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ANALYSIS OF SECTORS AFFECTING THE TOURISM INDUSTRY IN UZBEKISTAN AND ENVIRONMENTAL ISSUES

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Abstract: *This article analyzes the impact of environmental issues and factors promoting the development of the tourism sector on the national economy, particularly on Gross Domestic Product (GDP). The results indicate that air, water, and soil pollution, depletion of natural resources, and inadequate waste management negatively affect GDP. Conversely, the development of tourism infrastructure, preservation of cultural and historical heritage, and a stable political-economic environment stimulate economic growth. It has been determined that in the future, coordinated management of environmental and tourism factors, along with the implementation of sustainable development strategies, is crucial for enhancing the country's economic potential and maintaining ecological balance.*

Keywords: *tourism infrastructure, ecological sustainability, transportation system, natural resource use, ecotourism, environmental protection, climate change, regional development.*

INTRODUCTION

Today, environmental issues are among the most pressing global challenges. The state of the environment directly affects not only public health but also the development of tourism, a vital sector of the economy. Uzbekistan is distinguished by the diversity and unique beauty of its natural landscapes. Mountains, deserts, rivers, and historical cities attract significant interest from tourists. However, environmental problems, such as air pollution, water scarcity, and waste management issues, can negatively impact tourism development.

The state of the environment influences tourism not only nationally but also globally. Climate change, air and water pollution, and the depletion of natural resources directly affect international tourism flows. Many countries and international organizations consider environmental protection a key condition for tourism development. For example, sustainable tourism and ecotourism initiatives are supported by the UN and other international bodies. These initiatives not only protect nature but also strengthen cooperation between countries. In Uzbekistan, the government pays special attention to improving environmental conditions and promoting ecotourism.

In foreign countries, environmental protection is an integral part of tourism policy. In many developed countries, environmental protection is strictly regulated by law. For instance, in Switzerland, Norway, and Costa Rica, natural areas are preserved, waste is sorted, and eco-friendly transportation is used. As a result, ecotourism in these countries is

well-developed, and the number of tourists increases annually. Furthermore, environmentally friendly hotels, “green” certifications, and sustainable tourism projects are widely implemented abroad. A clean ecological environment has become an important criterion for tourist choice.

Although Uzbekistan has significant tourism potential, environmental issues hinder the sector’s development in some regions. The Aral Sea crisis, water scarcity, and waste management challenges negatively affect the ecological situation. In response, a series of decrees have been issued by President Sh.M. Mirziyoyev. According to the Decree of the President of the Republic of Uzbekistan No. PF-16 dated January 30, 2025, “On the State Program for Implementing the ‘Uzbekistan — 2030’ Strategy and the ‘Year of Environmental Protection and Green Economy,’” the Cabinet of Ministers will implement measures in tourism facilities, including accommodation, to:

Promote the use of environmentally friendly products that reduce negative environmental impact;

—Encourage services provided according to ecological standards;

—Approve the proposal to hold the annual “Best Model Green Tourism Facility” competition starting from November 2025;

—Prevent pollution of the environment and waste contamination;

—Reduce the use of plastic products and plastic waste in tourism facilities;

—Transition from single-use plastics to environmentally safe alternatives and promote their usage;

—Ensure compliance with ecological standards and technical regulations;

—Support innovative solutions and prospective initiatives aimed at environmental protection in tourism facilities.

The purpose of this study is to examine the impact of environmental factors on tourism, analyze the experiences of foreign countries and Uzbekistan, and identify opportunities for tourism development through ecological improvement. Additionally, the study aims to reveal the interconnection between ecology and tourism. The analysis shows that a clean environment directly enhances tourism development, while regions with environmental problems experience slower growth. International experiences demonstrate that environmental protection is a critical condition for tourism development. In Uzbekistan, although positive changes have been made, many tasks still need to be implemented.

Literature Review

The impact of Uzbekistan’s ecology on tourism, as well as issues such as climate change and air pollution, are among the most pressing contemporary challenges. Consequently, this topic has been widely covered in numerous scientific sources.

For example, Fotimakhon Artikova, in her study titled “The Impact of Ecotourism on Uzbekistan”, analyzed the concept of ecotourism, its opportunities, and its effects on the economy, ecology, and social sectors of Uzbekistan. The essence of her research is as follows:

—Conservation of nature: Ecotourism contributes to environmental protection, with a portion of tourist revenue directed towards the maintenance of protected areas. For instance, 30% of fees collected in Zomin National Park are allocated to the development of ecological infrastructure.

—Preservation of local culture and values: Ecotourists often show interest in traditional culture, customs, and local cuisine, which helps preserve national identity.

—Raising ecological awareness: Both tourists and local residents begin to understand the importance of environmental protection.

Additionally, Artikova proposed several recommendations in her study:

—Attracting investments from the state and private sector into ecotourism infrastructure;

—Conducting ecological training programs for local communities;

—Creating digital platforms to promote ecotourism;

—Organizing “green trails” (eco-trails) for sustainable tourism.

Similarly, M.F. Maksutova, in her research “Description and Types of Ecotourism”, analyzed various forms of ecotourism, such as nature observation, active ecological travel, agritourism, and the key principles of ecotourism. Ecotourism focuses on environmental conservation, sustainable use of natural resources, and improving the well-being of local communities.

Compared to conventional tourism, ecotourism emphasizes responsibility and sustainability. Maksutova highlights that scientific ecotourism, as a primary type of ecological tourism, involves visiting natural areas to observe, study, and learn about ecosystems and wildlife.

It emphasizes the importance of environmental protection, education, and scientific research, while minimizing negative environmental impacts. Furthermore, it contributes to cultural heritage preservation and promotes ecological awareness among communities. Maksutova also suggested:

—Strengthening regional programs for the development of ecotourism;

—Promoting eco-friendly transportation and infrastructure;

—Involving local communities extensively in ecotourism activities;

—Enhancing ecological education and awareness.

In addition, Zakhron Abdug’apporova, in her study “The Impact of Ecology on the Development of Sustainable Tourism in Uzbekistan”, examined environmental issues in Uzbekistan and their negative effects on tourism, while also proposing measures to promote sustainable development.

The study emphasizes the decisive role of ecological factors in the development of sustainable tourism in Uzbekistan. It defines sustainable and ecological tourism concepts and analyzes their interconnection.

The research highlights environmental challenges—such as water scarcity, biodiversity loss, pollution, and increasing natural disasters—that adversely affect tourism in Uzbekistan.

The results indicate that sustainable tourism development is directly dependent on ecological sustainability. In regions where environmental problems are neglected, ecotourism attractiveness decreases, natural resources degrade, and tourist flows decline.

Finally, Abdug'apborova proposed the following recommendations:

- Development of ecological infrastructure;
- Designing tourism facilities based on ecological standards;
- Strengthening ecological monitoring and risk management systems;
- Implementing a national program for ecotourism.

Methodology

The methodological basis of this study consists of theoretical data analysis and statistical analysis methods.

During the research process, both local and international scientific literature, regulatory and legal documents, state programs, and conceptual approaches concerning economic, social, and environmental factors affecting the tourism sector were systematically reviewed.

Through theoretical analysis, their content and essence were revealed. Additionally, using statistical analysis, official data on tourism development in Uzbekistan—including tourist flows, infrastructure expansion, and related environmental issues—were examined to identify dynamic changes, interconnections, and trends.

Based on these methods, the impact of the tourism sector on the environment was assessed, and scientific conclusions and practical recommendations were developed to mitigate existing problems.

Analysis and results

The analysis and results section of this article focuses on a comprehensive study of the main economic, social, and institutional factors influencing the tourism sector in Uzbekistan, as well as the environmental challenges associated with tourism activities.

The study primarily employs theoretical analysis methods, including a systematic approach, comparative analysis, logical generalization, and examination of scientific sources.

During the analysis, factors affecting tourism development—such as infrastructure, investment environment, transport and logistics systems, quality of services, and human resource potential—were identified, along with factors that have positive or negative impacts on the environment, including natural resource use, waste generation, ecological awareness, and sustainable tourism principles.

The interrelationships between these factors were analyzed.

Based on the results, the role of the tourism sector in the national economy was assessed, and its impact on Gross Domestic Product (GDP) was evaluated analytically.

The study also formulates conclusions regarding the reduction of environmental problems and the enhancement of economic efficiency through the development of sustainable tourism.

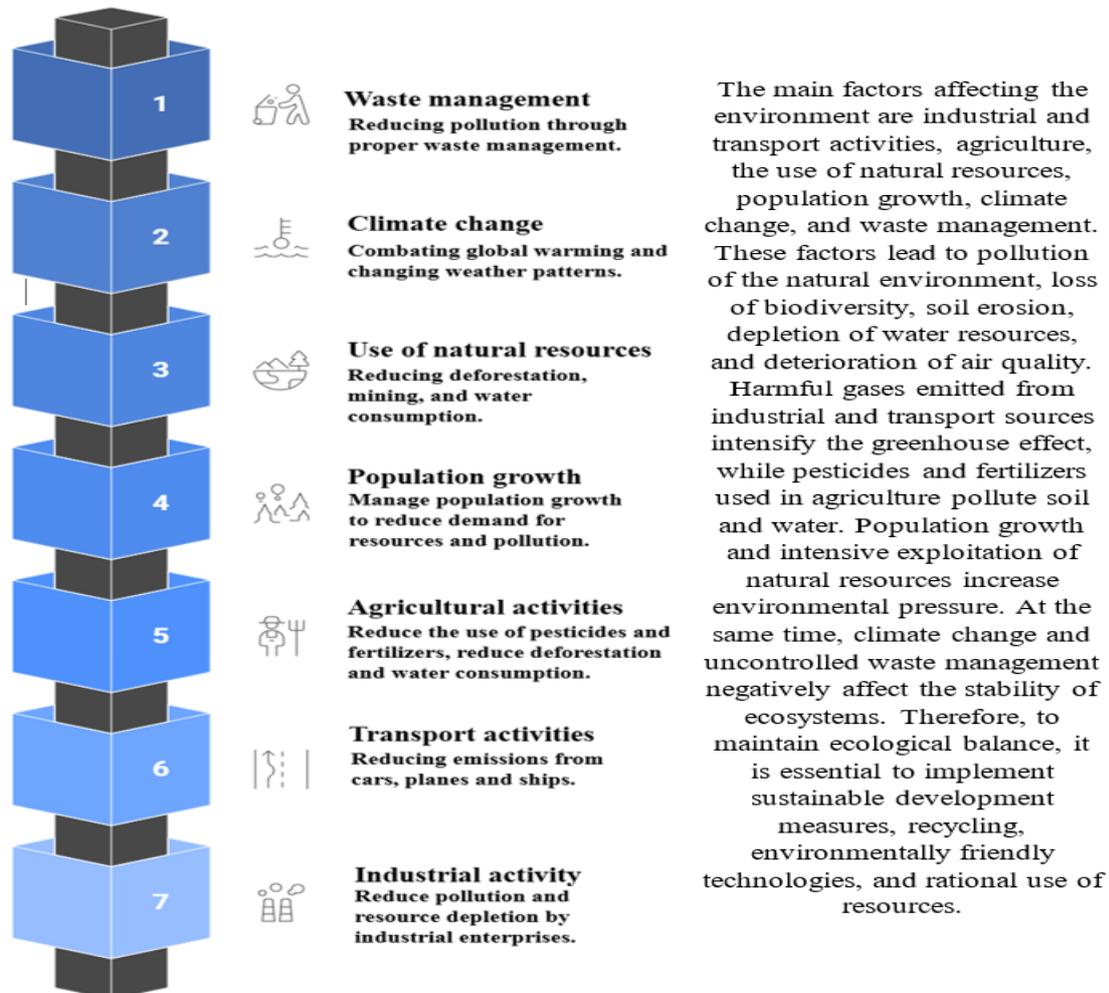


Figure 1. Key Factors Affecting the Environment

In the future, excessive industrial and transport activities, agriculture, and overuse of natural resources will continue to cause air, water, and soil pollution. This will lead to further loss of biodiversity, reduction of forests and water bodies, and degradation of land resources. In addition, population growth and uncontrolled waste management will increase environmental pressure and reduce the regenerative capacity of natural ecosystems.

As a result of climate change, the global greenhouse effect will intensify, leading to more frequent droughts, floods, and extreme weather events. These changes negatively affect human living conditions and agricultural production, putting food security at risk. Therefore, to maintain ecological balance and ensure sustainable development in the future, it is necessary to implement recycling, rational use of resources, and environmentally friendly technologies.

The tourism sector plays a significant role in the economic, cultural, and social development of countries and is directly influenced by a variety of internal and external factors. Natural resources, historical and cultural heritage, infrastructure, climate conditions, political stability, marketing, and environmental quality determine tourist flows and the pace of tourism development. Therefore, understanding and managing these factors is crucial for the effective development of tourism.

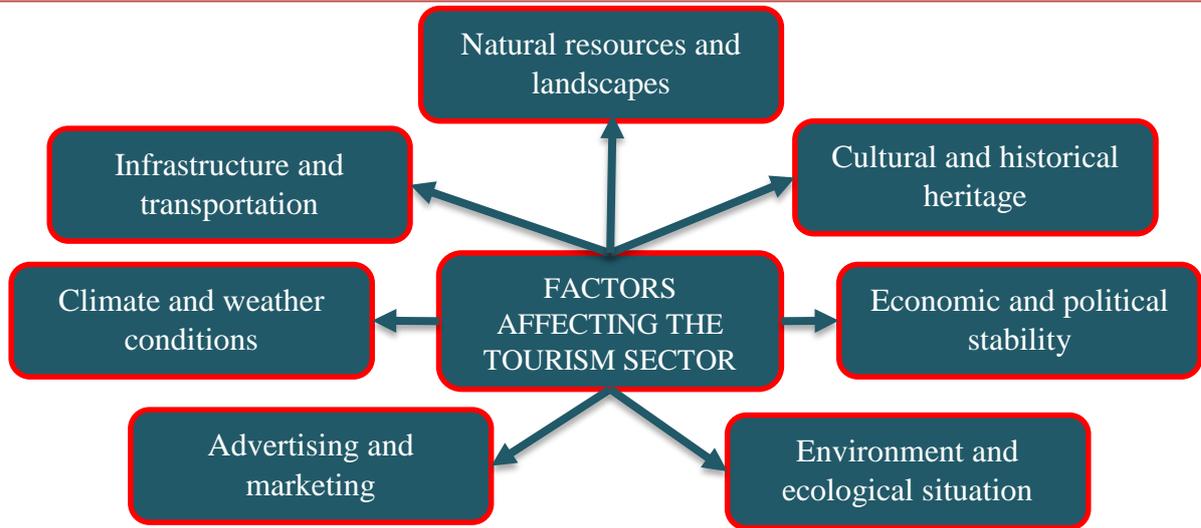


Figure 2. Key factors affecting the tourism sector.

The tourism sector is directly influenced by natural resources, cultural and historical heritage, infrastructure, climate and weather conditions, economic and political stability, marketing and promotion, as well as the ecological condition of the environment. If natural resources and landscapes are well-preserved and of high quality, tourist flows increase; conversely, pollution and depletion of resources reduce tourism potential. Cultural heritage and historical monuments attract tourists, but if they are not adequately preserved or are poorly managed, their appeal diminishes.

Good infrastructure and transport accessibility ensure safe and convenient travel for tourists, while inadequate or outdated transportation systems slow tourism development. Climate and weather conditions affect seasonal tourism, and extreme weather events can reduce tourist numbers. Economic and political stability allows tourists to travel safely, whereas political instability and security issues can decrease tourist arrivals in the future. Marketing and promotional activities strengthen regional branding and increase tourist flows; neglecting these aspects slows the sector's development. Environmental pollution and ecological degradation reduce tourism resources and hinder sustainable tourism development.

In the future, improper management of these factors poses serious risks to the tourism sector. Depletion of natural resources and worsening ecological conditions limit ecotourism opportunities, while extreme weather events reduce tourist arrivals. Insufficient preservation of cultural heritage can result in the loss of historical sites and national values. Additionally, outdated transport and infrastructure, as well as political and economic instability, hinder tourism development. Therefore, for sustainable tourism development in the future, it is essential to preserve natural and cultural resources, ensure ecological safety, modernize infrastructure, and implement sustainable marketing and political strategies.

Table 1 Impact of Ecological and Tourism Factors on GDP (with Forecast)

Factor	Type of impact	Level of impact	Projected value (percentage of GDP, 5 years)	Comment
Air, water and soil pollution (ecological problems)	Negative	High	-1,2%	Pollution reduces the efficiency of industry and agriculture.

Factor	Type of impact	Level of impact	Projected value (percentage of GDP, 5 years)	Comment
Depletion of natural resources	Negative	High	-0,8%	Lack of energy, water and tourism resources slows down economic growth.
Inadequate waste management	Negative	Medium	-0,5%	Productivity in the urban and agricultural sectors decreases, and health costs increase.
Development of tourism infrastructure	Positive	High	+1,5%	New hotels, transport and services significantly increase GDP.
Development of cultural and historical heritage	Positive	Medium	+0,7%	Tourist attraction and increase income in the service sector.
Stability of climate and weather conditions	Positive	Low	+0,3%	Stabilizes the seasonality of tourism, has a small positive impact on GDP.
Population and economic and political stability	Positive	High	+1,0%	Investment and tourism develop in a safe and stable country.

As shown in the table, environmental issues, including air, water, and soil pollution, depletion of natural resources, and inadequate waste management, have a negative impact on the country's Gross Domestic Product (GDP), and are projected to reduce GDP by approximately 1–2% over the next five years. Conversely, factors aimed at developing the tourism sector—such as improved infrastructure, preservation of cultural and historical heritage, stable weather conditions, and economic and political stability—positively affect GDP, with expected growth of 0.3–1.5%.

The table also indicates the degree of impact of each factor: environmental problems exhibit a high level of negative influence, whereas tourism and sustainable political-economic factors show high to moderate positive effects. This analysis highlights the necessity of planning national economic policy with consideration of both environmental and tourism sectors.

Conclusion

1. Environmental issues negatively affect GDP – Air, water, and soil pollution, depletion of natural resources, and insufficient waste management reduce economic efficiency and may hinder future economic growth.

2. Tourism development contributes to economic growth – Infrastructure, cultural and historical heritage, and stable weather conditions increase tourist flows and significantly enhance GDP.

3. A stable political and economic environment is essential – Security and political stability in the country promote tourism and investment, positively impacting GDP growth.

4. Integration of environmental and tourism policies is crucial – Without coordinated measures to protect the environment and develop tourism, the potential growth of GDP remains limited.

5. Sustainable development strategies are necessary for the future – Recycling, preservation of natural and cultural resources, modernization of infrastructure, and implementation of environmentally friendly technologies ensure the sustainable growth of the national economy.

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