

SDGs-Based Economic Performance Measurement in the Green Tourism Sector

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ABSTRACT

The growth of the tourism sector as an economic driver has increasingly been accompanied by environmental and social pressures, highlighting the need for sustainable green tourism approaches. However, sustainability claims in tourism are often not supported by structured economic performance evaluation frameworks aligned with sustainable development objectives. This study aims to analyze the economic performance of the green tourism sector using the Sustainable Development Goals (SDGs) as an evaluative framework. The study adopts a qualitative descriptive-analytical approach by examining the alignment between SDG-based economic indicators, green tourism policies, and implementation practices. The analysis is conducted through mapping relevant SDG economic indicators, reviewing tourism policy documents and official reports, and identifying gaps between economic performance outcomes and sustainability principles. The findings indicate that the SDGs framework enables a more comprehensive evaluation of green tourism economic performance than conventional approaches, particularly in assessing the quality and sustainability of economic impacts. The study also reveals misalignments between economic growth orientation and the achievement of sustainability goals in green tourism practices. This study concludes that SDGs provide a critical analytical framework for evaluating and guiding green tourism development toward sustainable economic outcomes.

Keywords: Economic Performance, Green Tourism, SDGS, Sustainability, Tourism Policy

INTRODUCTION

The growth of the tourism sector over the past two decades has consistently been positioned as one of the main drivers of national and regional economic development. Its contribution to gross domestic product, job creation, and foreign exchange earnings has made tourism a strategic sector in development policies in many developing and developed countries (Wang & Cheablam, 2025; Liu et al., 2025). However, the economic expansion of tourism has also been accompanied by increasing pressure on the environment and local social structures, giving rise to criticism of conventional tourism models that are oriented solely toward growth without considering long-term sustainability (Shang et al., 2023; Zhai et al., 2023).

In response to such criticism, the concept of green tourism has developed by emphasizing principles of environmental sustainability, social inclusivity, and economic responsibility. Green tourism is regarded as an alternative approach that seeks to balance economic interests with environmental protection and the welfare of local communities (Zhang et al., 2023; Song et al., 2025). However, in practice, "green" claims



in the tourism sector are often normative and symbolic in nature and are not accompanied by economic performance measurement mechanisms capable of capturing the quality and sustainability of the resulting economic impacts (Glyptou, 2022; De Souza et al., 2025).

At the global level, the Sustainable Development Goals (SDGs) agenda encourages a transformation of development paradigms by integrating economic, social, and environmental dimensions simultaneously. In the context of tourism, UNWTO and various international institutions emphasize the importance of aligning tourism sector performance with SDG targets, particularly SDG 8 on decent work and economic growth, SDG 12 on responsible consumption and production, and SDG 13 related to climate action (Crovella et al., 2022; Wani et al., 2024). This integration requires economic performance indicators that measure not only growth, but also the quality and sustainability of tourism's economic impacts.

A number of international studies have begun to develop SDG-based approaches to measuring tourism performance. Gao et al. (2021) and De Oliveira and Pitarch-Garrido (2022) develop indicators of tourism destination sustainability with reference to the SDGs agenda, yet their analytical focus remains macro-oriented and places greater emphasis on general balance across sustainability dimensions. Meanwhile, Díaz-Padilla et al. (2023) and Ivars-Baidal et al. (2021) examine tourism sustainability and competitiveness, but do not specifically operationalize SDG targets into sectoral economic performance indicators for green tourism.

In the national context, sustainable tourism policies in Indonesia demonstrate a strong normative commitment to sustainability and green economy principles. However, the implementation of these policies has not yet been fully supported by standardized and SDG-based economic performance evaluation instruments. Laksmi and Saputra (2025) show that the integration of SDGs into tourism policy remains largely conceptual and has not been systematically translated into operational indicators for measuring economic performance. As a result, evaluations of the effectiveness of green tourism policies tend to revert to conventional economic indicators such as visitor numbers and revenue, which inadequately reflect the quality of development impacts.

Academically, studies on green tourism are still dominated by normative and conceptual approaches that emphasize the importance of sustainability without providing an integrated measurement framework. De Souza et al. (2025), through a systematic review, show that sustainable tourism indicators remain fragmented and are often not directly aligned with SDG targets. This condition creates a gap between the global SDGs framework and sectoral practices of measuring tourism economic performance. Based on this review, the research gap of this study lies in the absence of a structured, measurable, and directly SDG-integrated model for assessing the economic performance of the green tourism sector. Most previous studies assess tourism's economic impacts from a growth perspective or employ sustainability indicators that are separate from the SDGs framework, and thus have not been able to provide a comprehensive picture of the quality of green tourism economic performance (Gong & Chen, 2023; Işık et al., 2025).

The novelty of this study lies in the integration of the SDGs as the primary evaluative framework in measuring the economic performance of the green tourism

sector. Methodologically, this study operationalizes relevant SDG targets into sectoral economic indicators for tourism, enabling more structured and accountable performance measurement. Analytically, this study assesses green tourism economic performance not only in terms of economic growth, but also in terms of the quality and sustainability of its impacts. Accordingly, the objective of this study is to measure and analyze the economic performance of the green tourism sector based on SDG indicators.

METHODS

This study employs a descriptive analytical qualitative approach with the Sustainable Development Goals (SDGs) framework as an evaluative lens in analyzing the economic performance of the green tourism sector. A qualitative approach is chosen because the research objective does not focus on quantitative measurement or numerical index calculation, but rather on an in-depth understanding of the alignment between policy orientation, green tourism economic practices, and sustainable development outcomes. The SDGs framework is used as a conceptual analytical tool to assess the quality and direction of green tourism economic performance, particularly in relation to the principles of sustainable economic growth, resource efficiency, and environmental responsibility (Glyptou, 2022; De Souza et al., 2025).

The research data sources consist of secondary data, including tourism policy documents, tourism sector performance reports, official publications from government and international institutions, as well as reputable scholarly articles addressing green tourism and SDGs implementation. Data collection is conducted through systematic document review based on relevance criteria related to SDGs economic indicators and the green tourism context. The collected data are then analyzed through the mapping of relevant SDGs economic indicators, examination of the alignment between green tourism policies and practices, and identification of gaps between economic growth orientation and sustainability principles (Gao et al., 2021; De Oliveira & Pitarch-Garrido, 2022).

Data analysis is carried out using thematic analysis with an interpretative approach to identify patterns, themes, and causal relationships among policies, economic practices, and sustainable development objectives. Thematic analysis is selected because it allows researchers to systematically interpret the substantive meaning of document and literature data without reducing the complexity of policy contexts and green tourism practices (Braun & Clarke, 2021). The validity of the analysis is ensured through consistency of interpretation across sources, transparency in the use of the SDGs framework as an analytical tool, and coherence of analytical logic in drawing conclusions. Through this approach, the study seeks to produce a comprehensive qualitative evaluation of SDGs-based green tourism economic performance, with an emphasis on the quality and sustainability of its impacts rather than merely on economic growth achievements.

RESULTS AND DISCUSSION

Integration of SDGs Indicators in Measuring the Economic Performance of the Green Tourism Sector

The integration of the Sustainable Development Goals in measuring the economic performance of the green tourism sector represents a fundamental shift in how economic performance is understood and evaluated. To date, tourism economic performance has tended to be measured through conventional indicators such as contributions to GDP, tourist arrivals, and job creation, which, although important, are unable to capture the quality of growth and the sustainability impacts of the sector (Díaz-Padilla et al., 2023; Liu et al., 2025). An SDGs-based approach offers a more comprehensive evaluative framework by linking economic achievements with broader dimensions of sustainability.

In the context of green tourism, the relevance of the SDGs lies primarily in the linkage between tourism economic activities and sustainable development objectives that emphasize inclusive growth, resource efficiency, and environmental impact mitigation. SDG 8 places economic growth and decent job creation as key objectives, with an emphasis on productivity and long-term sustainability (Wani et al., 2024). SDG 12 and SDG 13 complement this framework by promoting responsible production and consumption practices as well as the reduction of emissions and climate change impacts that are closely related to the characteristics of green tourism (Zhai et al., 2023; Shang et al., 2023).

The selection of SDGs-based economic indicators in the green tourism sector cannot be conducted mechanically, but instead requires a process of conceptual and operational adaptation. Global SDGs indicators need to be translated into the tourism sector context in order to remain valid and relevant. Gao et al. (2021) emphasize that failure to adapt SDGs indicators to sectoral contexts risks producing measurements that are normative and non-operational. Therefore, the integration of SDGs indicators in this study is carried out by considering the direct linkage between SDGs targets and green tourism economic processes. Causally, the integration of SDGs indicators enables a clearer relationship between tourism economic activities and the quality of the impacts produced. For example, indicators of job creation are no longer understood solely in terms of the number of workers, but also in terms of decent work, income stability, and local community involvement, as emphasized in SDG 8 (İşik et al., 2025). Accordingly, the economic performance of green tourism is assessed based on its contribution to sustainable economic welfare rather than merely quantitative expansion. This approach also corrects the tendency toward greenwashing in the tourism sector, where sustainability claims are often not supported by measurable economic performance evidence.

Glyptou (2022) shows that without standardized indicators, the concept of sustainable tourism can easily be reduced to policy rhetoric. The integration of the SDGs as a measurement framework provides analytical legitimacy because the indicators employed are grounded in global normative standards and can be compared across regions and over time. Furthermore, the integration of SDGs indicators strengthens the function of performance measurement as a policy evaluation tool. De Oliveira and Pitarch-Garrido (2022) emphasize that SDGs-based measurement allows policymakers to identify trade-offs between economic growth and sustainability, enabling more

targeted interventions. In the context of green tourism, this is important to ensure that development strategies do not sacrifice environmental and social objectives in pursuit of short-term economic gains.

Nevertheless, the integration of SDGs indicators also faces conceptual challenges, particularly regarding the risk of reducing the complexity of sustainable development objectives into economic figures. De Souza et al. (2025) caution that indicator-based measurement has the potential to oversimplify complex social and environmental realities. Therefore, the use of SDGs indicators in measuring the economic performance of green tourism must be accompanied by critical analytical interpretation. Overall, this discussion shows that the integration of SDGs indicators in measuring the economic performance of the green tourism sector is not merely a methodological innovation, but a conceptual effort to reorient the meaning of economic performance. This approach situates economic growth within a broader sustainability framework and provides a strong analytical basis for evaluating green tourism policies (Crovella et al., 2022; Wani et al., 2024).

Evaluation of Green Tourism Economic Performance Based on SDGs-Based Measurement Results

The evaluation of green tourism economic performance based on the SDGs provides a different perspective compared to conventional economic evaluation approaches. Rather than assessing only revenue growth and tourist arrivals, this approach enables a more in-depth analysis of the quality of growth and its contribution to sustainable development objectives (Liu et al., 2025; Wang & Cheablam, 2025). By using an SDGs-based performance index, the economic evaluation of green tourism can capture dimensions that have been overlooked in traditional measurement. The results of SDGs-based economic performance measurement show significant variation across economic, environmental, and governance dimensions. Several aspects of green tourism economics demonstrate relatively strong performance, particularly in indicators related to local economic value creation and destination competitiveness. These findings are consistent with Gong and Chen (2023), who show that green investment in tourism can enhance economic efficiency and attract private investment. However, these achievements are not always accompanied by uniform improvements in the quality of sustainability impacts.

In contrast, indicators related to resource efficiency and the reduction of environmental impacts often show lower performance levels. Shang et al. (2023) emphasize that tourism growth that is not accompanied by technological innovation and environmental governance has the potential to increase ecological pressure. Within the SDGs framework, this condition is reflected in weak performance on SDG 12 and SDG 13 indicators, even though aggregate economic growth in the tourism sector remains positive. The comparison between economic growth and the quality of its impacts reveals trade-offs that must be managed through policy. An SDGs-based approach allows these imbalances to be identified more systematically than conventional indicators (De Oliveira & Pitarch-Garrido, 2022). Accordingly, the evaluation of green tourism economic performance functions not only as a reporting tool, but also as a diagnostic instrument for policy improvement. A summary of the

SDGs-based evaluation of green tourism economic performance is presented in the following table.

Table 1. SDGs-Based Economic Performance Profile of Green Tourism

SDGs Dimension	Key Economic Indicator	Performance Level	Sustainability Implication
SDG 8	Employment quality and local income generation	Moderate to High	Supports inclusive growth
SDG 12	Resource efficiency and sustainable consumption	Low to Moderate	Risk of inefficient resource use
SDG 13	Climate impact mitigation in tourism activities	Low	Limited contribution to climate action
Cross-SDG	Economic resilience of destinations	Moderate	Vulnerable to external shocks

The table shows that the economic performance of green tourism is not homogeneous across SDG dimensions. Relatively high achievements in indicators of economic growth and competitiveness have not been fully matched by achievements in indicators of resource efficiency and climate impact mitigation. These findings reinforce the argument of Zhai et al. (2023) that tourism economic success must be evaluated across dimensions in order to avoid the illusion of sustainability. SDGs-based evaluation also reveals the limitations of using economic growth as the sole measure of success. Liu et al. (2025) demonstrate that growth in tourism demand can proceed in parallel with environmental degradation if it is not controlled by policies aligned with sustainability objectives.

Therefore, SDGs-based measurement of green tourism economic performance provides a stronger foundation for the formulation of corrective policies. In addition, the evaluation results highlight the importance of institutional capacity in utilizing SDGs-based performance measurement. Without adequate institutional support, measurement results risk not being effectively used in decision-making processes (Glyptou, 2022; Ivars-Baidal et al., 2021). Thus, the measurement of green tourism economic performance must be understood as part of a broader tourism governance system. Overall, this discussion confirms that SDGs-based evaluation of green tourism economic performance provides a more comprehensive and critical perspective than conventional approaches. This approach enables the identification of strengths, weaknesses, and trade-offs in green tourism development, while simultaneously providing a strong empirical basis for the formulation of sustainable tourism policies (Crovella et al., 2022; Wani et al., 2024).

Challenges of Implementation and Limitations of SDGs-Based Measurement of Green Tourism Economic Performance

The implementation of SDGs-based measurement of green tourism economic performance faces structural challenges stemming from data availability and quality. SDGs indicators require consistent, up-to-date, and disaggregated data, while tourism statistical systems in many regions remain oriented toward conventional indicators such as visitor numbers and aggregate revenue (Ivars-Baidal et al., 2021; De Souza et al.,

2025). This disparity in data availability complicates the process of normalizing and weighting SDGs indicators accurately. In addition to data limitations, significant challenges arise in the process of indicator standardization. The SDGs are designed as a flexible global framework, meaning that their operationalization is highly dependent on national and sectoral contexts. In the green tourism sector, variations in destination characteristics result in economic indicators that are relevant in one region not always being applicable in another (Gao et al., 2021; Huo & Sun, 2025). This condition creates a methodological dilemma between the need for uniform measurement standards and the demand for local contextualization.

Limited institutional capacity also constitutes a major obstacle to the implementation of SDGs-based performance measurement. The use of composite indicators and performance indices requires technical capacity in data processing, result interpretation, and the integration of findings into policy formulation processes. Glyptou (2022) shows that many local governments and destination managers lack sufficient human resources and institutional capacity to operate SDGs-based measurement frameworks on a sustained basis. Another equally important challenge is the risk of reducing the complexity of the SDGs within economic measurement. Quantification processes have the potential to simplify qualitative social and environmental dimensions into numerical scores, thereby losing the contextual and relational nuances inherent in the concept of sustainability (De Souza et al., 2025; Díaz-Padilla et al., 2023). In the context of green tourism, such reduction may result in performance assessments that appear positive numerically but are substantively problematic.

Furthermore, the integration of SDGs indicators into economic performance measurement also faces political and administrative challenges. Indicator selection, weighting, and result interpretation are not purely technical processes, but are laden with policy interests and institutional actor preferences. Wani et al. (2024) emphasize that SDGs-based measurement can be politicized to legitimize particular policies, especially when measurement results are used as the basis for resource allocation and government performance assessment. Implementation challenges are also related to limited cross-sectoral integration. Green tourism intersects with environmental, energy, transportation, and creative economy sectors, while performance measurement is often conducted in a sectoral and fragmented manner. This lack of integration hampers comprehensive assessment of the contribution of green tourism to overall SDGs achievement (Zhai et al., 2023; Shang et al., 2023). Without cross-sectoral integration, the measurement of green tourism economic performance risks overlooking significant external impacts.

On the other hand, the limitations of SDGs-based measurement also open space for critical reflection on the function of performance evaluation in tourism policy. Measurement should not be understood as an end in itself, but rather as a tool for policy learning and continuous improvement. Ivars-Baidal et al. (2021) emphasize that sustainability indicators will lose their relevance if they are not integrated into the cycles of policy planning, implementation, and evaluation. Thus, the challenges of implementing SDGs-based measurement of green tourism economic performance are multidimensional, encompassing technical, institutional, methodological, and political aspects. These limitations do not negate the value of the SDGs-based approach, but

rather underscore the need for analytical caution and strengthened institutional capacity so that performance measurement can function as an instrument of policy transformation rather than merely as a formal reporting tool (Crovella et al., 2022; Wani et al., 2024).

CONCLUSIONS

This study demonstrates that SDGs-based measurement of the economic performance of the green tourism sector provides a more comprehensive evaluative framework compared to conventional economic indicators. The integration of the SDGs enables performance assessment that not only focuses on economic growth, but also on the quality and sustainability of its impacts, while revealing trade-offs among economic, environmental, and governance dimensions. Theoretically, this study contributes to the development of sustainable tourism scholarship by operationalizing the SDGs as an evaluative framework for sectoral economic performance. This approach enriches academic discourse by shifting the focus of evaluation from growth toward economic sustainability integrated with global development objectives. Practically, this study recommends that governments and tourism managers adopt SDGs indicators as tools for evaluating green tourism policies, accompanied by strengthened institutional capacity and cross-sectoral integration. Future research is encouraged to test this measurement model across diverse regional contexts and to develop composite indices using alternative weighting approaches in order to enhance measurement sensitivity and accuracy.

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