



Implementation of Green Accounting in Sustainable Tourism Industry in Bangka Belitung Island Province

Nurma Yunita¹, Angelia Agustina², Michzan Arobi³, and Rulyanti Susi Wardhani⁴

^{1,2,3,4} Faculty of Economics and Business, Universitas Bangka Belitung, Bangka Belitung Province 33172, Indonesia
nurmayunita1818@gmail.com

Abstract. Bangka Belitung Islands with abundant natural resources of tin, along with marine tourism potential that has great potential in tourism development. However, the rapid growth of tourism without sustainable management can threaten environmental sustainability. The application of green accounting is important to measure the environmental impact of tourism activities and integrate environmental aspects in business decision-making. This study aims to analyze the extent of the application of green accounting in the tourism industry in the Bangka Belitung Islands. The research used a qualitative approach with incidental sampling techniques. Data collection techniques were carried out through in-depth interviews with tourism actors, distributing questionnaires, direct observation of business practices, and analyzing related documents. The analysis method used in the research is SWOT analysis. This research reveals that tourism actors in the Bangka Belitung Islands have an awareness of the importance of protecting the natural environment. However, the results showed that the systematic and comprehensive application of green accounting has not been carried out optimally. This finding indicates a gap between environmental awareness and sustainable business practices. Tourism actors need to improve their understanding of the concept of green accounting and apply it in their operational activities. Thus, tourism in the Bangka Belitung Islands can grow sustainably, providing economic benefits while preserving the environment for future generations.

Keywords: Green Accounting, Sustainable Tourism, Bangka Belitung Islands.

1 Introduction

Bangka Belitung Province is famous for its abundant natural resources of tin, so there is no doubt that Bangka Belitung has long been the center of mining activities and has become a leading sector. However, intensive exploitation of natural resources in mining operations has led to various serious environmental problems, such as ecosystem damage, water and soil pollution, and land degradation. This not only affects the environment, but also affects other sectors, one of which is the tourism sector which is starting to develop.

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Based on data from the Bangka Belitung Central Statistics Agency (BPS) in 2023, there was an increase in visits from Nusantara tourists of 1,991,533, an increase of 405,533, compared to the previous year of around 1,586,000. Likewise with the number of foreign tourists, in January - November 2023 it reached 4,269 people or doubled in the same period in the previous year which was around 2,575 people [1]. The increase is a moment where tourist sites are targeted to be visited by tourists, so Bangka Belitung needs to create a strategy through integrated cooperation from local governments, local communities and stakeholders to intensify sustainable tourism development that supports local economic growth while preserving the environment. In this context, the application of green accounting becomes relevant as an approach to achieve these expectations.

Green accounting is an accounting system that integrates environmental aspects into the business decision-making process. In the tourism industry, green accounting can assist in monitoring and reducing the ecological footprint of tourism activities, as well as increasing the transparency and accountability of companies to stakeholders. Through the application of green accounting concepts, tourism operations can identify and manage environmental impacts, improve resource efficiency, and comply with increasingly stringent environmental regulations [2].

In this study, there are 3 (three) regions that are used as research objects, namely Pangkalpinang City, Bangka Parent Regency, and Central Bangka Regency. The three regions are areas that already have mainstay attractions for tourists to visit and have their own charm. For example, Pangkalpinang, which is the city center of Bangka Belitung Province, was designated by Sandiaga Uno as the Indonesian Creative KaTa by organizing culinary events and tourism events that can reach the creative economy[3]. Bangka Induk is known as a leading tourist attraction with its beautiful beaches, and Central Bangka is known for its beautiful nature with the potential for nature-based cultural tourism such as ecotourism and agro-tourism.

Based on this background, researchers feel the need to conduct a study on the application of the concept of green accounting in the tourism sector in Bangka Belitung. Therefore, this study aims to fill the gap by exploring how green accounting can be effectively applied in the sustainable tourism industry in Bangka Belitung Province and identifying the benefits and challenges that may be faced in the implementation process.

This research is different from research related to green accounting that has been carried out by several researchers [4], [5], [6], [7], [8]. Among those that have been carried out previously or their commonality is that many studies on green accounting focus more on the manufacturing, mining, and other industrial sectors. There are still relatively few studies that highlight green accounting in the tourism industry, especially those that specialize in certain regions such as Bangka Belitung. Integrating the concept of green accounting with tourism sustainability principles, including natural resource management, environmental protection, and local community participation. This provides a comprehensive and holistic approach to sustainable tourism management. Therefore, based on the above background, the following problems can be formulated:

1. How can the application of green accounting support environmental and economic sustainability in the tourism industry in Bangka Belitung Province?

2. What are the perceptions of stakeholders, including local governments, local communities, and tourists, towards the application of green accounting in the tourism sector in Bangka Belitung Province?

2 Method

The method used in this research is a qualitative method, with the data collection techniques used include: in-depth interviews, questionnaires, observation, and documentation. The sampling method used is the incidental sampling method, namely determining the sample by chance/incidental which consists of tourism management, tourism administrators, visitors as well as the Tourism Office and the Environmental Service. The data obtained will be analyzed using thematic analysis method with several procedures, namely: data collecting, data editing, data reducing, data display, data verification, and data conclusions through consideration of SWOT analysis.

SWOT analysis in this study is used to determine the development strategy method by analyzing the internal and external conditions of tourism in Bangka Belitung, based on data obtained from distributing questionnaires with a linkert scale. The data is calculated to determine the location of the strategic quadrant of development that is considered urgent to do. The calculation of factor weights is done by tabulating the IFAS - EFAS score (Internal External Strategic Factor Analysis Summary). The following strategic factors are used in SWOT analysis using internal and external strategic factors (IFAS-EFAS):

Table 1. IFAS Analysis

No.	Strategic Factors (IFAS)	Weight	Rating	Score
I	Strength (S)			
	Protection and sustainable management	x	x	x
	Green Accounting adds value	x	x	x
	Green Accounting increases corporate awareness and responsibility	x	x	x
	Green Accounting provides long-term benefits	x	x	x
	Open reporting of environmental impacts of activities	x	x	x
	Encourage visitors to protect the environment.	x	x	x
	Local community involvement in green accounting practices	x	x	x
	The implementation of a waste management policy is indispensable	x	x	x
	Green accounting improves the quality of the tourism environment	x	x	x
	Total Weight	1.0		XS
II	Weakness (W)			
	Difficulty measuring and reporting environmental impacts	x	x	x
	Lack of and limited professional staff	x	x	x
	Lack of training for staff	x	x	x
	Environmental reports lack detail and are difficult to understand	x	x	x
	There are challenges in ensuring internal accountability	x	x	x
	Budget limitations in the implementation of Green Accounting	x	x	x

The challenge of collecting accurate environmental data	x	x	x
Lack of supporting infrastructure	x	x	x
Lack of public awareness of environmental issues	x	x	x
Total Weight	1.0		XW
Strength – Weakness Score ► IFAS = XS – XW			

Table 2. EFAS Analysis

No.	Strategic Factors (EFAS)	Weight	Rating	Score
III	Opportunity (O)			
	Green Accounting gets people actively involved	x	x	x
	Local government policies that support	x	x	x
	Investors support green accounting practices	x	x	x
	Collaboration between government, investors, local communities and tourists.	x	x	x
	Effective government incentives or subsidies	x	x	x
	Eco-friendly technology for efficiency	x	x	x
	Total Weight	1.0		XO
II	Threat (T)			
	Changes in social regulations or government policies	x	x	x
	Fluctuations in raw material prices affect operating costs	x	x	x
	Fierce competition in the tourism industry	x	x	x
	Expenses due to changes in environmental regulations	x	x	x
	Previous environmental damage made business difficult	x	x	x
	Climate change impacts threaten sustainability	x	x	x
	Total Weight	1.0		XT
Opportunity – Threat Score ► EFAS = XO - XT				

After being analyzed using the internal and external factors table (IFAS - EFAS) with SWOT analysis of tourism, the results will be grouped with the 4 quadrant SWOT matrix to determine the strategic development that is considered necessary to be implemented by tourism (see Fig. 1).



Fig. 1. Strategic Approaches through SWOT Matrix: Exploring Aggressive, Development, Diversification, and Defensive Strategies for Optimal Decision-Making.

3 Results and Discussion

3.1 SWOT Analysis of Green Accounting in Tourism in Pangkalpinang City

In the research carried out in the Pangkalpinang area, the team made 2 (two) objects as sample, namely Taman Merdeka Square and Bangka Botanical Garden (BBG). Based

on SWOT analysis using internal and external strategic factors (IFAS - EFAS), which are as follows:

Table 3. Recapitulation of IFAS - EFAS analysis results of Pangkalpinang City

No.	Factor	Description	Score	Results
1	Strength	Internal Factors	3.50	0.57
	Weakness		2.93	
2	Opportunity	External Factors	3.34	0.32
	Threat		3.02	

Based on the analysis, the IFAS value (Strength Weakness) is 0.57 and the EFAS value (Opportunity Threat) is 0.32. The tourism development strategy of Pangkalpinang City is located between external opportunities and internal strengths (growth strategy) called Rapid growth strategy, which is a strategy to increase the growth rate of tourist visits with a faster time (the second year is greater than the first year and so on), quality improvement which is a strength factor to maximize the utilization of all opportunities [9]. Pangkalpinang City shows an alignment between its strengths and opportunities, these strengths can be in the form of preserved natural potential, adequate infrastructure, and government support for sustainable tourism development. However, there are some weaknesses that need to be overcome such as the lack of human resource capacity in managing sustainable tourism, competition with other tourist destinations, and the non-optimal application of green accounting principles in tourism business practices.

3.2 SWOT Analysis of Green accounting in Tourism in Bangka Regency

The tourism objects used as samples in Bangka Induk Regency are Tikus Emas Beach and Telaga Emas Bersinar. Based on SWOT analysis using internal and external strategic factors (IFAS - EFAS), which are as follows:

Table 4. Recapitulation of the results of the IFAS - EFAS analysis of Bangka Regency

No.	Factor	Description	Score	Results
1	Strength	Internal Factors	3.53	1.05
	Weakness		2.47	
2	Opportunity	External Factors	3.17	0.46
	Threat		2.71	

Based on the analysis, the IFAS value (Strengths Weaknesses) is 1.05 and the EFAS value (Opportunities Threats) is 0.46. So this indicates that the position of Bangka Induk Regency is in the Aggressive Strategy (growth oriented strategy) which is located in quadrant I, with advantages in terms of internal strengths, Bangka Induk Regency can take more aggressive steps in developing the tourism sector through the Strength-Opportunities (S-O) strategy Development with this strategy can be done by improving the quality of infrastructure to support tourism development, maximizing the management of existing tourism potential, optimizing the participation and awareness of local communities in preserving and introducing tourist objects and natural products, and

improving the performance of tourism managers by completing socio-economic facilities to support community activities in conducting tourism activities, as well as making policies on the importance of applying green accounting principles in tourism business practices.

3.3 SWOT Analysis of Green Accounting in Tourism in Central Bangka

The tourism objects used as samples in Central Bangka Regency are Telapak Antu Beach and Natural Fishing (Tampi). Based on SWOT analysis using internal and external strategic factors (IFAS - EFAS), which are as follows:

Table 5. Recapitulation of IFAS - EFAS analysis results for Central Bangka Regency

No.	Factor	Description	Score	Results
1	Strength	Internal Factors	3.24	0.41
	Weakness		2.83	
2	Opportunity	External Factors	3.17	0.33
	Threat		2.84	

Based on the analysis, the IFAS value (Strengths Weaknesses) is 0.41 and the EFAS value (Opportunities Threats) is 0.33. Based on the results of the SWOT analysis in Central Bangka Regency, the results show the position of Rapid Growth Strategy, which indicates that Central Bangka Regency has the potential to grow rapidly, but needs to make several adjustments and improvements. Central Bangka Regency needs to take advantage of existing strengths to seize open opportunities, then simultaneously overcome internal weaknesses and minimize external threats. The results obtained show positive values in both variables. This indicates that the potential is quite good in implementing green accounting in the tourism sector of this district. Strengths such as unique natural tourism potential, local government support, and active community participation can be the basis for overcoming existing weaknesses, such as the lack of awareness of tourism actors of the importance of the environment, limited supporting infrastructure for environmentally friendly tourism, and no implementation of reporting related to green accounting. Opportunities such as increasing tourist interest in sustainable tourism and government policies that support sustainable tourism can be utilized to overcome threats that may arise, such as climate change and intense competition with other tourist destinations.

4 Conclusions

1. SWOT analysis of Pangkalpinang City shows that the city has great potential in tourism development, supported by natural potential, adequate infrastructure, and government support. However, there are several challenges such as lack of human resource capacity, competition with other destinations, and not yet optimal application of green accounting principles. To maximize this potential, it is recommended to use Rapid Growth Strategy. This strategy aims to increase the number of tourists visits

significantly and sustainably while maintaining quality. In other words, Pangkalpinang City needs to utilize internal strengths such as its natural potential to seize external opportunities (increased tourist interest).

2. Tikus Emas Beach in Bangka Induk Regency has great potential to be developed into a leading tourist destination. SWOT analysis shows that with an aggressive strategy, this beach can attract more tourists. The focus of development is on improving the quality of infrastructure, managing unique tourism potential, and involving local communities in preservation and promotion. Then, the importance of applying green accounting principles in the tourism development of Golden Rat Beach cannot be ignored. The proposed aggressive strategy should be in line with the principle of sustainability to ensure that the benefits of tourism can be enjoyed by future generations.
3. Central Bangka Regency is strategically positioned to achieve rapid growth in the tourism sector, particularly at Telapak Antu Beach. SWOT analysis shows that with Rapid Growth Strategy, Central Bangka Regency can utilize its unique natural potential, government support, and community participation to overcome challenges such as lack of environmental awareness, limited infrastructure, and competition with other destinations. With Rapid Growth Strategy, the beach can grow rapidly while still maintaining environmental sustainability. The implementation of green accounting will ensure that tourism development is done sustainably.
4. Overall, the three regions in Bangka Belitung have good potential to develop their tourism sector. However, each region has different challenges and opportunities. With the right strategy, the tourism potential in these three regions can be optimized to improve the welfare of the community and the regional economy.

5 Recommendation

5.1 Tourism Destination Parties

1. It is expected that tourist destinations in Bangka Belitung apply the concept of green accounting to the operation of tourism activities, so that each tourist destination has a special environmental cost report to improve clear environmental information and sustainability principles.
2. Cooperate with external parties, especially local governments, investors, and local communities well in an effort to increase the value of tourist destinations in the region. This cooperation plays a role in determining the spatial layout of the area, easy access to information and determining the capital management of tourist areas.
3. Improving infrastructure and energy resources to support the implementation of green accounting and the strategic development of tourism.
4. Conduct creative promotions and brilliant innovations to attract investors and achieve the targeted number of visits.

5.2 Government

1. Local governments must have a commitment and design joint programs with tourist destinations in optimizing the application of green accounting to develop sustainable tourism objects. Then establish a policy for tourist destinations to report regularly as an evaluation and accountability material.
2. Equalization and distribution of the tourism sector development budget in the form of APBD, in order to support the expected sustainable tourism development.
3. Organize training and education for staff and tourism management about the concept of green accounting by involving academics as one of the important components that play a role in achieving the application of green accounting in the tourism sector.

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