

EVALUATION OF NATURAL-POPULATION RELATIONS AND PROFESSIONAL EFFECTS OF LANDSCAPES ON ECOLOGICAL SITUATION (In the case of Shamakhi-Ismayilli zone)

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Abstract

The article analyzes the relationships between nature-related changes in human activity in the Shamakh-Ismayilli zone and has been studied by the impact of separate economic systems on the ecological situation.

Key words: nature and population relations, ecological, socio-economic, political and cultural-moral, aesthetic geography, landscape aesthetics

The actuality of the subject. In light of the fact that Azerbaijan has embarked on a path of modern development, there is a need for studying its natural conditions, new demands for productive forces development and new approaches to it. First of all, the demand for the protection of natural conditions and natural resources of Azerbaijan has increased. In particular, it should be noted that the approval of the National Program on Ecological Socio-Economic Development in the Republic of Azerbaijan by the Decree of the President of the Republic of Azerbaijan (18 February 2003), State Program on Socio-Economic Development of the Regions of the Republic of Azerbaijan for 2014-

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2018 (February 27, 2014) the Decree of the President of the Republic of Azerbaijan on establishment of conditions for the effective management of the country and its regions, as well as natural conditions, the efficient use of material and social resources, and the implementation of the environmental protection on a scientific basis. The findings are important in the study and management of mountainous regions. In the program documents of the President's decrees, new requirements are introduced in the field of environmental and natural resource management, as the "directions" of socio-economic development of all regions are defined.

With regard to the socioeconomic development as well as the balanced nature of anthropogenic activity of the population, the protection of nature is of great importance. First of all, there is a need for large-scale scientific research in natural contexts such as Shamakhi-Ismayilli zone, especially in areas with complex contrast. It should be noted that, in the assessment of the environmental conditions and natural resources of the zone, taking into account contemporary local and global processes, quality changes are also on the foreground. At the same time, in contrast to a number of non-scientific relationships to the nature of the former Union (socialist production method and relationships in promoting natural productivity, natural population growth, etc.), the natural environment and natural resources assessment, has created the need for disclosure of existing differences in recycling.

The main purpose of the verification. The purpose of the research is to determine the complex environmental conditions and natural resources in the Shamakhi-Ismayilli zone, the environmental legitimacy of their use, to determine the extent of the population's anthropogenic activity and to justify the protection measures. Implementation of these provisions mainly requires the fulfillment of the following tasks:

- Analysis of the main stages of the natural-historical process in the Shamakhi-Ismayilli zone;
- Investigation of natural-terrestrial systems and their structure;
- Determine the degree of optimality of the population in the study area and economic activity;
- Evaluating the ways in which the resources used during the modern-day reform and the use of land resources;
- mapping the territorial differences of geographical and ecological features by mapping the internal landscape-economy types of the region in order to use nature and restore nature;

Approach to Problem - Evaluation of geographical-ecological conditions of Shamakhi-Ismayilli zone, investigation of interrelationships between nature-population and production - rational use of nature, assessment of landscape units (zones) of nature for restoration of natural and anthropogenic landscape protection and mapping:

The research area is located on the southeastern slopes of the Greater Caucasus, contributing to the earthquakes, landslides and erosion. The analysis of what is said requires the use of nature in the modern times and the sustainable development of nature-society relations. That is why the above-mentioned is the basis of the topic of the dissertation. The characteristic feature of the modern stage of social relations is the increase in the use of nature, nature conservation and recreation. This tendency is typical for many regions of the world. The annual income from world tourism is estimated at 7.2 trillion. US dollars. 300 million in this area. The person working closely with the person [18]. New areas are being attracted to recreational use. Many people become participants in the process of using the nature. However, the observed "recreational boom" has serious problems with a number of environmental, socio-economic, political and cultural-moral characteristics.

All of this leads to new problems facing academics. The echo-geographical approach to the problem of the development of recreation industry requires, first of all, optimization of the territorial

organization of recreational systems. In this regard planning is based on the natural-resource potential registration of the zone.

The part of the recreation is geographical landfill. Recreation is multifunctional. The aesthetic charm of the landscape is one of these features. The beauty of nature is the basis of the spiritual and physical health of man. Therefore, a more valuable issue is the protection of the landscape.

The beauty, charm of the landscape is one of the main requirements for tourists. Therefore, the mutual capital flows to that area. That is why Landscape Landscape has an understanding of landscapes, with the landscape's aesthetic features, emotional calmness, and nervous breakdowns.

The mountainous regions of the globe are considered to be more perspective for the development of tourism. An untouched nature-landscape for this purpose is more attractive. Priority for sustainable development issues, including the UN International Environment Summit (Johannesburg, 2002), has been prioritized [21].

People try to maximize their aesthetic needs. This natural diversity in the mountains is maximal. Due to the differentiation of zonal and azonal factors of the landscape area (width and high intensity, sector, barrier, slope exposure, inverse processes, gravitational force activity, etc.), there are many varied variations in even smaller areas.

However, mountains are very sensitive to anthropogenic impact. Therefore, nature planning of mountain recreation systems should be more accurate and measurable. Any mistake in the management of the area can lead to negative environmental and socio-economic consequences. It is clear from the foregoing that the study of the aesthetic aspect of the landscape, their protection, and the use of the aesthetic resources of the area have always been an actual problem of life.

In relation to aesthetic geography (A.Geptner's term), we must note that the base for this field is not completely formed. There is no adaptation to the theory and methodology. They need to be clearly visible regional dependencies and are specifically designed to address specific planning issues. Less researchers apply for landscape-aesthetic features of mountain landscapes [23].

Given the aesthetic attractiveness of the landscape, we summarize the existing knowledge and understanding of the landscape-related aspects of the landscape-aesthetic properties of mountain landscapes with the functional features of landscapes:

- Identify the aesthetic attractiveness criteria of mountain landscapes based on the analysis of previous studies and personal observations and propose a method of assessment of landscape-aesthetic resources based on it;
- Perform aesthetic assessment of landscapes based on the developed methodology;
- reveal the legality of landscape-aesthetic differentiation of mountain landscapes;
- To carry out mapping of landscape-aesthetic resources of model landscapes;
- To advise on the planning of the recreational area of the area under study based on the evaluation data.

As a research area, the selection of the Shamakhi-Ismayilli zone is based on the major landscape types typical to this area: grassland, medium mountainous forest, high mountainous grass, glacial nivalis and other natural complex diversity. In this regard, the representation of the area also consists of the fact that the landscapes are relatively less exposed to the anthropogenic impact and there are many untouched areas where their richness contributes to the diversity of biodiversity [92].

Thus, the object of research is the natural-terrain complexes of the Shamakhi-Ismayilli zonaz, and the object of the study is the functional purpose of the landscapes and their aesthetics.

During the research, the following was analyzed:

1. The method of assessment of landscape-aesthetic resources of mountain landscapes should be based on the use of complex assessment indicators reflecting the landscape's landscape.

2. Determination of the aesthetic characteristics of natural complexes manifests itself in revealing the legality, the typology of the landscape's aesthetic characteristics, and the characteristics of the landscape-aesthetic potential of landscapes.

3. The aesthetic-reserve factor is one of the leading factors in the use of nature in the area-recreational systems (SRS).

During the research, the geographical data base of these justifications was formulated and its objective bases were disclosed.

Mountain systems are rare natural manifestations; still untouched mountainous landscapes, not only the culture of the indigenous population, but also tourists coming here have shown a high cultural attitude to nature during the global industrialization. The sustainable development of mountain regions is one of the global priorities of the modern world community, adopted at the UN Rio de Janeiro Forum (1992) and subsequently continued in Johannesburg (2002) [9].

Studying and evaluating the landscape-aesthetic resources of the landscape is a key issue in the study of mountain-recreation system. Professor Michael Sukkou, a prominent scientist in the field of landscape ecology, at Grayfsvald University in Germany, touched upon the aesthetic aspects of the landscape, and recommended the use of ball valuation of the aesthetic advantages of natural-terrain complexes in the national parks of Azerbaijan [22].

The relevance of this problem is due to the rapid development of recreation in some regions. It sometimes turns into the mainstream of nature use. This is also an attractive area in ecosystems. In this regard, rare natural and national cultural landscapes have begun from historical periods, and have been reflected in our national-ethnic culture to this day.

1. Methodology of assessment of aesthetic resources of mountain landscapes has been developed and tested. It is based on accurate, expert and inquiry methods. Here, too, landscape formation in the mountains is taken into account. High diversity of landscape landscapes, mosaics of their structure and diversity of natural complexes [8].

2. Selection of geospatial systems such as landscape-landscaping complexes is justified, characteristic of the landscape complexes of the research region. The "mountain-forest polydominant" and "alpine-grass-rock-landscape-landscaping complexes" are typical for the research area. They constitute 36% of the zone's territory.

3. Differentiation of mountain landscapes on the landscape-aesthetic principle has been revealed. This opens up the possibility of using landscape-analytical and extrapolation methods in the evaluation of landscape-aesthetic resources. Legitimacy data show that high-altitude cross-sectional movements have the highest aesthetic potential. The combination of different landscapes rises in the zone (landscape-ecotone) -esthetic value.

At the present time both science and society note that the value of nature is not determined only by visible resources. Natural environmental landscaping, ability to perform environmental environments, as well as aesthetic appeal are a number of unique natural resources. Landscape creates aesthetic appeal in people. Exceptional landscapes are the main factor of the recreation value of the area. This fact is undeniable in the territorial organization of nature use.

As the science of landscape studies develops, new scientific trends have emerged within it. In the mid-20th century, the landscape's geochemistry and landscape geophysics were rapidly developing and soon became a free-of-charge specialty.

The geochemistry of the landscape was first used as a scientific research in landscape studies. Subsequently, the application of this method expanded and developed and became a large area of landscape studies. B.B.Polinov [14] M.A.Glazovskaya [7] and A.I.Perelman [13] are more prominent in the development of landscape geochemistry. Through the geochemistry of the landscape, the distribution of the chemical elements and their migration are studied. The characteristic tipomorphic, chemical elements of each landscape unit have been identified. Landscape also occurs in geochemical anomalies. The number of chemical elements in geochemical anomalous landscapes is much higher than normal (Clark). Identification of such anomalous landscapes is also valuable in solving many practical issues, including the search for useful minerals and the solution of environmental problems [13].

By using geochemical investigation methods, it is possible to study the horizontal and vertical migration characteristics of chemical elements in landscapes with the help of various geochemical coefficients, which is a very important tool for identifying their development trends. The geophysics of landscape explores the nature and distribution of substance and energy between the landscape and its components. With the help of radiation, heat, biomass and water balances, the properties of matter and energy flows in the landscape are quantitatively determined. The study of physical and chemical processes occurring in landscapes has both scientific and practical significance. The study of these processes contributes to the purposeful change of landscapes and increase their productivity [13].

Depending on the nature of human nature and the aggravation of environmental problems, a new area of - landscape science science - the ecology of the landscape has emerged and the application has been rapidly developing as a science. The landscape ecology ensures thorough study of the environmental problems arising from the use of natural landscapes and the development of scientific bases for their elimination.

Mountainous zones are complex geological, geomorphological, climatic, and so on. features. At the same time, the area is characterized by the dynamics of endogenous and exogenous processes. The above-mentioned processes create complex landscape-geographical forms in mountainous areas. It is important to separate environmental systems in the same area, to identify their boundaries, and to distinguish genetic characteristics of ecological processes.

The principal legality of natural differences in mountain areas is the elevation of landscape zonality. Its basis is the decrease in temperature due to elevation of elevation, variability of temperature and humidity, which forms various landscapes [8].

The elevation landscape zone is not fully compatible with the horizontal natural zone. The temperature and humidity in the mountains vary according to the width and height, and the climate processes are subject to higher volatility than the plains. The landscape zonality in elevations is the geographical position of the mountain system, absolute drift, exposure and tendency of slopes, characteristic of mountain rocks. Depending on the type of structure of the landscape zone, the height is expressed.

There are large differences in the character of the landscape zones of the northern and southern slopes of the same mountain chain, with different types of soil and plant species.

Mountain-forest and mountain-meadow landscapes dominate in mountainous areas of Azerbaijan since its inception. Based on this, Musaibov notes that the mountain-forest landscapes of Eastern Transcaucasia have begun to develop from early pliocene and are older than old age [13].

The natural landscapes of the East and South Caucasus as well as the zone have been studied by a number of researchers (Keremov, 1961, 1966, Budakov, Museyibov, Mikayilov, 1973, 1986 and

others). In the South Caucasus, nival, high-mountain meadow, mountaineering, forest-desert and semi-desert landscapes have been developed [1,2,11,12].

Some aspects of landscape changes in anthropogenic impacts have been recently studied in several studies (Dashdiyev, 1990 Imanova, 1990) and the current state of landscapes, anthropogenic change based on the analysis of the socio-economic system of nature use [5,10,17,19,20].

The levels of the Shamakhi-Ismayilli zone in terms of degree of change of natural and anthropogenic landscapes have been defined and divided into: The practically unchanged; Anthropogenic modification, transformed; anthropogenic distorted and optimized landscapes. As one of the key criteria for determining the level of variability of natural landscapes with anthropogenic impacts, we have used the indicator reflecting the extent of plowing. It is known that as a result of plowing soil and vegetation cover of the area are substantially changed and this is the main indicator of landscape change [6].

The landscapes practically unchanged are spread in the basins of the Aghsu and Girdiman rivers in the middle and high mountain forests. As a result of limited forest breakdown and grazing, the western and northwestern parts of the area have remained unchanged, almost in smaller areas of hornbeam and peanuts, peanuts, oak trees. In landscapes belonging to this group, small-scale structures are quickly restored. In these forests, which are mainly grown on brown mountain forest lands, in some areas, there is a thick forest bed, and the natural reproduction of forests is normal. These forests are selected from the surrounding areas by their density and density. In some areas there are forest areas with grass and bush cover. In these relatively untouched forests, hawthorn and peanut trees dominate up to 20-25 m long. Landscapes belonging to this group are basically typical of Pirgulu and Ismayilli forests and surrounding areas and are almost no anthropogenic effects at present.

Low-modified landscapes with anthropogenic modification cover more than 20% of the area surveyed. Bugrup landscapes include grazing ecosystems of low-mountainous lowland of Shamakhi-Gobustan region. Semi-desert and partly desert landscapes are used mainly in the eastern and southeastern part of the study area as winter pastures. As a result of unregulated and sometimes overgrazing, the initial condition of these geosystems has changed dramatically, and the useful pastures have declined. The vegetation cover has not changed in landscape components, which has undergone more changes. The species composition, richness and projective cover of plants have changed as a result of inadequate compliance with the grazing norm and inefficient use. During field research conducted in Tava, we found that the projective cover of plants in areas over-normally diminished, sometimes down to 15-20%, and in most crop areas it reaches 40-50%. The ephemeral species are poorer on the slopes of the ephemeral-spruce plants, and in the more degraded complexes, they are transformed into wormwood. In relatively pronounced slopes, grass changes in the soil cover as a result of gravel and the terrain turns into a very low-productive stony hill. In general, the depth and level of the anthropogenic impacts in the semi-desert and semi-desert landscape of the studied area are relatively low, as the change occurs mostly in vegetation [3,4,6].

Partially transformed landscapes in the middle plain cover 20-22% of the area surveyed, covering the upper parts of the basins of Pirsatchay, Gilgilchay, Valvalachay and Kazulchay basins. Mountain-meadow, meadow-desert landscapes have been subjected to changes as a result of long-term, sometimes unregulated pastures and partly in agriculture. In these landscapes, the vegetation is deeply rooted, and in some areas the soil cover has undergone significant degradation. About 8-10% of the landscapes belonging to this group are plowed. Within these landscapes, natural complexes have been replaced by grain crops and orchards in many areas. The grass and grassland landscapes used as summer pastures have changed significantly in the composition of the plants and the surface

cover. Particularly in the landscape of Pirsaat and Gazulchay streams, systematic and excessive gravity has resulted in a strong degradation process in these landscapes. As a result of overgrazing, fodder crops have decreased, and instead of rough and alkaloid plants have increased. In the more slanted slopes, the herbs have been replaced by barbed wire. Summer pastures in the north of the village of Archivan, on the sloping slopes of the Zarat region in the Demirchi summer, have undergone severe degradation. As a result of erosion, the slopes were sometimes naked, the grass cover was destroyed and individual silver arms were left behind [4,6,15,16].

Although the erosion process is weak due to the relief of smoothness in areas such as the Shipyard, Uzunca, Gelinbulagi, Utuq, Pilpile, the biological productivity of the pastures has dropped dramatically as a result of poor compliance with grazing standards. In these pastures, there are 10 to 15 sheep per hectare, which is much more than the natural potential of the territories. In such grazing complex, the quantity of productive herbs (triple clover, rosacea, etc.) was very low and the projective cover was deteriorated.

Conclusion. 1. The population of the Shamakhi-Ismayilli zone has a natural level of natural growth. Here, the annual population growth is higher than the population growth in the republic. According to statistical data, 15% of the working-age population is unemployed or relative unemployed. In order to increase the employment of the population, processing enterprises, textiles, copper and others. there is a need for development. Especially it should be noted that there are working habits in the above-mentioned areas. Professional training in this area provides good results.

2. Ecosystems have a variety of natural foundations and deterioration reflect the degree of their natural resilience. In this regard, the stability levels of the areas have been determined. Ecological and meliorative measures have been grouped in areas of severity. Forest-meadow zone in the area is characterized by a high level of natural stability, where EPI is between 0.1 and 4%. Strongly disturbed areas ($EPA > 0.7$) have a tense ecological situation. The areas covered include mountainous landscapes of the Shamakhy Plateau, which have changed to 90%. Forest-desert landscapes of Southeast Caucasus have changed by 65-70%. Mountain-meadow landscapes have been changed to 30-40%. In order to reduce the impact of degradation rates on the above mentioned, we have provided a mapping scheme for forestry and meadowing and land reclamation.

3. Assessment of nature-and-property relationships and economic areas, and optimization of landscapes. That is why the landscape should operate with the full context. In this case, the landscapes will fully implement their full function: 1. Natural reproduction is guaranteed; 2. It is aesthetically attractive; 3. The importance of recreation is increasing; 4. Biological diversity is guaranteed.

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