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THE RELEVANCE OF STUDYING THE SPATIAL ALLOCATION OF
INVESTMENT FACILITIES AIMED AT INTEGRATED TERRITORIAL
DEVELOPMENT THROUGH LAND CADASTRE AND LAND MONITORING
FRAMEWORKS

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Abstract: *This article substantiates the necessity of scientifically studying the process of locating investment facilities under conditions of integrated territorial development based on land cadastre and land monitoring systems. The study demonstrates that the spatial placement of investment facilities is closely linked to the efficiency of land resource use, urban planning compatibility, and environmental sustainability. Land cadastre is considered the primary information source ensuring the legal and spatial accuracy of investment facilities, while land monitoring is analyzed as a system that enables the assessment of the ecological condition of territories and the dynamics of land resources. The research findings confirm that the integrated application of cadastre and monitoring data provides a scientific basis for multi-criteria evaluation of investment site selection, early risk identification, and sustainable territorial development.*

Keywords: *Integrated territorial development, investment facilities, land cadastre, land monitoring, spatial planning, GIS.*

INTRODUCTION

In modern concepts of territorial development, the spatial allocation of investment activities is considered a key factor determining the efficiency of land resource use. This is because the location of an investment facility simultaneously shapes logistics, infrastructure costs, access to social services, and environmental burdens. Therefore, investment decisions should no longer be evaluated solely on the basis of financial indicators, but rather through a comprehensive assessment of the economic, social, environmental, and infrastructural interconnections of a territory [9, 4]. Consequently, limiting investment decision-making exclusively to financial indicators is methodologically insufficient.

Integrated territorial development in practical governance implies the simultaneous harmonization of economic, social, and environmental objectives. This approach is implemented in urban planning through functional zoning, the placement of engineering infrastructure, and the designation of permitted land-use types. Accordingly, the issue of





locating investment facilities is directly linked to ensuring compliance with functional zones defined in territorial planning documents as well as with the legal status of land plots [1].

Research methodology. The research methodology is based on a systemic and multi-criteria approach, according to which the study of investment facility location in isolation from land cadastre and land monitoring systems is methodologically insufficient. The state land cadastre ensures the legal and spatial accuracy of an investment facility and forms the minimum necessary information required to assess the legality and compliance of its location. At the same time, the Land Code establishes the requirements for the rational use and protection of land, thereby creating the general legal framework for managing land resources within investment activities [2].

Land monitoring represents a dynamic system that ensures continuous updating of cadastral data and reflects temporal changes in land degradation, reclamation conditions, and anthropogenic pressure. Since the long-term sustainability of an investment facility is directly dependent on trends in these factors, decision-making must consider not only the current state but also the direction of their development. This approach, based on evaluating the compliance of land units with land-use requirements, forms the scientific foundation of integrated territorial development and contributes to the rational use of land resources, reduction of investment risks, and assurance of environmental sustainability. Thus, the integration of cadastre and monitoring systems enables the scientific modeling of investment location and the advance assessment of risks [5].

This necessity is particularly relevant in the context of Uzbekistan, where investments are regarded as one of the mechanisms for implementing state objectives of territorial development. Government regulation of investment activity is directly linked to the goals of socio-economic territorial development [2]. Official statistical materials also highlight investments in fixed capital as an important source of economic and social development [7, 10]. Therefore, as investment flows enter a territory, both their impact on land resources such as land-use intensity, land value, and environmental pressure and, conversely, the influence of land resource constraints on investment efficiency should constitute key objects of scientific analysis [8].

Results. The research results indicate that the land cadastre performs several key functions in the process of locating investment facilities, particularly by addressing the following critical issues:

□ Legal non-compliance, including the neglect of land category, permitted land-use type, and existing restrictions, which significantly increases project-related risks [3, 2];



□ Urban planning and zoning inconsistency, manifested in the placement of investment facilities contrary to territorial planning documents, leading to increased infrastructure burdens and a decline in social convenience and accessibility [1];

□ Delayed manifestation of environmental risks, arising from investment placement without adequate land monitoring, which may result in land degradation or violations of sanitary-protection requirements, thereby undermining the long-term sustainability of investment facilities [5].

Discussion. Therefore, under conditions of integrated territorial development, studying the process of locating investment facilities based on land cadastre and land monitoring systems should be regarded as a methodological necessity that yields the following scientifically grounded outcomes:

1. rigorous verification of the legal and urban-planning compliance of investment location [8];
2. dynamic assessment of land resource potential and environmental conditions[1];
3. multi-criteria modeling of the “investment-land-territorial outcome” chain [3];
4. development of optimal location scenarios across different territorial units [5].

This approach is consistent with international conceptual trends aimed at modernizing land management systems and advancing decision-making based on integrated geospatial data [3].

The scientific significance of this approach lies in the fact that land cadastre and land monitoring systems enable a multi-criteria and dynamic evaluation of the impact of investment facility placement on territorial development. Within this framework, land resource potential, investment capacity, environmental sustainability, and social infrastructure are considered in an integrated analytical system.

Integrated territorial development represents a priority policy direction focused on ensuring economic growth, social stability, and environmental balance, in which the placement of investment facilities serves as a decisive factor shaping the spatial foundation of territorial development. Consequently, scientifically substantiating the placement of investment facilities taking into account the limited and strategic nature of land resources and relying on the legal and economic information of the land cadastre as well as the ecological and dynamic data of land monitoring constitutes a crucial prerequisite for integrated territorial development.

Under conditions of integrated territorial development, placing investment facilities independently of land cadastre and land monitoring systems leads to subjective decision-making, territorial imbalances, and inefficient use of land resources. In practice, such an approach manifests in projects that contradict territorial planning documents, impose excessive burdens on infrastructure, and intensify environmental risks.



Conclusion. The placement of investment facilities based on land cadastre and land monitoring systems ensures a scientifically grounded, criteria-based approach to decision-making, enabling the identification of the most optimal location alternatives.

Digital land cadastre and monitoring data integrated with GIS elevate the investment process to a qualitatively new level by facilitating comprehensive analysis of spatial, infrastructural, and environmental factors. On this basis, opportunities for the rational use of land resources and the balanced organization of territorial development are significantly enhanced.

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