## IMPROVING THE SYSTEM FOR IDENTIFYING LAND PLOTS OCCUPIED ILLEGALLY

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**Abstract.** The given article emphasizes the importance of using Geographic Information Systems (GIS), satellite imagery, and other digital technologies to identify illegally occupied land plots and modernize existing systems. The article also compares the status of land occupancy issues between August 2018 and the last months of 2024. Based on the comparison, the article examines issues related to the unlawful occupation of land resources, including identifying cases of unauthorized land occupation and addressing these issues.

*Keywords:* GPS, GNSS, ArcGIS, "Uzbekkosmos," Geodesy, Cartography, Cadastre, "Etirof" AT, land registration, digital technologies.

## Introduction

As of January 1, 2024, the total land area within the administrative territorial boundaries of the Republic of Uzbekistan is 44,892.4 thousand hectares. Today, the effective and fair management of land resources, especially in accordance with the legal norms set by the government, is of utmost importance. Various land-related issues in the Republic of Uzbekistan, including the issue of illegally occupied land plots, are also urgent. Such cases can lead to the improper use of land, ecological negative consequences, and social inequality. Therefore, improving the system for identifying and monitoring illegally occupied land plots, ensuring the transparency of land resource management processes, and ensuring sustainable development remain critical tasks.

The return of an illegally occupied land plot to its rightful owner, user, lessee, or property holder is carried out based on a decision of the relevant district, city, or regional administration or a court ruling. On August 5, 2024, the President of our country signed the Law of the Republic of Uzbekistan "On Recognizing the Rights to Land Plots Illegally Occupied and the Buildings and Structures Built on Them," FRD-937. The aim of this law is to regulate relations regarding the recognition of rights to land plots illegally occupied and the buildings and structures built on them. Chapter VI of the law includes Article 35.

Eight Requirements for Recognizing Ownership Rights to Illegally Built and Unregistered Real Estate Objects:

1. Land and Buildings Occupied by Citizens Before May 1, 2018: Land plots and buildings constructed by citizens without legal documentation up until May 1, 2018.

2. Excess Land Occupied Beyond the Documented Area Before May 1, 2018: Land plots occupied by citizens and organizations that exceed the area stated in the legal documentation up until May 1, 2018, along with any buildings or structures constructed on them.

3. Land and Buildings Within the "One-time Action" Framework: Land plots and buildings constructed under the "One-time action" initiative, where the recognition of rights has not been completed.

4. Land Plots Allocated by Local Authorities But Not Approved by Regional Authorities (as of June 8, 2021): Land plots allocated by district (city) governors' decisions but not yet confirmed by the regional governor or local deputies' council before June 8, 2021, along with any buildings constructed on them.

5. Land Plots for Housing in Orchards and Vineyards: Land plots and buildings constructed on land within the boundaries of orchard and vineyard cooperatives.

6. Land Plots Allocated for Small Industrial Zones Before March 9, 2020: Land plots occupied by entrepreneurs in small industrial zones before March 9, 2020, along with any buildings constructed on them.

7. Privatized Buildings and Houses Under State Orders: Land plots occupied by buildings and houses that were privatized under state orders.

8. Land Plots with Ownership Rights Recognized by the Governor's Decision: Land plots occupied by buildings and houses where the ownership rights have been recognized through a governor's decision.

**Methodology.** Definitely, the state land cadastre is the foundation for managing the state real estate cadastre, which is aimed at providing the state and society with relevant legal and essential information. This primarily ensures property rights, supports the tax system, guarantees mortgage loans, facilitates land transactions, ensures state oversight, addresses land disputes, supports land reform, enables territorial development, and contributes to environmental protection.

Land Reform in the Republic of Uzbekistan: Current Challenges and Future Directions. During the years of land reform in the Republic of Uzbekistan, significant changes occurred in land relations, which notably impacted the condition and utilization of land. The state monopoly over land ownership was dismantled, leading to a multi-structured land ownership and usage system, land was redistributed, a land market emerged, land payments were introduced, and other significant reforms were carried out. At present, there are over 42 million landowners in the country, totaling 112 thousand individuals.

Despite the visible results achieved through the reforms, there are still unresolved issues in land reform. Some of these issues include:

- Development of land and property relations: This involves the further development of the real estate market and its infrastructure.

- Ensuring widespread use of land resources by the population: Ensuring equitable and effective access to land for all.

- Resolving issues related to the efficient transfer of land to property owners: Addressing problems related to the legal and procedural aspects of land ownership transfer.

- Incompatibility of numerous regulatory and legal documents: The need for harmonization of legal norms and regulations that govern land and property relations.

- Determining cadastral valuation: The need to improve the accuracy and fairness of land valuation methods.

- Absence of land planning assistance: The lack of proper support in land management and land use planning.

Thus, the need for modern land planning development and the creation of an effective cadastral system is of paramount importance in the country's political and socio-economic life. Addressing these challenges is essential to improving land relations and fostering sustainable land use and management in Uzbekistan.

As a result of the actions taken up to now, 66,109 cases of illegal land occupation have been identified, covering a total area of 9,462.3 hectares. Additionally, in 41,972 cases, legal violations were voluntarily resolved, covering 4,472.2 hectares of land.

Court cases: In 21,459 cases, claims were filed for 4,654.1 hectares of land. Of these, 5,561 claims (covering 1,144.5 hectares) were accepted by the courts and directed for compulsory enforcement.

Criminal and administrative responsibility: In 2,146 cases, materials with signs of criminal activity were sent to the prosecutor's office. 41,708 individuals were subjected to administrative penalties for land-related violations.

**Results and discussion.** Currently, based on the data provided by the "Space Research and Technology" Agency (Uzbekcosmos), under the Ministry of Digital Technologies of the Republic of Uzbekistan, the Cadastral Agency is responsible for collecting and managing land data. Once this data is integrated into the central system of the Cadastral Agency, district branches take on the responsibility of processing the data and monitoring land use on-site. These district branches regularly conduct checks and inspections to determine the status of the land and its use.

Uzbekcosmos provides updated and accurate satellite imagery of the Earth's surface. These images are used by the Cadastral Agency to account for land resources, maintain cadastral records, and determine the legal status of land. The Cadastral Agency, using satellite imagery and Geographic Information Systems (GIS), determines the size, location, and intended use of the land. The monitoring carried out via GNSS (Global Navigation Satellite System) helps quickly detect issues related to land and facilitates regulation and management.

Definitely, the collaborative efforts of these two organizations are crucial in accurately accounting for land resources, protecting landowners' rights, and detecting illegal land occupation.

- The electronic "Etirof" automated system developed by the State Cadastre Agency of the Republic of Uzbekistan exists. With the help of the "ETIROF" system, the Cadastre Agency speeds up the processes of formalizing real estate objects, registering them, regulating land, and creating other necessary documents. The main purpose of this system is to agree on documents related to recognizing rights over illegally occupied land plots and the buildings and structures constructed on them with authorized organizations. The system was introduced to the public after the adoption of Decision N. 937. Currently, this system is in operation at the "Mahalla Citizens' Assembly." Based on the results of the census, data on each object is being entered into the "Etirof" information system. To date, over 37,000 objects have been entered into the program, and they are being reviewed by more than 22 ministries and agencies (within 2 months).

- To improve the system for identifying illegally occupied land areas, work can be done in the following directions:

- Using artificial intelligence and Geographic Information Systems (GIS) and monitoring illegal construction and land appropriation in real-time based on remote sensing data

from satellite images. Use of drones: Quickly identifying, collecting, analyzing data, and automatically analyzing images to detect newly appropriated lands.

- Introducing an electronic monitoring system to create a land usage registry. All land-related data can be consolidated in a single database, and through online applications, citizens can report illegal land occupation through a special platform. Installing sensors via GPS and GNSS systems to detect changes in areas of illegal land use.

- Strengthening Legislation and Sanctions: Increasing fines for individuals who illegally occupy land or improving mechanisms for the mandatory return of occupied land. Establishing monitoring groups and creating special inspection teams to detect land-related violations.

- Public Awareness Campaigns: Conducting public awareness campaigns through mass media and increasing public knowledge about the consequences of illegal land occupation. It is necessary to create open online maps for citizens through modern programs, marking illegally occupied areas on them.

- As of January 1, 2018, the number of agricultural enterprises and organizations was 166,708, utilizing a total land area of 20,261.6 thousand hectares, or 45.1% of the national land fund. The area of agricultural lands was 15,543.7 thousand hectares, of which 3,702.4 thousand hectares were irrigated lands. Agricultural lands are divided into those necessary for agricultural activities, including farmland, orchards, internal farm roads, communications, forests, closed water bodies, buildings, structures, and facilities.



## Image 1: A photograph taken from Google, comparing 2018 and 2024 (Uzbekkosmos)

As of January 1, 2024, the number of agricultural enterprises and organizations is 787,808, and the total land area they use is 26,132.2 thousand hectares, or 58.21% of the national land fund. The area of agricultural lands is 21,206.5 thousand hectares, of which 3,701.0 thousand hectares are irrigated lands. We can clearly see that there is a significant difference. The number of enterprises and organizations has increased by 621,100, and the land they use has risen by 13.11%.

As of January 1, 2018, the land area of settlements was 221.2 thousand hectares, or 0.5% of the total land. As of January 1, 2024, this has increased to 226.7 thousand hectares, or 0.51% of the total land, an increase of 5.5 thousand hectares.

Besides that, land ownership and housing are crucial matters for millions of families. Economic growth in regions, food security, employment, and investment flows are primarily dependent on land. Over the past four years, as a result of reforms and the digitization of the sector, 41.5 million hectares of land have been registered in the national land registry, accounting for 92% of the country's total land. For comparison, as of 2020, only 487 thousand hectares of land had any documentation. Due to the firm political will and people-centered policy of our country's leadership, the issue of recognizing land rights has been declared in a total of five "campaigns." As a result, 1 million 365 thousand illegally built homes have been documented. However, more than 3.8 million land plots remain, which have not yet been formalized due to reasons unrelated to the landowners. The Land Code and the Civil Code do not specify legal grounds or authorized bodies for recognizing rights to such lands. The long-standing issues related to land plots and housing that have plagued the population will now find a legal solution.

**Conclusion.** By summarizing it should be suggested that residents or entrepreneurs will no longer have to run from office to office to formalize their rights to land plots and the buildings and structures constructed on them. The recognition of rights will be carried out in stages, region by region. The approval of information and documents related to illegally occupied land plots and the buildings and structures on them will be done through the automated information system of the Cadastral Agency. This system is used by 15 authorized organizations, which also input their respective data. In conclusion, the recognition of rights to land plots and the buildings and structures on them will be accompanied by state and public oversight.

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