

Research on the Coordinated Development Path of Ecosystem Health and Tourism Economy in Hainan

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ABSTRACT

How to achieve coordinated development of ecological environment and tourism industry is the core issue facing the promotion of high-quality development in Hainan. The article is based on the current situation of coordinated development between ecosystem health and tourism economy in Hainan, focusing on the coupling relationship and coordinated development path between the two, systematically analyzes the key problems faced by the coordinated development of Hainan's ecosystem health and tourism economy, and explores solutions. At present, Hainan is facing three prominent problems: the absence of ecological protection supervision, the imbalance of tourism economic structure, and the unsmooth mechanism of coordinated development. These problems are manifested in the overload of ecological carrying capacity in some regions, the development gap caused by regional and seasonal differences, and the transformation gap between ecological value and tourism revenue. Based on this, it is necessary to establish a rigid regulatory system and firmly hold the bottom line of ecological carrying capacity; optimize the structure of the tourism economy and promote balanced development across the entire region; improve the mechanism of coordinated development, achieve a win-win situation between ecology and economy, so as to effectively promote the coordinated development of ecology and tourism in Hainan.

KEYWORDS

Ecosystem health; Development of tourism economy; Coupling relationship; Coordinated development

1 Introduction

As the only tropical island province in China, Hainan has the most well preserved tropical seasonal rainforest, vast coral reef coastal zone, and abundant marine resources. Its unique ecological endowment has formed a deeply intertwined coupling relationship with the development of tourism economy. The health and stability of the ecosystem are the core competitiveness of Hainan's tourism economy. Ecological indicators such as clear sea and blue sky, coconut groves and beaches not only constitute the core elements of tourism economy, but also serve as a "natural barrier" to resist natural disasters and maintain regional ecological balance. The orderly development of the tourism economy provides financial support and social consensus for the health of the ecosystem. Ecosystem health and tourism economy are like two wheels of a car and two wings of a bird, together forming the core support for the high-quality development of Hainan. Under the strategic background of building a free trade port and creating an international tourism consumption center in Hainan, ecological priority and green development have become an insurmountable bottom line.

In recent years, Hainan has taken a series of ecological restoration measures and adopted measures such as promoting the diversification of tourism products and upgrading smart tourism to initially form a benign interactive prototype of "protection-development-feedback". However, at the same time, problems such as the absence of ecological protection supervision, imbalanced tourism economic structure, and the unsmooth coordinated development mechanisms have become increasingly prominent. Some regions have been overloaded with ecological carrying capacity due to tourism development, and the development gap between the north and south regions and the winter and summer seasons has intensified, the conversion channel between ecological value and tourism revenue has not been fully opened up, which seriously restricts the improvement of the coupling and coordination level between ecosystem health and tourism economy. This article is based on the actual development of Hainan, and conducts a systematic analysis from three dimensions: the importance, current problems, and development paths of the coordinated development of ecosystem health and tourism economy, in order to provide theoretical reference for building a long-term mechanism of mutual promotion and win-win between ecological protection and tourism development, and assist Hainan in achieving high-quality development of the tourism economy.

2 The Importance of Coordinated Development of Hainan's Ecosystem Health and Tourism Economy

Ecosystem health is the core competitiveness of Hainan. Hainan has the most well preserved tropical seasonal rainforest, vast coral reef coastal zone, and abundant marine biological resources in China. The blue sea and sky, as well as coconut groves and beaches have become the most distinctive symbols of Hainan. A healthy ecosystem is not only a "gene pool" of biodiversity, but also a natural barrier against typhoons and for conserving water sources. If the ecology is

damaged, the bleaching of coral reefs and the degradation of tropical rainforests will directly affect the high-quality development of Hainan's tourism economy. Without its ecological advantages, Hainan's tourism economy will become like water without a source or a tree without roots. Meanwhile, the development of the tourism economy can provide strong support for maintaining the health of the ecosystem. The orderly development of the tourism economy can transform ecological value into economic value, driving economic growth while injecting funds into ecological restoration projects. For example, the revenue from ecotourism scenic spots can be used to support the protection of tropical rainforests, while the revenue from ocean tourism can be used for the research and development of coral reef restoration technologies.

3 Problems in the Coordinated Development of Ecosystem Health and Tourism Economy in Hainan

Firstly, the absence of ecological protection supervision and the overdevelopment of tourism have led to an overload of ecological carrying capacity. At present, the rigid constraints on ecosystem protection in Hainan are insufficient. In some areas, ecological damage problems have occurred due to excessive tourism development, and there are obvious shortcomings in the regulatory system. For instance, Baoting Li and Miao autonomous county is an ecological conservation area in the central part of Hainan Province. Its geothermal hot spring resources have been exploited without a license for a long time, resulting in the loss of state-owned resources and ecological risks. What is more serious is that due to the lack of ecological protection supervision, the tail water from hot springs is discharged directly without treatment, which can easily cause water pollution and land salinization, directly threatening the regional ecological balance. Especially during the peak tourist season, the ecological carrying pressure is particularly prominent. In popular areas such as Sanya, the capacity for handling domestic waste during peak tourist periods is insufficient, and the water quality of some seaside bathing beaches around coastal scenic spots occasionally exceeds the standard. In some areas of Hainan, there are problems such as illegal mining, large areas of exposed land not covered, and wood processing plants lacking dust prevention measures, which reflect the drawbacks of ecological supervision and make it difficult to form a synergy for the coordinated development of ecosystem health and tourism economy.

Secondly, the tourism economic structure is unbalanced, and regional and seasonal differences have led to development breaks. In terms of regional development, Sanya and Lingshui Li autonomous county in the southern part of Hainan Province possess high-quality coastal resources and are the backbone forces driving the vigorous development of the tourism economy. In contrast, the tourism facilities in the northern and central and western regions of Hainan are weak, the number of tourists received is insufficient, and the high-quality ecological resources are difficult to be transformed into tourism products. This unbalanced situation not only widens the regional economic gap, but also intensifies the ecological pressure in the south, resulting in the idleness of the ecological advantages in the central and western regions. Meanwhile, the issue of seasonal fluctuations is also prominent. During the peak tourist season from November to March of the following year, hotel room prices skyrocket and scenic spots operate beyond their capacity. However, during the off-season from April to October, some scenic spots experience a sudden drop in foot traffic and a large number of tourist facilities remain idle.

Finally, the collaborative development mechanism is not smooth, and the conversion of ecological value and tourism revenue is hindered. In recent years, Hainan has been accelerating the design of the GEP (Gross Ecosystem Product) system, but the accounting work remains primarily focused on terrestrial ecosystems, with insufficient attention to the ecological value of marine areas, particularly the carbon sequestration value of marine ecosystems, making it difficult to convert ecological advantages into tourism economic benefits. Meanwhile, the proportion of tourism revenue that is used to support ecological protection is relatively low, and the ticket and consumption income of most scenic spots have not been used to extract ecological restoration funds as required.

4 The Coordinated Development Path of Ecosystem Health and Tourism Economy in Hainan

Firstly, establish a rigid regulatory system and adhere to the bottom line of ecological carrying capacity. To address the issues of ecological supervision absence and overload, it is necessary to start from three aspects: strengthening red line control, enhancing intelligent monitoring, and adhering to strict law enforcement, to establish a full-chain supervision system. Relevant departments in Hainan Province should designate ecological restricted zones for tourism development, clarify core areas such as tropical rainforests and coral reefs that are prohibited from commercial development, and implement total quantity control on ecological resources such as hot springs and sand and gravel. Relevant departments should rely on big data technology to build an ecological monitoring platform, install real-time monitoring equipment for passenger flow in popular scenic spots such as Sanya and Lingshui Li autonomous county, improve the long-term monitoring and early warning mechanism for ecological carrying capacity based on data such as seawater quality and

vegetation coverage. During peak seasons, measures such as appointment and flow restriction should be taken. Relevant departments in Hainan Province should strengthen law enforcement and accountability, impose strict penalties on behaviors such as illegal sand and gravel mining and illegal discharge, and include information on corporate dishonesty on the national credit platform. At the same time, it is necessary to establish a supervision mechanism with broad participation of the masses and media, establish an ecological reporting reward fund, form a joint force for ecological supervision, and lay a solid foundation for promoting the coordinated development of the ecological system health and tourism economy in Hainan Province.

Secondly, optimize the structure of the tourism economy and promote balanced development across the entire region. In terms of regional development, Hainan province should implement the strategy of "leading in the south, linking in the north, and rising in the east and west". Among them, Sanya and Lingshui Li autonomous county in southern Hainan should focus on developing high-end vacation tourism, Haikou in northern Hainan Province should be the core to build a cultural tourism hub, and the central and western regions should rely on tropical rainforests and tea garden resources to develop characteristic products such as rural homestays. In terms of business innovation, it is necessary to accelerate the transformation of the tourism economy from "sightseeing oriented" to "experiential oriented", develop new business models such as forest health care, and establish research bases with universities to attract summer parent-child customers. In response to the differences between peak and off peak seasons, Hainan Province should activate the off-season market with characteristic IPs, implement off-season tourism subsidy policies, encourage hotels and scenic spots to launch discounted packages, and narrow the gap between peak and off peak seasons through business format supplementation and policy incentives.

Finally, improve the mechanism for coordinated development to achieve a win-win situation of ecological and economic benefits. In terms of value conversion, Hainan Province should deepen the application of GEP accounting, promote the inclusion of tropical rainforest carbon sequestration projects in the national carbon market trading, develop ecological equity subscription products, and allow tourists to participate in ecological protection by purchasing carbon sequestration quotas. It is necessary to establish a sound mechanism for the return of tourism economic benefits, stipulating that tourism enterprises pay a certain proportion of their operating income to the ecological restoration fund, which is specifically used for projects such as hot spring tailwater treatment and mine greening. In addition, it is necessary to build a model of "scenic spots + cooperatives + farmers", give priority to absorbing local residents to participate in the development of the tourism economy, and share the fruits of tourism economic development.

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