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# SCIENTIFIC AND PRACTICAL IMPORTANCE OF LANDSCAPE PROTECTION

**Abstract:** The article describes the ecological state of agrolandscapes, the protection of the landscapes of the Zarafshan Bay and oasis, the preservation of the unique landscapes of the Zarafshan Bay, residential and geocomplexes of the ancient city.

**Key words:** residential, irrigation, bay, geosystem, ecosystem, valley, proluvial, reclamation, morphological.

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# НАУЧНОЕ И ПРАКТИЧЕСКОЕ ЗНАЧЕНИЕ ОХРАНЫ ЛАНДШАФТОВ

Аннотация: В статье рассмотрено экологическое состояние агроландшафтов, охрана ландшафтов Зарафшанского залива и оазиса, сохранение уникальных ландшафтов Зарафшанского залива, селитебных и геокомплексов древнего города.

Ключевые слова: селитебный, ирригационный, залив, геосистема, экосистема, долина, пролювиальный, мелиоративный, морфологический.

**Introduction.** The landscapes of the Zarafshan Bay and oasis are an integral part of the natural world, and their preservation, preservation and rational use in the interests of mankind is one of the most pressing problems of our time. The landscapes of the oasis serve as the main source of material and spiritual needs of mankind. Therefore, since man has appeared, he continues to have a positive and negative impact on nature and use it for various purposes. The level of influence of human economic activity on nature is increasing due to the growth of the population on a regional and global scale, the development of industrial enterprises and scientific and technological development.

Nature conservation is a broad concept that makes up a system of complex measures. This complex system includes the preservation of nature in the interests of humanity and its reasonable and expedient change for present and future generations, reclamation of unusable land, rational use of natural resources, prevention of groundwater and surface water pollution, restoring the ecological balance of the environment, maintaining productivity and increasing the efficiency of agrolandscapes, prevention of poisoning of cultivated areas with nitrates, pesticides and herbicides, optimization of the process of degradation of geosystems and ecosystems, control of soil erosion and repeated salinization of soils on irrigated lands, a set of measures, such as the rational use of geosystems, taking into account the laws of nature.

**Main part.** They argue that the concept of nature conservation has two interpretations. First, nature is protected passively. Passive protection provides for the natural maintenance and protection of specially designated landscape complexes. In protected areas, there is a natural development process, seasonal dynamics of geocomplexes, measures are being taken to preserve and reproduce unique species of plants and animals. Such work is carried out in specially organized national parks, reserves, reserves and nurseries.

The second environmental interpretation is broad, the main purpose of which is the active protection and management of nature. This interpretation provides for

the protection of nature in the process of creating anthropogenic landscapes and their use in various sectors of the national economy. Therefore, nature conservation should be understood not only as the protection of created national parks, reserves and reserves, but also the protection of all types of anthropogenic landscapes and their components that arose as a result of human economic activity. Only in this way can we preserve nature, its natural and anthropogenic forms, as well as its healthy geoecological state for future generations.

Today, all residents of the Earth, including residents of Zarafshan oases, live in a period of exacerbation and development of the ecological crisis. Currently, all experts recognize that the geoecological balance formed during geological progress in nature is disturbed under the influence of an anthropogenic factor and, as a result, environmental tensions arise.

Of great positive importance in increasing the productivity of agro-geocomplexes is the protection of the landscapes of the Zarafshan Bay, the development of a scientifically based program of measures, the organization and management of the mechanism for its consistent application in practice. However, the intensification of negative processes leading to a decrease in the productivity of irrigated agrolandscapes requires the identification and implementation of measures with both environmental and economic efficiency for the rational organization of the use of such geocomplexes in agricultural production and the protection of land and water resources. The solution of geoecological problems associated with oasis landscapes should be aimed at optimizing environmental management and fundamentally improving environmental and reclamation work.

The impact of irrigation erosion occurring in irrigated areas on the annual decline in the productivity of agrolandscapes, which occupy a significant place in the oasis geosystems, on the desertification of cultural geocomplexes, soil poverty is extremely high. To protect agrolandscapes from such negative phenomena, it is necessary to carry out such measures as agromelioration, hydromelioration, phytomelioration. Irrigation erosion occurs mainly on slopes, in foothill proluvial

plains, on slopes. Irrigation erosion activity is directly related to the level of slope of the area.

Most of the agrolandscapes in the Zarafshan Bay were built on the pre-proluvial plains. Here, the slope of the plain surface increases from the Zaravshan valley to the foothills. In the lower part of the plane, the slope averages 1-3$^0$, in the middle part - 3-6$^0$ and in the upper part - 6-10$^0$. In the relief of agrolandscapes formed on birches and over the birch terraces of the Zeravshan River, the slope is not noticeable.

According to M.K. Kodirkulov, irrigation erosion in areas with a slope of 1-3$^0$ or more occurs in the process of irrigation of crops. The irrigation erosion that has just occurred can be eliminated by technical means. If the process of irrigation erosion was delayed for a long time, washing away the fertile soil layer and forming the soil, then it is technically impossible to eliminate it. For this, a set of measures requires the use of agro-reclamation, hydro-reclamation, phyto-reclamation and other agro-technical measures.

Irrigation equipment plays an important role in protecting irrigated soils, preserving their fertility and combating irrigation erosion. To minimize irrigation erosion, it is necessary to divide the areas into areas depending on the slope of the relief. In areas with a relief slope of 0.5-1$^0$, the relief length should not exceed 150-200 m, on lands of 1.5-2.5$^0$ m - 100-150 m, in areas with a slope of 3-5$^0$ m - 100 m. According to experts, on foothill plains with soil with a slope of more than 1.5$^0$ m and a length of 80-150 m, water flows at a speed of 0.05-0.2 l/s. In order to avoid irrigation erosion of the soil on foothill plains with a slope of more than 5-10$^0$ m, it should be used for sowing grain ears and perennial grasses.

Erosion of the upper layer of watered serous soil on the preproluvial plains due to irrigation erosion reduces the productivity of agrolandscapes. An average of 100 tons of soil is washed from each hectare of land per year. As a result, fertile soils lose 100 kg of nitrogen and 115 kg of phosphoric acid during the year. To prevent irrigation erosion and increase soil resistance to erosion on the territory of

agrolandscapes on the slopes, it is recommended to fill 15-20 tons of organic fertilizers per hectare of sown area. On the one hand, organic fertilizer increases the fertility of the soil, and on the other hand, reduces its washing.

One of the urgent problems of our time is the organization and development of a mechanism for protecting irrigated soils from poisoning with pesticides, herbicides, nitrates and other chemicals for growing environmentally friendly products on agrolandscapes. In order to avoid soil contamination with mineral fertilizers and pesticides, irrigated lands should, first of all, prohibit their excessive use.

When crop plants absorb 35-40% of nitrogen and 15-20% of phosphorus used in agrolandschaft oases of the Zarafshan Bay, 20-25% of them freeze in the soil as a chemical compound that is difficult to dissolve. At the same time, 25% of nitrogen injected into the ground, 5% of phosphorus, dissolve in water, merge into groundwater, collectors and rivers. Nitrogen compounds contained in the soil prolong the growing season of cultivated plants, delay the ripening of crops and reduce the quality of products. The large amount of nitrates and sodium compounds in irrigated soils poisons fruits and vegetables and causes serious harm to human health. Therefore, the protection of the soil cover of agrolandscapes serves as an important measure for the cultivation of environmentally friendly products in agriculture and the promotion of human health.

When protecting the unique landscapes of the Zarafshan Bay, the geocomplexes of the ancient settlement city, the Zarafshan reserve created in the Zarafshan Gorge, ancient monuments were kept secret. Nature monuments play an important role in the Afrosiab State Archaeological Reserve and foothills located in the northeastern part of the city of Samarkand. In the Zarafshan reserve, along with landscape protection and Zarafshan peacocks, scientific research is carried out, such as observing the natural development of plants, their seasonal and gradual changes, breeding of Zarafshan peacocks, adaptation of Bukhara deer to local conditions. And the Afrosiab State Archaeological Reserve serves as the

main object of studying urban residential landscapes and their morphological structure, identifying the species and age of anthropogenic geocomplexes created 2.5-3 thousand years ago. At the same time, the Afrosiab reserve enriches the geographical information system of the history of the formation of anthropogenic landscapes with paleoanthropogeographic information. All of the above opinions indicate that the protection of the landscapes of the Zarafshan Bay and the oasis is of great scientific and practical importance.

**Conclusions.** The rational use of agro-geosystems with a complex mechanism of scientific and practical significance of landscape protection consists in organizing such measures as reclamation of disturbed lands, prevention of pollution of inland waters with various chemical compounds, combating salinization and soil erosion, restoring the geoecological environment, increasing the productivity of agro-geosystems, optimizing the environmental situation occurring in them. At the same time, a number of measures have been developed and practical proposals have been made regarding the problem of improving and optimizing the geoecological situation that has developed within the framework of urban and rural residential landscapes.

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