

Innovative Approach to Urban Planning and Architectural Solutions in Creating a Microclimate around High-Rise Residential Buildings

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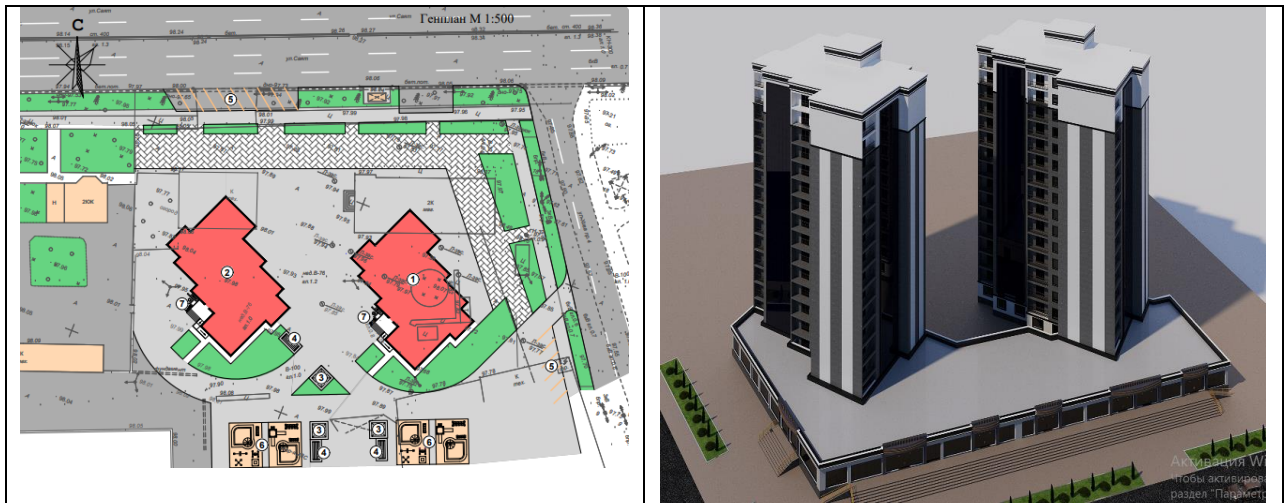
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ABSTRACT

The article describes innovative approaches to the organization of additional green areas around high-rise buildings in regions with a hot climate.

Khorezm region is located in the north-west of the Republic of Uzbekistan. According to the geographical location of the province, it is located between 40°-31° and 42° north latitudes and 60°-62° east longitude. Its territory is 280 km from north-west to south-east, and 80 km from west to east in the width where the city of Urganch is located. The northernmost point of the region corresponds to the Nuronbabo forest near the village of Olchin, Gurlan district. The southern end point is located a little south of Tuproqkala [3]

Khorezm region can be divided into two parts in terms of land structure: the large northern part, which is 100-110 m above sea level, and the remote southern part, which is 120-150 m above sea level.



General plan and general view of a multi-storey (16) residential building

Innovative new approaches are highlighted in our proposed project, and if these innovations are put into practice, the issues of creating a new microclimate for the well-being of the population would be solved in the future. In the climatic conditions of Khorezm, in the master plan, it is proposed to design household service buildings or public buildings in the central part of high-rise buildings and to organize green areas on its roof. It would be possible to make walkways from the residential building directly to the green area in the proposed design proposal. On the other hand, it will be possible to achieve more efficient use of land. This design proposal allows the growth of trees at a high height to improve the microclimate on the street for residents living above the 10th floor of a 16-story building.



General view of a 16-story residential building [2].

It is clear to everyone that these project proposals, when analyzed in different areas, create different problems. Planting trees and the weight of the soil under them, the implementation of construction works that need to be isolated from water in construction works in the irrigation system, the impact of the forces generated by the vibration of trees on the building, the impact of the loads falling on the roof on the cost of the building and other factors are required to be taken into account.



Project proposal for the construction of utility or public buildings in the central part of high-rise residential buildings and the organization of green areas on its roof.

In the future, we will conduct scientific research on finding economically effective solutions to these influencing factors and continue research on the study of world experience.

Books:

1. <https://qomus.info/oz/encyclopedia/x/khorazm-viloyati/>
2. <https://mc.uz/kop-qavatli-uylar/>