CARTOGRAPHIC MATERIALS AND THEIR USE IN THE STATE LAND CADASTRE

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Annotation
This scientific article covers the significance of the use of maps and their types, cartographic materials used in cadastre, remote sensing of the earth and space imagery.

Keywords: maps, types of maps, profile, cartographic materials, topographic plans.

Introduction

A map is a mathematically determined, reduced, generalized representation of objects located on the surface of the earth, in other sky views, or in the width of space, in the above-mentioned areas, in the accepted system of conventional signs. Maps are the basis of the cadastral field. Because with their help, primary information about the object and the area as a whole is obtained.

Materials and methods

Discussion. The main element of the map is a cartographic image, that is, a collection of information about the contents of the map, objects and realities, their location, characteristics, interrelationships, and dynamics. Maps are usually divided into general geographic, thematic and special types. General geographic maps have the following content: settlements, socio-economic and cultural objects, communication routes and communication lines, relief, hydrography, vegetation and soils, political-administrative boundaries.

By content, maps are divided into general geographic, thematic and special types. general geographic maps illuminate a set of elements in a place. They describe all the objects visible in the place, and all the elements of the place are given equal attention.

Thematic maps are maps of natural and social phenomena, their combinations and complexes in broad and diverse categories. The content of the maps is defined here by one or another specific theme. Figure – 1.

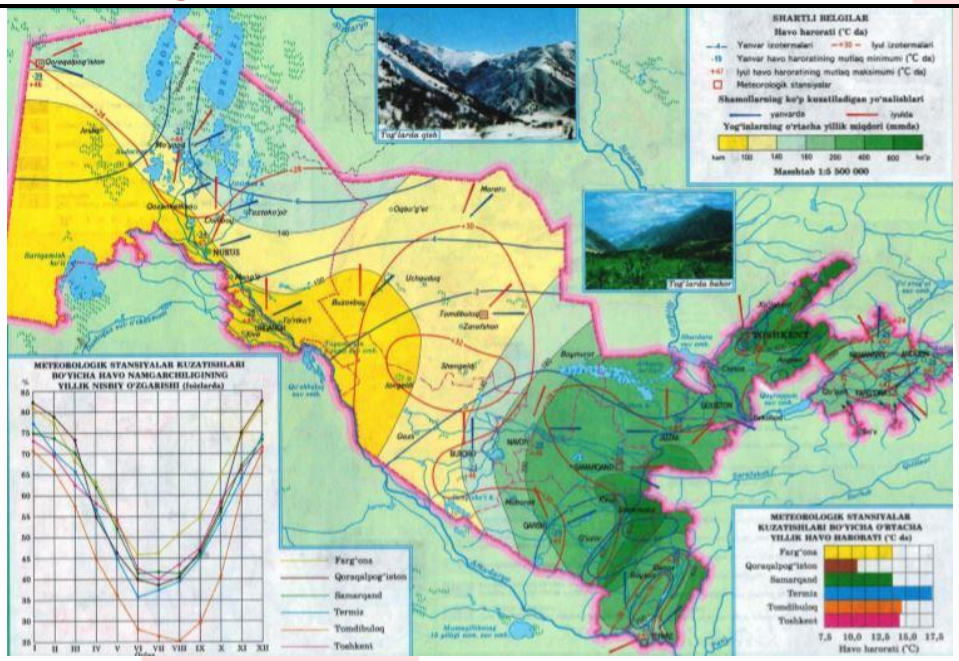

Figure 1. The climate map of Uzbekistan is an example of a thematic map.

Special maps are usually designed to address issues of a specific defined group or to users within a defined group. Often such maps have technical information. Cadastre maps, including land, water, forest, city cadastre and other cadastre maps, belong to the category of special maps. It can be seen from these that various plan-cartographic materials of a certain scale are used for proper management of the land cadastre. Figure -2.

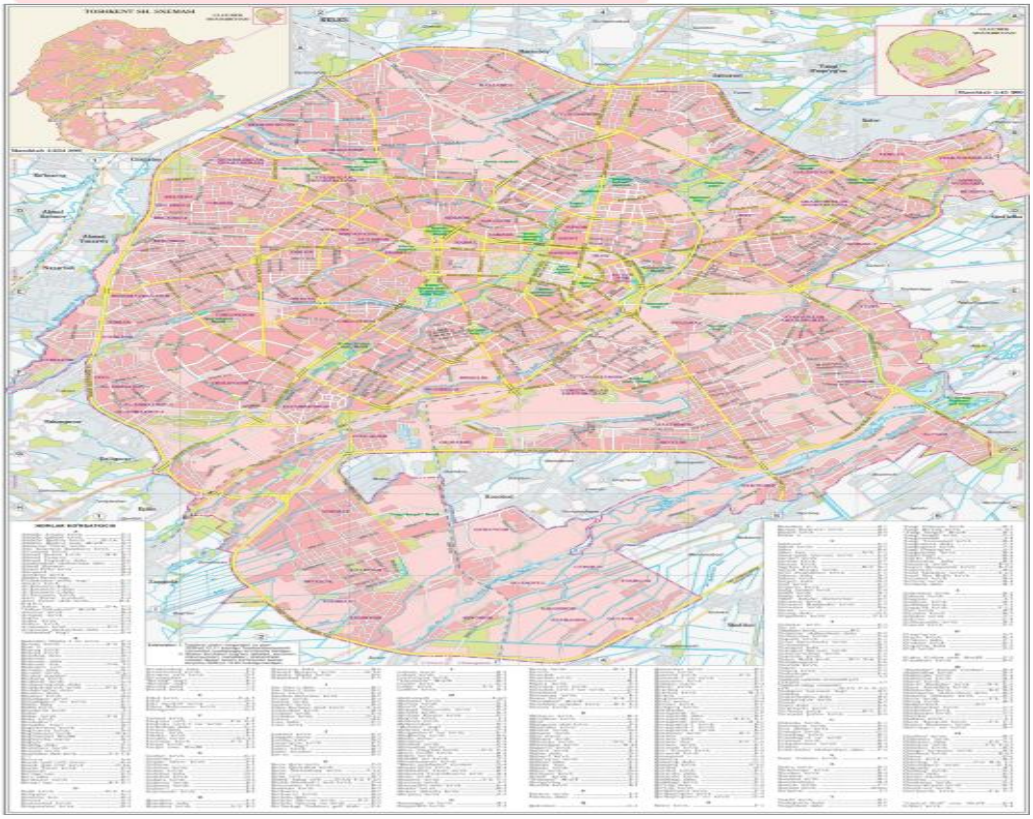

Figure – 2. The special map of Tashkent.

Conventional signs are used to mark the details of the place on maps and plans (settlements, plants, roads, rivers, agricultural fields, etc.) and colorful objects. Conventional symbols for all scales are established by official organizations and are mandatory for all cartographers to use. Conventional signs allow you to read the map, that is, to understand the depicted place. All conditional symbols are divided into four groups: with area (scale), without scale, linear and explanatory.

Objects that occupy a large area in a place and are represented on the scale of the map are depicted with scale conditional symbols. If it is not possible to represent the object on the map scale due to its small size, then it is necessary to use conditional symbols without scale. Line symbols represent roads, boundaries, communication and power lines, etc. Descriptions of objects, various inscriptions and names of objects are shown in explanatory symbols. topographic maps are published in multi-color, including hydrography (rivers, lakes) in air color, vegetation - in green, highways - in red, improved roads - in yellow, relief elements - in brown. This coloring of the map makes it easier to read the objects.

Plan-cartographic materials obtained with the help of aerial photography provide particularly high accuracy of land cadastral data. The advantage of aerial photographs is that they provide a quantitative and qualitative picture of land ownership or land use. Plans made with the help of aerial photographs have the ability to reflect such characteristic conditions and views of the place, which cannot be achieved based on ground photography. With the help of photoplans, it is possible to distinguish the dimensions of the land areas, at the same time, the boundaries of the exchange of soil types with each other, the plots requiring various reclamation, cultural and technical measures, as well as the boundaries of the plots with various natural grasses. Figure – 3.

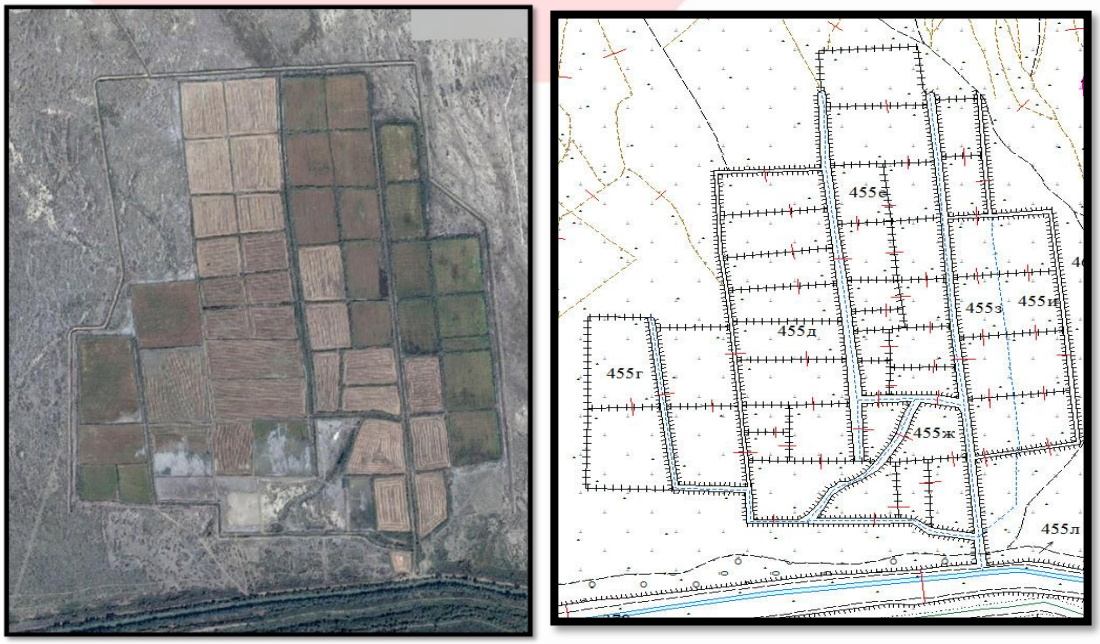

Figure – 3. Creating a map of the area using aerial imagery.

Space images of the Earth's surface are of great scientific and practical importance. Usually, the traditional methods used to study natural resources are based on combining and collecting private observations at different times and in fragments. And space images allow to obtain information in a short period of time, covering the surface of the earth in a comprehensive way, and to obtain quick information about difficult and inaccessible places. Space imaging materials provide comprehensive, comprehensive information about natural resources, including land resources, and therefore are used in various sectors of the economy.

Aerial imaging of the surface of the earth allows to solve the following issues in the study of land resources in order to organize the rational use of land:

1)improving the quality of land;

2)protecting the soil from erosion;

3)combating salinity and waterlogging;

4)determining the pollution of productive land and loss;

5)assessment of the impact of agriculture on the environment, etc.

In the near future, aerial photography will be the main source of data for land cadastre. It should be noted that it is possible to obtain land cadastral data on a large scale, that is, on large areas, on the basis of aerial imaging materials.

In order to update the land cadastral data, the work of correction of existing plan-cartographic data materials is carried out. Correction is the determination of changes in land ownership and land types in the period after the last correction was carried out, and recording them in plan-cartographic materials. Correction of plan-cartographic materials is to compare it with the situation on the ground, that is, with the actual condition of the land areas, and graphically highlight the identified changes in the land ownership plan. This work is carried out in various ways with the help of steel tape, theodolite, tension and other geodetic tools. The use of electronic tachyometers, gps-500 complex, which are produced in foreign countries in recent years, allows to perform correction works in high quality and at a fast pace.

Conclusion

In general, cartographic materials are obtained as a result of ground imaging, aerial photography, and space imaging. Cartographic materials must meet the main requirement of land cadastre - the necessary accuracy of land cadastre data. Therefore, cartographic materials serve as the primary basis for obtaining cadastral data.

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