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DIGITALIZATION OF THE TOURISM ECONOMY AND SPATIAL PLANNING IN THE ENVIRONMENT OF CLIMATE GOALS WITH THE APPROACH OF THE REPUBLIC OF SERBIA, MONTENEGRO AND CROATIA

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Abstract:

This paper aims to explore the interaction between modern tourism, climate change, and spatial planning, with a particular focus on the application of digitalization and innovations in the tourism economy. The main goal is reviewing the key elements of the system of contemporary climate change and climate goals, politics and law in modern ambiences. The paper uses a methodological approach to consider digitalization phenomena in tourism and spatial planning in achieving existential climate goals. An overview is also given of the way of implementing global international obligations through the national regulations of Serbia, Montenegro and Croatia. The concepts of these countries are basically based on international regulation in this sphere with certain national specificities. We conclude that emphasizing the need for an integrated approach that combines digitalization, adaptation to climate change, and effective spatial planning to ensure the sustainable and prosperous development of modern tourism.

Key words: *digitalization, tourism economy, innovations, climate change, spatial planning, climate goals, Serbia, Montenegro, Croatia*;

Introduction

Contradictions in the living environment are essential challenges for all actors of modern society, so their legitimacy is striking through the constant engagement of competent international institutions. Industrialization and uncontrolled economic development have led to global challenges such as climate change, the depletion of the ozone layer, and growing economic inequality. These problems point to the need for urgent action, which is also recognized through international agreements such as the Paris Agreement, which aims to limit global warming and transition to sustainable development models.

Climate change is a long-term change in the Earth's temperature and weather patterns. Although natural variations in climate have existed throughout history, modern climate change is largely due to human activities, especially greenhouse gas (GHG) emissions such as carbon dioxide (CO_2) and methane (CH_4). The main cause of modern climate change is the burning of fossil fuels (coal, oil and gas) for energy production, transport, industry, and warming the planet. Additional factors include deforestation, which reduces CO_2 absorption capacity, and certain agricultural practices that increase methane emissions. Therefore, all segments of the global community have an imperative to formulate an adequate concept of climate goals. In this context, Serbia, Montenegro and Croatia are undertaking certain concepts towards improving the medium and long-term planning of objectives for the purpose of effective adaptation to current climatic conditions, in accordance with international legislation.

Modern tourism is facing the challenges of climate change, which creates the need for the application of new technologies and innovations. Digitalization plays a key role in this context, enabling

better monitoring and management of tourism's environmental impact. The use of smart technologies makes it possible to reduce carbon dioxide emissions, while innovations in ecotourism help to protect natural resources. The integration of digital platforms enables better planning of tourist destinations, optimization of traffic, and improvement of energy efficiency, therefore contributing to the sustainability of tourism in the face of climate change.

Tourism is one of the fastest growing sectors of the global and national economy today, but at the same time it contributes significantly to climate change in a negative constellation. The main sources of greenhouse gas emissions in tourism include transport, especially air transport, as well as energy consumption in accommodation facilities from spatial planning. According to research by relevant world actors, the carbon product of tourism accounts for about 8% of global greenhouse gas emissions as a repercussion of the greenhouse gas phenomenon.

Spatial planning plays a crucial role in the development of tourism, especially in the context of climate change. By using strategies that take into account key environmental aspects, such as biodiversity conservation and natural resource management, it is possible to create sustainable tourist destinations. In this context, compatible spatial planning inaugurates human resources, innovative trends, postmodern information and communication technologies and possible climate change in its plans, in order to minimize negative consequences for tourism and ensure long-term sustainable development goals. The digitalization of the tourism economy in correlation with effective spatial planning of tourist facilities within which climate goals are conceived, among other domains, provide objective circumstances for the progress of each individual country, including Serbia, Montenegro and Croatia.

1. Methodology of scientific research

The postmodern international community, as well as all individual states, realistically exist in an environment of drastic threat to the environment, i.e. the endangered future of the human population. Climate change is exacerbating the current anomalies with incalculable repercussions. Therefore, we insist on an innovative approach to creating a tourism economy on the platform of digitalization and spatial planning, adapted to the climate goals defined in the Introduction section. The current state of the planetary configuration and all its segments points to an increased responsibility of the relevant international entities and the responsible factors of the nation states. Such a shape of affairs imperatively requires taking adequate strategic solutions in the context of climate change design, competent formulation of climate goals and elimination of observed controversies, in order to ensure a prosperous future. These arguments imply an adequate approach of the relevant subjects of each separate entity, such as Serbia, Montenegro and Croatia.

The subject of our research is a scientific consideration of the digital transformation of the tourism economy and the projection of spatial planning in the context of the realization of proclaimed climate goals. The priority is to eliminate the anomalies, improve the existing situation and create conditions for successful convergence towards the European Union. This means the conception and implementation of appropriate standards in a given area, in accordance with Community law and international legislation.

The main goal of our work is scientific research of the substantive aspects of digitalization in the tourism economy and spatial planning of tourist destinations in order to eliminate pronounced retrograde trends in the field of the environment, according to the formulated climate goals of Serbia, Montenegro and Croatia. The responsible subjects of each state are imperatively required to eliminate environmental anomalies with the adoption of lucrative concepts, which has not been sufficiently implemented so far. We will try to use established academic procedures to look at the most important postulates of the observed topic, as a first-class threat to the survival of the human civilization. A particular challenge in the implementation of the set tasks is the adoption of certain legal and by-law documents, in line with the positive experiences of progressive countries and international regulations. In the paper, we especially point out the importance of digitalization in tourism activities, proper spatial positioning of tourist destinations, their adaptation to environmental changes and proclaimed climate goals, from the point of view of the observed repercussions, with possible recommendations for the elimination of manifested social controversies.

Research hypotheses are defined according to the problem, the subject, and the goals formulated, following traditional academic principles.

The basic hypothesis:

The digitalization of the tourism economy and adequate spatial planning of resources are essential segments of the social development, which needs to be competently incorporated in the implementation of defined national climate goals. The existing institutional capacities of the Republic of Serbia, Montenegro and Croatia represent a satisfactory framework for the implementation of the strategic projects of environmental protection and improvement in the conditions of pronounced climate change. Adequate conception of environmental standards and legislative documents, harmonized with the legislation of EU Community law, initiates the elimination of anomalies and ensures the implementation of the doctrine of sustainable development. These postulates create conditions for the implementation of the existential requirements of the population, as well as the criteria for successful convergence into the European Union and the group of developed countries, with the provision of a prosperous existence of the population.

Special hypotheses:

H1: Objective indicators stipulate that there are numerous contradictions in the functioning of institutions in the spheres of digitalization, i.e. the application of information and communication technologies in the tourism economy, resource and destination planning, and the treatment of environmental anomalies. Especially climate change. It is evident that all relevant subjects of society must constantly consider the influential postulates in the implementation of the competencies of institutions and the coordination of the activities of the subjects of the incorporated departments of the state in order to achieve the adopted solutions.

H2: The defined climate goals of Serbia, Montenegro and Croatia in the form of adopted legislative documents represent the starting point for the implementation of the conceived measures. The envisaged normative acts are harmonized with the provisions of European law, the United Nations Framework Convention and other international regulations. Successful implementation of the innovative approach ensures the improvement of the quality of tourism services, improvement of business competitiveness, satisfaction with the provision of services and sustainable existence of citizens.

In our work, all the essential methods of scientific knowledge will be applied, with an emphasis on analysis, synthesis, description, classification, systematization and generalization. The use of the given methods will ensure a logical and clear path that will result in the knowledge of the observed object of research and the achievement of the projected goals. From the general scientific methods, the hypothetical method of induction and deduction, the statistical and comparative methods will be applied. Consequently, we will use appropriate academic procedures, instruments and techniques of the research process.

The importance and justification of the current research is reflected in the scientific and social aspects of looking at the topic of digital transformation of the tourism industry, adequate spatial planning and the competent achievement of climate goals. Such an approach is relevant in the current conditions of the endangered human perspective, the planet Earth, as well as Serbia, Montenegro and Croatia. The scientific contribution is manifested in the systematization of existing and the acquisition of new knowledge in the fields of law, ecology, economics, informatics, tourism, politics and other social disciplines, providing a detailed insight into the engagement of the institution in the considered sphere. Proper engagement of given capacities eliminates the interweaving of competencies of certain government bodies involved in projects, problems in the coordination of state institutions and other contradictions. Our research fosters debate and social dialogue, from the position of the broadest identification and consideration of acute difficulties. The need to formulate real challenges and potential solutions in the human environment is initiated by implementing digital technologies and innovations in practice with the definition of optimal concepts in order to improve the situation and ensure the existence of the human population.

The social importance and justification is reflected through the competent positioning of the institutions of the Republic of Serbia, Montenegro and Croatia in the field of expansion of the tourism economy, creative spatial planning and the achievement of climate goals and sustainable environmental development of the observed countries and the wider community. It is necessary to achieve the trust of the

population in the observed state government bodies, to improve the level of awareness of citizens in ecology and natural resources, as well as the engagement of all national institutions. Establish cooperation between public institutions and non-governmental organizations, indigenous associations, media and other community actors is a must. A relevant interpretation of the necessity for an innovative reform approach to this topic will imply a deep understanding and creative relationship of all official factors of society in the context of eliminating negative repercussions and ensuring the progress of the state creation. The attitudes and perceptions of different social groups will contribute to the containment of existential anomalies in the analyzed areas and the wider development of society. It also implies the satisfaction of citizens with the treatment and services of public service broadcasters, in the context of the implementation of the process of convergence towards the European Union and other nationally determined lucrative international groupings.

2. Discusion and Results

Digital transformation and innovation in the tourism conglomerate are playing a first-class role in reducing depressive trends and adapting this industry to climate challenges. The energy conversion and the transition to renewable energy sources are becoming necessary in the tourism industry, especially in the infrastructure of hotels, transport and tourist destinations. Digital technologies enable smart management of energy consumption through automated systems that optimize heating, air conditioning and lighting in buildings, thereby reducing unnecessary consumption and contributing to environmental protection. A key role in effective digitalization is played by sustainable energy solutions and the reduction of negative repercussions of the tourism economy. (Nešković, p. 11, 25)

Given the intense demands to reduce greenhouse gas emissions and increase energy efficiency, digitalization enables the development of smart tourism destinations that use renewable energy sources, advanced waste management systems and environmentally friendly transport options. The use of IoT (Internet of Things) devices, sensors and artificial intelligence enables more accurate monitoring and reduction of greenhouse gas emissions. Smart hotels use systems that automatically regulate temperature and lighting depending on the presence of guests, which significantly saves energy. In addition, the application of electric vehicles and modern transport networks in the field of transport make it possible to reduce the devastating consequences of the impact of harmful substances in the human environment.

A significant aspect of digitalization in tourism is the development of digital platforms that enable more sustainable travel planning. Mobile apps and online tools are increasingly integrating features to calculate the environmental footprint of travel, offering tourists the opportunity to choose more environmentally friendly transport and accommodation options. Virtual (VR) and augmented reality (AR) are also playing an increasingly important role in reducing the negative impact of tourism – instead of traveling to distant destinations, tourists can experience cultural and natural sights through VR technology, thus reducing mass tourism and pressure on natural resources. Modern technologies not only improve the tourist experience, but also encourage environmental awareness, which is crucial for the sustainable development of tourism in the conditions of climate change. Their wide application in energy, infrastructure and planning enables more efficient use of resources, reduction of waste and adaptation of destinations to modern environmental standards.

In the conglomerate of climate goals proclaimed in the European Union's 2030 energy strategies, tourist destinations are expected to increase the use of renewable energy sources and integrate digital solutions into the management of tourism activities. The introduction of smart energy supply networks and digital waste recycling systems not only improves the environmental sustainability of tourism, but also contributes to greater competitiveness of destinations in the global market. In addition, digitalization enables the development of virtual tourism experiences, thereby reducing the need for travel and CO_2 emissions. Virtual reality and augmented reality are becoming increasingly important tools in the promotion of destinations and allow tourists to explore sites before visiting them, which can optimize tourism pressure

on ecosystems. All of these innovations are a key part of the strategy to reduce the environmental footprint of tourism in the face of climate change.

Modern technologies and digitalization play a key role in the modernization of the tourism economy, especially in the context of climate change and spatial planning. The European Union, in its quest to become climate neutral by 2050, fosters innovation and digital solutions in various sectors, including tourism, through legal and strategic frameworks. The National Energy and Climate Plans (NECPs) lay the foundations for a sustainable energy transition, with an increasing emphasis on smart energy grids and renewable energy sources, such as photovoltaic technologies, whose cost is declining and whose integration can contribute to the sustainable development of tourist destinations.

At the local level, digital solutions can improve climate and energy planning through the use of advanced analytical tools, sensor networks and predictive models to assess the impact of climate change on tourism flows. Smart cities, as part of a broader sustainable development strategy, apply IoT technologies to optimize energy efficiency, while digital platforms enable more transparent planning and public involvement in decision-making. In the context of tourism, the development of digital guides, interactive maps and applications that inform visitors about environmental initiatives and sustainable practices further contributes to environmental awareness and reducing the negative impact of tourism on the environment.

Despite technological progress, there is a noticeable delay in the implementation of modern strategies in the Balkan countries, which still rely heavily on outdated planning methods and international expertise instead of national capacities, which applies mostly to Serbia and Montenegro, and partly to Croatia. Digitalization and the implementation of innovations in the tourism industry, with competent spatial planning of tourist destinations, represent a necessary step towards sustainable development, but require systemic support and active involvement of local communities in order to ensure the effective implementation of climate adaptation strategies, with the implementation of objectively based climate goals in the tourism economy (Ibidem, p. 7). Moreover, financial sector development, including banking systems, is vital for supporting the economic growth that underpins sustainable tourism initiatives in these regions (Bylo & Memushaj, 2024). In the following text, we give an overview of the modalities of digital transformation and the application of artificial intelligence in the tourism industry.

Blockchain technology is an innovative paradigm of digitalization in the tourism sector. This system ensures much greater business compatibility, security and efficiency at all stages of planned activities. This technology works as a decentralized database, where information is stored in encrypted blocks that are connected in a chain. Its application in tourism brings many advantages, especially in terms of bookings, payments, loyalty programs and data protection.

Traditional booking systems often depend on intermediaries, such as agencies and OTAs (Online Travel Agencies), which can increase costs and the risk of fraud. Blockchain enables direct and more secure transactions between travelers and service providers, eliminating the need for third parties. Smart contracts automatically process reservations and payments without the ability to manipulate data, reducing false bookings and double charges. Travel companies are increasingly accepting cryptocurrencies as a form of payment, allowing for faster and more secure transactions without high bank fees and currency conversions. Cryptocurrencies, such as Bitcoin and Ethereum, allow travelers to pay for accommodation, airfare, and other services without the need for traditional banking systems, increasing financial flexibility and reducing costs.

Blockchain can significantly improve security and efficiency when tracking luggage and verifying passenger identities. By using this technology, airports and airlines can track luggage in real-time, reducing the possibility of loss and theft. Also, blockchain enables digital identity verification using decentralized databases, reducing the need for multiple checks on passports and identification documents at different points of travel. Travel companies offer loyalty programs in which travelers collect points for certain services. However, these programs often have complex usage conditions and limitations. Blockchain enables more transparent and efficient management of loyalty programs, where users can easily transfer or use their points with different travel partners, without the need for intermediaries (Farias Deborah, 2, 31).

One of the biggest problems in digital tourism is fake reviews that can mislead tourists. By using blockchain technology, reviews can be verified and permanently recorded, guaranteeing their authenticity. This allows for greater reliability in the selection of destinations, hotels and travel agencies. Blockchain represents the future of the digitalization of tourism, enabling safer, more efficient and more transparent operations. Although its implementation is still in its early stages, a growing number of travel companies are exploring ways to use this technology to improve the user experience and optimize their services.

The implementation of blockchain technology in tourism is not only theoretical; There are already concrete examples of its applications. For example, certain airlines and hotel chains are already accepting cryptocurrencies as a means of payment, allowing travelers to use digital currencies to make reservations. Decentralized platforms for sharing travel experiences have also been developed, where users can communicate directly and exchange services without the need for centralized intermediaries. These examples point to the growing trend of integrating blockchain into various segments of the tourism industry, which contributes to its efficiency, transparency and adaptation to modern technological trends.

Artificial Intelligence and Climate Change in Tourism

Artificial intelligence (AI) and automation are significantly transforming the tourism industry, improving the efficiency of operations and the quality of services. The integration of these technologies allows for personalization of passenger experiences, optimization of business processes and improvement of customer support.

Artificial intelligence entities analyze large amounts of data to understand travelers' preferences and behavior, allowing travel companies to provide customized recommendations and content. This personalization contributes to greater customer satisfaction and brand loyalty. For example, the KAYAK search engine integrates ChatGPT, allowing users to ask questions like, „Where can I fly from London for less than £300 in April?“ and get recommendations based on a large database. Chatbots and virtual assistants with AI capabilities enable 24/7 interaction with users, efficiently processing queries and reservations without the need for human intervention. This reduces operating costs and improves service speed. Artificial intelligence also helps analyze tourist flows, which allows for better planning and allocation of resources (Nešković, 9, 35).

This postmodern phenomenon enables faster and more accurate responses to user queries, analyzing previous interactions and providing relevant information. This increases customer satisfaction and reduces the workload on human agents. For example, AI can offer alternatives in the case of an overbooked hotel, but it can't negotiate or provide comfort like a human agent can. By analyzing user data, AI helps create targeted marketing campaigns, increasing the effectiveness of promotions. This allows tourism companies to better understand the needs of the market and adapt their offers. AI also helps analyze competition and current market trends, allowing strategies to be adjusted more quickly. By introducing artificial intelligence and automation, the travel industry can provide more efficient, personalized and high-quality experiences to travelers, which contributes to a competitive advantage in the market.

The first-rate challenge of artificial intelligence is the process of security and data protection as key aspects in the digital part of tourism. Given the extensive exchange of personal and financial information between travelers and tourism workers, this area is gaining crucial importance. Travel platforms often collect users' personal information, including first name, last name, address, email address, and payment information. This information must be protected from unauthorized access, loss or misuse. A lack of adequate security concepts can lead to serious consequences, such as identity theft or financial losses for users. In the European Union, the protection of personal data is regulated by the General Data Protection Regulation (GDPR), which sets strict guidelines for the collection, processing and storage of personal data. Tourism companies are obliged to implement appropriate technical and organizational measures to ensure the security of their users' data (Green, 3, 17).

Climate change has a significant impact on various types of tourism, especially winter tourism, where the disappearance of snow and ski resorts is becoming a serious problem. Similarly, coastal

destinations are facing coastal erosion and rising sea levels, which reduces tourist attractiveness. In addition, tourism itself contributes to climate change through greenhouse gas emissions, especially in transport and energy consumption for accommodation. Sustainable tourism, which respects climate policies such as the Paris Agreement, can help reduce the negative consequences for tourism and the environment. The Paris Agreement is important not only because of the global agreement, but also because of the challenges of its implementation. Many countries have adopted targets, but they are not ambitious enough, and industrial lobbies often slow down progress. There is also inequality, as poorer countries suffer the brunt of climate change, even though they contribute the least to emissions.

Tourism and climate change are deeply linked through the impact of tourism activities on the environment and, conversely, the impact of climate change on the tourism economy. Coastal tourism is facing rising sea levels and coastal erosion. On the other hand, tourism contributes to environmental degradation through energy consumption, water and air pollution, as well as excessive infrastructure construction. Tourism is subject to change caused by global warming, which is reflected in the shift of tourist destinations to more northern areas. European tourism is forecast to shift more and more towards Scandinavia and the Baltics, while more southern destinations, such as the Mediterranean, will suffer losses due to extreme temperatures and the disappearance of coastlines. However, there is a lack of institutional capacity and methodological tools for the effective implementation of these strategies, especially at the local level in the Western Balkans.

One of the key aspects of spatial planning in rural tourism is the harmonization of environmental, economic and social factors. Increased tourism pressure can contribute to the degradation of natural resources, while inadequate planning can cause conflicts among different interest groups. In this context, spatial planning must ensure the sustainable development of rural areas through the regulation of tourist activities, the protection of natural landscapes and the creation of policies that will enable a balance between the preservation of the identity of the village and economic development. Development planners will face the challenges of integrating tourism into rural areas in a way that will be sustainable and environmentally friendly, which will enable the long-term valorization of these areas in accordance with modern needs and the challenges of climate change.

The planned development of tourist destinations requires the construction of adequate infrastructure, including roads, airports, water supply and sewage systems, as well as facilities intended for tourists such as hotels, restaurants and agencies. This process changes the natural environment in the initial stages, but its long-term impact also depends on the way tourism is organized and how tourists behave at the destination. The environmental impacts of tourism are particularly pronounced in coastal and mountainous areas, which remain among the most visited destinations, but are also the most vulnerable to degradation. Excessive urbanization, pollution and changing natural cycles are just some of the challenges that arise due to intensive tourism development. At the same time, with proper spatial planning and sustainable strategies, tourism can contribute to the protection of natural and cultural heritage through controlled visitor management and investments in environmental conservation.

Sustainable tourism planning involves several steps: defining the system and the market, setting clear goals, collecting and analyzing data, developing a preliminary and final plan, approval by all relevant stakeholders, and its implementation through infrastructure development and environmentally friendly strategies. Historically, tourism has often exploited certain destinations, depleting their resources before the focus shifts to new exciting locations. This approach is harmful in the long run and does not contribute to the sustainability of tourist destinations. Key elements that should be part of any sustainable tourism plan include determining the carrying capacity, setting boundaries for acceptable changes, environmental impact assessments, zoning of tourism activities, and the application of ethical standards. Long-term planning is necessary to ensure a balance between tourism development and the conservation of natural resources.

Spatial planning of the tourist economy

Sustainable spatial planning plays a decisive role in shaping the successful development of tourist destinations, taking into account the challenges posed by climate change and other social contradictions. Inadequate spatial planning can lead to an increase in the environmental burden, especially in regions where energy policy has neglected the impact on the environment. The example of Serbia shows how low compliance with EU environmental standards can have a negative impact on the development of tourism, given that air quality, waste management and energy efficiency directly affect the attractiveness of destinations. Reducing greenhouse gas emissions and increasing the share of renewable energy sources, as envisaged by the EU's 2030 policy, could contribute to the creation of environmentally friendly tourist zones that would be sustainable in the long term. This includes improving infrastructure for sustainable tourism, such as energy-efficient hotels, the use of solar energy and the development of green transport networks. The implementation of these measures requires an integrated approach, in which spatial planning would be aimed at protecting natural resources, adapting to climate change and fostering a competitive tourism sector based on the principles of environmental sustainability.

Climate and energy plans represent a essential framework for the sustainable transformation of tourist destinations. The European Union has recognized the importance of a strategic approach to the fight against climate change, setting ambitious targets to reduce greenhouse gas emissions and increase energy efficiency. Lack of capacity, both at the national and local levels, makes it difficult to form effective working groups to address the integration of climate policies into spatial planning. The dependence of local self-governments on the decisions of the home country is particularly pronounced, which leads to problems in the implementation of climate change adaptation and mitigation measures. Some progress is visible, as local communities increasingly recognize the importance of adapting to climate conditions, especially in terms of energy efficiency and the use of renewable energy sources in tourism infrastructure. An affirmative example in this context is the involvement of the Municipal Administration of Ulcinj in Montenegro.

A significant challenge in the planning process is also the lack of involvement of citizens in the adoption of sustainable energy policies. Climate and energy planning and tourism development strategies must be based on the principle of participatory decision-making, as the long-term sustainability and success of these policies are directly linked to the level of information and engagement of the local population. In this context, spatial planning in tourism should be aligned with the concepts of green infrastructure, energy sustainability and climate resilience, in order to develop destinations in accordance with the principles of sustainable development. (Nešković, 4, 57)

In modern tourism, the landscape is a key factor in attracting tourists, since tourist destinations are often chosen on the basis of the natural and cultural characteristics of the area. However, the intensive development of tourism and the construction of infrastructure can undermine the basic values of the landscape, leading to the degradation of tourist resources. Therefore, it is important to approach spatial planning in a way that ensures the sustainable use of space, preserving its authenticity and ecological balance.

The 2000 European Landscape Convention emphasizes the importance of landscape protection, management and planning, defining a landscape as an area that is experienced by people and whose character is shaped by natural and human influences. In this context, the policy of geographical space should direct the development of destinations towards sustainable models, where the degree of urbanization will be in accordance with the natural and cultural values of the area. Spatial planning is of fundamental importance in the sustainable development of tourism, as it enables a balanced growth of tourism activities while preserving natural and cultural resources. Also, spatial measures include the development of guidelines for the preservation of water, air and soil quality, as well as the regulation of construction and traffic density.

One of the key challenges of spatial planning in tourism is the management of seasonal loads, in order to reduce the pressure on infrastructure and the ecosystem during periods of high tourist traffic. Decisions on tourism development must be made on the basis of comprehensive information on the environmental impact of tourism, considering alternative solutions and local capacities. In particularly sensitive areas, it is possible to impose access restrictions or place certain areas under legal protection.

It is also important to continuously monitor the state of the environment in tourist regions in order to react to negative changes in a timely manner. The role of the authorities is essential in identifying areas suitable for further tourism development, as well as those that require restoration measures. In addition, informing and educating the public about the importance of nature conservation is an important segment of sustainable tourism, because the awareness of the local population and tourists directly affects the long-term preservation of tourist destinations. The financial aspects of environmental protection are also significant, as revenues from tourism are often not enough to cover the costs of environmental measures. Therefore, various financing models are resorted to, including tourist taxes, taxes on tourist activities and entrance fees to nature reserves. Bylo and Gürbüz (2023) found that taxes have a positive impact on the financial performance of companies in the emerging markets, serving as a business incentive. Preserving the quality of tourist resources is necessary for destinations to remain attractive and promising, with a special role played by the local population in the sphere of responsible use of available natural resources.

Concepts of Serbia, Montenegro and Croatia in the Domain of Climate Goals

The Global Climate Policy Strategy implies that the agreement reached obliges all signatory states to act in accordance with normative regulations. In the concept of implementation of the given international agreements, it is possible to adopt new regulations, which determine the platform for the implementation of measures in achieving the projected goals. This applies to all areas of public life within the framework of sectoral concepts. The key issue is the manner of assuming obligations under international treaties, i.e. the official procedures from the conclusion of the contract to their implementation. The process of achieving climate goals is a complex process because it means a multi-criteria approach to measures of current issues. A systemic concept is needed in the analysis of all aspects of the relationship between international and national regulations from the position of constitutional provisions and concrete practice of individual states.

Considering the conglomerate of climate change and the relationship of regional entities to the established global policy, we note that Serbia, Montenegro and Croatia are members of the United Nations Framework Convention on Climate Change, the Kyoto Protocol and the Paris Climate Agreement. In the face of climate change, all three countries have adopted certain laws over the past few years. It is estimated that around 140 countries around the world have adopted their own Framework Climate Legislation, with the United Kingdom, France, Denmark, Sweden, Norway and Mexico being considered the best.

The normative documents formulated as a whole must define short-term and long-term goals, deadlines for the execution of actions, financial framework and responsibility of incorporated actors in all segments of indigenous projects. At all stages, relevant factors should be engaged, with possible corrections during the implementation of the formulated goals. A number of bylaws are also envisaged, which each country shows in the list of regulations. The Republic of Serbia officially presents its regulations in the document „Climate Change“, Montenegro in the title „Legislation“, while Croatia has grouped this area into the group „Laws and regulations within the scope of the Directorate for Climate Action“. There are some noticeable differences in the subject matter of the regulation of the basic legal contents, which also reflects conceptual differences in the treatment of the phenomenon of climate change.

Serbia has given its normative concept in the field of climate goals through the „Law on Climate Change“, presented in an official state document. The following issues are regulated here: (1) A system for limiting greenhouse gas (GHG) emissions and for adapting to changed climatic conditions; (2) Monitoring and reporting on the low-carbon development strategy and its improvement; (3) Adaptation to the changed climatic conditions; (4) Adoption of a low-carbon development strategy and adaptation program to changed climate conditions, etc. In further examination, comparative similarities and differences with Montenegrin and Croatian legal provisions will be noticed.

Montenegro regulates the current issue through the „Law on Protection from the Negative Impacts of Climate Change“, which was announced in the Official Gazette of the country. This includes: (1) protection from the adverse impacts of climate change; (2) reducing greenhouse gas emissions; (3) the protection of the ozone layer and other phenomena as repercussions of retrograde reflections of climate

change. The conglomerate of a country's climate goals derives from pre-formulated elements, aligned with the preconceived measures and actions of developed countries.

It is believed that the current topic, compared to previous countries, is the most complex in Croatia. The national nomenclature is contained in the Law on Climate Change and Protection of the Ozone Layer, proclaimed in the official state material. It covers the following areas: (1) competence and responsibility for climate change mitigation, climate change adaptation and ozone layer protection; (2) documents on climate change and the ozone layer; monitoring and reporting of GHG emissions (i.e. greenhouse gases); (3) Emissions Trading System, aviation, sectors outside the GHG Emissions Trading System, and others.

It can be said that the minimum common elements incorporated by the laws of the three countries include measures related to two areas: Limiting GHG emissions of greenhouse gases and Adaptation to climate change. Looking at the essence of the documentation, it can be stated that all three countries have formulated their established national postulates in different ways in terms of obligations for the issue of GHG emission reduction. In the following, we will present the officially established autochthonous parameters in the sphere of projected goals for each individual country in question.

The Republic of Serbia has set its climate goals in this segment as follows: reduction of GHG emissions by 13.2% by 2030 compared to 2010, i.e. 33.3% compared to the base year 1990. Montenegro has planned to reduce total national GHG emissions (excluding in the land change and forestry sectors) by at least 35% by 2030, compared to the base year 1990. Croatia's GHG emission reduction targets are framed within the framework of the European Union's regulations, which stipulate the following: Reduction of net domestic greenhouse gas emissions in the entire economy by at least 55% by 2030 according to the level of the 1990 baseline. In addition to the above, reductions are also implemented in accordance with special regulations of the European Union, such as: Regulation (EU) 2018/841, Regulation (EU) 2918/842 and Directive (EU) 2018/410 (Todić, 17, 21).

It is recognizable that the parts that deal with adaptation to the phenomenon of climate change, all three countries have adopted special regulations regulating measures and procedures in the event of emergency situations. (Nešković, 12, 31) At this point, we believe that the situation of climate change and emergencies should be substantively differentiated and competently analyzed. It can be confirmed that in the field of climate change, none of the mentioned countries specifically defines the principles of the United Nations Framework Convention on Climate Change in their laws. However, here the Croatian law explicitly refers to the principles of „environmental protection“ related to the law governing the area in question, the requirements of international law and the „acquis communautaire“. These topics are directly related to each other, unless otherwise provided by law. In essence, the principles of contemporary environmental policy and law are relevantly projected in all three presented legal documents.

Conclusion

Today, the tourism economy is an essential economic area with numerous challenges of climate change and the need for sustainable spatial planning. Digitalization and the application of modern technologies provide significant opportunities for improving the tourism sector, enabling more efficient resource management, reducing the ecological footprint and adapting to global environmental standards. In doing so, spatial planning and tourism development must be aligned with the adopted climate goals for the purpose of sustainability. It is necessary to create relevant program documents that will enable the adaptation of tourist destinations to new climate challenges, while preserving natural resources.

Climate change and the energy crisis require the adaptation of infrastructure and the creation of institutional mechanisms that will allow for more efficient spatial planning. Without adequate involvement of local communities and citizens, the implementation of energy policies can remain limited to a declarative level. It is obvious that the transition to renewable energy sources and the reduction of greenhouse gas emissions are not only a global, but above all a local challenge. In this regard, the Western Balkans face serious difficulties, including a lack of science-based real-time data, weak institutional capacity and the

absence of a long-term strategy at the local level. It follows that it is the obligation of the relevant state entities to imperatively resolve the controversies and projected environmental goals.

We believe that Serbia, Montenegro and especially Croatia are treating their own national issues of climate change, through adopted laws and bylaws, with the formulation of authentic goals. The official documents as a whole are in line with the traditional legal political acts of the international community, the United Nations Framework Convention and the climate goals of the European Union. The specifics of individual creations, crisis trends in the world and permanent conflicts, indicate that constant national development is necessary with adequate implementation of universally proclaimed values in the essential spheres of climate goals and environmental protection.

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