

Methods of Cadastral Assessment of Real Estate Objects



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ABSTRACT: The article analyzes the improvement of the cadastral valuation system based on market principles and equal for all the procedure for allocating land plots, ensuring stability in property and legal relations in the field of land use and the need to carry out methods for calculating the cadastral value within the framework of the income approach.

KEYWORDS: land market, land plots, cadastral value, engineering infrastructure, accounting and registration of real estate objects, comparative approach, revenue approach, expenditure approach, estimated value.

INTRODUCTION

The development of the real estate market is the process of regulating society's needs for real estate. This development takes place in the conditions of market relations and is closely connected with the right of ownership [12].

Land, as a real estate object, has a unique key importance in market relations in the entire system of human entrepreneurial activity, being the only place where peoples live, the main and natural factor in any business area, directly or indirectly participating in the production of all other goods and benefits [5,8].

The cadastral value of a piece of land should always be considered in terms of its use as free and available for the best and most efficient use.

Land is primarily entitled to the income generated by the entire property, so real estate appraisal reads that land has a value, while improvements are a contribution to value.

When determining the cadastral value of land, the following factors should be considered:

- ◀ Location of the land;
- ◀ The state of the object's market demand;
- ◀ Physical characteristics of the site;
- ◀ Financial feasibility of the project.

In addition, in order to study real estate objects, it is necessary to determine the classification of objects. For these purposes, different classification principles can be applied depending on their origin and purpose.

As the analysis of literary sources showed, when developing a methodology for cadastral valuation of real estate, the definition of the classification of real estate objects serves as a link between cadastral valuation as a way to determine the tax base and taxation in terms of setting tax rates, A.V. Pylaeva formed in her works "Models and methods of cadastral valuation of real estate". [9,10]

Also in his article Egorov E.V. "Problems of determining the cadastral value of land in property taxation" [11] analyzed the problems of the cadastral value of real estate in the taxation of property, in which the cadastral valuation of the land plot should not be either overestimated or underestimated, because the object of assessment may lose, in the first case, its investor, in the second case, incentives for its rational use, and then the approved cadastral prices for land plots can only be used for fiscal purposes, that is, for calculating land tax, and not for managing land resources.

Thus, depending on the type and classification, the cadastre acquires different meanings, corresponding to the purposes for which it is created.

RELEVANCE OF THE TOPIC

One of the real estate objects is a land plot. And in connection with ensuring stability in property and legal relations in the field of land use, land protection, guaranteeing the property rights of landowners, as well as introducing them into free circulation as an object of civil law relations by determining the economic value of land by Decree of the President of the Republic of Uzbekistan

Methods of Cadastral Assessment of Real Estate Objects

dated June 8, 2021 year UP-6243 "On measures to ensure equality and transparency in land relations, reliable protection of land rights and their transformation into a market asset" [6], the task was to study the best foreign experience in the field of rational land use and prepare proposals for its implementation with taking into account national characteristics and the introduction of a mechanism for the allocation of land plots to the private sector - on the basis of ownership, non-agricultural land to sell through electronic online auctions based on ownership and lease rights.

To fulfill these tasks, it is necessary to determine the cadastral and market value of land, and also to determine the difference between the cadastral value and the market value of land.

Therefore, in our studies, the **purpose of the study** is to determine the market and cadastral value of a land plot of 8 categories of the land fund of the Republic of Uzbekistan.

Based on the above, we set the task to collect the necessary information and the necessary materials to carry out preparatory work. The purpose of the preparatory work is as follows:

- collection of general information about the territory of the located land plot, climate, hydrography, ecology, engineering and geological characteristics of the area;
- determination of the boundaries of the district (city) in accordance with the master plan for the development of the district (city);
- land classification by land users, legal regime; land classification according to functional use;
- classification of land according to urban development value, types of real estate objects and main types of current use with allocation of appraisal microzones;
- determination of typical land plots included in the appraisal microzones;
- collection, validation and grouping of land market data by estimated microzones.

OBJECTS AND METHODS OF RESEARCH

The cadastral and market value of a land plot is relevant today more than ever. With the adoption of the law of the Republic of Uzbekistan "On the privatization of land plots for non-agricultural purposes" [4], it became necessary to improve the cadastral valuation of land plots. As we know, according to Art. 8 of the Land Code of the Republic of Uzbekistan, the land fund is divided into 8 categories [1,2,8]:

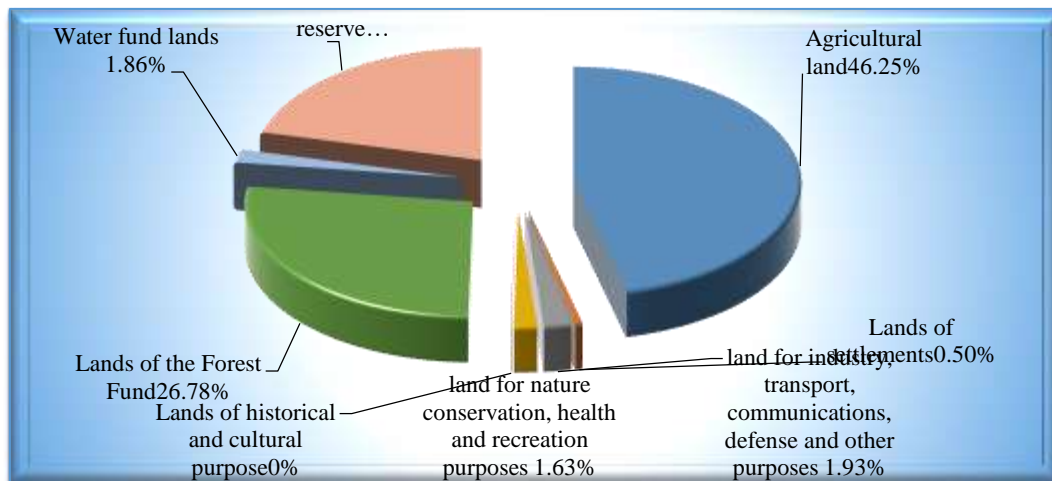


Fig. 1-diagram of the land fund as a percentage

The main methods of market valuation of land are:

1. Comparative approach - a set of valuation methods based on obtaining the value of the appraised object by comparing the appraised object with analogue objects.
2. Income approach - a set of valuation methods based on the determination of expected income from the use of the object of valuation.
3. Cost approach - a set of methods for assessing the value of the object of assessment, based on the determination of the costs necessary for the acquisition, reproduction, or replacement of the object of assessment, taking into account wear or obsolescence [11,12].

Methods of Cadastral Assessment of Real Estate Objects

RESEARCH RESULTS AND DISCUSSION

Based on the above methods, we have scientifically and practically substantiated the principles of segmentation of agricultural objects of the republic.

Based on the data, the principles of segmentation of agricultural objects are given in table 1.

The cadastral value of a real estate object is a calculated value determined for the purposes provided for by the legislation of the Republic of Uzbekistan, including for taxation, based on market information and other information, real estate, without taking into account property rights to this object, other than the right of ownership, and represents the most probable price of the object at which it can be acquired (created) based on the possibility continuation of the actual type of its use, regardless of the restriction on the disposal of this object [3, 4,5,9,10].

If it is impossible to continue the actual use of the property, the cadastral value is determined based on the intended, documented type of its use, regardless of restrictions on the disposal of this property.

Table 1. Principles of segmentation of agricultural objects

Code (numerical designation) of the type of permitted use of the land plot	Name of the type of permitted use of the land plot	Description of the type of permitted use of the land plot
1	2	3
1.0	Agricultural use	Farming. The content of this type of permitted use includes the content of types of permitted use with codes 1.1-1.20, including the placement of buildings and structures used for the storage and processing of agricultural products
1.1	crop production	Implementation of economic activities related to the cultivation of crops.
1.2	Gardening	Carrying out economic activities, including on agricultural land, related to the cultivation of perennial fruit and berry crops, grapes and other perennial crops
1.3	animal husbandry	Carrying out economic activities related to the production of livestock products, including haymaking, grazing of farm animals, breeding of breeding animals, production and use of breeding products (material), placement of buildings, structures used for keeping and breeding farm animals, production, storage and primary processing of agricultural products.
1.4	Fish farming	Implementation of economic activities related to the breeding and (or) maintenance, cultivation of fish farming (aquaculture); placement of buildings, structures, equipment necessary for the implementation of fish farming (aquaculture)
1.5	agricultural production	Implementation of activities related to agricultural production, storage and processing of agricultural products
1.6	nurseries	Cultivation and sale of undergrowth of trees and shrubs used in agriculture, as well as other crops for seedlings and seeds; placement of facilities necessary for the specified types of agricultural production
1.7	Scientific support of agriculture	Implementation of scientific and selection work, farming to obtain scientifically valuable samples of flora and fauna; housing collections of plant genetic resources

When determining the cadastral value, the calculation technique (method) of at least one of the valuation approaches should be used: comparative, costly, profitable.

In the course of the study, it turned out that the determination of the cadastral value should be carried out on the basis of the unity of the fate of the land plot and the real estate objects located on it.

A land plot as an object of cadastral valuation is characterized by its intended purpose and (or) permitted use, as well as the type of activity carried out or proposed to be carried out on it (actual or intended) use.

The determination of the cadastral value is carried out without taking into account the encumbrances (restrictions) of the property, with the exception of restrictions on rights arising in connection with the establishment of zones with special

Methods of Cadastral Assessment of Real Estate Objects

conditions for the use of the territory, other public restrictions established by the current legislation of the Republic of Uzbekistan. [9,11,12,] .

According to the results of the study of determining the cadastral value, a mandatory quality control of the results obtained is carried out based on the current price situation in the real estate market. It is mandatory to analyze the quality indicators of models, including format-logical control of the influence of pricing factors determined within the framework of the calculation (the degree and vector of their influence), as well as checking the results of determining the cadastral value for compliance with the real estate market in order to prevent unreasonable excess of the cadastral value the average level of market prices of similar objects. [8,9,10,14,] .

The results of individual calculations can be used to improve the quality of the models determined in the framework of preliminary calculations.

Analysis of the results of determining the cadastral value includes an analysis of the quality of the models for assessing the cadastral value obtained in accordance with the above paragraphs, as well as verifying the results of determining the cadastral value by analyzing the ratios of the minimum, average and maximum CCL in the context of price zones and territories, taking into account the administrative-territorial division of the Republic of Uzbekistan , including by comparing price and economic (estimated) zoning maps [5,6,7] .

Based on the results of determining the cadastral value of objects , a report is drawn up on determining the cadastral value [3,4] .

To determine the cadastral value of land, information was collected on all categories of land and an electronic database of land cadastre records was created - the information system “ UzKAD ”

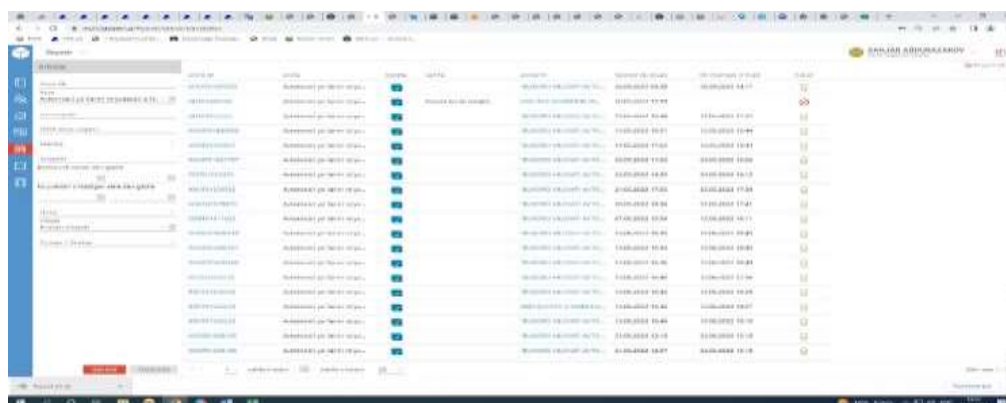
The image shows a screenshot of a web-based information system interface. The interface is in Russian and displays a table with multiple columns. The columns include various identifiers, descriptions of land plots, and numerical values. The table is organized into several sections, with a left-hand sidebar containing navigation icons. The overall layout is typical of a data management or reporting application.

Fig.2. Information system “ UzKAD ”

The traditional land fund accounting information is prepared once a year and published in paper format, and the electronic information system is updated online based on the inventory and registration of land rights.

CONCLUSION

1. According to the results of the study , the methods of cadastral valuation of real estate objects of the Republic of Uzbekistan are justified according to the principles of segmentation of agricultural objects. It defines the descriptions of the types of permitted use of the land plot(s) .

2. According to the description of agriculture, including the content of this type of permitted use includes the content of types of permitted use with codes 1.1-1.20, including the placement of buildings and structures used for the storage and processing of agricultural products.

3. Improving the methodology for the mass valuation of real estate for tax purposes to bring its results closer to market indicators of the value of objects of taxation.

4. Improving the automated system of cadastral valuation based on the use of modern digital technologies and artificial intelligence.

5. Improving the methods and methods of information support for cadastral valuation in terms of automating the processes of field and cameral collection of market information and methods for identifying objects of mass valuation.

6. Work out a grouping option that is necessary and sufficient to determine the cadastral value of real estate objects, based on the type of use (purpose) of the objects, the type of activity carried out

7. Improving calculation methods using cost modeling, including statistical processing of objects due to insufficient information about the market (market segment) of real estate objects determination of the cadastral value of land.

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