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Research Article

THE STATE OF LAND RESOURCES OF UZBEKISTAN, PROBLEMS OF LAND RESOURCES, WAYS TO IMPROVE THE EXISTING GEOECOLOGICAL STATE

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ABSTRACT

This scientific article provides information about the state of existing land resources in Uzbekistan, land degradation, desertification, and erosion. In particular, information is provided about the processes of drying up of the Aral Sea, salinization and degumification of land resources in the regions of the Republic of Uzbekistan as a result of historical mistakes and attitude to land resources, and it is explained in detail through tables and pictures. Decisions taken by the government of our country for the solution and prevention of these problems and their results, opinions aimed at the use of land resources and the solution of these problems are described.

KEYWORDS

Land, degradation, deification, erosion, degradation, swamping, desertification.

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INTRODUCTION

The land is the source of society's wealth, the basis for public life and activity, agricultural production. Our country is rich in natural resources, it has large reserves of fossil fuels, freshwater, and other resources, but their most important is land resources, especially agricultural land.

As of January 1, 2022, the total area of Uzbekistan amounted to 44892.4 thousand hectares, about 60.48% of which were occupied by agricultural land. Today, ensuring the needs of the population for food on a global scale and in our country has become one of the most complex issues of the time. As the population grows, issues of increasing the production of agricultural products and at the same time expanding the area of cities and towns, developing industrial communication, and allocating additional land for other needs are being raised. Additionally, the degradation of land resources as a result of human farming activities, wind and water erosion of soils, degradation of irrigated land, sedimentation of pastures, degradation of soil in the Aral Sea zone, and technological desertification are the most pressing problems awaiting their solution.

Methods. In general, the state of the soil depends on how we affect it. Mankind produces and harvests crops during its subsistence farming activities. This means that it takes organic matter grown in the soil and makes it poorer. At the same time, it fertilizes the soil, performs replacement plantings and other agrotechnical activities, thereby enriching the soil and restoring its productivity. However, the failure to carry out such events in a timely manner can only accelerate the layoffs of the soil as a result of erosion, degradation, and swamping of the soil.

Such bitter lessons are also found in U.S. agriculture. In previous years, the republic has grown to develop desert zones and open new lands and expand subsistence farming. Between 1975 and 1985, 1 million hectares of new land were cultivated. However, during the development, there was insufficient emphasis on subsistence farming, replacement technology was replaced by a single agricultural government, inventions decreased, and meliorative work was thirsty. The resulting rise in sea levels from the meltwater could eventually deteriorate to the oceans from freezing over or bogging away. (Figure 1)

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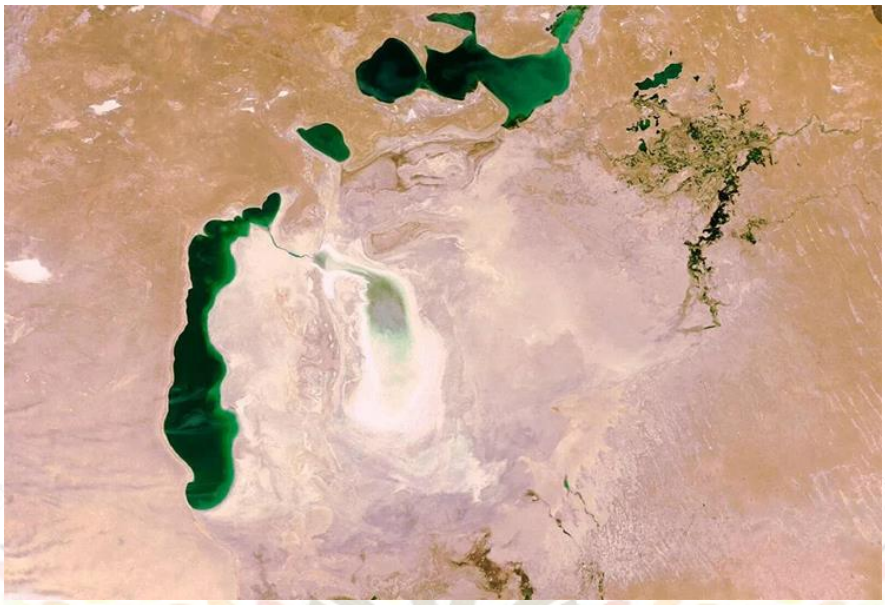

Figure 1. The image of Aral Sea which was taken by satellite

Wind and water erosions also greatly affect the fertility of the soil. Today, there are 2 million in the republic. more than a hectare of land deficit, including 0.7 million. the hectare of land was severely decreased, 0.5 million. Irrigation erosion is occurring on hectares of land. Such lands are common in the provinces in front of the mountains, especially in the Valley of Fargo, and irrigated land is part of it. According to the Ministry of Agriculture and Rural Agriculture, erosion can wash away 0.5-0.8 tons of gum, 100-120 kg of nitrogen, and 75-100 kg of phosphorus per hectare. This sets the stage for a decrease in the efficiency of irrigated land use.

By the second decade of the 21st century, the global climate change that is taking place in the world and the incompetence of lands in many countries is experiencing problems of desertification and land degradation, resulting in an incompetence of some 2 billion acres [2 billion ha] of land around the world. According to the United Nations, more than 40 percent of the land to be driven has been degraded due to mistakes and shortcomings in irrigation and meliorative work, making it unsuitable for cultivation and agricultural crops. In addition, desertification and drought are a serious economic, social and ecological problem that threaten food security in many parts of the world. Desertification poses a serious threat to the health and well-being of the 1.2 billion people living in more than 100 countries around the world.

As a result of the world's degradation processes, 7 million acres [7 million ha] of land are being evacuated from agriculture each year. This rightly worries experts. This is because its area decreases thousands of times faster than the formation of soil. For example, for the formation

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of soil 10cm thick, it takes 1400-1700 years. Water erosion of such thickness soil can be discharged as early as 20-30 years. Sometimes only one turtle is enough for this process.

Results. In the years that followed, irrigation subsistence farming zones, especially in the Aral Sea regions, resulted in various degradation and excessive humidity, secondary degradation, desertification, wind and irrigation erosion, pollution with heavy metals and toxic substances, degumification, density of the driving layer, resulting in a decrease in irrigated soil productivity and crop yields. A total of 2 million people are across the country, according to the results of scientific and practical research conducted in the regions. Of the 418.8 thousand hectares of slaughtered land, 72.1% were found to be sown at different levels, of which 38.4% were weak, 22.8% were medium, 6.2% were strong, and 4.7% were very strong. We tested - 91.4% of all irrigated land in the District (15 districts), In the Bukhara region (12 districts) - 85.1%, in the Jizzakh region -76.4%, in the Navoi region (6 districts) -64.5%, in the Syrdarya region (10 districts) -79.3%, in the Khorezm region (10 districts) -68.8%. The share of strongly degraded soil was found to be mainly attributed to the District (15.1%) and Khorezm region (5.9%). Figure 2 shows that the state of irrigated land in the cross-section of the provinces is not satisfactory. Almost all of the 14 administrative provinces in the country are some extent degraded.

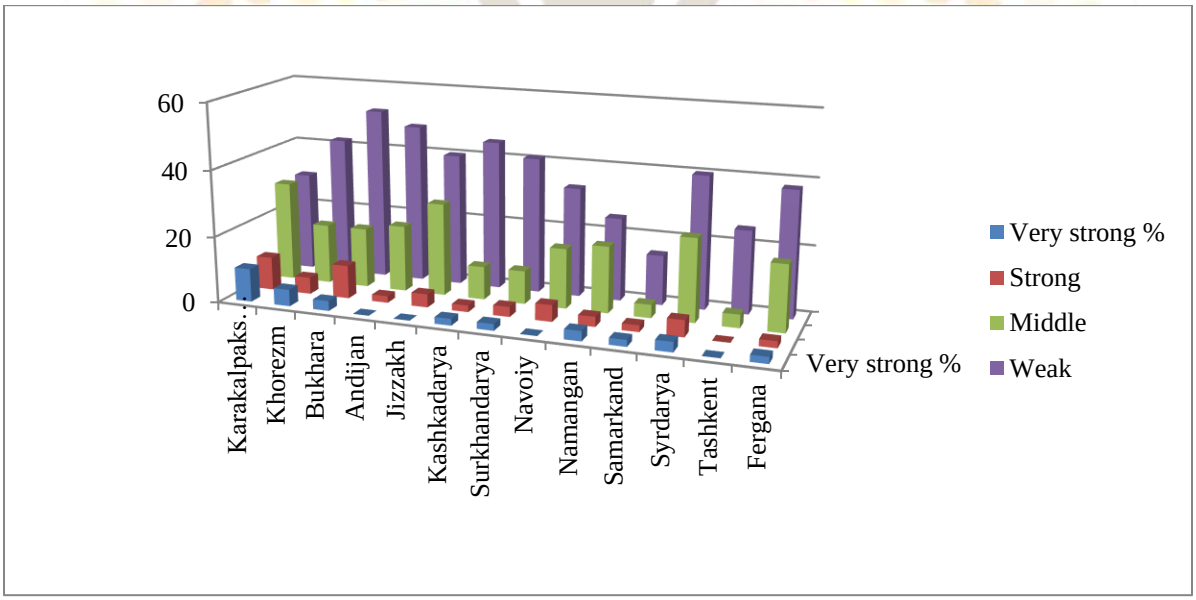

Figure 2. The degradation rate of irrigated land throughout the country accounts for % of the share of the prov

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As a practical solution to the above problems, the Decrees of the President of the Republic of Uzbekistan have been adopted. For example, on June 10, 2022, our President Shavkat Mirziyoev signed a resolution "On measures to create an effective system for combating land degradation." The resolution designates the Ministry of Agriculture as the body implementing government policy to combat land degradation.

Drought is one of the most internal natural disasters in terms of the loss of crop yields, the destruction of people's lives as a result of forest fires and water shortages. In recent years, forest fires caused by food and water shortages, severe droughts have intensified. Currently, 70 percent or 31.4 million acres [70 percent or 31.4 million ha] of land in Uzbekistan are drought-prone areas, mainly affected by deserts and hot harmsel winds consisting of naturally degraded, moving sand dunes and sand dunes, according to a news service from the National Forestry Committee of the Republic of Uzbekistan. Our President's resolution, adopted on February 22, 2019, "On measures to improve the efficiency of efforts to combat desertification and drought in the Republic of Uzbekistan," was of great importance. The decision aims to improve the efficiency of desertification and drought fighting in our country.

When we think about the activities being undertaken in our country against desertification and drought, it is intended to stop, especially the development of a “Way Map" for 2019-2023 by the State Committee for Forestry. Because in a short period of time, a number of effective work has been achieved on the basis of this "Way Map", which has selected the most relevant boiling areas for our republic. For example, during 2019-2022, forestry and reconstruction activities were carried out on some 1.7 million acres [1.7 million ha] of land in the dried-up region of the Aral Sea. Additionally, in the region of Bukhara, work has begun to create a Green Shield of Bukhara in more than 200,000 acres [200,000 ha] of land to protect irrigated valley land and infrastructure in the Red Cross, and to build sparrows to improve the condition of more than 150,000 acres [150,000 ha] of desert pastures in the region of Navoi.

Additionally, the construction of forests consisting of desert-resistant plants, such as sparrows, sugarcane, and cherry trees in the region will create a unique ecosystem and soften climate change. The reprocessing of plants such as chagon, terraces, dyes, and Caiaphas, which are considered food in the desert zone, will serve to ensure food security. Indeed, all measures taken are aimed at protecting irrigated land, and irrigated land is one of the main sources of global wealth, agricultural production and the country's food security.

At the same time, the AGROMAP.UZ online news portal, which features an agricultural map of our country to digitize and digitize the agricultural industry, create a realistic status for land resources, properly use the potential of our regions to determine where to plant what kind of livestock, what type of livestock is cultivated, and create an added value chain, can be used in the near future as a solution to these problems.

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This website allows you to monitor and monitor the national land balance of the Republic online, including digitalization services that allow you to develop a system for storing, selling and finally delivering ready-made products, from gradual soil ball bond data in each region through the satellite system. (Figures 5 and 6)

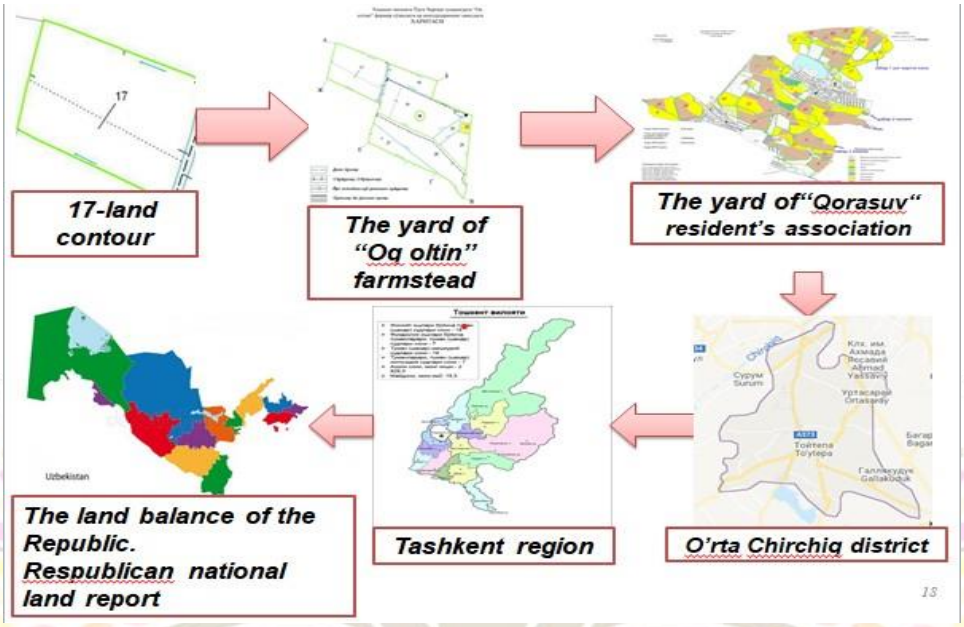

Figure5. Gradual registration of land resources

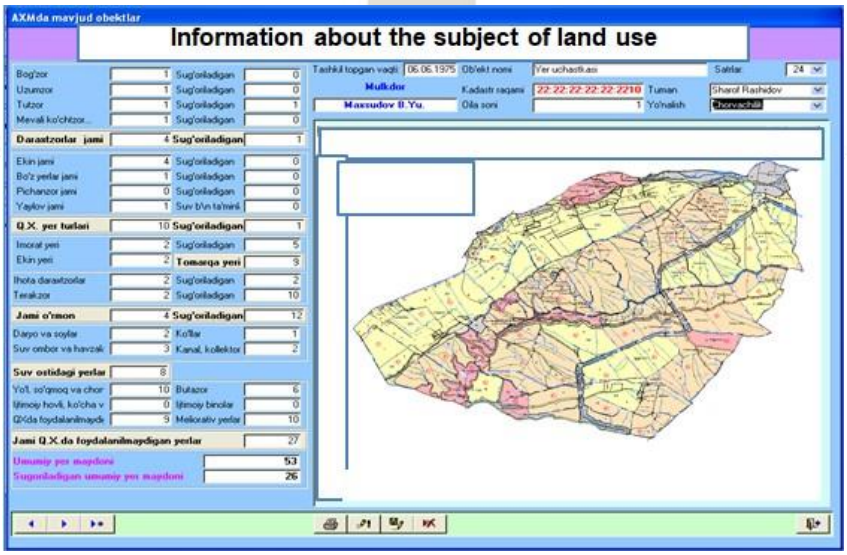

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Figure 6. Display of land plot information on the online portal

CONCLUSION

In connection with these approaches, the above-mentioned problems are studied scientifically and practically, and the stability of land restoration is achieved by the following ways:

1. Formation of a unified accounting system for lands as a result of improving the separate accounting of land between offices and (network) agencies;
2. By creating duty electronic cards on degraded, salinized and eroded irrigated lands, as a result of forming a system of operational management and monitoring of their restoration and putting into use, their orderliness, addressability, reliability of data is ensured;
3. Development of a methodology for the formation of a regional investment program of measures to restore and put into use irrigated lands in a state of degradation;
4. To create grounds for including measures to restore irrigated lands in a state of degradation into the state investment program;
5. To create programs covering systematic and complex measures at the republican and regional level regarding restoration of degraded, saline and eroded irrigated lands.

Implementation of this program through these ways, in turn, in addition to land restoration works, the amount of agricultural products obtained from these lands and the number of created jobs will increase, and the employment of the population living in rural areas will be ensured. In addition, in the future, as a result of further development and diversification of the production of agricultural products through the restoration of degraded irrigated lands, their role in the socio-economic development of the country will be strengthened.

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