, deduksiya metodları ilə yanaşı müqayisəli təhlil metodlarından da geniş istifadə edilmişdir. Məqalənin əsas məhdudiyyəti kimi Qarabağ iqtisadi rayonunun talassoterapiya resurslarına dair statistik məlumatların azlığı çıxış edir.

Açar sözlər: turizm, talassoterapiya turizmi, təbii ehtiyatlar, iqlim ehtiyatları, turizm potensialı

Introduction

Azerbaijan has a significant tourism potential. After regaining independence, fertile conditions have been created for the development of tourism, like other fields, and fundamental measures have been implemented in this field. One of the types of tourism with the widest development prospects in the country is medical tourism. The richness of Azerbaijan's natural tourism-recreational resources show the promising possibilities of therapeutic tourism. However, it is also important to form the necessary infrastructure to use this potential appropriately.

With the liberation of Karabakh from the occupation, favorable conditions have been created for attracting the use of large tourism resources in the area. At the same time, the geographical location of Karabakh economic region, relief, as well as natural resources and mineral waters show that there is a favorable environment for the development of medical tourism in the area (Ovalı, 2016: 600).

According to a study conducted by UNEP (UN Environment Programme); Ecotourism is one of the top types of tourism. According to the forecasts of the World Tourism Organization, an increase is observed both when the number of tourists is examined and when the development course of ecotourism is evaluated in general. Ecotourism is predicted to account for 5% of the global tourism market by 2024. The above-mentioned issues reveal the relevance of the dissertation work, and the study of this field requires a comprehensive approach to the issue (Azərbaycan Respublikasında turizm sektorunun rəqabət qabiliyyətinin yüksəldiləsi problemləri, 2019: 58).

Geographical position, relief and natural resources of Karabakh economic region

Karabakh economic region is considered one of the 14 economic regions of the Republic of Azerbaijan. It includes Agjabadi, Agdam, Barda, Fuzuli, Khojaly, Khojavand, Shusha and Tartar administrative regions and the city of Khankendi. The total population of the Karabakh economic region with a total area of 7330 km2 is 900.3 thousand people, which is 8.94 percent of the total population of Azerbaijan. From 1991 to 2021, it was called Upper Karabakh economic region.

The map of Karabakh economic region is shown below (Honey, 2021: 880).



Figure 1. Karabakh economic region

The terrain is mainly mountainous. The northern part of the Upper Karabakh economicgeographic region is divided by the northeastern foothills of the Karabakh ridge and the southern slopes of the Murovdag ridge (the highest peak of the Lesser Caucasus, Mount Gamish (3724 m)), the central, western and southern parts are the eastern slopes of the Karabakh ridge (Mount Gizgala (2843 m), Mount Kirkhgiz (2827 m), Mount Big Kirs (2725 m)), the northeastern and eastern parts are occupied by the western edges of the Karabakh and Mil plains (4). It borders the Islamic Republic of Iran in the south and southeast. The Murovdag and Karabakh ridges are divided into several side branches descending towards the Karabakh and Mil plains. As a result of the division of the ridge and its side branches by rivers, deep and steep valleys have been formed. In the middle highlands, there are valley depressions in the areas where river valleys widen. Forests in the area are 187.7 thousand ha (Hüseyn, 2023: 59-68).

Analysis of the current state of climate and thalassotherapy resources in the Karabakh economic region.

The climate of Azerbaijan has given impetus to the development of thalassotherapy, aerotherapy, heliotherapy treatment, recreation and health tourism. The concentration of the majority of existing recreation centers in the country in areas with favorable climate-landscape conditions is due to favorable microclimate indicators. At the same time, it can be noted that the microclimate potential is poorly used in terms of health tourism (Əsgərov, Bilalov, Gülalıyev, 2021: 90).

In Kalbajar, Lachin and Shusha regions, the number of days with average daily air temperature above 10°C varies between 210 days in the plains, 190 days in the middle highlands, and 50-120 days in the highlands. The annual solar radiation starts from 132-136 kcal/cm² in the lowland and mid-mountain zones and increases to 140-144 kcal/cm² in the highlands. 300-600 mm of precipitation falls in the medium mountainous areas, and 700-800 mm in the high mountainous zone. The landscape of the region is dominated by alpine and subalpine meadows, forests, and the area of forests with rare trees is 92 thousand ha. (9% of the republic's forests). 72% of it consists of tourism-recreational mountain forests located in the administrative regions of Kalbajar and Lachin (7).

The climate of Shusha is relatively cold in winter $(-3^\circ, +4^\circ)$, cool and sunny in summer $(+18^\circ)$. The average monthly temperature varies between -2.2°C in January and +13.3°C in June. Relative humidity averages between 70-80 percent. Average annual precipitation is 630-660 millimeters. Most precipitation is observed in the summer months. Wind speed in Shusha is 4-6 meters/second on average. Relatively strong winds (12 meters/second) occur very rarely, about 4-6 times a year. The average number of foggy days is 80 per year (7).

Favorable microclimate indicators, rich healing springs of Shusha-Turssu recreation zone are considered favorable for the treatment of cardiovascular, respiratory, gastrointestinal, liver, biliary tract and urological diseases.

The most favorable conditions for applying climate treatment in the resort area are in the Shusha-Kalbajar district. Shusha's climate, Tarshsu mineral water is very favorable for a climate-balneological resort. As in Goygol, cool and favorable weather conditions prevail in Shusha during the summer months. However, in Shusha, January is 20C warmer than Goygol, and July is 3.30C warmer. The frequency of sunny weather in Shusha during the summer resort season is 36% in May, 48% in June, 52% in July, 62% in August, and 42% in September. Therefore, the most favorable time for rest and treatment in Shusha is June-August (8).

The summer treatment and rest period (June-August) is drier and sunnier in the Lachin-Ahmedli resort zone, where the mountain-meadow landscape dominates. The climate of Minkend exceeds the climate of Shusha due to the fact that summer is sunnier and less rainy. The quiet, frosty-snowy winter months are very similar to Kislovodsk's winter season. On clear, frosty winter days, steam balls rising like fountains from Minkend mineral springs have a pleasant effect on those who come here for the first time. Minkend and its surroundings deserve to be developed as the best climate-

balneological resort of Azerbaijan based on favorable climatic and balneological factors (Hüseyn, 2022: 112-127).

Along with favorable and cool weather conditions, Kalbajar, Lachin and Shusha zones are known for their beautiful subalpine and alpine meadows, mountain ranges, and cool springs. The altitude factor ensures the cleanliness of the air, the high intensity of direct solar radiation, and the abundance of ultraviolet rays. The analysis of climatic conditions shows that Kalbajar, Lachin, Shusha have all the natural possibilities for creating a climate-balneological resort. The spread of a wide forest and mountain-meadow landscape around the areas distinguished by balneological-climatic potential, the presence of natural monuments make it possible to use the area for the purpose of health tourism.

The climate of the territory of the Karabakh economic region is mildly cold, plain and low at an altitude of 1000-2000 meters, and relatively dry and hot in the foothills. Precipitation is 400-900 mm depending on the terrain (7).

Warm waters are represented by three independent groups. These are the Upper Heat, Lower Heat and Intestine.

In 1948, a drinking balneological resort was organized in the territory of Istisu.

Warm springs are located in Minkend and Ahmadli areas in Lachin district at an altitude of 1600 m. These springs are 280J Narzan with hydrocarbonate-chloride-sodium-magnesium-calcium properties. This water is considered a favorite healing agent of the local people (Roe, Leader-williams, Dalal-Glayton, 2021: 158-166).

All measures implemented by the state in the direction of turning Karabakh into a safe zone will lead to the formation and dynamic development of tourism infrastructure here. Thus, the realities conveyed to the world about the tourism potential of Karabakh will open the way to attract new investments to Azerbaijan.

Let's start with Shusha. Located in one of the natural and strategic points of our country, Shusha Isa Spring, Turshsu, Sakili Spring, Soyugbulak, Yuzbulak, Kirkhbulak, Charigbulak and other rare natural wonders, which is one of the most beautiful and pleasant corners of our country (11).

The first rest house in Shusha was opened in 1936. The boarding house in Shusha was established in 1964, and since 1970 it has been turned into a sanatorium. The sanatorium specializes in the treatment of gastrointestinal diseases. The Shusha Turshsu tourist base, which is famous throughout the former USSR, started operating in 1970 and quickly became popular in the USSR (12).

Khankendi Travel and Excursions Bureau (SEB), which started operating in 1971, and Shusha "Shafa" Tourist Base, which was put into operation in 1972, are among these facilities. The Council of Tourism and Excursions continued the construction of tourism facilities in Karabakh and the process of using the tourism potential of the region as a whole. The Shusha Travel and Excursions Bureau was established in 1984, the Agdam Travel and Excursions Bureau in 1986, and the Aghdam "Shahbulaq" Tourism Base in 1988 was established on the balance sheet of this council.

According to the estimates of 1998, the total value of the property in Shusha Tourist Base was 2761.6 thousand manats, and in Aghdam Tourist Base was 227.6 thousand manats (Azərbaycanın mineral su ehtiyatlarının müasir vəziyyəti və onlardan səmərəli istifadənin perspektivliyi, 2018: 239).

"Shafa" Tourist Base with a total area of 2 hectares in Shusha was able to serve 130 tourists at the same time. In 1990, a building with 200 seats was built. However, due to the occupation war started by the Armenians, it was not possible to receive tourists here, and later the area was completely occupied.

In Shusha, there were 17 pioneer camps subordinated to the republic and the and 1 specialized children's sanatorium for the republic. Even in the biggest cities, there were no such number of school camps. Shusha's unique nature and clean air played a big role in setting up camp projects here. Because the nature of Shusha created wonderful conditions during the months when schoolchildren went on summer vacation. Both in terms of health and relaxation (12).

The most noticeable areas in the Lesser Caucasus are the Istisu-Kalbajar hydrothermal area. One end of this territory extends to the waters of Cermukh in the territory of Armenia.). Due to the complex chemical composition of water, it is one of the rare and precious species in the world. They are waters with a high temperature (750 C).

There are warm hydrothermal waters in Lachin region. The water temperature is relatively low, 24-290, 60 C. About 2 million liters of water comes out of these areas during the day. The origin of water temperatures is one of the most interesting issues in science. According to the Austrian scientist E.Zus, hot water in nature (in the example of the famous Karlovy Vary hot water in the Czech Republic) is formed from the magma inside the earth (8).

Actual materials related to the geological structure and hydrogeological conditions of known hot waters in the Caucasus have shown that the heat of natural waters is not related to the internal magma of the earth. The temperature of these waters is related to the complex geological history that ensured their formation.

In ancient geological times - tens, hundreds of millions of years ago, the present territories of the Lesser Caucasus were under water. The huge Tethys Ocean, extending in a parallel direction and occupying a very large area, was located in these latitudes. As the geological eras changed, the shape and bottom of the ocean shores changed, various sediments were deposited there, and underwater volcanic eruptions took place. The earth's crust has been subjected to pressures in different directions, which has periodically caused disturbances (breaks, spills, displacements) in these and other areas. All these events covered the territory of Kalbajar region. Usually, after such volcanic eruptions, there was a period of calm, during which limestones - the remains of sea animals - were collected at the bottom of the ocean. Then, sand and tuff sands were thrown (8).

In the third period, the ocean retreated, the bottom rose, and mountain systems with high peaks were formed. The voids were filled with granite-type magma and the rocks formed in this way expanded from Istisu along the Tartar River and extended to the southeast to Mikhtöken mountain (Dalidağ). In all the described rocks, including granites, many cracks occur during the exhumation movements, into which the next igneous mass enters, and most of the rocks lead to the formation of diabases, partites, dacites, andesite-dacites, spreading in the form of veins. The indicated folds belong to the third period - Pliocene. This interesting geological feature is spread over a wide area, not only in Kalbajar regio. Such a direction of wrinkles and disturbances, as well as vein-shaped distributions, are explained by the emergence of mineral waters from great depths to the earth's surface and its circulation conditions (7).

Conclusion

For the development of health tourism in Karabakh, at the initial stage, it is necessary to create at least an informative map plan and a database of the existing institutions: can I think that after a certain time, these sanatoriums will become the most famous treatment centers in the world due to their therapeutic value, and it will be possible to attract thousands of tourists here every year. At the next stage, there is a need to create an International Working Group together with the State Tourism Agency, the Ministry of Economy and other relevant institutions. This working group can invite specialists and prepare business plans and development plans for the implementation of infrastructure projects. Then, it is possible to implement a long-term strategy for attracting foreign investments.

One of the main goals is to conduct a policy of clustering (systematic unification) in the field of health tourism in Azerbaijan, including in Karabakh, and thus to implement the interdependent interconnection of NGOs and legal entities working in this field.

Clustering is necessary for Azerbaijan today, because in this case, new opportunities for both competition and cooperation between small and medium-sized business entities will arise. Clustering in the field of health tourism will connect the activities of institutions that do not duplicate each other within certain geographical boundaries, but support and complement each other with a value chain. All stages for obtaining a health tourism product take place in one place.

Clustering can also be organized by sub-sectors and geographical areas. Thanks to the advantages of clustering, increasing the competitiveness, expanding the range of cooperation will be ensured, rapid development will take place in this area. At the same time, mutual support of different and same areas will be demonstrated. The tourism cluster is formed from three main basic elements, which include business entities, enterprises in all production, service and supply fields.

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