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THE ROLE OF GREEN INFRASTRUCTURE IN THE ECONOMIC GROWTH OF SUSTAINABLE TOURISM

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Abstract. *This article analyzes the economic importance of sustainable tourism and the role of green infrastructure development in enhancing its effectiveness. Although tourism is an important sector for economic growth and job creation, especially in poor countries, not implementing the principle of sustainability can lead to environmental problems and social uncertainties. The article examines the economic benefits of sustainable tourism (increased income for local communities, rational use of resources) and ways to ensure the sustainability of the industry through green infrastructure (eco-friendly hotels, renewable energy sources, waste recycling systems). The analysis results show that sustainable tourism and green infrastructure investments help reduce the impact of tourism on climate change and strengthen local economies.*

Keywords. *sustainable tourism, overtourism, attraction, amenities, transport accessibility, ancillary services*

Introduction. As tourism is a rapidly growing sector, it is crucial to further develop sustainable tourism to re-attract tourists to the area. Tourism includes various components such as economic, social, cultural, political, geographical and ecological factors of a logical place (destination). Tourist behavior is influenced by prices, quality, perception of the area, as well as the tourist's personal interests. The entire process of the tourism "product" is created by many participants.

Sustainable tourism is the industry and its related organizations operating within natural resources, taking into account the restoration and efficiency of natural resources in the present and future, recognizing the importance of people and communities, traditions and lifestyles, travel experiences, and also recognizing that these people and communities have the right to equitably benefit from the economic benefits in the host regions.

Supporting the environment is crucial for the long-term sustainability of tourism. To this end, when offering a tourism experience, it is necessary to take into account factors such as waste, pollution, the use of inorganic products and overtourism. Local communities also benefit from such tourism, as involving them in the tourism development decision-making process protects them from inflation, preserves their culture, and allows them to benefit from the sources of income that tourism brings to the area.

Overtourism is observed in some areas, which requires the construction of additional hotels and tourism activities due to the large number of tourists coming to one place. As a result, natural sites and resources are re-directed for tourists, which harms local ecosystems and forces the population to compete for resources. Therefore,

sustainable tourism helps to avoid this negative cycle, which is important for the industry to develop and succeed.

Main part. Achieving success as a sustainable tourism destination requires considering several important factors. First of all, in order to implement sustainability in the development of a destination, it is necessary to understand it not only as an obligation, but also as a broader process. The concept of sustainability should be seen not as achieving a set goal, but as a continuous journey. Therefore, it is important to effectively use cooperation and partnerships to achieve common goals and objectives. To apply new approaches, it is necessary to develop proposals for changes in accordance with the needs and sensitivities of all users. Improving the planning process is required to answer the question: How many tourists can be accommodated? This process requires clearly defining the scope and boundaries of impact, as different ecological features have different degrees of sensitivity to different levels of impact and types of use. The main goal is to identify and preserve the qualities that are valued by tourists and locals in each holiday destination.

The tourism destination plays an important role in attracting tourists. A tourism destination is a geographical location that has all the essential components to attract tourists and can meet their demands and needs. A tourism destination consists of various components, which are classified based on the 4 A principle.

Attraction - these are the factors that encourage and attract tourists to visit the destination. They include both man-made and natural attractions or cultural events.

Amenities - these include additional services and infrastructure such as accommodation, food, entertainment activities and recreation areas that tourists need during their stay at the destination.

Access - this is the development and continuous maintenance of the transport system that ensures access to the destination and visits to attractions within the destination.

Ancillary services - these are the services provided to customers and the tourism industry by the local tourism council at the tourism destination.

Sustainable tourism is a form of tourism that has a positive impact on the environment, society and economic development. It focuses on the rational use of resources, supporting the local population and the long-term sustainable development of tourism services. In this process, the 4A principle - Attraction, Amenities, Access and Ancillary services - plays an important role. In particular, their contribution to sustainable tourism is increasing through green infrastructure.

Attractions and green infrastructure. Within sustainable tourism, the ecological sustainability of attractions is important. This is ensured by protecting natural landscapes, national parks, historical monuments and cultural heritage sites. Green infrastructure makes it possible to create comfortable conditions for tourists without harming nature. For example:

Environmental protection measures are being strengthened in ecotourism areas.

Solar-powered information centers and lighting systems are being introduced.

Water resources are used efficiently and waste recycling systems are being developed.

Amenities and green infrastructure. Providing convenient services to tourists should be based on sustainable principles. This includes eco-friendly hotels, the use of local food products and the introduction of energy-saving technologies. For example:

Green hotels - accommodation facilities that use renewable energy sources and reduce waste.

Restaurants with organic products - support the local economy and reduce the ecological footprint.

Bicycle rentals and hiking trails - provide environmentally friendly transport alternatives.

Transport opportunities and green infrastructure. In sustainable tourism, the transport system is an important factor, which includes the use of environmentally friendly and low-carbon transport. Green infrastructure is based on:

Development of public transport - reducing the use of private cars by improving bus and train systems.

Electric vehicles and bicycle paths - encouraging tourists to use environmentally friendly transport.

Ecological paths and parks for pedestrians - creating a comfortable and safe environment for tourists by increasing green spaces in cities.

Additional services and green infrastructure. In the tourism sector, additional services play an important role in developing ecological awareness among tourists and tourism organizations. For example:

Ecotourism programs and information centers - provide tourists with an understanding of environmental sustainability.

The participation of the local population in tourism - ensures economic sustainability through ecological products and services.

Green certification systems - assess and encourage sustainable practices of hotels, restaurants and tourist sites.

Sustainable tourism and green infrastructure are interconnected, enabling the development of sustainable tourist destinations through the 4A principle. Implementing an environmentally conscious tourism policy not only creates a comfortable environment for tourists, but also has positive results for the local community and the environment. Therefore, sustainable tourism based on green infrastructure is one of the most important ways to preserve natural and cultural heritage for future generations.

It is possible to find a balance between travel and avoiding its negative consequences through a sustainable approach to tourism. This can be interesting and dangerous, but at the same time, it provides satisfying results and amazing ideas. The most important advantage of this approach is environmental protection. This is not surprising, because the main goal of sustainable development is to create a better and more sustainable future for people. One of the global problems it faces is the ecosystem and climate change.

On the one hand, the tourism industry is one of the largest economic sectors in the world, creating an important learning experience for the least developed countries. However, tourism is also one of the main sources of pollution and carbon dioxide

emissions. For example, according to European Union data, tourism is one of the main causes of carbon dioxide emissions in Europe, with more than 20% of pollution related to hotels and other infrastructure (Figure 1).

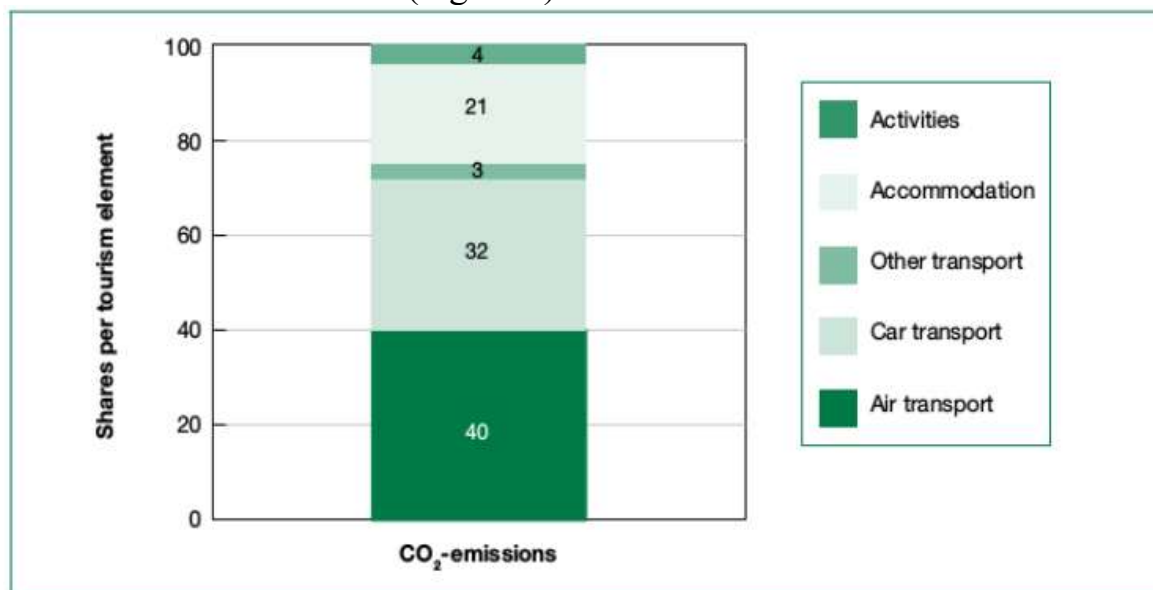


Figure 1: Main causes of carbon dioxide emissions from tourism in Europe

According to European Union data, the tourism sector is one of the main sources of carbon dioxide (CO₂) emissions. The figure shows the shares of pollution generated by tourism-related traffic and infrastructure:

- Air transport - 40% (the largest share).
- Light cars - 32%.
- Hotels and other infrastructure - more than 20% (motels, restaurants, recreational facilities, etc.).

Air transport accounts for almost half of all tourism-related CO₂ emissions, which has a significant impact on global climate change. Hotels and infrastructure are also significant sources of pollution, putting pressure on the ecosystem through energy consumption, water use and waste generation. These data indicate the challenges for the sustainability of tourism, as the sector's rapid growth increases its impact on natural resources and the atmosphere.

Sustainable tourism helps to address the problems that tourism can cause. Sustainable tourism provides tourists with an authentic experience of the host destination, allowing them to enjoy it for years to come, as it is maintained responsibly. It is based on its three pillars - economic, socio-cultural and environmental.

Economically, it encourages two-way communication between the tourist and the host community. It contributes to the local economy, which helps to reduce poverty. Again, it is related to cultural exchanges and knowledge sharing between the tourist and the host community, and is aimed at reducing the negative environmental impacts of the industry. This can be done by choosing environmentally friendly accommodation or transport options, which helps with environmental factors such as pollution and CO₂ emissions.

Conclusion. Sustainable tourism is of great importance economically, socially and environmentally, and its development plays an important role in ensuring the long-term effectiveness of the tourism sector.

Analyses show that sustainable tourism helps the development of the local economy, creates new jobs and serves to increase the welfare of local communities. In particular, green infrastructure (eco-friendly hotels, renewable energy sources, waste recycling systems) makes a great contribution to sustainable tourism.

The tourism industry can be associated with overexploitation and environmental problems, but by implementing the principles of sustainable tourism, it is possible to protect natural and cultural heritage, use resources rationally and strengthen social relations between tourists and locals.

Green infrastructure serves to improve transport opportunities, create environmentally friendly tourist facilities and increase energy efficiency. In addition, it is also possible to reduce the negative impact on climate change through sustainable tourism policies.

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