

**THE IMPACT OF ENVIRONMENTAL EDUCATION ON ECOTOURISM  
DEVELOPMENT**

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**Abstract.** In the context of intensifying global environmental challenges and the increasing anthropogenic pressure on natural ecosystems, the development of ecotourism in the Republic of Uzbekistan is gaining strategic importance as an effective instrument for ensuring sustainable development. This study is aimed at a comprehensive analysis of the role of environmental education in shaping an effective ecotourism model, taking into account the national characteristics of the country's natural resource potential.

Particular attention is given to Zamin National Nature Park — one of the key ecotourism centers of Uzbekistan, covering an area of more than 26,000 hectares. The park annually attracts thousands of tourists due to its unique mountain-forest ecosystems, rich biodiversity, and favorable climatic conditions. According to national and international sources, recent years have witnessed a steady growth in domestic tourism, with the share of nature-based tourism increasing on average by 10–15% annually.

The study identifies key barriers to the development of ecotourism, including a low level of environmental awareness among the population, limited institutional integration of environmental education into the tourism sector, and insufficient implementation of sustainable natural resource management principles. It is substantiated that environmental education acts as a system-forming factor that contributes to the development of responsible tourist behavior and the reduction of anthropogenic impact on natural areas.

The paper proposes scientifically grounded approaches to the development of ecotourism in Uzbekistan, including the integration of environmental education programs into professional training systems, the digitalization of environmental monitoring, and the development of sustainable tourism infrastructure. The results confirm that an increase in environmental awareness is directly correlated with the growth of regional tourism attractiveness and the effectiveness of environmental protection.

**Keywords:** ecotourism, Uzbekistan, Zaamin National Nature Park, environmental education, sustainable development, natural resources, environmental culture.

**Introduction.**

In recent years, ecotourism has been increasingly regarded not only as a form of recreational activity but also as an effective instrument for ensuring the sustainable development of territories. International experience demonstrates that countries actively implementing the principles of environmental education and sustainable natural resource management achieve significant success in developing the tourism sector while simultaneously reducing negative environmental impacts.

The Republic of Uzbekistan, endowed with a unique natural resource potential, including the mountain systems of the Tian Shan, the desert landscapes of the Kyzylkum Desert, and a wide range of specially protected natural areas, possesses substantial prerequisites for the development of ecotourism. In particular, such sites as Zaamin National Nature Park represent key centers for the formation of environmentally oriented tourist flows.

Recent statistical data indicate a rapid growth of the tourism sector in Uzbekistan. In 2023, the country was visited by approximately 6.6 million international tourists; this figure exceeded

8 million in 2024 and surpassed 10 million by 2025. At the same time, there is a clear trend toward an increasing share of nature-based tourism, including ecotourism, driven by growing tourist demand for environmentally friendly and sustainable forms of recreation.

Despite these positive trends, the development of ecotourism in Uzbekistan faces a number of systemic challenges. The most significant among them include a low level of environmental culture among the population, limited integration of environmental education into professional training systems, and insufficient implementation of sustainable natural resource management principles in tourism activities. According to recent studies, less than 10% of the country’s tourism infrastructure complies with sustainability principles.

The aim of this study is to conduct a comprehensive analysis of the role of environmental education in the development of ecotourism in Uzbekistan and to develop scientifically grounded recommendations for improving the efficiency of this sector. To achieve this goal, the study examines current trends in tourism development, analyzes the potential of natural territories, and evaluates the impact of environmental education on the sustainability of the tourism system.

The data presented in Table 1 provide a comprehensive analysis of the statistical indicators of tourism sector development in Uzbekistan over the period 2023–2026, demonstrating a stable and systematic upward trend. In particular, a significant increase in the number of international tourists is observed: from 6.6 million visitors in 2023 to 8.2 million in 2024, followed by further growth to 10.5–10.7 million in 2025, with a projected increase to 12–15 million by 2026.

This dynamic reflects not only the recovery of the tourism sector in the post-pandemic period but also the effectiveness of national strategies aimed at enhancing tourism attractiveness and infrastructure development. The average annual growth rate remains consistently high, indicating strong and stable demand for tourism services.

**Table 1.  
Development of Tourism in Uzbekistan (2023–2026)**

<b>Indicator</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
Number of International Tourists (million people)	6.6	8.2	10.5–10.7	12–15
Tourism Growth Rate (%)	25%	24%	20–30%	15–20%
Tourism Revenue (billion USD)	2.1–2.2	3.5	3.7–4.0	5
Domestic Tourism (million trips)	18	22.7	25	30

Share of Ecotourism (%)	8–10%	10–12%	12–15%	15–20%
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This trend indicates a significant increase in the international competitiveness of the tourism sector in Uzbekistan, as well as the country’s deeper integration into the global tourism market. The steady expansion of tourist flows and the improvement of service quality contribute to strengthening Uzbekistan’s position as an emerging and attractive destination within the international tourism system.

The tourism growth rates remain consistently high, reaching 25% in 2023 and 24% in 2024. However, in the following years, a gradual stabilization is projected at the level of 15–30%, indicating a transition from an intensive growth phase to a more balanced and sustainable development trajectory. This shift reflects the maturation of the tourism sector, where quantitative expansion is increasingly complemented by qualitative improvements and strategic planning.

The economic efficiency of tourism activities is also experiencing substantial growth. Tourism revenues increase from USD 2.1–2.2 billion in 2023 to USD 3.5 billion in 2024, reaching USD 3.7–4.0 billion in 2025 and exceeding USD 5 billion by 2026. This upward trend is driven not only by the growing number of tourists but also by enhanced service quality, diversification of tourism products, and the expansion of modern tourism infrastructure. Furthermore, the increase in average tourist spending reflects a shift toward higher-value tourism services and improved visitor experiences.

Domestic tourism demonstrates a stable upward trajectory, with the number of trips rising from 18 million in 2023 to 22.7 million in 2024, followed by further growth to 25 million and 30 million in 2025–2026. This dynamic indicates a strengthening of domestic demand, active development of regional tourism, and improved accessibility of tourism services for the population. It also highlights the role of domestic tourism as a stabilizing factor in the overall tourism system, particularly under conditions of external economic fluctuations.

Of particular importance is the growing share of ecotourism, which increases from 8–10% in 2023 to 15–20% by 2026. This indicator reflects the rising significance of environmental factors in tourism development, the increasing level of environmental awareness among tourists, and the gradual implementation of sustainable natural resource management principles. The expansion of ecotourism also demonstrates a shift in tourist preferences toward environmentally responsible and nature-based forms of recreation, which aligns with global sustainability trends.

Overall, the analyzed indicators confirm that the tourism sector in Uzbekistan is undergoing a phase of structural transformation characterized by both quantitative growth and qualitative improvements. This creates favorable conditions for the further development of ecotourism; however, it simultaneously requires the strengthening of environmental education, institutional support mechanisms, and sustainable management practices to ensure long-term ecological and economic balance.

**Conclusion**

1. The analysis of tourism development in Uzbekistan for 2023–2026 demonstrates a stable positive trend and increasing economic importance of the sector.
2. The growth in international tourist arrivals, tourism revenues, and domestic tourism confirms the effectiveness of state policies and ongoing reforms.
3. The increasing share of ecotourism indicates a gradual transition toward sustainable development and a stronger environmental orientation of tourism activities.

4. Overall, the results confirm the high potential of ecotourism as a key driver for enhancing the competitiveness of the national economy, provided that environmental education and sustainable practices are further strengthened.

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