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ENVIRONMENTAL IMPACTS OF SPORTS TOURISM: A CASE STUDY OF OVERCROWDING, POLLUTION AND WASTE MANAGEMENT DURING 2023 AFCON

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Abstract
This paper investigated the environmental impacts of sports tourism: A case study of overcrowding, pollution and waste management during 2023 AFCON. The research design adopted for this study is descriptive and survey-based, which enabled the systematic collection of primary data through the administration of a structured questionnaire. The study focused on a sample of 150 respondents, selected from various communities within the Local Government Area. Descriptive analysis was employed to analysis the data. Result from the study revealed that There will be percentage increase in tourist influx during the hosting of AFCON competitions. The percentage increase in tourist influx will lead environmental pollution during the hosting of AFCON competitions. Increased waste generation and poor waste management will be the major sources of environmental pollution during the hosting of AFCON competitions. High-level traffic congestion and air pollution from vehicular emissions will be the major sources of environmental pollution during the hosting of AFCON competitions. Overcrowding of tourist destinations and natural reserve will be the major sources of environmental pollution during the hosting of AFCON competitions.

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INTRODUCTION

Sports tourism has become a formidable force within the global tourism industry, attracting millions of spectators and participants annually, and contributing significantly to the economies of host nations (Tichaawa & Swart, 2010; Weed & Bull, 2009). Defined as travel for the purpose of engaging in or experiencing sporting activities or events, sports tourism combines leisure with competition, offering both economic promise and a platform for cultural exchange. However, while the economic and social benefits of sports tourism are widely celebrated, less attention has been given to its environmental consequences, particularly in the context of large-scale sporting events held in developing nations (Higham, 1999; Collins et al., 2009).

The 2023 Africa Cup of Nations (AFCON), hosted in Côte d'Ivoire, presents a critical case study in understanding the environmental implications of mega sports events in Africa. With a significant influx of visitors—including athletes, officials, fans, media, and vendors—the host cities experienced notable challenges related to overcrowding, pollution, and waste management. These issues not only strained local infrastructure and services but also exposed gaps in sustainable urban and environmental planning (Bob & Swart, 2010; Nyikana & Tichaawa, 2018). The scale and intensity of AFCON 2023 underscored the environmental costs associated with the rapid, concentrated growth in population density during such events.

One of the most visible consequences was overcrowding, which manifested in congested transportation systems, overbooked accommodations, and overwhelmed public spaces. Urban centers such as Abidjan and Bouaké faced significant stress on their transportation networks and utilities, leading to increased energy consumption, traffic-related emissions, and compromised air quality (Collins et al., 2009). Public parks, streets, and beaches were overrun by tourists, many of whom engaged in unsustainable behaviors due to the lack of adequate waste disposal and sanitation facilities (Diedrich & Garcia-Buades, 2009). Overcrowding in host destinations often leads to long-term environmental degradation, particularly when infrastructure is not scaled for such surges (Getz, 2008).

Closely linked to overcrowding was the rise in pollution, especially air, water, and noise pollution. Increased vehicular traffic, particularly from private transport and inter-city shuttle systems used by fans and event officials, contributed significantly to greenhouse gas emissions. Temporary structures and fan zones required high levels of electricity, much of it generated using fossil fuels. In coastal areas, such as those near Abidjan, water pollution worsened due to improper disposal of waste, sewage overflow, and marine litter resulting from boat parties and informal gatherings (Yao & Schwarz, 2018). Noise pollution also escalated, with concerts, match celebrations, and fan rallies continuing late into the night, affecting both residents and wildlife (Mallen & Adams, 2017).

A particularly pressing environmental challenge during AFCON 2023 was waste management. The surge in visitors generated vast amounts of solid waste, including food wrappers, plastic bottles, disposable vuvuzelas, and single-use promotional materials. The existing municipal waste management systems were largely unprepared for the increase, leading to overflowing bins, open dumping, and

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limited recycling (Adeola & Adesina, 2020). Inadequate waste segregation further complicated the situation, resulting in significant volumes of potentially recyclable materials being sent to landfills. In line with previous studies, such as those by Bob and Swart (2010) and Tichaawa (2017), the waste generated by mega-events in developing countries often becomes a post-event burden, with lasting implications for urban sanitation and public health.

This case study thus highlights the environmental costs that accompany the economic and social gains of hosting continental sporting events. The 2023 AFCON not only exemplifies the complexities involved in managing sports tourism in a developing African context but also calls attention to the need for sustainable planning frameworks. Existing literature has emphasized the importance of integrating environmental sustainability into sports event management through eco-friendly transport solutions, renewable energy use, efficient waste systems, and robust public awareness campaigns (Hall, 2006; Mallen & Adams, 2017; Jones, 2013). The objective of this study is to critically examine the environmental impacts of sports tourism during AFCON 2023, focusing on the interrelated issues of overcrowding, pollution, and waste management. By adopting a qualitative case study approach, this research seeks to identify key environmental challenges faced by host cities and evaluate the effectiveness of the strategies implemented to mitigate them. In doing so, it aims to contribute to the growing body of knowledge on sustainable sports event management in the Global South and offer practical recommendations for future host nations, particularly in sub-Saharan Africa. Ultimately, this research is timely and relevant, given the increasing interest among African countries in hosting international sporting events. It underscores the need to balance the short-term excitement and economic windfall of mega-events with long-term environmental stewardship. A sustainable approach to sports tourism is essential not only to protect local ecosystems and communities but also to preserve the integrity of sports as a tool for development and social cohesion.

MATERIALS AND METHODS

This study was conducted in Ado-Ekiti, the capital city of Ekiti State, located in the southwestern region of Nigeria. As one of the most developed urban centers in the state, Ado-Ekiti holds both historical and contemporary significance. Formerly the seat of the pre-colonial Ekiti Kingdom, the city is renowned for its rich cultural heritage and is predominantly inhabited by the Yoruba ethnic group. With an estimated population exceeding 500,000 residents, Ado-Ekiti ranks among the more populous cities in Nigeria.

Ado-Ekiti is characterized by a vibrant sports culture, particularly in relation to football. The city is home to numerous sports facilities and organized fan clubs that actively participate in and support both urban and rural-level sporting events and tournaments. This dynamic engagement with sports makes Ado-Ekiti a relevant setting for a study on sports tourism awareness.

The research design adopted for this study is descriptive and survey-based, which enabled the systematic collection of primary data through the administration of a structured questionnaire. This approach was chosen to effectively captures the perceptions of the participants regarding environmental impacts of sports tourism: A case study of overcrowding, pollution and waste

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management during 2023 AFCON. The research was carried out across multiple communities within the Ado-Ekiti Local Government Area of Ekiti State. Due to practical and logistical constraints, it was not feasible to study the entire population. Therefore, the study focused on a sample of 150 respondents, selected from various communities within the Local Government Area.

Given the nature of the research objectives and the variables involved, both qualitative and quantitative methods of data collection and analysis were employed. This mixed-methods approach allowed for a more comprehensive understanding of the phenomenon under investigation, facilitating triangulation and ensuring the robustness of findings.

Although the study is localized within Ado-Ekiti, the findings may offer insights that are applicable to broader contexts, particularly other urban centers in Nigeria with similar socio-cultural and sports engagement dynamics.

Cochran's equation of finite population was used to determine the sample of the study. The formula is stated below:

$N_0 = \frac{Z^2pq}{e^2N}$

$N_0 = \frac{SS}{1+\frac{(SS-1)}{Pop}}$

Where

SS = Sample size

Pop = Population

n = sample size

Z = Z value of confidence level.

P = Estimated proportion of an attribute present in the population

q = 1-p

e = Desired level of precision expressed in decimal.

N= Population size.

Using a 90% confidence interval; Z = 1.645

e = ± 10% = 0.1

p = 0.5 (maximum variable)

q = 1- 0.5 = 0.5

N = 0.5

$N_0 = \frac{(2.53)^2(0.5)(0.5)}{(0.10)^2}$ **= 160**

$N_0 = \frac{160}{1+\frac{(160-1)}{4300}} = 153.85$ **Ω 150**

The sampling procedure employed in this study involved the random selection of residential divisions within the Ado-Ekiti Local Government Area. A simple random sampling technique was adopted to ensure that each unit of the population had an equal chance of being selected, thereby enhancing the representativeness of the sample.

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Primary data served as the main source of information for this study. This data was collected using a structured questionnaire, which was administered to residents across various communities within the study area. The questionnaire served as the principal research instrument and was designed to elicit responses relevant to the research objectives.

The questionnaire consisted of both close-ended and open-ended questions. The close-ended questions formed the structured core of the instrument and were primarily used to facilitate quantitative analysis. The open-ended questions, on the other hand, were incorporated to capture more nuanced responses and to provide a more holistic understanding of the participants' perspectives.

The items in the questionnaire addressed key issues related to the environmental impacts of sports tourism: A case study of overcrowding, pollution and waste management during 2023 AFCON. Respondents were asked to reflect on the positive and negative implications of sports tourism on the average Nigerian. The questionnaire utilized a five-point Likert scale ranging from Strongly Agree (SA) to Strongly Disagree (SD), allowing respondents to express the degree of their agreement with each statement.

For the purpose of data analysis, the study employed the Spearman's Rank Correlation Coefficient. This statistical technique was selected due to the quantitative nature of the data collected, which comprised ordinal variables that could be ranked. Spearman's correlation is particularly appropriate when assessing the strength and direction of association between two ranked variables.

This method was deemed suitable as the study fulfilled the required conditions for its application, including: an adequate sample size (minimum of 10 observations), independent observations, data presented in frequency form, and use of the entire dataset without omissions. The technique also allows for the testing of hypotheses by comparing observed values against expected values under the assumption that the null hypothesis is true.

Moreover, degrees of freedom, determined by sample size, were considered in interpreting the significance of the correlation coefficients. The use of this technique enabled the researcher to examine the strength of association between variables and provided insights into the overall distribution of responses in relation to the research hypotheses.

Due to the nature and number of the variables involved in this study, quantitative data analysis was used to process the data. For the quantitative analysis Statistical Package for Social Sciences (SPSS version 17) was used to process the data. For the lower version of analysis for the perception of respondent's percentages were used to analyse the data. This means that the analysis was done on the content of the data which were collected.

RESULTS

Figure 1 illustrates the response rate recorded during the data collection phase of this study. Out of a total of 150 questionnaires distributed across the selected study locations, 143 questionnaires were successfully retrieved, representing a response rate of 95.33%, while 7 questionnaires (4.67%) were not returned.

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This high response rate was facilitated by the method of administration. The researcher personally distributed the questionnaires and waited while participants completed them, enabling immediate collection. This approach minimized loss and ensured that the intended sample size was maintained, thereby preserving the representativeness of the target population and enhancing the validity and reliability of the study's findings.

All retrieved questionnaires were subsequently organized, coded, and entered into the Statistical Package for Social Sciences (SPSS) for systematic analysis. The data were then interpretively analyzed to derive meaningful insights in line with the study's objectives.

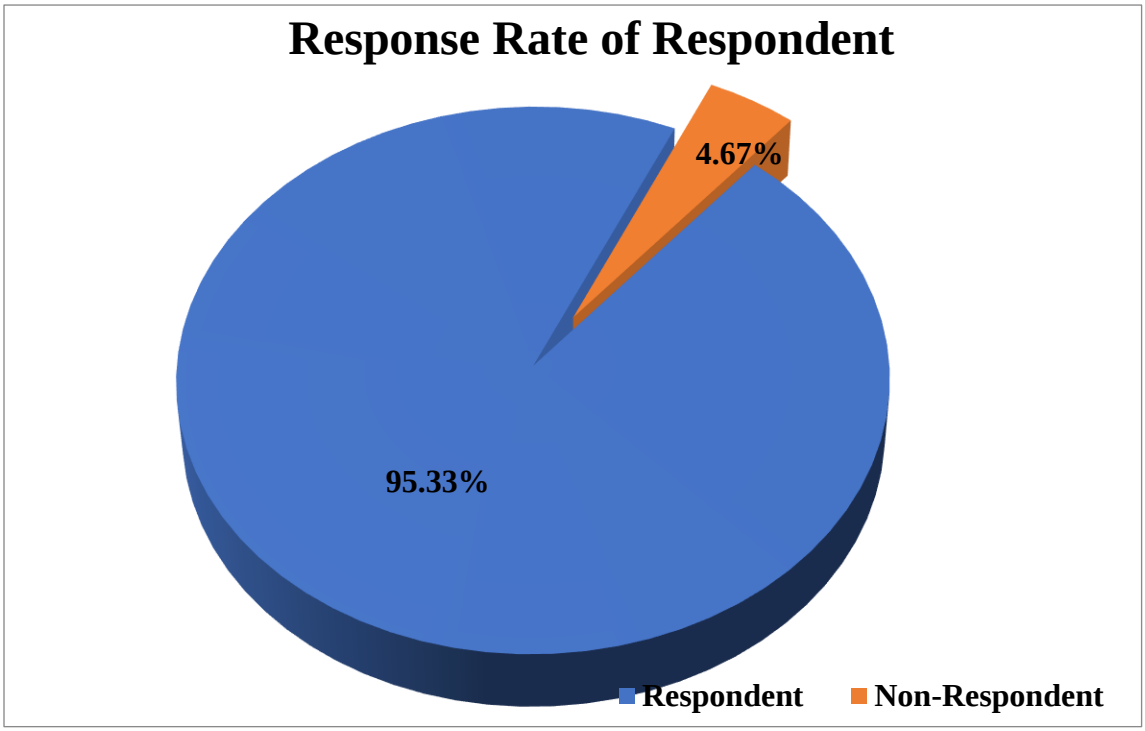

Figure 1. Response rate of respondent during the course of the study

Source: Fieldwork, (2025)

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Personal Details of Respondents

Table 1. Personal details of respondent during the course of this study

Variables	Categories	Frequency	Percentage (%)
Sex	Male	91	63.64
	Female	52	36.36
	Total	**143**	**100%**
Age bracket	18-30 years	38	26.57
	31-50 years	65	45.46
	51 and above	40	27.97
	Total	**143**	**100%**
Educational attainment	SSCE	30	20.98
	NCE/OND	37	25.87
	B.Sc/B.Ed	51	35.66
	Ph.D	5	3.50
	No formal	20	13.99
	Total	**143**	**100%**
Nationality	Nigerian	137	95.80%
	Foreigner	6	4.20%
	Total	**143**	**100%**
Marital Status	Single	56	39.16
	Married	67	46.85
	Divorced	20	13.99
	Total	**143**	**100%**
	Total	**143**	**100%**

Source: Fieldwork, (2025)

Demographic Profile of Respondents

The presentation and analysis of the demographic characteristics of respondents are summarized in Table 1. The study sought to determine the gender distribution of participants. As indicated, 63.64% (n = 91) of the respondents were male, while 36.36% (n = 52) were female. Regarding age distribution, 26.57% (n = 38) of respondents fell within the 18–30-year age bracket, 45.46% (n = 65) were aged between 31 and 50 years, and 27.97% (n = 40) were aged 51 years and above. In terms of educational attainment, 20.98% (n = 30) of respondents held a Senior Secondary School Certificate (SSCE), 25.87% (n = 37) possessed an Ordinary National Diploma (OND) or Nigeria Certificate in Education (NCE), while 35.66% (n = 51) held a Bachelor's degree (B.Sc./B.Ed). A smaller percentage, 3.50% (n = 5), were Doctor of Philosophy (Ph.D.) holders, and 13.99% (n = 20) had no formal education. The nationality of respondents revealed that the vast majority, 95.80% (n = 137), were Nigerian citizens, whereas 4.20% (n = 6) were non-Nigerians. Marital status distribution showed that 39.16% (n = 56) of respondents were single, 46.85% (n = 67) were married, and 13.99% (n = 20) were divorced at the time the study was conducted.

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Assessment on the extent to which the rise in tourist influx during hosting of AFCON footballing competition will impact environmental degradation and increased pollution levels

Table 2: Respondents' knowledge on whether there will be percentage increase in tourist influx during the hosting of AFCON competitions.

There will be percentage increase in tourist influx during the hosting of AFCON competitions		
Responses	**Frequency**	**Percentage**
Strongly Agree	52	36.36
Agree	71	49.65
Disagree	7	4.90
Strongly Disagree	13	9.09
Total	**143**	**100%**

Source: Fieldwork, 2025

Table 2 above, shows respondents' view on whether there will be percentage increase in tourist influx during the hosting of AFCON competitions. 36.36% (52) of the respondents strongly agreed, 49.65% (71) agreed, 4.90% (7) of the respondents disagreed while the remaining 9.09% (13) of the respondents strongly disagreed. Majority of the respondents agreed, this depicts that there will be percentage increase in tourist influx during the hosting of AFCON competitions.

Table 3: Respondents' knowledge on whether the percentage increase in tourist influx will lead environmental pollution during the hosting of AFCON competitions.

The percentage increase in tourist influx will lead environmental pollution during the hosting of AFCON competitions		
Responses	**Frequency**	**Percentage**
Strongly Agree	53	37.06
Agree	60	41.96
Disagree	14	9.79
Strongly Disagree	16	11.19
Total	**143**	**100%**

Source: Fieldwork, 2025

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Table 3 above, shows respondents' view on whether the percentage increase in tourist influx will lead environmental pollution during the hosting of AFCON competitions. 37.06% (53) of the respondents strongly agreed, 41.96% (60) agreed, 9.79% (14) of the respondents disagreed while the remaining 11.19% (16) of the respondents strongly disagreed. Majority of the respondents agreed, this affirms that the percentage increase in tourist influx will lead environmental pollution during the hosting of AFCON competitions.

Table 4 Respondents' knowledge on whether increased waste generation and poor waste management will be the major sources of environmental pollution during the hosting of AFCON competitions

Increased waste generation and poor waste management will be the major sources of environmental pollution during the hosting of AFCON competitions		
Responses	**Frequency**	**Percentage**
Strongly Agree	69	48.25
Agree	55	38.46
Disagree	9	6.29
Strongly Disagree	10	6.99
Total	**143**	**100%**

Table 4 above, shows respondents' view on if increased waste generation and poor waste management will be the major sources of environmental pollution during the hosting of AFCON competitions 48.25% (69) of the respondents strongly agreed, 38.46% (55) agreed, 6.29% (9) of the respondents disagreed while the remaining 6.99% (10) of the respondents strongly disagreed. Majority of the respondents strongly agreed, this depicts that increased waste generation and poor waste management will be the major sources of environmental pollution during the hosting of AFCON competitions.

Table 5. Respondents' knowledge on whether high-level traffic congestion and air pollution from vehicular emissions will be the major sources of environmental pollution during the hosting of AFCON competitions

High-level traffic congestion and air pollution from vehicular emissions will be the major sources of environmental pollution during the hosting of AFCON competitions.		
Responses	**Frequency**	**Percentage**
Strongly Agree	57	39.86
Agree	43	30.07
Disagree	18	12.59
Strongly Disagree	25	17.48
Total	**143**	**100%**

Source: Fieldwork, 2025

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Table 5 above, shows respondents' view on if high-level traffic congestion and air pollution from vehicular emissions will be the major sources of environmental pollution during the hosting of AFCON competitions. 39.86% (57) of the respondents strongly agreed, 30.07% (43) agreed, 12.59% (18) of the respondents disagreed while the remaining 17.48% (25) of the respondents strongly disagreed. Majority of the respondents strongly agreed; this affirms that high-level traffic congestion and air pollution from vehicular emissions will be the major sources of environmental pollution during the hosting of AFCON competitions.

Table 6: Respondents' knowledge on overcrowding of tourist destinations and natural reserve will be the major sources of environmental pollution during the hosting of AFCON competitions

Overcrowding of tourist destinations and natural reserve will be the major sources of environmental pollution during the hosting of AFCON competitions		
Responses	**Frequency**	**Percentage**
Strongly Agree	58	40.56
Agree	47	32.87
Disagree	23	16.08
Strongly Disagree	15	10.49
Total	**143**	**100%**

Source: Fieldwork, 2025

Table 6 above, shows respondents' view on the notion that overcrowding of tourist destinations and natural reserve will be the major sources of environmental pollution during the hosting of AFCON competitions. 40.56% (58) of the respondents strongly agreed, 32.87% (47) agreed, 16.08% (23) of the respondents disagreed while the remaining 10.49% (15) of the respondents strongly disagreed. Majority of the respondents strongly agreed, this depicts that overcrowding of tourist destinations and natural reserve will be the major sources of environmental pollution during the hosting of AFCON competitions.

Hypothesis Testing

Variables	**ΣX**	**ΣX² ΣY²**	**ΣXY**	**r-val**
Environmental impacts of sports tourism	956	4591	5813	0.79
Impacts on an Average Nigerian	192	2110		

Significant 0.05 level, critical r=0.109, df =491.

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From the result above Table 7, the calculated r-value of 0.79 is higher than the critical r-value of 0.109 at 0.05 levels of significance and 491 degree of freedom. The null hypothesis is rejected, while the alternate hypothesis which revealed that hosting AFCON footballing competition has a significant impact on the average Nigerian.

Model	R	R Square	Adjusted R Square		Std. Error of the Estimate	Change Statistics				
	R Square Change	F Change	df1	df2		R Square Change	F Change	df1	df2	Sig. F Change
1	0.325[a]	0.119	0.11	0.782	.00000	8.751	11	452	.000	0.123.

a Predictors: (Constant), Environmental impacts of sports tourism
b Dependent Variable: tourism development and socio-cultural and economic development

The result of the regression analysis on Table 8 shows a yielded coefficient of regression (R) of 0.325 and a multiple regression R-square (R^2) of 0.119, and adjusted R^2 of 0.11, at 0.01 level of significance, the result is significant, the result also shows that an analysis of variance (ANOVA) of the multiple regressions produced an F-ratio of 8.751, while the f-critical value is 1.91 (2-tailed), since the calculated F-value of 8.751 is greater than the critical F-value of 1.91, at 0.05 significant level, (2-tailed), the result is also significant at 0.05 level. The significance of this result environmental impacts of sports tourism has a significant impact on the average Nigerian.

DISCUSSION OF FINDINGS

An assessment of respondents' perspectives on the environmental implications of increased tourist influx during the hosting of the Africa Cup of Nations (AFCON) revealed significant concerns related to environmental degradation and pollution. The findings of this study indicate a projected percentage increase in tourist arrivals during AFCON, which, while beneficial for the local economy and international visibility, poses considerable challenges to environmental sustainability. Participants overwhelmingly noted that this surge in tourist activity would likely result in a rise in environmental pollution, primarily due to increased waste generation and inadequate waste management systems.

The study further emphasized that major sources of pollution would include littering, unsorted solid waste, and pressure on already overstretched sanitation infrastructure. Respondents highlighted that the influx of visitors, particularly in urban centers and near match venues, would lead to the overcrowding of tourist destinations, recreational parks, and natural reserves—thereby exacerbating land degradation and loss of ecological balance. This concern aligns with the work of Collins et al. (2009), who found that the hosting of mega-events often leads to environmental strain due to a sharp increase in human activities, particularly in developing countries with fragile waste disposal systems.

Moreover, this research found that traffic congestion and vehicular emissions would be critical contributors to air pollution during the tournament. Participants expressed concerns that the high

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volume of cars, buses, and commercial vehicles required for transporting tourists, athletes, and officials would contribute significantly to carbon emissions. This is consistent with the findings of Gibson et al. (2012), who emphasized that transport-related air pollution is a recurrent environmental issue during large-scale sporting events, particularly in cities with underdeveloped traffic management and emission control systems.

The anticipated environmental degradation is further reinforced by the studies of Mules and Dwyer (2005), who argued that although mega-events provide opportunities for infrastructure development, they also impose temporary yet intense pressure on urban ecosystems. Similarly, Horne and Manzenreiter (2006) observed that in developing countries, poor planning and insufficient investment in sustainable environmental management during sports events often result in long-term damage to the natural environment.

In agreement with Bob and Swart (2010), the present study also affirms that host cities must implement proactive strategies, including proper waste disposal mechanisms, green event policies, and environmental awareness campaigns to mitigate the negative ecological impacts associated with mass tourism during sporting events. The findings echo the conclusions of Getz (2008), who suggested that without adequate environmental safeguards, the influx of tourists during mega-events can overwhelm public utilities, degrade urban aesthetics, and diminish the overall quality of life for residents.

Additionally, Jones (2010) pointed out that hosting sporting events in cities with weak environmental governance structures can amplify problems like water pollution, noise pollution, and the destruction of green spaces. The responses from this study mirror this assertion, with many participants expressing concern over the lack of sustainable event planning and the likelihood of post-event waste accumulation in public spaces.

Lastly, the concerns raised in this study are consistent with the growing body of work by Nyikana and Tichaawa (2023), who emphasized the importance of integrating sustainability into the planning and execution of sports tourism events in Africa. They argue that while events like AFCON can be leveraged for socio-economic growth, they must also be aligned with national and regional environmental protection strategies.

While the increased tourist influx during AFCON presents valuable opportunities for economic and cultural exchange, it is also likely to intensify environmental challenges if not managed responsibly. The findings underscore the need for Nigeria and other prospective host nations to adopt integrated environmental management frameworks that balance development with ecological preservation. Future event planning should incorporate sustainable waste management, traffic regulation, and eco-tourism policies to ensure that the environmental impact of such tournaments is minimized.

CONCLUSION

The findings of this study offer critical insights into the environmental implications associated with increased tourist influx during the hosting of mega sporting events such as the Africa Cup of Nations (AFCON) in Nigeria. While the economic and social benefits of such events are widely recognized, this research underscores the pressing need to address the environmental consequences that accompany

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large-scale tourism and mass gatherings. The anticipated rise in tourist arrivals during AFCON, as revealed by respondents, is expected to result in elevated levels of environmental degradation, primarily driven by increased waste generation, poor waste management practices, overcrowding at tourist and recreational sites, and heightened vehicular emissions contributing to air pollution.

This study reaffirms existing literature that has long warned of the environmental pressures faced by host nations during mega-events. Authors such as Bob and Swart (2010), Collins et al. (2009), and Jones (2010) have previously highlighted that insufficient infrastructure and the absence of robust environmental policies often lead to irreversible ecological consequences. These findings resonate with the concerns expressed by respondents in this study, particularly regarding Nigeria's current waste management capacity, the vulnerability of natural reserves and public spaces, and the inefficiencies in urban traffic and transport systems.

Furthermore, the study confirms the assertion by Gibson et al. (2012) and Nyikana and Tichaawa (2023) that sporting events in developing countries must be accompanied by proactive environmental planning if their long-term sustainability is to be assured. The evidence presented suggests that while Nigeria may have the infrastructural and organizational capacity to host AFCON, the environmental dimension requires greater attention. Without strategic planning, environmental degradation risks outweighing the intended socio-economic gains of the event.

The implications of these findings are far-reaching. First, they call for an integrated approach to sports tourism planning—one that balances infrastructure expansion and economic gain with ecological responsibility. Environmental sustainability must be mainstreamed into the bidding, planning, execution, and post-event legacy phases of sports event management. This includes developing efficient waste disposal systems, promoting green transport options, investing in environmental education and awareness campaigns, and ensuring compliance with national and international environmental standards.

Second, this research advocates for the establishment of collaborative frameworks involving government agencies, environmental experts, private stakeholders, and host communities to co-design sustainable event-hosting models. Such collaboration can ensure that environmental concerns are addressed from a bottom-up perspective, integrating local knowledge and promoting community ownership of environmental outcomes.

Lastly, while this study is localized to Ado-Ekiti, the findings have broader applicability to other Nigerian cities and similar urban contexts across Africa that aspire to host large-scale events. The lessons drawn here are timely and relevant for policymakers, urban planners, sports tourism organizers, and environmental advocates alike. They highlight the necessity of adopting a holistic vision for sports tourism—one that recognizes the intricate link between tourism growth and environmental stewardship.

In conclusion, as Nigeria continues to pursue its ambition of becoming a preferred destination for international sporting events, it must do so with a clear commitment to environmental sustainability. Hosting AFCON should not only be a celebration of football and national pride but also a demonstration of Nigeria's capacity to organize events that are socially enriching, economically beneficial, and

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ecologically responsible. The future of sports tourism in Nigeria depends not just on infrastructure and organization, but equally on the nation's ability to safeguard its natural environment for generations to come.

RECOMMENDATION

The below recommendations have been provided:

1. Organizers should deploy adequate waste bins, recycling stations, and waste collection teams at stadiums and fan zones to reduce litter and promote proper disposal practices.
2. Encourage the use of public transport, shuttle buses, cycling lanes, and walking paths to reduce traffic congestion and carbon emissions during major sporting events.
3. Host cities should enforce environmental policies related to noise control, air quality, waste disposal, and sanitation to mitigate negative impacts of overcrowding.
4. Event planners should adopt eco-conscious practices such as using biodegradable materials, reducing single-use plastics, and sourcing sustainable energy for venues.
5. Educational initiatives targeting fans, vendors, and local communities should be implemented to promote environmentally responsible behavior during the tournament.
6. Collaborations with environmental organizations and recycling firms can support efficient waste collection, sorting, and recycling processes before, during, and after the event.
7. Use digital ticketing systems and capacity management tools to control crowd numbers and reduce the environmental strain on facilities and surrounding areas.
8. After the tournament, comprehensive evaluations should be conducted to assess the environmental footprint and guide improvements for future events.

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