

## **NATURAL-CLIMATIC AND ENVIRONMENTAL FACTORS AFFECTING THE DESIGN OF URBAN-TYPE SETTLEMENTS IN UZBEKISTAN**

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**ANNOTATION:** The article considers the main factors of natural-climatic and environmental. Taking into account the influence of these factors on the planning structure of urban-type settlements is the main development of the principles of structural and planning organization of settlements that have transformed the status of urban-type settlements in Uzbekistan.

**KEYWORDS:** territory, natural and climatic conditions, urban-type settlements (UTS), status, ecology, region, space, distribution.

The main factors that affect the planning and development of territories are natural and climatic, environmental, architectural and aesthetic.

Natural-climate factor: Any ordered space is created by society as a result of its interaction with nature is the most effective organization of life processes, in this regard, the formation of such a space is predetermined on the one hand the natural conditions and level of development of society, its productive forces. The territory of Uzbekistan is diverse in its natural qualities, which is naturally reflected in the characteristics of localities, the nature of the distribution of land and water resources, and a variety of other indicators. Natural conditions are the main factor without which it is impossible to carry out design and planning works. Based on their influence, planning restrictions are identified, and the principles of development of urban planning systems are determined. Climate conditions are of particular importance. The climate of Uzbekistan is sharply continental: it is expressed in different amplitudes of day and night, summer and winter temperatures.

A characteristic consequence of the continental climate is dryness, low precipitation, low relative humidity in the summer, low cloud cover, and therefore a long duration of sunshine. Wind conditions are an important factor that affects the planning decisions of buildings. Regions of Uzbekistan have significant differences in the wind regime of the territory – from regions with a predominance of calm weather to regions with constant strong winds and dust

storms. Accordingly, planning decisions should be aimed at encouraging aeration of the territory, either for the protection of inhabited spaces from strong winds are not favorable.

According to natural and climatic conditions, the territory of Uzbekistan is divided into the following main zones.

- Northern oases (10%);
- The southern oases (10%);
- desert 70%;
- Foothill and mountain (20%).

According to the materials of the regional settlement scheme, only 6-8% of the territory of the Republic is occupied by favorable conditions for living. These territories are mostly located in oases. In addition, the main part of the territory of about 85% of the oasis is occupied by irrigated land. Irrigated land is the most valuable in relation to the crops grown in it. The limited availability of favorable territories leads to competition of functions – residential and industrial territories encroach on valuable irrigated agricultural land and recreational territories. The formation of agro-industrial complexes based on cotton, horticulture and vegetable growing in old – irrigated oases, as well as the expansion of areas of irrigated agriculture in newly developed areas are the reason for the emergence of cities – support centers, the development of urban-type settlements-agricultural centers. Mountain and foothill zones occupy about one-fifth of the territory of the Republic, being part of the Tien Shan and Hissaro-Alai systems. Mountain areas are located at an altitude of more than 2000 meters from sea level. Mountain climate zones of Uzbekistan include mountain villages located in the southern part of the Hisar Mountain chain.

Mountain areas are prone to salt formation and landslides. The mountain and foothill zones include the Tashkent-Golodnostep plain, the Fergana basin, the Sanzaro-Nurata and Surkhandarya depressions, the Samarkand, Kashkadarya and Surkhandarya depressions. Desert areas for living are considered the most uncomfortable. The climate of this area is characterized by prolonged droughts and high temperatures. The Northern part of the desert zone is very different from the southern one. The desert climate zones of Uzbekistan include: part of the territory belongs to Bukhara, the Republic of Karakalpakstan, Khorezm, Navai, Karshi, Surkhandarya, and Jizzakh regions.

When solving urban planning tasks at all levels of design, it is recommended to take into account regional features of the natural environment in accordance with the landscape and climate zoning of the territory of Uzbekistan. As an important factor in the planning organization of a small urban settlement, we should consider the planning structure of the local settlement system, in which urban-type settlements (UTS) act either as its center, or (much less often) as an ordinary element.

When designing UTS as part of local settlement systems, it is necessary to take into account the trends of strengthening the functional and structural-planning integrity of these systems and turning them into a new type of urban development— local territorial units of settlement of various scales. All issues of the architectural and planning organization of the village Should be solved from the position of forming a General planning structure of these prospective settlement units, taking into account: the territorial development of all their constituent localities; the placement of residential development territories; placement centers and private agencies, public services and leisure; functional zoning; waist zoning; industrial, agro-industrial complexes: embed line and hub, a unified local communication infrastructure. Environmental factor: The natural and climatic factor refers to 3 zones located in the Republic. The southern and Northern zones of the Republic are located very well compared to other zones. In this zone there are enough natural resources for the population to live, provision of engineering infrastructure, water, network, work, recreation, etc. This proves that most of the population lives in this part of the Republic. The more crowded it is, the more the ecological environment deteriorates. Serious sources of pollution of territories are so-called dumps and industrial waste, the transport network. At the enterprises of the mining industry, ferrous and non-ferrous metallurgy, chemical and coal industries, energy enterprises that use solid fuel, dumps occupy tens of thousands of hectares of valuable territory. And this proves that, when designing a UTS, it is necessary to take into account all of the above to avoid environmental problems. Today, the population living in the UTS, for everyday life use channels, ditches, as they are not provided with engineering infrastructures (Dargom, Tashsaka, Kizkekan, South Mirzachel, Zang). In desert zones such as Mirzachel and Qarshi limited water resources, limited territorial resources. For PGT located in desert zones, it is necessary to plant long-lasting landscaping (gardens) that survive in hot climates

and quickly spread (saxaul, long-lived plants like biyurgun, ephemera). Since the desert zone is not particularly endowed with natural resources, you can use this area to extract electricity. To do this, it is necessary to place solar collectors on a large scale, which receive energy from the sun's rays, as well as to maximize the use of wind energy.

And it can provide eco electro energy to the entire Republic, and acquire the status of "center of energy supply". These collectors have been studied and processed By the Institute of Electricity to date. This will give the Republic a huge economic and environmental progress in providing electricity. Everyone knows that the air, soil and land in the Karakalpak Republic are very much damaged due to the aridity of the Aral Sea. The air has already reached Bukhara. Because of the bad atmosphere, the population living in these areas has problems with the stomach, intestines, and headaches. Today, plants are planted that have the ability to survive even in such difficult conditions as in Aral with high efficiency of treatment plants (up to 97-98%), significantly affects the state of atmospheric air in cities. In rural areas, air pollution is 10 times higher, and in industrial cities it is 150 times higher than over the ocean. Sanitary cleaning of cities includes two large sets of works, the task of which is to collect and remove household waste from the places of its formation and subsequent neutralization, and recycling of household waste. The main method of solid waste disposal in all countries is still landfills, for which, in the conditions of urbanization and significant growth in the accumulation of household waste, it became increasingly difficult to find free territories.

Landfills can pollute ground water and the surrounding area around cities and on the territory of agglomeration. There are more than 230 urban and rural solid waste landfills in Uzbekistan, where about 30 million cubic meters of waste is stored.

The regulation of the environment by means of functional zoning is supported by a rational planning organization of each of the UTS: for industrial zones-the organization of sanitary protection zones, etc.; residential – the organization of convenient connections of groups of settlements with green areas, the formation of wedges of green areas and agricultural land that are ecological zones of natural balance, etc.; external transport zones-the concentration of engineering and transport networks in common corridors isolated by green strips from residential areas; areas of protected natural landscapes-restrictions on the placement of

objects that may cause adverse environmental consequences.

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