

Implementation of Green Accounting and Community-Based Tourism in Supporting Sustainable Tourism: A Study on Toronipa Beach

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Article History

Received: 12-07-2026

Revised: 19-07-2026

Published: 30-07-2026

Keywords: Green Accounting; Community-Based Tourism; Sustainable Tourism; Toronipa Beach; Secondary Data

ABSTRACT

This study examines the implementation of green accounting and community-based tourism (CBT) as two integrated approaches to supporting sustainable tourism, with a case study at Toronipa Beach, Southeast Sulawesi. The study employs a descriptive qualitative approach based on secondary data, using the Systematic Literature Review (SLR) method and document-based case study. Data were sourced from journals indexed in Scopus and Sinta, official government reports, and publications from international bodies such as UNWTO and UNEP. The findings indicate that: (1) green accounting provides a framework for reporting environmental costs and benefits that remains underutilized in the coastal tourism sector; (2) CBT effectively improves local welfare and ecosystem conservation when supported by strong institutional frameworks; (3) Toronipa Beach has significant potential for applying both approaches synergistically, although it faces challenges in institutional capacity and environmental financial governance; and (4) the integration of green accounting and CBT yields a more comprehensive sustainable tourism model than applying each separately. This research contributes to developing a conceptual model of sustainability-based environmental accounting for coastal tourism destinations in Indonesia.

INTRODUCTION

Sustainable tourism has become an increasingly pressing global agenda as environmental and social pressures stem from the rapid growth of the tourism industry increase. The World Tourism Organization (UNWTO) noted that before the COVID-19 pandemic, the tourism sector contributed approximately 10% of global Gross Domestic Product (GDP) and employed one in ten people worldwide (UNWTO & UNEP, 2005). However, this uncontrolled growth often negatively impacts coastal ecosystems, local cultures, and the unequal distribution of economic benefits.

At the national level, Indonesia, as an archipelagic nation with over 17,000 islands, boasts an extraordinary wealth of marine tourism destinations. The Indonesian government, through various tourism development programs, seeks to harness this potential as a source of foreign exchange and job creation. However, these efforts often clash with issues of environmental degradation, the marginalization of local communities, and the lack of an accounting system that integrates environmental values into tourism destination management (Lako, 2018).

At the local level, Toronipa Beach in Konawe Regency, Southeast Sulawesi, is a marine tourism destination with significant ecological and economic potential. As a beach located near the capital of Southeast Sulawesi Province, Toronipa faces increasing development pressures as well as opportunities for sustainable development (Rasyid et al., 2025). Data shows that tourist visits to Toronipa Beach have steadily increased in recent years, but environmental management and local community involvement remain suboptimal.

In this context, two conceptual approaches are relevant for study: first, green accounting, a financial reporting system that integrates environmental impacts into economic calculations (Gray, 1990; Gray et al., 1993); and second, community-based tourism (CBT), which positions local communities as key actors in the planning, implementation, and utilization of tourism outcomes (Murphy, 1985; Dodds et al., 2016). These two approaches have not been widely studied in an integrated manner, particularly in the context of coastal tourism destinations in Indonesia.

The identified research gaps are: the majority of green accounting studies focus on the manufacturing sector and large corporations (Alieva & Usmonova, 2021), while their application in the tourism sector remains limited. Similarly, existing CBT studies generally focus on the social and ecological dimensions without systematically integrating environmental accounting frameworks (Bramwell et al., 2017). Integrating the two within a single conceptual study, specifically for the case of Toronipa Beach, represents a novel contribution that this research offers.

Based on the literature review above, a conceptual framework for integrating green accounting and CBT in supporting sustainable tourism can be identified. Green accounting provides financial and reporting instruments that community-based management organizations can use to measure and communicate the environmental impacts of tourism activities. Conversely, CBT principles provide the institutional and social foundations necessary for green accounting to become more than just a formal reporting tool, but also to truly transform destination management practices.

This synergistic relationship has not been widely explored in the literature. Most studies of green accounting in tourism focus on the firm or industry level (Alieva & Usmonova, 2021), while CBT studies tend to overlook the environmental dimensions of accounting and financial reporting (Dodds et al., 2016). This research seeks to fill this gap by developing a

conceptual model that integrates both approaches in the context of coastal tourism destinations.

Based on this background, this study aims to: (1) examine the concept of green accounting in the tourism sector based on scientific literature; (2) analyze the role of CBT in supporting the sustainability of tourist destinations; (3) identify the implementation of the two concepts in the management of Toronipa Beach based on secondary data; and (4) analyze the contribution of the integration of green accounting and CBT to sustainable tourism.

RESEARCH METHODS

This research uses a conceptual and comparative approach with the consideration that: (1) the focus of the study is conceptual and comparative; (2) the required data is available in scientific literature and official documents; and (3) this approach is relevant to the research objectives, namely developing a conceptual model based on literature synthesis.

This research uses a descriptive qualitative approach with two main methods: a Systematic Literature Review (SLR) and a document-based case study. The SLR was used to identify, evaluate, and synthesize relevant research on green accounting, CBT, and sustainable tourism. The document-based case study was used to analyze the implementation of these concepts in the specific context of Toronipa Beach based on available data.

Secondary data were obtained from several primary sources: (a) Scopus and Sinta indexed scientific journals obtained through the Google Scholar, Scopus, and ScienceDirect databases; (b) official reports from the Konawe Regency and Southeast Sulawesi Province governments regarding tourism and the environment; (c) international publications from UNWTO, UNEP, and related institutions; and (d) previous research on coastal tourism destinations in Southeast Sulawesi that can be scientifically verified.

The literature search was conducted using keywords in Indonesian and English, including: "green accounting", "green accounting", "community-based tourism", "community-based tourism", "sustainable tourism", "sustainable tourism", "Toronipa", "coastal tourism Indonesia", and combinations of these keywords. The databases used included Google Scholar, Scopus, ScienceDirect, and the Garuda portal (for national journals).

Inclusion criteria included: (a) publications between 1985 and 2025; (b) thematically relevant to green accounting, CBT, or sustainable tourism; (c) published in indexed journals or as official reports of authorized institutions; and (d) available in Indonesian or English. Exclusion criteria included: (a) opinion articles without scientific data support; (b) publications on unverified platforms; and (c) duplication of sources.

Data analysis used the Miles & Huberman (1994) model, which consists of three stages: (1) data reduction, namely the process of selecting, focusing on, and transforming raw data from the literature; (2) data presentation, namely the arrangement of information that allows conclusions to be drawn; and (3) drawing conclusions, namely the verification of findings based on patterns that emerge from the data. The validity of the research was guaranteed

through source triangulation (cross-checking between references) and consistency of interpretation across sources.

RESULTS AND DISCUSSION

1) Green Accounting Concept in Tourism Sector

Based on a literature synthesis, green accounting in the tourism sector can be operationalized through at least four main mechanisms. First, environmental cost accounting identifies and allocates environmental costs arising from tourist destination operations, such as waste management costs, coral reef ecosystem restoration costs, and wastewater treatment costs from tourist facilities (Gray et al., 1993).

Second, natural capital valuation, which is an effort to calculate the economic value of natural resources that serve as tourist attractions, including coastal ecosystems, marine biodiversity, and coastal water quality. Commonly used valuation methods include the contingent valuation method (CVM), the travel cost method (TCM), and hedonic pricing. Third, environmental disclosure, which requires destination managers to transparently report the environmental impacts of tourism activities to the public and stakeholders (Lako, 2018). Fourth, integrated reporting, which combines conventional financial reporting with social and environmental impact reporting in a single, unified document.

Yunita et al. (2024) in their study on the application of environmental accounting to tourist destinations in Indonesia showed that the majority of tourism destination managers, especially those managed by local governments, do not have adequate environmental reporting systems. This creates a situation where negative externalities from tourism activities, such as coastal pollution, mangrove ecosystem damage, and overcapacity, are not reflected in the official financial reports of destination managers.

2) The Role of Community-Based Tourism in Destination Sustainability

Literature reviews show that CBT plays a multidimensional role in supporting the sustainability of tourism destinations. Economically, CBT has been shown to increase the retention of economic benefits at the local level. Dodds et al. (2016) reported that destinations that consistently implement CBT have lower local economic leakage than destinations managed by external tour operators. This is due to the tendency of local communities to use products and services from local suppliers, resulting in a greater multiplier effect from tourist spending.

In the environmental dimension, CBT contributes to ecosystem conservation through community-based monitoring mechanisms. Murphy (1985) argued that communities with a direct economic stake in the sustainability of natural resources tend to be more effective in protecting those resources than those monitored by external authorities. This argument is supported by Ostrom's (1990) concept of commons management, which demonstrates that local communities are capable of developing effective and sustainable mechanisms for managing shared resources.

Dewi & Baiquni (2021) in the Indonesian context showed that the success of CBT is largely determined by: (1) the quality of local leadership; (2) clarity of ownership rights over tourism resources; (3) the availability of internal conflict resolution mechanisms; and (4) support from local governments in the form of regulations and technical assistance. The absence of any of these factors can lead to the failure of CBT implementation, even if natural resource potential is available.

3) Implementation in Toronipa Beach Management

Toronipa Beach is located in Soropia District, Konawe Regency, Southeast Sulawesi, and is one of the leading marine tourism destinations in the Kendari Bay area. Based on available secondary data, including a study by Rasyid et al. (2025) and a report from the Konawe Regency government, Toronipa Beach has ecological and social characteristics that make it an ideal candidate for implementing a sustainable tourism model based on green accounting and CBT.

From an ecological perspective, Toronipa Beach has a coral reef ecosystem that is still well-maintained in several zones, coastal vegetation in the form of coconut trees and mangroves.

buffer zones, and diverse marine life that attract special interest tourists. However, pressure from poorly managed tourism activities has given rise to several environmental problems, including the accumulation of plastic waste, disruption to coastal ecosystems due to uncontrolled recreational activities, and potential pollution from waste from tourist facilities.

From a socio-economic perspective, the Bajo people and fishing communities living around Toronipa Beach have historically had a strong cultural connection to the marine ecosystem. This connection represents invaluable social capital for the development of CBT. Rasyid et al. (2025) noted that some local communities have been involved in providing tourism services such as boat rentals, selling local culinary delights, and providing tour guides, although this involvement remains informal and has not yet been organized within a formal CBT institutional framework.

If a green accounting framework is applied to the management of Toronipa Beach, at least three aspects can be implemented immediately: first, the establishment of an environmental cost register that documents all environmental management costs incurred by the destination manager; second, the implementation of an environmental levy charged to tourists and used exclusively to finance ecosystem conservation programs; and third, reporting an environmental balance sheet that shows the condition of the beach's natural resources periodically.

Meanwhile, CBT development at Toronipa Beach can begin with the establishment of a Tourism Awareness Group (Pokdarwis) equipped with adequate institutional capacity, including a transparent financial system, a fair profit distribution mechanism, and internal conflict management procedures. Comparative studies of successful CBT destinations in

Indonesia, such as those reviewed by Dewi & Baiquni (2021), can serve as a reference in designing CBT institutions in Toronipa.

4) Integration of Green Accounting and CBT: A Conceptual Model

The integration of green accounting and CBT in the context of sustainable tourism produces a conceptual model that can be described as follows: at the institutional level, community-based management organizations (Pokdarwis or Village-Owned Enterprises/BUMDes) become accounting entities responsible for recording, reporting, and using environmental cost-benefit information in destination management decision-making.

This model has several advantages over applying each approach separately. First, CBT provides the institutional structure necessary to translate green accounting information into concrete management actions. Without a strong CBT institutional framework, green accounting reports would remain mere documents with no real impact on destination management.

Second, green accounting provides a financial language that local communities can use to advocate their interests to external stakeholders, including governments and investors.

Third, the integration of these two approaches aligns with the principles of a green economy that are increasingly being adopted in Indonesia's national development policies, particularly in the context of implementing the Sustainable Development Goals (SDGs). Mowforth & Munt (2016) emphasize the importance of aligning sustainable tourism practices at the destination level with development policies at the national and global levels.

However, this integrated model faces several implementation challenges. Bramwell et al. (2017) caution that comprehensive sustainable tourism models often face implementation obstacles due to limited technical capacity, resistance from actors with vested interests in the status quo, and a mismatch between the long-term logic of sustainability and the short-term pressures of community economic needs. In the context of Toronipa Beach, specific challenges include low accounting literacy among the local community, the absence of regional regulations explicitly governing environmental reporting in tourism destination management, and limited budget for initial investment in developing a green accounting system.

Comparison with similar research in other coastal tourism destinations in Indonesia suggests that these barriers can be addressed gradually through: technical assistance from universities or research institutions; development of environmental accounting standards tailored to the scale of community tourism destinations; and integration of green financial literacy programs into the Pokdarwis training curriculum.

CONCLUSION AND SUGGESTIONS

Based on the secondary data analysis conducted, this study yields four main conclusions that address the stated research questions. First, the concept of green accounting in the tourism sector can be operationalized through environmental cost accounting, natural capital

valuation, environmental disclosure, and integrated reporting. The integrated application of these four mechanisms enables destination managers to make decisions that fully consider the economic value of the ecosystems that underpin tourist attractions.

Second, CBT has a multi-dimensional role in supporting the sustainability of tourist destinations through: increasing the retention of economic benefits at the local level, strengthening community-based oversight of natural resources, and developing social capital, an intangible asset that is highly valuable for the long-term sustainability of the destination. Third, Toronipa Beach has ecological and social conditions that are conducive to the implementation of a sustainable tourism model based on green accounting and CBT. The local community's cultural ties to the marine ecosystem, the availability of relatively well-maintained natural resources, and the growing momentum of tourism development represent strategic opportunities that need to be utilized immediately and in a planned manner.

Fourth, the integration of green accounting and CBT produces a more comprehensive and operational sustainable tourism model than either implementation alone. This integrated model positions community-based management organizations as the accounting entity responsible for environmental impact reporting and as the primary actor in destination management.

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