

Effective Use of Azerbaijani Lands and Solutions to Existing Problems

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Abstract

60% of the territory of the Republic of Azerbaijan is located in very complicated physical conditions on the slopes of the Big and Small Caucasus and Talysh Mountains. As a result of the combined effects of natural and anthropogenic factors, the soil has been exposed to some degree of erosion. In the Republic of Turkey, surface, crust, ravine, irrigation, wind, water, pasture and military erosion are widespread and deteriorate soil fertility. Large land areas are facing a threat of extinction from agricultural turnover. In this regard, the elaboration and early application of preventive measures to restore and improve the fertility of eroded soils is a great necessity. It should be noted that the use of soil-protective and environmentally-relevant zonal measures can also improve the ecological situation.

Keywords: Soil Protection; Erosion; Water Scarcity; Irrigated Soils; Suitable for Cultivation; Farming; Peaceful; Perennial Plantings

Introduction

The Republic of Azerbaijan is located in the eastern part of the South Caucasus at 38025 and 41055 North latitude and 44050 and 50023 east longitude.

Despite the fact that the territory of the Republic of Azerbaijan is located in the subtypes of the geographical position, depending on the complexity of relief, very complex climate factors have been formed in the country. Thus, the mountainous region of the

country differs considerably from one another to the semi-desert and even to the deserts which have started from these zones.

The altitude amplitude ranges from 28m below sea level to 4466m in height.

In terms of relief, the territory of the Republic of Azerbaijan can be divided into two main parts: mountainous and plains. These areas differ greatly from each other depending on their climate, soil and vegetation as well as other natural factors, depending on their relief variability.

From this point of view, as a result of numerous studies conducted by us, a complex system of anti-erosion measures for different regions of the Republic has been developed. It should be noted that the introduction of soil-water hydrotechnical, agrotechnical, phytomeliorative, progressive optimal irrigation systems and organizational and economic measures for mountain-shamen, mountain-forest, mountainous and semi-deserted zones were important.

Thanks to these systems of action, the intensive development of the country, as well as the wind, and irrigation erosion, are considered as the most important issues facing the agrarian scientific community reflected in the relevant State programs.

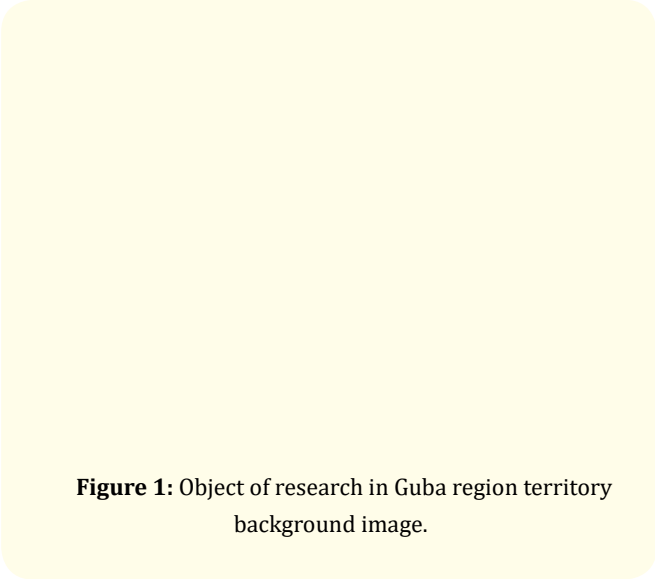


Figure 1: Object of research in Guba region territory background image.

Around 3/5 of the territory of the Republic occupy mountains, with a 1/8 of them being part of a high mountain range with a height of more than 1500 meters. Such natural-climate and relief complexity are also acute in agricultural activities and production.

The surface area of the Republic of Azerbaijan is divided into four main sections:

- 1) The Greater Caucasus,
- 2) Small Caucasus,
- 3) Talish Mountains (including the Lankaran Plain)
- 4) Kura-Araz lowland.

From the agricultural point of view, the Kura-Araz lowlands are the most precious plants in the republic, such as cotton, gheel, vegetables, melons and gourds. cultivation of high-yielding agriculture has developed. However, there are problems with drought in these areas.

During the summer season, the volume of moisture reserves in the 1 meter layer of soil decreases to 30-66 mm.

Due to the drought, agricultural crops cultivated in the Kura-Araz lowland face moisture shortages since the second decade of May.

In general, the territory of the republic is characterized by uneven precipitation. The eastern regions of the country, the central part and the south-western regions of the country are dependent on irrigation, while northern and north-western regions, as well as in the sub-tropical zone of Lankaran, suffer from rainfall.

Therefore, it is important for Azerbaijan to establish a regular commission to deal with drought problems, which can help mitigate and eliminate its harmful effects, and replace economic losses.

There are 66 administrative regions with 8641506 hectares in the country, which are divided into ten economic groups.

From the point of view of agriculture, the regions suffering from drought are as follows: Absheron, Aghstafa, Beylagan, Fuzuli, Jalilabad, Bilasuvar and Shamakhy, Aksu, Goychay, Yardimli and other regions, which suffered from droughts 40 - 50% of the droughts, are located in Nakhchivan Autonomous Republic, Siyazan, Khizi, Gobustan, Hajigabul, 70 - 75% How many regions can you show?

**Situation of agricultural land
Hectar**

Republic territory	Including agriculture	From them				
		Planting	Perennials	Relaxed	Strawberry	Strawberry
8641506	4524776	1635420	155752	49893	109027	2574684

As it is seen from the table, only 52.4% of the territory of the Republic is suitable for agriculture, only 18.9% of which is for agriculture.

Only 0.20 hectares of land belong to each citizen of Azerbaijan.

It has been more than 10 years that over 20% of the territory of the Republic of Azerbaijan was occupied by Armenian occupiers. Therefore, currently only 0.16 hectares of land are available for each citizen. Therefore, saving and efficient use of every inch of land is one of the main principles of our citizens.

The land and its relationships have been fundamental and indispensable for any society throughout history. Therefore, land issues are not only socio-economic, but also political and international. As long as the land is the basis of all the tangible assets, the attitude towards it will not change even with the change of political regimes and governance, even of socio-political forms.

It is not possible to make sufficient use of valuable and indispensable land resources, especially for agricultural purposes, with the fact that water use and its proper quantities are used.

The country's water resources are quite limited.

The demand for surface water resources of the Republic of Azerbaijan is about 32.2 billion m³ and in droughts this figure dropped to 23.2 billion m³ - m³.

Moreover, less than 30% of these water resources are in the territory of the republic, and more than 70% flow from the neighboring countries (mainly via the Kur River).

The main part of the agricultural sector of the Republic of Azerbaijan is formed in irrigated areas.

About 90% of crop production is grown on irrigated soils.

There are about 3.2 thousand potable water available in the country. ha 1.4 million ha or 44.7% of the area is irrigated.

This fact once again proves that there are water shortages or irrigation opportunities in the territory of the country. 33 thousand km of irrigation canals, 22,400 km collector-drainage systems, 83,000 hydrotechnical facilities at the balance of kolkhoz and sovkhoz, 153 pumping station and 1067 subartesian wells are under the supervision of State and Water Amelioration Agency under the Ministry of Agriculture with the decision of the Cabinet of Ministers of the Republic of Azerbaijan dated March 15, 2000. 70% of these irrigation canals cause groundwater losses, and large amounts of water losses are due to 33% of the collector drainage systems.

In general, 80 - 85% of irrigation canals and collector-drainage systems need rehabilitation and capital repairs.

The condition of irrigated lands Hectar

Total	Agricultural destination	From them				
		Planting	Perennials	Relaxed	Strawberry	Pasture
1431185	1287306	1107734	110417	16946	6304	45926

As can be seen from the table, 16.6% of the agricultural land is watered by 28.5%. In the present period the irrigated soils of the Kura-Araz lowland have been sharply saline.

The saline areas in the country cover about 600,000 hectares of land, with only a few of them being provided with collector-drainage systems.

The collector network in Azerbaijan is only 11100,0 km, the drainage network is 19787,7 km.

It should be noted that the collector-drainage network is inadequate and requires a lot of money to bring it into good condition.

Moreover, as a result of studies conducted by Azerbaijani scientists, 3610 thousand hectares or 41.8% of the land fund has become useless, with strong erosion.

Even the use of these lands as pasture has been impossible. In these areas, ecological problems are aggravating. Almost a third of the country's sown area is covered by fields.

Nevertheless, 90% of agricultural production is collected from 67.7% sown area in total.

This again indicates that the agricultural production in Azerbaijan depends on the water factor. If the area of irrigated areas is expanded, it is possible to increase the volume of production several times if it is used water resources efficiently. ha Annual water demand of agricultural crops grown in the irrigated area is approximately 9.2 - 11.0 billion m³.

In the drought years, this indicator needs to be increased by 25 - 30%. It is not difficult to imagine what economic losses we are experiencing in this situation, given the loss of 40 - 50% of these water resources in open canals and selenium irrigation. In the period of 2000-2003, the country's droughts were about 920 billion manat \$ 1888 million in economic damage.

Problems arising from gravity The above-mentioned arguments and facts once again prove that farming depends on the drought factor.

These problems are characterized by the following: - expansion of enriched areas:

- Resettlement and urbanization Expansion of exposed land areas
- Acceleration of the serous processes
- Reduction of the level of water in open channels or their periodic drying
- Deteriorating the quality of the collector-drainage system and increasing its basic function;
- Annual deterioration of the ecological situation and, as a consequence, the increase in the volume of economic losses. Reduction of harmful effects of the cessation and the necessity of its implementation all possible means at the state level should be investigated, assessed and used sufficiently to reduce harmful impacts, prepare and implement its management measures.

The smallest issues should be taken into account, as far as possible, in the context of the work that will be undertaken in these activities, as far as possible issues of possible psychic tension, as a result of possible rickets, supplementary drug additives, cerebral palsy and overall drought. For this purpose it is planned to carry out the following measures:

- 1) Comprehensive and thorough study of the water resources in the Republic;
- 2) Identify key agricultural areas most closely related to water supply and drought;
- 3) In smaller districts, especially in lowland areas, small quantities of water identification of places to create warehouses;
- 4) Determination of the volume of open and closed collector drainage system, which is a diagnostic and repairs;
- 5) Establishment of a national working group on crouching problems;
- 6) Establishment of scientific - expedition groups for the study of erosion processes and specification of areas exposed to desertification;
- 7) Development of basic strategic crop varieties, resistant to currents and other adverse conditions;
- 8) Development and implementation of agronomic operations that help prevent soil erosion processes, such as minimal and zero cultivation, sowing, sloping and terracing;
- 9) Ensure the operation of agrometeorological facilities that have lost their functionality on all regions of the Republic and ensure the creation of new stations;
- 10) Water saving in water treatment processes.

Plans and programs for drought preparedness should include three key components:

- a) A comprehensive system of early warning;
- b) rules of risk assessment and risk assessment;
- c) Mitigation of the effect of the groom and the strategy of response to it.

These components require a specifically integrated institutional approach by complementing each other. They include short-term and long-term problems of reducing and managing the drought's harmful effects [1-9].

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