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THE NECESSITY, SIGNIFICANCE, AND OBJECTIVES OF INVESTIGATING THE IMPACT OF LAND CADASTRE ON INVESTMENT PROCESSES

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Annotation: The article highlights the necessity, importance, and main tasks of researching the impact of land cadastre on investment processes. The role of the cadastral system in land resource management, its significance in improving the investment environment, and opportunities for achieving economic development through efficient land resource utilization are scientifically substantiated. Based on the research results, scientific and practical recommendations for improving the land cadastre system have been developed.

Keywords: land cadastre, investment processes, land resources, economic efficiency, sustainable development, cadastral information, investment climate

Introduction. Ensuring the sustainable development of a country's economy through the efficient management of land resources, regulation of land relations, and improvement of the investment climate is a pressing scientific and practical issue. In this context, the role and significance of the land cadastre are increasingly growing. This article substantiates the necessity of scientifically analyzing the impact of the land cadastre on investment processes and identifying ways to enhance its improvement.

Relevance of the topic. The land cadastre is a crucial system for managing land-related information, and its accurate and reliable data create favorable conditions for attracting investments. In this regard, the Strategy of Actions adopted by the President of the Republic of Uzbekistan outlines key tasks for improving land relations and fostering investment attraction [2]. As emphasized by the first President of the Republic of Uzbekistan, I.A.Karimov [3], enhancing the efficiency of land resource utilization directly impacts various sectors of the economy. Aliyev and Qodirov [4] have specifically highlighted the necessity of ensuring the accuracy and transparency of land cadastre information in investment processes. Dale and McLaughlin [6] have also noted the significance of land management systems in investment decision-making. Williamson et al. [7], as well as Zakout et al. [8], have elaborately discussed the influence of land governance on sustainable development.

Research objective. The study aims to provide a scientific basis for the impact of the land cadastre on investment processes and to develop practical recommendations aimed at enhancing its effectiveness.

Research tasks:

- To analyze the relationship between the land cadastre and investment processes;
- To determine the significance of the land cadastre in investment decision-making;
- To develop scientifically grounded practical recommendations for the development and improvement of the land cadastre.

Research methodology. The article employs methods such as systemic analysis, comparative evaluation, statistical and economic-mathematical analyses, and the analysis of foreign experiences.

Solutions to the problem. To improve the investment climate, the following measures are recommended:

1. Digitization of the cadastre system and development of electronic platforms [9];
2. Alignment of the land valuation system with international standards [5];
3. Presentation of land-related data to investors in a convenient and transparent format [10].

In the modern era, digital technologies are driving profound transformations across all sectors. The management of land resources and the state cadastre system are no exception to this process. The theoretical foundations proposed by Burns [9] encompass significant concepts related to the digitization of the cadastre system and the effective organization of management through electronic platforms.

The digitization of the cadastre system refers to the conversion of data on land parcels into electronic format, their storage in a unified information database, and their updating in real-time. This process includes the following components:

- Creation of digital maps detailing the coordinates, boundaries, and classifications of land parcels.
- Conversion of documents related to property ownership and land rights into electronic form.
- Development of platforms enabling the online provision of cadastre data to government agencies and investors.

The digitization of cadastre systems also necessitates the introduction of electronic platforms. These platforms should possess the following features: a user-friendly interface, a high level of information security, mobile adaptability, and integrated geospatial services (GIS).

A digitized cadastre system combined with advanced electronic platforms yields the following outcomes:

- Increased relevance and accuracy of land-related data.
- An improved investment climate, as transparency in property and land rights is ensured.
- Automation of management processes and reduced dependence on human factors.
- Enhanced oversight of the efficient use of land resources.

Through the digitization of the cadastre system and the development of modern electronic platforms, it is possible not only to enhance management efficiency but also to foster economic growth and sustainable development. Implementing these processes through a comprehensive approach remains a priority direction in the cadastre policy of every state.

Aligning land valuation systems with international standards is a decisive factor in the economic, social, and ecological development of every state's land resources. Land valuation serves as an essential tool for ensuring the optimal management and efficient utilization of these resources. In the current era, amid global integration processes and the expansion of international trade relations, adapting land valuation systems to international standards has become a pressing issue. In this regard, the International Land Administration Guidelines [5], developed by international organizations such as the United Nations and the World Bank, hold significant importance in standardizing land governance, cadastre systems, and valuation mechanisms.

In many developing countries, land resource valuation relies on outdated methodologies, approaches detached from market mechanisms, and assessment methods lacking analytical grounding. This negatively impacts the formation of land markets, the attraction of investments, and the accurate valuation of taxable land, which serves as a key revenue source for state budgets. The principles, approaches, and valuation models proposed in the ILAG 2020 [5] can serve as an effective tool in addressing these shortcomings.

The International Land Administration Guidelines 2020 [5] encompass the following key directions:

1. Transparent and Open Land Data Management: Digitization of legal, technical, and valuation information related to land, transforming it into an open database.
2. Valuation Based on Fairness and Market Principles: Land value should be determined based on its real worth, market supply and demand, location, usage type, and economic profitability.
3. Institutional Collaboration and Harmonized Approaches: Expanding the participation of the state, private sector, and civil society in valuation processes.
4. A Valuation System Serving Sustainable Development: Harmonizing criteria for social justice, ecological safety, and economic efficiency.

Advantages of Implementing ILAG 2020 [5] Standards in Land Valuation:

- Enhanced reliability of the valuation system, which ensures the security of land assets for investors.
- Establishment of a fair taxation mechanism, leading to increased budget revenues.
- Assurance of land market stability, reducing speculative transactions.
- Integration with GIS Technologies: The ILAG 2020 [5] recommendations provide specific guidelines for utilizing geospatial information systems, remote sensing, and photogrammetry technologies in land valuation.

International experiences:

- **Netherlands.** For many years, a digital cadastre and automated valuation system (AVM – Automated Valuation Models) have been implemented based on the ILAG 2020 [5] standards.
- **Australia.** Valuation mechanisms developed in line with ILAG 2020 [5] principles for calculating land taxes have increased tax revenues by 40%.
- **Lithuania and Estonia.** With support from the European Union, land valuation systems have been updated based on ILAG 2020 [5], and an automated GIS-based land value assessment system has been established.

Proposals for Implementing ILAG 2020 [5] Standards in Uzbekistan:

- Harmonization of regulatory documents related to valuation with international standards.
- Introduction of a market-based valuation approach in state cadastres.
- Integration of GIS and remote sensing technologies into the valuation system.
- Enhancement of the qualifications of valuation specialists based on international certifications.
- Development and implementation of algorithms for the automated determination of land value.

By improving the land valuation system in accordance with the ILAG 2020 [5] principles, Uzbekistan can enhance the efficiency, fairness, and transparency of land resource utilization. This, in turn, lays the foundation for the sustainable development of a market economy, the improvement of the investment climate, and an increase in budget revenues.

Providing land-related data to investors in a convenient and transparent format. The global digital transformation and the advancement of geospatial information technologies have ushered in a qualitatively new stage in the management, valuation, and attraction of investments to land resources. The comprehensive, accurate, convenient, and transparent provision of land-related data essential for investments plays a critical role in creating a reliable environment for investors, stimulating economic activity, and ensuring the stability of the land market. Currently, many countries are introducing specialized geoportals, open databases, and artificial intelligence-based search systems in this direction.

In numerous developing countries, the fragmented, outdated, or closed nature of land-related information poses a barrier to unlocking investment potential. Furthermore, the absence of critical data-such as legal status, usage conditions, existing infrastructure, cadastral value, or ecological constraints-in a unified and accessible format slows down or increases the risks associated with decision-making processes. Addressing this challenge, open geospatial

information platforms, GIS-based data systems, and interactive maps designed for investors hold decisive importance.

Categories of Land Data Essential for Investors:

- **Legal Status.** Ownership rights of the land parcel, lease status, restrictions, and encumbrances.
- **Cadastral Data.** Area, contours, boundary lines, and existing structures.
- **Valuation Data.** Cadastral value, market value, and depreciation status.
- **Usage Types.** Current and permitted forms of land use (e.g., agricultural, industrial, tourism, etc.).
- **Proximity to infrastructure.** Access to electricity networks, roads, gas, and water sources.
- **Ecological condition.** Climate, groundwater, pollution levels, and the presence of ecological zones.

International experiences:

1. **Estonia - e-Land System.** Estonia has established an open, real-time updated interactive platform for investors through its digital land management system. This system allows investors to select a land plot on an online map, access comprehensive legal, economic, and geographic information, and directly submit applications.
2. **Georgia - NAPR Geoportal.** Georgia's National Agency of Public Registry has developed a geoportal that provides open land parcel data. It offers investors simplified visual maps displaying legal statuses, transaction histories, and available opportunities.
3. **India - Bhoomi Portal (Karnataka).** Certain Indian states have introduced a "Land Bank" system, through which detailed information about unused land areas is publicly announced online.

In recent years, Uzbekistan has been introducing platforms such as a digital cadastre, "electronic land map," and an "open data" portal. However, fully customized geospatial information systems tailored for investors remain insufficiently developed.

Proposals:

- Creation of a unified geoportal for investors, integrating all land-related data.
- Development of open APIs and mobile applications, providing international investors with interactive search and application submission capabilities.
- Design of an artificial intelligence-based land selection recommendation system.
- Development of a geoportal interface in English, Russian, and other foreign languages.
- Identification of unused land resources and their announcement as an "investment land bank."

Providing land-related data to investors in an open and convenient format is a key priority in a modern economy. This not only facilitates investment attraction but also ensures land market transparency, efficient land resource utilization, and increased state revenues. Within the framework of digital transformation, the introduction of investment-oriented geospatial information systems in Uzbekistan is a demand of the times.

Research findings indicate that improving the land cadastre system-particularly through the adoption of digital technologies and alignment with international standards-significantly enhances the efficiency of investment attraction. Moreover, the openness and transparency of cadastre data boost investor confidence, facilitating new investment flows into various economic sectors. Consequently, this leads to qualitative improvements in land relations, increased efficiency in land resource utilization, and broader opportunities for ensuring economic stability.

Conclusion. Based on the research findings regarding the impact of the land cadastre system on investment processes, the potential to enhance the efficiency of land resource management and create favorable conditions for investments has been scientifically substantiated. By implementing the proposed recommendations, land-related relations in the country can be regulated, leading to the efficient and rational utilization of land resources. This, in turn,

contributes to the sustainable development of the economy and the activation of investment activities.

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