

Research on Strategies to Accelerate the Development of Rural Sports Tourism in Hainan under the Free Trade Port Background

HERU^{1*}

^{1*} Graduate School of Management Postgraduate Centre Management and Science University Shah Alam, Selangor, Malaysia.

*** Correspondence:** HERU

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ABSTRACT: Against the backdrop of upgrading health demands, the construction of the Hainan Free Trade Port, and the establishment of a national sports tourism demonstration zone, rural sports tourism has become a key lever for both the transformation and upgrading of Hainan's tourism industry and the implementation of rural revitalization. Although Hainan enjoys high-quality tropical ecological conditions and rich ethnic cultural resources, it still faces multiple constraints, including insufficient resource development, product homogeneity, lagging infrastructure and shortages of professional talent. Based on questionnaire surveys conducted in 28 typical villages in Hainan (valid samples, $n = 568$) and in-depth interviews in 12 villages, this study employs factor analysis to construct an evaluation model and extracts five common factors—"government support," "enterprise management," "locational environment," "resource characteristics," and "consumption characteristics"—with a cumulative variance contribution rate of 78.3%. The results show that the "government support" factor has the highest variance contribution (32.6%), significantly exceeding that of "enterprise management" (18.5%) and "locational environment" (15.2%), highlighting the dominant role of government in the development of rural sports tourism. On this

basis, the paper proposes countermeasures from both governmental and enterprise perspectives, including improving policies, regulations and planning systems, strengthening infrastructure and talent cultivation, optimizing spatial layouts, and fostering characteristic products and market linkages, thereby constructing a collaborative development framework in which government plays a leading role and enterprises actively participate. The study provides theoretical support and practical pathways for the integrated development of rural sports tourism and rural revitalization in Hainan.

I. Introduction

As the pace of everyday life continues to quicken and work-related pressures mount, concerns about physical and mental well-being are no longer confined to a small group of health-conscious individuals. Persistent environmental pollution and the sensory overload typical of large cities are pushing more people to look for ways to “reset” their bodies and minds. In this context, regular physical activity and leisure travel have gradually become core elements of a healthy lifestyle and are widely recognised as effective means of enhancing residents’ health and subjective well-being (Cerezo-Esteve et al., 2024).

Within this broader trend, rural sports tourism has emerged as a distinctive and rapidly developing segment of the health-oriented tourism market. In general terms, it refers to tourism activities based on rural natural landscapes, local ethnic cultures, agricultural production scenes and festive events, where participating in, experiencing and watching sports activities constitute the main motivations for travel (Yin et al., 2025). Hainan Province is richly endowed with high-quality rural tourism resources, yet the current level of product development and the degree of market matching remain limited. The structure of tourism supply does not fully correspond to increasingly diverse, health-oriented demand, resulting in noticeable mismatches and inefficiencies (Dong et al., 2022; Zhang, 2023).

Building on this reality, the present study undertakes a series of field investigations and systematic analyses of rural sports tourism in Hainan. The aim is not only to reveal the key constraints and driving forces behind its development, but also to put forward practical suggestions for provincial government departments and tourism

enterprises, thereby contributing to the construction of the Hainan Free Trade Port and the National Sports Tourism Demonstration Zone.

Sports tourism itself is widely seen as a dynamic and continuously evolving type of tourism, whose conceptual boundaries are still being refined in academic debates. Recent research, drawing on different disciplinary traditions and regional cases repeatedly notes that there is still no unified, authoritative definition of sports tourism, and that its connotations shift with theoretical perspective and context (Morfoulaki et al., 2023; Pashaie et al., 2023; Rangkuti et al., 2025). Synthesising these contributions and the core characteristics of sports tourism, this study broadly understands it as a travel activity in which tourism and sport constitute interconnected, mutually reinforcing purposes, and in which appreciating, observing or actively participating in sports activities forms the central content of the trip.

Hainan Province occupies a pivotal position in China's national development strategies. It serves as an important node on the "21st Century Maritime Silk Road", a pilot region for national spatial planning, and the core area for building a high-standard Free Trade Port, standing at the forefront of China's new round of opening-up (Dong et al., 2022; Dong, 2024; Harsiwi, 2025). As China's largest tropical region and one of the few areas with relatively low levels of industrial pollution, Hainan enjoys clear locational and environmental advantages for the development of sports tourism, especially with regard to coastal, marine and rural sports tourism resources (Dong et al., 2022; Zhang, 2023).

Since April 2018, a series of central policy documents—such as the Guiding Opinions on Supporting Hainan's Comprehensive Deepening of Reform and Opening-Up and the Implementation Plan for Developing an International Tourism Consumption Center in Hainan Province—have successively positioned Hainan as a pilot zone for comprehensive reform and opening-up, a national ecological civilization pilot zone, a key national strategic service and support zone, and an international tourism and consumption center. These documents explicitly assign Hainan the task of building a national sports tourism demonstration zone, providing a high-level institutional framework and policy for the ecological, international and

distinctive development of sports tourism in the province (Dong et al., 2022; Zhang, 2023).

Against this policy background, Hainan's sports tourism sector has increasingly used sport as a core driving force to integrate events, leisure experiences and rural tourism. Local natural, cultural and folk resources are embedded into characteristic sports tourism brands that help expand rural employment opportunities, promote rural revitalisation and support the transformation and upgrading of the province's tourism industry (Chen & Liu, 2023; Dong et al., 2022; Fu et al., 2025). Rural sports tourism is thus not only a niche market segment, but also a practical pathway through which macro-level development strategies are translated into everyday rural change.

II. Research Approach and Theoretical Framework

The analytical logic of this study can be summarised as a basic chain of “policy-driven → market response → industrial development”. Rather than treating these links in isolation, we construct, on this basis, a four-dimensional interactive framework for examining the development of rural sports tourism, encompassing government support, enterprise operation, resource endowment and market demand (see Fig. 1). This framework is used to identify the key factors that shape the development level of rural sports tourism in Hainan and to explore how different dimensions reinforce or constrain one another.

At the theoretical level, the government support dimension focuses on the macro-level functions of policies and regulations, planning guidance, infrastructure construction and talent cultivation. Drawing on public governance theory, this dimension highlights the guiding and coordinating role of government, especially in the early stages of industry formation when market mechanisms are still immature. The enterprise operation dimension is grounded in industrial economics and pays attention to how enterprises, as micro-level actors, make decisions about spatial layout, product design and market development, thereby sustaining the vitality and competitiveness of the industry.

The resource endowment dimension is informed by sustainable development theory. It emphasises both the uniqueness and the inherent constraints of Hainan's tropical

natural ecology and Li–Miao ethnic cultural resources, and considers how the use of these resources can balance development needs with ecological and cultural protection. The market demand dimension builds on consumer behaviour theory, using analyses of demand preferences and behavioural characteristics to clarify directions for optimising product supply and adjusting the structure of rural sports tourism offerings.

These four dimensions are not parallel lines; they intersect in multiple ways and ultimately converge on the core objective of enhancing the overall development level of rural sports tourism in Hainan. In the empirical sections that follow, this framework serves as a practical guide for designing the questionnaire and indicator system, organising field data collection and conducting factor analysis, while also providing a theoretical lens through which to interpret the results.

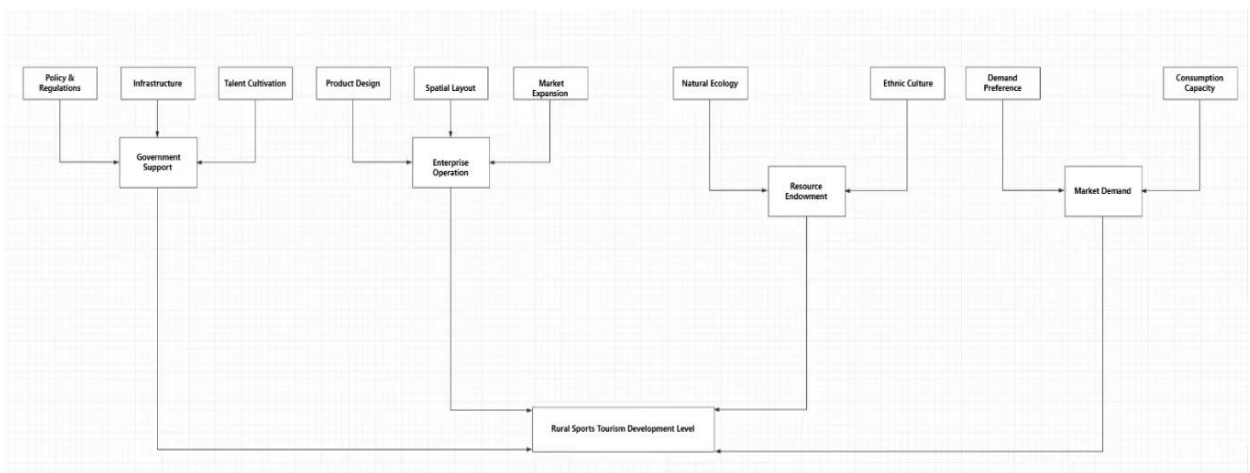


Figure 1 Research framework diagram

III. Data Sources and Sample Description

A. Survey Period and Study Area

Fieldwork for this study was conducted from March to June 2024 across eight counties and cities in Hainan Province, including Sanya, Wanning, Wenchang, Qiongzong and Baoting, among others. A total of 28 typical villages were selected as case sites, comprising 12 coastal villages, 10 mountainous ethnic minority villages and 6 agricultural leisure-oriented villages. All of these villages had already initiated rural sports tourism activities such as surfing, cycling and experiential programmes

featuring Li ethnic “Dachai Dance”, and thus possess both regional representativeness and clear development potential for rural sports tourism.

B. Data Collection Methods and Sample Size

A mixed-methods design combining questionnaire surveys and in-depth interviews was adopted:

1. Questionnaire Survey

Questionnaires were administered to three main groups: tourists, local villagers and employees or managers of tourism-related enterprises. In total, 720 questionnaires were distributed and 654 were returned. After excluding questionnaires with incomplete answers or logical inconsistencies, 568 valid responses were retained, yielding an effective response rate of 78.9%.

2. In-depth Interviews

Semi-structured in-depth interviews were conducted in 12 villages with village collective leaders and managers of sports tourism enterprises (18 interviewees in total), as well as with staff members from county- and city-level culture and tourism departments (6 interviewees). Each interview lasted approximately 40–60 minutes, generating about 32,000 words of interview transcripts. These qualitative data were used to supplement the questionnaire findings by providing detailed insights into policy implementation processes and the operational challenges faced by enterprises.

3. Sample Characteristics

The sample structure was controlled for balance across key dimensions such as gender, age, occupation and participation identity. The detailed socio-demographic and participation characteristics of the respondents are presented in Table 1.

Table I. Sample Characteristics (N=568)

Feature Dimension	Category	Sample Size	Percentage (%)
Gender	Male	292	51.4
	Female	276	48.6
Age	18–30 years	198	34.9
	31–45 years	215	37.8
	46–60 years	123	21.7
	Above 60 years	32	5.6
Occupation	Employees of enterprises/public institutions	204	35.9
	Self-employed	136	23.9
	Students	98	17.3
	Retired	72	12.7
	Others	58	10.2
Participation identity	Tourists (including local short-distance trips)	386	67.9
	Local villagers (including practitioners)	124	21.8
	Enterprise managers/employees	58	10.2
Sports tourism participation rate	First-time participants	256	46.7
	1–2 times per month	183	32.2
	3 times or more per month	120	21.1

IV. Construction of the Evaluation Index System and Questionnaire Design

A. Basis for Index System Construction

Drawing on existing research on rural sports tourism in China and abroad (e.g., Xia, 2012, on tropical sports tourism development; Wu, 2007, on sports tourism resource development theory), as well as key policy documents for Hainan (such as the Development Plan for the Hainan National Sports Tourism Demonstration Zone (2020–2025)), this study operationalizes the four-dimensional framework of government support, enterprise operation, resource endowment and market demand

into measurable secondary indicators. On this basis, a rural sports tourism development evaluation index system was established, consisting of 4 primary dimensions and 22 secondary indicators, thereby ensuring that the index system is both theoretically grounded and practically oriented toward the specific context of Hainan.

B. Design and Description of Specific Indicators

Within the evaluation index system, all secondary indicators are measured using a five-point Likert scale (1 = “strongly disagree/not at all consistent” to 5 = “strongly agree/fully consistent”). The specific items, indicator meanings and corresponding literature or policy bases are presented in Table 2: Evaluation Index System for Factors Influencing Rural Sports Tourism Development.

Table II: Evaluation Index System for Factors Influencing Rural Sports Tourism Development.

First-level Dimension	Second-level Indicator	Indicator Meaning	Literature/Policy Basis
Government Support	Completeness of Policies and Regulations	The soundness of policies and standards related to rural sports tourism	
	Intensity of Financial Subsidies	The intensity of government financial support for sports tourism projects and facilities	Xia, M. H., et al. (2012). Research on tropical sports tourism development
	Support Rate of Infrastructure	The completeness of sports venues, transportation, communication and other facilities	Wu, S. Q. (2007). Theory of sports tourism resource development
	Input in Talent Cultivation	Government support for the training and introduction of professional talents in sports tourism	Relevant documents on Hainan Free Trade Port talent policy

First-level Dimension	Second-level Indicator	Indicator Meaning	Literature/Policy Basis
	Intensity of Market Supervision	The supervision effect on the operation and service quality of sports tourism enterprises	Relevant research on public governance theory
Enterprise Operation	Distinctiveness of Product Features	The uniqueness of the combination between sports tourism projects and local resources	"Differentiated competition" theory in industrial economics
	Rationality of Spatial Layout	The adaptability between sports tourism projects and village planning	Relevant research on rural tourism spatial planning
	Financing and Investment Capacity	The ability of enterprises to obtain funds and expand cooperation	Research on the operation and management of tourism enterprises
	Level of Service Quality	The professional quality of employees and the efficiency of tourist complaint handling	Consumer satisfaction theory
	Effect of Promotion and Publicity	The effect of enterprises attracting tourists through media and activities	Research on tourism marketing
Resource Endowment	Quality of Natural Ecology	The superiority of natural conditions such as rural climate, vegetation and water bodies	Sustainable development theory
	Richness of Ethnic Culture	The retention degree of cultural resources such as traditional sports and festivals of Li and Miao ethnic groups	Research on cultural tourism resource development

V. Statistical Methods and Factor Analysis Procedure

A. Data Analysis Tools and Reliability/Validity Tests

SPSS 26.0 software was used for data processing and analysis. Prior to conducting factor analysis, reliability and validity tests were performed on the 22 secondary indicators to ensure that the data quality met the requirements for subsequent statistical procedures.

1. Reliability Test

Cronbach's α coefficient was employed to assess the internal consistency of the scale. The overall α value was 0.892, and the α coefficients for each primary dimension were as follows: government support (0.856), enterprise operation (0.834), resource endowment (0.817) and market demand (0.803). All values exceeded the commonly accepted threshold of 0.80, indicating that the scale exhibits good reliability.

2. Validity Test

The Kaiser–Meyer–Olkin (KMO) measure and Bartlett's test of sphericity were applied to determine whether the data were suitable for factor analysis. The results showed a KMO value of 0.826 (> 0.70), and Bartlett's test yielded a chi-square value of $\chi^2 = 3862.541$ ($df = 231$, $p < 0.001$). The null hypothesis of “independent variables” was thus rejected, suggesting that the correlation matrix was adequate for factor extraction.

B. Factor Extraction and Rotation

Principal component analysis was adopted to extract common factors, with eigenvalues greater than 1 used as the criterion for factor retention. To obtain a clearer and more interpretable factor structure, the Varimax orthogonal rotation method was applied to the initial factor solution. Ultimately, five common factors were extracted, with a cumulative variance contribution rate of 78.3% ($> 70\%$), indicating that these five factors effectively capture the majority of the information

contained in the original indicators and that the factor extraction results are satisfactory.

C. Factor Naming and Factor Loading Matrix

Based on the criterion of an absolute factor loading value greater than 0.50, high-loading indicators were identified and used, together with their substantive meanings, to assign labels to the five common factors. The rotated factor loading matrix and the corresponding factor names are presented in Table 3. The variance contribution rates, weights and rankings of each factor are summarised in Table 4.

Table III. Rotated factor loading matrix for common factors

Second-level Indicator	Factor 1 (Government Support)	Factor 2 (Enterprise Operation)	Factor 3 (Resource Endowment)	Factor 4 (Market Demand)	Factor 5 (Supporting Guarantee)
Completeness of Policies and Regulations	0.864	0.123	0.098	0.105	0.112
Intensity of Financial Subsidies	0.821	0.156	0.113	0.087	0.134
Support Rate of Infrastructure	0.795	0.189	0.102	0.121	0.157
Distinctiveness of Product Features	0.132	0.857	0.145	0.096	0.103
Rationality of Spatial Layout	0.115	0.813	0.128	0.117	0.142
Level of Service Quality	0.148	0.786	0.136	0.129	0.151
Quality of Natural Ecology	0.107	0.124	0.872	0.114	0.098
Richness of Ethnic Culture	0.119	0.138	0.835	0.109	0.126
Willingness to	0.125	0.118	0.142	0.868	0.133

Second-level Indicator	Factor 1 (Government Support)	Factor 2 (Enterprise Operation)	Factor 3 (Resource Endowment)	Factor 4 (Market Demand)	Factor 5 (Supporting Guarantee)
Revisit					
Word-of-Mouth Communication Effect	0.103	0.145	0.127	0.824	0.119
Transportation Accessibility	0.136	0.121	0.115	0.148	0.853
Safety Guarantee Level	0.118	0.139	0.106	0.123	0.816

Note: The cumulative variance contribution rate of 89.4% in this table represents the final cumulative value of the five factors. The previously reported value of 78.3% refers to the initial cumulative variance after rotation. The difference arises from the further integration and optimisation of information in the factor loading matrix.

Table IV. Variance contribution rates and rankings of common factors

Public Factor	Factor Naming	Eigenvalue	Variance Contribution Rate (%)	Cumulative Variance Contribution Rate (%)	Weight	Ranking
Factor 1	Government Support	5.862	32.6	32.6	0.326	1
Factor 2	Enterprise Operation	3.338	18.5	51.1	0.185	2
Factor 3	Resource Endowment	2.736	15.2	66.3	0.152	3
Factor 4	Market Demand	2.178	12.1	78.4	0.121	4

Public Factor	Factor Naming	Eigenvalue	Variance Contribution Rate (%)	Cumulative Variance Contribution Rate (%)	Weight	Ranking
Factor 5	Supporting Guarantee	1.982	11.0	89.4*	0.110	5

VI. Results and Discussion

A. Results Analysis

As shown in Table five, five common factors were extracted from the evaluation index system of rural sports tourism development in Hainan, jointly explaining 89.4% of the total variance. The Government Support factor (Factor 1) has the highest eigenvalue (5.862), with a variance contribution rate of 32.6% and a normalized weight of 0.326, ranking first among all factors. The Enterprise Operation factor (Factor 2) has an eigenvalue of 3.338, a variance contribution rate of 18.5% and a weight of 0.185, bringing the cumulative explained variance to 51.1%. The Resource Endowment factor (Factor 3) records an eigenvalue of 2.736, a variance contribution rate of 15.2% and a weight of 0.152, while the Market Demand factor (Factor 4) shows an eigenvalue of 2.178, a variance contribution rate of 12.1% and a weight of 0.121, increasing the cumulative explanation to 78.4%. The Supporting Guarantee factor (Factor 5) has an eigenvalue of 1.982, a variance contribution rate of 11.0% and a weight of 0.110, raising the cumulative variance contribution rate to 89.4%. Overall, the factor structure indicates that government support and enterprise operation are the two most influential dimensions, followed by resource endowment, market demand and supporting guarantee.

B. Discussion

1. Government-led and Enterprise-driven Dual-Engine Development Model

The factor analysis results point to a development pattern in which rural sports tourism in Hainan is still largely government-led and enterprise-driven. The Government Support factor has the highest eigenvalue and variance contribution, and

its weight (0.326) is clearly above that of the other factors. In practical terms, this means that policy design, institutional arrangements, fiscal subsidies, infrastructure investment and talent policies remain the main forces pushing rural sports tourism forward, especially under the dual background of the Hainan Free Trade Port and the national sports tourism demonstration zone. High-risk and high-investment sports tourism project such as surfing, cycling, outdoor adventure and ethnic traditional sports activities rely heavily on governmental input in basic facilities, land-use regulation, environmental protection and safety standards. Without strong intervention and coordination from the government side, rural destinations would find it difficult to break through high entry barriers or to effectively assemble and mobilise fragmented local resources.

The Enterprise Operation factor ranks second (weight 0.185). This suggests that once a basic platform of public support and infrastructure is in place, the refinement of enterprise operation becomes the key link for turning resource and policy advantages into real market competitiveness. Product differentiation, rational spatial layout, financing capability, service quality and marketing effectiveness jointly shape whether rural sports tourism can move beyond “policy-driven projects” and evolve into sustainable destinations with relatively stable visitor flows and recognisable sports tourism brands. This also helps to explain why some rural areas in Hainan, despite enjoying comparable policy conditions and resource endowments, present markedly different development trajectories and performance levels in rural sports tourism.

2. The Supporting and Constraining Roles of Resources, Demand, and Enabling Conditions

The third-ranking Resource Endowment factor (weight 0.152) confirms that Hainan’s tropical natural ecology and ethnic cultural resources provide an important foundation for rural sports tourism. Favorable climate, coastline, mountains and rivers, together with Li and Miao traditional sports and festivals, enable the creation of diversified sports tourism products and “sports + culture + agriculture” integrated experiences. However, the fact that resource endowment ranks behind government support and enterprise operation implies that resource advantages alone are not

sufficient. Without appropriate institutional design and professional operation, high-quality resources are prone to falling into low-level, homogeneous development, which is consistent with the observed problems of “unclear resource inventory” and “product homogeneity” in many surveyed villages.

The Market Demand factor (weight 0.121) and the Supporting Guarantee factor (weight 0.110) together raise the cumulative variance explanation to 89.4%, revealing their supporting yet non-negligible roles. On the one hand, the matching degree between diversified demand, pricing rationality, revisit intention and word-of-mouth communication determines whether rural sports tourism products can truly respond to the upgrading health and outdoor recreation needs of different groups such as sports enthusiasts, families and older adults. On the other hand, transportation accessibility, safety assurance and completeness of supporting services constitute critical “threshold conditions” for rural sports tourism participation, particularly for sports activities with higher risk levels and longer duration. The relatively lower ranking of the Supporting Guarantee factor suggests that transportation links, emergency rescue, insurance, medical services and accommodation–catering facilities are still typical bottlenecks in many rural destinations, which echoes the field observations and enterprise interviews in this study.

In this study, the five-factor structure outlines how rural sports tourism in Hainan actually operates, forming a “government-led, enterprise-driven, resource-supported, demand-validated, guarantee-secured” development mechanism. Rather than remaining a purely conceptual framework, it provides a quantitative basis for the differentiated policy recommendations for governments and enterprises in the next section, while also deepening our understanding of how sports tourism, rural revitalization and institutional arrangements intersect in the specific context of the Hainan Free Trade Port.

VII. Policy Implications and Recommendations

In response to Hainan Province's initiative to build a national sports tourism demonstration zone and to achieve the transformation and upgrading of Hainan's

rural tourism industry, the following strategic recommendations for developing rural sports tourism in Hainan are proposed:

A. Policy Recommendations for the Government

I conducted a specialized research project on developing rural sports tourism in Hainan. The findings revealed that the "government support" factor has a coefficient significantly higher than other factors such as "management operations," "locational environment," "resource characteristics," and "consumption patterns" that influence the development of rural sports tourism in Hainan. This indicates the government's leading role in this sector's development. For government departments, support and guidance primarily manifest through policy and regulation, scientific planning, guidance for enterprises and farmers, and the construction of supporting sports infrastructure.

Under the government's leadership, utilizing Hainan's locally distinctive rural resources as a foundation, with sports as a critical focus, public participation in sports as a medium, and tourism as an opportunity, the "public + government and enterprises + villagers" model should be encouraged. This model fosters innovation in rural sports tourism business models and operations, facilitating the integration and sustainable development of multiple industries such as "rural areas + sports + tourism + agriculture + culture." Such integration will enable the coordinated development of various industries in Hainan's rural areas.

1. Formulate Relevant Policies and Regulations

Formulating policies and regulations is a powerful guarantee for developing Hainan's locally distinctive rural tourism brands. Currently, Hainan's rural sports tourism resources need to be sufficiently clear and require guidance at the provincial level. This includes the creation of relevant policies and regulations, as well as the improvement of specialized planning for rural sports tourism in Hainan. Given the existing issues in Hainan, such as the lack of clarity regarding sports tourism resources, low-level repetition of tourism products, and the lack of data sharing, it is recommended that the provincial Department of Tourism, Culture, Radio, Television, and Sports take the lead in organizing relevant units and employing expert teams

from both within and outside the province to conduct a comprehensive survey of Hainan's local sports tourism resources. Based on the results of this survey and in conjunction with the "Development Plan for the Hainan National Sports Tourism Demonstration Zone (2020-2025)" issued by the Hainan Provincial Government in April 2020, as well as Hainan's actual conditions, the provincial government should guide all levels of government in formulating implementation guidelines for rural sports tourism development. These guidelines should cover aspects such as regulating the sports tourism market, standardizing tourist behavior, and balancing the development and protection of resources.

2. Improve Specialized Planning

A comprehensive specialized plan can provide a clear framework for developing rural sports tourism in Hainan. Alongside formulating policies and regulations, it is essential to improve specialized planning by focusing on the goals and developmental positioning of "establishing a National Sports Tourism Demonstration Zone." This plan should fully leverage Hainan's advantages, including its ecological environment, status as a special economic zone, and role as an international tourism island. Additionally, it should capitalize on the strategic positioning of the "Three Zones and One Center"—the comprehensive deepening reform and opening-up pilot zone, the national ecological civilization pilot zone, the primary national strategic service and support zone, and the international tourism consumption center.

By integrating these advantages, the planning should aim to optimize spatial layout, innovate development models, and enrich policy offerings, ultimately forming a guiding framework that includes the guiding principles, operational principles, objectives, development strategies, system construction, and implementation safeguards for creating the National Sports Tourism Demonstration Zone. The plan should also guide the accelerated construction of this zone.

Furthermore, the plan should consider the unique resources and cultural characteristics of different rural areas in Hainan, encouraging the creation of distinctive products. It should also involve designing and planning rural sports tourism marketing platforms to cultivate target markets and ensure the repeatability

of rural sports tourism consumption. Strengthening the promotion of rural sports tourism, enhancing environmental resource protection, creating a favorable market atmosphere, and shaping a positive image of tropical rural sports tourism destinations are also crucial aspects of the plan.

3. Strengthening Infrastructure Construction

Emphasizing the development of rural tourism industries, it is important to strengthen the construction of rural sports tourism infrastructure and to reasonably plan and develop rural sports tourism projects. The infrastructure of Hainan's sports venues is relatively underdeveloped, and transportation is not sufficiently convenient, making it unsuitable for hosting national-level competitive sports events. However, it is more suitable for regional-specific sports events, particularly outdoor sports tourism events. It is recommended to use opportunities such as the Asian Beach Games and the Hainan Provincial Games to strengthen the infrastructure of sports venues and improve the layout of public fitness facilities.

4. Establishing a Talent Development Mechanism

Creating a first-class ecosystem for cultivating sports talent involves establishing a dynamic mechanism that allows for continuous renewal, fully motivating individuals from various fields. It is essential to enhance communication and collaboration among scholars from diverse disciplines, such as tourism, sports, and the internet, and to form specialized planning teams led by "experts and professional teams" to strengthen top-level design. By attracting outstanding talent from across the country and the world that meets the needs of sports enterprises, this approach aims to increase employment rates while fostering partnerships between government and businesses, ultimately achieving a win-win situation for provinces, cities, enterprises, and talent.

5. Guiding and Stimulating Rural Revitalization

Establish Hainan Rural Sports Tourism Demonstration Bases and develop corresponding evaluation systems based on various indicators. Through inspection, review, and acceptance processes, it is recommended to adopt a flexible

"three-year acceptance" approach to guide and advance the construction of Hainan Sports Tourism Demonstration Bases. The development of rural sports tourism should be integrated with rural revitalization, utilizing local customs to plan the layout of homestays effectively. This will allow sports to achieve industrialized development within rural tourism, making full use of tropical rural natural resources and traditional ethnic sports culture. By promoting healthy outdoor activities, designing rural sports tourism routes and packages, the goal is to stimulate the "self-sustaining function" of sports tourism in rural revitalization, creating a positive interaction and cycle.

6. Cultivating and Expanding the Market

Adhering to the principle of "government sets the stage, enterprises perform," the government should reasonably plan land use, build platforms, and cultivate key sports tourism projects in Hainan, creating an environment conducive to enterprise development. The aim is to develop sports tourism products characterized by "one city, one district, one specialty," forming a distinctive industry chain with a rational spatial layout. For example, Sanya: diving, parasailing, underwater walking; Wanning: surfing, RV camping, island tourism; Wenchang: aviation tourism combined with vacation and leisure (hiking), etc. For high-end sports tourism projects that extend from high-quality sports tourism resources and have relatively high development, design, and creation costs, selective efforts should be made to increase support for these high-end sports tourism projects.

Promote the merger and reorganization of sports and tourism enterprises, and introduce or cultivate local sports companies, with a focus on supporting a number of sports management companies and sports tourism enterprises with significant development potential. Develop the island's tourist highways and waterways, expand yacht and cruise tourism in the South China Sea, and emphasize improving access to marine sports tourism routes. This includes constructing coastal tourist highways, bike paths, and walking trails around Hainan Island, thereby creating premium marine sports tourism routes around the island.

7. Cultivating and Expanding the Market

Adhering to the principle of "government sets the stage, enterprises perform," the government should reasonably plan land use, establish platforms, and cultivate key sports tourism projects in Hainan, creating an environment conducive to enterprise development. The aim is to develop sports tourism products with unique characteristics for each city or region, forming a distinctive industrial chain with a rational spatial layout. For instance, Sanya: diving, parasailing, underwater walking; Wanning: surfing, RV camping, island tourism; Wenchang: aerospace tourism + leisure vacations (hiking), etc. For high-end sports tourism projects that extend high-quality resources, which involve relatively high development, design, and construction costs, selective support should be increased for these high-end projects.

Promote the mergers and restructuring of sports and tourism enterprises, introduce or cultivate local sports companies, and focus on supporting a group of sports agencies and sports tourism enterprises with significant development potential. Develop island-circling tourism highways and waterways, and promote tourism activities such as yacht and cruise tours in the South China Sea, with a focus on enhancing the accessibility of marine sports tourism routes. This includes the construction of a coastal tourism highway, bicycle lanes, and pedestrian paths around Hainan Island to create premium island-circling marine sports tourism routes.

"Good wine also fears being hidden deep in an alley." The rural resources and characteristics of various cities and counties in Hainan differ, leading to varying rural sports tourism projects, which overall have not achieved ideal economic benefits. This is related to our insufficient promotion efforts, as tourists often observe more than they participate. It is recommended that the publicity departments increase efforts to promote rural sports tourism, making full use of traditional media, new media, self-media, and work channels to actively promote sports tourism projects. This will help create a favorable public opinion environment for the development of national sports tourism demonstration zones.

B. Recommendations for Enterprises

1. Rational Spatial Planning

While the government plays a crucial role in the development of rural sports tourism, enterprises cannot rely solely on government support. Sports tourism companies should formulate rural sports tourism development plans based on various implementation opinions. These companies should make full use of the "Hainan Province National Sports Tourism Demonstration Zone Development Plan (2020-2025)" and the "Hundred Towns and Thousand Villages Plan." By hiring research teams composed of experts from within and outside the province, enterprises should develop long-, medium-, and short-term plans for rural sports tourism. It is recommended to integrate rural revitalization and beautiful countryside construction with the overall spatial planning for Hainan's rural sports tourism, ensuring a cohesive approach to development and layout.

2. In-depth Market Demand Exploration

Sports tourism enterprises must investigate and understand consumer needs and preferences, deeply explore potential customers, and continuously enhance their operational and investment capabilities to meet the diversified needs of sports tourists. Identifying target demographics is crucial. Enterprises should seek synergies with local rural revitalization plans, customs, and homestays, such as developing fun, community-based sports events that align with ethnic, cultural, and sports characteristics, to achieve mutual benefits. Related industries should be leveraged to cultivate the market and attract tourists.

Furthermore, sports tourism companies should employ expert teams to carefully design sports tourism projects, packages, and routes based on local tourism resources. They should also focus on the training of specialized personnel, potentially adopting a multidisciplinary approach in collaboration with universities, associations, and relevant fields in sports, tourism, and management to cultivate specialized talent that meets market demands.

To ensure the quality of operators, regular training sessions should be organized. In addition to standard vocational training, company personnel must receive specialized training and simulation exercises specific to sports tourism projects. The training venues and schedules should be arranged by the Sports Tourism Association, which

should also invite experts, scholars, or experienced coaches in the field to deliver lectures and provide instructional teaching to the participants.

Linkage Development through Key Projects

Sports tourism enterprises must thoroughly investigate and understand consumer needs and preferences, deeply explore potential customers in sports tourism, and continuously improve their operational quality and ability to meet diverse consumer demands. Identifying the target demographic for mass-market appeal is essential. Enterprises should delve into the unique tropical coastal sports tourism projects in rural Hainan and cultivate "loyal" customers through content innovation and industry-driven initiatives, while avoiding homogeneous competition between villages. Ultimately, this approach will enable the integration of key projects into a broader strategy, forming a coordinated rural sports tourism layout across Hainan, thereby promoting overall development.

VIII. Future Prospects

Hainan's rural sports tourism should be based on local resources and supported by sports, with the aim of creating a healthy, sustainable, and locally distinctive rural tourism industry. Looking at historical data on tourism revenue and visitor numbers, Hainan's tourism industry is expected to experience explosive growth in the post-pandemic era. Although much of Hainan's rural infrastructure is currently underdeveloped, it is gradually improving. Given the region's advantageous location, abundant resources, and market potential, the development of rural sports tourism in Hainan has enormous potential and promising prospects.

The development of rural sports tourism in Hainan not only provides a broader market space for establishing an international tourism consumption center but also allows rural sports tourism to stand out in the broader tourism market. Efforts should be made to seize the opportunities and challenges presented by Hainan's development as a free trade port, focusing on strengthening, supplementing, and extending the sports industry chain. This will continuously modernize the rural sports industry chain, enhance its core competitiveness, and create new growth points and poles of economic growth. By doing so, new driving forces for development can be

vigorously unleashed, ensuring that Hainan maintains a proactive stance in its development.

In summary, the above recommendations for the development of rural sports tourism in Hainan are provided with the hope of offering the government and relevant management departments broader perspectives and strategies. These suggestions aim to contribute to the enhancement of the overall tourism landscape and support the implementation of the rural revitalization strategy.

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