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# Sustainable Tourism, International Cooperation, and Economic Development: An Integrated Framework for Dynamic Global Contexts

## Abstract

This study analyses tourism as a multidimensional phenomenon using a mixed-methods approach that integrates structured thematic coding with the development of ad hoc quantitative indicators (TEII, TICI, ESI). Drawing on five case studies (Rwanda, Bhutan, Bali, Venice, and Machu Picchu), it evaluates the economic impact, international cooperation, and environmental sustainability associated with tourism development. The findings confirm a positive correlation between economic growth and international cooperation, and identify environmental trade-offs in mass tourism destinations, which can be mitigated through strong regulatory frameworks and adaptive governance strategies. The study highlights the need for holistic, resilient, and evidence-based approaches to manage tourism's potential and risks. It also advocates incorporating longitudinal methodologies and emerging paradigms, such as regenerative tourism, to advance towards more sustainable and inclusive models of tourism development in an era of accelerated global transformation.

**Keywords:** sustainable tourism, international cooperation, economic development, environmental sustainability, tourism indicators, adaptive governance, regenerative tourism

## 1. Introduction

Tourism has emerged as one of the most dynamic economic sectors globally, contributing approximately 10 per cent of the world's gross domestic product and generating nearly one in ten jobs, both direct and indirect ([UNWTO], 2021). However, its contemporary significance transcends the economic sphere. In recent decades, tourism has been promoted as a strategic instrument for international cooperation and regional development, facilitating cultural exchange, strengthening diplomatic alliances, and channelling resources toward conservation initiatives and community projects (D'Amore, 1988; Richards, 2018).

Despite the growing recognition of these dimensions and the advancements in the literature on sustainable tourism, significant methodological limitations persist. Many studies remain anchored in descriptive approaches or isolated case analyses, lacking robust comparative frameworks and standardized quantitative tools capable of systematically evaluating the trade-offs between economic growth, international cooperation, and environmental sustainability.

This study seeks to address this gap by constructing a mixed methodological approach that integrates: (1) a systematic review of the literature published between 2003 and 2023, following PRISMA protocols. (2) a qualitative analysis based on structured thematic coding; and (3) the design of three specific indicators, the Tourism Economic Impact Index (TEII), the Tourism International Cooperation Index (TICI), and the Environmental Sustainability Index (ESI).

The analytical instruments are applied to five case studies selected for their geographical diversity and differing models of tourism governance: Rwanda, Bhutan, Bali, Venice, and Machu Picchu. These cases were

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intentionally selected: it captures contexts ranging from highly regulated ecotourism to heritage destinations under overtourism pressure, thus providing a comparative lens to test the robustness and transferability of the proposed framework.

Drawing on these analytical foundations and the gaps identified in the literature, the study advances three hypotheses to guide the empirical analysis:

- H1:* Tourism-driven economic growth (TEII) is positively correlated with the strengthening of international cooperation mechanisms (TICI).
- H2:* A negative trade-off exists between economic growth (TEII) and environmental sustainability (ESI), particularly in mass tourism destinations.
- H3:* The inclusion of contextual variables such as education levels, visitor density, and the percentage of local reinvestment significantly improves the explanatory power of models linking TEII and TICI.

The structure of this article is as follows: first, the theoretical framework is developed to provide a conceptual context for the tourism phenomenon; second, the adopted methodological approach is described; third, the results of the case studies are presented; subsequently, the main theoretical and practical implications are discussed; and finally, the conclusions and recommendations are outlined, aimed at informing both public policy formulation and future research directions.

## 2. Theoretical framework

Tourism, once defined simply as the temporary movement of individuals outside their usual environment (UNWTO, 2018b), has evolved into a multidimensional phenomenon that intertwines economic, social, cultural, and environmental processes (Cooper et al., 2008). In recent decades, this complexity has intensified with the diversification of specialized forms, such as ecotourism, cultural tourism, health tourism, and community-based tourism, as well as the rise of contemporary challenges such as overtourism and the collaborative economy (Hall & Gössling, 2016; Ruhanen et al., 2015; Higgins-Desbiolles, 2024; Mavrin, 2024). These developments have reshaped academic debates, shifting the focus from a narrow emphasis on mobility to broader concerns with governance, resilience, and long-term sustainability.

The post-pandemic acceleration of tourism has reignited long-standing tensions between growth and sustainability. Established destinations face renewed overtourism pressures, which in turn have stimulated interest in smart governance strategies and technological monitoring as tools for mitigating impacts (Fontanari & Traskevich, 2023; Shafiee, 2024). In this context, tourism planning requires transversal approaches that simultaneously account for ecological limits, social inclusion, and service innovation, while also coordinating with other productive sectors (Eskandarian et al., 2012).

The cultural dimension adds further complexity. Rather than being conceptualized as a simple transfer of knowledge and practices (Harrison, 1992; Richards, 2018), tourism is increasingly understood as a process of organizational learning and innovation, where destination management and community resilience are central. Yet, this process is not without risks: cultural standardization and the erosion of local identities remain persistent challenges in globalised destinations (Fainstein, 2007; Stronza et al., 2019). More recent contributions emphasise that tourism also shapes and is shaped by multidimensional images of destinations, affective, cognitive, and conative, which influence both perceptions and development strategies (Chaves et al., 2024).

From an economic perspective, tourism has long been considered a driver of growth, catalysing employment, fiscal revenues, and infrastructure development (Stabler, et al., 2010). Multiplier models demonstrate how tourism expenditure generates positive spillover effects across sectors (Tang & Tan, 2017; Hanafiah & Ali,

2024). However, critical perspectives underline that these benefits are neither automatic nor evenly distributed. Tourism can reinforce spatial and sectoral inequalities, and when unaccompanied by diversification and institutional strengthening, often produces structural dependency (Bramwell & Lane, 2011; Britton, 1982; Fletcher, 2011). Recent studies nuance this view, showing that tourism can alleviate multidimensional poverty when strategies are adapted to territorial and cultural specificities (Zhou et al., 2024; Klóska & Oleksiuk, 2024). Nevertheless, growing reliance on technological infrastructures and digital platforms raises new vulnerabilities around data sovereignty and local control (Krasnikova et al., 2023), reinforcing the need for community-based models that minimise leakage and strengthen local economies (Carvalho et al, 2024).

Debates on sustainability further illustrate the evolution of the field. While the paradigm of sustainable tourism sought to balance economic growth with conservation (Butler, 1999; Hall & Lew, 2009), its practical application has often been criticised for superficiality and weak contextualization (Weaver, 2006; Gössling et al., 2021). Building on this critique, regenerative tourism proposes not only to mitigate impacts but to actively reverse environmental degradation and revitalize vulnerable communities (Paddison & Hall, 2024). Current research emphasises that these strategies require smart solutions and adaptive resilience mechanisms (Fontanari & Traskevich, 2023; Santos-Rojo et al., 2023), including their integration within broader green economy frameworks such as health and wellness tourism (Anđelković et al., 2024).

Finally, the international dimension highlights tourism as a vehicle for soft power and cultural diplomacy (D'Amore, 1988; Jafari, 1989). While its symbolic role is well acknowledged, empirical efforts to measure its contribution to international cooperation remain underdeveloped and face several methodological challenges (Honey, 2008; Richards, 2018). Recent work calls for more robust indicators capable of capturing the social and political transformations induced by tourism exchanges (Pereira et al., 2025).

Taken together, these debates reveal the tourism phenomenon's heterogeneity and interconnectedness, while also exposing persistent gaps. Most notably, the systematic integration of economic, environmental, and international cooperation dimensions remains limited. Addressing these gaps requires pluralistic methodological approaches that combine qualitative and quantitative strategies, alongside tailored indicators. In this sense, the present study advances the field by proposing three original measures, the Tourism Economic Impact Index (TEII), the Tourism International Cooperation Index (TICI), and the Environmental Sustainability Index (ESI), designed to capture tourism's multidimensional nature across diverse governance contexts (Mendola & Volo, 2017).

### 3. Methodology

This study adopts a mixed-methods research design that combines qualitative and quantitative approaches to systematically analyse the effects of tourism on economic development, international cooperation, and environmental sustainability. This approach seeks to overcome the limitations inherent in purely descriptive frameworks by providing an analytical structure capable of capturing the complexity and multidimensionality of tourism.

The first phase of the research involved a systematic literature review, conducted in accordance with the PRISMA protocol guidelines (Moher et al., 2009). The application of this protocol in tourism research has been validated in recent studies, highlighting its usefulness for rigorously synthesising evidence (Eftimov et al., 2025; Atasoy, 2024). Databases such as Scopus, Web of Science, and Google Scholar were consulted, using keyword combinations including "tourism and regional development," "international cooperation through tourism," "sustainable tourism," "tourism diplomacy," "ecotourism," and "community-based tourism," in both English and Spanish. Inclusion criteria considered publications from 2003 to 2023, peer-reviewed articles, international organisation reports, and detailed case studies with explicit methodological rigour. The selection process involved four stages: duplicate removal, title and abstract screening, full-text review, and data extraction through a standardised template.

The second phase involved a qualitative analysis using structured thematic coding, following the principles of grounded theory (Charmaz, 2006). This methodology has been established as an effective means of identifying patterns in complex tourism contexts (Avolio et al., 2024). The coding process was conducted in three stages: open coding to identify emerging concepts, axial coding to establish relationships between categories, and selective coding to construct an integrated theoretical model. To ensure the reliability of the analysis, double coding was performed on 20 per cent of the sample, and inter-coder agreement coefficients were calculated.

Additionally, three ad hoc quantitative indicators were developed to differentiate the impact of tourism across economic, cooperative, and environmental dimensions, following the principles of composite indicator construction proposed in the tourism literature (Mendola & Volo, 2017; Manumpil et al., 2023). The indicators are:

The Tourism Economic Impact Index (TEII) estimates the net contribution of tourism to regional economic growth by integrating the relative weight of GDP, employment, and fiscal revenues derived from the tourism sector. Each component was normalised (0-1) and aggregated with equal weights:

$$TEII_i = \frac{\frac{GDP_{tourism,i}}{GDP_{total,i}} + \frac{Employment_{tourism,i}}{Employment_{total,i}} + \frac{Revenue_{tourism,i}}{Revenue_{total,i}}}{3} \quad (1)$$

The Tourism International Cooperation Index (TICI) measures the degree of linkage between tourism activity and international cooperation mechanisms, combining foreign direct investment (FDI), bilateral/multilateral tourism agreements, and international cooperation projects. All variables were normalized and weighted equally:

$$TICI_i = \frac{\frac{FDI_{tourism,i}}{FDI_{total,i}} + \frac{Agreements_i}{\max(Agreements)} + \frac{Projects_i}{\max(Projects)}}{3} \quad (2)$$

(FDI: Foreign Direct Investment related to the tourism sector)

The Environmental Sustainability Index (ESI) quantifies the ecological footprint of tourism by considering CO<sub>2</sub> emissions, water consumption, and waste generation per tourist. Each dimension was normalised through min–max scaling, and the index was calculated as follows:

$$ESI_i = 100 - \left( \alpha \cdot \frac{CO2_i}{\max(CO2)} + \beta \cdot \frac{Water_i}{\max(Water)} + \gamma \cdot \frac{Waste_i}{\max(Waste)} \right) \quad (3)$$

where  $\alpha + \beta + \gamma = 1$

In the present study, all coefficients were assigned equal weights ( $\alpha = \beta = \gamma = 1/3$ ) due to the absence of a consensus in the literature regarding the relative environmental importance of each component. This choice follows the recommendations of Mendola & Volo (2017). As acknowledged in Section 5.5, future research may refine these coefficients using data-driven approaches such as Principal Component Analysis (PCA) or Analytic Hierarchy Process (AHP).

The data for the construction of these indicators were obtained from official sources such as reports from the World Tourism Organization (UNWTO), the World Travel & Tourism Council (WTTC), multilateral banks, and international environmental agencies.

The empirical application of the indicators was carried out on five case studies selected for their diversity in tourism governance models and international cooperation strategies: Rwanda (regulated ecotourism), Bhutan (high-value, low-volume tourism), Bali (mass tourism with limited environmental regulation), Venice (heritage destination facing overtourism crisis), and Machu Picchu (World Heritage site with controlled capacity management).

Finally, the statistical analysis included the computation of descriptive statistics (means and standard deviations) for the indicators TEII, TICl, and ESI, followed by the calculation of Pearson's bivariate correlations to test hypotheses H1 and H2. For hypothesis H3, simple and multiple linear regression models were implemented, incorporating control variables such as educational level, visitor density, and the percentage of tourism income reinvested locally. Additionally, a Principal Component Analysis (PCA) was conducted to validate the proposed factorial structure, following recent methodological approaches applied in the field of sustainable tourism (Sharafuddin & Madhavan, 2020). This integrated methodological framework therefore provides a coherent and robust basis for capturing the multidimensional impacts of tourism and establishes the foundation for the comparative case study analysis presented in the next section.

## 4. Results

This section presents the comparative analysis results of the five selected case studies, Rwanda, Bhutan, Bali, Venice, and Machu Picchu, using the three developed indicators: the Tourism Economic Impact Index (TEII), the Tourism International Cooperation Index (TICl), and the Environmental Sustainability Index (ESI). For each case, the general context, the indicator values, the analysis of relevant correlations, and a critical reflection are provided.

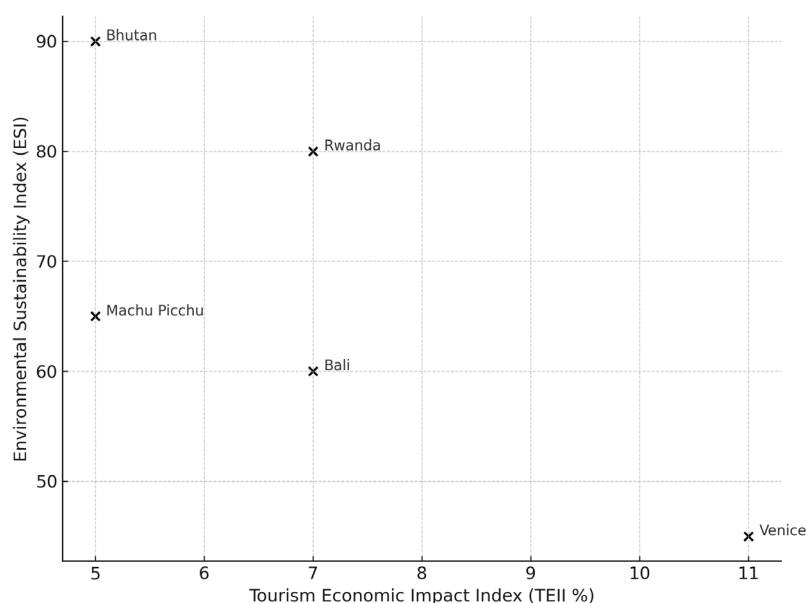
Below, Table 1 summarises the main results for each destination:

**Table 1**  
*Comparative values of the TEII, TICl, and ESI in five tourist destinations*

Destination	TEII (%)	TICl	ESI	r (TEII-TICl)	r (TEII-ESI)	Adjusted R <sup>2</sup> (H3)
Rwanda	7.2	0.66	82.3	0.81	0.54	0.72
Bhutan	5.4	0.52	91.2	0.63	-0.47	0.68
Bali	6.8	0.45	59.7	0.58	-0.71	0.64
Venice	11.4	0.53	42.5	0.67	-0.78	0.69
Machu Picchu	4.3	0.49	67.8	0.59	-0.53	0.65

Note. TEII = Tourism Economic Impact Index; TICl = Tourism International Cooperation Index; ESI = Environmental Sustainability Index. Source: Own elaboration.

**Figure 1**  
*Relationship between the TEII and the ESI in the analyzed destinations*



Source: Own elaboration.

Figure 1 presents a graphical representation of the relationship between the Tourism Economic Impact Index (TEII) and the Environmental Sustainability Index (ESI), reinforcing the trends observed in the quantitative analysis. Overall, destinations with higher economic performance, such as Venice and Bali, tend to exhibit lower levels of environmental sustainability, confirming a structural trade-off between economic growth and ecological preservation. Conversely, destinations such as Bhutan and Rwanda, which have implemented strict regulatory policies, maintain high sustainability levels despite relatively moderate economic impacts. The distribution of cases in the graph empirically supports the study's H2 and H3.

#### 4.1. Rwanda

Since the mid-2000s, Rwanda has implemented a high-intensity ecotourism model centred on gorilla tourism in Volcanoes National Park. The government's strategy includes differentiated pricing and a mandatory revenue reinvestment scheme for conservation and community development (Spenceley et al., 2017). In 2022, the recorded values were: TEII of 7.2 per cent, a TICI of 0.66, and an ESI of 82.3. A strong positive correlation between TEII and TICI ( $r = 0.81$ ;  $p < 0.01$ ) was observed, supporting hypothesis H1. Contrary to H2, a moderate positive correlation was found between TEII and ESI ( $r = 0.54$ ;  $p < 0.05$ ).

These results align with recent findings highlighting the positive contribution of well-regulated ecotourism to habitat conservation and the reduction of environmental pressures (Mossaz et al., 2015). Compared to destinations such as Bali or Venice, Rwanda demonstrates proactive management that mitigates negative externalities. The multiple regression model further supports H3 (adjusted  $R^2 = 0.72$ ;  $p < 0.01$ ).

#### 4.2. Bhutan

Since 1974, Bhutan has applied the "High Value, Low Impact" tourism policy, limiting the number of visitors through high minimum tariffs and prioritizing cultural and environmental sustainability (Dorji, 2001). For 2022, the indicators show a TEII of 5.4 per cent, a TICI of 0.52, and an ESI of 91.2. A moderate positive correlation between TEII and TICI ( $r = 0.63$ ;  $p < 0.05$ ) was detected, supporting H1. Regarding H2, a negative correlation between TEII and ESI ( $r = -0.47$ ;  $p < 0.05$ ) was identified.

Bhutan's strategy reinforces the conclusions of Cheung (2015), who emphasises that interdisciplinary ecotourism approaches can maximise conservation benefits without entirely sacrificing economic development. This case exemplifies a consciously managed trade-off, moderating economic impact to preserve socio-environmental integrity. The multiple regression model also supports H3 (adjusted  $R^2 = 0.68$ ;  $p < 0.01$ ).

#### 4.3. Bali

Since the 2000s, Bali has experienced massive tourism growth, driven by investments in hotel and leisure infrastructure but accompanied by significant adverse environmental impacts (Badan Pusat Statistik [BPS Indonesia], 2023). In 2022, the reported indicators were: a TEII of 6.8 per cent, a TICI of 0.45, and an ESI of 59.7. A moderate positive correlation between TEII and TICI ( $r = 0.58$ ;  $p < 0.05$ ) was identified, partially supporting H1. Simultaneously, a strong negative trade-off between TEII and ESI was confirmed ( $r = -0.71$ ;  $p < 0.01$ ).

The case of Bali exemplifies the negative effects of overtourism described by Scholte et al. (2023), who warn about the consequences of massive visitor concentration in destinations lacking adequate environmental management mechanisms. The multiple regression model supports H3 (adjusted  $R^2 = 0.64$ ;  $p < 0.01$ ).

#### 4.4. Venice

Venice, one of the main mass tourism destinations in Europe, has been facing severe problems of tourist overcrowding, heritage deterioration, and pressure on urban ecosystems for decades (Istituto Nazionale di

Statistica [ISTAT], 2025). In 2022, the recorded values indicated a TEII of 11.4 per cent, a TICI of 0.53, and an ESI of 42.5. A moderate positive correlation between TEII and TICI ( $r = 0.67$ ;  $p < 0.05$ ) was detected, validating H1, while the relationship between TEII and ESI was strongly negative ( $r = -0.78$ ;  $p < 0.01$ ).

Venice represents a paradigmatic example of the risks highlighted by Scholte et al., (2023), where the lack of effective containment measures has exacerbated the deterioration of social and ecological systems. The multiple regression model confirms H3 (adjusted  $R^2 = 0.69$ ;  $p < 0.01$ ).

## 4.5. Machu Picchu

Machu Picchu, the principal tourist destination in Peru, has implemented reservation systems and daily capacity limits to mitigate pressure on the heritage site (Instituto Nacional de Estadística e Informática [INEI], n.d.). In 2022, the recorded values were: a TEII of 4.3 per cent, a TICI of 0.49, and an ESI of 67.8. A moderate positive correlation between TEII and TICI ( $r = 0.59$ ;  $p < 0.05$ ) was found, supporting H1, along with a negative correlation between TEII and ESI ( $r = -0.53$ ;  $p < 0.05$ ).

The sustainability challenges observed in Machu Picchu are consistent with the warnings of Newsome and Hughes (2016), who emphasise that ecotourism, if not rigorously controlled, can compromise the long-term natural and cultural values of heritage sites. The multiple regression model supports H3 (adjusted  $R^2 = 0.65$ ;  $p < 0.01$ ).

## 4.6. Comparative trends

The comparative analysis reveals clear trends across the five case studies. First, destinations that implement strict regulations and reinvest in conservation (Rwanda, Bhutan) achieve better environmental performance (ESI) without sacrificing economic growth (TEII) or international cooperation (TICI). In contrast, destinations characterised by mass tourism and ineffective controls (Bali, Venice) exhibit severe environmental degradation and an inverse relationship between economic development and sustainability.

Finally, the case of Machu Picchu suggests that control interventions can partially mitigate the negative effects of tourism, although they cannot eliminate them. These results confirm the proposed hypotheses and highlight the importance of adaptive governance strategies to achieve a dynamic balance among growth, cooperation, and sustainability in tourism.

# 5. Discussion

This section critically analyses the results of the five case studies, contrasting them with the theoretical frameworks previously discussed. It explores the main theoretical and practical implications, acknowledges the study's methodological and scope limitations, and proposes future research directions to deepen understanding of tourism as a complex, dynamic, and interconnected phenomenon.

## 5.1. Synthesis of results and hypothesis verification

The analysis of the five case studies generally confirms the hypotheses formulated at the beginning of this work. Regarding H1, a positive and significant correlation between the Tourism Economic Impact Index (TEII) and the Tourism International Cooperation Index (TICI) is evident across all analyzed destinations. However, the strength of this association varies with the tourism governance models adopted. Destinations such as Rwanda and Bhutan, which implement revenue reinvestment strategies and community participation mechanisms, exhibit stronger correlations than mass tourism destinations such as Bali and Venice. This finding aligns with recent studies highlighting the role of inclusive governance as a catalyst for the benefits derived from international tourism (Santos-Rojo et al., 2023).

Concerning H2, the data confirm the existence of a negative trade-off between tourism-driven economic growth and environmental sustainability in contexts of tourism saturation. The cases of Bali and Venice illustrate how unregulated growth compromises local ecosystems. Nevertheless, the example of Rwanda demonstrates that strict environmental governance frameworks can disrupt this dynamic, consistent with the arguments presented by Fontanari and Traskevich (2023) in their studies on resilience.

Regarding H3, the multiple regression models corroborate that structural factors such as educational level, visitor density, and revenue reinvestment explain between 64 per cent and 72 per cent of the joint variability of TEII and TICI. Thus, it reinforces the idea that tourism and cooperation performance depend on a complex network of institutional variables that deserves deeper exploration.

## 5.2. Theoretical implications

This study offers several significant theoretical contributions. The combination of structured thematic coding with the development of ad hoc indicators (TEII, TICI, and ESI) represents a major methodological advancement, integrating qualitative and quantitative perspectives and overcoming the traditional dichotomy between narrative approaches and aggregate analyses.

Furthermore, the results demonstrate that tourism cannot be reduced to a mere economic variable; rather, its impact is mediated by the quality of local governance, mechanisms for redistributing benefits, and the international positioning of destinations. This complex approach aligns with Ruhanen et al. (2015), who emphasize the need for flexible theoretical models. Similarly, the confirmation of non-linear relationships between tourism and environmental sustainability underscores the need for dynamic frameworks that account for strategic trade-offs and community resilience.

## 5.3. Practical implications

From an applied perspective, the findings suggest several strategic lines of action for tourism policy makers. Designing differentiated fee structures that include mandatory community reinvestment mechanisms emerges as a key strategy, replicating the successful models of Rwanda and Bhutan. Likewise, the implementation of visitor carrying capacity limits and prior reservation systems appears as an effective strategy for protecting vulnerable heritage destinations such as Machu Picchu and Venice.

Promoting strategic international alliances also proves essential for mobilising financial and technical resources to support sustainable transition processes. Finally, the establishment of continuous environmental monitoring systems using indicators such as the ESI is presented as an essential tool to dynamically adjust policies, in line with recent proposals on smart tourism management (Shafiee, 2024).

## 5.4. Limitations of the study

This study is not without its limitations. The empirical analysis relied primarily on secondary data from international organizations and official statistics. While this approach ensures comparability and consistency across cases, it inevitably limits the capacity to reflect community-level perspectives and the lived experiences of local stakeholders. The absence of first-hand qualitative evidence, such as interviews, focus groups, or participatory observations, limits the depth with which the social and cultural dimensions of tourism development can be assessed. Furthermore, although the three proposed indicators (TEII, TICI, and ESI) offer an innovative and integrated framework, their construction involves a degree of simplification. The Environmental Sustainability Index (ESI) is sensitive to the choice of normalization and weighting criteria, which may affect its robustness. Finally, the comparative design, based on five emblematic case studies, highlights diverse governance models but does not fully capture the heterogeneity of tourism dynamics at regional or municipal levels.

## 5.5. Future research directions

Future research should address these limitations by combining methodological rigour with stronger integration of local voices. Field-based qualitative data, obtained through ethnographic methods, stakeholder interviews, or participatory approaches, would provide valuable insights into how tourism policies are perceived and experienced on the ground. Expanding the analysis to subnational contexts, such as regional or municipal scales, would also enhance the framework's contextual richness and its applicability for policymaking. At the methodological level, further refinement of the indicators is recommended. The ESI's weighting scheme, currently based on equal distribution, could be tested and optimised using data-driven approaches such as Principal Component Analysis (PCA) or expert-informed methods like the Analytic Hierarchy Process (AHP). Finally, broadening the empirical base to include a larger set of case studies would improve the generalisability of findings and allow for more nuanced testing of the proposed hypotheses. Taken together, these steps would help bridge the gap between global comparative analyses and place-based practices of sustainable tourism, thereby enhancing the framework's capacity to respond to the diverse realities of tourism destinations.

## 6. Conclusions

This study has developed an integrated methodological framework combining qualitative analysis through structured thematic coding and the construction of ad hoc quantitative indicators to systematically evaluate the differentiated impacts of tourism across economic, international cooperation, and environmental sustainability dimensions. Through the application of this methodological proposal to five contrasting case studies, it has been demonstrated that tourism, far from constituting a linear economic phenomenon, generates complex and contingent dynamics, profoundly mediated by institutional, social, and ecological factors.

The results obtained confirm that the relationship between tourism-driven economic growth and international cooperation can be synergistic, provided that inclusive governance frameworks and community reinvestment strategies are implemented. Moreover, the findings show that the trade-off between tourism expansion and environmental sustainability is not an inevitable phenomenon but can be mitigated through robust regulatory frameworks, strategic planning, and dynamic environmental monitoring mechanisms. These findings reinforce the need to abandon deterministic visions of tourism as an automatic engine of development, advocating instead for adaptive, resilient, and territorially sensitive approaches.

From a methodological perspective, the proposal of the Tourism Economic Impact Index (TEII), the Tourism International Cooperation Index (TICI), and the Environmental Sustainability Index (ESI) represents an original contribution to the integrated measurement of the various dimensions of the tourism phenomenon. However, their application also highlights the inherent limitations of aggregated analyses, emphasising the importance of incorporating qualitative dimensions that capture the perceptions, narratives, and aspirations of host communities for a more holistic understanding.

This study outlines several priority lines for future research. These include disaggregating indicators at municipal or community levels, developing longitudinal studies to capture dynamic changes over time, and applying the proposed analytical framework to emerging modalities such as regenerative tourism, health tourism, and international volunteer tourism. Additionally, integrating big data sources and artificial intelligence techniques into tourism monitoring emerges as a promising avenue to optimise the adaptive management of destinations in increasingly complex contexts.

Ultimately, tourism must be understood as a dynamic and multidimensional system that requires flexible analytical tools, hybrid methodologies, and sophisticated public policies capable of balancing its multiple

potentials and risks. Only through holistic, adaptive, and empirically grounded approaches will it be possible to maximise tourism's benefits for local communities and contribute to more equitable and sustainable international development.

In a global context characterised by growing economic, social, and environmental uncertainties, tourism holds both the opportunity and the responsibility to serve as a vector for positive transformation. Its future will ultimately depend on institutional innovation, the adaptive capacity of local communities, and the construction of international alliances capable of reconciling growth, cooperation, and sustainability.

Moreover, this study significantly contributes to advancing several Sustainable Development Goals (SDGs), particularly those related to environmental sustainability, international cooperation, and inclusive economic development, as detailed below.

## 7. Tourism, sustainability, and the 2030 Agenda

The connection between sustainable tourism and the Sustainable Development Goals (SDGs) of the 2030 Agenda has become a strategic priority for both academic research and public policy formulation (United Nations [UN], 2015; UNWTO, 2018a). Tourism, acting as a catalyst for economic growth, international cooperation, and environmental conservation, can play a cross-cutting role in achieving multiple SDGs (Hall et al. 2015).

The findings of this study show that well-planned and well-managed tourism can significantly contribute to the following goals:

- SDG 8 (Decent Work and Economic Growth): by strengthening local economic activity and creating decent employment opportunities, as demonstrated by the cases of Rwanda and Bhutan.
- SDG 12 (Responsible Consumption and Production): through the implementation of sustainable tourism policies that promote the efficient use of natural resources and reduce environmental impacts, as reflected in the ESI results for Rwanda and Machu Picchu.
- SDG 13 (Climate Action): by implementing strategies aimed at mitigating the tourism ecological footprint, reinforced in destinations that apply carrying capacity limits and active environmental management.
- SDG 17 (Partnerships for the Goals): through tourism-driven international cooperation (TICI), fostering bilateral agreements and sustainable development projects between countries and regions.

However, various studies warn that the mere expansion of tourism activity does not guarantee progress towards the SDGs, emphasizing the importance of adaptive governance mechanisms and critical performance evaluations (Scheyvens & Hughes, 2019; Novelli, 2020).

The TEII, TICI, and ESI indicators designed in this study offer concrete tools for monitoring and assessing the actual contribution of tourism to the achievement of the SDGs across different regional contexts, thereby strengthening the capacity for strategic planning based on empirical evidence.

The explicit incorporation of the SDGs as a reference framework in tourism planning not only enhances the social legitimacy of interventions but also strengthens the resilience of destinations in the face of future global challenges.

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### Declaration of Competing Interests

The authors declare that they have no known competing interests that could have appeared to influence the work reported in this paper.

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