On Sustainable Development of Low-carbon Tourism in Jiangxi Province

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Abstract. Low-carbon tourism is a kind of green tourism meaning reducing CO2 emissions during tourism activities. In recent years, the contradiction between eco-environmental protection and economic development becomes increasingly outstanding. Thus, the low-carbon tourism, as the developing trend of tourism industry, owns great value and significance. This paper makes a comprehensive research on eco-environmental protection problems existing in developing tourism industry in Jiangxi. Meanwhile, from the perspectives of government, tourism enterprises as well as tourists, the paper also puts forward corresponding countermeasures to sustainable development of low-carbon tourism in Jiangxi.

1. Introduction
In recent years, a series of new ideas and policies have emerged, such as “carbon footprint”, “low-carbon economy”, “low-carbon technology”, “low-carbon development”, “low-carbon lifestyle”, “low-carbon society”, “low-carbon city” and “low-carbon world”. In the background of global warming, the “low-carbon economy” based on low energy consumption and low pollution has become a global hot spot. Developed countries in Europe and the United States vigorously promote the "low-carbon revolution" with energy efficiency and low emissions as the core, focus on the development of "low-carbon technology", and make major adjustments to industries, energy, technology, trade and other policies in order to seize the opportunities and occupy the industrial commanding heights. On December 7, 2009, Copenhagen held a climate summit. The concept of “low-carbon economy” is of a global concern, and the protection of the environment is put on the agenda of countries again. Countries in the world have reached a consensus: If global warming is to be fundamentally resolved, the whole world must reduce the use of fossil fuels and practice low-carbon production and consumption. Developing low-carbon economy can protect the earth and enable society to achieve sustainable development. As a new concept, low-carbon economy is an inevitable trend of social and economic development.

Low-carbon economy refers to the reduction of high-carbon energy consumption such as coal, oil and greenhouse gas emissions through technological innovation, institutional innovation, industrial transformation, and new energy development under the guidance of the concept of sustainable
development. In this economy, economic and social development and ecological and environmental protection are mutually beneficial.

2. The Environmental and Ecological Problems in Developing Tourism in Jiangxi

2.1. Extensive Development and Blind Utilization of Tourism Resources
The extensive development and blind utilization of tourism resources are embodied in the lack of detailed investigation and comprehensive scientific demonstration, evaluation and planning. We always hold an attitude of seeking quick success and instant profit. Under the premise of the lack of necessary argumentation and general plan, we began to carry out blind exploration and extensive development. In the process of development, there are still behaviors of emphasizing development and neglecting protection, which lead to the destruction and waste of many non-renewable precious tourism resources. In the past ten years, the construction of scenic spots in the development of Jiangxi's tourism industry is full of the artificial, commercial and urbanized atmosphere, resulting in a large number of scenic spots have been seriously damaged. In some tourist areas, people chop off mountains, blast rocks, cut trees, and destroy the forest, which leads to serious soil erosion. Driven by economic interests, people blindly expand tourist areas, build tourist facilities, hotels and restaurants at the cost of destroying ecology.

2.2. Extensive Operation of Tourism and Environmental Pollution
With the continuous development of new tourism mode, more and more industries such as catering industry, accommodation industry, entertainment industry, such as agriculture, light industry, cultural relics, communication, retail industry, etc. are gradually integrated into the tourism industry. The industry like catering industry, accommodation industry and entertainment industry, however, in order to maximize operators’ interests, they use a series of non-environmental protection products in the process of production and operation. For example the disposable toothbrush, toothpaste and disposable slippers provided by hotels and restaurants. Those non-environmental disposable products not only cause serious waste due to poor quality and low utilization rate, but also bring a lot of waste residues in their production process and after use. It results in huge environmental pressure.

2.3. Lack of Public Awareness of Environmental Protection and Ecology Protection
Because of the large population and the rapid development of tourism in China, there are many imperfections in planning and management, and national people are lack of the concept of environmental protection. Therefore, wherever tourists go, there will be different degrees of ecological destruction and environmental problems. In the scenic spot, all kinds of garbage can be seen everywhere. It brings a lot of garbage to the scenic spot and seriously affects the local environment. At the same time, in the process of dealing with those wastes, people put the huge investment of human, material and financial resources. And more importantly, it will bring problem of the pollution caused by carbon emissions. For example, in the annual Wugong Mountain tent festival in Jiangxi Province, the land and grassland were fully covered by garbage after the carnival in Wugong Mountain. It has increased the burden on the local ecology. The mountain turf has been seriously damaged. The garbage is in everywhere.

3. Sustainable Development Tactics of Low-carbon Tourism in Jiangxi
Low-carbon tourism is a strategic industry for the development of low-carbon economy, which requires government agencies, tourism enterprises and tourists to work together. At the macro level, the government should formulate policies and laws to adapt to low-carbon tourism, providing a standardized and orderly environment for the development of low-carbon tourism. Tourism enterprises, including travel agencies, scenic spots, tourism transportation departments, tourism hotels, etc., should actively respond to the government's call for the development of low-carbon tourism, formulating scientific development plans, using new technologies, changing business philosophy and business
model. At the same time, tourists should also apply the concept of green consumption into the tourism activities of "food, housing, transportation, tourism, shopping, entertainment".

3.1. Macro Control Function Played by Government at All Levels
The development of low-carbon tourism in Jiangxi Province is still in the primary stage of exploration and a good market environment conducive to the healthy and orderly development of low-carbon tourism has not been formed. The corresponding economic system and legal norms need to be improved, and the investment and invention of low-carbon technology are also needed. Therefore, the local government should play its leading role to guide the healthy development of low-carbon tourism.

The government can spread the low-carbon concept through various media, and spread the importance and necessity of developing the low-carbon economy to the public and enterprises. At the same time, it should guide the public to correctly understand the position of tourism development in China's economy, gradually improving the public's awareness and attention to low-carbon tourism, creating an environment for the development of low-carbon tourism, enhancing people's concept of low-carbon life, and expanding the influence of low-carbon in various fields.

In addition, low-carbon tourism is a new development concept, which means that the policies and legal norms under the traditional tourism development concept should be updated and improved, so as to adapt to the reasonable and orderly development of low-carbon tourism. For example, the government should formulate and implement a "carbon tax system", which means that the government should tax the carbon pollution caused by the use of fossil fuels in the production process of tourism enterprises. What's more, for those enterprises that use new technologies, clean energy and renewable resources in the production process, they will be given tax relief or subsidies to encourage and guide low-carbon production, low-carbon operation, expanding the impact of low-carbon concept on the market and improving the attention of operators on low-carbon tourism. Furthermore, the government should also formulate industry entry criteria which can adapt to the development of low-carbon tourism, drawing up corresponding indicators, and inspection and assessment standards in the process of operation, so as to ensure the development of low-carbon tourism.

3.2. Low-carbon Business Philosophy Set up by Tourism Enterprises
Tourism enterprises, mainly represented by travel agencies, tourism transportation departments, tourism gathering areas and tourism hotels, are not only the main body of tourism resources exploitation, but also the media connecting tourists and tourism resources, playing a main role in the development of China's tourism industry. Therefore, the development of low-carbon tourism requires tourism enterprises to take the low-carbon concept as the criterion of operation and management, enlarge the use scale of low-carbon technology and clean energy at the same time, building a low-carbon system, and optimizing resource allocation, which could realize low-carbon production and low-carbon operation. The specific performance of each tourism enterprise is as follows:

3.2.1. Low-carbonization of tourism attractions management. First of all, tourism resources are the core components of tourism products. In the process of its development and construction of tourist attractions, enterprises should adhere to the principle of sustainable use of tourism resources, and achieve harmony between tourism resources development and the natural environment. In the construction of tourist attractions, we should evaluate the local ecological environment and tourism resources, measure the capacity of the scenic spot and control the number of tourists within the environmental carrying capacity of the scenic spot, to achieve the coordination of low-carbon tourism and ecological benefits. Secondly, there are abundant tourism resources in Jiangxi Province, which also has much local characteristics. The scenic spots can embody these cultural elements through the scenic buildings’ decoration and exhibition halls to enhance the cultural connotation of the tourist attractions. Meanwhile, more experience activities can be designed based on the local culture, such as Dragon Boat Race, Water-Splashing Festival and so on, All these activities are the perfect combination of culture and tourism experience, which not only meets the requirements of low-carbon
tourism, but also enriches the experience of tourists, conducive to the spread of Chinese traditional culture. Thirdly, increase the use of clean energy such as solar energy and wind energy, reduce the use of high-pollution energy in the past, and use energy-saving products such as solar products, electricity-saving lamps, and inverter air conditioners. At the same time, carry out regular and scientific maintenance of resources and facilities in the scenic area, to improve their use cycle and avoid waste of resources. In addition, in the scenic area, conduct the publicity and education of waste sorting, recycle tourist wastes, and improve the rate of that, achieving sound development of the scenic spot.

3.2.2. Low-carbonization of tourism transportation development. The transportation is an important form to realize the change of tourists' position, of which the choice in a low-carbon way will play an important role in realizing the goal of reducing carbon emissions in tourism. According to a survey conducted by Ademe, trains can send more passengers to the destinations than airplanes on the premise of equal energy consumption. The same situation exists in the compare between coaches and car. It can be seen that in order to develop low-carbon tourism, it is necessary to increase the use of aircraft, tourist vehicles and public transportation, maximize the use of energy, and reduce the pollution caused by carbon emissions. In the second place, use clean energy, increase investment in hybrid power locomotives, and apply low-carbon technology to reduce emissions from exhaust. Some has been put into use such solar buses, gas-fuelled buses, etc. Meanwhile, our transportation department should also improve the quality of public transportation services, greatly increase the convenience of the pedestrians, improve their satisfaction with public transportation, which helps to improve people's choice of public transportation.

3.2.3. Low-carbonization of tourism hotels transformation. In the process of hotel construction, building energy consumption accounts for a huge proportion of China's energy consumption. In order to achieve energy conservation and environmental protection, the hotel building is designed to sit in the north facing the south as far as possible, which is determined by the geographical location of China. The building is relatively warm in winter and cool in summer with more abundant light, which can reduce the use of air conditioners and electric lamps in an invisible way, meeting the requirements of energy saving; enhances the thermal insulation of building walls, windows, and roofs and the use of solar panels; use centralized heating to improve energy efficiency.

3.3. The Implementation of Low-carbon Consumption for Tourists
As the main body of tourism activities and the consumers of tourism products, tourists affect the development direction of tourism products for tourism enterprises. The development of low-carbon tourism requires not only the participation of tourists but also the support of them. Only when tourists set the concept of low-carbon consumption and implement it into "food, housing, transportation, tour, purchase, entertainment" can we promote the development of China's low-carbon tourism industry. As for food, we can choose local vegetables, stop eating wild animals, order as much as we eat, refuse pomp about and avoid food waste. As for lodging, we can choose green hotel, budget hotel, develop the habit of bringing toiletries, avoid disposable supplies. We should avoid the use of disposable products. When we use air conditioners, the temperature should not be too low or too high. We should also develop the habit of turning off the lights and faucets when leaving. As for transportation, it is preferable to try to choose public transport and reduce the use of private cars. We can travel on foot in the scenic area, ride the bicycles, develop the habit of sorting garbage and improve the recycling efficiency of resources. As for tour, we can choose ecological scenic spots, increase cultural and experiential tourism activities, and enhance the depth of tourism. As for purchase, we shouldn’t require excessive packaging when purchasing souvenirs or local specialty. As for entertainment, we should participate in activities that are environmentally friendly and sporty.
4. Conclusion
Low-carbon tourism is the inevitable choice for tourism development. In the meantime, its development is a complicated and long-term project which needs to be explored and practiced in a long period. Based on fundamental national and provincial status and through joint efforts of government, tourism industry and tourists, we should try hard to draw on the experiences of advanced ideas and techniques of foreign countries to build up low-carbon and green industry in the true sense. Hence, the process of development of low-carbon economy can be promoted and the target of building a resource-conserving and environment-friendly society can be achieved.

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