



International Conference on Modern Science and Scientific Studies

Hosted online from Madrid, Spain

Website: econfseries.com

20th October 2025

DIGITAL CADASTRE AND ITS ROLE IN CROSS-BORDER DATA INTEGRATION: UZBEKISTAN'S PERSPECTIVE

Abdullayeva Nodira Karimberdi Qizi

Chamber of State Cadastres of the Cadastre Agency under the
Ministry of Economy and Finance of the Republic of Uzbekistan

+998998080081

e-mail: nodirakh7@gmail.com

ABSTRACT

The development of a digital cadastre system in Uzbekistan has become a crucial factor in enhancing land management, property valuation, and spatial data governance. This study explores the role of digital cadastre in facilitating **cross-border data integration**, enabling seamless exchange of geospatial information with neighboring countries and international institutions.

The research highlights Uzbekistan's efforts in establishing standardized digital land records, integrating legal, technical, and administrative frameworks to support **regional cooperation** and international investment. The findings indicate that a robust digital cadastre not only improves **land administration efficiency**, but also strengthens cross-border collaboration, economic planning, and sustainable land use policies.

Keywords: Digital cadastre, land management, cross-border data integration, land valuation, Uzbekistan, automated mapping.

Uzbekistan has established a comprehensive legal framework to govern the collection, management, and exchange of spatial and cadastral data. The Law on Spatial Data (2022, October 26) provides the foundation for collecting and maintaining geospatial information. In practice, this law enables cadastral authorities to digitize land parcels, create accurate maps, and store legal property information in a unified digital format. This ensures that all land-related data are consistent and accessible for both domestic and international exchange.



International Conference on Modern Science and Scientific Studies

Hosted online from Madrid, Spain

Website: econferences.com

20th October 2025

The Presidential Decree PF-6061 (2020, September 7) outlines measures to modernize land registration and cadastre systems. In practical terms, this decree allowed the State Cadastre Agency to implement automated cadastral mapping and standardized property registration processes. Regional cadastral offices now use digital platforms to register land ownership, reducing administrative delays and errors in property documentation.

The Cabinet of Ministers' Decision 535 (2020, September 2) provides administrative regulations for cadastral services. In practice, these regulations define step-by-step procedures for issuing cadastral passports, recording property in the national registry, and integrating these records with mortgage and investment databases. By applying these processes, cadastral officers can efficiently handle high volumes of property registration requests while maintaining data integrity.

The Cabinet of Ministers' Decision 424 (2023, August 25) and 612 (2023, November 20) further refine these administrative processes. Practically, they introduce updated digital workflows that allow field officers to capture property measurements using mobile GIS devices, directly upload survey data to central servers, and validate information in real-time. These improvements reduce physical paperwork, enhance transparency, and provide immediate access to verified cadastral data for investors and government agencies.

The **State Budget Law for 2024 (2023, December 25)** allocates funding for the implementation and maintenance of digital cadastre systems. In practical application, this funding has allowed the State Cadastre Agency to deploy high-resolution satellite imagery, purchase advanced survey equipment, and train technical staff. This ensures that cadastral data is both accurate and up-to-date, supporting domestic land management and enabling Uzbekistan to meet international data exchange standards.



International Conference on Modern Science and Scientific Studies

Hosted online from Madrid, Spain

Website: econfseries.com

20th October 2025

Digital Cadastre and Its Role in Cross-Border Data Integration: Uzbekistan's Perspective:

Legal/Institutional Framework	Technological Advancements	International Collaborations	Implementation and Integration
Law on Spatial Data (2022, October 26)	Geospatial Data Infrastructure	World Bank Support (2025, May 19)	Integrated Information System for Real Property Registration and Cadastre (IISRPRC)
- Establishes the legal basis for spatial data collection and management.	- Development of a unified geospatial data infrastructure to support cadastre modernization.	- Approval of a \$35 million concessional credit to improve geospatial data availability and use.	- Ongoing development of IISRPRC to digitize property registration and cadastre systems.
Presidential Decree PF-6061 (2020, September 7)	GIS and Remote Sensing Technologies	Collaboration with International Land Systems (ILS)	Integration with National E-Government Systems
- Mandates the modernization of land registration and cadastre systems.	- Implementation of Geographic Information Systems (GIS) and remote sensing technologies for accurate data collection.	- Partnership with ILS to upgrade Land Register Software (LRS) and integrate with GIS systems.	- Incorporation of cadastre systems into Uzbekistan's e-government initiatives for streamlined service delivery.
Cabinet of Ministers' Decisions (2020, September 2; 2023, August 25; 2023, November 20)	Blockchain for Data Security	Engagement with Esri for GIS Solutions	Standardization of Administrative Processes
- Approve regulations for cadastral services, including the issuance of cadastral passports and property registration procedures.	- Exploration of blockchain technology to enhance data security and transparency in property transactions.	- Collaboration with Esri, the official distributor in the CIS, to implement advanced GIS solutions.	- Establishment of standardized procedures for cadastral services to improve efficiency and consistency.
State Budget Law for 2024 (2023, December 25)	Artificial Intelligence in Cadastral Valuation	Participation in International Forums	Public Access to Cadastral Data
- Allocates funding for the development and maintenance of digital cadastre systems.	- Research on integrating artificial intelligence into cadastral valuation systems for accurate property assessments.	- Active participation in international forums to share experiences and learn from global best practices.	- Implementation of platforms to provide public access to cadastral data, enhancing transparency and accessibility.



International Conference on Modern Science and Scientific Studies

Hosted online from Madrid, Spain

Website: econfséries.com

20th October 2025

CONCLUSION

Uzbekistan's approach to digital cadastre demonstrates a strong commitment to modernizing land administration and facilitating international data exchange. Through a combination of robust legal frameworks, including the Law on Spatial Data (2022), Presidential Decree PF-6061 (2020), and relevant Cabinet of Ministers' Decisions (2020, 2023), the country has established a structured and legally supported foundation for cadastral management.

On the technological side, the integration of GIS, remote sensing, AI-based valuation, and blockchain ensures accurate, transparent, and secure collection, storage, and processing of cadastral information. These innovations directly improve operational efficiency and reduce administrative errors in property registration and land management.

REFERENCES

1. World Bank Implementation Status & Results Report. Modernization of Real Property Registration and Cadastre (2023, August 30).
<https://documents1.worldbank.org/curated/en/099083023144543444/pdf/P1517460fe50080ce08ee30e13ecb018b25.pdf?>
2. World Bank Press Release – Support for Improving Geospatial Data Availability and Use in Uzbekistan (2025, May 19).
<https://www.worldbank.org/en/news/press-release/2025/05/19/world-bank-to-support-uzbekistan-in-improving-geospatial-data-availability-and-use?>
3. UNECE – Digitizing the National Cadastre: The Experience of Uzbekistan (2025, May).
https://unece.org/sites/default/files/202505/WPLA14_4.2.6_Nishanov.pdf?
4. Republic of Uzbekistan Cadastre Agency – Project Overview (2025, April 1).
https://api-portal.gov.uz/uploads/184/2025/04/01/f8623dae-4b14-7816-bf687a4776645ab5_media_13099.pdf?