

## Reuse of the Historical Environment as a Public Cluster Core (with Gyumri city example)

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**Abstract.** The achievements of the 20th century in the field of science and technology have had a direct impact on the living environment, living conditions and quality of life of human beings. The emergence of the latest technologies was guided by global industrialization, which in turn dictated the criteria for the creation of a modern urban environment, formed the architectural image of the modern settlement, trying to meet basic human needs (housing, work, leisure). Such changes have led to uncontrolled growth of cities and overpopulation. These developments also directly affected the further fate / exploitation of the historic core of the already formed cities. In the Republic of Armenia, the 20th century was marked by a completely new urban development direction, in line with the world directions, and at the same time with the introduction of national approaches. The economic development of the country had a direct impact on the process of forming cities. The overall growth of cities has led to their multifaceted development, while contributing to the creation of valuable architectural and urban environments. The current model of the modern city, dictated by current political and economic demands, has undergone major changes, transforming into a complex of low-density residential areas grouped around high-rise, highly constructed business centers. Modern sustainable urban development directions offer the introduction of alternative models of cities/settlement structure, which will be aimed at the balanced development of cities, efficient, balanced use of space and the creation of a favorable environment. *In the process of balanced formation and reorganization of urban areas, the importance of public spaces (such as streets, parks and other public zones) in promoting social relations and social coexistence is especially important.*

### Introduction

#### Public urban heritage and cluster model

Nowadays public spaces have played a significant role in the settlements planning and in the process of social and economic well-being of residents. They have turned from purely urban structural elements into platforms for social contacts and a component that plays an important role in the lives of the population. Therefore, the process of their formation must be subject to clear rules to meet the demands of the society and be adapted to the new requirements of the industry.

The problem of irregular development and disproportionate distribution of resources in the territory of the Republic of Armenia is especially faced by the cities with a historical core. Those cities with a layer of historical nucleus are facing such a problem, the restoration and adaptation of which is one of the current global problems.

As in the case of cities with other historical and cultural values, in the case of Gyumri, the main task of architectural-urban cultural values is the correct assessment of historical values, both quantitative and qualitative.

The city of Gyumri is considered a target destination for the cluster development of tourism and urban development in Armenia due to its strategic geographical location at the international airport,

as well as access to main highways and railways, rich cultural and historical heritage, rapid development and many other factors (Fig. 1).

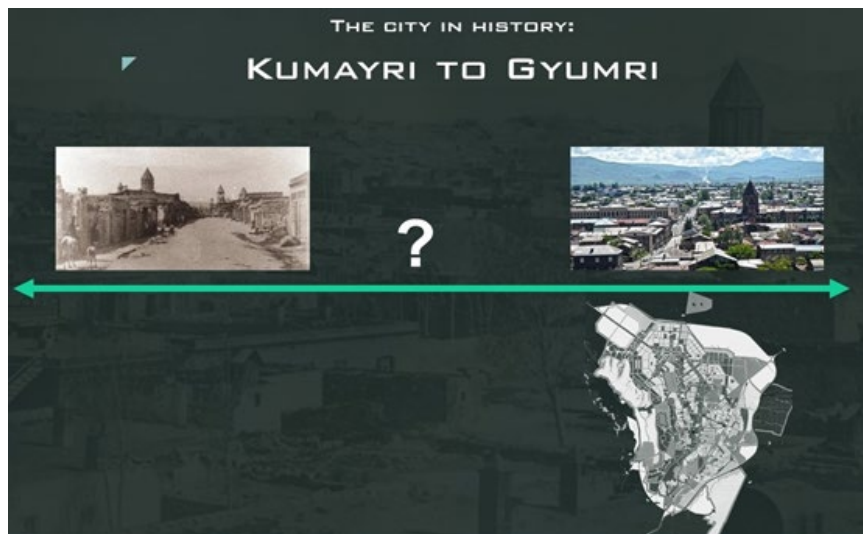


Fig. 1. Gyumri: the city in history

### Public cluster for Gyumri

As a heritage site, the city of Gyumri has several major public centers, which include different parts of urbanization: residential, public, industrial, spiritual and natural landscape.

However, there are number of issues related to public infrastructure, the solution of which will significantly make the process of human communication more accessible and will contribute to the formation of a unified public cluster in the layout of the city.

The city, along with the public areas in its historical layer, is considered to be one of the main components of the formation of a general public cluster (Fig. 2).



Fig. 2. Future of the Gyumri: questions and proposals

*At present, there are a number of problems due to the use of resources in Gyumri's urban development public junctions and being left out of modern requirements, such as:*

- The existing public cluster is not fully formed and developed,
- Public spaces are located in a zone of limited favorable or unfavorable access,
- Public spaces are interrupted by areas for cars (parkings, streets, etc.),
- A unified panorama of the city is not designed to complete the public space system,
- There is no clear assessment of the structures of historical and literary value in public areas,

- There is no continuous or interconnected infrastructure of public spaces (public cluster) (Fig. 3).

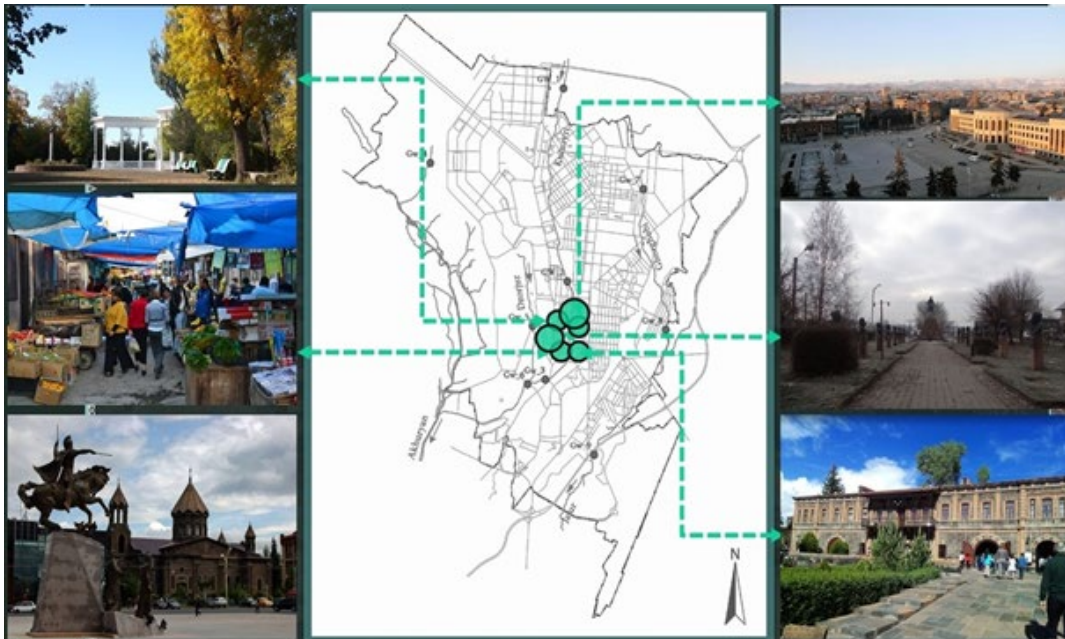


Fig. 3. Analysis of the Gyumri city's public urban zones: existed situation

*The localization of the cluster model* makes it possible to achieve a systematically balanced interconnected development of such an urban environment. The development of the cluster is also defined as the development of open spaces or conservation development, which enables development and the establishment of a balance of protection between possible open spaces and other urban development environments (Fig. 4).

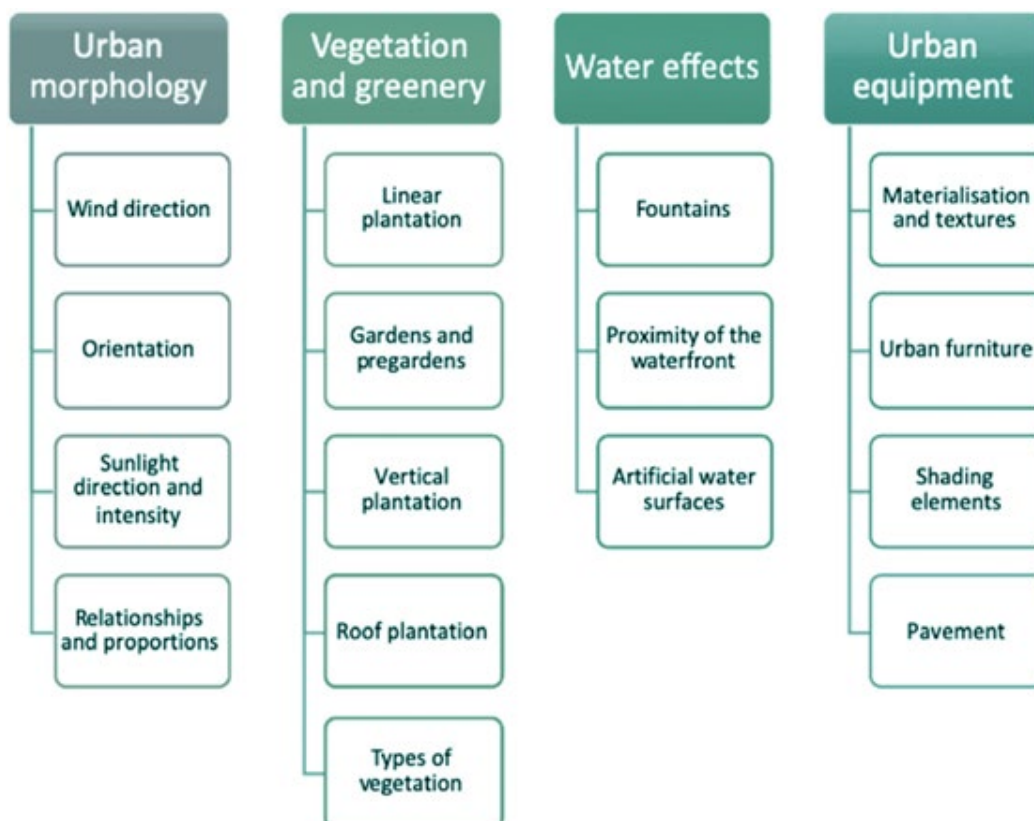


Fig. 4. The localization of the cluster model: open public space comfort clusters and indicators

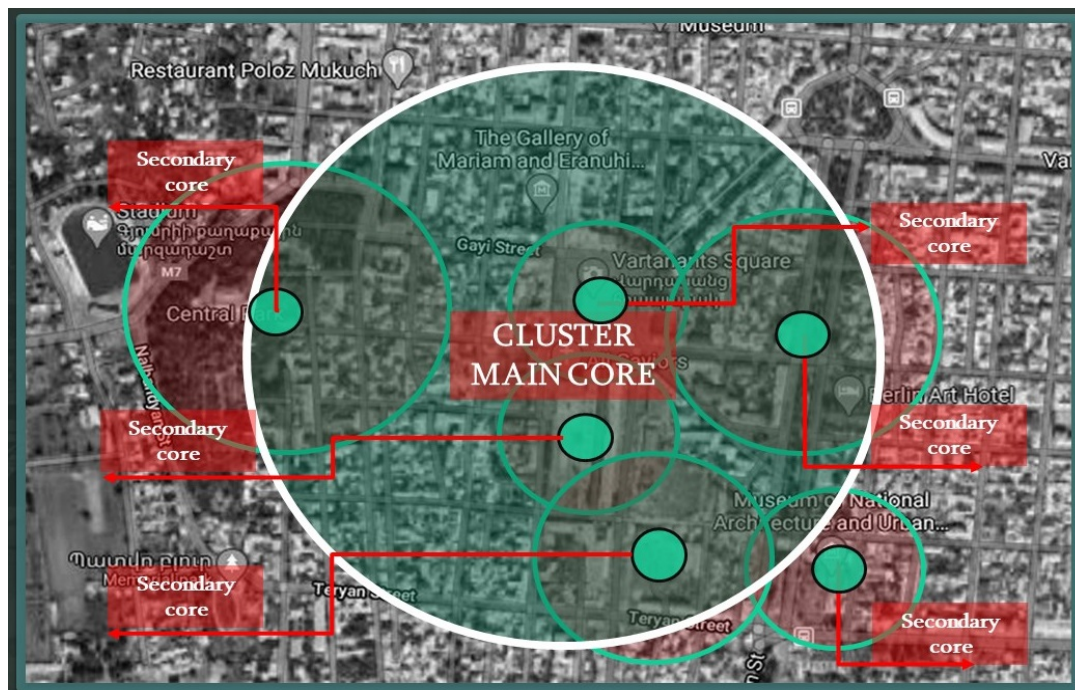
## Why public space and a public space cluster network?

*The main goals of the public cluster formation are:*

- The establishment of self-service, self-sufficient public subclass centers, the development of which will be based on the active cooperation of all components of the entire network,
- Systematic development of the most dynamically developing areas of the city with mutual influence,
- Strengthening and joint development of existing multi-functional, publicly distributed zones in the planning structure,
- Formation of an attractive architectural image, organization of green zones, preservation of cultural heritage and cultural traditions.

*Advised actions:*

- Assessment of resources (assessment of existing values as a means of possible development of communities and so on),
- Allocation analysis of the existing resource (accessibility estimation),
- Analysis of the public urban zones: existed situation,
- Proposal for possible connections: formation of the intercluster links (the outline of the transport network is considered by the prospective mayor on the emerging urban environment,
- Localization of the cluster network development model,
- Outcome assessment: positive and negative results,
- Development of methodology for other similar cities in Armenia (Fig. 5).



**Fig. 5.** Public urban cluster localization in a base of the existed several functional open public zones, such as:

- Cultural and historical public spaces
- City market
- Public green zones, parks
- Public squares and open park zones

(all above mentioned public areas which are located in the historical center of the city will be considered as the secondary coils of the main cluster and will promote the main core development).

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