

The use of Geo Information System in the Establishment of Land Balance

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ABSTRACT

At a time of radical reconstruction of land relations in the country, it is important to restructure the land balance. It is advisable to use a geo-information system to create a clear and effective land balance.

KEYWORDS: *Land, real estate, balance sheet, geoinformation, management, registry, tax.*

Introduction: The ongoing economic reforms in our country have led to a radical reconstruction of land relations, the creation of a new system of governance in the formation of market mechanisms for the coordination and management of land use. In such circumstances, it is necessary to maintain a systematic information on the state of the land, including basic information about the object of land relations, land users, actions with land plots and their value characteristics, ie a complete land cadastre as a system of information management and coordination of land use [1;2]. The purpose and essence of land cadastre for agricultural sectors are different, because for them the functional environment of life activities, as well as the purpose and methods of their management are different [3;4]. This difference leads to a greater emphasis in the cadastre of settlements on the legal and fiscal (tax) components, the different composition of registration indicators, the content of cadastral maps, rather than physical [5;6].

In order to conduct land policy and coordinate land relations in the agricultural sector, it is necessary to create a specialized service within the administrative bodies. Its main function should be to maintain a cadastre of land and real estate [7;8].

Purpose: Processing, storage and systematization of large amounts of information that occur in the implementation of these tasks in agriculture requires the creation of an automated information system of the district land cadastre. [9;10] The district is designed to automate the formation of land balance and provide information on the processes of economic and legal coordination of land and real estate relations. Improving the efficiency of land use based on the automation of the process of decision-making, information support to monitor their implementation means the creation of this system [11;12;13].

At the same time, if we look at the agricultural sector of developed countries, the information system of state importance, designed for automated registration and processing of information on land use and real estate, is being improved. [14;15] The main purpose of implementing such large-scale projects is to facilitate, accelerate, increase the reliability of the registration system, adapt it to planning and management issues in the field of land use and real estate economy, to create a multi-purpose cadastre system [16-18].

It also provides reliable, versatile information to various levels of administrative and economic services dealing with land and real estate and addressing various issues of management, planning and control in these areas. It should be noted that in our country, too, special scientific work has been

started on the transition to an automated system for creating a database of land balance. In this regard, an automated registration program has been created for all organizations involved in the registration of various rights to land plots. This work was one of the first steps in creating an automated database on land and real estate in the country. An automated system of real estate registration on the basis of land balance was developed in Sweden, Austria, Denmark, Switzerland, Canada, Germany and other countries and is available today. All public and private land management organizations are required to provide certain information on the services provided in order to take into account changes in the maintenance of land cadastre. In the centralized cadastre only land registers of legal entities and individuals, buildings and structures are systematized by other services. If necessary, information from these registers can be obtained on the basis of a request. All of the automated systems considered include the information needed to collect and analyze statistics on land use, land sales and housing construction, land taxation, new land ownership, and land sales reporting. Based on the study and use of the experience of a number of foreign countries mentioned above, the creation of a similar system in Uzbekistan will be an important factor in the rational formation of land and real estate. When creating an automated information system, first of all, it is important to correctly interpret automated services. Organizational structure, the list of works carried out by the Department of Land Management and Land Relations, the structure of the automated information system of administrative relations with other governing bodies and organizations of the district.

It is expedient to separate the following tasks from the general list of automation:

- reservation of land plots;
- identification of types of property on the land plot;
- land allocation;
- maintenance of the consolidated land cadastre;
- land survey; •
- economic evaluation of land plots;
- land monitoring of settlements;
- state control over land use.
- An automated information system should consist of a number of functional and service subsystems. Such subsystems may include:
 - references and classifiers; data archiving;
 - protection of information and restriction of access to this information;
 - system administration.

It is known that the cadastre of agricultural lands is a system of information and documents on the legal status of land in this area, their qualitative (technical) description of the distribution among land users, landowners and tenants, and the value of land in settlements. Therefore, the creation of an agricultural land cadastre - a land information system involves the development and application of an automated workplace, which is installed in each user. In the process of using the installed automated workplace, a separate (local) database and a single database of the agricultural land cadastre will be formed. One of the main issues in creating an automated information system is to provide the system with information, data. The implementation of the land balance system is determined by the requirements for the use of geographic information systems, that is, the land resource must be in a graphical form that contains textual information. The graphical view can be applied in plane and

latitude model views, as well as being able to determine the coordinates of this model by displaying any point on the screen.

According to the model, the following requirements are set:

- any point of the model illuminated on the screen is connected to the coordinates;
- it should be possible to link numerical data on different information to any point. Since the object of the land balance is the district land fund, all lands included in the land fund of this district are counted, regardless of who owns them, whether these lands are used for certain purposes or not. In other words, the land account should cover all areas of the district land fund, which means that in turn, it allows to accurately determine the total area, its distribution by land categories and land types [19-25]. When conducting land balance, it is necessary to use methods and techniques for obtaining and processing data that cost as little as possible. The use of modern computers and much improved methods of imaging and surveillance will allow to make accurate, timely and high-quality calculations of the country's single land fund. This, in turn, paves the way for the successful maintenance of the state land cadastre.

Conclusion: the district is designed to automate the formation of the land balance and inform the process of economic and legal coordination of land and real estate relations. Improving the efficiency of land use based on the automation of the process of decision-making, information support to monitor their implementation means the creation of this system.

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