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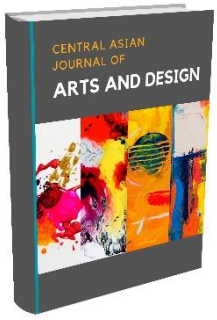

International Scientific and Practical Conference on the topic: " Sustainable Architecture – Challenges and Achievement of the Present and Future"

WHAT IS SUSTAINABLE ARCHITECTURE: THE MAIN PRINCIPLES

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Annotation. *In recent years, the term "sustainable architecture" has become more and more common in the field of design and construction. Experts believe that it has a future in both private and high-rise construction. Sustainable architecture has only two main goals: Reduce the impact of residential and industrial construction on the environment. As little interference with nature as possible, minimizing the amount of resources used, reducing the amount of waste. Experts say, mankind needs to think about the future of the planet, leaving as soft a footprint on the earth as possible.*

Key words*. sustainable architecture, design, construction, environment*

Creating a healthy, comfortable environment for people to live in. Residents of any home should thrive and feel safe, comfortable. When it comes to a private home, it is important to ensure the comfort of all family members. There is its own social environment in high-rise buildings and residential complexes, which should also be as favorable as possible for people.

In order to fulfill its tasks, sustainable architecture must be based on the following fundamental principles:

Reducing the amount of land used. The amount of suitable land for construction is limited. You can't cut down forests and develop agricultural land - all environmentalists call for it. Instead of cutting down a wooded area or rolling up a lawn in asphalt, it is better to build, for example, on former industrial sites, to use land after the demolition of old buildings. High-rises are better than single-story buildings, as they allow you to settle more people on a smaller piece of land.

Residential complexes should become a comfortable social environment. Spot development of sustainable architecture assumes only in the private sector. If we are talking about an apartment complex, it should include everything from ground-floor stores to a flat-roof green garden. A balance must be struck between ensuring the privacy of all residents of the apartment building and the social environment in which they interact.

The use of materials that are not harmful to humans and the environment. Environmental

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cleanliness and safety come to the fore. Materials that can then be recycled. It is best to use renewable resources while conserving non-renewable ones. Architects need to think about how the material will be disposed of after its useful life, whether it can be used in some other way. Also logistics should be taken into account - it is advisable to use local materials in the construction, not wasting money and effort on their delivery.

Energy efficiency. The less energy goes into keeping your home comfortable, the better it is. Solar panels, wind turbines, and heat pumps are used as much as possible. Creating a zero-energy home is extremely difficult, but sustainable architecture strives for it.

Water availability. Fresh water can become scarce, a problem that already exists in many regions. Sustainable architecture aims to use rainfall as well as reduce the discharge of dirty sewage water. The water treatment system can become part of the overall water supply system of apartment buildings.

Is it possible to use the principles of sustainable architecture in private construction? Of course, it's very important both for nature and for you. Choose durable and safe materials, try to ensure the autonomy of the house, be sure to insulate it, install solar panels and barrels for collecting rainwater. You will save money on the operation of the house and benefit the nature.

The national architectural monuments that have survived to this day are deservedly considered to be true works of art, which entered the treasury of world culture. They have been studied for many years by historians, archaeologists, architects, art historians, ethnographers, orientalists and other specialists. At the same time, new buildings are erected every day, creating an incredibly beautiful and unique ensemble of modern Uzbekistan, where antiquity and innovation coexist in harmony. The sphere is constantly changing, new projects and perspectives appear...

On July 20, the country's leader attended a presentation on the results of reforms in the architectural and construction sector.

The architecture of Uzbekistan is considered to be a symbol of the history of the people’s living on the territory of the republic. Despite changing economic conditions, technological advances, demographic fluctuations and cultural shifts, the originality of our country's architecture remains to this day.

Tashkent, Samarkand, Bukhara, Khiva, Shakhrisabz, Termez and Kokand are well known architectural centers of art, culture and science far beyond the borders of Uzbekistan. Palaces, mausoleums, mosques and minarets erected on this land have been recorded in the annals of world history. In the Middle Ages Uzbekistan was the center of the Silk Road, which allowed the development of architectural projects of Uzbek culture.

Since the twentieth century, domestic urban planning is characterized by its connection with the traditional background on the one hand, and modern innovations on the other. This trend is still observed to this day, as the country filigree copes with the task of radical reform and transformation, not forgetting the roots, traditions and culture.

Thus, the cities of the republic, transforming from year to year, become major metropolitan cities, embodying the traditions of national architecture and world architecture. Modern structures, roads and bridges, alleys, recreation parks create favorable conditions for the population. The process of urbanization in the regions is underway. Construction work is in full swing in the countryside as well.

These changes require improvement of industry norms, transparency, and development of the

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mortgage market based on new requirements. As noted at the presentation, over the past three years about 40 acts signed by the President on these issues have been adopted. Among them are the fundamentally important for the sphere decrees "On measures to organize the activities of the State Committee of the Republic of Uzbekistan on Architecture and Construction" of May 1, 2017, "On measures to improve the system of landscaping and architectural and landscape design of roads" of September 11, 2017 and "On measures to further improve procedures for the provision of free land for non-farm purposes and implementation of architectural and construction works" of August 26, 2019, Decree "On additional measures to improve state regulation in the field of construction" of November 14, 2018.

As a consistent continuation of this work, the Decree of the country's leader of March 13, 2020, identified measures to further deepen reforms in the construction sector, removing bureaucratic barriers, ensuring transparency at all stages, wide use of innovation and advanced information technology.

The document promises to bring even more positive changes in the field. For example, the Ministry of Construction is tasked with updating 60 out of 337 urban planning rules and regulations this year. At the beginning of the year the Ministry organized the Center of technical standardization in construction, which attracted 15 qualified specialists. As it was announced, currently 33 new norms and rules of urban development have been developed.

It is also interesting that now it will be easier than ever to access them. From August 1 of this year in Tashkent (and from next year in all regions of the country) oversight processes will be automated with the entry into the online platform of all detected deficiencies with photo fixing. An interactive system is expected to be launched, which will allow construction organizations and citizens to obtain full information about the order and conditions of construction at any time. It is also indicated on the need to transfer into electronic form all the norms and rules of urban development, digitalization of the examination of design and estimate documentation and storage of the examination reports in a single database.

As it was mentioned by the Head of the country, these measures will reduce the time of issuing permits for construction from 254 to 84 days, reduce the number of licensing procedures from 17 to 5 and the time spent by citizens - by 67 percent. The work being done is a sign of concern for citizens, for each individual, because the quality of life is directly related to the environment. The development of the infrastructure of cities and their transformation into large megalopolises implies the creation of even more comfortable conditions for the population, especially for pedestrians, including pedestrian zones. The scale of work is expanding, and international cooperation is developing. It is worth emphasizing that an important direction in recent years has been the study of international experience in creating better conditions for the lives and activities of citizens in the implementation of urban architecture projects. Clear evidence can be seen in the fact that the meeting instructed a foreign company with advanced experience to accelerate the work in this area.

According to experts, the modern world architecture should be based on sustainable architecture, be adapted to the comfortable life of people, including their movement from one point to another. The most widespread and effective way in this area is to increase the number of green areas, develop a network of bicycle paths and pedestrian zones. Regions with developing infrastructure are obliged to return streets and squares to pedestrians. In other words, parking spaces for cars and traffic jams should not make people's lives inconvenient.

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Thanks to the President's initiatives, the face of the capital is changing rapidly. New construction technologies, a solution with an emphasis on sustainable architecture, standards, management and other innovations launched in Tashkent City are already expanding the republic's capacity to build like never before.

Also at the presentation it was noted that now it is necessary to carry out the authors, technical and state supervision in the field of construction, not "manually" as it is now, but with the use of IT-technologies. This decision, too, as it turned out, was met by practitioners with optimism. In their opinion, it is high time to integrate the most modern technologies into the process of building structures.

At the same time, it is desirable to train new specialists in innovative methods. Those who cannot only perceive innovations, but also think creatively and offer ideas, relying not only on the changing conjuncture and temporal variability.

The computer does not exist in order to draw spectacular pictures, but to learn to think analytically, to approach the study of planning issues not subjectively, as before, but systematically, at the level of parametric analysis. After all, if we are talking about designing the shape of a building, its place in the city plan, the spatial structure of a park, a fragment of the urban area or any other architectural object, then, considering and studying it in all the many complex relationships, possible growth prospects and transformations, you can come up with amazing solutions with technology.

Thus, by adapting to sustainable architecture and gaining access to innovation, the republic has the opportunity to adopt the best practices, but not through the abolition and self-liquidation of its science and national architectural school, not through the complete replacement of the historically established urban environment. But through the further development of scientific and educational achievements, education of highly qualified specialists, carriers of the great and glorious school of national architects.

Literature

1. Zaynidinovna, K. D. (2020). Elements of light architecture in reconstruction and restoration of historical and architectural monuments of uzbekistan. *International Journal of Scientific and Technology Research*, *9*(3), 4214-4216.
2. Papas, A. (2016). So close to Samarkand, Lhasa: Sufi hagiographies, founder myths and sacred space in Himalayan Islam. In Islam and Tibet–Interactions along the Musk Routes (pp. 275-294). Routledge.
3. Nayimovna, F. N., & Nigora, S. (2023). Researching Ways to Reconstruct the Areas of Historical Objects of Old Cities in Uzbekistan. JOURNAL OF ENGINEERING, MECHANICS AND MODERN ARCHITECTURE, 2(2), 95-98.
4. Nayimovna, F. N., & Erkinovna, I. Y. (2023). Problems of environmental restoration of cultural heritage objects. JOURNAL OF ENGINEERING, MECHANICS AND MODERN ARCHITECTURE, 2(4), 51-55.

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