

**DIGITAL TRANSFORMATION OF UZBEKISTAN'S LAND CADASTRE
SYSTEM: LEGAL FRAMEWORK, TECHNOLOGICAL ADVANCEMENTS,
AND THE ROLE OF ENGLISH LANGUAGE**

Baxtiyorova Gulnoza Navruzbekovna

Student at "TIAME" NRU

+998 933470226

gulnozabaxtiyorova4@gmail.com

Scientific Advisor: Karimov Feruzjon

Teacher, English Language Department

"TIAME" NRU

Abstract: This article explores the digital transformation of Uzbekistan's land cadastre system, focusing on the integration of modern technologies, the evolving legal framework, and the pivotal role of the English language in facilitating international collaboration and the adoption of global best practices. The study underscores the necessity of a robust legal foundation and language proficiency to enhance transparency, efficiency, and alignment with international standards in land administration.

Keywords: Land Cadastre, Digital Transformation, Legal Framework, Uzbekistan, English Language, Geospatial Technologies

Introduction

In the era of rapid technological advancement, the modernization of land cadastre systems has become imperative for effective land management and sustainable development. Uzbekistan, recognizing the significance of accurate and accessible land information, has embarked on a comprehensive digital transformation of its land cadastre system. This transformation aims to enhance transparency, efficiency, and alignment with international standards in land administration.

The foundation of this transformation lies in the integration of advanced geospatial technologies, including Geographic Information Systems (GIS), remote sensing, and the utilization of unmanned aerial vehicles (drones) for topographic mapping. These technologies facilitate the creation of detailed electronic maps, enabling precise recording of land ownership, usage, and value. Notably, the Cadastre Agency of

Uzbekistan has been equipped with specialized aircraft, aerial cameras, and a fleet of drones to conduct comprehensive topographic measurements, resulting in electronic mapping of a significant portion of the country's land area.

Concurrently, Uzbekistan has undertaken substantial legal reforms to support this digital transition. The enactment of the Law No. 666-I on State Land Cadastre establishes the principles and procedures for maintaining comprehensive land records. Recent reforms focus on digitizing land records, improving data accuracy, and streamlining administrative processes. However, challenges persist, including the need for legal definitions of digital tools and the regulation of emerging technologies such as artificial intelligence in the cadastral sphere.

A critical component of this modernization effort is the role of the English language. Proficiency in English enables professionals to access international research, participate in global forums, and adopt best practices in land administration. Furthermore, English facilitates collaboration with international organizations and experts, contributing to the successful implementation of reforms and technological advancements in the sector. ([\[PDF\] Supporting Digital Transformation in Europe and Central Asia](#))

This paper examines the digital transformation of Uzbekistan's land cadastre system, focusing on the integration of modern technologies, the evolving legal framework, and the pivotal role of the English language in facilitating international collaboration and the adoption of global best practices. By analyzing these interconnected components, the study aims to underscore the necessity of a robust legal foundation and language proficiency to enhance transparency, efficiency, and alignment with international standards in land administration.

Methods

This study employs a multidisciplinary qualitative approach to analyze the digital transformation of Uzbekistan's land cadastre system. The research integrates legal analysis, technological assessment, and linguistic evaluation to provide a comprehensive understanding of the ongoing reforms.

Legal and Policy Analysis

A thorough examination of national legislative documents was conducted to assess the legal framework governing the digitalization of the land cadastre. Key legal instruments analyzed include:

- The Law No. 666-I "On State Land Cadastre"
- Government resolutions and decrees related to land administration and digital transformation
- Policy papers outlining strategies for integrating digital technologies into public services

The analysis focused on identifying provisions that facilitate or hinder the implementation of digital technologies, with particular attention to the regulation of emerging tools such as artificial intelligence (AI) in cadastral processes. ([Digital Technologies in the National Cadastre System of Uzbekistan](#))

Technological Assessment

The study evaluates the integration of geospatial technologies within the land cadastre system. This includes the use of:

- Geographic Information Systems (GIS)
- Remote sensing technologies
- Unmanned aerial vehicles (drones) for topographic mapping
- 3D, 4D, and 5D modeling techniques ([Digital Technologies in the National Cadastre System of Uzbekistan](#))

Data was collected from official reports, academic publications, and case studies detailing the deployment of these technologies in Uzbekistan's land administration. The assessment aimed to determine the extent of technological adoption and its impact on the efficiency and accuracy of cadastral records. ([Digital Technologies in the National Cadastre System of Uzbekistan](#))

Linguistic Evaluation

Recognizing the role of language in accessing global knowledge and best practices, the study examines the influence of English language proficiency among professionals in the land administration sector. This involved:

- Reviewing educational curricula and training programs related to land management
- Analyzing participation in international collaborations and conferences
- Assessing the availability of resources and documentation in English

The evaluation aimed to understand how English proficiency facilitates the adoption of international standards and technologies in Uzbekistan's land cadastre system.

By integrating these methodological approaches, the study provides a holistic view of the factors influencing the digital transformation of Uzbekistan's land cadastre, encompassing legal structures, technological advancements, and linguistic competencies.

Results

Technological Advancements

Uzbekistan has made significant strides in modernizing its land cadastre system through the integration of digital technologies. The Cadastre Agency has been equipped with specialized aircraft, aerial cameras, and a fleet of 112 drones to conduct topographic measurements. Additionally, six information systems and a data center have been launched to digitize the land management industry. These technological upgrades have resulted in the creation of electronic maps for 96% of the country's land, registration of 40 million hectares of land, and inclusion of 790,000 new and 520,000 previously unaccounted buildings into the system, contributing UZS 1.1 trillion (\$89.8 million) to the national budget.

Furthermore, the implementation of artificial intelligence (AI) in the cadastral system has been explored to enhance data processing and analysis. The application of AI aims to improve the accuracy and efficiency of cadastral information management,

although its full integration requires further development of legal regulations. ([Digital Technologies in the National Cadastre System of Uzbekistan](#))

Legal Framework Reforms

The digital transformation of the land cadastre system necessitated substantial legal reforms to ensure effective implementation. The Law No. 666-I "On State Land Cadastre" establishes the principles and procedures for maintaining comprehensive land records. Recent reforms have focused on digitizing land records, improving data accuracy, and streamlining administrative processes. However, challenges persist, including the need for legal definitions of digital tools and the regulation of emerging technologies such as artificial intelligence in the cadastral sphere.

Moreover, the government has adopted the National Spatial Data Infrastructure (NSDI) strategy to integrate various geospatial data systems, facilitating better coordination among agencies and enhancing decision-making processes related to land administration. ([\[PDF\] Modernization of Real Property Registration and Cadastre \(P151746\)](#))

Role of English Language

The English language plays a vital role in Uzbekistan's efforts to modernize its land cadastre system. Proficiency in English enables professionals to access international research, participate in global forums, and adopt best practices in land administration. Furthermore, English facilitates collaboration with international organizations and experts, contributing to the successful implementation of reforms and technological advancements in the sector.

Initiatives such as the English Speaking Nation program have been launched to improve English language proficiency among professionals, thereby enhancing their capacity to engage with global knowledge networks and adopt innovative solutions in land administration. ([English Speaking Nation Program Launches in Uzbekistan](#))

Role of English Language

The English language plays a vital role in Uzbekistan's efforts to modernize its land cadastre system. Proficiency in English enables professionals to access

international research, participate in global forums, and adopt best practices in land administration. Furthermore, English facilitates collaboration with international organizations and experts, contributing to the successful implementation of reforms and technological advancements in the sector.

Certainly! Here's an expanded **Discussion** section for your article titled:

Discussion

The digital transformation of Uzbekistan's land cadastre system represents a pivotal shift towards modernizing land administration and aligning with international standards. This transformation is underpinned by the integration of advanced technologies, comprehensive legal reforms, and the strategic promotion of English language proficiency among professionals in the sector.

Technological Integration and Its Implications

The adoption of digital technologies, such as Geographic Information Systems (GIS), remote sensing, and unmanned aerial vehicles (UAVs), has significantly enhanced the accuracy and efficiency of land data collection and management. These technologies facilitate the creation of detailed electronic maps, enabling more transparent and accessible land records. The implementation of such tools not only streamlines administrative processes but also supports informed decision-making in land use planning and resource allocation.

However, the integration of these technologies necessitates substantial investment in infrastructure and human capital. Challenges such as limited technical expertise, inadequate training programs, and the need for continuous maintenance of digital systems must be addressed to ensure the sustainability of these advancements.

Legal Reforms Supporting Digitalization

The evolution of the legal framework governing land cadastre in Uzbekistan has been instrumental in facilitating digital transformation. Legislation, such as the Law No. 666-I "On State Land Cadastre," provides a foundation for the systematic recording and management of land-related information. Recent amendments and policy initiatives aim to accommodate the nuances of digital data management,

including the recognition of electronic documents and the establishment of protocols for data sharing among governmental agencies.

Nonetheless, the rapid pace of technological change presents ongoing challenges for the legal system. Ensuring that legislation keeps pace with technological innovations requires a proactive approach to lawmaking, incorporating flexibility to adapt to emerging tools and methodologies. Moreover, safeguarding data privacy and establishing clear guidelines for data usage are critical considerations in the digital era.

The Role of English Language Proficiency

English language proficiency among professionals in the land administration sector plays a crucial role in the successful implementation of digital technologies and the adoption of international best practices. Proficiency in English enables access to a vast array of technical literature, facilitates participation in global forums, and fosters collaboration with international experts and organizations.

Efforts to enhance English language skills, such as specialized training programs and educational initiatives, are essential for building a workforce capable of navigating the complexities of modern land administration. Moreover, promoting English proficiency contributes to the broader goal of integrating Uzbekistan into the global knowledge economy, thereby supporting sustainable development objectives.

Interconnectedness of Reforms

The interplay between technological advancements, legal reforms, and language proficiency underscores the multifaceted nature of digital transformation in land cadastre systems. Each component reinforces the others: legal frameworks provide the structure for technological implementation; technology enhances the efficiency and transparency of land administration; and language skills enable the assimilation of global knowledge and practices.

Addressing the challenges inherent in each area requires a coordinated and holistic approach. Investments in infrastructure must be matched with capacity-building initiatives; legal reforms should be informed by technological capabilities and

constraints; and language education must be aligned with the specific needs of the land administration sector.

Conclusion

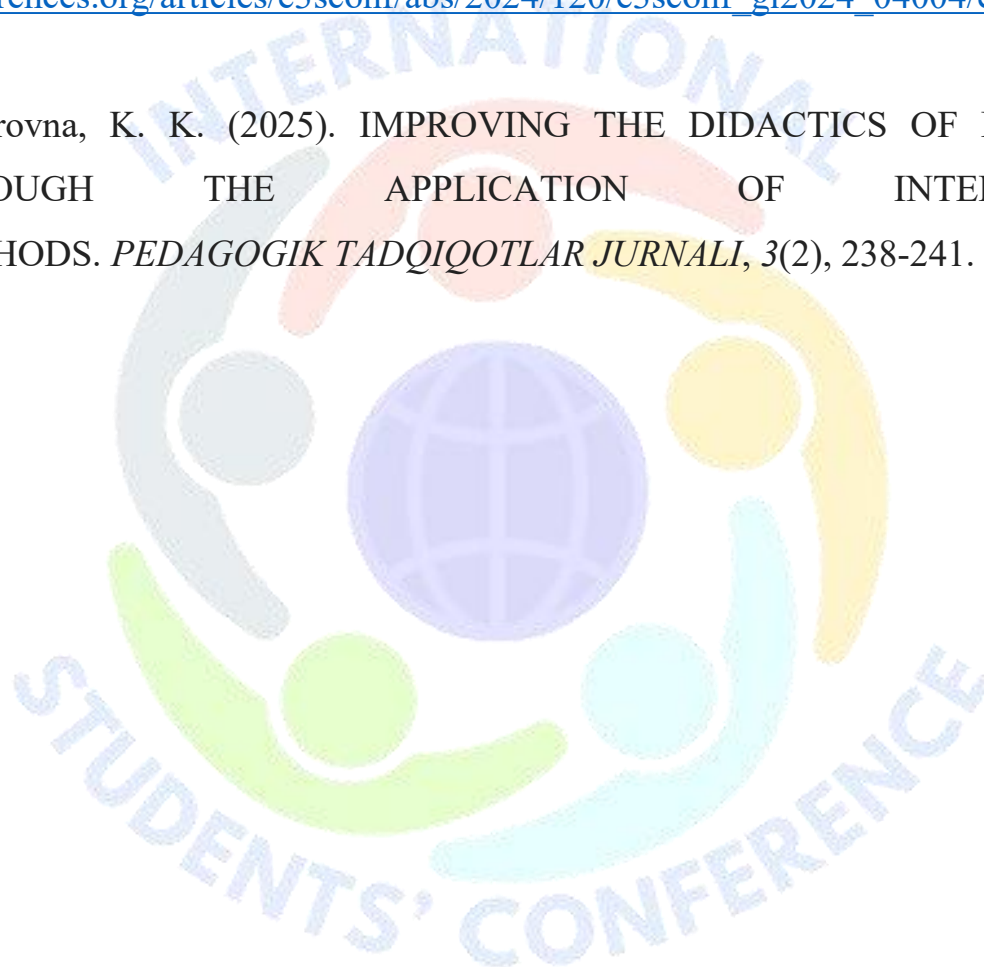
Uzbekistan's commitment to reforming its land cadastre system reflects a broader strategy to enhance land governance and support sustainable development. The integration of digital technologies has significantly improved the efficiency and transparency of land administration. Simultaneously, the English language serves as a conduit for international collaboration and the adoption of advanced technologies. Strengthening English language proficiency among professionals in the land administration sector will further bolster Uzbekistan's capacity to implement effective land management practices and integrate into the global community.

References:

1. President Mirziyoyev's 96% land mapping boost and UZS 1.1 trillion (\$89.8mn) revenue progress. Daryo.uz. Retrieved from <https://daryo.uz/en/2023/10/28/president-mirziyoyevs-96-land-mapping-boost-and-uzs-11-trillion-898mn-revenue-progress> (President Mirziyoyev's 96% land mapping boost and UZS 1.1 trillion (\$89.8mn) revenue progress — Uzbekistan News | DARYO.UZ)
2. Digital Technologies in the National Cadastre System of Uzbekistan: Issues of Legal Regulation. ResearchGate. Retrieved from https://www.researchgate.net/publication/385763463_Digital_Technologies_in_the_National_Cadastre_System_of_Uzbekistan_Issues_of_Legal_Regulation ((PDF) Digital Technologies in the National Cadastre System of Uzbekistan: Issues of Legal Regulation)
3. Application of orthophotomaps in land cadastre. E3S Web of Conferences. Retrieved from https://www.e3s-conferences.org/articles/e3sconf/abs/2023/23/e3sconf_gisca2023_05008/e3sconf_gisca2023_05008.html (Application of orthophotomaps in land cadastre | E3S Web of Conferences)

Trends in the Use of Foreign Languages for Professional Priority May 17, 2025

4. Improvement of the existing technology of cadastral assessment of irrigated crop land in case of Uzbekistan. E3S Web of Conferences. Retrieved from [\[https://www.e3s-conferences.org/articles/e3sconf/abs/2024/120/e3sconf_gi2024_04004/e3sconf_gi2024_04004.html\]](https://www.e3s-conferences.org/articles/e3sconf/abs/2024/120/e3sconf_gi2024_04004/e3sconf_gi2024_04004.html)(https://www.e3s-conferences.org/articles/e3sconf/abs/2024/120/e3sconf_gi2024_04004/e3sconf_gi2024_04004.html)
5. Anvarovna, K. K. (2025). IMPROVING THE DIDACTICS OF ENGLISH THROUGH THE APPLICATION OF INTERACTIVE METHODS. *PEDAGOGIK TADQIQOTLAR JURNALI*, 3(2), 238-241.



**TRENDS IN THE USE OF FOREIGN LANGUAGES
FOR PROFESSIONAL PRIORITY**

MAY 17, 2025