

THE NECESSITY OF IMPLEMENTING NEW DISTRICTING IN AZERBAIJAN AND THE IMPORTANCE OF RESEARCHING OF THE LANDSCAPES IN THE EASTERN ZANGEZUR ECONOMIC REGION

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Abstract

The Second Karabakh War, which was started by Armenia in the morning of September 27, 2020, ended with the signing of the act of capitulation - the Tripartite Declaration - which confirmed the defeat of the enemy on November 10, 2020, as a result of the successful counter-offensive operation of Azerbaijan. As a result of the correct policy and leadership of Ilham Aliyev, the Commander-in-Chief of the Armed Forces of the Republic of Azerbaijan during the 44-day Great Patriotic War, the Azerbaijani army liberated the occupied areas and their surrounding territories in nearly 30 years and achieved the complete integrity of the country. With this bravery, our republic made a big noise all over the world, and many great world leaders studied the tactics of our country. According to the statement of November 10, Aghdam, Kalbajar and Lachin regions were taken back without shooting. In particular, during the battles for Shusha, our Special Forces liberated the area from occupation without the use of military equipment and weapons through hand-to-hand combat, proving to the whole world how strong our army is.

Keywords: zoning, The Eastern Zangezur region, farm, liberated areas from occupation, economic development, agriculture, natural resources, tourism

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Introduction

During the Second Karabakh War, several districts and villages of Azerbaijan, which constituted nearly 20% of the country and were part of the former Upper Karabakh and Kalbajar-Lachin economic-geographical regions, were liberated from occupation. This includes several strategic heights in the Aghdara and Murovdagh directions, as well as Bartaz, Sighirt, and Shukurataz heights in Zangilan, along with 5 unnamed heights. Additionally, Jabrayil was liberated on October 4, Fuzuli on October 17, Zangilan on October 20, Gubadli on October 25, Shusha on November 8, Aghdam on November 20, Kalbajar on November 25, and Lachin on December 1, fully restoring Azerbaijan's territorial integrity.

The liberation of our lands, the expansion of our borders, and the need for proper management within the country have created the necessity for a new regionalization. It is important to note that Azerbaijan has undergone three economic-geographical regionalizations to date, with the most recent one conducted in 1995 (Table 1).

HISTORY	DIVIDED REGIONS
1950	<i>Absheron-Gobustan, Kirovabad-Dashkesen, Kur-Araz, Lankaran-Astara, Gakh-Zagatala, Guba-Khachmaz, Nakhchivan, Nagorno-Karabakh Autonomous Region, Kalbajar-Lachin</i>
1969	<i>Absheron, Kirovabad, Gazakh, Mil-Karabakh, Mughan-Salyan, Shirvan, Sheki, Lankaran, Khachmaz, Arazboyu, Kalbajar, Nakhchivan, Nagorno-Karabakh Autonomous Region</i>
1995	<i>Absheron, Guba-Khachmaz, Highland Shirvan, Sheki-Zagatala, Aran, Ganja-Gazakh, Upper Karabakh, Kalbajar-Lachin, Lankaran, Nakhchivan</i>
2021	<i>Baku, Absheron-Khizi, Guba-Khachmaz, Central Aran, Mil-Mughan, Shirvan-Salyan, Highland Shirvan, Sheki-Zagatala, Ganja-Dashkesen, Gazakh-Tovuz, Lankaran-Astara, Nakhchivan, Karabakh, the Eastern Zangezur</i>

Table 1. Economic-geographical zoning of the Republic of Azerbaijan [1, 3].

Since the aforementioned year, the economic reforms implemented in the country have contributed to the development of the regions. Taking this into account, the necessity of conducting a new regionalization has become evident. Accordingly, based on the decree signed by the President of the Republic of Azerbaijan, Mr. Ilham Aliyev, on July 7, 2021, a new economic regionalization of Azerbaijan was carried out, resulting in the division into 14 economic regions. As part of the new economic regionalization conducted in 2021, and in the spirit of restoring historical justice, the Eastern Zangezur economic region was established (Figure 1). The newly established region includes the districts of Kalbajar, Lachin, Gubadli, and Zangilan, which were previously part of the Kalbajar-Lachin economic-geographical region, as well as the Jabrayil district, formerly part of the Upper Karabakh economic-geographical region. These districts, which are located along Azerbaijan's border and cover an area of 7,471 km², stand out from other regions due to their significant economic development potential.

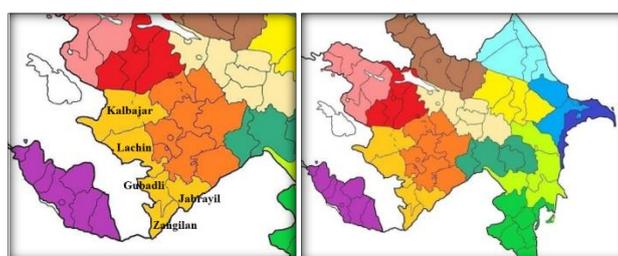


Figure 1. The new division of economic regions of the Republic of Azerbaijan conducted on July 7, 2021, and the areas included in the Eastern Zangezur economic region [6]

In his article "Evaluation of the Potential of Agricultural Lands in Occupied Territories", A.H. Valiyev analyzed the lands of the region for the establishment and management of agriculture, assessing their potential using a bonitet scale. Additionally, agricultural indicators of the region were documented in the prepared tables. In this article, the author provides a comprehensive analysis not only of the occupied Karabakh and Eastern Zangezur regions of Azerbaijan but also of the occupied territories of Tovuz and Gazakh. In his other article, "Soil and Climatic Factors for the Development of Agriculture in Liberated Territories", Valiyev presents extensive information on the composition of the lands that were under occupation, their suitability for use, soil quality characteristics, and the climate features of the area [4, 5]. Meanwhile, F.F. Fikretzadeh and S.I. Hajiyeva, in their article "Directions for the Restoration of the Agricultural Sector in the Liberated Territories and Forecasting Production Indicators", addressed the damages inflicted by conflicts and wars on agricultural sectors, global experiences in the restoration and development of agriculture in post-conflict zones, issues and directions of agricultural restoration in the liberated territories, possible options for conducting land reforms, and forecasting agricultural sectors and their future trends. The data provided by the Agrarian Research Center and the State Statistics Committee of the Republic of Azerbaijan were meticulously analyzed in this article [2]. Although these articles jointly analyze the Karabakh and Eastern Zangezur regions liberated from occupation, they hold significant practical importance.

Method and materials

In investigating the importance of studying the landscapes of the Eastern Zangezur economic region, various literature and archival materials, as well as cartographic materials from different periods, have been analyzed. In addition, methods such as comparison, analysis, synthesis, and GIS techniques have been extensively utilized. Through the use of the GIS method, satellite images of the research area were analyzed, and maps and schemes of the region's relief, exposure, and slope were created.

Result and discussion

The Eastern Zangezur economic region is located on the southeastern slope of the Lesser Caucasus and includes the districts of Kalbajar, Lachin, Gubadli, Zangilan, and Jabrayil. The total area of the region is 7,471 km². Among these, Kalbajar is the largest district with an area of 3,054 km², while Zangilan is the smallest, covering 730 km². The areas of Lachin, Gubadli, and Jabrayil districts are 1,835 km², 802 km², and 1,050 km², respectively. The Eastern Zangezur economic region shares borders with the Dashkesen, Goygol, and Goranboy districts of the Ganja-Dashkesen economic region to the north; the Terter, Aghdam, Khojaly, Khojavend, Fuzuli districts, and the city of Shusha of the Karabakh economic region to the north-eastern and east; the Islamic Republic of Iran via the Araz River to the south; and the Republic of Armenia to the west.

Despite the presence of foothill and plain reliefs, the region is predominantly mountainous. Within the region, there are the Murovdagh, the Eastern Goycha, Karabakh, Mikhtoken, Bargushad, and Mehri ranges, the Karabakh Volcanic Plateau, and the Yazi plateaus, along with the Geyan and Inja plains. These mountain ranges are separated by intermountain ridges, plateaus, and depressions.

Let us now focus on the elevation, exposure, and slope maps derived from the analysis of satellite images of the area. It should be noted that the analysis was based on space imagery featuring the elevation model characteristic of the Eastern Zangezur economic region. Special operations were performed through the application of Geographic Information Systems (GIS) to generate these images. The maps display the elevation (hypsometry) of the area in absolute heights measured in meters (Figure 2, a), while the slope is shown in degrees (Figure 2, c). Additionally, the exposure of the terrain to the north and south directions is also reflected in the map (Figure 2, b). These maps are of great importance for evaluating the geomorphology of the region (Figure 2).

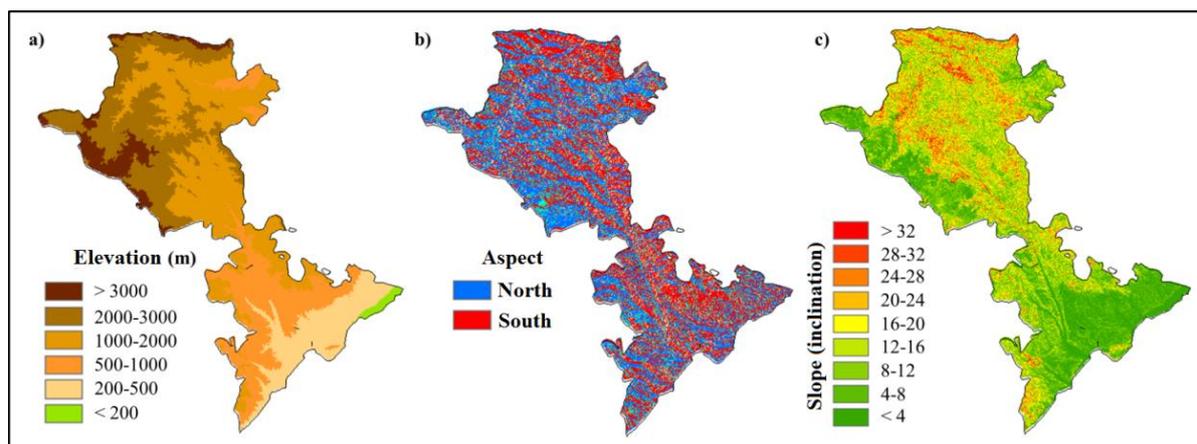


Figure 2. Relief features of the Eastern Zangezur economic region

(a. Elevation of the relief, b. Aspect of the area, c. Slope (inclination) of the region's territory)

In the image depicting the elevation of the terrain in Figure 2, we can observe that the relief of the Eastern Zangezur economic region gradually decreases from the north and northwest towards the southeast. The highest point of the relief is recorded in the western part of the region, near the border with Armenia. Here, the highest peak of the region, Gamish Mountain, is located. Additionally, it is evident that the relief of the southeastern Jabrayil district primarily consists of lowland and plain areas, which can be explained by its connection to the Araz lowland and its transition from the Lesser Caucasus mountains to the Kura-Araz plain. It is clear that Kalbajar district has the highest elevation, while Jabrayil district has the lowest.

In the image showing the exposure of the terrain in Figure 2, it is noticeable that most of the relief is oriented towards the north. Even though the southern slopes of the Murovdagh mountain range in the northern part of Kalbajar district face south, its northern slopes clearly exhibit a northward orientation. The image in Figure 2 depicting the slope of the terrain reveals that the northern and northwestern parts of the Eastern Zangezur economic region have steeper slopes, while the slopes in the western and southeastern parts are more gentle. It is known from scientific studies that on mountains located in the northern hemisphere, vegetation generally grows better on the southern-facing slopes than on the northern-facing ones. However, in the case of the Murovdagh mountain range, which extends along the northern flank of the region, the northern slopes exhibit less steepness compared to the southern

slopes, contrary to the expected pattern. The image also shows that the mountains of the Eastern Zangezur economic region are highly fragmented, which can be attributed to its geological past, as well as peneplanation and pediplanation processes.

The analyses clearly demonstrate that the landscapes of the Eastern Zangezur economic region hold great economic potential. The analysis of satellite images has confirmed that the relief, climatic features, and soil cover of the area create favorable conditions for the cultivation of various agricultural products. It is possible to grow crops such as grapes, tobacco, dry subtropical fruits, potatoes, and others here, yielding high productivity. The region's large mountain-meadow landscapes and extensive pastures also provide opportunities for the development of livestock farming and the cultivation of fodder crops. For this reason, the study of the Eastern Zangezur economic region is of significant importance.

In addition to its agricultural sectors, the region also possesses tourism and recreation potential. The mineral springs of Istisu, Goturlusu, Iliqsu, and others located here are valuable recreational resources. The Istisu mineral spring, which was formed as a result of ground upheaval during a powerful earthquake in the 12th century, is particularly notable for its high content of carbon dioxide, bicarbonate-chloride-sulfate-sodium composition, and favorable chemical properties. Its temperature reaches 58.8°C, and 1 liter of its water contains up to 6.7 grams of minerals, including lithium, bromine, iodine, antimony, phosphorus, zinc, nickel, magnesium, iron, and other chemical elements. Because of these characteristics, academician M. Qashqai equated it to the famous Karlovy Vary spring in the Czech Republic, and chemist E.E. Karstenski even rated it higher. Additionally, the historical sites of the region, such as the Khudafarin bridge built in the 11th century, ancient settlements, and other landmarks, play an important role in developing the region's tourism potential.

The Eastern Zangezur economic region not only has rich surface resources but also possesses underground natural resources. The region is home to gold deposits (in the Aghduzdag and Zod areas of Kalbajar district, the Vejnali deposit in Zangilan district, as well as the Tartar, Soyudlu, Zarchay, and Tutkhun river basins), chromite (Goydara), molybdenum (Delidagh), copper (Murovdagh, Kecheldagh, Delidagh), mercury (Aghyataq, Levchay, Shorbulaq, Lachin-Bashlibel), arsenic (Aghyataq), asbestos (Goydara, Levchay), nephrite (in the Goycha-Karabakh tectonic zone), onyx marble (along the Tartar fault in several rivers), irrigation obsidian (Kecheldagh, Bazar River), mineral paints (Aghyataq), perlite (Kalbajar, Kecheldagh), travertine (Istisu, Esrik), tuff (Kalbajar), gypsum, sand, and clay (on the left bank of the Tartar River), among others.

All this information shows the immense importance of studying the landscapes of the Eastern Zangezur economic region. Through this research, it will be possible to correctly position economic sectors within the region, increase the country's revenues, achieve high agricultural productivity, and fully meet domestic demand for several products.

Conclusion

The following results were obtained from the study of the landscapes of the Eastern Zangezur economic region:

1. The landscapes of the Eastern Zangezur economic region hold significant importance. The vast mountain-meadow areas in the highlands offer great opportunities for the development of livestock farming. The establishment of sheep farming based on pasture utilization could meet the demand for

dairy and meat products. In addition, the cold climate of the highlands creates the potential for developing beekeeping and producing high-quality honey. The fertile soils in the middle and low mountain ranges, plains, and foothill areas create favorable conditions for cultivating agricultural products such as tobacco, grapes, fruits, and vegetables. Based on the temperature analysis of the soils in the southern and southwestern parts of the region, it has been determined that there is great potential for the development of dry subtropical fruit farming in these areas.

2. The study revealed that the natural beauty of the region opens up broad opportunities for the development of tourism and recreational sectors in the Eastern Zangezur economic region. The healing underground waters such as Istisu, Goturlusu, and Iliqsu play a significant role in restoring human productivity and maintaining health. At the same time, the ancient settlements and historical monuments in the area provide great opportunities for the development of the tourism industry.

3. The area under investigation is rich in natural resources, which could supply raw materials to several industrial sectors in the country. The gold reserves here could support the jewelry industry, while the sand, clay, gravel, and tuff deposits could contribute to the construction industry. Other natural resources could support the development of metallurgy, chemical, and other industries. By utilizing all these opportunities, it is possible to transform the Eastern Zangezur economic region into a key part of the country's economy.

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