



VARIOUS CONSIDERATIONS ABOUT CONCEPTS AND TRENDS IN THE STUDY OF AGRICULTURAL LANDSCAPES

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Abstract

The principles of agriculture organization in land use and the importance of ecologicallandscape approaches to the acceptability of geographical resources in the cultivation of agricultural crops are explained. The article expresses the main problems of the study of agrolandscapes, the interpretation of the concepts of agro-landscape by experts in the field, and the theoretical aspects of the scientific principles and approaches to research.

Keywords: landscape, geosystem, agrolandscape, agroirrigation, adaptive, agroecosystem, biocenosis, ecosystem, sustainability.

Introduction

LANDSHAFTLARINI TADQIQ ETISH VA UNING TAMOYILLARI

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Annotatsiya:

Maqolada agrolandshaftlarni oʻrganishning asosiy muammolari, agrolandshaft tushunchalarining soha mutaxassislari tomonidan talqini va tadqiq etishning ilmiy tamoyil hamda yondashuvlaring nazariy jihatlari bayon qilingan. **Ye**rdan foydalanishda qishloq xoʻjaligini tashkil etish tamoyillari hamda qishloq xoʻjaligi ekinlarini yetishtirishda geografik

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hudud resurslarining maqbullik jihatlari ekologik-landshaft yondashuvlarining muhimligi bayon qilingan.

Kalit soʻzlar: landshaft, geosistema, agrolandshaft, agroirrigatsion, adaptiv, agroekotizim, biotsenoz, ekotizim, barqarorlik.

РАЗЛИЧНЫЕ СООБРАЖЕНИЯ О ПОНЯТИЯХ И НАПРАВЛЕНИЯХ В ИЗУЧЕНИИ СЕЛЬСКОХОЗЯЙСТВЕННЫХ ЛАНДШАФТОВ

Аннотация:

В статье объяснены принципы организации земледелия в землепользовании и значение эколого-ландшафтных подходов к приемлемости географических ресурсов при возделывании сельскохозяйственных культур а также описаны основные проблемы изучения агроландшафтов, интерпретация понятий агроландшафта специалистами в данной области, теоретические аспекты научных принципов и подходов к исследованию.

Ключевые слова: ландшафт, геосистема, агроландшафт, агроирригацион, адаптив, агроэкосистема, биоценоз, экосистема, устойчивость.

Introduction

Agricultural agro-landscapes are the most valuable and fertile lands on the planet, which are used with various intensities, amounting to approximately 1.5 billion hectares. They vary greatly in terms of quality, productivity and uneven distribution across continents. The largest areas of agricultural agrolandscapes are located in the forest-steppe and steppe zones of the temperate zone, as well as in the humid zones of the warm and hot zones of the continents. The different dimensions of the land surface being processed on the globe depend not only on the needs of the population, but also on the agro-natural possibilities of the region. Violation of natural balance and proportion in landscapes leads to the formation of managed anthropogenic landscapes in their place.

The tasks of landscape science include the correct and rational use of landscapes in agriculture and the issues of increasing their effectiveness. It is important to study the formation and development of agro-landscapes and evaluate the geo-ecological situation that has arisen in them in order to improve the material well-being of people and increase the productivity of agricultural lands. A number of concepts and terms have emerged in the work carried out by experts in the field of studying the formation and development of agrolandscape, we will express our opinion on the analysis of these concepts.

Methods and level of study. The use of landscape, geographical-comparative, systematic analysis, ecological approach and other methods in the study of the topic allows to achieve the main result. The main characteristics of agrolandscapes and the main directions of their change in the course of human activity were studied by V.A. Kovda (1972), A.I. Kurakova (1976), V.A. Nikolaev (1979), V.M. Chupakhin (1982) and others. Among the scientists from Uzbekistan, scientific researches in the field of anthropogenic landscape science, agrolandscape, agroecology are A.A. Abdulqasimov, L.A.Alibekov, Sh.S.Zokirov, A.



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Maksudov, A.A.Rafikov, scientists such as I.A. Khasanov, S.A. Nishonov with scientific researches in the Kashkadarya region. performed by In the following years, S.I. Abdullaev, M.G. from Karshi State University scientists. Anthropogenic landscapes of Kashkadarya region were studied by Nazarov, and land and water resources of Kashkadarya region were studied by M.A. Fayzullaev in agro-ecological direction.

The main part. K. Bürger (1935) reported that the term landscape was introduced into the scientific geographical literature in 1805 by the German geographer A. Gommeyer with a clearly defined meaning. The current term "landscape" is derived from the German language, land - land, area, country, place, schaft - interaction. The landscape has natural boundaries and is expressed by its internal uniformity, structure, a certain set of processes and events. The study of landscape complexes and their morphological units began in the 30s of the 20th century. As a result, a comprehensive geographical study of local areas in the countries was carried out on a large scale in determining, justifying and analyzing the ways of rational use of nature.

Since ancient times, agro-landscapes have been formed as a result of cultivation of plants by humans. Agrolandscape is considered as the basis of human life and activity, and at the current stage of development of geographical imagination, agricultural landscapes are interpreted as anthropogenic landscape or natural-production (geotechnical) system. A lot of work has been done to study the formation and development of agrolandscape. As a result, a number of concepts and terms have emerged.

Below we consider some definitions of agricultural landscapes given by experienced geographers, landscape scientists and ecologists. According to L. I. Kurakova (1976), "The formation of agro-landscapes began 10,000 years ago in the centers of cultivated plants and gradually expanded." According to L. I. Kurakova, agro-landscapes are the alteration or artificial creation of natural landscapes by humans. Irrigated agriculture changes the natural landscape and creates agroirrigated landscapes. After all, it is characteristic of agrolandscapes that the natural components have been strongly modified and these landscapes differ from the original natural landscapes [3].

In 1987, V.A. Nikolaev tried to justify the concept of agrolandscape, according to which he put forward the opinion that "landscape agricultural production is perceived as a fundamentally new formation." He stated that "Agrolandscape is a functional area that includes a unified, internally heterogeneous natural-agricultural geosystem, cultivated land and other cultivated land." Agrolandscape does not mean any agricultural system, but only a certain (regional) scale at the level of the same geosystems characteristic of the natural landscape. It is a natural landscape modified by agricultural production [7].

According to M.N. Lebedinsky (1989), agrolandscape as an object that changes human activity, and as an area with a unique complex of natural and anthropogenic agriculture, its change affects the effectiveness of nature management. and should be considered as a place of residence [1].

M.I. According to Lopyrev's definition (1995), agrolandscape is a set of interconnected natural components, elements of the agricultural and land management system, with relatively autonomous water, heat and other regimes that are signs of a general ecological system. understands the mass of the earth. It presents the natural and economic system of agrolandscape



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structure. The structure of the agrolandscape should be reflected in the elements of the agricultural system that make it up [5].

V. V. Udalov, O. G. Nazarenko (2003) gave the following definitions, taking into account the functions of the agricultural landscape. An agroecosystem is a stable ecosystem that is artificially created and regularly maintained by humans for the purpose of producing agricultural products. Agroecosystems are components of agrolandscape [9].

According to Sh. Dusanova (1998), agrolandscapes are natural anthropogenic complexes formed or formed as a result of the interaction of agricultural production with the natural environment [2].

According to A.A. Yurtaev (2011), the composition and area of agricultural land is determined by the level of specialization and intensity of agriculture. The main requirement is that the structure of the land should not only increase the efficiency of farming, but also rational use of land, ecologically unstable arable land, fodder land, perennial cultural crops and ecologically stable objects of the natural landscape (water bodies, states that it is to ensure a reasonable ratio between forests, swamps) [10].

According to the definition of V.V. Lyutova (2013), agrolandscape is an anthropogenic landscape created on the basis of changes taking into account the specific characteristics of the natural landscape. During the emergence of agrolandscape for agricultural use, the activity of some components, i.e., the evolutionary relationships between landscape components, changes [6].

Based on the analysis of the above points, it can be observed that there is still no unity in the understanding of the term "agricultural landscape" and there are different approaches. According to many researchers, any agrogeosystem can be considered as an agricultural destination, whether it is cultivated land, arable land, or agricultural land of the entire economic region. In other words, the agricultural landscape is considered as a dimensionless concept. Such a vague interpretation of the term makes it difficult, and sometimes impossible, to classify agricultural landscapes, their typological map, and territorial planning in general.

The main goal of the agrolandscape is to grow agricultural products as much as possible under the given climatic conditions. For the efficient use of agricultural lands, it is of great importance to organize an ecological landscape of the area where natural systems (landscapes) are primary and where there are means of production (agro-landscapes).

Principles of agricultural organization in land use A.G. Isachenko, V.M. Chupakhin, M.V. Andryshin, B.I. It was analyzed by Kochurov and a number of other researchers. A landscape approach to land management requires, first of all, an effective allocation of agricultural land.

The essence of the landscape approach is that human activity is carried out with a high degree of adaptation to the natural conditions of the area and imitation of natural resources. The ecological-landscape principle in land management allows us to achieve the maximum uniformity of natural conditions in the conditions of land use, which helps to solve the issues of specialization of production, production monitoring, land cadastre and economic assessment of land. In addition, it is necessary to take into account the existing socio-economic conditions in the use of land for agricultural enterprises, especially the location of settlements, general and other engineering facilities.

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The landscape-ecological approach takes into account the landscape difference of the territory by dividing the ecological-landscape zones and divides the territory into certain parts of the agrolandscape (location, direction, types, facies, etc.), that is, a certain farming system, agriculture, ecological a territorial framework of environmental management with the same territories is formed. The essence of the landscape approach is that human activity is carried out with a high degree of adaptation to the natural conditions of the area and imitation of natural resources.

The adaptive-landscape system of agriculture is a system of land use in a certain agro-ecological group, and this system is directed to the production of products with ecological quality and economic quantity that are compatible with social (market) needs, natural and production resources. The adaptive-landscape system of agriculture is considered as a means of optimizing agro-landscapes. Adaptive-landscape is developed depending on a certain landscape of agriculture, that is, it should be adapted to certain natural resources [4]. Here, the primary link of the agrolandscape is considered to be agrocenosis - it is artificially created by people for a relatively long time, characterized by the composition and structure of unstable plant communities. Agrocenosis is a biogeocenosis created by man. It has certain relationships between the composition of a certain species and the components of the environment. From the point of view of a systematic approach that takes into account the features of the formation of landscapes, the following conditions for the optimization of agro-landscapes may appear. First, the formation and preservation of the land structure and activity at an optimal level, ensuring the necessary diversity and stability of agricultural landscapes. Secondly, the ecological optimization of the agrolandscape should ensure the restoration and preservation of the local genetic fund of wildlife, as well as the restoration and preservation of natural senoses. Thirdly, restore and preserve the salinity of the area, which should correspond to the natural fund of this landscape formation. Fourthly, the ecological optimization of agro-landscapes is ensured by the sustainable development of a network of protected natural areas of different levels and status (from micro-reserves to reserves).

When considering issues of landscape stability and optimization, it is very important to have a system of quantitative assessment and descriptions of the studied processes. It is necessary to assess the level of ecological stability of the landscape using the ecological stability coefficient (ESC), which combines the qualitative and quantitative characteristics of abiotic and biotic landscape elements. It ensures agrolandscape stability and restoration of soil fertility.

Taking into account new approaches to the concept of "agrolandscape" and based on the analysis of published materials, we tried to draw up a scheme of agrolandscape structure. In relation to this, two subsystems of the agrolandscape can be distinguished (Scheme 1.)







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These natural systems - agrosites: agrourochishche, agrofacies allow to divide into small systems.

In our study, the agricultural area - Kashkadarya oasis corresponds to the mesoforms of the relief, that is, the upper and lower parts of the river terraces of the oasis are fully developed, and it is assumed that these places were agricultural lands from ancient times. Agrojoy can be taken as irrigated, irrigated, pasture landscapes. Agrourochishchelar is a part of the meso-relief, a place formed in specific forms, a fragment of a natural anthropogenic complex, which can be a cultivated area - a field, a residential plot - a garden, etc.

Agrofacies is a part of urochishche with the same topography, soil, and hydrothermal conditions. There may be residual riverbeds, dykes and khakozos.

Within the framework of the production and social system, an important factor of creating the optimal agrolandscape: the proportion of ecological zones in a changed and stable state is obtained. These are made up of engineering structures, roads and rural settlements. Consequently, the creation, structure and activity of agro-landscapes are closely related to social and economic conditions and are their requirement.

Agrolandscapes are limited by clear lines of territorial organization, and are often formed on the basis of accumulated experience in the use of land, water, and forest resources. The contour of the agrolandscape is an elementary part of the system, the same according to the technology of using natural resources, it can be an agricultural area, including an irrigated and spring area. A set of areas that form a single technological system within their natural limits and are close in structure and activity forms an agrolandscape massif. Agricultural types of agrolandscape - (landscape) appearance include: field, garden, mixed garden area, meadow, pasture, landscapes with altered lithogenic base, vernal, irrigated, saline and other landscapes.

Conclusions. Based on the analysis of the above, the following conclusions can be drawn. The formation of ecologically stable agrolandscapes is based on natural balance, the laws of landscape ecology, the main composition of which is natural energy processes. To place agrolandscapes, their classification should be carried out according to the leading component that determines the natural balance (ecological balance) in a given region. In our opinion, agrolandscape should be understood as a territorial unit to solve the issues of forming the farming system on an ecological basis. Agrolandscape is a geosystem created by man and formed under the influence of human agricultural activity. Consequently, the agricultural system in the region and its constituent elements are reflected in the structure of the agrolandscape. The agrolandscape is a unique system, and in the study of the agrosystem, it is possible to know the laws of matter and energy circulation, to adapt them to the agricultural production, to determine whether it is ecologically safe and economically acceptable.

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