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NATURAL AND CLIMATIC FACTORS INFLUENCING THE FORMATION OF THE ARCHITECTURE OF TOURIST COMPLEXES

Sharipova Yulduzkhon Olim qizi
Doctoral Student, Samarkand State Architectural
and Civil Engineering Institute

Nishonov Mirshod,
Head Specialist at the International
Department in the Ministry of Culture of Uzbekistan

Annotation
The article considers the natural climatic factors influencing the different types of tourist complexes. It includes climate elements, air temperature, air macroclimate, wind and speed of wind, windflower, solar radiation and humidity. Uzbekistan is analyzed in terms of natural climate and climatic indicators are given below. In addition, the territory of the Republic is studied in terms of climatic zones.

Keywords. Climate macroclimate, solar radiation, meteorological forecast, windflower, precipitation, constructive methods, complex, tourist (tourist) center, tourist resources.

Introduction

It is known that natural and climatic conditions are among the most important factors that determine the architectural structure of buildings and structures. Just as each region has its own natural and climatic conditions, architectural objects are formed in accordance with them. During the long summer days of Central Asia, there is a great need to create shady places in hot and dry climates. [4] Climate has a big impact on planning. The unity of the landscape, solar radiation, soil structure characteristics, precipitation temperature, and air humidity, precipitation amount, wind speed and return, and insulation conditions are constant depending on various natural factors. For example, the average annual rainfall is 150-200 mm for the dry regions of the Caucasus. In St. Petersburg, it is 750 mm, in Sochi - 2080 mm [2]

The Effect of the Sun on the Earth

Some of the solar energy returns to space before it reaches the earth. Only one-third of the sun's energy reaches the earth's surface, and it quickly converts to other forms of energy.

1) Daytime position of the sun;
2) The state of the sun in the seasons;
3) Clouds and other obstacles;
4) The direction of the slope;
5) The value of the slope of the place;
6) Height of the place;
7) The position of the place in question in relation to the environment.

All of these factors have a great impact on architecture and there is a great interest in it: the architect must be well aware of the various forms of solar influence and use them skillfully in his work. [4,page 33.]

Weather Macroclimate

The area in question can be used all year round or only in winter or only in summer. Meteorological findings provide a detailed description of temperature differences in the macroclimate by season. These findings are used in a wide range, for a variety of purposes, including to determine the amount of heat lost in a building heating or cooling system. The exact timing of both changes gradually with the different seasons. [3,page 122]

The movement of the air mass in a horizontal direction is called wind. The main direction of the wind (the side that blows the most) is an important factor in choosing the location of the residential area and the placement of functional zones in it. This takes into account that the topography of the area affects not only the thermal behavior but also the wind speed. The average annual speed and repetition of winds is constant and allows you to draw a chart called the “flower of the winds” on 8 or 16 rhumb - the main sides of the world. This is the unit of return of the wind direction on a given scale, or the units of average and maximum wind speed, placed in the vector direction corresponding to each rhumb. The endpoints of the vectors are connected by lines. The windflower is taken in the hottest month and hottest quarter of the year based on the results of wind returns for a given area. The regions of the country are characterized by different wind conditions, for example, in some regions, the wind speed is low, in some areas strong winds blow. This requires ventilation of residential areas, and in some cases wind protection. [2,page 48] Before planning the design of a building or selecting an area, the architect should carefully study and monitor the damage that rainfall may cause to the area.

Benefits:
-Snow has insulating properties,
-Moisture is a cooling factor,
-Rain has washing properties,
-Snowfall gives psychological and aesthetic pleasure,
-Returns additional harmful radiation from buildings.

Disadvantages:
-Snow accumulates in unexpected places
-High humidity and frequent formation
-Excessive rains can cause floods as a result of flooding of rivers and lakes,
-Damp and rain turn to ice as the air cools,
-Hail.[3,page 207.]

The total area of Central Asia is 3,944,300 square meters km: five countries - Uzbekistan, Turkmenistan, Tajikistan, Kyrgyzstan, Kazakhstan. According to official figures, their total population in 2014 was 65.7 million. [1,page 22.] The nature of Central Asia is determined primarily by the aridity of the climate; a large part of the territory is occupied by deserts and semi-deserts. The climate of the arid climate zone is characterized by long hot and dry summers, very high average temperatures, low humidity, unstable weather in winter, strong solar radiation.
Only large rivers cross the desert. The main rivers in Central Asia are the Amudarya and the Syrdarya. Rivers are unevenly distributed in Central Asia. [5.]
In terms of climate, the territory of our Republic is not the same with neighborhood countries. Therefore, the solution of urban planning problems, taking into account the territorial features of the natural environment, the UzNIIP Institute of Urban Planning (now UzLITI) has carried out the landscape and climatic zoning of the territory of Uzbekistan (Figure 1.1).

Zone 1 includes plains and foothills, low-altitude mountain valleys, low foothills up to 1000 m. The area is characterized by an organized irrigation network that provides favorable soil and water resources, optimal conditions for plant growth, and intensive development of agricultural lands.
The climate is dry and hot, forming a stable thermal discomfort of the external environment in summer, its duration in the north is about 60 days, in the south - more than 120. The wind regime is mainly characterized by weak and normal. Wind speed - average daily and average night speed does not exceed 3 m / sec. Dust

storms are observed on the border with the desert, their recurrence is at least 3 days in the summer months.

The main typological principle of the organization of planning of buildings located in Zone 1 is an open and semi-open structure that provides a direct connection of vacant lands with the neighboring favorable landscape, as well as protection of areas of located settlements on the border with the desert or at the mouths of valleys, from hot summer and cold winter winds.

Zone 2 (deserts) includes areas that are unsuitable for technical crops, unsuitable for irrigated agriculture, underdeveloped, non-irrigated. Land development is very difficult and is possible only with the cultivation of agro-technical soil. The regions are sparsely populated, the settlements are deserted, the Middle Oases, communication is limited.

The climate is characterized by hot dry summers and plenty of days with hot weather. In the South, very severe heat conditions for more than 120 days are combined with very dry air. The wind regime is characterized by wind speeds throughout the year - more than 3 m / s. Dust storms are observed in most parts of the area - more than 3-5 days during the summer months (when loose and eroded soils are present).

Given that the use of urban planning tools to improve the reclamation of the urban environment is very limited, it is necessary to rely primarily on methods of organizing development and constructive ways to protect its functional elements from adverse external factors. The availability of green areas and water facilities is determined in each individual case by water resources and irrigation conditions of the area.

The typological feature of the settlements of Zone 2 should reflect the closedness of the planning structure with minimal connection to the external environment and the size of vacant areas, a complex solution for the construction of housing and daily service tourist facilities.

Zone 3 (high foothills and mountains) covers an area whose terrain is difficult to cross according to orography and has a diverse combination of meteorological factors. The areas are characterized by heterogeneity of soil, water, and plant resources and limited availability of suitable sites for construction. In this regard, urban planning requirements for the construction of settlements are largely determined by specific local conditions, which are not taken into account in the study.

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(Table 1.)

Construction and climate zone	Subzone	Number of dusty days a year 1	Overheating Duration period 2 day / year	Air temperature daily in the middle duration air t < 8oC day / year	Note
ZONE I	1a	More than 20	More than 60	Less than 160	Stable in winter snow cover Less than 50% are observed
	1b	Less than 20	More than 60	Less than 160	Stable in winter snow cover Less than 50% are observed
	1c	More than 20/5	40-60	Less than 160	Stable in winter snow cover Less than 50% are observed
	1d	More than 20/5	40-60	More than 160	Stable in winter snow cover More than 50% are observed
ZONE II		Less than 20	0-60	Less than 160	Stable in winter snow cover Less than 50% are observed
ZONE III		Less than 20	Overheating lost	More than 160	Throughout the year stable snow cover More than 60 days

Picture 1

General features of construction and climate zones of the Republic of Uzbekistan.

Figure 1.1. Climate-friendly construction zones of the Republic of Uzbekistan.

Conclusion

Strong solar radiation, dryness and high temperature in the country, almost no precipitation in the summer months require special measures for landscaping and beautification in the organization of "tourist complexes".

It is divided into 3 construction zones according to the climate of the republic and in each zone it is necessary to choose the design methods in accordance with the climate. open and semi-open for zone 2, closed for zone 2, we can use complex structures. In the design of tourist centers or complexes, in addition to the climatic factor, we refer to many factors. For example, the availability of tourist resources in the area, socio-economic and other factors.

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