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TOPOGRAFO THE PLACE AND ROLE OF GEODESIC AND CARTOGRAPHIC WORK IN THE NATIONAL ECONOMY.

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Annotation: Information is provided on topografo –geodesic and cartographic work performed in our country, topografo –geodesic and cartographic work performed in geodesic organizations, Organization of Topografo –geodesic and cartographic work on expeditions, Organization of Topografo –geodesic and cartographic work in parties, Organization of Topografo –geodesic and cartographic work in Brigades.
Keywords: Topography, Geodesy, cartography, Earth Resources, SGYT, photoplanes, photochemicals.

Introduction.
All performed topografo-geodesic and cartographic work is carried out by the Ministry and various geodesic organizations and has a special common feature.
Topografo –geodesic and cartographic work performed in our country is supervised by the state committee on land resources, Geodesy, cartography and state Cadastral. Land resources, Geodesy, cartography and the state Cadastral State Committee play a fundamental role in the performance of the main geodesic, topographic work of our state and the preparation of cards of various scales by organizations formed under the committee. In addition to these, committee-affiliated organizations are engaged in the performance of topographic syomkas, (in large-scale non-large areas) syomka work in road construction, construction of canals and platines, planning engineering facilities and various other s'yomkas. Geodesic works of state significance are planned and financed on the basis of state budget funds. Topografo –geodesic works performed in other ministries (by industry) are financed by the state or the customer in terms of importance [1-5].
Methods
This study employs a comprehensive literature review and case study analysis to understand the role of geodesic and cartographic work in the national economy. The literature review includes academic journals, government reports, and industry publications. The case studies focus on specific applications of geodesic and cartographic work in different sectors, highlighting their economic impact.
Results
Agriculture: Geodesic and cartographic work provides precise data for land use planning, irrigation management, and crop monitoring. Geographic Information Systems (GIS) and remote sensing technologies enable efficient resource allocation, leading to increased agricultural productivity and reduced costs.
Urban Planning: Accurate geospatial data is essential for urban planning and development. It helps in designing infrastructure, managing land resources, and ensuring sustainable

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development. GIS tools facilitate data integration and analysis, supporting decision-making processes in urban planning.

Transportation: Geodesic and cartographic work is critical for the planning and maintenance of transportation networks. Accurate maps and spatial data support the design of roads, railways, and airports. They also play a key role in navigation systems, enhancing transportation efficiency and safety.

Environmental Management: Geospatial data is vital for environmental monitoring and management. It helps in assessing natural resources, monitoring environmental changes, and managing disaster response. GIS and remote sensing technologies provide real-time data, aiding in effective environmental management [6-10].

Discussion

The findings demonstrate the multifaceted role of geodesic and cartographic work in the national economy. The integration of geospatial technologies in various sectors leads to improved efficiency, cost savings, and enhanced decision-making. However, challenges such as data accuracy, accessibility, and technological advancements need to be addressed to maximize the benefits of geodesic and cartographic work.

The products of geodesic organizations are coordinates and height catalogs, photoplanes, photochemicals, geodesic device i.e., triangulation or SGYT -0 (artificial geodesic satellite net), SGYT -1 points, rappers will be the basis of various cards, topographic plans of different scales (Figure 1).

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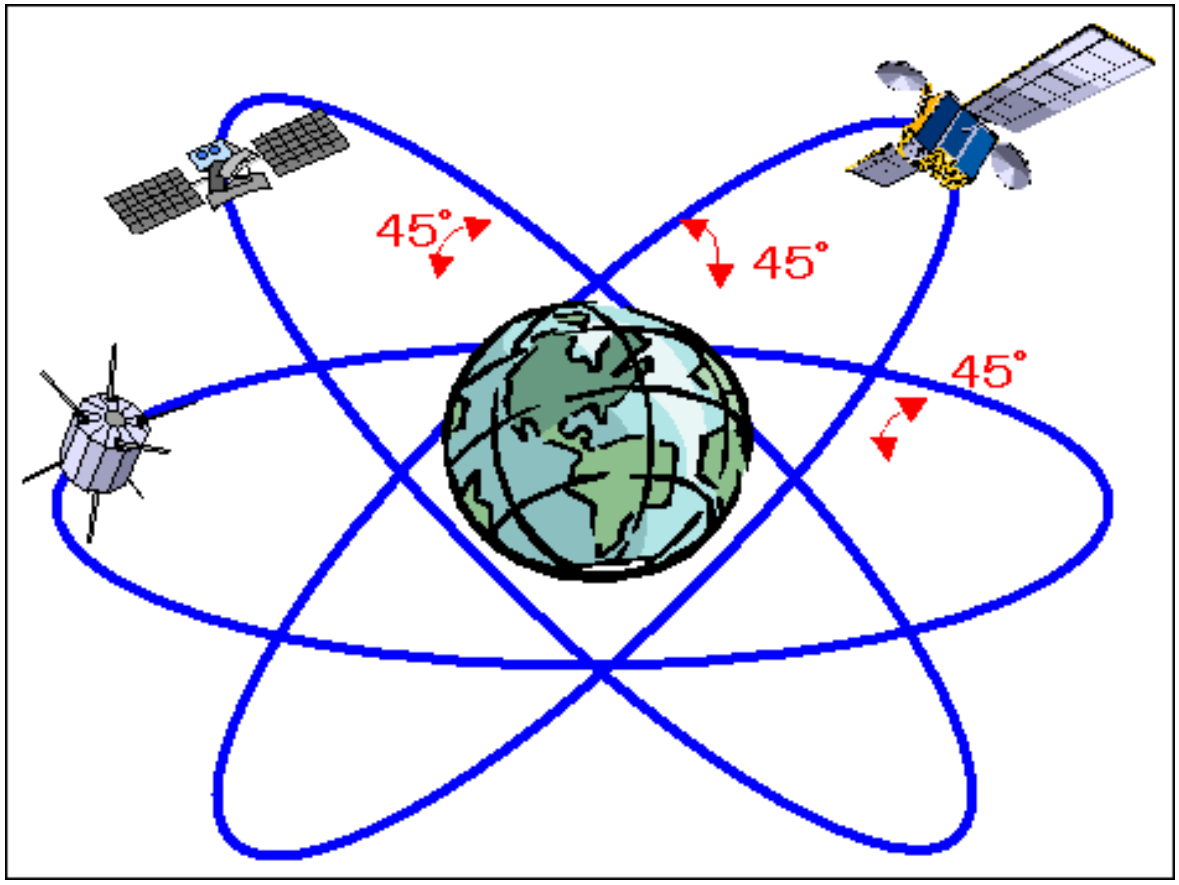

Figure 1. artificial geodesic satellite net.

SGYT -0, SGYT -1, triangulation, polygonometry and other geodesic points are used in construction, scientific work, Defense and military work.

Photoplanes and photochemicals are mainly used in the display of underground wealth, in underground work, in the design of deciphering agricultural land, roads and electrical networks [11-15].

Special study cards, atlases, globes are used in school, college and higher education organizations (Figure 2).

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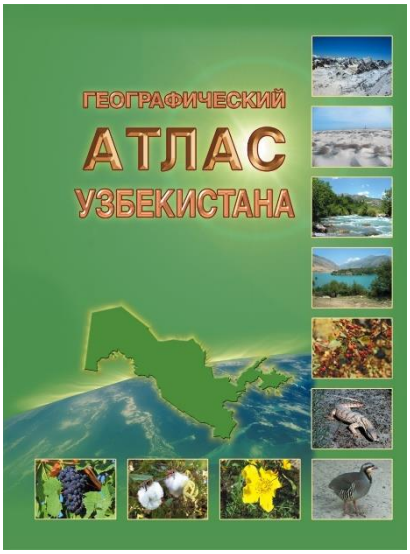
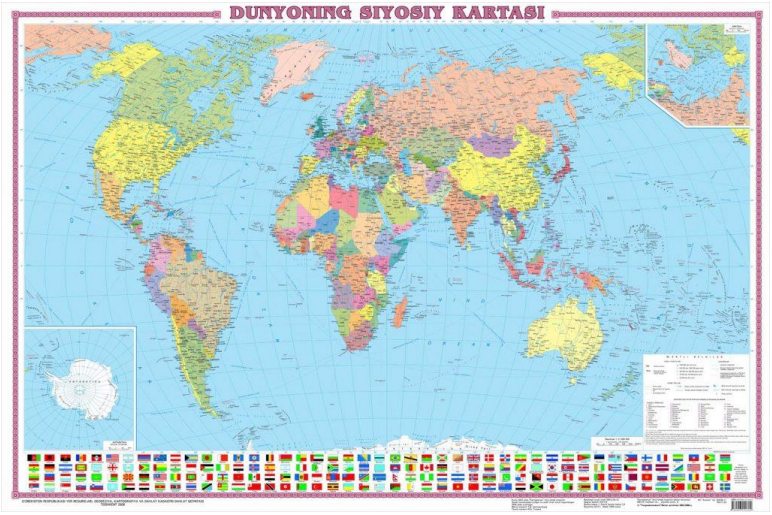


a

b



c

Figure 2. A-atlas, B – globe, c-study card

1:5000, 1:2000, 1:1000 and 1: 500 scale cards and plans are used in urban construction, agriculture and the construction of industrial enterprises. Currently, it can be said that not all work on the construction will be carried out without cards and plans.

The expedition is considered the main branch of the enterprise, it acts as an independent legal entity. Work on the expedition is carried out according to the plan approved by the enterprise. In addition to field work, the expedition can also carry out chamber work. Depending on the volume of work, 80 to 200 workmen can work on the expedition. The expedition works divided into parties. Each party has 8 to 15 field groups. In addition to these, each expedition has teams that perform camera work, which include counting teams (light brigades), stereo teams. The expedition will work according to the plan approved by the enterprise [16-20].

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Before each season of fieldwork to be carried out, the following organizational work is carried out on the expedition:
1. Providing professionals and workers to parties and groups, depending on the volume of work;
2. To distribute the work to be done to the parties and provide technical tasks based on the plan;
3. Engineers and technicians analyze the materials of the given object and make lists of materials, raw materials needed for each object;
4. With all working groups, the necessary instruction is carried out, and these are confirmed by acts;
5. Teams are provided with tools and equipment.
Expeditions may also have teams to perform design work in addition to parties. These groups are mainly concerned with processing the result of geodesic work done in the field.
The quality of the field work performed is high, the customs must be carried out within the specified deadlines. To fulfill these requirements, the prescribed work will have to be properly planned and organized, provided with the necessary field equipment, and the work to be carried out will always be in control.
In field conditions, batches for performing topographer –geodesic work are the main production zvenos. In an expedition, parties are formed mainly by types of work, for example, one party can perform riveting work, the second-basic Geodetic work, the third-topographic syomka work. The parties would have 5 to 8 brigades.
The same expeditions may have brigades directly subordinate to expeditions rather than parties. Since the parties are affiliated with the expedition base, they work based on the expedition's instruction. At the time of carrying out work, the following must be followed:
1. Motor transport, water transport and rail transport are also used in some cases to transport workers working in the party to the facility with the necessary equipment. The object in which the geodesic work is performed is studied by the party leader, and the rapper to be installed, centers are identified and fastened to the place with the permission of local organizations;
2. It will be necessary to equip the party base, organize warehouses and chamber jobs;
3. Before starting work, party workers study the rules of Technical Safety;
4. Before workers use all geodesic instruments, they are tested and found to be in working condition [21,22].
In the current period, most parties are formed to perform their complex work.
In Topografo –geodesic organizations, brigades are a first-class production unit.
The style of working as a brigade is considered effective. Workers working in the brigade account work on the basis of a single naryad, high labor efficiency. The main field geodesic work is carried out by brigades. Each brigade is commanded by a brigadier. The Brigadier not only organizes the work, but also performs all the complex geodesic work himself. Depending on the complexity or simplicity of the geodesic work to be carried out, the brigade can be managed by an engineer, a senior technical officer and a technical officer.
Each brigade will have at least 3 to 5 working personnel. The main topographic –geodesic work performed by the brigade consists of:
Recognossing-in this case, a place is studied to perform geodesic networks, polygonometry and niveling. Recognossing work can be done in advance and in the process of work.
Recognossing work is considered very responsible. At the time of recognossing, changes can be made to the project depending on the location conditions.

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After recognossing, the work on the installation of geodesic points is started. Once the centres and signs have been installed or completed, it is accepted by the party chief.
Building geodesic characters and rappers – the main types of geodesic points are a pyramid, a type of triangulation and signals. Considering the introduction of new technology in geodesic measurement work, GPS systems, electronic tacheometers are now used. In most cases, wooden pyramids are built. in some districts and centers, prefabricated metal signs are built. Before the brigade begins work, all geodesic instruments are inspected and an act is drawn up that they are in working order.
Angular measurement work at triangulation points –when measuring triangulation angles, mainly qualified specialists perform work. Angular measurement works are measured at dawn and for two hours after sunrise, two to four hours before sunset. First of all, it is recommended to measure angles at close distances [23,24].
Polygonometry-1,2,3,4 class polygonometrics are mainly used in urban and closed areas.
In Nivelirlash-i-class nivelirlash, the brigade is led by a senior civil engineer. The brigade will have 1 assistant technician and 8 workers. The niveling is done correctly and in the opposite direction. In Class II nivelirling, the team is led by an engineer and is attended by an assistant technician, 5 workers.
In addition to these, the brigade also performs stereotopographic syomka, deciphering work.
SGS-1 the composition of the creation of satellite Geodetic foundations on the territory of Uzbekistan. Currently, developed countries have created satellite Geodetic foundations for their territories, relying on new modern technologies. Satellite geodesic base SGS–0 has also been built on the territory of the Republic of Uzbekistan and triangulation, polygonometry are serving together with high-class geodesic bases.
On the territory of Uzbekistan, using the GNSS (Global Navigation Satellite System) System, SGS–0 points are 2 of the 24 of them that are constantly working.
The average distance between the created geodesic base points is 270-280 km, causing some difficulties in geodesic connections. Therefore, in the state committee”Aerogeodesy", it was decided to create a geodesic basis SGS–1 in the cross–section of provinces between SGS-0, reference geodesic bases in order to make SGS points more widely used and to comply with the time requirement of geodesic bases in our state.
Their location should fully cover the territory of the provinces and fully provide the entire territory as a geodetic basis. SGS–1 has a point range of 20-30 km and is interconnected by regional geodesic backbone (RGP) and SGS-0 Systems [25].
The SGS –1 geodesic basis is attached to the now existing astronomo – geodesic basis and I-class nivelir bases.
SGS-1 points consist of the main (central) and checkpoints on site. The main points operate connected to the SGS-1 coordinate system. Control points are used as a working Center in control and in geodesic work so that they do not lose the position and accuracy of the main point.
The link pattern of the main and checkpoints is triangular and must be visible to each other. The checkpoints are fixed in place with 155-A view centers [26].

Conclusion

In summary, topografo-geodesic and cartographic works are important in all areas of the national economy and are widely used in areas planning, construction, land resource

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management, transportation, environmental protection and many others. Through these works, it is possible to obtain accurate information, effectively manage processes and use resources wisely, which contributes significantly to the development of the national economy.

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