

The Impact of Low-carbon Tourism Development Model on the Regional Economic Sustainability under the Dual Carbon Goals

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ABSTRACT

Global climate change is becoming more and more serious, and the international community's call for the reduction of greenhouse gas emissions is growing louder, so many countries and regions have put forward to the carbon peaking and carbon neutrality goals to reduce greenhouse gas emissions. The traditional tourism model is facing the pressure of transformation due to high carbon emissions, resource consumption and environmental burden, but low-carbon tourism, as a new development model that meets the requirements of the dual carbon goals, can reduce carbon emissions and improve energy efficiency. Therefore, this paper will deeply discuss the innovative development mode of low-carbon tourism and its multi-dimensional impact on the regional economic sustainability under the dual carbon goals, hoping to provide suggestions for local governments in formulating green development policies and promoting low-carbon tourism practices.

KEYWORDS

dual carbon goals; low-carbon tourism; regional economy

Green growth is closely related to the sustainable development of tourism. As an emerging tourism development model, low-carbon tourism responds to the global call for carbon reduction and provides a new opportunity for regional economic transformation and upgrading. This model emphasizes the balance among economic benefits, social well-being and environmental protection in tourism development, thus promoting the sustainable growth of regional economy, and reducing negative the impact on the environment. Therefore, this paper will explore the implementation of low-carbon tourism strategies to promote the sustainable development of regional economy and evaluate the impact of these strategies in practical application, so as to provide scientific bases for the sustainable tourism practice and policy formulation.

1 Low-carbon Tourism and Regional Economic Sustainability

1.1 The Development Basis of Low-carbon Tourism

The development of low-carbon tourism is mainly based on the systematic promotion and implementation of sustainable tourism, which emphasizes the use of efficient and low-pollution operation methods and techniques in tourism, as well as the promotion of environmental awareness and behavior. At the policy level, the promotion of low-carbon tourism depends on the support of environmental laws and regulations, such as adjustments of the carbon cap-and-trade system and tourism tax policy, and financial support for green tourism projects, which promote the adoption of low-carbon techniques and encourage tourism companies and destination managers to adopt more environmentally friendly business strategies. In terms of market mechanisms, the expansion of low-carbon tourism depends on an increase in consumer preference for sustainable travel options. This trend prompts tourism service providers to develop new low-carbon products and services. From the perspective of techniques, the development of low-carbon tourism cannot be achieved without the innovative application of techniques, including the optimization of energy management systems, the utilization of renewable energy technology, and the popularization of waste reduction and recycling technology^[1].

1.2 The Theoretical Connotation of Regional Economic Sustainability

The theoretical connotation of regional economic sustainability originates from a profound insight into the long-term benefits of economic activities and the balance of ecological environment. The development model guided by this theory emphasizes that while safeguarding the driving forces for the economic growth, it must ensure the continuous appreciation of environmental capital and the general improvement of social well-being. The evaluation criteria of region economic sustainability include three dimensions: resource efficiency, environmental load and social inclusion. Resource efficiency mainly focuses on optimizing resource allocation, improving resource utilization and reducing waste within a region. Environmental load focuses on assessing the pressure of economic activities on the ecosystem and seeking to

minimize the negative impact on the environment. Social inclusion measures the fair distribution of the fruits of economic growth and the degree of harmony among social groups^[2].

2 Development Models of Low-carbon Tourism under the Dual Carbon Goals

2.1 Policy Support and Market Demand of Low-carbon Tourism

In the low-carbon tourism industry, the guiding role of policies and the triggering effect of market demand have formed a good circulation for mutual promotion. At the policy level, policy tools such as carbon emission trading systems, green tax incentives, and financial subsidies for low-carbon tourism projects promote the transition of tourism to a green and low-carbon direction. In addition, the government establishes strict environmental standards and regulations to compulsively restrict the carbon emission behavior of tourism enterprises, and encourages enterprises to adopt low-carbon techniques and green operation modes by means of tax breaks and subsidies. These policies provide an institutional guarantee for low-carbon tourism and lay an economic foundation for the green development of tourism. In terms of market demand, as the public pays more and more attention to the environmental protection and climate change, consumers tend to choose tourism products and services that can reduce carbon emissions and protect the ecological environment. Driven by these changes in demand, tourism enterprises adjust their product structures and launch low-carbon travel packages, carbon-neutral tourism projects and green accommodation facilities, etc. These innovative products meet the growing market demand for environmental protection and sustainability and promote the development of low-carbon tourism market^[3].

2.2 The Innovation and Development Path of Low-carbon Tourism Products

The innovation and development paths of low-carbon tourism products are mainly reflected in the deep reshaping of traditional tourism service modes and the continuous expansion of environment-friendly tourism products. In terms of product innovation, low-carbon tourism is to promote the green reallocation of tourism resources and reduce the ecological footprint. By integrating renewable energy techniques, low-carbon transport and green accommodation facilities, tourism companies create energy-saving and environmentally friendly travel products. These products cover transport with lower carbon emissions, as well as the promotion of green hotels, eco resorts and other forms of accommodations, thus reducing energy consumption and effectively reducing waste emissions during the operation of tourism facilities. The development path of low-carbon tourism products is reflected in the extension from the local green practice to the green transformation the whole industrial chain. The product innovation in the industry is gradually transitioning from a single low-carbon element to a more comprehensive green tourism system, and forms a diversified low-carbon tourism product system including green transportation, green accommodation, green scenic spots and carbon-neutral tourism.

2.3 Selection and Optimization of Regional Low-carbon Tourism Development Models

The key to the selection and optimization of regional low-carbon tourism development models lies in the organic combination of ecological environmental protection, economic development and social well-being in the region through systematic planning and policy guidance, so as to realize the green transformation of tourism. When choosing low-carbon tourism development models, the region should fully consider the local natural resource endowments and industrial structure characteristics. Low-carbon tourism should be based on regional characteristics, promote the development of products based on ecological and environmental advantages, such as ecotourism, cultural heritage tourism and agricultural tourism, and strive to achieve the efficient use of resources and organic integration of ecological protection. In terms of model optimization, it must focuses on maximizing the cooperative effect of policy, market and technology. The government can optimize the market mechanism and encourage tourism enterprises and tourists to take low-carbon measures by introducing green finance policies and low-carbon tourism subsidies^[4].

3 The Impact of Low-carbon Tourism on Regional Economic Sustainability

3.1 The Contribution of Environmental Benefits to Regional Economic Sustainability

The contribution of environmental benefits to regional economic sustainability is mainly reflected in improving resource utilization efficiency, optimizing ecological service functions and promoting the development of green industry. On the one hand, the improvement of environmental benefits directly contributes to the efficient allocation and recycling of resources in the region. Through the implementation of green economic activities such as low-carbon tourism, energy

efficiency in the region will be improved, and the resource consumption and environmental pollution will be effectively controlled, so that a win-win situation of ecological benefits and economic benefits will be formed. This model can help to reduce environmental costs in the production and life processes, and improve the green competitiveness of enterprises and local governments. On the other hand, the improvement of environmental benefits promotes the restoration and enhancement of regional ecosystem service functions. The good ecological environment and beautiful natural landscape in the region can attract more green investments and the application of low-carbon techniques, drive the formation and growth of relevant green industry chains, such as the rapid development of renewable energy, environmental protection technology and green building and other industries, and inject new growth momentum into the local economy.

3.2 The Influence of Economic Benefits on the Adjustment of Regional Economic Structures

The impact of economic benefits on the adjustment of regional economic structures is reflected in promoting industrial upgrading, optimizing resource allocation and promoting green development and transformation. In terms of industrial upgrading, the rise of green industry promotes the transformation and upgrading of traditional industries, and makes the industries that were originally characterized by high carbon emissions gradually transform into low-carbon, environmental protection and innovative fields. Moreover, the rise of low-carbon tourism promotes the greening of tourism, service industry and related infrastructure construction, improves the environmental protection level of regional economy, and promotes the diversified development of the industrial chain within the region. In terms of resource allocation, the improvement of economic efficiency helps to promote the efficient allocation of capital, technology and labor resources. The development of low-carbon tourism stimulates investment in clean energy, green transportation and ecological protection technology, optimizes the resource allocation in the regional industrial structure, and enhances the competitiveness and innovation ability of the regional economy^[5].

3.3 The Effect of Social Benefits on the Social Harmony and Long-term Development of a Region

The effect of social benefits on the social harmony and long-term development of a region is mainly reflected in promoting social equity, improving public welfare and enhancing social capital. Specifically, through the development of low-carbon tourism, the social wealth in the region can be distributed more evenly. The promotion and implementation of low-carbon tourism projects create a large number of green employment opportunities, improve the employment level and income level of local residents, and relieve the economic gap between urban and rural areas and between regions. By optimizing resource allocation and improving the construction of public facilities, low-carbon tourism provides a better living environment for regional residents, effectively improves the level of regional public services, and promotes the comprehensive development of health, education and other fields.

4 Conclusion

This paper defines the far-reaching impact of low-carbon tourism on the sustainable development of regional economy under the dual carbon goals, and discusses the key role of low-carbon tourism in promoting environmental, economic and social benefits. Through the analysis of low-carbon tourism development model, it reveals the unique value of low-carbon tourism in promoting the adjustment of regional economic structures, optimizing resource allocation and enhancing social harmony. Therefore, it is necessary to strengthen the policy guidance, and promote the green transformation and innovation of low-carbon tourism, so as to provide strong support for the green and high-quality growth of regional economy.

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