

Development Of Green Tourism Products - Solutions For Sustainable Development Tourism The System Of Vietnam Coastal Island

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ABSTRACT

Vietnam's coastal island system has natural tourism resources on the island and along the coast, rich cultural tourism resources, and unique tourism products, making it a place to attract tourists from around the world. However, the process of rapid tourism development on coastal islands has greatly affected the environment and natural landscapes. The results of the article aim to identify green tourism products that are prioritized for development to serve sustainable tourism development on the islands (in the case of Quan Lan and Ly Son islands). Applying the group of methods of collecting documents—methods of analysis, data processing, documents, field survey methods, sociological investigation methods, in-depth interview methods, and expert methods—the research results identified on each island have four green tourism products that are prioritized for development orientation: On Quan Lan Island, tourism products include ecotourism, blue sea experiences, tourism to explore natural ecosystems combined with education about the environment, Experience "One day as a fisherman on Quan Lan Island", humanistic ecotourism combined with cultural and historical tourism, on Ly Son Island. Tourism products include: ecotourism, geopark tourism, tourism to experience the blue sea, green experience tourism, "One day island citizen," Cultural tourism to the sea and islands is closely related to national sovereignty. Developing green tourism is a solution to help increase the number of tourists with high spending levels, a sense of responsibility, and civilized actions to meet the goal of sustainable tourism development for coastal island districts of Vietnam.

Key words: Vietnam sea and island tourism, Green tourism products, Sustainable development, Ly Son Island, Quan Lan Island

I. INTRODUCTION

Green tourism is a type of tourism based on nature, culture, and environmental education, contributing to conservation and sustainable development efforts, and attracting the active participation of local communities [1]. It can be said that developing green tourism is the key to developing responsible tourism and ensuring sustainable tourism. The core of green tourism is the green tourism product. And to ensure it is a green tourism product, it is necessary to meet the following criteria: (1) the product is made from environmentally friendly materials; (2) products that provide solutions that are safe for the environment and health; (3) in the process of use, the product reduces the impact on the environment; (4) products are friendly and safe for health. Thus, all tourism services and products, such as tours, products, and services of hotels and restaurants, that want to be recognized as green tourism products must meet or implement the basic contents of the criteria above. The level of "greenness" of a tourism product will depend heavily on the environmental friendliness of the factors involved in its formation. With the above approach, green tourism products are understood as tourism products with a high content of elements, especially environmentally friendly services, developed in accordance with the principles of environmental protection sustainable development [1].

According to the sustainable tourism survey on Booking.com, green and sustainable tourism trends are reflected in the following information: The majority of travelers intend to stay at least once at an eco-friendly establishment. school. This rate has increased over the years (62% in 2016, 68% in 2018, 73% in 2019). 70% of travelers said that they will most likely book a room at a green property (2019). 60% of tourists want sustainable tourism because they are impressed with the natural landscape during their trips (2018); 52% of visitors

switched to a more eco-friendly mode of travel, such as walking, cycling, or hiking; 68% expect their travel spending to benefit the local community (2019); 67% of tourists are willing to pay at least 5% more for their green travel experience to limit their environmental impact when possible.

Green tourism is not only a guarantee for sustainable tourism development, but also a solution to help increase the number of tourists with high spending levels and consciously civilized actions when participating in tourism [1]. With the trend of "green living" in modern life, more and more tourists want to return to a life without hustle and bustle. They want to find green tourism products, increase the ability to experience them, and protect the environment [2]. The COVID-19 pandemic has impacted tourist psychology. Tourists choose to travel in smaller groups, enhancing green experiences, clean nature, and environmental protection [5]. Green tourism is a promising manifestation of entrepreneurship in rural areas. Developing green tourism has been proven as a way to increase income, improve the livelihoods of rural people [4], and promote sustainability in the future [8]. This is an important opportunity to promote the development of green tourism products, create new attractions for the tourism industry, and ensure the sustainable tourism development of each locality [6]. The model of green tourism and the development of green tourism products have been implemented in many different localities and are effective [10].

In the context of unusual developments in climate change, the COVID pandemic is still complicated, tourism is developing rapidly, and sea and island tourist destinations in general and Quan Lan and Ly Son island districts in particular need special attention. Special attention is paid to sustainable tourism development [11]. With its existing potential, the district has many favorable conditions for developing green tourism products. In the direction of tourism development in the island district, Quan Lan island and Ly Son island have focused on choosing green tourism as one of the prerequisites for sustainable socio-economic development and environmental protection. islands District. The article analyzes the current status of tourism development, the needs and requirements for green tourism development on the islands, and the case of Quan Lan and Ly Son islands, thereby proposing suitable green tourism products to serve the purpose of tourism development. sustainable development of island tourism.

II. RESEARCH METHODS

The methods used in the research and development of green tourism in Ly Son island district include: (1) methods for collecting documents; (2) methods of analysis, data processing, documentation, and field survey methods that help supplement documents about the study area, the potential of tourism resources for tourism products, the current status, policies for tourism development, etc. of the island district of Ly Son. (3) Sociological survey method: The number of samples is calculated by Linus Yamane's formula: $n = N/(1 + N \cdot e^2)$. Where: n is the sample size; N is the total; Choose a 95% confidence interval, and the allowable error is $e = 5\%$. The total number of tourists at the time of the survey was about 1500 (A. Furqan et al., 2010). As a result, the number of samples to be investigated is 315. In order to avoid errors, the total number of questionnaires to be investigated is 320. Implemented by a questionnaire with 320 votes and random interviews with tourists in 2 islands, the survey sites include Minh Chau beach, Quan Lan Dinh (Quan Lan island); Chua Duc, Hang Cau, Hang Pagoda, Thach area, To Vo gate, the exhibition house of the Hoang Sa team concurrently managing Bac Hai and Dao Be (Ly Son island area) to analyze and confirm green tourism products of the island district. The survey period was conducted from March to July 2022 in the form of an online and in-person survey. (4) The author's in-depth interview method was conducted with six cultural managers of two island districts and 10 managers of tourism enterprises and directly discussed with local people to determine the orientation and development needs of green tourism products in the island district. (5) The expert method based on consultation with leading tourism experts helps to advise and identify potential green tourism products on Quan Lan and Ly Son islands.

III. RESEARCH RESULTS

3.1. A general introduction to Vietnam's island system and island tourism potential

Vietnam is a maritime nation with a coastline that stretches over 3,260 km from North to South, almost 3,000 islands of varying sizes, and the two archipelagos of Hoang Sa and Truong Sa. Vietnam's coastal island system Vietnam has 28 provinces and cities bordering the sea, with 12 island districts. It should also be noted that within the coastal island system of Vietnam, in addition to the above 12 island districts, there are more than 85 island communes, 1 island ward, and hundreds of other islands directly belonging to administrative units on the shore, from commune wards, districts, and towns to the city. Those island communes belong to 4 provinces: Quang Ninh (Co To, Van Don), Hai Phong (Bach Long Vi, Cat Hai), Quang Tri (Con Co), Đa Nang (Hoang

Sa), Quang Ngai (Ly Son), Binh Thuan (Phu Quy), Khanh Hoa (Truong Sa), Ba Ria – Vung Tau (Con Dao) and Kien Giang (Kien Hai, Phu Quoc).

The island districts are concentrated in the waters of the North and the South and dispersed in the Central Sea, with very different sizes and populations. The largest is the island district of Phu Quoc, with 593.1 km² and 82,338 people. The smallest are the two island districts of Bach Long Vy and Con Co (newly established in October 2004), with an area of just over 2 square kilometers each.

According to the size of coastal island districts, they can be divided into four groups: Group of large coastal island districts: Phu Quoc (593.1 km²), Van Don (551.3 km²), and Cat Hai (323.1 km²).

- Group of coastal island districts is quite large: Con Dao (75.2 km²), Co To (46.2 km²). The group of average coastal island districts is: Kien Hai (27.9 km²), Phu Quy (16.0 km²), and Ly Son (10.0 km²).

- Small coastal island districts: Bach Long Vy (4.5 km²), Con Co (4.0 km²).

The average total population in 2004 on 10 island districts was about 227,000 people, of which the highest density was in Ly Son with 1980.2 people/km² (Pham Hoang Hai, 2010).

* Potential for tourism development of coastal islands and archipelagos in Vietnam

- Tourism resources from natural values:

Due to its distribution in the tropical monsoon belt and characteristics of climatic conditions, along with the processes of weathering, washing, erosion, accumulation, etc., the coastal island system of Vietnam has been obtained. an extremely rich set of geomorphological heritages and tropical landscapes, creating valuable tourism resources; that is:

The climate of the sea and islands is mild, which is favorable for swimming and resorting all year round on the islands and archipelagos (especially in the northern provinces, where due to the cold winter, it mainly occurs in the summer months). Thanks to the warm sea temperature, waves, currents, and winds along the island are favorable for adventure sports like surfing, skydiving, scuba diving, etc. Some islands have natural conditions suitable for relaxation, convalescing, and recovering health with cool air, like Cu Lao Cham, Con Dao, and Phu Quoc, at altitudes above 300 m.

Beaches on many beautiful and famous coastal islands, convenient for beach resorts, such as: Hong Van, Van Chai, Nam Hai (Co To island); Cat Co, Cat Dua (Cat Ba Island); Bai Du, Bai Cua Hang, Bai Lang, Bai Lang, Bai Phu (Phu Quy island); the beaches of Gieng Ngu, Bai Khem, Bai Sao, Bai Vong, Bai Thom, Rach Tram, Vung Bau, Cua Can, Bai Dai, Ganh Dau (Phu Quoc island); The landscape of many bays and islands has become famous, such as Tien Yen Bay, Ha Coi, Bai Tu Long Bay, Ha Long Bay, Nha Trang Bay, Lang Co Bay, and Thuan Yen Bay (Ha Tien). Ha Long Bay was recognized twice as a world natural heritage site, and Nha Trang Beach is recognized as one of the 29 most beautiful bays by the Club of the Most Beautiful Bays in the World.

Landscape of mountains, islands, and tropical karst islands distributed in Bai Tu Long, Ha Long, Cat Ba, and Ha Tien bays, with conical topography, towers, and abrasive lines on the island's cliffs;

Landscapes of mountains and hills on sedimentary rocks: Cai Bau, Vinh Thuc, Co To, Thanh Lam, Bach Long Vi, Phu Quoc, Tho Chu...

Landscape of volcanic islands: Con Co, Ly Son, and Phu Quy; intrusive rock island landscape: Cu Lao Cham, Cu Lao Xanh, Con Son, and Hon Khoai;

Landscape of abrasive island shores: cliffs of Vinh Thuc, Thanh Lam, Cu Lao Cham, Ly Son, Hon Khoai, Tho Chu, Phu Quoc,... landscape of island shores and bays: Co To, Quan Lan, bay Lan Ha (Cat Ba Island shore), Con Son Bay;

Landscape of the caves: Dau Go cave, Thien Cung cave (on Dau Go island), Sung Sot cave (on Bo Hon island); Quan Y cave, Trung Trang, Hoa Cuong, Luon cave... (on Cat Ba island).

Landscapes of mountains and lakes in the karst areas of Ha Long, Cat Ba: Ang Mat, Ang Vem,...

The biological world of coastal islands is rich with 3 world biosphere reserves, namely Cat Ba, Cu Lao Cham, and Kien Giang (Phu Quoc island waters are the core of the reserve); National Parks Bai Tu Long, Cat Ba, Con Dao, and Phu Quoc; along with 14 national marine conservation planning areas: Tran, Co To, Cat Ba, Bach Long Vi, Hon Me, Con Co, Hai Van-Son Cha, Cu Lao Cham, Ly Son, Hon Mun, Phu Quy, Hon Cau (Binh Thuan), Con Dao, and Phu Quoc with high biodiversity characteristics, many endemic and rare species of flora and fauna. Abundant biological benefits are the basis for conservation and development of of tourism industry - marine and island ecology (Uong Dinh Khanh, 2016).

- Cultural tourism resources

The cultural tourism resources of the coastal island system are also very rich and diverse, including ancient architectural works, historical and cultural relics, archaeological sites, folk festivals, and culinary culture. regions.

Architectural works, historical-cultural and archaeological sites with monuments and relics of Uncle Ho's Temple on Co To island; Trade port of Van Don (on the sea of Quan Lan island), Cai Bau pagoda on Cai

Bau island; Archaeological sites (Ngoc Vung, Soi Nhu, Ha Giet) unique in Van Don island region; Quan Lan Temple, Quan Lan Temple, Tran Khanh Du Temple on Quan Lan Island; the sites of Cai Beo, Hien Hao, Hoang Chau communal house, Van Chan temple, Gia Loc pagoda stone stele, etc., on Cat Ba and Cat Hai islands; the system of stone works arranged along the mountain slopes and more than 20 ancient architectural works including communal houses, mausoleums, pagodas, ancient wells of the Cham and Vietnamese on Cu Lao Cham island; Hang pagoda, Duc pagoda, An Long Dinh, Cham Pa and Sa Huynh cultural sites in Ching stream, Oc village, Hoang Sa Fleet Museum exhibition house, and many other relics on Ly Son island; Linh Quang, Van An Thanh, Linh Son Tu pagoda, etc., on Phu Quy island; Con Dao prison (system of prisons, tiger cages, cow stables, rice mill tunnels), Hang Duong cemetery, heroic martyr Vo Thi Sau's grave on Con Son island; Phu Quoc Prison, National Hero Temple Nguyen Trung Truc, Dinh Cau Temple, etc. on Phu Quoc Island (Uong Dinh Khanh, 2015).

Cultural and folk festivals: Quan Lan festival (June 18 of the lunar calendar) on Quan Lan island both celebrates the victory over the Mongol invaders in 1288 and the feat of Tran Khanh Du (a famous general of the Tran Dynasty) and is the festival of fishing for residents of the sea; the ceremony to replace the soldiers of Hoang Sa; the communal house festival of An Hai village on Ly Son island; festivals of Duong Dong god, Cua Can god, An Thoi god, O Nam Hai temple; and Thuy Long Thanh Mau festival on Phu Quoc island.

The culinary culture of the region has specialties such as tu comei, blood cockles, oysters, and abalone in the waters of Van Don and Cat Ba; sea cucumbers, snails, squid, shrimp, crabs, and sea urchins in Ly Son; king crab, red grouper steamed with ginger; snail salad; one-sun squid, mackerel, thunderstorm, and lobster in Phu Quy waters; lobster and green mussel in Binh Ba island (Cam Ranh).

The special industries on the island are also tourist resources that tourists often visit, namely: fish sauce processing with barrel houses and pepper gardens on Phu Quoc island; goat farms and beekeeping for honey on Cat Ba island; cage farming of fish, oysters, and pearls on the seas of Van Don, Ha Long, Cat Ba, Ly Son, Phu Quy, Con Dao, and Phu Quoc; or handicraft villages from marine products on the islands of Ly Son, Con Dao, and Phu Quoc.

- Infrastructure and forms of tourism

Another important factor that plays a role in tourism development is the issue of tourism infrastructure, tourism management, and the connection between the islands and major coastal tourist centers.

Many islands have favorable conditions to connect with large coastal tourist centers, and these centers become the driving force for the islands to develop tourism potential, such as Vinh Thuc island, associated with Mong Cai-Tra Co; islands in Bai Tu Long and Ha Long bays (Ngoc Vung, Quan Lan, Tra Ban, Co To, Thanh Lam, Tuan Chau, etc.), associated with Van Don economic zone; and Ho Chi Minh City. Ha Long; Cat Ba and Hai Phong city; Cu Lao Cham; and Da Nang city, Hoi An; Hon Tre, Hon Lon, and Nha Trang City; Con Dao with Ba Ria Vung Tau; Phu Quoc, Ba Lua Islands; Hon Rai, Nam Du, and Rach Gia city and Ha Tien town. Con Dao and Phu Quoc also have the conditions to directly attach to Ho Chi Minh City and Can Tho City by air.

The coastal island structure has created many unique and appealing tourism types due to its rich tourism potential: swimming in combination with resorts; ecotourism; sport tourism (sea diving, windsurfing, boat racing); scuba diving tourism (seeing coral reefs and coral reef fish populations); commercial travel, conferences, and seminars; festival tourism; scientific tourism; and enjoying the specialty dishes of the sea and islands.

+ Tourism for swimming, relaxing, and sports is concentrated on islands with beautiful beaches and good tourist infrastructure, such as Quan Lan, Co To, Cat Ba, Con Dao, Phu Quoc, etc., but active This type of tourism is highly seasonal, especially in the northern islands with cold winters. It occurs mainly in the summer months.

+ Ecotourism combines scientific research with visits to festivals and historical and cultural relics.

Culture thrived on Cai Bau, Cat Ba, Cu Lao Cham, Ly Son, Phu Quy, Con Dao, Phu Quoc, and Hon Khoai islands;

+ Commercial tourism, conferences, and seminars take place in major tourist centers such as Tuan Chau, Cat Ba, Hon Tre (Khanh Hoa), and Phu Quoc.

+ Snorkeling tourism combined with scientific research is currently thriving on islands with a system of marine protected areas such as Co To, Cat Ba, Cu Lao Cham, Hon Mun, Con Dao, and Phu Quoc.

+ In addition, weekend tourism combined with entertainment is thriving in Van Don, Co To, Cat Ba, Hon Tre (Khanh Hoa), Phu Quoc, and many other small coastal islands in the South Central and Southern regions.

In recent times, the seas and oceans have faced increasing threats and risks due to climate change, natural disasters, environmental pollution, and overexploitation of natural and economic resources. In the period from 2010 to present, Vietnam's tourism industry has experienced rapid growth, leading to a massive and spontaneous development of tourism and resource exploitation without management and planning, especially tourism development in Vietnam. Islands. The risk of over-exploiting resources, exceeding tourist capacity, and environmental pollution are factors that directly threaten the sustainable development of the island.

In that context, the blue sea economy is a development trend around the world, especially in countries with the sea. Vietnam focuses on developing the blue sea economy and considers it a guide to the scenario of sustainable development of the sea and island economies. There are six key green development-oriented marine economic sectors, including: fisheries, renewable energy, oil and gas, tourism, transportation, the environment, and ecology. Faced with that requirement, green tourism development is an urgent requirement for the coastal area, especially the coastal island of Vietnam.

3.2. Potential and current status of tourism on Quan Lan and Ly Son islands

3.2.1. General overview of tourism in Quan Lan Island District, Quang Ninh Province

Quan Lan is an island in Bai Tu Long National Park on Bai Tu Long Bay. Quan Lan Island (also known as Canh Cuoc Island and Cao Lo Island) has two communes, Quan Lan and Minh Chau, in Van Don district, Quang Ninh province. The island has geographic coordinates of 20° 53' 04" north latitude and 107° 30' 42" east longitude. The island consists of two communes, Quan Lan and Minh Chau, with five villages, and a part of the island area is in the territory of Bai Tu Long National Park. The island has an area of 118,638 square kilometers.

- *Tourism resources:* Quan Lan is favored by nature, with a beauty bearing the imprint of an island commune in the middle of the sea. Rich in both natural resources as well as historical and cultural values, Quan Lan-Minh Chau Island has many advantages for developing tourism.

In terms of natural values, Quan Lan-Minh Chau Island has a stable, unspoiled ecosystem and a fresh-air environment, especially with many beautiful sandy beaches. In particular, Son Hao Beach is a tourist beach in the tourism development planning of Van Don district up to 2020 with a vision to 2030, with the orientation of developing the island into a center of quality beach resort tourism. This place with a stretch of fine white sand, a clear blue sea, and soaring natural and wild casuarina groves is an attractive destination for tourists from all over the world.

When it comes to Quan Lan-Minh Chau Island, it is also worth mentioning Tram Forest and Minh Chau Beach, which are overall spaces with a typical population of hundreds of years old brocade forest, covering an area of over 14 hectares running along the white sand dunes next to the beach. Minh Chau beach stretches about 2km, has a gentle shore, smooth and clean white sand, and small waves suitable for organizing sports activities such as football, volleyball, tug of war, or sandboarding.

In terms of cultural and historical values, one must mention the complex of national architectural and artistic historical relic sites—Quan Lan Temple—which has been recognized since 1990. In which communal house-pagoda clusters The temple is located in Doai village, right in the center of Quan Lan commune, on a beautiful land facing the large sea. Nghe, located about 1.5km away, is located in a large flat field that is peaceful all year round, next to the main road across the island.

Quan Lan Island -Minh Chau is also home to the National Historic Site of Van Don, an ancient trading port formed in 1149 and one of the first seaports in Vietnam. According to historical documents, the ancient Van Don trading port was a system of ports distributed on many separate islands in the Bai Tu Long Bay area, in which the center was Cai Lang and Cong Cai wharfs on Van Hai island.

From this potential, over the years, people and travel companies have organized beach resort services, dining, accommodation, and other entertainment.

In addition to visiting scenic spots, historical sites, and accompanying service points, the Quan Lan island area has built tourism products to bring interesting, new, and attractive experiences to tourists, such as: one day as a fisherman on the island, squid fishing, digging sa worm, visiting Ba Mun national forest, etc.

According to the statistics of the People's Committees of two communes, Quan Lan and Minh Chau, the total number of tourists to Quan Lan island in recent years has grown at a fairly stable rate. In 2013, the total number of tourists to Quan Lan Island was just over 39,500; in 2019, this number has increased to over 113,800. In addition, the growth rate of the number of guests staying is also quite stable and reaches an average of 14.29% per year, higher than the growth rate of visitors. In 2022, when tourism on Quan Lan Island recovers from COVID, the number of tourists will be 111,300.

3.2.2. Overview of tourism in Ly Son Island District, Quang Ngai Province

Ly Son island district (15°32'04"-15°38'14"N; 109°05'04"-109°14'12"E), natural area 10.32 km², far away from land about 15 nautical miles, including three islands: Big Island (or Cu Lao Re), Be Island, and Mu Cu Island. The island district consists of three communes: An Vinh, An Hai, and An Binh, with a very important geopolitical position in protecting the sacred sovereignty of the Fatherland. The population of the island district (July 2022) is 22,174 people, of which 60% of households live by fishing, 30% by farming (mainly growing onions, garlic, and corn), and 10% by other industries.

* *Tourism resources:*

- *Natural tourism resources:* In Ly Son, geological movement in the East Sea more than 10 million years ago created many unique natural landscapes for the island district. On the big island, Ly Son has 5 volcanoes (Toi Loi mountain, 149m high; Gieng Tien mountain, 86m high; Hon Tai, Hon Soi, and Hon Vung); and 1 volcano on Be Island. Along the coast, large-sized cliffs, hundreds of meters long, standing tall and unusually beautiful, creating a feeling of grandeur, are distributed in Hang Cau, Hang Pagoda, and Tien Well. Ly Son's climate is characterized by a tropical monsoon climate; the prevailing wind is a southwest monsoon; the average air humidity is 80%; the average air temperature is from 21.8°C to 30.5°C; and the number of sunshine hours ranges from 1900 to 2100 hours per year (I. K. Suwena, 2017). The temperature is moderate, the humidity is suitable, the number of hours of sunshine is high, and it is convenient for the organization of tourism and resort activities. Ly Son Sea Area has high biodiversity with typical ecosystems such as coral reefs and seagrass beds, in which there are more than 700 species of marine flora and fauna and 157 species of corals (in the red seaweed and seaweed industries). green and brown seaweed), 202 species of marine fish, 137 species of seaweed, 96 species of crustaceans, 40 species of echinoderms, and 6 species of seagrass, creating a special attraction for tourists. This is the basis for the island district to build a marine nature reserve, develop eco-tourism, and build resorts, with the highlights being scuba diving, coral watching, and fishing tourism. Ly Son has beautiful beaches, likened to a "paradise in the middle of the sea" because of the beautiful blue sea landscape. Some attractive beaches, such as Cau Cave Beach, Hang Pagoda Front Beach, Duc Pagoda, Sau Beach on the small island... Particularly at Hang Cau, the clear blue sea makes it easy for visitors to see all the aquatic things under the sea.

The beauty of nature gives Ly Son a unique and distinctive landscape, attracting tourists. Famous landscapes on the island can be mentioned as: Thach fairy flag, To Vo gate Thach, Mu Cu landscape, Suoi Tien-Duong Loi, Cau Thach cave, Gieng Tien and Thoi Loi volcano, Be Island, etc. are beautiful sights on this pristine island.

- *Cultural tourism resources:* Ly Son Island, which was explored and inhabited about 400 years ago, has a long history and rich cultural traditions with Sa Huynh culture. Since ancient times, the island district has been the place to protect sovereignty over the two archipelagos of Hoang Sa and Truong Sa in Vietnam. It also preserves many cultural heritages and precious documents on sovereignty over the sea and islands. The national flagpole is considered a "living milestone," affirming the sovereignty of the country. On the island, there are about 50 attractions, of which there are 4 national-level relics, 1 national-level intangible relic, and 14 provincial-level historical sites such as Hang Pagoda, Duc Pagoda, An Hai village communal house, etc. An Vinh village communal house, Am Linh Tu, the Museum of Hoang Sa team concurrently managing Bac Hai, the Exhibition House of Hoang Sa team concurrently managing Bac Hai, the Tomb of the Wind guarding Pham Quang Anh team and militiamen, etc. In terms of intangible culture, the island district is a living museum with a surprising richness of treasures in the form of legends, stories, folk songs, boat racing festivals, and customs of the time of the fisherman. The most special is the Ceremony of Retirement of Paracel Soldiers, announced in the list of national intangible cultures.

In fact, many tourists choose Ly Son island district for tourism because of a special agricultural product with high economic value, which is Ly Son garlic. Image of "Garlic Kingdom", typical local dishes such as: young garlic salad, crispy jelly salad, dom hop (rumored), fresh seafood, typically Huynh De crab, hand snails, shrimp lobster,... are the highlights of attracting tourists in Ly Son (Ly Son District People's Committee, 2010 - 2021).

It can be said that Ly Son Island District contains hidden beauties, stimulating tourists to explore and discover. The beauty of the blue sea, white sand, clear sea water, mysterious reefs, and historical and cultural relics make Ly Son an ideal tourist destination and resort for many travelers.

3.2.3. Some limitations in the tourism development of Quan Lan and Ly Son islands and impacts of tourism on the tourism environment of the island district

Since 2013, tourism on Quan Lan Island and Ly Son Island has developed strongly, but the opportunity came so quickly and unexpectedly that the tourism industry here was passive, leading to limitations:

- Most of the tourism resources are in potential form and have not been well invested and exploited, so the revenue from sightseeing and tourism activities is not high. Tourism products lack an exploitation orientation, are spontaneous, and have not been planned yet.

- The number of tourists concentrated with a high density, sudden spikes in the tourist season pose a risk of exceeding the "capacity" (for example, in 4 public holidays (from April 27 to 30), there were more than 12,000 visitors to the island, and this is a record number during the holidays that tourists come to the island), leading to expensive characteristics, lack of water, power outages, increased waste, etc.

- Geological and geomorphological tourism resources have been violated. Road construction, embankment construction, and "concrete" when hotels, motels, and high-rise buildings have disrupted the natural

value of the heritage have downgraded the heritage, causing Ly Son to gradually lose its pristine appearance as the capital. It is a tourist attraction.

- Tourism environment is affected; surface water is at risk of being polluted by waste and sediment. The natural land fund on the island is limited, and land prices have increased sharply, affecting people's livelihoods and the conservation of onion cultivation.

- The system of tourism infrastructure and technical facilities is spontaneous and small-scale. The power grid is not enough to provide during peak periods. The means of transport to and from passengers are rudimentary and outdated, mainly motorbikes and a few electric cars.

- The tourism human resources are few; the staff of restaurants, hotels, guides, etc. are thin and unprofessional, do not understand well about green tourism products.

Facing environmental risks and assessing the limitations in tourism development for island districts in general and Quan Lan island, Ly Son determined that developing green tourism products is the right direction in resource protection. Environmental education towards sustainable tourism development nowadays

3.3. Identify green tourism products in the island district.

3.3.1. Identifying green tourism products on Quan Lan Island

In order to meet the urgent requirements of sustainable development of tourism in an island district, Quan Lan Island focuses investment resources on developing green tourism products and, at the same time, needs to develop complementary tourism products to increase the variety of product systems. Based on available resources and the consultation results of experts and tourism managers, Quan Lan Green - tourism products is proposed to include three products:

Product 1: *Ecotourism, experiencing the Blue Sea*: Natural beaches: Minh Chau, Con Khoi, Son Hao, and Quan Lan are located along the length of the island; each beach has a separate but natural feature. It has the same characteristics of being wild and unspoiled, not affected much by artificial factors. Among these beaches, there is Minh Chau Beach, which was once on the list of the 10 most beautiful beaches in Vietnam.

Product 2: Tourism to *explore the natural ecosystem combined with environmental education Natural beaches*: Minh Chau, Con Khoi, Son Hao, and Quan Lan are located along the length of the island; each beach has a unique character. Natural features are distinct, but they all have the same characteristic of being wild and unspoiled, not affected much by artificial factors. Among these beaches, there is Minh Chau beach, which has been listed in the list of the 10 most beautiful beaches in Vietnam; visiting and studying at the turtle spawning grounds; Sa Sung beach; and the pristine Tram forest on the island.

Product 3: Experience *"One Day as a Fisherman on Quan Lan Island"* with traditional fishing experiences with locals. The main activity of this experience is to go with fishermen in Quan Lan commune to scratch clams and shellfish on Dau Doc beach. This is the daily livelihood of the people on the island. Participating in the experience trip, where visitors can mingle with the people, directly go fishing with fishermen, is a memorable experience. Through practical experience, people will understand more about the hard work of Quan Lan fishermen.

Product 4: *Humanistic eco-tourism combined with cultural and historical tourism*: Temple, pagoda, Van Don ancient commercial port, Quan Lan festival etc.

3.3.2. Identify green tourism products on Ly Son Island.

Based on the available resources of Ly Son Island and the consultation results of experts and tourism managers, Ly Son's green tourism products are proposed, including the following: Local tourism matters; tourism to experience the blue sea; green experience "One day you will be a citizen of the Garlic Kingdom", Sea island cultural tourism is associated with national sovereignty. Tourism products are represented as follows:

Product 1: *Geotourism at Ly Son Geopark*: Ly Son Island District is one of the four main tourist routes located in the Ly Son-Sa Huynh Geopark. This is the eastern tourist route with the name "Mystery of the sacred island". The sightseeing tour will take visitors to visit and listen to the sharing of geological and historical features and decipher the formation processes of five volcanoes, freshwater volcanic lakes, lava, and other terrain forms. beautiful and interesting on the island through the tourist route, with 30 sites of geological and cultural heritage interwoven and integrated with each other: Hang Cau Cliff, Thoi Loi Crater, Gieng Tien, To Vo Gate, etc. Ly Son Island is also a place to keep many traces of Sa Huynh residents from 2,500 years ago.

Product 2: *Travel to experience the blue sea*: Tourists have many experiences with this type of tourism. (1) *Diving to see the coral*: Visitors can choose to dive to see the coral with a simple mirror or with an inflatable tank. The water in Ly Son is clear blue, making it convenient for visitors to see all creatures living under the sea surface, including corals and aquatic algae, like a brilliant garden stretching like a multi-colored silk carpet.

Usually on Be Island (2) *Swimming activities at clear blue beaches*: Blue sea, white sand, and golden sunshine, along with clear water, create diverse and colorful seabed landscapes that make visitors relax comfortably. (3) *Fishing and fishing experience*: If you stay at homestays on Be Island, the experience of catching flat crabs is a bit difficult, but it will be an interesting and fun activity. (4) *Experience the possibility of setting up a campfire at sea and preparing BBQ seafood together*. And during the experience tour, visitors will be able to experience the activities of picking up trash at the beaches to protect the natural ecosystems and educate themselves on the importance of protecting the marine environment. Those will be experiences that many visitors will never forget.

Product 3: Green experience tourism "*one day as a citizen of the Garlic Kingdom*": Ly Son overwhelms visitors with the cool green color of garlic and onion fields on a white sand background, covering the whole island. Tourists coming to Ly Son can participate in experiencing each stage, from planting, tending, and harvesting garlic to feeling the hardships and joy of the working people when seeing their own achievements. They will enjoy specialties made from garlic and taste and feel the crunchy, aromatic, spicy taste of Ly Son garlic. At the same time, when you leave, you can also buy gifts to take home: onions, garlic, and products made from garlic (black garlic).

Product 4: *Cultural tourism of the sea and islands associated with national sovereignty*: To feel the sacredness of the island land, visitors will visit the Ly Son flagpole and admire the whole view of Ly. Paint at dawn; visit Am Linh pagoda and wind grave; visit Hoang Sa soldier monument, Hoang Sa museum, and Bac Hai administration. At the time of the sacrifice ceremony, visitors have the opportunity to participate in and observe the activities of the islanders and listen to the heroic stories of the people of Ly Son Island. This activity contributes to the education of patriotic traditions for the younger generation, with the desire to continue to preserve Vietnam's sovereignty over the sea and islands like their ancestors did hundreds of years ago.

3.3.3. Evaluate green tourism product requirements

To conduct the determination of tourists' opinions on green tourism products, based on the selection of tourism products, based on the evaluation criteria of green tourism products of the Nguyen Van Dinh, through the results of surveys and interviews with guests (tourists with 320 people are mainly domestic visitors: 312 guests, 97.5%; aged 26–35 years old with 152 people - accounting for 47.5%, most of them finished high school: 213 people - 66.5%), with the determination of agreeing or disagreeing with the criteria and through in-depth interview results showing: over 80.0% of tourists Tourism managers and 100% of tourism managers, tourism businesses and local communities all agree that 04 tourism products meet green tourism standards. The results of the survey of tourists are shown in Table 1.

Table 1: Assessment results of green tourism products on Quan Lan and Ly Son islands

Tourism products Evaluation Criteria green tourism products	QUAN LAN ISLAND				LY SON ISLAND			
	Product 1	Product 2	Product 3	Product 4	Product 1	Product 2	Product 3	Product 4
Created from the natural environment, the product is environmentally friendly	93,5%	97,4%	96,8%	84,8%	97,4%	98,3%	98,7%	85,6%
Using the product brings knowledge and solutions that are safe for the environment and health	92,1%	94,6%	95,9%	87,3%	95,8%	93,7%	91,8%	92,7%
Reduce environmental impact during implementation	93,1%	93,7%	93,5%	88,1%	90,5%	92,8%	91,7%	96,3%
Creating a friendly and safe tourism environment for health	94,2%	95,3%	98,2%	92,4%	97,8%	96,2%	98,0%	97,5%
Contributing to preserving and honoring the value of	93,4%	95,7%	97,3%	-	99,8%	96,5%	87,3%	-

Natural Tourism Resources									
In line with the needs and tastes of the customer markets in the current trend, the period of control of the covid-19 epidemic	-	-	-	91,4%	-	-	83,8%	93,1%	
Contributing to preserving, honoring the value of traditional cultural tourism resources, protecting territorial sovereignty	89,9%	93,2%	88,7%	87,6%	88,6%	93,6%	87,6%	89,5%	
Environmental protection education in islands	89,9%	97,5%	96,2%	87,7%	96,8%	92,4%	94,7%	93,4%	
Overall rating of green level of products	86,7%	95,7%	97,1%	83,4%	92,5%	94,6%	94,2%	85,5%	

Source: Synthesized from the survey

The survey results showed that most of the tourists rated eight selected tourism products as products created in a natural and environmentally friendly environment (the highest being the blue sea experience tourism products). products 2 and 3: accounting for > 94%, the lowest is marine cultural tourism products associated with national sovereignty: 83.4% and 85.6%. The products, when exploited and used, will bring knowledge and solutions to safety for the environment and health; reduce impact on the environment; create a friendly and safe tourism environment for health; and contribute to environmental protection education (four products have a very high rate of customer agreement of over 90%). In the current time, green tourism products are suitable for the needs and tastes of customers (over 85% of visitors agree with this opinion), while green tourism products 1, 2, and 3 meet the needs of the customers. To meet the requirements of preserving and honoring the value of natural tourism resources, tourism products contribute to preserving and honoring the values of traditional cultural tourism resources and protecting territorial sovereignty. Thus, the proposed products meet the green criteria and are the proposed green tourism products for development, contributing to ensuring the sustainable tourism development of Quan Lan and Ly Son islands.

3.4. Solutions for green tourism development in Quan Lan and Ly Son islands

From the tourism situation of Quan Lan and Ly Son islands, although the tourism human resources on the island have been shaped, they have not been properly trained, and the quality of the human resources is still low; awareness of green tourism products among people and officials is not high; Ly Son has the strength to develop green tourism; however, it needs to be exploited and developed in sync with the requirements of green living and environmental protection. Facilities on the island were built spontaneously. To develop green tourism in Ly Son Island District, a number of solutions are proposed to be implemented synchronously, as follows:

(i) Regarding green tourism product development: Focus on developing existing green tourism products, starting with assessing the potential of green tourism resources, conducting market research surveys, and encouraging and enhancing the "green" in the development of tourism facilities and services. Implementation of association: cooperation with tourism businesses in promoting and promoting green tourism products of the island district; regularly organizing environmental protection tourism activities. In particular, tourists play a key role in contributing to environmental protection activities by doing practical things such as planting trees, picking up trash on the beach, handing out self-destructing plastic bags, and sorting trash.

(ii) Regarding tourism, human resources, and local communities: Raising awareness among tourism human resources, local resident communities, and management officials about the meaning and importance of green tourism development and green tourism products in the island district; There should be a policy to train staff on green tourism development and sustainable tourism. Formation of knowledge and skills on environmental protection for green tourism; Regularly update information on green tourism activities, green tourism development examples, and green tourism development experiences. The enterprises operate in the direction of green tourism and green tours of the island district.

(iii) Regarding propaganda and promotion: strengthening propaganda to raise awareness among island residents and tourists (through billboards, posters, banners, slogans, images, etc.) about positive measures aiming at sustainable development of island district tourism, such as: using natural, environmentally friendly materials, saving energy, using solar energy, and being responsible for environmental protection.

(iv) Policy and investment: formulate policies to encourage investment projects to develop green tourism associated with nature and cultural conservation; Invest in building waste water treatment, collection, and recycling systems. Creating conditions for companies to register for the development of green tourism products and invest in thematic tours with the aim of combining tourism with environmental protection activities; Research on environmental fee collection for tourists in service of protecting and preserving the tourism eco-environment.

Finally, in order to well implement the development of green tourism in the island district, it is necessary to focus on improving close coordination with departments in the province, localities, and businesses to develop policies and create a favorable environment for green tourism product businesses in a sustainable direction.

IV. CONCLUSION

Research results show that each island has four green tourism products that all meet the standards and need to be developed towards the goal of sustainable tourism development in the island district.

A current problem with Vietnam's coastal islands, Quan Lan Island and Ly Son Island, is that green tourism is not easy to implement. Green tourism development requires a methodical investment in a suitable and synchronous physical and infrastructure system. It is necessary to agree on exploiting and developing green tourism products, building cultural habits (green tourism behaviors), and having enough time to train green tourism human resources. With a poor island district, there is still an opposition between conservation and development, benefiting from tourism and developing green tourism products that are really necessary but challenging, requiring drastic participation from the side. government, local community, and tourism business; all are necessary for the synchronous and effective implementation of the proposed solutions.

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