

PHÁT TRIỂN BỀN VỮNG DU LỊCH THEO TIẾP CẬN KINH TẾ TUẦN HOÀN TẠI ĐẢO CÁT BÀ

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Tóm tắt

Hoạt động du lịch đang gây ra những tác động khủng khiếp đến môi trường du lịch của đảo Cát Bà. Nghiên cứu nhằm mục đích giới thiệu du lịch tuần hoàn và tìm cách làm sáng tỏ rằng liệu du lịch tuần hoàn có phải là viễn cảnh du lịch hàng đầu trong tương lai không. Bài viết tập trung vào phân tích hiện trạng phát triển du lịch trên đảo Cát Bà trong giai đoạn 2018-2020, nó là cơ sở để đánh giá khả năng áp dụng mô hình kinh tế du lịch tuần hoàn tại đảo Cát Bà. Phương pháp SWOT được sử dụng để đánh giá điểm mạnh, điểm yếu, cơ hội và thách thức. Phân tích SWOT đã tiết lộ rằng đảo Cát Bà phù hợp tốt để thực hiện du lịch tuần hoàn, đặc biệt ngành du lịch Cát Bà đã phát triển nhanh và mạnh trong những năm gần đây. Đó được coi là một lợi thế mạnh để áp dụng mô hình kinh tế tuần hoàn. Dựa vào các kết quả nghiên cứu, bài viết gợi mở một số giải pháp để phát triển kinh tế du lịch tuần hoàn tại đảo Cát Bà trong thời gian tới.

Từ khóa: Phát triển, du lịch bền vững, kinh tế tuần hoàn, đảo Cát Bà.

SUSTAINABLE DEVELOPMENT OF TOURISM WITH CIRCULAR ECONOMY APPROACH IN THE CAT BA ISLAND

Abstract

Tourism activities are causing terrible impacts on the tourism environment of Cat Ba island. The study aims to introduce circular tourism and to answer whether circular tourism will be the leading tourism perspective for the future. The article focuses on analyzing situations of tourism development in Cat Ba island from 2018 to 2020. It is the basis for assessing the applicability of the circular tourism model in Cat Ba island, using the SWOT method to assess strengths, weaknesses, opportunities, and threats. The SWOT analysis reveals that Cat Ba island is good-fit to conduct circular tourism, especially when the Cat Ba tourism industry has developed rapidly and snappily in recent years. It is considered as a strength to apply the circular economy model. Based on the research results, the article suggests solutions to develop the circular tourism economy in Cat Ba island in the future.

Keywords: Development, sustainable tourism, circular economy, Cat Ba island.

JEL classification: L83, O.

1. Introduction

Over the past decades, tourism has become a significant industry in the world. It has a great impact on the growth rate of the global economy. Based on data from more than 180 countries and territories, tourism contributed 7,580.9 billion dollars, or 9.8% of global GDP, and provided 276,845,000 jobs, or 9.4% total global employment (ILO, 2020). Tourism is one of the most dynamic and fastest-growing economic sectors in the world today. The tourism industry is a driving force in creating jobs and promotes economic development, culture, and local products. Tourism contributes directly and indirectly to job creation, especially for women and youth, and drives growth through micro, small and medium enterprises (MEMS). Due to the influence of the COVID-19 pandemic and the war between Russia and Ukraine, tourism only contributed 8,600 billion dollars to the global economy and 330 million jobs in 2022. Vietnamese tourism contributed 9.2% to the gross domestic product (GDP), equal to the contribution in 2019 before the pandemic (Vietnam National Administration of Tourism, 2022).

The Cat Ba in the southwest of Ha Long Bay, known as the pearl island of Vietnam. Cat Ba island is an attractive destination for international tourists and domestic tourists. The Cat Ba has potential for biodiversity and has many species listed in the Red Book of Vietnam and the world. Marine life in Cat Ba island is the most abundant and diverse in the northern island region of Vietnam including 1,313 species. In addition, Cat Ba island has a majestic natural landscape with caves, coral ecosystems, and ideal beaches. Those are great potentials to help Cat Ba tourism develop strongly, quickly becoming the most attractive tourist destination in the North. In 2019, the Cat Ba tourism industry

welcomed 2.8 million tourists; tourism revenue reached 1,805 billion VND (Department of Culture, Information, Sports, and Tourism of Cat Hai district, 2019). However, the pressure of tourism and service activities has a significant impact on the environment of Cat Ba island as consuming a lot of resources and creating waste. In this context, the circular economy is essential, as it proposes zero-emission, zero-waste tourism models through the creation of circular processes. The development of a circular tourism economy can lead to sustainable use of resources, improve the efficiency of the Cat Ba tourism industry and achieve sustainable development of the industry.

However, there is no research evaluating the sustainable development of tourism with a circular economy approach in Cat Ba island. The study aims to assess the current economic development of tourism in Cat Ba island to help protect resources, protect the environment, and economic efficiency. Based on the results, the study proposes some solutions to the sustainable development of tourism with a circular economy approach in Cat Ba island in the future.

2. Theoretical background

2.1. Sustainable Tourism Development

The concept of sustainable tourism development appeared around the 90s of the 20th century based on improving and upgrading from “soft tourism” supported by many countries and tourism associations. However, up to now, there has not been a unified and complete concept of sustainable tourism.

From an economic perspective, sustainable tourism is a process of tourism activities that can maintain economic growth over many years (Institute for Tourism Development Research, 2001). However, this concept has received much criticism from scientists, environmental and resource researchers.

In 1992, the World Tourism Organization (WTO) defined “Sustainable tourism is the development of tourism activities that meet the current needs of tourists and local people while preserving and enhancing resources for tourism development in the future. Sustainable tourism will plan to manage resources to satisfy people’s economic, social and aesthetic needs while maintaining cultural integrity, biodiversity, the development of ecosystems and support systems for human life”.

Sustainable tourism development in Vietnam is a new concept. According to the Vietnam National Administration of Tourism, tourism development must be oriented and managed according to the motto: Harmoniously combine the needs of the present and the future in terms of tourism production and consumption, exploitation, rational use, and development of natural tourism resources; focus on preserving, embellishing and promoting the value of humanistic tourism resources; preserving and promoting the national cultural identity, avoid modernizing or distorting the environment and landscape of monuments, building and maintaining a healthy social environment, ensuring political security and social safety, especially in tourist cities and tourist attractions.

Although there are disagreements about sustainable tourism development, in this study, the authors use the concept of sustainable tourism development according to Clause 14, Article 13, Vietnam Tourism Law (Vietnam Tourism Law, 2017). Accordingly, sustainable tourism development is the development of tourism that simultaneously meets the requirements of the economy - society - environment, ensures the harmony of interests of the subjects participating in tourism activities, and does not compromise the ability to meet future tourism demand. Or, tourism is considered sustainable development when tourism activities are helpful for the country in the present and sustainable in the long term for the future.

2.2. Circular Economy

Ellen MacArthur Foundation (2012) argued that a circular economy is a system that is renewable and restorative through proactive planning and design. It replaces the concept of “end of life” of materials by restoring, shifting towards the use of renewable energy, not using harmful chemicals that harm reuse, and

reducing waste reduction through the design of materials, products, systems engineering, and business models within its scope. The similar with Ellen MacArthur Foundation, the United Nations Industrial Development Organization (UNIDO, 2017) also believed that “circular economy is a new way to create value and towards the ultimate goal of prosperity. It works by extending the product life cycle through design and maintenance improvements, transferring the waste from the end of the supply chain back to the beginning. Hence, use resources more efficiently by using them many times, not just once”.

Geissdoerfer et al. (2017) gave a specific view of the circular economy, which is “a system in which input resources and waste, emissions, and energy loss are minimized through slowing, narrowing, and closing the motions of materials and energy. It through long-term design, maintenance, repair, reuse, remanufacturing, renewal, and recycling”.

Thus, there are many different views on the circular economy. It can be argued that a circular economy is an economic system that is renewable and restored by changing the way goods and services are designed, produced, and consumed. Hence, it will prolong product life, transferring the waste from the end of the production or consumption cycle to the beginning, minimizing negative impacts on the environment.

Nam & Hanh (2019) affirmed that the circular economy is not a uniform model for the whole economy. It's a combination of many different models built under the same philosophy. It is the philosophy of regeneration and recovery. The circular economy has three principles include:

- Conservation and development of natural capital: through control, to rationally use resources and regenerate native systems, especially promoting renewable energy.
- Maximize resource benefits by circulating products and materials as much as possible in engineering and biological cycles.
- Improve the efficiency of the whole system by minimizing negative externalities. Through waste design, pollution design from the very beginning of the production process.

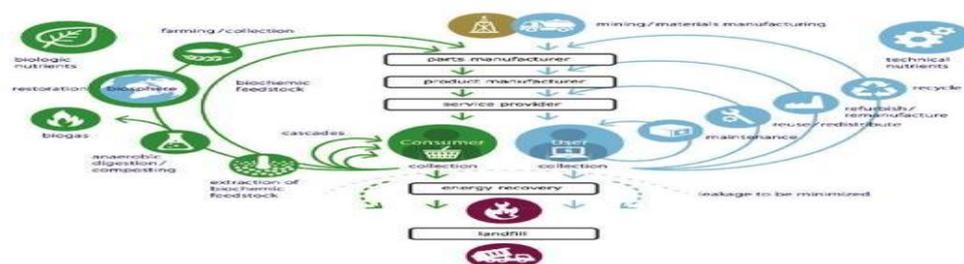


Fig. 1: Circular economy

Source: Ellen MacArthur Foundation (2019)

2.3. Circular economy in tourism

Zhang & Xiao (2015) argued that the circular economy in tourism enhances the recycling of tourism resources and environmental sustainability according to tourism market analysis, development and training,

tourism product design and development, business management, and tourism management.

Sadat (2017) affirmed circular tourism is the maintenance or improvement of tourism products and services through redesign, upgrading, remanufactured,

or remarketed to help tourist destinations retain their attractiveness for as long as possible lead to long-term economic development.

A circular economy in tourism is capable of supporting the economic development of a tourist destination without risking environmental sustainability by reducing the use of energy elements and natural resources, reuse of waste generated in

tourism activities, and use of waste as raw materials directly after recycling (2020).

The circular tourism follows the principle of the circular economy associated with tourism to realize the cycle of resources, improve the environment, and sustainably develop the tourism economy. Many scholars argue that the circular tourism economy consists of three aspects: internal circulation tourism, regional social circulation, and cycling tourism.



Fig.2: The circular tourism sector

Source: Oreve (2015)

Robaina et al. (2020) conducted a critical literature review about circular economy contributions to the tourism sector. They evaluate the importance of tourism in the circular economy literature and identify current research trends and possible gaps in the literature on circular economy and tourism. Findings show that more research is needed about tourism's intersection with the circular economy to generate possible solutions toward a more sustainable tourism industry.

Xu et al. (2022) revealed that the circular economy theory is one of the crucial tools for solving tourism environmental problems. They conducted a work related to the level of tourism industry ecologization in China from 2011 to 2019. The research results show that the proposed Thiel index can better evaluate the dynamic process of tourism industry ecologization and explain the evolution of the tourism industry ecologization level to a certain extent. They put forward relevant policy suggestions to improve the development of the tourism industry ecologization from micro, medium, and macro perspectives.

3. Methodology

3.1. Data collection methods

The data related to the analysis process are secondary data collected mainly from the report on tourism business activities in Cat Hai district from 2018 to 2020. In addition, the study also uses data collected from articles, journals, websites, and some information from related books. Based on the secondary data collected, we will analyze the situation of tourism development on Cat Ba island.

3.2. Field research

That is a traditional and characteristic method in the study of the development of a tourist destination. This method is an essential method in research to assess the current tourism development in Cat Ba island in recent years. From there, there are reasonable and feasible solutions.

3.3. Methods of analysis and synthesis

After collecting, and statistical data, the data is used to generalize and build a theoretical basis for

sustainable tourism development in the direction of the circular economy in Cat Ba island. At the same time, analyze the current of Cat Ba tourism development in stages from 2018 to 2020. The results serve as concrete evidence for the general assessment and judgment on the situations of tourism development in the Cat Ba. That is the basis to offer solutions to sustainably develop tourism in the direction of a circular economy in Cat Ba island in the future.

3.4. Professional Methodology

During the research process, the authors consulted with tourism experts and tour operators in Cat Ba island, Cat Hai district to make accurate assessments and comments as a basis for research content.

3.5. SWOT method

The SWOT method is used to determine strengths, weaknesses, opportunities, and threats affecting the application of the circular tourism model in Cat Ba island.

4. Findings

4.1. Situations of tourism development in Cat Ba island

4.1.1. Situations of tourists

Tourism is an essential source of income and the growth engine of Cat Ba island. From 2018 to 2020, the Cat Ba tourism industry has achieved positive results and is becoming an important economic sector bringing a source of budget revenue to the locality. The number of tourists coming to Cat Ba has many positive changes, attracting more and more domestic and foreign tourists. In 2018, the total number of tourists to Cat Ba reached over 2.5 million, which increased to 18% compared to 2017. With international visitors achieve 608,000 people, up 27%, domestic visitors are 1.9 million people. Revenue from services, accommodation, and meals reached VND 1,550 billion, up 24% compared to 2017. In 2019, Cat Ba welcomed 2.8 million visitors, up 10.2% compared to 2018. Domestic tourists are 2.1 million people, an increase of 8.6% compared to 2018. Total revenue from tourism and services in 2019 reached VND 1,805 billion, up 16.5% compared to 2018. Due to the advantages of sea and island landscape, combined

with increasingly rich and diverse tourism products, visitors come and stay higher and spend more on other tourism services (revenue increased by 143.0% per year on average, higher than the growth rate in the number of visitors). However, by 2020, due to the impact of the COVID-19 pandemic, the Cat Ba tourism industry suffered a terrible decrease in the number of visitors and tourism revenue. Specifically, Cat Ba only received 1.5 million tourists, down 47% compared to 2019. Total tourism revenue was only 636.2 billion VND. Although the number of tourists and tourism revenue decreased due to the impact of the COVID-19 pandemic, Cat Ba island's tourism economy still plays a significant part in the development of the marine economy of Cat Hai district.

In general, revenue from tourism of Cat Ba island is on a positive trend in stages from 2018 to 2019. However, this revenue has not been used rationally, especially in environmental protection and facilities. The Cat Ba has only focused on building a convenient road system for tourists conveniently with Cat Ba island. However, accommodation activities, landscape improvement, investment in facilities cannot meet the number of visitors to Cat Ba island.

4.1.2. Situations of technical facilities for tourism

With rich tourism potentials, Cat Ba has attracted many investment projects to develop infrastructure for

tourism development, including transportation network, power supply system, water supply, and communications such as Dinh Vu - Cat Hai bridge project, Flamingo Cat Ba project, Cat Ba wastewater treatment plant, Tan Vu - Lach Huyen bridge project the long sea-crossing project in Southeast Asia, etc.

Technical facilities for tourism in Cat Ba have developed in both quantity and quality. Until September 2019, Cat Ba has 230 accommodation establishments, including one 4-star hotel, two 3-star hotels, thirteen 2-star hotels, twenty 1-star hotels with 4,765 rooms belonging to hotels, motels, guest houses, eco-resorts, and 790 rooms on overnight cruise ships operating in the bays of Cat Ba archipelago. In addition, there are over 70 households in the residential area of Cat Ba town including over 300 rooms for rent to tourists in the peak tourist season. Cat Ba has 68 restaurants serving tourism, including 14 out of 68 floating restaurants serving to dine on the bay. Shopping service providers are concentrated in Cat Ba souvenir shops with more than 60 shops, stalls, and markets in Cat Ba town. In addition, there are restaurants at eight beach resorts as well as at community resorts and administrative areas of Cat Ba National Park.

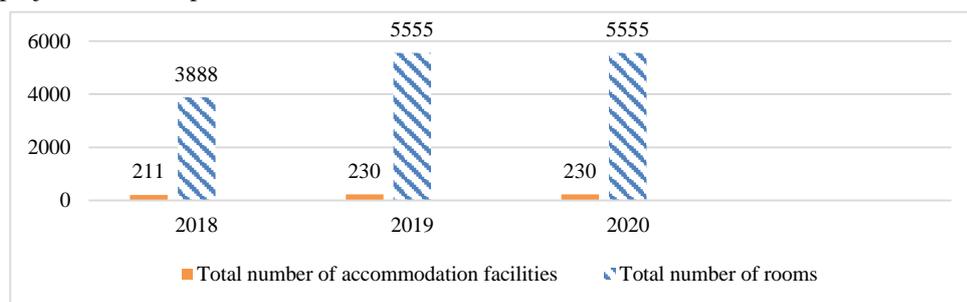


Chart 1. Situations of tourist accommodation facilities in Cat Ba island

Source: Department of Culture, Information, Sports and Tourism of Cat Hai district [15]

The increase in the number of visitors makes the technical facilities develop at a fast up to 109% from 2018 to 2020. That is the result of investment activities of all economic sectors involved in the business of accommodation and catering services. Although there are many accommodation facilities, the number of accommodation facilities is small from 10 to 35 rooms, the number of hotels with over 150 rooms is still limited. That set for Cat Ba tourism industry is to prioritize the development of high-class hotels by prescribed standards and limit the construction of small-scale motels, guest houses, and inns.

The system of dining establishments is diverse and rich, restaurants with specialty dishes including shrimp, crab, fish, snail, etc. However, the number of experts and artisans in food and beverage is less. So they have not been able to create many culinary products with their brands. In addition, the floating restaurants on the bay do not have a garbage collection system, so the waste is dumped directly into the bay, and some households live on the boat. Meanwhile, the garbage collection system is inadequate, causing garbage to float on the water surface, polluting the landscape and environment,

significantly affecting the impression of tourists and the ecological environment at sea.

Activities of entertainment facilities such as karaoke shops, bars create a loud noise. It causes noise pollution and affects the sleep of people living around the area and tourists themselves.

4.1.3. Tourism human resources and the participation of local communities

Cat Ba tourism is considered a key economic sector of Cat Hai district along with the development of tourism activities, tourism human resources in Cat Ba also increased significantly. In 2008, the number of employees working directly and indirectly in the tourism industry in Cat Ba was about 1500 people. By 2018, this number increased 3.7 times compared to 2008 to reach about 5600 people. Despite a sharp increase in the number of workers, it still does not meet half of the needs of the tourism industry.

The quality of human resource training here is still limited. The capacity is low. The service is not enthusiastic, not attentive. The education level of the tourism workforce is not high. The graduate level only accounted for 0.2%, and the university level reached

8.1%; college degree accounts for 12.3%; intermediate level accounts for 15.7%; other qualifications accounting for 14.6%. The total number of untrained tourism laborers accounted for 65.2%. That is an unfavorable issue for tourism development in Cat Ba island because the tourism laborers are qualified and skilled in skills and expertise are still weak and lacking. Hence, many tourism businesses face difficulties in recruiting, especially in using local labor. Local

laborers are not qualified to accept jobs according to the requirements of professional standards and skills set by the Vietnam National Administration of Tourism. Meanwhile, the minimum wage to pay for a local laborer is relatively high compared to their actual capacity and qualifications. Besides, the terrible lack of professional guides makes Cat Ba tourism industry not achieve the highest development.

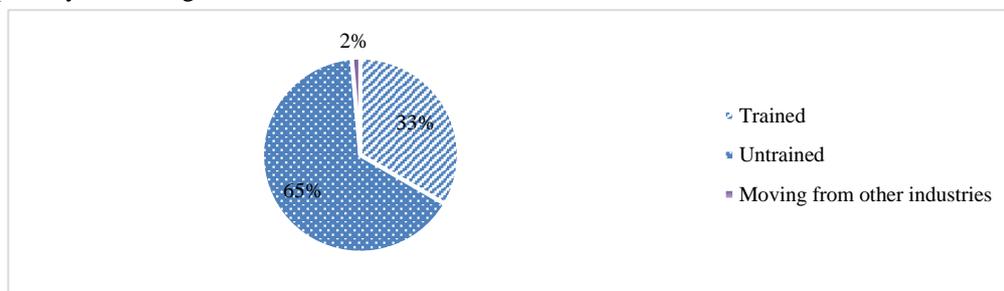


Chart 2. Situations of tourism laborers in Cat Ba island in the period of 2018 – 2020

Source: Department of Culture, Information, Sports and Tourism of Cat Hai district [15]

The development of Cat Ba tourism activities contributes to creating jobs and bringing high incomes to local people. The number of local labor directly involved in tourism activities is very high, and the average earnings per person reach 4.5 million VND per month. In 2016, the poverty rate decreased from 3.02% to 0.6% in 2020 (Cat Hai District People’s Committee. It means the development of tourism has contributed to creating jobs and providing high income for local laborers.

However, the development of tourism activities leads to increasing local security problems, immigration problems, cost of living problems, etc. The survey results show that tourism activities have made goods scarce and increased prices, making it difficult for local people’s lives, especially in the peak tourist season. According to a survey by the Department of Culture, Information, Sports, and Tourism of Cat Hai district in 2020, 65.7% of local people agree with this statement. People’s opinion that tourism increases crime rates is also relatively high, with 81.2% of people agreeing. Traditional activities such as local customs, practices, and festivals are showing signs of being lost.

4.1.4. Situations of tourism environment

According to preliminary statistics of the Environment Team of Cat Hai district in 2020, Cat Ba island generates more than 100 tons of solid waste every day. However, the Environment Team of Cat Hai district collects about 80 tons of waste (about 71%). Waste generated from daily-life activities, trade, and tourism accounts for 80 to 85%. By 2025, the amount of solid waste on Cat Ba island will increase 3.5 times. Cat Hai district does not have a centralized waste treatment area as planned, only one Cat Ba wastewater treatment plant. Thus, Cat Ba island does not meet the requirements of handling large amounts of waste of the island district. Hence, waste is treated by burning or temporarily gathering at Dong Trong landfill. Uncollected waste and untreated wastewater drift in nature, along with the sewer, canals, and rivers, directly into the sea, polluting the marine ecological environment of Cat Ba. The most

pollution is happening in Cat Ba Bay, where there are 113 tourist boats and 14 floating restaurants serving dining at sea. The second area that is heavily polluted is Ang Tham (Cat Ba) has a death rate of corals up to 74.3%, living corals only 7.4% of the bottom surface of this area. Areas such as Van Boi, Ba Trai Dao, Long Chau island are also in a similar situation. That has significantly influenced visitors’ opinions about the environment of Cat Ba and the sustainable tourism development of the island.

In addition to pollution from waste, Cat Ba’s tourism environment faces terrible emission pollution caused using transport such as passenger cars, coaches, motorbikes, and cruise ship emissions. The amount of suspended dust arising from various types of waterway and road traffic in Cat Ba island will increase by 1.9 - 2.2 times (Environment Team of Cat Hai District, 2020).

Cat Ba National Park is suffering from negative impacts from tourism activities. The activities of transporting and visiting tourists cause noise and dust that affect the lives of animals and plants here. The development of infrastructures such as road construction and pier construction disrupts the landscape and occupies natural ecosystems. The marine ecosystem includes coral reefs and seagrass beds in the core area of Cat Ba Nature Park. Decline in the quantity and quality of the ecosystem due to overfishing and exploitation for tourism activities.

The rapid growth of tourism activities is the cause of environmental problems, affects natural ecosystems, nature reserves, narrow coastal waters, etc. Make the local marine environment at risk of facing unsustainable development.

By 2030, Cat Ba tourism will become the most beautiful destination in Asia at the international level. The amount of solid waste from tourism and other daily activities will increase to 718 tons per day. Hence, if the Cat Hai district government does not find a solution, it will negatively affect the future Cat Ba tourism development plan. At the same time, the image

of Cat Ba pearl lost to tourists, and Cat Ba tourism positioned itself on the world tourist map.

4.2. Assessing the applicability of the circular economy model in the Cat Ba tourism industry

4.2.1. Strength

The Cat Ba tourism industry has developed rapidly and snappy in recent years. That can be considered as a strength to apply the circular economy model. The growth rate of the Cat Ba tourism industry in the period from 2018 to 2020 reaches 10.3% (Department of Culture, Information, Sports, and Tourism of Cat Hai district, 2020).

Cat Hai district has an abundant labor source. The cost of paying laborers in the tourism industry is relatively cheap, with the average salary at 4.5 million VND per month. It is about 22% lower than the average salary of major tourist cities in Vietnam such as Hanoi, Ho Chi Minh City, etc. The cost of paying employees accounts for 9% of the revenue structure of the tourism industry. The cost of paying employees accounts for 9% of the revenue structure of the tourism industry. Thus, the low cost of paying laborers is a strength for the Cat Ba tourism industry, helping local laborers have a competitive advantage over laborers from other places.

In Cat Ba, the source of plastic waste from tourism activities is up to 8-10 cubic meters per day. That shows a great potential to develop a recycling plastic factory on the island to reuse used products made from plastic such as water bottles, food containers, disposable plastic waste, etc.

4.2.2. Weakness

In the context of increasingly depleted resources, the environment, especially the marine environment in Cat Ba, is becoming more and more serious. Waste in which plastic waste accounts for 70% of them in the bay is not considered a resource. The State does not have an adequate mechanism for the circular economy, and short supportive policies for tourist destinations lead to terrible situations. The lack of circular economy development mechanisms for recycled plastic waste makes it difficult for accommodation and foodservice businesses to develop and invest in a model of a plastic waste recycling system on the island.

Besides, the law on waste management in Cat Ba still has many limitations, shortcomings, and inadequacies. According to the General Department of Environment, there is currently no complete mechanism for the circular economy, but only at the beginning of reuse and recycling of waste, bringing benefits to production facilities and consumption, so the activities of those models have caused environmental degradation and pollution. This challenge needs handling quickly. If not, the implementation of the circular economy is only spontaneous and affected by the tourism economy on the island.

The products after being recycled are not of high quality and appearance compared to similar products. Hence, it is hard to consume recycled products at hotels and restaurants on the island.

Propaganda to raise awareness of people and tourists about plastic waste resources has not been paid attention to by the State. The role of the community, social media, organizations, and individuals has not

been promoted yet in preventing, detecting, and treating environmental pollution in the bay of Cat Ba archipelago from plastic waste to develop the recycling industry, waste reuse (Environment Team of Cat Hai district, 2020).

In addition, an outdated recycling system will create challenges for waste management and treatment. The circular economy associated with technological innovation and model design in the context of the Cat Ba tourism industry is developing, increasing the amount of plastic waste. Especially in the context of the COVID-19 pandemic, the number of single-use masks of tourists and residents increased in large numbers, causing a rapid increase in the amount of waste. Hence, putting pressure on recycling activities on the island.

4.2.3. Opportunity

Many countries have successfully applied circular economy in tourism as Denmark, Finland, Norway, Sweden, etc. Hence, the Cat Ba tourism industry needs to learn practical experiences from other countries and take advantage of cooperation opportunities for future development. Support to promote the development of a circular economy.

The pressure of resource shortage, environmental pollution, and a large amount of waste from tourism activities will reduce if the circular economy develops. Vietnam's tourism industry is in the process of adjusting the green economic growth strategy, responsible tourism associated with sustainable tourism development in line with the National Strategy on green growth to 2030 for sustainable development and adaptation to climate change. Developing a circular economy will reduce the greenhouse effect. Despite this, they are controlled and do not emit into the environment. The development of a circular tourism economy in Cat Ba island is one of the appropriate directions. It is selected for sustainable tourism development here.

Developing a circular tourism economy in Cat Ba will receive high consensus and support from locals and tourists. Because this approach solves resource scarcity, encourages the supply of local products, reduces waste, and less for using fossil resources. Moreover, this model also helps to protect the environment because if recycled, the amount of plastic waste discharged will reduce, which means improved environmental quality. That helps creatures have more places to live and a cleaner living environment. The amount of plastic waste discharged from the tourism industry into Cat Ba Bay is slowing down. Hence, leading to the fishing and aquaculture industry will be more efficient, tourism development will bring high economic efficiency and contribute to climate change adaptation.

Tourism activities on Cat Ba island are growing along with people's living standards are constantly improving. Participating in tourism, especially ecotourism, is becoming the need of many people. Along with the propaganda policy and promotion of green tourism, responsible tourism towards sustainable development and environmental protection at tourist destinations is improving. Hence, the perception of tourists and locals has changed. Increased awareness

will create opportunities for the application of the circular tourism economy model on the island.

4.2.4. Threat

Opportunities to develop a circular tourism economy in Cat Ba are many. However, to apply this economic model most effectively, the Cat Ba tourism industry is facing the following threats:

The policy framework for the development of the circular economy model in general and circular tourism, in particular, is at a macro level, not yet clear. Vietnam does not have an overall legal framework for circular economy development. The current activities of implementing circular tourism economic development in some tourist destinations are still spontaneous, carried out by NGO programs in cooperation or travel agencies deployed with the local community, and subject to market dynamics. So it is not continuous, not clear, and sustainable. In addition, a set of criteria to identify, evaluate, summarize and provide an accurate classification of the development level of the circular economy by industry, field or locality, for each tourist area is essential but not yet built and released.

Awareness of circular economy, circular tourism economy, and the need to switch to developing circular economy models are still limited. Circular tourism requires green, sustainable ecology and ethical responsibility for the community of tourist destinations. In particular, the circular tourism economy requires the classification and cleaning of waste and water before being reused and recycled, which is a big challenge for the economic operation of the province. Meanwhile, the propaganda to help improve understanding of the circular economy in the social community has just started. For Cat Ba tourism, tourism resources are exploited mainly from nature and the marine environment, so it is easy to be affected by degradation. Hence, right from the starting stage, it is necessary to have the correct awareness of the circular tourism economy, focusing on implementation from the design of tourism types and programs, etc.

Cat Ba is an island with great potential. However, the investment resources for socio-economic development associated with development in tourism still face many difficulties, especially the support from the state budget and businesses is too little. The economic development of tourism is based on exploiting natural resources in available form, exploiting natural landscapes, but the level of exploitation is primitive, spontaneous, lacking regional linkage. All these factors have significantly influenced the development of the general economy and tourism of the island district in the direction of a green economy and sustainable development. Currently, tourism activities in Cat Ba island mainly rely on available natural resources. The exploitation has generated many contradictions in the relationship between economic growth and environmental protection. Therefore, the transformation of operation management from a traditional economy to a circular economy of tourism will face many challenges.

The implementation programs of circular economy policy on tourism in Hai Phong city in general and Cat Hai district, in particular, are still in their stubs, leading to no results in preparing resources for the implementation of the transition to the development of a circular tourism economy. The circular tourism economy requires scientific innovation, access to advanced technology, green, clean, eco-environment, and sustainable community as the foundation. For tourist destinations associated with the natural environment of the island, sensitive tourist destinations are necessary for a team of good experts who can solve problems from the beginning to the end of the whole cycle. The experts and managers who operate tourism supply businesses are not professionally trained and do not have specific training specialties. Therefore, to meet operational requirements, scientific and technological resources and human resources for business management and operation management also become a significant challenge to overcome.

5. Solutions to develop circular tourism economy in Cat Ba island

Firstly, the State needs to have a clear legal framework for the circular economy model in general and the circular tourism economy in particular. Create a mechanism to form market dynamics based on investment efficiency criteria, encourage businesses and people, especially the private sector investment, and develop areas of the circular economy for the tourism industry. Clearly define the role of supply enterprises in implementing circular tourism economic development. Learn from experiences from countries that have successfully applied circular tourism economic models such as Denmark, Finland, Norway, and Sweden.

Secondly, Cat Hai district has to learn the models of circular tourism economics from countries. Principles of establishing research by industry, field, model deployment, operational criteria related to the circular economy model in tourism. Hence, the Cat Hai district selected and applied it specifically to practical situations. Cat Hai district implements pilot economic models close to the circular tourism economic approach. Then, completing and making appropriate choices for each industry, each field, from pilot to deploy, replicate, and widely disseminate to supply businesses, tour operators, tourists, managers, and local communities to learn and apply.

Third, developing a communication strategy is an important task to raise awareness of tourists, business enterprises in the tourism sector, and local people about their responsibility for products throughout their life cycle.

Fourth, encourage the participation of stakeholders: mobilize responses and engage stakeholders in a circular tourism economy development including the State, businesses in the field of tourism, tourists, local people, scientists, and banks. Local governments need to encourage enterprises to apply a circular economy to their business operations to build a sustainable future for businesses. Tourists and local people should change traditional consumption habits into responsible consumption

habits. We should actively participate in the classification, reuse, or recycling of waste. In addition, there should be cooperation, how to make better use of resources, using raw materials from recycled waste.

Fifth, the development of circular economy tourism must be based on the general circular economy. There should be a roadmap and priorities in development based on market demand and the response of society.

6. Conclusion

The circular tourism economy is a sustainable development trend that achieves both goals, responding to the depletion of resources and environmental pollution. The circular economy approach is one of the appropriate approaches to sustainable tourism development in Cat Ba island,

bringing the Cat Ba tourism industry green and sustainable growth. Based on the circular economy approach, the study evaluated the applicability of the circular economy model in the Cat Ba industry by the SWOT method. As a result of assessing the ability to development of the circular tourism economic model, the research has identified five solutions to develop the circular tourism economy that the Cat Ba tourism industry needs to prioritize, including: have a clear legal corridor; cooperate in extensive research on models of circular tourism economic development; develop a communication strategy; encourage the participation of stakeholders; circular tourism economic development should base on the overall circular economy.

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Ngày nhận bài: 2/2/2023

Ngày nhận bản sửa: 14/3/2023

Ngày duyệt đăng: 25/3/2023