

Development of Coastal Sports and Leisure in China: Models, Challenges, and Trends

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Abstract: China possesses abundant marine resources and a rich maritime culture, providing favorable conditions for coastal sports and leisure activities. Starting from the current state of China's coastal sports and leisure industry, this article analyzes the challenges faced by the industry, including issues related to seawater quality, cultural factors, lack of professional sports talent, and inadequate infrastructure and service systems. Additionally, it explores the development trends of the coastal sports and leisure industry driven by factors such as new technologies, environmental awareness, diverse consumer demands, and community participation. The sustainable development of this industry necessitates the collaboration and efforts of multiple stakeholders, including government, businesses, and society.

Keywords: coastal sports, industry challenges, development trends

1. Introduction

The eastern part of China, adjacent to the Pacific Ocean, boasts over 18,000 kilometers of coastline. Its coastal regions span from north to south, offering picturesque natural landscapes and pleasant climates. Coupled with a rich maritime cultural heritage [1], this unique combination provides an ideal environment for the development of coastal sports and leisure. As China's socioeconomic status continues to rise, people increasingly aspire to a better quality of life, with sports and leisure becoming a favored lifestyle choice for maintaining physical and mental well-being [2]. Along the coastal areas, the coastal sports industry is flourishing.

In 2022, the total scale of China's sports industry exceeded 3.3 trillion yuan, with the leisure sports sector accounting for approximately 60% of this total [3]. Projections indicate that by 2025, the scale of the leisure sports industry is expected to surpass 3.5 trillion yuan. The participation in coastal leisure sports activities is on the rise, and the industry's scale continues to expand, undoubtedly serving as a pivotal engine driving the future development of the sports industry.

However, the development of China's coastal sports and leisure industry is not without challenges [4]. Significant disparities in economic development exist between coastal provinces in the north and south, leading to imbalances related to coastal ecological conservation efforts and the development of leisure tourism resources. Additionally, the establishment and improvement of talent pools and corresponding service systems for coastal sports and leisure pose considerable challenges. Therefore, it is crucial to comprehensively assess the current state of industry development and address existing issues.

This paper aims to analyze the current status of China's coastal sports and leisure industry, identify challenges and limitations in its development, and provide insights into future trends. Ultimately, this study aims to contribute valuable references for the healthy and sustainable growth of China's coastal sports and leisure industry.

2. Development model of coastal sports and leisure

2.1 Current status of China's coastal sports and leisure activities

As residents' material living standards improve, the public is increasingly seeking diverse

recreational activities. The cultural tourism market continues to thrive, with local delicacies like “Zibo barbecue” and “Erbin” gaining popularity [5]. Consequently, in coastal areas, the construction and development of sports and leisure facilities in seaside cities have received unprecedented attention. Governments and businesses are leveraging local marine resources to build beach resorts, water sports centers, yacht clubs, and other sports and leisure infrastructure. This not only meets the growing demand for sports and leisure among residents and tourists but also significantly enhances the tourism appeal and competitiveness of these cities [6].

Coastal cities capitalize on their unique marine geographical advantages by actively promoting ocean-related sports and leisure activities such as sailing, surfing, diving, and beach volleyball. These activities not only provide colorful recreational choices for citizens but also attract a large number of domestic and international tourists, further boosting local tourism development. Additionally, governments and relevant departments organize international sailing races, beach soccer tournaments, and festive events to effectively promote the popularity and improvement of sports and leisure activities. Meanwhile, various regions focus on their own coastal resources to create distinctive coastal sports brand projects [7]. For instance, Ningbo Meizhou Bay has established a water sports training and competition base centered around sailing and motorboats, while Zhuhai aims at kite-related projects by constructing a coastal sports park. By extending the sports and leisure industry chain, these cities are building new engines for urban development.

The rapid development of the coastal sports and leisure industry has also greatly benefited the socioeconomic status of coastal regions. Firstly, it meets the vibrant demand for diversified recreational and entertainment activities among citizens and tourists. Secondly, the industry itself and its extended supporting services become highlights in the development of the local tertiary sector, contributing to tax revenue and employment. Moreover, through the promotion and publicity of various distinctive activities, coastal sports and leisure have become attractive “business cards” for these cities. This, in turn, enhances their visibility among both national and global tourists, fostering a virtuous cycle in the leisure economy.

2.2 Typical coastal sports and leisure model

Coastal Sports and Leisure is form of physical activity that relies on the natural resources and sports facilities in coastal areas, with the aim of sightseeing, entertainment, fitness, and relaxation [8]. This model fully integrates the unique coastal resources such as beaches, seawater, and islands, utilizing corresponding sports facilities to provide participants with diverse sports and leisure experiences.

The distinctive feature of this model lies in its deep reliance on natural resources [9]. For instance, beach volleyball and beach soccer depend on high-quality sandy beaches, while activities like diving, sailing, and surfing rely on clean seawater and suitable wave conditions. These natural resources not only offer ideal venues for sports but also allow participants to connect intimately with nature and find mental relaxation. Moreover, coastal sports and leisure emphasize active participation and experiential aspects. It encourages not only spectators to watch professional sports events like sailing races and surfing competitions but also actively engage in various sports activities to experience the joy of movement. This model promotes stepping out of daily routines, enhancing physical fitness, and achieving mental relaxation through sports participation.

Beyond providing sports activities, coastal sports and leisure also prioritize personal well-being. Ocean tourism is a typical representation of this model, where coastal areas are often equipped with a range of leisure facilities and services, including beach resorts, spas, bars, and restaurants [10]. These offerings create a comprehensive leisure experience that balances activity and tranquility, satisfying both the need for sports and the pursuit of a high-quality leisure lifestyle.

2.3 Policy support for coastal sports and leisure

At the national level, policy support forms a solid foundation for the development of coastal sports and leisure industries. For instance, the State Council’s document titled “Several Opinions on Accelerating the Development of the Sports Industry to Promote Sports Consumption” explicitly outlines goals for sports industry development, providing direction for the growth of coastal sports and leisure industries. Additionally, joint guidelines issued by the National Tourism Administration and the General Administration of Sport of China emphasize the prospects for developing coastal sports and leisure industries.

Local governments play a crucial role in promoting the development of coastal sports and leisure industries. They provide regulatory support by enacting local laws and management measures to facilitate coastal sports and leisure projects. Simultaneously, local governments allocate financial resources to enhance coastal sports and leisure infrastructure, including beaches, bathing areas, and sports facilities, thereby improving the overall experience for visitors. Furthermore, efforts to introduce advanced international concepts and management practices in coastal sports and leisure contribute to enhancing service quality and international competitiveness. Hosting international coastal sports events and activities also raises the profile of coastal sports and leisure destinations, attracting both domestic and international tourists.

Financial policies are another significant driver for the development of coastal sports and leisure industries. The government encourages financial institutions to offer loans and other financial services to support these industries, reducing financing costs for businesses. Additionally, tax incentives alleviate the tax burden on enterprises, motivating investments in coastal sports and leisure.

Regarding talent development, coastal region governments collaborate with universities to establish specialized programs and courses related to maritime fields. These initiatives focus on nurturing professionals needed for the coastal sports and leisure industry, including experts in sports management, tourism management, sports coaching, lifeguarding, and tour guiding. This investment in human resources ensures the sustainable growth of the industry.

3. Challenges faced by coastal sports and leisure industries

3.1 Seawater quality issues

The quality of seawater is a critical limiting factor for the development of coastal sports and leisure industries. It not only affects the implementation of marine sports projects but also directly impacts the health and safety of participants. Data from the National Marine Environmental Monitoring Center reveals that seawater quality is adversely affected by multiple factors, including industrial pollution, domestic sewage discharge, and improper exploitation of marine biological resources. These issues are particularly severe in nearshore areas, leading to a decline in water quality.

In China's coastal regions, there is widespread distribution of water bodies classified as "Class IV" (poor quality), with abnormal levels of total nitrogen and active phosphates in seawater. Additionally, some areas experience frequent ecological problems such as red tides. The concerning seawater quality not only threatens marine biodiversity but also imposes practical limitations on coastal sports activities. For instance, Zhejiang Province explicitly acknowledges the seawater quality issues in the Yangtze River estuary region within its marine sports development plan. The subpar seawater quality renders Zhejiang's nearshore areas unsuitable for activities like yachting, sailing, windsurfing, surfing, and diving. Furthermore, the scarcity of high-quality beach resources also hinders the development of coastal sports and leisure activities in the province.

3.2 National character and cultural factors

China is a multi-ethnic country, where different ethnic groups have their unique cultural traditions and lifestyles. These factors to some extent influence the promotion and participation in coastal sports and leisure activities.

Firstly, differences in ethnic temperament may lead to varying levels of acceptance of sports and leisure activities. For instance, some ethnic groups may lean towards introverted and calm lifestyles, while others may be more enthusiastic about intense sports activities. These personality differences can impact the appeal and participation of ethnic populations in newly introduced coastal sports and leisure projects. Secondly, cultural factors also play a role in coastal sports and leisure. China's cultural diversity among ethnic groups means that different sports activities may be more or less popular in various regions. For example, certain areas may favor traditional sports, while showing less interest in modern coastal sports and leisure activities. Additionally, traditional festivals and celebrations of some ethnic groups may conflict with the timing of coastal sports and leisure activities, affecting people's participation. Furthermore, language and religious customs can also influence public engagement with these projects, posing challenges to the promotion and development of coastal sports and leisure activities.

Overall, within traditional Chinese culture, reverence for the sea and a relatively conservative ethnic

temperament may constrain the widespread adoption and promotion of coastal sports projects. Particularly in high-risk marine sports activities like surfing, diving, and sailing, this cultural background may result in lower public participation.

3.3 Lack of professional sports talents

Despite various efforts by coastal governments, including collaborations with universities, to promote the establishment of professional talent systems in coastal sports and leisure, the shortage of professional sports talent remains a critical factor hindering industry development from a global perspective. The scarcity of professional talent directly impacts the quality of sports and leisure activities, safety during these activities, and overall service levels and innovation within the industry.

The shortage of professional talent manifests across multiple dimensions. Firstly, coastal sports and leisure activities such as diving, surfing, and sailing require competent coaches to provide standardized guidance, ensuring the quality and safety of tourists' experiences. However, due to the lack of professional coaching talent, these activities often lack effective supervision and guidance. Secondly, insufficient event planning and management personnel hinder the improvement of event organization standards, making it challenging to attract and host international-level competitions. Additionally, inadequate service quality is linked to the lack of professional expertise among practitioners, affecting overall industry service levels and reputation.

The underlying reasons for this shortage are twofold. On one hand, as an emerging industry, sports tourism lacks a well-established education and training system, resulting in an inadequate supply of professional talent. Relevant courses and training programs in universities and vocational institutions are relatively scarce, failing to meet market demands. On the other hand, the coastal sports and leisure industry's limited marketization and unclear career prospects make it challenging to attract and retain talent.

3.4 Poor infrastructure and service system

The inadequacy of infrastructure and service systems also hinders the sustainable development of the coastal sports and leisure industry, directly impacting its competitiveness in meeting diverse consumer demands. Regarding infrastructure, the lack of sports and leisure facilities and the outdated state of existing facilities pose significant challenges. For instance, certain coastal areas lack high-standard beach volleyball courts, diving centers, and surfing facilities, limiting the diversity and quality of sports and leisure activities. Additionally, insufficient maintenance and updates of existing sports facilities may lead to safety hazards, thereby diminishing the overall visitor experience.

Similarly, the underdeveloped service system affects the growth of the coastal sports and leisure industry. Insufficient professional training for service personnel results in inconsistent service quality, making it challenging to provide visitors with expert guidance and assistance. Standardizing service processes and ensuring consistent service quality are areas that require improvement within the current service system, as these issues impact the overall consumer experience. Furthermore, the establishment of an efficient information service system is crucial. In the digital age, tourists expect convenient access to sports and leisure-related service information through streamlined channels. However, some coastal regions have yet to establish effective information service systems, lacking features such as online booking, activity scheduling, and tourism guides. Consequently, information dissemination is hindered, and service quality suffers.

4. Future trends of coastal sports and leisure

4.1 Impact of emerging technologies

In the future development trends of the coastal sports and leisure industry, the penetration of emerging technologies will undoubtedly be a major driving force. The application of Artificial Intelligence (AI) technology, for instance, can analyze tourists' behavior patterns and preferences to provide personalized recommendations for sports and leisure activities. It can also assist in safety management, such as real-time monitoring through intelligent surveillance systems to prevent accidents. Big data technology, on the other hand, collects and analyzes visitor feedback, helping businesses better understand market demands and optimize resource allocation. The utilization of Virtual Reality (VR) and Augmented Reality (AR) technologies offers immersive virtual environment experiences and

interactive augmented reality, revolutionizing the way coastal sports and leisure are experienced. Additionally, the high-speed and low-latency features of 5G communication technology support new service models like remote teaching and guidance, while also providing a technological foundation for smart device integration and industry management.

However, the development of emerging technologies also presents a series of challenges. These include the urgent need for technology talent, infrastructure upgrades, and heightened requirements for visitor privacy protection. Therefore, the coastal sports and leisure industry must continually adapt to technological innovations, actively integrate new technologies to enhance service quality, and effectively address the challenges posed by technology to ensure the industry's health and sustainable development. As technology continues to evolve, it is expected that the coastal sports and leisure industry will move towards greater intelligence, personalization, and diversification.

4.2 Environmental protection and sustainable development

In the future development of the coastal sports and leisure industry, environmental conservation and sustainability are central themes. Given the growing global focus on ecological protection, industry development strategies must align with ecological principles to achieve harmonious coexistence between economic benefits and the environment. Enhancing ecological benefits while safeguarding the environment forms the cornerstone of coastal sports and leisure industry growth. During development, priority should be given to conserving natural resources and avoiding irreversible harm to ecosystems. Scientific planning and management are essential to ensure that sports activities do not disrupt the balance of beaches, coastal areas, and other ecosystems. Additionally, collaboration between the coastal sports and leisure industry and environmental organizations is crucial. Increasing tourists' environmental awareness and engagement through educational initiatives such as eco-tourism workshops and marine conservation lectures enhances their understanding of environmental impacts and encourages participation in conservation efforts. Furthermore, integrating local culture and wellness industries into coastal sports and leisure development creates unique, region-specific activities. For instance, promoting green tourism and encouraging eco-friendly transportation options like cycling and hiking contribute to both service quality and environmental protection.

4.3 Market and consumption prospects

The rise of sports tourism, as a significant branch within the coastal sports and leisure domain, is becoming a driving force for industry development. Simultaneously, the evolution of consumer demands significantly influences market trends.

Sports tourism injects fresh vitality into the coastal sports and leisure market. With increasing disposable incomes and heightened health awareness, the public increasingly incorporates sports activities into their travel plans. According to relevant research data, the sports tourism market is rapidly expanding and is expected to maintain robust growth over the next few years. Coastal sports tourism, leveraging its unique natural environment and diverse sports activities, has become a crucial factor in attracting numerous tourists. Events like beach marathons, sailing competitions, and surfing festivals not only boost local economic benefits but also enhance a city's brand image.

Consumer demand shifts also impose higher development requirements on the coastal sports and leisure market. Modern consumers seek personalized and experiential travel products, rendering traditional service models inadequate to meet market needs. Consequently, coastal sports and leisure enterprises must focus on integrating products and technology, innovating to develop new offerings that align with consumers' evolving expectations. Leveraging local cultural features and natural resources, designing and providing unique sports tourism products can satisfy consumers' quest for novel experiences.

4.4 Community participation and social impact

In the development of the coastal sports and leisure industry, community involvement plays a crucial role. Active participation from the community provides essential social capital and service support for the growth of the coastal sports and leisure industry. It contributes to the establishment of robust service coordination mechanisms, promoting the industry's overall health. Additionally, community engagement enhances the regional characteristics of sports and leisure activities, improves the quality of life for local residents, and fosters positive social impacts through education and

awareness about marine environmental conservation. Valuable feedback from the community also stimulates industry innovation, leading to the emergence of novel business and service models. On a societal level, the coastal sports and leisure industry significantly drives local economies by generating economic growth, creating employment opportunities, and enhancing residents' income. However, as the industry develops, it must also shoulder the social responsibility of environmental protection, ensuring sustainable practices in ecological conservation and resource utilization. Implementing measures such as proper area planning, using eco-friendly materials and equipment, and promoting green tourism are effective ways to minimize adverse impacts on the natural environment.

5. Conclusion

The coastal sports and leisure industry in China has achieved significant development with robust support from national policies and reliance on abundant natural resources and unique geographical advantages. However, the industry also faces multiple challenges, including water quality issues, cultural factors related to ethnic temperament, a shortage of professional sports talent, and inadequate infrastructure and service systems. These challenges not only hinder further industry growth but also pose potential threats to the health and safety of participants. In response to these challenges, effective measures should be taken by the government and relevant authorities to promote the sustainable development of the coastal sports and leisure industry. Regarding water quality issues, continued efforts are needed to strengthen marine environmental protection regulations, enhance monitoring and pollution control, and advance marine ecosystem restoration projects. Culturally, raising public awareness and interest in marine sports through education and promotional activities can foster adventurous spirits and exploration desires. Addressing the shortage of professional sports talent requires intensified talent cultivation efforts, establishment of talent development bases, and reforms in talent management systems. Improving infrastructure and service systems necessitates increased investment in sports facilities, elevated service management standards, and the establishment and enhancement of safety mechanisms.

The future trends of the coastal sports and leisure industry indicate that the application of emerging technologies, environmental conservation, market dynamics, and community engagement will be key factors driving industry development. Innovations such as Virtual Reality (VR) and Augmented Reality (AR), along with smart devices and applications, offer new experiential dimensions and personalized services for coastal sports and leisure. Embracing multicultural co-learning and integrating Western and Indigenous perspectives enhances our understanding of coastal blue spaces. Furthermore, the industry's sustainable development requires collective wisdom and active participation from government, businesses, and social entities.

Acknowledgments

This work was supported by the Philosophy and Social Science Foundation of Guangdong Province, (Grant number: GD20XTY19).

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