

# Aligning Sport Tourism with SDGs: Governance of Traditional Horse Racing in Central Aceh

*By Yoki Afriandy Rangkuti*



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### Abstract

**Study purpose.** This study aims to evaluate the socio-economic impacts of a cultural-based sport tourism event, specifically the traditional horse racing festival in Central Aceh, and to identify governance issues affecting the sustainability of its impacts. The primary focus of the research lies in sport tourism development and sustainable growth, while physical education and learning are positioned as conceptual implications of the findings, particularly in strengthening sustainability literacy and local cultural awareness.

**Materials and methods.** A mixed-method design with data triangulation was employed, combining quantitative surveys of local residents and business actors with qualitative data collected through in-depth interviews and Focus Group Discussions (FGDs) to capture both statistical patterns and contextual community experiences. Quantitative data were analyzed using descriptive statistics and cross-tabulation, while qualitative data were examined through thematic narrative coding. The research instruments were developed based on Social Exchange Theory and the Input–Output model, and were tested for content validity using Aiken’s V and reliability using Cronbach’s alpha.

**Results.** The findings indicate significant short-term economic benefits: 68% of business actors reported increased income, and 57% of respondents noted the creation of temporary employment during the event. However, local inflationary pressure was observed, with essential commodity prices rising by approximately 10–15% during peak periods. From a socio-cultural perspective, 72% of respondents reported increased community pride, and more than 40% of

residents participated in organizational activities or performances during the event. Infrastructure improvements were acknowledged by 61% of respondents, although concerns regarding long-term sustainability remain. In terms of governance, only 38% of respondents felt that community voices were adequately represented in the planning process.

**Conclusions.** It can be concluded that the traditional horse racing event holds strong potential as a socio-economic catalyst in cultural-based sport tourism development. Nevertheless, strengthening inclusive governance, implementing post-event strategies, and ensuring equitable benefit distribution are essential to prevent impacts from being limited to the event period alone, while also providing meaningful implications for sustainability-oriented physical education and sport learning.

**Keyword:** Cultural Sport Tourism, Traditional Horse Racing, Socioeconomic Impacts, Community Participation, Tourism Governance, Sustainable Development

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## Introduction

Physical education that adopts the concept of sport tourism offers a fresh and engaging approach. This concept integrates sporting activities with tourism elements, thereby creating opportunities for students to experience enjoyable new activities while simultaneously gaining significant mental health benefits (Lu, 2021). Furthermore, sustainable development through sport should incorporate moral values not only within sporting activities themselves but also in everyday life, including within families and across broader society (Kalynychenko et al., 2021).

Rapid advancements in science and knowledge have increasingly influenced various domains of sport, including cultural-based sport tourism (sport-culture tourism), which has emerged as a rapidly growing sector demonstrating significant socio-economic impacts, particularly in rural and peripheral regions worldwide. This form of tourism, which combines sporting activities with cultural celebrations, plays an important role in promoting regional development and preserving local cultural heritage.

Sport tourism integrates athletic activities with tourism practices, offering unique opportunities for students to enjoy new experiences while obtaining substantial mental health benefits (Lu, 2021). The interaction between sporting events and tourism can generate considerable economic, social, and environmental benefits, while also supporting local community empowerment and cultural heritage preservation. One of the most prominent trends in sport-culture tourism is its increasing recognition as a tool for economic development. Events such as marathons or regional sports competitions have been shown to produce significant economic impacts. For instance, a study of the Istanbul Marathon revealed a substantial public return on investment, with a contribution of €0.53 to local economic activity for every euro spent by the government (Bangun, B., 2024). Such events often create employment opportunities, increase spending in the hospitality and retail sectors, and strengthen regional economic vitality (Pedauga et al., 2022; Teixeira et al., 2023).

These impacts are particularly important for rural areas, which generally face limited employment opportunities. In addition, active sport tourism is recognized as having significant potential to promote sustainable social development, especially in rural regions. Such settings also offer considerable potential to be utilized as supporting environments in the physical education learning process in schools. Within physical education curricula, outdoor education

materials include activities such as excursions or field trips, environmental exploration, camping, trekking, and mountain climbing (Kusuma et al., 2020).

The growing demand for outdoor sports such as kayaking and hiking in natural landscapes can serve as a strategy for socio-economic development (Morfoulaki et al., 2023). This trend not only attracts tourists but also encourages local community involvement in environmental and cultural preservation, thereby strengthening their unique heritage (González-garcía et al., 2022). The development of sports-themed towns in China provides an example of the integration of sport and tourism as a strategy for rural revitalization (Liu & Qi, 2024).

The relationship between sport tourism and community well-being is closely interconnected. Communities hosting sporting events often report improvements in quality of life and enhanced community pride associated with such activities. Public perceptions indicate a strong belief that sport tourism generates economic benefits and enhances the image of local tourism destinations (Fauzi et al., 2025). Moreover, participation in and attendance at local sporting events strengthen social cohesion and collective community identity, which are essential for cultural preservation (González-garcía et al., 2022; Monterrubio, 2020).

Furthermore, tourism as a medium for physical education possesses several key characteristics: it is practical in nature, fosters independence and initiative, and has strong educational value. Such activities develop skills including leadership, management, goal setting, as well as map-reading and route-finding abilities (Abukari & Mwalyosi, 2020; Sari et al., 2022).

Although these positive impacts are evident, the development and evaluation of sport-culture tourism in many rural or post-conflict regions such as Central Aceh often fall short of expectations. Despite government policies emphasizing tourism development as an instrument for regional recovery, the benefits of such initiatives are not always equitably distributed. The dominance of external actors, limited local governance capacity, and the lack of participatory mechanisms frequently hinder program sustainability and inclusiveness (Borovcanin et al., 2020; Kim et al., 2020).

Moreover, traditional festivals and cultural events used as tourist attractions are often exploited merely symbolically. Local communities may feel marginalized when their cultural expressions are commodified without authentic involvement, potentially leading to cultural erosion and social alienation (Rojo-Ramos et al., 2021). Without an inclusive framework, the socio-economic impacts of sport tourism tend to be temporary and are unable to achieve long-term development (Tomino & Perić, 2022).

Tourism development in post-conflict or post-disaster regions such as Aceh reflects distinctive socio-economic characteristics in supporting recovery and growth. Following the 2004 tsunami and social conflict, Aceh began leveraging its cultural richness and natural resources to rebuild its economy through tourism. Aceh possesses unique cultural and natural assets that support the development of sport tourism (Rangkuti et al., 2024), including traditional horse racing, white-water rafting tourism, and trail running events. This strategy involves integrating traditional culture into tourism products and organizing events as catalysts for local development (Widianingsih et al., 2023).

Many sport-tourism initiatives remain overly oriented toward short-term outcomes, such as event revenue or visitor statistics, without investing in long-term strategies that ensure sustained community benefits. Infrastructure improvements are often temporary and lack continuity. Evaluation systems also tend to focus primarily on economic outcomes, while social indicators such as community identity, cultural pride, and intergenerational knowledge transfer are frequently overlooked (Borek & Puciato, 2023).

To bridge this gap, several evaluation frameworks, such as the Input–Output (I–O) model and Social Exchange Theory (SET), have been recommended. The I–O model is capable of explaining the multiplier economic effects of tourism investment (Pedauga et al., 2022), while SET helps to understand community perceptions, trust, and social cohesion (Kim et al., 2020), as illustrated in Figure 1. These two approaches enable the formulation of more targeted policy interventions aligned with community needs. Local governments play a crucial role in promoting inclusive and sustainable tourism. In the context of Central Aceh, aligning tourism strategies with cultural preservation goals and grassroots participation can foster a resilient tourism ecosystem. Policies that integrate traditional cultural practices into tourism planning and strengthen community roles can enhance cultural integrity and generate long-term economic impacts (Fauzi et al., 2025).

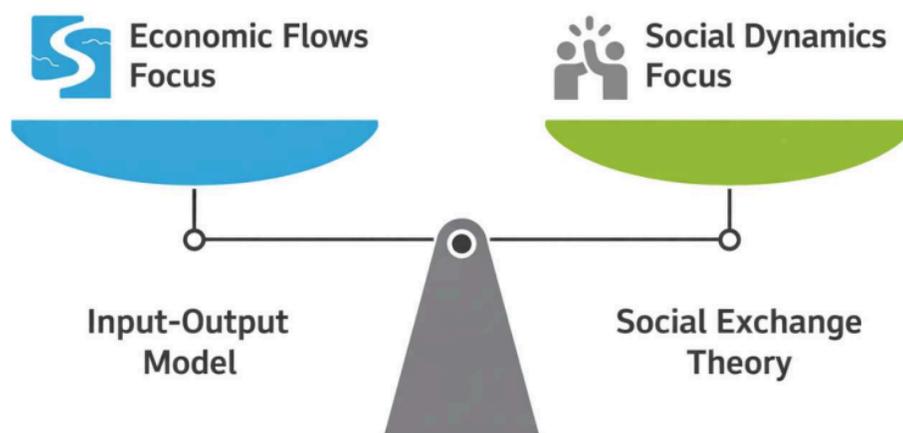


Figure 1. Theory Balancing Economic and Social Impact of Tourism

Developing an effective evaluation framework for sustainable tourism development remains a major challenge, particularly in rural or post-conflict areas. Key barriers include the complexity of socio-cultural indicators (González-garcía et al., 2022), the dominance of external actors limiting local participation (Verma et al., 2022), weak governance structures (Borek & Puciato, 2023), and methodological limitations in data collection (Dimitrovski et al., 2023). Furthermore, many large-scale sport-culture events fail to leave a sustainable socio-economic legacy due to short-term planning, limited community involvement, and unequal benefit distribution (Ranguti & Bangun, 2025). The lack of sustainable planning further exacerbates the limited long-term benefits for both communities and the environment (Morfoulaki et al., 2023). Therefore, to align tourism initiatives with the Sustainable Development Goals (SDGs), inclusive governance, strategic planning, and rigorous evaluation are required to ensure that tourism genuinely serves as a catalyst for equitable and sustainable local development.

This study offers a novel contribution by presenting an integrated evaluation of the impacts of the traditional horse racing event in Central Aceh as a form of sport-culture tourism through a sequential mixed-method design and triangulation approach, linking economic, socio-cultural, and governance indicators within a single analytical framework. Previous studies have largely been limited to partial measurements of economic outcomes or visitor satisfaction and have rarely examined issues of benefit distribution and community voice representation as determinants of event sustainability. By combining Social Exchange Theory (SET) and the Input–Output (I–O) model, this research expands understanding of how community perceptions of benefits and costs are formed, how economic effects are perceived

at the local level, and why governance weaknesses may render event benefits temporary. The findings are expected to enrich the literature on cultural-based sport tourism in rural contexts and support more inclusive policy recommendations.

This study aims to evaluate the socio-economic impacts of a cultural sport tourism event on the local community in Central Aceh, specifically the traditional horse racing event, by identifying both the benefits and limitations of existing practices. Through an examination of community perceptions, economic indicators, and governance mechanisms, the study seeks to contribute to the development of a more equitable and culturally respectful tourism framework. It also forms part of the broader academic discourse on sustainable tourism and rural revitalization, arguing that long-term development can only be achieved through inclusive, community-centered strategies that balance economic objectives with cultural authenticity and social cohesion.

## Materials and Methods

### Study participants

This study was conducted in Central Aceh Regency within the context of a cultural-based sport tourism event, namely traditional horse racing, involving local communities and tourism stakeholders. Participants were divided into two groups according to the research phases.

#### 1. Quantitative Phase (Survey):

Respondents consisted of community members and local economic actors who were affected by or involved in the event, including: (a) local residents; (b) tourism business operators (homestay/accommodation managers, transportation service providers, tour guides, etc.); and (c) traders/SMEs selling goods during the event. The inclusion criteria were: aged  $\geq 18$  years; residing or operating a business within the research area; and having direct experience related to the event (as affected/involved residents or as business actors/vendors). The exclusion criteria included respondents who did not complete the questionnaire or did not meet the event involvement criteria. A total of 20 survey respondents participated, and data were collected in August 2025 in Bintang District.

#### 2. Qualitative Phase (In-depth Interviews and Focus Group Discussions):

Informants were selected purposively to obtain in-depth information from key actors, including government officials responsible for tourism and economic affairs, cultural leaders, event organizers, and traditional/community leaders. In addition, Focus Group Discussions (FGDs) were conducted in strategically selected villages to capture diverse community perspectives and validate preliminary findings. A total of five informants participated in the in-depth interviews, while two FGDs were conducted, each consisting of six participants.

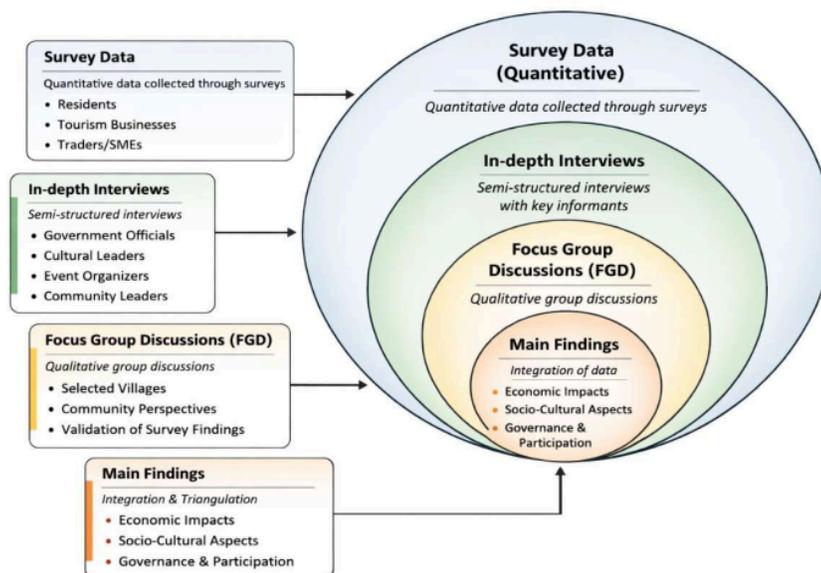
### Study organization

The study employed a mixed-method design using a sequential two-phase model to comprehensively evaluate the socio-economic impacts of a cultural-based sport tourism event. This approach was selected to enable quantitative–qualitative data triangulation, as illustrated in Figure 2, thereby strengthening the validity of the findings and providing a more contextualized understanding.

The questionnaire instrument was developed deductively based on Social Exchange Theory (SET) to measure the social and participation dimensions, and on the Input–Output (I–O) framework to assess the economic dimension. The instrument consisted of items measured using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree) to evaluate perceptions

of benefits, costs/risks, satisfaction, participation, local economic impacts, and aspects of event governance.

The survey was administered to respondent groups (local residents, tourism business operators, and traders/SMEs) in August 2025, during the implementation period of the traditional horse racing event. Data collection was conducted both offline (face-to-face) and online. Prior to participation, the researchers explained the purpose of the study and obtained informed consent from all respondents.



**Figure 2.** Data Triangulation in Research

Informants were selected through purposive sampling to identify key actors involved in the planning, implementation, and governance of the event. In-depth interviews were conducted using a semi-structured interview guide exploring perceived impacts, satisfaction/complaints, socio-cultural dynamics, economic benefit distribution, and governance quality. Focus Group Discussions (FGDs) were held in selected villages to capture collective perspectives and to test the consistency of survey findings through interactive discussions. Triangulation was applied whereby qualitative findings were used to explain and confirm quantitative patterns, as well as to identify narratives and contextual factors not captured through the survey instrument.

The sampling technique employed in the quantitative phase was stratified random sampling. The research population was divided into several strata based on the type of respondents' involvement in the cultural-based sport tourism event, namely: (1) local residents, (2) tourism business operators, and (3) traders/SMEs. The sample size within each stratum was determined proportionally according to the population distribution. Subsequently, respondents within each stratum were selected randomly using the available population lists, ensuring that each member of the population had an equal probability of being selected as a research participant.

In contrast, the qualitative phase applied purposive sampling to select key informants (government officials, cultural leaders, event organizers, and traditional/community leaders) as well as FGD participants. Content validity was evaluated by three experts (in tourism, development sociology, and research methodology) using Aiken's V to assess the clarity and relevance of the items. Items with an Aiken's V value below the threshold of 0.80 were revised

or excluded. Reliability testing was conducted using Cronbach's Alpha through a pilot test of the instrument involving 20 respondents with characteristics similar to those of the research sample. The instrument was considered reliable when the alpha value was  $\geq 0.70$ . All participants were informed about the study and provided informed consent prior to participation. Respondents' identities were kept confidential, and the data were used solely for academic purposes.

### **Statistical analysis**

Quantitative data were analyzed through several stages. First, data cleaning and coding were conducted, including checking the completeness of respondents' answers and coding the Likert scale from 1–5 (1 = strongly disagree to 5 = strongly agree). Given the relatively limited number of respondents, only complete and analyzable data were included in the analysis. Second, descriptive statistical analyses were performed, including frequencies, percentages, means, and standard deviations, to describe respondent characteristics and to illustrate community perception trends regarding the social and economic impacts of the traditional horse racing event in Central Aceh. Third, cross-tabulation analysis was applied to identify variations in perceived impacts across respondent groups based on demographic characteristics and type of involvement in the event. All quantitative analyses were conducted using SPSS software.

Qualitative data obtained through in-depth interviews with five key informants were analyzed using thematic analysis. The analytical process included data transcription, repeated reading to understand contextual meaning, initial coding, grouping codes into major themes, and interpreting the findings. The qualitative analysis was conducted manually, emphasizing thematic consistency and its relevance to the quantitative results. To enhance the credibility of the findings, source triangulation was performed by comparing survey and interview results, thereby providing a more comprehensive understanding of the socio-economic impacts of the traditional horse racing event on the local community in Central Aceh. The study was conducted in August 2025.

## **Results**

### **1. Aiken's V Index**

To ensure the content validity of the research instrument used to evaluate the socio-economic impacts of the cultural-based sport tourism event, a validation test was conducted by three experts with competencies in tourism, development sociology, and research methodology. Content validity was assessed using Aiken's V index across 14 statement items to evaluate the relevance and clarity of each instrument item in representing the measured constructs [Table 1](#).

The analysis results indicate that 13 out of 14 statement items obtained Aiken's V values  $\geq 0.83$ , with most items reaching the maximum value of 1.00. These values reflect a very high level of agreement among the experts and demonstrate that the majority of the instrument items possess strong conceptual and contextual relevance. The items with the highest validity scores were primarily related to community pride, social cohesion and solidarity, appreciation of local culture, equitable distribution of economic benefits, and community participation in [Table 1](#).

**Table 1.** Indeks Aiken (Aiken's V)

No.	Statement	Expert 1	Expert 2	Expert 3	Aiken's V	Validation
1	My income increased following the cultural-based sport tourism event.	5	5	4	0.92	Valid

2	I or a member of my family obtained new employment during the event.	4	4	5	0.83	Valid
3	I started or expanded a business as a result of the event.	5	5	4	0.92	Valid
4	Tourists spent a substantial amount of money in local businesses during the event.	4	5	5	0.92	Valid
5	I feel proud that my community hosted this event.	5	5	5	1.00	Valid
6	The event increased a sense of togetherness and solidarity among residents.	5	5	5	1.00	Valid
7	The event positively affected my daily quality of life.	5	4	5	0.92	Valid
8	The event strengthened relationships among community groups.	5	5	5	1.00	Valid
9	The event enhanced my appreciation of local culture.	5	5	5	1.00	Valid
10	I or my family were involved in cultural activities during the event.	4	4	4	0.75	Not Valid
11	Road access and transportation improved as a result of the event.	5	4	5	0.92	Valid
12	Public facilities such as toilets and public spaces were improved during the event.	5	5	5	1.00	Valid
13	Residents were actively involved in the planning and implementation of the event.	5	5	5	1.00	Valid
14	The economic benefits of the event were distributed equitably among the community.	5	5	5	1.00	Valid

Source: self-developed by the author.

Conversely, one statement item obtained an Aiken's V value of 0.75 and was therefore deemed invalid, namely the item related to family involvement in cultural activities during the event. This finding indicates that the item was perceived by the experts as not consistently representing the intended construct. Accordingly, the item was recommended for revision or elimination from the research instrument. Overall, the results of the Aiken's V analysis confirm that the instrument demonstrates strong content validity and is appropriate for field data collection.

## 2. Cronbach's Alpha Value

Reliability testing of the instrument was conducted to assess the internal consistency of the statement items used in the study. The analysis results indicate that all constructs achieved Cronbach's alpha values  $\geq 0.70$ , reflecting a good and acceptable level of reliability. These

Cronbach's alpha values demonstrate that the items within each construct consistently measure the same underlying concept. This finding aligns with (Mathew & Soliman, 2021; Yoon, 2002), who states that an alpha value above 0.70 indicates adequate reliability in social research instruments. It is also consistent with (Flegr et al., 2023), who emphasize that  $\alpha \geq 0.70$  represents the minimum acceptable threshold for internal consistency, particularly in survey-based research within the social and educational fields. Therefore, the research instrument is considered reliable and suitable for further data analysis.

### Research Findings

Figure 3 presents the percentage distribution of respondents' perceptions across five dimensions of impact from the cultural-based sport tourism event, namely community pride, cultural understanding, infrastructure improvement, pride in being a host, and representation of community aspirations. The data were obtained from a community survey conducted in August 2025 (n = 20). The findings illustrate how the traditional horse racing event in Central Aceh contributes to community dynamics and the local economy based on five key indicators derived from the survey data. Based on the survey results presented in Figure 3, there is variation in the level of community perceptions regarding the impacts of the traditional horse racing event in Central Aceh across the five main dimensions.

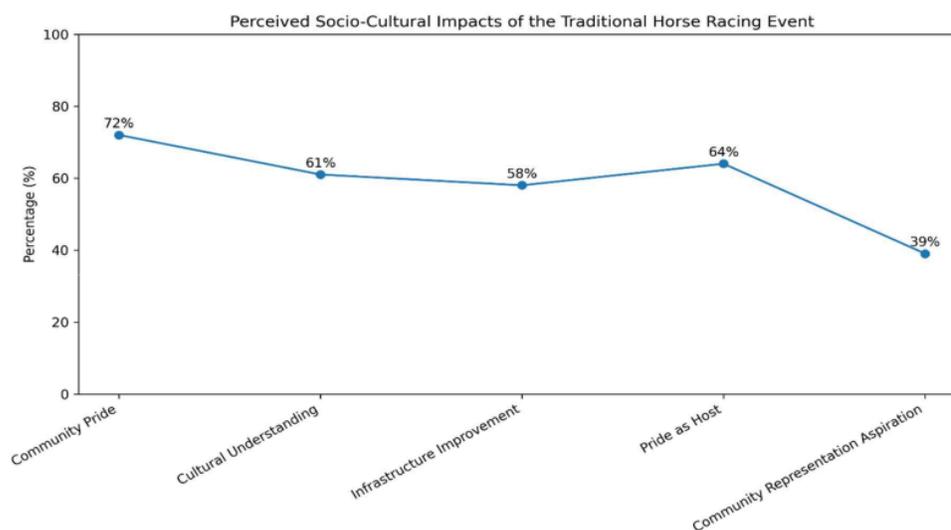


Figure 3. Impact of Events on Local Communities and Economies

#### a. Economic Impacts

The analysis<sup>5</sup> indicates that the sport tourism event generated significant economic benefits, particularly for micro, small, and medium enterprises (MSMEs). A total of 68% of respondents reported increased income during the event period. This finding supports previous studies emphasizing that tourist expenditures constitute a primary source of economic benefits in the tourism sector (Kersulić et al., 2020; Lintumäki et al., 2020). In Central Aceh, tourist spending was mainly allocated to accommodation, local culinary businesses, and transportation services, thereby directly increasing the income of local traders and service providers. In addition, employment indicators showed improvement, with 57% of respondents reporting the creation of temporary job opportunities, particularly in security services, catering, event coordination, and retail sectors.

These findings are consistent with (Parlato et al., 2022; Zulfikar et al., 2024), who highlight the role of tourism events in promoting job creation in rural areas. Although most positions were part-time or short-term contractual in nature, interviews with stakeholders indicated that such employment opportunities provided important supplementary income, especially during the post-harvest period when agricultural activities decline.

b. Impact of Tourist Influx on Local Economic Dynamics

The integration of survey findings and qualitative narratives reveals a multiplier effect resulting from the event's implementation. Respondents identified various secondary benefits, including increased sales for local suppliers, rising demand for cultural performances, and the emergence of new businesses such as homestays and souvenir kiosks. These findings reinforce previous studies by (Lintumäki et al., 2020) and (Pedauga et al., 2022), which emphasize the positive spillover effects of tourism on local economies. However, this study also identified indications of short-term inflationary pressure, with essential commodity prices increasing by approximately 10–15% during the peak of the event. This impact was most strongly felt by low-income households, highlighting the need for mitigation policies as suggested (Borek & Puciato, 2023) in studies of intensive tourism regions.

c. Social Cohesion and Strengthening of Cultural Identity

The traditional horse racing event and local cultural festival were found to have a strong positive impact on social cohesion and the strengthening of cultural identity. A total of 72% of respondents stated that the event increased their sense of community pride and strengthened relationships among different social groups. Qualitative data indicate that the event functioned as a space for cultural exchange, reinforcing traditional values and enhancing mutual understanding among diverse community members. These findings are consistent with (González-garcía et al., 2022) and (Tomino & Perić, 2022), who argue that tourism can serve as an instrument for social integration and the reinforcement of collective identity.

Furthermore, volunteerism emerged as an important indicator of social engagement with more than 40% of respondents reporting involvement in organizational activities or performances during the event. This participation contributed to the enhancement of social capital and local capacity, particularly in event management, public communication, and logistics.

d. Infrastructure Development and Area Revitalization

The findings indicate that the tourism event stimulated improvements in local infrastructure. Field observations and interviews revealed renovations of public facilities, including village road improvements, the provision of temporary sanitation units, and enhancements to event venues. A total of 61% of respondents acknowledged infrastructure improvements as a direct impact of the event.

These findings align with studies by (Kim et al., 2020) and (Soofi et al., 2021), which emphasize that tourism events can act as catalysts for medium- to long-term infrastructure development. Nevertheless, several informants highlighted the importance of sustainability, particularly through the development of permanent and environmentally friendly facilities, such as solar-powered lighting and water conservation systems, as recommended (Widianingsih et al., 2023).

e. Stakeholder Perceptions and Governance

Community perceptions of event governance revealed mixed results. Although economic benefits were widely appreciated, only 38% of respondents felt that local community aspirations were represented in the event planning process. This finding underscores the importance of inclusivity and transparency in tourism governance, as emphasized by (Rasoolimanesh et al., 2023). Qualitative data indicate that participants directly involved in decision-making processes tended to report higher levels of satisfaction and perceived benefits, supporting the findings of (González-garcía et al., 2022). Moreover, the authentic representation of local culture was perceived as a key indicator of event success and a driving factor for community participation.

### 3. Synthesis of Mixed-Method Findings

Triangulation between quantitative and qualitative data demonstrates convergence of findings across all major domains, particularly in terms of increased economic benefits, strengthened cultural identity, and enhanced community social engagement. Nevertheless, the study also reveals that these benefits remain short-term in nature and are largely concentrated during the event period. Issues of benefit distribution, governance inclusivity, and long-term sustainability emerge as key challenges in the development of sport tourism in Central Aceh. Therefore, more strategic planning and inclusive policy approaches are required to ensure that the positive impacts of the event are sustainably integrated into local community development.

### 3 Discussion

The findings of this study reinforce the potential of cultural-based sport tourism (sport-culture tourism) events as catalysts for socio-economic development in rural and post-conflict regions such as Central Aceh. Increased income, infrastructure improvements, and the strengthening of cultural pride reflect the positive impacts that such initiatives can generate. However, the results also reveal important limitations related to inclusivity, sustainability, and equitable benefit distribution, indicating the need for a more strategic and community-centered tourism planning approach. The increase in local business income and job creation aligns with global trends showing that sport tourism generates temporary economic surges in rural areas (Pedauga et al., 2022; Teixeira et al., 2023). Similar to the Istanbul Marathon and other regional festivals, such events produce significant multiplier effects on local economies

However, in Central Aceh, the temporary nature of these benefits raises concerns regarding long-term sustainability. Without post-event economic planning and adequate reinvestment mechanisms, the potential of the event to stimulate sustained growth becomes limited. From a social perspective, the increase in community pride and intergroup cooperation reflects similar findings from other rural tourism destinations (González-garcía et al., 2022). The sense of togetherness fostered during the event contributes to strengthening social cohesion and local cultural identity. Nevertheless, this study indicates that such social benefits tend to diminish after the event concludes, suggesting the absence of strategies to sustainably leverage this social capital for community development.

In the era of the industrial revolution, physical education plays an important role, particularly in integrating its core values within contemporary transformations and in addressing the evolving demands of sport tourism (Syafuddin & Asri, 2022). Moreover, education aims to enhance the effectiveness of sport promotion, encourage community participation in sporting activities, and strengthen the role of sport in supporting comprehensive regional development, as evidenced in the case of Jember Regency (Hardovi et al., 2024).

Improvements in infrastructure, such as roads and public sanitation facilities, demonstrate that tourism events can function as catalysts for physical development. This finding aligns with various international studies indicating that event-based funding stimulates

infrastructure modernization (Lintumäki et al., 2020). However, the uneven distribution of infrastructure improvements among villages in Central Aceh reflects systemic challenges in governance and planning. More remote areas often remain underserved, potentially widening spatial inequalities among communities.

Stakeholder perception data reveal a significant gap between institutional frameworks and local community aspirations. Although residents express pride in hosting the event, there is a sense of marginalization in the planning processes and benefit distribution. This gap is consistent with the sport tourism governance literature, which highlights the dominance of external actors and the marginalization of local voices (Kim et al., 2020; Rojo-Ramos et al., 2021). Without structured community involvement, tourism risks becoming a top-down approach that alienates rather than empowers local populations. Furthermore, through physical education, children have the opportunity to learn proper sporting techniques, improve posture, maintain physical health and fitness, and develop self-confidence as well as social skills through engagement in sport tourism activities (Candra et al., 2023).

The theoretical frameworks employed in this study, namely the Input–Output (I–O) model and Social Exchange Theory (SET), proved effective in understanding these dynamics. The I–O model helps map the extent to which economic impacts spread across various sectors, yet it has limitations in capturing social and cultural dimensions. In contrast, SET provides deeper insight into the interaction between perceived benefits and the community’s willingness to support tourism initiatives. The combination of these two models suggests that future evaluations should adopt an integrative approach encompassing economic, social, and cultural indicators simultaneously.

The limited long-term impact of sport-culture events in Central Aceh can be associated with weak local governance capacity and excessive reliance on external actors. The literature indicates that such imbalances often result in symbolic community involvement and superficial cultural integration (Borovcanin et al., 2020; Widianingsih et al., 2023). These findings underscore the importance of participatory governance models that position local communities as co-creators rather than merely passive beneficiaries.

The policy implications of this study are clear: to maximize the socio-economic benefits of cultural-based sport tourism, planners must integrate such events into long-term development strategies that emphasize sustainability and equity. This includes strengthening local government capacity, developing community-based tourism enterprises, and establishing institutional mechanisms for sustained dialogue with local stakeholders. Furthermore, tourism programs should treat cultural preservation not merely as a spectacle for visitors, but as a community asset that deserves protection and empowerment.

These recommendations align with the Sustainable Development Goals (SDGs), particularly SDG 8: Decent Work and Economic Growth; SDG 11: Sustainable Cities and Communities; and SDG 17: Partnerships for the Goals. By promoting inclusive economic participation through tourism, enhancing sustainable infrastructure, and encouraging collaborative governance, cultural sport tourism initiatives can serve as a platform for achieving the SDGs at the local level and transforming their benefits into tangible and equitable development for post-conflict communities such as Central Aceh.

## **Conclusions**

This study demonstrates that cultural-based sport tourism events possess significant potential as instruments of socio-economic transformation, particularly in rural and post-conflict regions such as Central Aceh. Evidence obtained through both quantitative and qualitative methods confirms that such events can generate economic benefits, strengthen social cohesion, and enhance cultural pride among local communities.

However, these benefits are often temporary and unevenly distributed, largely due to limited local governance capacity and the dominance of external actors in the planning and implementation processes. Without sustainable and inclusive planning, as well as targeted reinvestment strategies, the positive impacts of these events tend to diminish over time. Therefore, an integrated approach is required one that positions cultural-based sport tourism as part of a broader regional development strategy aligned with the Sustainable Development Goals (SDGs). Empowering local communities as primary stakeholders and co-creators, rather than merely passive participants, is essential to ensuring long-term sustainability and equitable impact distribution.

These findings underscore the urgency of implementing participatory governance models, culturally grounded planning approaches, and institutional support mechanisms capable of ensuring sustainability and inclusivity in rural tourism development.

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#### 4 Conflict of interest

The authors have no conflict of interest to declare

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