

Tourism Green Consumption Optimization Strategies Based on Tourists' Low-Carbon Behavior

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Abstract: As people pay more and more attention to environmental issues, green consumption has gradually become an important trend in the development of society, and its influence also permeates the tourism industry. Based on this, the article analyzes the current situation of green consumption in the tourism industry and the impact of tourists' low-carbon behavior on green consumption in the tourism industry, and proposes optimization strategies for green consumption in the tourism industry from the three aspects of green supply chain management, green product development and green marketing strategy. The aim is to promote tourism enterprises to do a good job of protecting the environment while realizing the improvement of economic benefits, and to promote the tourism industry to achieve sustainable development.

Keywords: Tourists; Low Carbon; Tourism Enterprises; Green Consumption

1. Introduction

With the intensification of global climate change and the advancement of sustainable development issues, low-carbon tourism, as an important way to address the challenges of climate change, has become an important part of tourism development. As a resource-intensive industry, tourism accounts for a significant portion of global carbon emissions. The dual-carbon target still faces a severe carbon reduction task ^[1]. Firstly, the real threat of global climate change has been very clear, and the frequent occurrence of extreme weather events, sea level rise, loss of biodiversity, etc., are sending warnings to human beings. Secondly, with the rapid development of economy and society, environmental problems have become an important factor restricting development, so it has become an inevitable choice to change the mode of development and realize green and low-carbon development.

Based on the goal of achieving “double carbon” (carbon peak and carbon neutrality), the tourism industry has responded positively by encouraging a green and low-carbon approach to tourism development. Low-carbon development of the tourism industry can not only effectively reduce greenhouse gas emissions, but also promote the rational use of resources and sustainable consumption, thereby promoting the green transformation of tourism consumption ^[2]. Green consumption is not only the need for sustainable development of tourism, but also a positive response to consumer demand. While realizing environmental protection, green consumption can also provide consumers with a healthier and more environmentally friendly tourism experience, realizing a win-win situation in terms of economic and ecological benefits.

2. Status of Green Consumption in Tourism

With the progress of society and the enhancement of consumers' awareness of environmental protection, tourists' tourism behaviors are quietly changing, and more and more tourists are choosing low-carbon and environmentally friendly ways in tourism, such as choosing public transportation, supporting green accommodation, and participating in low-carbon tourism activities. These changes bring new opportunities for the green development of the tourism industry, and at the same time pose new challenges to the development model of the tourism industry. Green consumption is a multi-dimensional and multi-angle concept, the core of which lies in guiding and encouraging consumers to actively fulfill their environmental responsibilities while meeting their own needs, and to promote the protection of resources and the improvement of the environment through specific and actionable green consumption behaviors, thereby promoting the green and low-carbon development of the economy. Despite the current development of green consumption in the tourism industry, there

are still many areas that need to be improved. First, in terms of publicity and promotion, the current green consumption still faces a certain lagging problem. Although more and more tourism enterprises have begun to pay attention to and practice green tourism, the publicity in the concept of green consumption is not enough. This situation affects the environmental awareness of tourists, so that they cannot well transform their environmental awareness into actual green consumption behavior. Secondly, green consumption in the tourism industry has not yet formed an operational mechanism with comprehensive coverage. Although some industries and tourism enterprises have begun to try green transformation, such as adopting energy-saving lamps and solar hot water systems, etc., these changes are limited to some areas and do not cover the whole industry. In addition, the low coverage of green buildings in scenic spots and the low degree of electrification of tourist transportation are the current shortcomings of green consumption in the tourism industry. The article argues that green consumption in tourism is also affected by economic development. Different stages and modes of city construction, rural development and urbanization will have an impact on green consumption in tourism. For example, the rapid advancement of urbanization may pose new challenges to green consumption in areas such as tourism transportation.

3. Status and Trends of Low-Carbon Behaviors of Tourists

Low-carbon behaviors refer to those behaviors that can reduce greenhouse gas emissions and promote energy conservation and environmental protection. In the tourism sector, low-carbon behaviors are embodied in a series of environmentally friendly practices and choices made by tourists during their travels, including, but not limited to, low-carbon catering, low-carbon transportation, low-carbon accommodation and low-carbon entertainment. The promotion and practice of low-carbon behaviors not only plays an important role in reducing the carbon footprint of the entire tourism industry, but also helps to enhance the environmental awareness of tourists and promote the development of green tourism consumption. Currently, tourists' low-carbon awareness is still relatively low in general. For example, in the choice of transportation, many tourists prefer to

choose self-driving trips, while the proportion of those who choose to take public transportation for trips, or cycling or hiking trips is relatively small; in the choice of accommodation, most tourists will choose moderate or economical hotels based on their financial strength, and only a small number of them will choose small-sized guesthouses or luxury and extravagant hotels; in terms of food and beverage, the majority of the In terms of catering, most tourists use disposable tableware occasionally, while the proportion of tourists who use disposable tableware frequently or do not use disposable tableware at all is relatively low. In terms of transportation, the proportion of tourists choosing low-carbon travel modes such as walking and using public transportation is gradually increasing. Meanwhile, in terms of accommodation choices, tourists are increasingly inclined to choose accommodation facilities with low-carbon features, such as inns.

However, the low-carbon transformation of the tourism industry is progressing gradually with the increase in environmental awareness and the advocacy of low-carbon lifestyles, as well as the government's promotion of environmental protection policies. The higher the low-carbon awareness, the higher the possibility of low-carbon behavior of tourists ^[3]. More and more tourists are beginning to learn about low-carbon tourism through the Internet and other channels, and have a better understanding of the definition and importance of low-carbon. In addition, when choosing tourism products and services, tourists are also more and more inclined to value their environmental protection concepts. With the continuous promotion of environmental protection publicity and low-carbon tourism policies, tourists' low-carbon tourism behavior is increasing, and in the future, tourists' low-carbon tourism behavior will be more common and proactive.

4. The Impact of Tourists' Low-Carbon Behavior on Green Consumption

4.1 The Promotional Role of Tourists' Low-Carbon Behavior on Green Consumption

Tourists' low-carbon behavior refers to the adoption of energy-saving and emission-reduction behaviors in tourism activities, such as the selection of low-carbon means of transportation, the use of renewable

energy, and the reduction of disposable supplies. Tourists' low-carbon behavior plays a positive role in promoting the development of green consumption in tourism through demonstration effect, guidance of market demand, and innovation of green products and services.

First of all, when tourists demonstrate low-carbon behaviors during tourism, their choices will gradually influence the choices of other potential consumers. This phenomenon is known as the "demonstration effect", i.e., through the behavior of individuals to set a benchmark and influence people around them. For example, if a person chooses an environmentally friendly accommodation, such as a hotel powered by solar energy, this choice is likely to attract more tourists to imitate it, thus promoting the construction and development of more green accommodation facilities.

Second, tourists' low-carbon behavior can promote the tourism industry to provide more green products and services. In order to meet market demand, tourism enterprises and suppliers will have to consider environmental factors and introduce more low-carbon tourism products. For example, increasing bicycle rental services, providing environmentally friendly means of transportation, and developing tourism activities with the theme of protecting the environment are all products driven by tourists' low-carbon behaviors.

Furthermore, as tourists' demand for low-carbon tourism increases, green eco-tourism destinations in the tourism industry will become more and more popular. This form of tourism emphasizes living in harmony with nature and reducing interference with the environment, providing tourists with a healthier and more sustainable tourism experience. Such experiences tend to promote the sustainable and healthy development of the tourism industry.

4.2 Constraints of Tourists' Low-Carbon Behavior on Green Consumption

The constraints that low-carbon behavior may have on green consumption in tourism are carried out in multiple dimensions, including personal behavioral habits, the sustainability of tourism products, and consumption awareness and willingness.

First of all, personal behavioral habits are important factors affecting tourists' low-carbon behavior. Individuals' lifestyles, consumption habits, and the degree of cognition of

environmental awareness all have an impact on low-carbon tourism behavior. For example, tourists who are accustomed to using disposable products may find it difficult to realize low-carbon consumption during their travels, as they may lack the habit of using reusable products and may have insufficient willingness to purchase environmentally friendly products. In addition, habitual high consumption habits may make tourists more inclined to choose non-low-carbon options that are more expensive but with better experiences when choosing tourism services.

Second, the sustainability of tourism products is also an important constraint on tourists' low-carbon behavior. If the sustainability of tourism products themselves is insufficient, such as over-reliance on fossil energy and the generation of large amounts of waste, it will directly limit the low-carbon behavior of tourists when using these products. For example, a tourism itinerary that focuses on sightseeing may not encourage low-carbon travel because it may require tourists to use transportation modes such as cars and high-speed trains, which have relatively high carbon emissions.

Again, consumption awareness and willingness play a key role in tourists' low-carbon behavior as well. Tourists' low awareness of low-carbon tourism, or insufficient knowledge of the positive impacts it brings, may lead them to not prioritize low-carbon options when choosing tourism services and products. In addition, if tourists have a limited perception of the value of low-carbon tourism, their willingness to pay may also be low, which directly affects their likelihood of choosing low-carbon tourism products.

4.3 The Interaction between Tourists' Low-Carbon Behavior and Green Consumption

The interaction between tourists' low-carbon behavior and green consumption in tourism is an interactive and complex system, which needs to be explored from various aspects. First of all, tourists' low-carbon behavior can serve as an important force to promote the development of green consumption in tourism. With the improvement of social awareness of environmental protection, more and more tourists are willing to choose those tourism products and services that can reduce environmental impacts, which is a positive

signal for the tourism industry. Secondly, green consumption in the tourism industry will be affected by external conditions, including policies and regulations, the level of social and economic development, and cultural cognition. For example, support and incentives from government policies may be an important driver in promoting green tourism consumption. In practice, the tourism industry can take a variety of measures to promote the effective interaction between tourists' low-carbon behaviors and green consumption.

5. Optimization Strategies for Green Consumption in Tourism

For a long time, the tourism industry has often been regarded as a resource-saving and environmentally friendly industry with the industrial characteristics of low energy consumption, low pollution and low emissions^[4]. In the current context of social development, with the rising global climate change and sustainable development issues, the tourism industry, as an important part of the national economy, also needs to actively respond to the dual-carbon goal, i.e., to ensure economic and social development while realizing a significant decline or even negative growth in carbon emissions. In implementing the optimization strategy of tourists' low-carbon behavior to promote tourism's green consumption pattern based on the dual-carbon goal, the author believes that a multi-dimensional implementation path can be taken, which can effectively promote tourists' low-carbon tourism behavior, promote tourism to the green and sustainable direction, and at the same time achieve a win-win situation in terms of both economic and environmental benefits.

5.1 Optimizing Green Supply Chain Management

Achieving green consumption through optimizing supply chain management is an important way for tourism enterprises to achieve sustainable development. Tourism enterprises should integrate the concept of green and environmental protection in the design, operation and optimization of the supply chain, and achieve a win-win situation for economic benefits and environmental protection through technological innovation, multi-party cooperation and circular economy. First of all, tourism enterprises should pay

attention to the construction of green tourism supply chain, and adhere to the concept of green and environmental protection in the whole process of tourism product design, production, distribution until use and waste disposal. For example, they should choose environmentally friendly raw materials and energy sources and optimize logistics and transportation methods to reduce carbon emissions and resource consumption. Secondly, tourism enterprises can adopt advanced information technology to optimize supply chain management. Using IoT, big data analysis and other technologies, they can monitor all aspects of the supply chain in real time to improve efficiency and transparency, and use data analysis to predict market demand, optimize inventory management, and reduce excess resources and waste. Finally, tourism enterprises should actively explore the circular economy model and strengthen the combination of "pull" and "push" supply chain. This not only helps to realize the efficient use of resources, but also promotes the development of circular economy. For example, consumers should be encouraged to put recyclable waste generated during tourism into recycling bins, which tourism enterprises can then reintroduce into production through the circular supply chain.

5.2 Enhance Green Service Marketing

In the green marketing practice of tourism, tourism enterprises need to make comprehensive consideration from product design, management mode, market demand and other aspects, in order to improve the public's rational understanding of green tourism products, and then improve their acceptance of green products, so as to seize market opportunities.

First, green product logo setting. As the sales channels of green products, travel agencies and tourism intermediaries, their recognition and implementation of the green concept largely affect the success or failure of green marketing. Tourism service enterprises and organizations should have a strong green concept, select partners through strict selection procedures and standards, and ensure that every link of tourism services can reflect the concept of green and environmental protection. Multi-channel publicity through TV, radio, Internet and social media can be used to raise the public's, especially tourists', awareness of low-carbon green products, encourage them to choose green tourism methods, and promote wider public

participation in low-carbon tourism ^[5].

Second, market promotion and brand building. Tourism enterprises understand the needs and preferences of potential tourists through accurate market research and provide them with green tourism products that meet their expectations, which is an important means to improve the visibility and attractiveness of green products. Tourism enterprises can utilize digital technology for marketing, such as through the Internet, social media and other channels, combined with big data analysis, to improve the accuracy and efficiency of marketing. At the same time, it cooperates with tourism-related industries to realize resource sharing and mutual benefit and win-win, and to enhance brand influence. In the development of specific ecotourism resources, tourism enterprises should pay attention to the protection of the local ecological environment to avoid irreversible damage caused by the number of tourists exceeding the environmental carrying capacity. By maintaining and publicizing the ecological landscape, emphasizing its ecological effects and benefits to public health, tourism enterprises can highlight their green ecological brand image in marketing and form a green brand advantage. Third, tourism enterprises cooperate with hotels, transportation and other tourism organizations to launch preferential green tourism packages and joint marketing campaigns to increase the popularity and market competitiveness of green tourism products. At the same time, publicity through new media platforms such as the Internet and social media attracts more tourists; tourism enterprises incorporate green design, energy-saving management and other concepts into their product design, enriching the types of green tourism products and enhancing tourists' green consumption experience.

5.3 Promote Technological Innovation in Green Services for Tourism

Tourist attractions should actively apply new energy technologies to reduce fossil energy burning ^[6]. At the same time, the promotional materials of the products should also reflect the low-carbon concept, such as the use of electronic brochures to replace the traditional paper materials, which not only reduces carbon emissions, but also enhances the green image of the products. Tourism enterprises should comprehensively consider the requirements of environmental protection, energy conservation

and rational utilization of resources, and integrate ecological protection and social responsibility into all aspects of tourism product development. In terms of tourism accommodation, green accommodation is encouraged. First, hotels adopt energy-saving and emission reduction technologies, such as installing energy-saving lamps and using solar-powered water heaters, etc., to encourage tourists to conserve resources in order to minimize energy consumption; and provide tourists with green lodging offers, such as green tourism cards, which tourists holding such cards can enjoy discounts or points rewards from green hotels. Secondly, in terms of tourism transportation, promote green travel. It is well known that among the carbon emissions of tourism, the carbon emissions directly caused by tourism transportation are an important source ^[7]. Therefore, encouraging tourists to use low-carbon green transportation can directly reduce carbon emissions, such as preferential use of public transportation cards, carpooling services for tour groups, etc.; providing bicycle rental services, constructing bicycle paths, and encouraging short-distance trips to use cycling; and providing preferential parking fees for tourists using new energy vehicles and preferential activities for charging piles. In terms of tourism catering, promote green dining. Catering enterprises are being guided to reduce the use of disposable items and encourage the use of reusable tableware; the à la carte system is being advocated to reduce food waste, and the reasonable disposal of leftovers and the recycling of resources are being encouraged.

5.4 Improve the Green Certification System

Develop a series of standards and norms for low-carbon tourism, and at the same time actively participate in the certification of relevant international green and low-carbon standards ^[8]. For example, to encourage sustained participation in the establishment of environmental protection tourism awards, active participation in green tourism tourists for recognition and reward, for sustained contribution to the green tourism behavior of tourists to provide point accumulation and redemption services, to increase the enthusiasm for participation. At the same time, tourism products can be measured for carbon emissions and certified as "carbon labeled" ^[9]. Through the green certification of tourism products, clear and

credible reference information is provided to consumers, guiding them to choose low-carbon and environmentally friendly tourism products and services. For example, a certification mark can be issued to hotels and tourism projects with low or zero carbon emissions to increase their market competitiveness^[10].

6. Conclusion

In the context of promoting the achievement of the dual-carbon target, the low-carbon development of the tourism industry, as an important source of carbon emissions, is particularly important. Tourism enterprises, as an important part of the industry, play a key role in enhancing the incentive effect of tourists' low-carbon behavior. Under the deployment of the carbon neutral strategy, the development of low carbon tourism will usher in a new phase. Under the “dual-carbon” goal, green tourism development is not only a business strategy choice for tourism enterprises, but also an important path for the sustainable development of society. For tourism enterprises, green tourism encourages them to adopt more environmentally friendly business strategies and attract more consumers by providing high-quality green tourism experiences, thus enhancing market competitiveness and operational efficiency. For the society, green tourism can bring positive impacts in many aspects, help promote the construction of national ecological civilization, and realize the harmonious development of economy, society and environment.

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