

THE ROLE OF GEODETIC MEASUREMENTS IN THE CADASTRE OF LAND AND REAL ESTATE.**Qilichev Zaynobiddin Mirzayevich**Karshi state technical university
qilichevzaynobiddin72@gmail.com**Mahmudov Bekzod Xolbekovich**Karshi state technical university
bekzodxolbekovich92@gmail.com

Abstract: This article highlights the importance of geodetic measurements in the management of the cadastre of land and real estate, their role in ensuring accuracy and reliability. This article highlights the importance of geodetic measurements in the management of the cadastre of land and real estate, their role in ensuring accuracy and reliability. The scientific and practical foundations of geodetic measurements in determining the boundaries of land plots, determining the spatial location of buildings, etc. are analyzed.

Keywords: geodetic measurements, land registry, real estate, GNSS, cadastral map, GIS.

INTRODUCTION. Currently, the importance of the cadastral system in the processes of rational use of land resources, complete and reliable accounting of real estate and their state registration is increasing. Nowadays, the importance of the cadastral system in the processes of rational use of land resources, complete and reliable accounting of real estate objects and their state registration is increasing. The cadastre of land and real estate is the main source of information for establishing property rights, regulating land relations and territorial planning.

The accuracy and reliability of cadastral information directly depends on the result of geodetic measurements. The accuracy and reliability of the cadastral information directly depends on the result of geodetic measurements. Such important indicators as the boundaries of land plots, their area, and the location of buildings and structures are determined precisely on the basis of geodetic measurements. The accuracy and reliability of cadastral information directly depends on the accuracy of geodetic measurements. Important indicators such as the boundaries of land plots, their area, the location of buildings and

METHODS. In the course of the research, the following scientific and practical methods were used:

Using the method of theoretical analysis, the scientific literature, regulatory legal acts and current methodological guidelines in the field of geodesy and cadastre were studied. The following scientific and practical methods were used to conduct the research:

Scientific literature, regulatory legal acts and current methodological guidelines in the field of geodesy and cadastre were studied using the method of theoretical analysis. With the help of this analysis, the place and tasks of geodetic measurements in the cadastral system were determined.

Geodetic measurement methods formed a practical part of the study. It studied geodetic measurements of the earth's surface, planned and high-altitude geodetic networks, as well as methods for determining the location of cadastral objects. Geodetic measurement methods formed a practical part of the study. In it, Izugeodesic measurement methods formed a practical part of the self. It studied geodetic measurements of the earth's surface, planned and high-altitude geodetic networks, as well as methods for determining the location of cadastral objects. The accuracy of the measurement results and their impact on cadastral information were evaluated.

The use of GNSS technologies, electronic tachometers, aerial photography, and GIS applications in cadastral work has been studied by analyzing modern technologies. The advantages and effectiveness of these technologies were analyzed.

Using the comparison method, the results of methods based on modern digital and satellite technologies were compared with traditional methods of geodetic measurements.

RESULTS. The results of the study showed that geodetic measurements are the main and integral link in the cadastre of land and real estate. With the help of geodetic measurements, the results of the study have shown that geodetic measurements are the main and integral link in the cadastre of land and real estate. Using geodetic measurements:

- the boundaries of land plots are clearly and legally established;
- the area and configuration of the land plots are reliably determined;
- The spatial location of buildings and structures is determined;
- The accuracy of cadastral maps and plans is ensured.

It has been established that with the help of modern GNSS and electronic tachometers, measurement accuracy is significantly improved, uptime is reduced, and the ability to process data digitally is expanded.

DISCUSSION. The results show that without geodetic measurements it is impossible to effectively maintain a cadastre of land and real estate. The results obtained show that without geodetic measurements it is impossible to effectively maintain a cadastre of land and real estate. Errors in geodetic measurements can lead to incorrect determination of land boundaries, inconsistencies in cadastral documents, and property disputes.

Therefore, it is important to use modern geodetic equipment and digital technologies in cadastral work. The integration of geodesy and GIS allows you to store, analyze and update cadastral information in a single information system. Therefore, it is important to use modern geodetic equipment and digital technologies in cadastral work.

CONCLUSION. Thus, geodetic measurements are crucial to ensure the accuracy, reliability and legal justification of cadastral information, forming the scientific and practical basis of the cadastre of land and real estate. Thus, geodetic measurements are crucial for ensuring the accuracy, reliability and legal justification of cadastral information, forming the scientific and practical basis of the cadastre of land and real estate. The processes of defining the boundaries of land plots, determining their area, as well as determining the spatial location of buildings and structures are based on the results of geodetic measurements. The accuracy of these measurements directly determines the quality of cadastral documents and their legal force.

The results of the study show that errors in geodetic measurements can cause inconsistencies in cadastral maps and plans, incorrect definition of land boundaries, property and legal disputes. The results of the study show that errors in geodetic measurements can cause inconsistencies in cadastral maps and plans, incorrect definition of land boundaries, property and legal disputes. Therefore, when carrying out cadastral work, it is an important task to ensure high accuracy of geodetic measurements.

Widespread adoption of modern geodetic technologies, including global navigation satellite systems (GNSS), electronic tachometers, aerial photography and geographic information systems (GIS), significantly increases the efficiency of cadastral work. The introduction of modern geodetic technologies, including global navigation satellite systems (GNSS), electronic tachometers, aerial photography and geographic information systems (GIS), significantly increases the efficiency of cadastral work. With the help of these technologies, measurement work is carried out in a short time, with less labor and material resources, resulting in savings in time and money. In addition, digital technologies make it possible to store, constantly update and analyze cadastral data in a single information system.

In general, the combination of geodetic measurements and modern information technologies plays an important role in the legal regulation of land relations, the rational use of land resources, and ensuring the sustainable development of the real estate market. In general, the combination of geodetic measurements and modern information technologies plays an important role in the legal regulation of land relations, the rational use of land resources, and ensuring

LIST OF LITERATURE

1. Yuldosheva Y. Sh. Davlat yer kadastrini yuritishda geodezik va kartografik ishlar. IQRO INDEXING, 12(02), 243–246, 2024. – Yer kadastrini va geodeziya o‘rtasidagi bog‘liqlik va amaliy ishlarda geodezik ta‘minot haqida tahliliy maqola.
2. Ochilova Z. A. Yer kadastrini yuritishning ilmiy, nazariy va uslubiy asoslari. – Maqola, 2025. – Kadastr metodologiyasi va uning asoslari, shu jumladan yer geodeziyasi nazariy bilimlari yoritilgan.
3. Gofurov X. V. Problems and solutions in providing ... – Zamonaviy yer kadastrini va geoinformatsion texnologiyalarni kiritish yo‘nalishlari, kadastr tizimini digitallashtirish masalalari tahlil qilingan.
4. Oznamets V. V. The content of geodetic support. Geodesy and Cartography, 2020. – Geodezik ta‘minotning kadastr va boshqa milliy iqtisodiy faoliyat sohalaridagi roli tahlil qilingan.
5. Dragomir L. O. Enhancing Conventional Land Surveying for Cadastral Documentation. Remote Sensing (MDPI), 2025. – UAV, SLAM va an’anaviy geodezik o‘lchashlarni kadastr hujjatlarida qo‘llash bo‘yicha ilg‘or metodologiya.
6. Savanović R., Savanović M. The need for renewal of the cadastral maps on the territory of Vojvodina, Republic of Serbia. International Journal of Engineering and Geosciences, 9(3), 324-333, 2024. – Kadastr xaritalarini yangilash va geodezik o‘lchashning muhimligi tahlili.
7. EuroGeographics Annual Review 2022 (EuroGeographics) – Yevropadagi milliy xarita va kadastr tizimlarining geodezik ma‘lumotlari va ularning roli haqida tizimli sharh.