



AGGLOMERATION REPRESENTS A CORE FOUNDATION OF MODERN URBAN SYSTEM DEVELOPMENT

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ABSTRACT

Agglomeration studies have become increasingly important in addressing contemporary urban challenges such as uncontrolled spatial expansion, infrastructure congestion, depletion of resources, rising living costs, and the degradation of the urban environment. An agglomeration can be defined as a compact cluster of settlements integrated into a complex system with intensive industrial activity, transport networks, and communication infrastructure. Today, these issues represent a priority area of territorial policy both in Uzbekistan and globally. The rapidly developing Karshi agglomeration is no exception, as urbanization processes require the identification of the most rational pathways for its territorial growth. The purpose of this study is to justify the selection of potential areas for the future development of the Karshi agglomeration. To achieve this objective, the study analyzes local and international experience in urban system development, examines the provisions of the Karshi Master Plan and the Karshi agglomeration development concept, conducts a retrospective assessment of Karshi as an agglomeration core, develops long-term forecasts based on historical dynamics, identifies key development constraints, and provides recommendations for improving territorial planning documents.

Introduction

Agglomeration research is essential for the timely resolution of modern urban problems, including excessive urban sprawl, overloaded infrastructure, resource constraints, increasing living costs, and the deterioration of urban environmental quality. In this context, agglomeration is viewed as the foundation of modern urban systems, as it represents a compact cluster of settlements integrated into a complex system characterized by intensive industry, transport, and communication networks.

The study of the problems of modern urban systems of agglomeration is the need to timely solve the problems of excessive growth of urban areas, congestion of infrastructure, reduction of resources, increasing the cost of living and, as a result, reducing the degradation of the urban environment.

Agglomeration is a compact cluster of settlements united into a complex system with intensive industry, transport and other communications.

Today, these problems are becoming a priority area of regional policy both in Uzbekistan and around the world. The developing Karshi agglomeration is no exception, since in the process of urbanization it is necessary to look for ways to develop its territory in the most rational way.

The purpose of this work is to justify the selection of potential areas for the development of the Karshi agglomeration.

To achieve the goal, the following tasks were set:

- Analysis of domestic and foreign experience in the development of urban systems in the process of urbanization;
- Analysis of the provisions of the Master Plan of the city of Karshi and the Concept of the Development of the Karshi agglomeration from the point of view of forecasting its territorial development;
- Retrospective analysis of the territory of the city of Karshi as an agglomeration center;
- to compile a long-term forecast of the population and the territory based on retrospective analysis data, as well as to identify problems in the process of its development;
- to select and justify potential areas for the development of the O'Arshi agglomeration based on natural, technical, legal and other factors;
- to develop recommendations for amendments to the territorial planning documents of the Karshi agglomeration.

Due to the high level of urbanization, the population of Karshi is growing rapidly, and there is an urgent need to expand the city's borders. The study of various urban systems, the identification of the causes of modern problems of cities and the search for their solutions is carried out by a special scientific discipline - urban studies. This term comes from economic geography, where it means the analysis and study of problems related to the functioning of cities. Urbanistika urbanizatsiyaning asosiy belgilari va tendentsiyalarini aniqlashga, shaharlar turi va tuzilishining shakllanishini, turli iqtisodiy va ijtimoiy o'zgarishlar natijasida ularning rivojlanishi va qayta tashkil etilishini aniqlashga qaratilgan.

Thus, urban studies distinguish three main areas:

- ✓ urban planning and the structural structure of the city;
- ✓ urban infrastructure;
- ✓ social life of citizens.

As an independent science, urban studies arose and began to develop in Western countries at the beginning of the 20th century. Although some researchers include the works of Plato and Aristotle in connection with the regulation of politics in the first studies in urban studies. The most striking examples of the application of urban ideas are the construction of cities such as St. Petersburg, Washington, and Brazil.

The problems of developing urban agglomerations are:

- large capital investments in preparatory work, high costs for relocation of production facilities, land reclamation, and reconstruction of engineering communications;
- lack of a specialized legislative framework, which is why such projects are delayed for a long time;
- lack of common interests of developers, executive authorities, and copyright holders;
- Insufficient activity of executive authorities;
- Lack of a systematic approach to the relocation of industrial facilities outside the city and a comprehensive analysis of the selection of territories for these purposes.

Foreign and local experience”, this practice in Uzbekistan is only now becoming relevant, while abroad there is a century-old practice of introducing this form of territorial development in European and American cities. Therefore, in order to understand how this process is going on, why it is so necessary and how it is financed, it is necessary to turn to the works of foreign researchers.

The most successful in the reconstruction and placement of scientific and technical clusters are countries such as the USA, Canada, Singapore, Japan, and leading European countries. The most famous science and technology clusters in the world are: Silicon Valley, Boston Technopark in the USA, Cambridge Science and Technology Park in the UK, Technopolis in Finland, Sophia Antipolis in France, Tsukuba Specialized Science Center in Japan, Silicon Alley in India, Zhongguancun Technopark in China.

It should also be noted that in the US, in the middle of the last century, a law on reconstruction was adopted in the state of California, which laid the foundation for this process explains the concept, in which areas it should be implemented and how it was prepared.

Thus, based on the study of the theory of urbanism and the experience of developed Uzbek and foreign cities, it can be concluded that any urban system should be developed in accordance with certain urban principles. Undoubtedly, timely and rational development of the territory requires significant investments, including cash. Therefore, the development of the urban system of the Karshi-Karshi agglomeration should be one of the priority areas of budget financing and investment.

Interzonal functional zoning of the Karshi region. This means that residential buildings in some areas are located close to industrial zones. A significant part of residential facilities are located within the boundaries of sanitary protection zones of production. Violates the requirements of the "Sanitary protection zones and sanitary classification of enterprises, structures and other objects", but also leads to the creation of uncomfortable living conditions. a significant number of the population.

Irrational use of industrial areas, especially in the closed or The problem of vacant land plots taken out of the city is urgent. Insufficient connectivity of urban space, insufficient transport links between new settlements and the city center, transport links do not allow for good provision.

Insufficient development of social infrastructure in new settlements and historical areas.
Increased air pollution.

The principles of the master plan are aimed at correcting the shortcomings of the existing urban environment and preventing each of the listed negative factors in the future.

The master plan of the city of Karshi is calculated based on a conservative scenario of demographic forecasting. Based on the Project Indicators, the concept defines the strategic directions of the agglomeration development:

- ✓ development of the economic base and attraction of investment resources;
- ✓ improvement of the quality of life;
- ✓ development of social infrastructure.

Thus, the concept pays great attention to the development of the housing stock in order to ensure the growth of the population in the most favorable conditions for living.

It should be noted that the concept includes the development of industrial enterprises, training for highly qualified personnel comprehensive measures to create attractive conditions and form a new technological base ks measures are envisaged.

A prerequisite for creating an innovative regional center in Karshi region to achieve systematic results is the coordinated development of urban areas.

It should be noted that for these purposes the territory of the Karshi agglomeration has large reserves of land resources. For integrated development, it is important to combine several functions when identifying sites for newly registered and unregistered projects. Thus, the agglomeration zones are classified as follows, while forming requirements for their further development:

North: development of industry and infrastructure, development of a recreational function; the introduction of a social function, increasing the density of the urban structure, as well as the emergence of a business function will be possible.

Northeast: development of industry, development of infrastructure.

East: development of innovation and industry, development of housing construction; it will be possible to increase the volume of the recreational function and strengthen the role of the business function.

Southeast: development of housing construction and recreational functions; it is promising to increase the role of the business function.

Central - a multifunctional center of the agglomeration: infrastructure development, housing development, recreational function development, innovative development (including educational complexes); while maintaining the balance of the territory, the historical center and a comfortable urban environment are the most important tasks.

Western: infrastructure development, recreational function development; it will be possible to introduce a social function and individual housing construction.

According to the analysis of the main territorial planning documents of the city of Karshi and the Karshi agglomeration, it can be concluded that the main principles of the future development of the studied territory are to improve the housing stock, increase the housing stock. the territory of the agglomeration center due to a fairly high level of urbanization, as well as the creation of the most comfortable living conditions for the population. It is also worth noting that the most favorable areas for development for the Karshi agglomeration are clustering and redevelopment of the territory due to the large reserves of land resources -

therefore, it will be possible to develop the urban system in favorable environmental conditions.

Undoubtedly, in the process of increasing the area of the city of Karshi, nearby settlements are included in its composition. However, world experience in the development of agglomerations shows that even with an increase in the boundaries of the agglomeration center, settlements included in the agglomeration somehow retain their autonomy. Often, the need to include autonomous settlements within the city is to “artificially” increase the population, i.e. by annexing settlements in order to obtain the status of an elevated city and increase financing.

In any case, when selecting territories for potential development, it is necessary to analyze the territorial planning documents of nearby settlements, as well as develop projects for updating the territories for settlements included in the city.

Retrospective analysis

One of the main research methods in this work is a retrospective analysis of the Karshi region, which was carried out in order to identify the main trends in the development of the studied territory, as well as to identify problematic factors in the past in order to correct them in a timely manner. and prevent them in the future.

An important part of the retrospective analysis is the study and analysis of the dynamics of the development of the territory. For this purpose, a number of literary sources on the history of the city of Karshi were studied. Analysis of history is necessary to compare past events with the expansion and development of the territory, to identify cause-and-effect relationships.

The following indicators were selected for retrospective assessment:

increase in the total area of the city;

expansion of its built-up area.

Analysis of the dynamics of these indicators allows us to determine the pace and main directions of the development of the territory, and to identify the factors of territorial expansion based on historical analysis.

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