



University of Belgrade, Technical Faculty in Bor  
29<sup>th</sup> International Conference Ecological Truth  
& Environmental Research



# EcoTER'22

## Proceedings



*Editor*

*Prof. Dr Snežana Šerbula*

*21-24 June 2022, Hotel Sunce, Sokobanja, Serbia*



University of Belgrade, Technical Faculty in Bor  
29<sup>th</sup> International Conference Ecological Truth  
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**29<sup>th</sup> INTERNATIONAL CONFERENCE**

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## **PREFACE**

*In today's world, the environment has been endangered by the use of outdated technology, fossil fuels and environmental law violations. Therefore, environmental and many other scientists all over the world have been concerned about finding sustainable technology in resolving these issues. That is why environmental research and ecological truth are at the focus of the 29<sup>th</sup> International Conference Ecological Truth & Environmental Research 2022 (EcoTER'22), which will be held in Sokobanja, Serbia, 21–24 June 2022. On behalf of the Organizing Committee, it is a great honor and pleasure to wish all the participants a warm welcome to the Conference.*

*We hope to convey the message of the conference, which is that a transformation of attitudes and behavior would bring the necessary changes. This is also an opportunity for the participants who are experts in this field to exchange their experiences, expertise and ideas, and also to consider the possibilities for their collaborative research.*

*The 29<sup>th</sup> International Conference Ecological Truth & Environmental Research 2022 is organized by the University of Belgrade, Technical Faculty in Bor, and co-organized by the University of Banja Luka, Faculty of Technology, the University of Montenegro, Faculty of Metallurgy and Technology – Podgorica, the University of Zagreb, Faculty of Metallurgy – Sisak, the University of Pristina, Faculty of Technical Sciences – Kosovska Mitrovica and the Association of Young Researchers, Bor.*

*These proceedings include 85 papers from the authors coming from the universities, research institutes and industries in 6 countries: Bulgaria, Italia, Albania, Bosnia and Herzegovina, Montenegro and Serbia.*

*As a part of this year's conference, the 4<sup>th</sup> Student section – EcoTERS'22 is being held. We appreciate the contribution of the students and their mentors who have also participated in the Conference.*

*Financial assistance provided by the Ministry of Education, Science and Technological Development of the Republic of Serbia is gratefully acknowledged by the Organizing Committee of the EcoTER'22 conference.*

*The support of the Platinum donor and their willingness and ability to cooperate have been of great importance for the success of EcoTER'22. The Organizing Committee would like to extend their appreciation and gratitude to the Platinum donor of the Conference for their donation and support.*

*We appreciate the effort of all the authors who have contributed to these Proceedings. We would also like to express our gratitude to the members of the scientific and organizing committees, reviewers, speakers, chairpersons and all the Conference participants for their support to EcoTER'22. Sincere thanks go to all the people who have contributed to the successful organization of EcoTER'22.*

*Prof. Snežana Šerbula,*

*President of the Organizing Committee*



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## ECOTURISM AS A FORM OF GREEN ECONOMY

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### Abstract

*Intensive technological development has led to significant changes in the structure of tourist supply and demand. So today the concept of sustainable tourism development dominates, which means the development of tourism that meets the needs of current tourists, tourist destinations and all participants in tourism, while preserving and increasing the potential for future tourism resources, without compromising the ability of future generations to meet their own needs. The critical question of sustainable tourism is how to turn sustainable development into practice in all tourism activities—from mass to nature tourism and special forms of tourism. We identify ecotourism as a chance to improve tourism in many destinations. Ecotourism is one component of sustainable tourism that can play a significant role in preserving a particular destination's natural and anthropogenic values. As a new form of touristic offer, ecotourism is an environmentally responsible tourist trip that shows specific areas to stay and enjoy nature. Today, in the world of eco-tourism, it is increasingly becoming a global phenomenon that includes not only movements related to staying in certain tourist facilities but also various adventure trips.*

**Keywords:** sustainable development, ecotourism, green economy, ecology, ecological economy

### INTRODUCTION

Tourism is one of the leading economic branches, and more and more people need it in the technological age, to rest with some time spent at a tourist destination. It is interesting that today, tourism is one of the major forms of production. According to the UNWTO (World Tourism Organization), transactions in the tourism market amount to approximately \$5 billion every day and move 20 percent of the world's population (over 1,400 million people), which makes at least one tourist trip a year.

The growth in the number of people traveling each year is exponential, as are the consequences. We have noticed that most tourists avoid destinations with disturbed environments. Forms of spending free time are increasingly taking place in a natural environment where rich cultural, historical, ethnographic, and Eco content is always welcome. Given the unexpectedly rapid development of tourism, which posed a serious risk to the environment and the well-being of the population, tourism has gradually developed into an important factor in sustainable development. This has caused many destinations, in order to adapt to new trends, to allow tourists to enjoy and gain knowledge about the natural, historical and cultural characteristics of a unique environment while preserving the integrity of the place and encouraging economic development and local community well-being.

Ecotourism, or at least the idea of ecotourism on paper, was born as a concept contrary to the conventional tourism model and seeks balance, in the same way, that sustainable tourism applies to the urban environment [1]. Ecotourism has been just one way to travel. The partial collapse of the tourism sector marked the year of the Covid-19 virus pandemic, which we left behind. Despite all that, social networks are flooded with photos of those who are exploring, mountain peaks, villages and hamlets, hills, and forests of Serbia for the first time. During the pandemic year, nature was our enemy, and yet it seemed miraculously close, taking us back, at least for a moment, to some old, different times. Eco-tourism, as a form of green economy and a topic in scientific and professional papers, is insufficiently processed, and it can be said that it is neglected.

## **ECOTOURISM**

### **Meaning of Ecotourism**

Ecotourism is a specific form of travel to relatively unpolluted areas of nature to admire and enjoy the landscapes, wild plants, and animals, but also in all the accompanying cultural facilities of a particular location. TIES (International Society for Ecotourism) defines ecotourism as: "Responsible travel in nature, which protects the environment and supports the well-being of the local population" [2].

The basic principles of eco-tourism are: minimizing the negative effects on nature and local communities; influencing the long-term participation of the local population in decision-making; providing economic and other benefits to local communities; contributing to the protection and management of protected and other natural resources [3]. And the most common misconceptions about eco-tourism are reflected in the following factors: an underdeveloped area is an ideal area for the development of eco-tourism; an opinion that the environmental awareness of the local population and tourists is at a high level; equating ecotourism with rural tourism.

Ecotourism strives to achieve the results of sustainable development in all its forms. However, it is important to note that all tourism activities-whether related to mass tourism or specific forms of tourism-should aim at sustainability. From this, it is concluded that the planning and development of tourism infrastructure, its further functioning, as well as its marketing, should focus on environmental protection, social, cultural, and economic criteria of sustainability [4].

Experiencing the natural environment actually means respecting and preserving the area in which we are, whether it is a village, mountain, river, or forest. The most important concepts of this new type of tourism are respected and preserved.

### **Ecotourism in Republic of Serbia**

Serbia has huge potential for ecotourism development. Beautiful, peaceful rivers, rich forests, and mountains give tourists the opportunity to enjoy. Let us mention only the region of Lake Vlasina, the slopes of Zlatibor, Divčibare and Kopaonik. Many travel agencies also offer these types of arrangements: trips to preserve nature. Tourist adventures in Serbia provides an incomparable experience of a pure, untouched nature. We know that travel has the power to protect nature; it brings benefits to the community and contributes to the

preservation of cultural heritage. These three principles should become not only our goal, but also our responsibility.

Ecotourism is in direct functional connection with the environment. It should preserve the soil and ecosystem in every way. This refers to the protection and restoration of environmentally sensitive land, natural resources, agricultural land, watersheds and water resources, cultural and historical spaces, increasing the quality and availability of open space and recreational opportunities.

Natural resources should be used wisely: to build facilities and infrastructure for tourists, but with the preservation of natural resources, reduction of waste, and reduction of pollution through efficient use of land, energy, water, and materials. As far as transport is concerned, there is room for improvement-clearing paths for cyclists and pedestrians, cleaning river canals and shores, and using land transit. Development projects in the field of transport and housing are very important here. The trend of sustainable development is widespread and increasing in development.

The promotion of clean energy means increasing energy efficiency through the renewable energy system and the energy distribution system. Strive to reduce greenhouse gas emissions and consumption of artificial fuels. Protection of autochthonous culture and traditions: preservation of culture and traditions of the autochthonous population of the region, conservation and preservation of archeological sites and historical sites. Besides the above positive effects of ecotourism on the environment and the local community, there are several negative parameters that must be considered for a protected area of untouched nature. This type of sustainable tourism includes any type of tourism that contributes to protecting the environment, social and economic integrity, and the promotion of natural values. It is crucial that tourism activities, as well as capacity building and infrastructure activities, do not harm nature (watercourses, coastal areas, wildlife).

Unfortunately, there is an obvious lack of adequate infrastructure in Serbia, which would support the development of sustainable tourism. There is also a lack of efficient planning of waste management in tourist places, in order to minimize the negative impact of tourist activities on the environment. We should place special emphasis on the development of "environmentally friendly technologies" such as Eco toilets, which are currently insufficiently present in Serbia.

The fact, which we cannot deny, is that Serbia is an extremely beautiful country, which has a preserved environment. At every step, we can see a trace that nature has made with its processes and left behind. We legally protected these national parks, but rivers, lakes, parks, waterfalls, natural landscapes, etc. Sometimes we are not aware of the beauty we possess. We will list only some of them: nature reserves Uvac, Zasavica, Carska bara. There are also many mountains, lakes and rivers that create magnificent waterfalls, one of the biggest attractions for tourists [5].

### **The future of ecotourism in Republic of Serbia and its impact on the green economy**

In order to better understand the concept of ecotourism, Fennell (2001) studied 85 definitions of ecotourism (mostly from a 20-variable perspective), using a content analysis method. Based on this study, he concluded that the variables that are most often mentioned in

the definitions include: 1. areas where ecotourism occurs, e.g. natural areas; 2. protection; 3. culture; 4. benefits for the local community, and 5. education [6].

Ecotourism, as a specific market niche and part of a broader concept of sustainable tourism, is a responsible journey to relatively preserve natural areas that preserve the environment and cultural values, stimulating the increase in the standards of the local population [7].

Eco-tourist destinations with their population are set as certain catalysts in the restoration of ecotourists, tourists who come from a modern society in which the evaluation of the natural environment is different [8]. In order for a destination to receive the epithet of an eco-tourist destination, it is necessary to meet certain criteria. The criteria adopted by international ecotourism agencies that should meet "real" ecotourism are: preservation of bio and cultural diversity through the achievement of minimal impact on the natural resources of protected areas; generating sustainable and legal income for the benefit of local communities; involvement of local communities, ecotourists, tour operators and state institutions in planning and development processes; improving environmental and cultural knowledge through respect for local traditions and culture; generation of revenues intended for the preservation of protected areas; training of the shareholders on their role in the process of nature protection and conservation [9].

One advantage of ecotourism is the impact on the environment, which is less than with conventional tourism, although this is no effect, as many promoters say because it is impossible. It fosters respect for local traditions and cultures and economic benefits to the local population (through income from activities). This marks a difference from conventional tourism, which mainly benefits large restaurant chains, hotels, and travel agencies, usually multinational.

One of the major disadvantages of ecotourism is that, although environmental pollution is less than with mass tourism, it is still an enormous mass of the population that moves (and generates waste). It also generates that many buildings are used to accommodate tourists, and this is impossible to limit, especially when it is tourists who offer profits to the local population. The social difference between those who visit and have the money for it, and those who have to serve, clean and entertain these guests is as insignificant as with conventional tourism and does nothing to change the situation, except offering a layer of green to unevenness.

The risks of ecotourism are equal to the risks of conventional tourism. Overcrowding is very difficult to control, especially when a place becomes "modern". It also creates a problem for the land and water of the place, whether people go by car or other means of transport, such as boats and buses. Extensions used to accommodate tourists, as well as land for planting food, are taken directly from the surrounding natural areas. The waste generated by tourists and tourism, as well as energy consumption (water, electricity) is still huge and directly affects the environment. Wild animals are affected by the reduction of their habitat, noise, people walking, and others, which significantly changes their well-being.

A large number of tourists in recent years have left their mark on tourist destinations, and many places have felt the negative impact of mass tourism. After a long period of isolation

and work from home, there was a significant increase in visits to national parks. Queues for painting in front of waterfalls and lookouts and outdoor activities have replaced the trend of visiting big cities, museums, and concerts. Eco-tourism, which has seen a slight increase in recent years, is now a new opportunity that can save tourism in the post-covid era. What used to be only the potential but also the hope of many environmental organizations is now a reality. Since the onset of the coronavirus crisis, the tourism industry has come under significant global pressure-research shows that environmentally conscious vacations in nature, rural and less populated areas are what attract tourists in these circumstances.

When it comes to Serbia, tourist organizations throughout the country have noticed an increase in interest in the numerous natural beauties that Serbia can provide. As an indisputable proof of that, the increased number of tourist visits supports this.

## **CONCLUSION**

Although economists are extremely satisfied with the financial effects of tourism, over 70% of the world's population ignores one extremely important fact, and that is that this lucrative activity has many negative aspects, including endangering the environment. The International Union for Environmental Protection at the United Nations (IUCN) warns that an additional source of danger is the negligence of tourists who often use significantly more resources than they need for a pleasant vacation, causing serious damage to both locals and the planet Earth.

We live in a world where many areas are destroyed and environmentally polluted. Food, water, air, and land are contaminated, the climate has changed, and all this affects tourism. In order for this not to happen, we need to engage in eco-innovation and its realization. The first thing is to gain awareness and knowledge about protecting the natural environment, as well as about the economic and cultural aspects of a certain area and place. Thus, the tourist will become a socially responsible person who enthusiastically participates in environmental issues. While the nature-oriented tourism is essentially a simple journey to areas with beautiful nature, ecotourism benefits the local population in environmental, cultural, and economic terms-the green economy.

Tourism development is best if it is planned and based on modern requirements of sustainable development (green economy) that put in the forefront such landscaping for tourism so that it is without violating basic environmental laws, regardless of whether it is legally protected facilities parks, nature reserves, etc.), or nature. Abuses of natural resources in order to expand tourist travel and increase tourist traffic have led to environmental problems and threats to natural heritage, but also to raising awareness of the need to establish and constantly apply the concept of sustainable tourism development.

Sustainable tourism should enable the optimal use of environmental resources that are a key element of tourism development, in order to enable the heritage preservation and sustainable business. In order to realize the idea of sustainability and eco-tourism, it is necessary to establish an innovation system for eco-innovation, because they are of fundamental importance for the preservation of the environment, mostly the most beautiful places on the planet. As an important segment of sustainable tourism, ecotourism is a

responsible journey into relatively preserved natural areas that preserves the environment and cultural values and the values of ecotourism destinations. Through the improvement of the tourist offer, ecotourism can have multiple positive effects on increasing the standards of the local population and the overall sustainable economic development of the local (ecotourism) community.

It can be concluded that Serbia has significant potential for the development of eco-tourism and that an increasing number of people are interested in investing in this branch of tourism, but also that concrete projects are needed, as well as cooperation with European Union countries brings eco-tourism.

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