

Design Study of Characteristic Scuba Diving Tourism in Sanya, Hainan Province

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Abstract: In recent years, with the development of diving tourism, the diving tourism industry in Sanya, Hainan Province, China has rapidly emerged. The tourism management department has been promoting and advertising this unique tourism feature, making diving tourism one of the major attractions that bring in more and more domestic and foreign tourists. We have noticed that there is great potential and room for the development of diving tourism in Sanya, Hainan Province, but there are also problems with tourist safety, marketing strategies, and poor management. To promote the development of diving tourism in Sanya, Hainan Province, we suggest the following: First, strengthen the measures to ensure the safety of tourists, including improving the quality of diving tourism services, strengthening the construction of management systems, and enhancing tourist safety measures to improve their sense of security. Secondly, optimize the marketing strategies to increase the awareness and competitiveness of diving tourism products. Thirdly, strengthen management and regulatory measures, perfect management systems, and standardize market order. Fourthly, establish a comprehensive diving tourism plan, design diving routes, and enhance the quality of diving facilities and services. Based on these suggestions, we can enhance the development of diving tourism in Sanya, Hainan Province, increase its economic and social benefits, and raise its level of development significantly.

Keywords: Sanya, Hainan Province, Diving tourism; current development, Countermeasure research, Plan and design.

1. Introduction

With the rapid development of the global economy, tourism has become the most influential industry in the world. Tourism is one of the most important basic industries in the world economy and also a strategic pillar industry in China's economic transformation and upgrading. The tourism industry is not only an industry, but also a systematic engineering involving multiple fields, closely related to other fields such as resource environment, transportation, cultural media, commerce and finance. Yalong Bay is located in Sanya City, Hainan Province. It is a natural beach and is known as one of the "most beautiful bays in China", with over 20 high-end hotels and villas. Traditionally, it is a region of a highly developed tourist city. Moreover, Yalong Bay is rich in marine resources, allowing for diverse diving experiences such as snorkeling, deep diving, and free diving. With the increasing popularity of traditional diving tourism, a series of problems have arisen. The traditional tourism development model overly emphasizes economic benefits, but neglects the protection of society and the ecological environment. In addition, considering the uneven resources of diving teaching personnel, insufficient technological means, and the uneven dissemination of traditional tourism information, many tourists may not meet their travel expectations, and there may be some personal safety issues during diving. Based on the above issues, this article proposes suggestions on strengthening regional joint development, protecting ecology, adhering to sustainable development strategies, and internet tourism, hoping to contribute to the development of diving tourism in Yalong Bay and China.

Basing on what I said, we plan to reduce the negative effect in a theoretical perspective. For instance, ecological environment protection, diving personal safety, marketing, and poor management. At the same time, it is possible to study how to further deepen the development of characteristic diving tourism in Yalong Bay.

It is possible to systematically evaluate diving resources, market size, investment needs, tourism routes, and other aspects, providing scientific basis for the future development of diving tourism economy in Sanya City, strengthening market development, improving tourism experience, and creating a diving brand in Sanya City.

From other aspects, the research on diving tourism planning and design is also an important component of the national ocean strategy, providing decision-making support for the country's vast diving tourism market and promoting the sustainable development of diving tourism.

In the economic field, The development and industrial development of Yalong Bay Scenic Area can help promote the optimization and adjustment of industrial structure. As a leading industry in the tertiary industry, the tourism industry in Yalong Bay will greatly drive the development of the tertiary industry and adjust the proportion composition of the primary, secondary, and tertiary industries. The development of tourism activities can bring in external economic injection, which is conducive to increasing government taxation and thereby enhancing economic strength. In addition, due to the high correlation and long chain of the tourism industry, the development of the tourism industry can drive and promote the development of many related industries. The development of tourism activities can increase employment opportunities and absorb a large amount of idle labor from society.

2. The Current Development Status of Diving Tourism in Yalong Bay

2.1. Overview of Yalong Bay Diving Tourism

At the beginning of diving in Hainan Province, there were 8 clubs, but by the beginning of 2000, 24 diving clubs had already developed in this region alone [1]. In the past 3 to 4 years, the number of divers visiting Hainan Province has doubled, with approximately 6000 of the 14000 or so divers holding diving qualifications being exceptionally active [2].

Since 2000, the number of leisure divers has been rapidly increasing, with an average of about 1000 new divers per year increasing [3]. In 1995, an international diving organization was established in China's international diving club in Zhanjiang, including NAUI, PADI, ADS, SSI, etc. This has led to the development of diving in China like mushrooms after rain [4]. Many coaches have been trained in leisure diving before and after, providing them with advanced theoretical knowledge and excellent skills. They have nurtured a large number of excellent coaches, received a series of standardized course training, and compiled China's first textbook on leisure diving [5].

2.2. Current status of diving tourism planning in Yalong Bay

At present, government departments have formulated a series of policies and plans to guide the sustainable development of the tourism industry in Yalong Bay. The evaluation standards for national level tourist resorts are very strict, with strict regulations on the external regional environment and internal resource base, natural environment and cultural resources, hardware facilities and software development, planning and layout, and operation management of the resort. If the area needs to reach 8 square kilometers or more, the total number of beds needs to reach 1000 or more, and there have been no major tourism safety accidents in the past three years, it is necessary to obtain recommendations from provincial management departments before proceeding Declaration and other evaluation steps alone can take up to 11 steps, and this title has a high value. The relevant person in charge of the Yalong Bay Management Committee stated that the construction of the Yalong Bay National Tourist Resort is different from the creation of A-level tourist attractions, and it is a decades of accumulation. After obtaining the "golden signboard" of a national tourist resort, Yalong Bay will continue to strengthen the brand enhancement construction within the bay area [6].

3. Analysis on the Problems and Development Environment of Yalong Bay Tourism Development

3.1. Ecological and environmental protection issues

Firstly, the water quality problem in Yalong Bay is more prominent. In recent years, there have been multiple instances of water pollution in Yalong Bay during marine environmental monitoring. Among them, sewage discharge and agricultural production are important reasons for water quality problems. The harmful substances generated by artificial emissions have seriously affected the marine ecological environment of Yalong Bay in Sanya, Hainan.

Legitimate diving sites approved by the government often avoid coral protected areas, while unauthorized black diving sites are usually located in these coral nature reserves. In the coral protection zone, black diving has frequent diving tourism activities in the areas of Ximaozhou, Yalong Bay, and Dadonghai. The sunscreen and other cosmetics worn by tourists contain highly toxic compounds such as benzophenone, which can form a floating oil in the water during diving and unknowingly cause harm to coral. Some tourists carrying pathogens enter the interior of coral through diving, which can damage the coral's tissue and cause coral

death. During the diving process, rubber products such as masks and mouthpieces abandoned on the seabed, which release toxic substances during decomposition, pollute the seawater and damage the ecological environment within the protected area. And some tourists also touch or pick up underwater coral, and in order to attract tourists, many coaches do not stop tourists from damaging coral reefs. After touching coral reefs, they secrete a mucus that affects their growth. However, the growth rate of corals is very slow, growing only one to two centimeters per year, and it takes hundreds of years to form a formed coral reef. Therefore, once a coral reef is damaged, it is difficult to repair it in a short period of time. The survey found that approximately 10 (73.52%) tourists had engaged in acts of damaging underwater coral during diving, and the coach did not stop them. These various behaviors have exacerbated the damage to the marine ecological environment [7].

In this study, the content of ammonia nitrogen and nitrate in the water was measured. During the water intake process, it was found that there are many phytoplankton in the water of Haiyue Square during the peak tourism season. Nitrogen is a necessary ion for the growth of phytoplankton. Therefore, the development of tourism still has a certain impact on the seawater, but it is not yet obvious. In the future, water pollution needs to be considered [8].

The pH values in October 2017 and March 2019 were lower than 8.0, indicating severe seawater pollution. On October 13, 2017, the water was taken just after the National Day Golden Week, so the water may have been severely polluted in a short period of time. March 2019 was just the end of the peak tourism season, and the water may have been severely polluted, while the pH values in other time periods were approximately between 8.0 and 8.5, indicating normal seawater. From this, it can be seen that the increase in tourists has a certain impact on seawater pollution [9].

According to the testing of water quality indicators near the coast of Sanya City, it is believed that the tourism industry will bring some pollution, especially after the peak tourism season when water pollution is more severe [10].

3.2. Diving safety issues

During diving, the following problems may arise: as the diving depth increases, the eardrum will be subjected to external pressure [11]. If the diver does not balance the pressure inside and outside the eardrum in a timely manner, the external pressure on the eardrum will become greater and greater, and ear pain will become more obvious [12]. Furthermore, it may cause dizziness, tinnitus, and even lead to the rupture of the eardrum. So during the diving process, as the depth and pressure increase, it is very important to adopt the correct method to balance the pressure inside and outside the eardrum in a timely manner for successfully completing the diving task. In addition to balancing pressure, there are also issues where a leaking mask can make candidates feel uncomfortable and nervous. When panicking, incorrect judgments can be made to ensure that the mask fits tightly against the face and does not leak water. You can perform a mask water level test or contact a coach to adjust. If students have a unclear understanding of the learning materials before going overseas, there may be some difficult terminology or illustrations in the learning materials. If the meaning of sign language is not understood in a timely manner, it may pose a risk to life. Before diving, if the candidate has an illness, conceal it and do not report it. It is highly likely to cause

diving hazards. In addition, different diving depths require different gas mixing ratios, and tourists need to understand these mixing ratios and corresponding diving rules. If there is any carelessness, it can cause gas poisoning during diving. And free diving tourists are not allowed to absorb the air of lung diving tourists, which can cause the risk of "lung explosion". If there is an emergency situation (such as a mask falling off, a gas cylinder leaking, etc.), if tourists cannot calmly respond and follow emergency measures to solve the problem, it may cause life-threatening situations. The above is a study that found that various improper diving operations can interfere with the diving experience of tourists, and in severe cases, even affect life safety.

3.3. There are few single distribution channels for diving tourism products

According to a survey, Yalong Bay Underwater World is located in the Yalong Bay International Tourism Resort, with the world's largest and most complete soft coral population, as well as colorful hard corals and other marine organisms. The water quality here is better than that of Dadonghai and Sanya Bay, with more hotels and relatively convenient transportation. Therefore, there are many diving clubs here [13]. The diving clubs gathered here include Sanya Lehai Yacht Club, Sanya Black Yacht Sea Fishing Club, Yalong Bay Aegean Sea PADI Diving Resort, Yalong Bay Love Cube Mediterranean Diving Center, Haisilan Diving Center Club, etc [14]. In fact, essentially these diving points are monopolized by these government departments, but due to the needs of economic development, these diving points need to be allocated to a certain diving club or clubs for specialized operation and management in order to exert economic benefits. Therefore, objectively, a certain diving club or clubs have obtained the monopoly management rights of each diving point [15]. For example, the monopoly of the Yalong Bay diving site only belongs to the Yalong Bay Aegean Sea PADI Diving Resort and Yalong Bay Love Cube Mediterranean Diving Center [16], and the services available are only scuba diving certification or scuba diving+accommodation certification or free diving certification+accommodation or two dives with certificates, or physical diving such as snorkeling, reef diving, coral diving, etc. The development of diving competition projects is relatively limited, and they can keep up with the trend. Building free diving swimming pools, which do not require high physical fitness requirements, can also attract attention and profits through hosting competitions. In addition to the problem of less development of diving projects, diving is an extreme sport, and even experiential diving requires high physical fitness. So, tourists who may not have booked diving service products may not be able to experience the fun of diving.

4. Planning Strategies for Yalong Bay Diving Tourism

4.1. Ecological protection measures

In terms of environmental protection, the following aspects can be regulated for marine ecological environment protection: ①carry out marine protection actions, such as collecting and recycling marine garbage, and tell people about the harm of marine pollution through videos and photos on the official account.②Improve relevant laws and regulations,

and in the "Regulations on Nature Reserves in Hainan Province", a fine of 1000 to 10000 yuan will be imposed for those who damage coral reefs weighing less than 10 kilograms, and a fine of 10000 to 50000 yuan will be imposed for those weighing more than 50 kilograms. However, the pricing of red coral is grams [17], and obviously the amount of such fines is far from enough. It is recommended to increase the amount of fines for damaging marine vegetation. When I received diving education in Yalong Bay, I did not learn any knowledge about protecting marine ecology. Therefore, I can add some courses on protecting marine ecology and harmonious coexistence with marine organisms to my diving courses. We can create souvenirs about harmonious coexistence with marine ecology, so that customers feel honored for protecting marine ecology and are willing to become a part of protecting the ocean.

4.2. Addressing security issues

In the sampling survey of literature, it was found that out of every 136 people who wanted to dive, 130 people were informed of pre dive safety training and training content, but the remaining 6 people were not informed.

Every 10 meters of underwater diving increases the pressure by 1 atmosphere, which has a strong pressure change on our lungs, and the content of useless nitrogen in our blood vessels also increases. If we do not follow scientific procedures for diving and ascending, it will cause great harm to the human body, some of which may even be permanent [18].

So in terms of personal safety protection, there are the following suggestions: ①In the textbook, coaches should highlight the importance of the textbook, because after tourists go to sea, the knowledge in the textbook is that they can use survival skills to protect themselves. Each sentence is important, and if the situation allows, the important parts can be used in the form of a test paper. The test paper content includes how to balance ear pressure and survival rescue gestures. After tourists complete the test paper, they can go to sea diving. For example, tourists must first learn how to fully assemble their equipment before they can have the right to enter the water.②To increase the adaptation time for tourists, coaches should balance the learning progress of each member, and prioritize the slowest learning member.③They should not completely disregard the personal safety of other members in order to complete the diving process. If members cannot adapt, they can add 1-on-one teaching services midway. ④ Using the head coach and deputy coach system, one coach is responsible for teaching, but the head coach of another team serves as the deputy coach of their own team. In the event of an accident, they can help with rescue tasks in a timely manner. ⑤ Diving shops can introduce high-tech rescue products to reduce the risk of accidents. ⑥ Before diving, carefully review the tourist's medical history and whether there are any adverse symptoms for diving. Professional and experienced doctors should be equipped near the diving site to determine whether they are qualified to dive and promptly carry out diving rescue.

Here are some suggestions before diving [19]

1. Both physical and mental health must be in their best condition.
2. Have a certain level of swimming ability
3. Receive correct training guidance.
4. Be familiar with the diving area, and diving in unfamiliar

areas should be led by someone familiar with the area.

5. Carry first aid supplies.
6. Check the equipment and use it in good condition.
7. Avoid diving alone and do not move without companions.
8. Hurry up and get out of the water when injured, fatigued or out of time.
9. Pay attention to the depth and comply with the diving depth limit of 30 meters.
10. Before diving, do not drink alcohol, overeat, or eat food that is prone to gas production.

4.3. Marketing strategies

The cultural construction of tourism enterprises should have more connotations and essence. By refining the business philosophy and positioning the development vision of the enterprise, employees' work values should be clarified, their sense of mission should be enhanced, and their initiative, creativity, and cohesion should be enhanced with clear and clear goals. On the other hand, at the institutional level, employee behavior is planned through the construction of management systems, allowing employees to actively participate in the construction of corporate culture and enhancing the cultural atmosphere of the enterprise [20].

In the marketing strategy, the following aspects need to be addressed.①The price strategy needs to be differentiated. For different consumer groups, whether to use combination pricing or other pricing? For example, in the Hornet Nest OTA, or in the Tiktok group purchase products, the product services are too homogeneous and almost only provide diving projects. It is suggested to consider special groups and increase customer groups. With the improvement of modern VR or virtual technology, Perhaps diving shops can use VR technology or simulate scenes in seawater to allow tourists who cannot dive into the sea to experience the fun of diving. Alternatively, some diving market products with local diving characteristics or Hainan ethnic culture can be developed. For families with elderly people and children, can we consider combination pricing and offer discounted pricing or membership for customers with a second repurchase Based on the customer's understanding of our diving company's channels, it is not only necessary to set up direct channels for understanding, but also to set up brief channels for understanding.③We can showcase our company's advantages and opportunities online or offline, making consumers believe that our company will fulfill their service commitments.⑤In terms of human resource management, the inheritance of new and old talents, and personnel mobility are very important. For example, the qualification level of diving coaches varies from good to bad, Among the companies I have visited on site, the oldest one has been teaching for 13 years and has obtained multiple diving certificates. However, my own coach, who has only 5 years of teaching age, may lack some teaching experience and safety measures in the diving industry. I think it is necessary to strengthen the technical communication between new and old coaches. For young coaches, I can provide some suggestions on teaching attitude, At the same time, old employees should recognize the contributions made by new employees to the company and enhance their sense of identification; ⑥ In addition to considering standardized services, after-sales service is also crucial. For example, companies can distribute survey questionnaires and gift souvenirs to tourists after diving. This not only provides diving experience data to analyze business development factors, but also increases tourists' desire to repurchase.

Diving Service Evaluation Supervision Form [21]

Coach ID: Date:

Tourist Name: Contact Information:

Did the coach remind you of the contraindications for diving? Yes No

Have you seen fish and coral underwater? Yes No

Are you satisfied with the service quality of the coach? Yes No

If you are not satisfied, please let us know:

⑦Employee etiquette is the facade of a company and also the first impression of the company and this diving sport by consumers. It is recommended to provide tourism etiquette training courses for diving company employees.

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5. Summary

With the development of Sanya's marine tourism industry, diving tourism has become an emerging form of tourism in Sanya. As of now, there are dozens of diving clubs and bases in Sanya City, and diving projects involve multiple fields such as underwater photography, underwater archaeology, and underwater nature conservation. As of now, there are dozens of diving clubs and bases in Sanya City, and diving projects involve multiple fields such as underwater photography, underwater archaeology, and underwater nature conservation. It can be said that the development of Sanya's characteristic diving tourism has natural and conditional advantages. Although the development situation of Sanya's characteristic diving tourism is good, there are still some problems: the diving tourist group is relatively single, and the market development is not extensive enough. At present, the development of diving industry in Sanya is not yet mature enough. There are some unqualified diving clubs, and vicious competition between enterprises has occurred repeatedly. Establish a standardized system to promote the standardized and professional development of the diving industry in Sanya. Strengthen the cultivation of diving talents and improve the overall quality of the diving industry. Support excellent diving enterprises and create a favorable industry environment.

In short, Sanya's characteristic diving tourism is a highly potential tourism industry. Only by guiding diving enterprises to compete reasonably and continuously improve the overall

quality of Sanya's characteristic diving industry from the perspectives of standardized systems, market expansion, talent cultivation, and sustainable development, can Sanya's characteristic diving tourism be developed into a shining film on the coastline.

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