

Exploratory development of ancient village based on the low carbon travel development model

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Abstract

This paper summarized basic theory of low carbon travel and the functional mechanism of the low carbon economy to improve the village tourism development by analyzing its conception, and development status and existing problem of the ancient village tourism in the low-carbon tourism development mode of our country nowadays is put forward. Combining with actual situation, this paper aims to propose the emission reduction countermeasures in allusion to these problems above, in order to provide certain reference to the development of ancient villages low carbon tourism.

Keywords: Low carbon concept; Low carbon travel; Ancient village travel; Emission reduction countermeasure

1 Introduction

With the increasing attention to the climatic variation worldwide, “low carbon” enters into view and is brought to the forefront. At the same time, with the voice of developing the low carbon economy, energy conservation and emission reduction, the low carbon travel becomes the fashionable tourism rapidly. Ancient village is a kind of traditional human settlement space, and it unites the most traditional life custom, social structure and thousands of years of farming culture of our country. A new tourism development mode has been built by combining the low carbon travel with ancient village travel development. The spiritual enjoyment of people can be satisfied when they are traveling, and at the same time, the healthy ecosystem can be guaranteed. The environmental friendly and energy-saving travel has a positive meaning to promote the development of the ancient village and protect the integrity of the ancient village [1-4].

2 Overview of the low carbon travel

2.1 CONCEPTION OF THE LOW CARBON TRAVEL

The low carbon travel in our country is not clearly defined because it starts late, and scholars have put forward their own viewpoint of the low carbon travel: Cai Meng et al [1] defined the low carbon travel as the carbon sequestration mechanism and low carbon consumption patterns through the low-carbon technology, in order to get higher quality of tourist experience and tourism economy. The core idea of it was to obtain greater economic, social and environmental benefits with less carbon emissions of tourism development; Qu Bao [2] thought that the low carbon travel was a deeper green tourism with low power consumption, low pollution, lower carbon footprint and carbon dioxide emissions; Hou

Wenliang et al [3] thought that fundamental purpose of low carbon travel was to reduce greenhouse gas emissions with the premise of guaranteed satisfaction, and realized the new travel mode and management concept of low carbon economy development through the different ways and the humanized system; this was a new kind of management philosophy, the essence of it was a new tourism consumption with low carbon intensity and its objects were all categories of tourist activities. Making a general survey of each scholars' viewpoint, although the low carbon travel is not clearly defined, all of them agree that low carbon tourism is a new type of tourism, and the traveling experience can be higher in the case of reducing carbon emissions through the new type “energy conservation and emissions reduction” technology and tourist's “low carbon consciousness” [5].

2.2 THE THEORETICAL BASIS OF LOW CARBON TRAVEL

The theoretical basis of low carbon travel is mainly about low carbon economy theory, tourism sustainable development theory and ecological tourism theory [5]. The low carbon economy refers to change development pattern from extensive development pattern to new development model with low pollution, low energy consumption, low emissions through a series of means, including technology, institutional innovation, new energy development, etc; innovation and change are the core essentials, and final goal is to achieve sustainable development. Sustainable tourism development follows its basic concept, that is, meet the need of contemporaries and do not threaten the capacity of future generations to their needs. It balances and coordinates the relationship between travel and nature, economy, culture and harmonious development. Besides respecting the integrity of local natural travel and protecting traveling, ecological tourism also involves the interpretation and education of the natural.

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3 The development mechanism of ancient village travel based on the low carbon travel development model

The low carbon economy promotes the development of ancient village travel in aspects of low carbon concept, low

carbon technology and low carbon policy, and it is a comprehensive function mechanism. The function mechanism of the low carbon economy to promote the development of ancient village travel [5] is shown in the Figure 1.

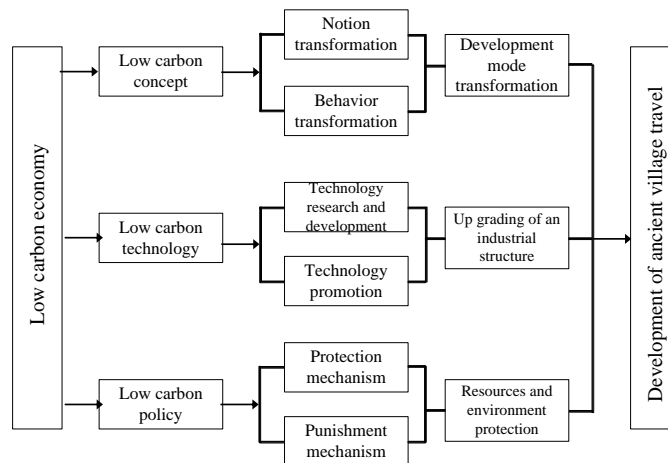


FIGURE 1 Action mechanism of the low carbon economy to promote the development of ancient village

Low carbon concept changes the concept and behaviours of participant and promotes the transformation of development pattern into low pollution, low energy consumption and low emissions in pursuing travel [5]. Most of ancient villages are in the ecological sensitive zone or reserves. The production of the low carbon concept can realize the transformation of development pattern by changing the ecology and resource utilization pattern, and the tourists are boosted to produce low carbon behaviours, and at the same time the ancient villages operators, enterprise, etc can receive self-discipline by calculating the carbon emissions; the low carbon technology provides the support to the low carbon travel, and then upgrade of tourism industry structure of ancient village is promoted. The low carbon technology steady or reduce the demand of non-renewable high carbon fossil energy by improving energy efficiency in each link of each industry in the process of ancient village travel such as eating (food tourism), living (Tourist hotel industry), behaviours (Tourist transportation), travelling (Tourism landscape), purchase (Tourism businesses), amusement (Tourist entertainment industry), etc. The cleaner production and thrift is proposed, and the virtuous cycle and harmonious development of ecology and economy of ancient village is realized by strict control of wastes and emissions; the cleaner production and thrift is proposed, and the virtuous cycle and harmonious development of ecology and economy of ancient village is realized by strict control of wastes and emissions. The low carbon policy provides the safeguard mechanism to low carbon travel by protection mechanism and punishment mechanism in the process of the development of the ancient village travel. It is easy to produce tour order disorder because of the continuously extended ancient village tourism industry scale, which will produce adverse impact to sensitive local ecological environment and resource utilization. Effective utilization of the environment and resources is realized by policy guidance and protection mechanism. The establishment of punishment mechanism can hit the behaviours of environment damage and resources

waste to some extent. These two supplement each other, and the objective of ancient village tourism environment protection can be realized under the action of the dual mechanism.

4 The development status of ancient village travel based on the low carbon travel development model

On account of the different national conditions, there has a significant difference between ancient travel development at home and abroad based on the low carbon travel development model [3, 5-7]. First, the research contents of low carbon travel abroad concentrate on tourists' behaviours choice, tourism carbon emissions and reducing travel emissions. The research perspectives of domestic scholars of low carbon travel concentrate on the conceptual framework of low carbon travel, development research and systematic study of low carbon travel. Research focuses at home and abroad have big difference. The research key point at home is low carbon tourism basic theory and gradually tend to study evaluation system of low carbon tourism and the development strategy; abroad study is more tend to measure the tourist traffic emissions through quantitative calculation, at the meanwhile, the corresponding measures of carbon reduction are put forward based on it. By comparison, the value of research results at abroad is generally higher than that at home in terms of science and credibility. The study of travel and protection of ancient village at foreign countries has certain reference significance to our country. Secondly, the history of tourism development research abroad is longer; therefore they have larger advantages compare with our country in the involved field and results. The study of ancient village travel abroad unfold in three aspects, ancient village tourism stakeholders, sustainable development and community participation in tourism, in order to form a virtuous circle of travel development in multiaspect. The study in this aspect at home is still on the exploratory stage, and the points of view in

our study are the problems in the process of tourism, protection and development of ancient villages and stakeholders. Although the involved fields of the theoretical research at home are being extended, lots of them are still rest on the principle and strategy, especially the study of new travel development mode of ancient village travel is rare. Therefore, guidance of the theory and practice is needed in the sustainable development of the ancient village.

The sustainable development of the ancient village is discussed starting from the view of low carbon economy. This paper put forward a technical route framework based on the research and analysis of the low carbon tourism development at home and abroad, in order to provide a certain reference to the study in this aspect. Research on ancient villages' technology roadmap under low carbon economy is shown on Figure 2.

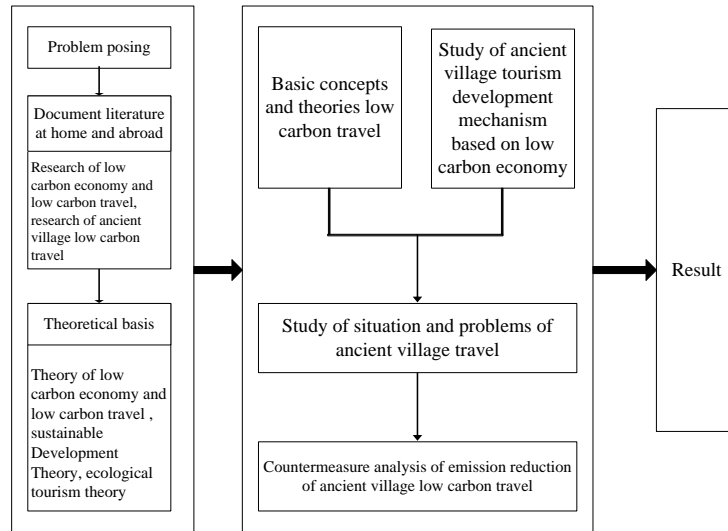


FIGURE 2 Research on ancient villages' technology roadmap under low carbon economy

5 Emissions reduction countermeasures of ancient village tourism development based on low carbon tourism development pattern

The ancient village travel in our country is still in the initial exploration stage; therefore, we should draw on the advanced experience abroad. The environment at home and abroad is different, therefore, how to use the experience for reference is still an issue needed to be researched. The consciousness of low carbon concept is built up from the aspects of "carbon source", "carbon sink" and industrial restructuring. Industry system of ancient village low carbon travel is supported by low carbon technology and guaranteed by low carbon policy, and then the ancient village low carbon travel can realize. The relative countermeasures are shown below:

5.1 ENHANCE THE LOW CARBON CONSCIOUSNESS, AND STRUCTURE INDUSTRIAL SYSTEM OF ANCIENT VILLAGE LOW CARBON TRAVEL

The economy of ancient village is lag behind relatively and the development is slow, which are influenced by its sealing and conservatism. Another study found that domestic tourists did not know completely about the low carbon travel. New knowledge should be increased and the concept should be changed in order to change this phenomenon [5, 7]. We must increase publicity of low carbon tourism consciousness, and the tourism environmental protection concept of "low carbon tourism" should be promoted to the village residents and tourists actively, in order to cultivate and establish

a public awareness culture of environmental protection. At the same time, the relative tourist enterprises should devote themselves to forge the low carbon tourism products with local characteristics and guide green and energy-saving consumption. The covers of the tourist industry are very wide, and the tourist industry of low carbon travel is structured by vertical and horizontal industry chain.

5.2 POPULARIZE THE LOW CARBON TECHNOLOGY, AND STRUCTURE THE CLEAN AND EFFICIENT ENERGY SUPPLY SYSTEM

Promotion and application of the low carbon technology is the key to develop the ancient village travel. Comprehensive benefits of ancient village travel can be realized through measures including increasing the invest capital to low carbon travel, completing supportive polices of low carbon travel development, popularizing the development patterns of local ecological agriculture and recycling economy. The commonly used methods for further refinement include many new technologies like carbon capture and sequestration technologies, reduction, recycling, energy utilization technology and so on, and we should promote using proportion of clean energy and process contaminant, which is generated in the production, and live.

5.3 CONSUMMATE THE LOW CARBON POLICY, AND BUILD THE LONG-TERM MECHANISM OF ANCIENT VILLAGE LOW CARBON TRAVEL

The local government should play a leading role to guide the behavioral pattern of enterprise, resident, tourist under the

guidance of sustainable development and low carbon concept. We should formulate the target responsibility, appraise check-up system, develop strategic step combine with the local practical, and make scientific plannings. The rational distribution of local low carbon travel should be built. In addition, the experience and lessons of low carbon economy and low carbon travel development abroad can be used for reference in building the suitable marketing system and policy system for the development of ancient village low carbon travel. The low carbon travel is regarded as the capital projects of ancient village, and then a sound long-term mechanism will be built.

5.4 ENCOURAGE THE ENTERPRISE TO TAKE PART IN ACTIVELY, AND FORM THE ECONOMICAL PRODUCTION SYSTEM

One of the basic requirements of low carbon travel is to reduce the energy consumption in the production processes and use the clear energy. "Green operation" needs the cooperation of enterprise. Nowadays, the usage rate of ancient village travel enterprises to use low carbon technology and clear energy is not ideal. The enterprise should be initiated to do green consumption and cultivate the low carbon tourism awareness of employees, and production system with scientific, forward-looking and environment friendly should be chose. We can make full use of natural high carbon sinks tourism resources, and the low carbon resources of culture and intangible cultural heritage resources should be excavated and protected in order to realize the ancient village tourism low carbonization.

5.5 EXCHANGE THE CONSUMPTION MODEL OF TOURIST, AND BUILD LOW CARBON CONSUMPTION PATTERNS

Tourists are the subject in the tourist activity. The common consumption model of tourist with resources wasting and increased emissions pollution should be translated into low carbon consumption model, from the aspects of eating, living, behaviours, purchase. The tourists can enjoy a healthy ancient village tourism environment and protect the healthy environment of ancient village at the same time, and the benign development of ancient village travel can be promoted.

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5.6 EXERT THE USE OF CARBON SINK, AND STRUCTURE THE CLEAN DEVELOPMENT MECHANISM

Definition of carbon sink is: the course, activity and mechanism of the forest vegetation fix the carbon dioxide in organisms by photosynthesis and reduce the concentration of carbon dioxide in the atmosphere [5]. Ancient villages reduce carbon emissions from the carbon source and pay attention to the carbon sink function of forest, grassland, wetland ecological land etc by using local ecological resources. Therefore, the utilization efficiency of agrarian and the protection of ecologically fragile area should be intensified in the ancient village travel.

6 Conclusion

The ancient village low carbon travel is a new type of tourism sustainable development facing to the increasing climatic variation and environmental resources pressure. It can not only realize the objective of energy conservation and emission reduction but also can quicken the upgrade industries of the tourist industry, and the energy consumption and operation cost of the tourist industry can be reduced, at the same time, the returns can be increased. The tourist industry can develop with dimension and collectivization [3, 5]. At present, it is in the booming period. Based on the further analysis of development mode of ancient village low carbon tourism, this paper started with the research on this aspect of the relevant literature and development mechanism research based on low carbon tourism development at home and abroad, comprehended the research status of ancient village low carbon travel at home and abroad and proposed relative research technology roadmap. On the above basis, we put forward countermeasure of emission reduction from the aspects of "carbon source", "carbon sink" and industrial restructuring, and positively promote the destination construction of low carbon travel.

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