

THE SUSTAINABLE DEVELOPMENT OF AREAS IS SIGNIFICANTLY IMPACTED BY THE USAGE OF GEOINFORMATION TECHNOLOGY

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Abstract

In the course of the study the features of application of geo-information systems and technologies in the management of territories are disclosed. The definition of territorial information management systems as information systems for management of territories that provide processes for the development of optimal spatial solutions is based on the use of up-to-date, reliable and complex geo-information necessary for the implementation of the functions of management of the territory by local authorities. It has been established that geo-technologies, "GIS + Internet", transform geographic information into a universal, economically and socially significant subject of consumption. Today it becomes obvious that the use of geo-information systems and technologies at the local level significantly reduces the cost of maintaining a register of spatial information (land, real estate, engineering communications).

Keywords: geographical information technologies, geographical information systems, geospatial data of the territory, sustainable development.

Introduction

The use of geographic information technology (GIT) in the sphere of public administration has advanced to one of the top priorities of state policy due to the growing importance of information and communication technologies for sustainable development and in modern society. In the context of settlements, geographic information systems (GIS) were developed to more effectively address management for sustainable development, planning, inventory, and engineering communications challenges. After all, solving the issues with

current information and communication provision of management in public bodies requires the construction of multifunctional information subsystems based on GIS and the adoption of a unified information provision strategy. Depending on how significant the aforementioned elements are.

Problem statement in the general case

The influence of information and communication technologies for sustainable development of territories is actualized by the development of e-government systems, intensive deployment of works in Uzbekistan on the formation of the National Geospatial Data Infrastructure (NIGD) and legislative requirements for ensuring the access of a wide range of citizens to the public information resources of the state and urban development and other specific cadastres as well as to the results of monitoring of the state of the natural environment and engineering infrastructure of the country's territories on the of sustainable development principles. The availability of integrated, carefully planned GITs helps to ensure timely and sound decision-making in the field of urban planning, widespread investment in all spheres of management, and the implementation of large-scale innovative of sustainable development projects. The information and management systems are closely linked with storing and delivering information systems, and with systems that provide information exchange in the management process.

A statement of the basic material

The evolution of GIT is based on a number of fundamental GIS characteristics, taking into account the trends in the development of computer technology and the Internet technologies. By the level of public administration, automated information systems are divided into territorial (regional) information systems (TIS) and city information systems, which are high-level information systems in the management hierarchy. TIS are intended to solve informational tasks of management of administrative-territorial objects, located on a specific territory. These systems carry out work on information processing, which is necessary for the implementation of functions of regional management, reporting and issuance of operational data to public authorities and economic entities. Therefore, TIS can be represented as a geographic information system, designed to provide

processes for the development of optimal spatial solutions based on the use of up-to-date, reliable and complex geographic information and methods of geographic information processing . Information content of TIS is substantiated by the necessity of informational representation of the territory from the standpoint of the needs of its sustainable development, functioning of the economy, life support of the population. The main directions of using TIS in the course of activities related to the management of territories include the study of their: socio-economic status, ecology, resources and nature management, transport and communication, utilities and construction, agriculture, health care, education and culture, socio-political status. Functional use of the territory is expressed in planning restrictions, as territory is a spatial resource of urban development that has a number of features which distinguish it from among other natural resources. The current state of formation of geographic information resources and the provision of geo-information services in Uzbekistan is characterized by a number of problems and negative events, including:

- 1) inadequate level of activities coordination of public authorities and their implementation of measures such as collection, requirements of composition and quality of geospatial data;
- 2) limited access to geospatial data accumulated in the departmental funds;
- 3) the discrepancy of legislation in the spheres of geodesy and cartography, state secrets, certification, licensing, information and GIT to the current ever-increasing level of development of science and technology, the requirements of public authorities, business entities and citizens to the quality and efficiency of access and obtaining geospatial data;
- 4) the lack of accessible metadata for geodetic and cartographic works and the geospatial data created on their results;
- 5) insufficient financing of geodetic and cartographic works of national importance, as a result of which state maps and plans are not updated in time, and 80% of the materials and data of the State Cartographic and Geodetic Fund doesn't meet the established norms for compliance with the state of the area;

Conclusions

Implementation of geo-information systems and technologies in the management of territories proves geographical information in modern

conditions that has become an important strategic resource of public administration and the general social product of consumption. Accordingly, the main trends in the development of topographic and geodetic and cartographic activities in Uzbekistan are conditioned by the development of information technologies and the current growing needs of society in the actual geospatial data on the of sustainable development principles. Such an impact of information technology has determined the need for a transition from traditional cartographic infrastructure to the development of geospatial data infrastructure for their multiple and multi-sectoral use in geo-information systems, including the preparation of new forms and types of diverse cartographic materials. Modern GIS with their developed analytical capabilities allow to visualize and comprehend information about specific objects, processes and phenomena in their totality; to discover interconnections and spatial relationships, support the collective use of data and their integration into a single information space.

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