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**ENVIRONMENTAL POLICY AND ARCHITECTURE IN THE CONTEXT OF
GLOBAL CLIMATE CHANGE: THE EXPERIENCE OF UZBEKISTAN**

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Abstract. *Climate change, as a global problem, has a strong impact on the human environment, urban and building plans. This thesis analyzes the impact of climate change on the field of architecture, the foundations of environmental policy applied at the country level, and sustainable (green) architectural trends. In the conditions of Uzbekistan, energy efficiency, natural lighting, water conservation, and the use of local building materials are considered. As a result, recommendations and directions are proposed for strengthening environmental principles in architectural projects. The thesis should not exceed 3 pages and is aimed at scientific understanding.*

Keywords: *climate change; environmental policy; sustainable architecture; green building; energy efficiency; Uzbekistan; architecture; nature conservation.*

INTRODUCTION

Climate change is one of the most pressing global problems today. Rising atmospheric temperatures, extreme weather events, water scarcity, and soil salinization are creating new regulatory and design requirements for cities and structures. Architecture should not only solve aesthetic or functional issues, but also be considered as a key tool for ensuring environmental sustainability. In Uzbekistan, this issue has also risen to the level of state policy: a number of documents have been adopted aimed at expanding energy-saving technologies, renewable energy sources, and green areas.

The impact of climate change on architecture. Climate change is changing architectural requirements in the following ways:

Thermal regime: During hot seasons, the demand for cooling in buildings increases, increasing energy consumption. Therefore, thermal insulation, shading elements, and air exchange mechanisms are important in designs.

Moisture and water resources: Changing precipitation patterns require the design of water harvesting and reuse systems.

extreme events: strong winds, floods, and droughts will be assessed based on new standards.

One of the most pressing issues for Uzbekistan is the effective use of solar energy and the application of natural air cooling methods. The efficiency of solar energy use is expressed by the following formula:

$$\eta = (Q_{\text{sur}} \times A) / Q_{\text{sarf}}$$

where: η is the energy efficiency coefficient; Q_{sur} is the amount of solar energy; A is the collector surface area; Q_{sarf} is the building energy consumption.



Date: 1st October-2026

Environmental policy and principles of sustainable architecture.

Within the framework of state policy, the following can be distinguished:

- New regulatory documents and standards for energy efficiency.
- Green areas and landscaping programs.
- Introduction of renewable energy sources.
- Development of local and environmentally friendly building materials.

architectural practice this The principles are implemented as follows: positioning buildings according to the direction of sunlight and wind flow; optimizing natural lighting and air exchange; collecting and reusing water systems ; heat battery and thermal mass elements .

International experience. In world practice, green certification systems such as LEED, BREEAM and DGNB are widely used to assess the quality of projects. These systems combine energy, water, environmental and social factors and measure sustainability through indicators. In Uzbekistan, although national standards are still being formed, national requirements are being developed, inspired by international criteria.

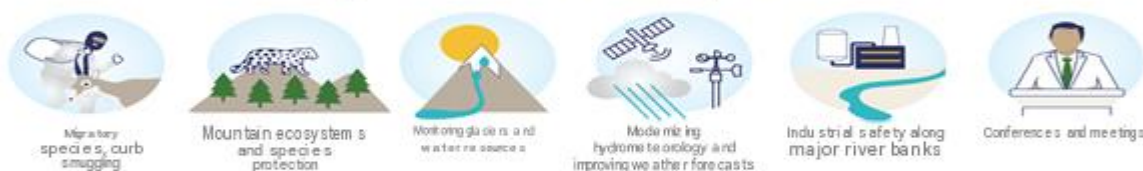
Environmental policy and architecture in Uzbekistan.

Uzbekistan in the legislation climate There are a number of programs and strategies in the field of climate change and ecology. Including:

International environmental cooperation



Regional environmental cooperation



International and regional actions on the island



- State Energy Efficiency Program.
- Greening and green corridors program.
- Sustainable management of agriculture and water resources.

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In practice, the installation of solar panels, water-saving technologies, and traditional architectural methods (e.g., porches, wall thickness, air-permeable structures) are being adapted to modern solutions. The formula for calculating building heat loss is:

$$Q = k \times F \times \Delta T$$

where: Q is heat loss; k is heat transfer coefficient; F is wall surface; ΔT is internal and external temperature difference .

Conclusion. Global climate change requires new approaches to architecture and urban planning. Cooperation between the state, architects and the public is important for the effectiveness of environmental policy. National standards, education and experience should be expanded to develop green and sustainable architecture in Uzbekistan. The results of the thesis may be useful in conference discussions.

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