



EVALUATION OF THE TOURISM POTENTIAL OF ERIN IJESHA (*OLUMIRIN*) WATERFALLS, OSUN STATE, NIGERIA

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ABSTRACT

Nature-based tourism is increasingly recognized as a tool for rural development when it generates income, jobs, and infrastructure while conserving ecosystems. In Nigeria, many iconic sites, including Olumirin Waterfalls, remain underdeveloped, with limited empirical evidence on their tourism potential. This study evaluated the tourism potential of Erin-Ijesha (Olumirin) Waterfalls using the adapted Tourism-Livelihood Interaction Model within the Socio-Ecological Systems Framework. The objectives were to examine perceived attractions, benefits, challenges, and negative impacts of tourism in the area. A mixed-methods approach was applied to 100 participants comprising tourists and residents. Requisite data were collected through structured questionnaire, in-depth interviews, and direct observations. Data analysis involved descriptive statistics, Pearson Chi-square tests and thematic analysis. The results showed that most tourists were male (56%), aged 21-40 years (66%), with tertiary education (52%). Natural scenery and the multiple waterfalls were the main attractions (78%), while recreation was also important (62%). Motivation differed significantly by age group ($\chi^2=11.36, p<0.05$), with younger visitors more likely to cite recreation and photography. Among residents, farming (36%) and trading (32%) were main occupations. While a few ($n=6$) saw no community benefit, most reported tourism created local jobs (56%) and boosted petty trading (49%), with benefits significantly linked to occupation type ($\chi^2=8.17, p=0.017$). Key challenges include poor road access (60%), inadequate facilities (60%), littering (46%), and vegetation disturbance (39%). Overall, Erin-Ijesha Waterfalls has high but underutilized tourism potential. Improving infrastructure, promoting community participation, and ensuring equitable benefit-sharing are critical to realizing its socio-economic and cultural value.

Keywords: Community-based, Foreigners, Rural dwellers, Socioeconomic values, Sustainable development, Tourism-SES

INTRODUCTION

Globally, tourism is one of the largest and fastest-growing economic sectors, contributing about 10% to GDP and generating one in ten jobs worldwide prior to the COVID-19 pandemic (UNWTO, 2022). Beyond its economic contribution, tourism has been positioned by the United Nations as a strategic vehicle for achieving multiple Sustainable Development Goals (SDGs), particularly those relating to poverty alleviation (SDG 1), decent work (SDG 8), and sustainable cities (SDG 11). Nature-based tourism, which includes visits to waterfalls, forests, mountains, and other natural landscapes has gained prominence, not only for its economic potential but also for its role in biodiversity conservation, cultural exchange, and environmental education (Eagles *et al.*, 2022; TIES, 2021). For instance, destinations such as Niagara Falls (Canada/USA), Victoria Falls (Zambia/Zimbabwe), and Iguazu Falls (Argentina/Brazil) demonstrate how well-managed waterfall tourism can generate substantial revenues, attract millions of visitors annually, and contribute to sustainable development when balanced with environmental protection (Scheyvens, 2019). Similarly, diverse landscapes from the savannahs of East Africa to the rainforests of Central Africa offer unique opportunities for nature-based tourism. For example, Victoria Falls attracts over 300 000 visitors annually, contributing significantly to local and national economies (Manwa, 2016; Rogerson & Rogerson, 2020). In Ghana, Wli Waterfalls hosts tourism activities, capacity to conserve biodiversity and improve livelihoods (Ajani *et al.*, 2024; Kumi *et al.*, 2018; Ashley & Roe, 2022). Case studies from Namibia and Kenya

have shown that tourism can significantly enhance income, generate employment, stimulate local enterprises, and promote environmental and cultural preservation (Telfer & Sharpley, 2025; Snyman, 2024; Manyara & Jones, 2017). Interestingly, Nigeria's tourism potential is substantial, with destinations like Obudu Mountain Resort, Awhum Waterfalls, Arinta Waterfall Owu Waterfall and Erin Ijesha Waterfalls offering a mix of natural beauty and cultural heritage (Ashley *et al.*, 2020). Specifically, tourism based on natural attractions like waterfalls presents a powerful opportunity for rural revitalization in Nigeria. For instance, ecotourism can deliver employment, improve infrastructure, and community enterprise when properly harnessed, especially in underdeveloped rural settings (Babafemi *et al.*, 2021). More so, where traditional livelihoods often depend on agriculture, forestry, or fishing, tourism can act as a livelihood diversification strategy by providing employment, stimulating small-scale enterprises, and creating markets for local goods (Snyman, 2024; Ibrahim, 2021). In addition, it can catalyze investments in infrastructure such as roads, sanitation, and communication networks, which often serve both tourists and residents (Telfer & Sharpley, 2015; Butler, 2019).

Historically, Erin Ijesha Waterfalls, locally called Olumirin holds cultural value for the Erin Ijesha people, featuring in local folklore and annual festivals. Ecologically, it supports various plant and animal species, contributing to regional biodiversity (Ajake *et al.*, 2023). In Erin-Ijesha, tourism brings socio-cultural changes as residents experience shifts in identity, pride, and cultural revitalization tied to the waterfall

site (Bhat *et al.*, 2024). Other studies discuss the site's eco-spiritual importance and the community's reverence and environmental stewardship ethos (Oluyemi & Shitu, 2024). Thus, waterfalls have unique appeal as tourism destinations due to their visual beauty, recreational opportunities, and cultural significance (Bhat *et al.*, 2024).

Despite Nigeria's abundance of scenic sites like waterfalls, suspended lakes, cultural heritage and festivals, the tourism sector underperforms compared to peers like South Africa or Kenya. Weak policy implementation, poor facilities, and low private investment continue to limit the sector's competitiveness (Adewumi & Oladipo, 2018). According to Eja. (2021), tourism's contribution to Nigeria's GDP remains less than 5%, largely due to infrastructural decay, insecurity, and low prioritization in development planning. In 2023, about 1.2 million tourists visited Nigeria, held back by poor infrastructure, security concerns, lack of international marketing, and limited accommodation in tourism zones (Kumi *et al.*, 2018). For nature-based sites, specific challenges include poor access roads, inadequate visitor facilities, lack of promotional strategies, and limited benefit-sharing mechanisms for host communities (Akinwalere *et al.*, 2020).

Another problem is that although the Nigerian tourism policy framework identifies natural attractions as central to diversifying the economy, yet practical implementation is hampered by inconsistent funding, weak enforcement of environmental regulations, and limited integration between tourism and other development sectors (Okonkwo & Akintunde, 2020). At the state and local government levels, tourism is often under-prioritized compared to extractive

industries, despite evidence that well-managed natural attractions can generate steady revenue streams and preserve cultural heritage.

In Osun State, where Erin-Ijesha is located, the waterfalls are recognized as a flagship tourism asset, however, infrastructure and marketing investments remain inadequate relative to the site's potential. Although visitors' value it's scenic and cultural appeal, the surrounding rural community receives limited socio-economic benefits, and infrastructural deficits hinder both tourists experience and local development. Although, few evidence suggests tourism at the site provides economic opportunities for local traders and service providers, there is little empirical research quantifying these benefits or assessing visitor perceptions and site readiness for sustainable tourism development. Without such evidence, policy and investment decisions risk being poorly targeted or ineffective.

Furthermore, there is a lack of application of socio-ecological systems (SES) thinking to waterfall tourism in Nigeria, an approach that can reveal feedback loops between tourism activities, community well-being, and ecosystem health. This gap restricts evidence-based decision-making for sustainable site management. Thus, to assess the tourism potential of Erin-Ijesha (Olumirin) Waterfalls and its contribution to rural livelihoods, the theoretical framework of the study is premised on the Tourism-Livelihood Interaction Model within the Socio-Ecological Systems framework to generate a holistic, evidence-based understanding of how tourism at Erin-Ijesha Waterfalls intersects with community benefits, ecological health, and infrastructural conditions (see Figure 1).

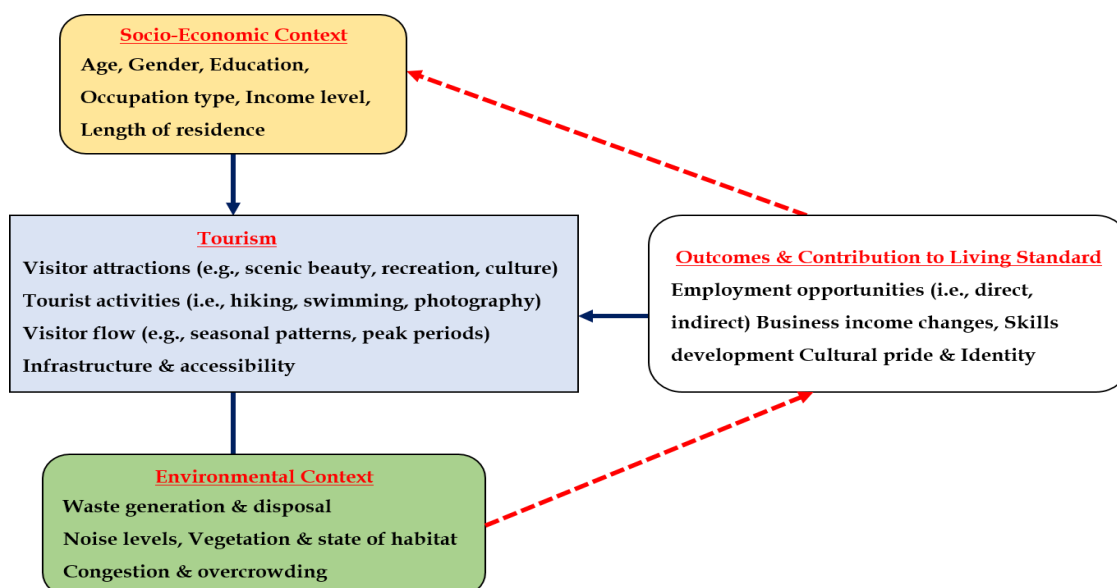


Figure 1: Tourism Socio-Ecological Systems framework (adapted from Ostrom, 2019)

The broad objective of the study was to evaluate tourism at Erin-Ijesha Waterfalls through the lens of Socio-Ecological Systems and livelihood outcomes, examining visitor motivations, challenges, and environmental consequences. Specific Objectives were to identify key attractions and motivations for tourists; assess socio-economic benefits experienced by local residents; document challenges faced by tourists and examine negative environmental and socio-cultural impacts as perceived by residents. By applying an adapted Tourism-Livelihood Interaction Model within the SES framework, the findings of the study could inform policymakers, site managers, and community stakeholders on

how to maximize tourism's livelihood benefits while minimizing ecological and socio-cultural costs. This is especially critical as Nigeria works toward the SDGs and seeks to expand its non-oil economy.

MATERIALS AND METHODS

Study Area

Erin-Ijesha Waterfalls, locally known as Olumirin Waterfalls is located in Oriade Local Government Area, Osun State, Southwest Nigeria. The waterfall lies approximately 2 km off the Ilesha-Akure expressway and about 20 km from Ilesha town. Geographically, the site is positioned at 7°34'N latitude

and 4°54'E longitude, within a tropical rainforest zone characterized by rich vegetation and biodiversity. Historically, the waterfall is believed to have been discovered in 1140 AD by Akinla, granddaughter of Oduduwa, the progenitor of the Yoruba people (Tourism Magazine, 2019). The waterfall is made up of seven distinct cascades, with the first three being the most visited due to their accessibility, while the upper levels remain relatively undisturbed. The

climatic conditions are typically warm and humid with distinct wet (April-October) and dry (November-March) periods. The mean annual rainfall ranges between 1 400-1 800 mm and mean annual temperatures of 25-27°C (Osun State Tourism Board, 2021). The host community is predominantly agrarian, with farming, petty trading, and tourism-related activities contributing to household income and employment strategies.

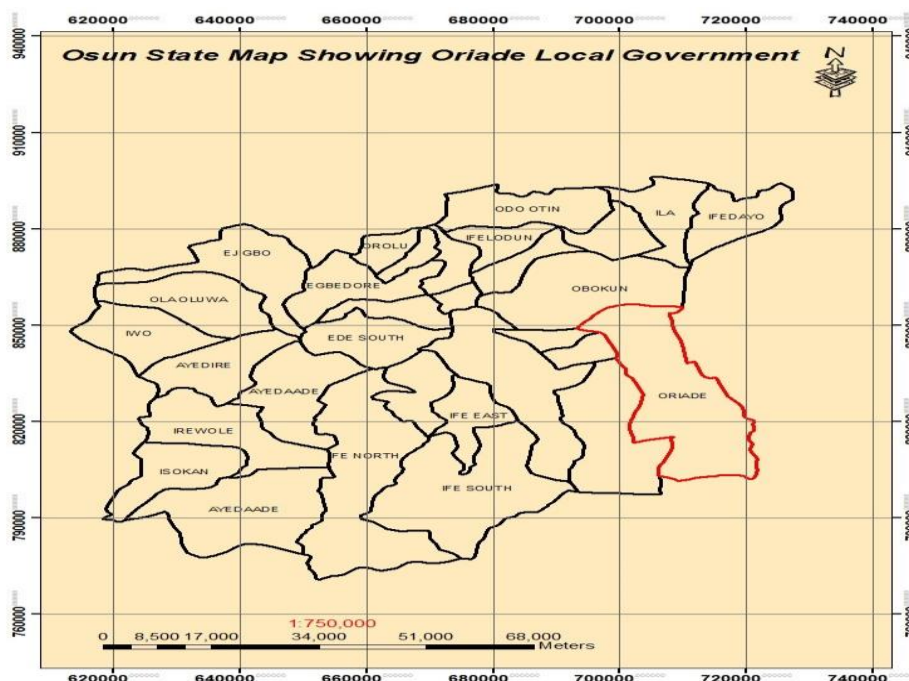


Figure 2: Schematics of Osun State and Oriade Local Government Area hosting the Olumirin Waterfall (Ministry of land, physical planning and urban development, 2021)

Sampling Technique and Sample Size

A cross-sectional survey design was employed to capture quantitative and qualitative data from visitors to Erin-Ijesha Waterfalls during the study period and adult residents (≥ 18 years) living in the host community. Consistent with previous studies (see De Vaus, 2024; Creswell & Plano Clark, 2017), a purposive sampling strategy was used to interview the tourists on-site, while systematic random sampling was applied for selecting residents in every n^{th} household along transects from the waterfall entrance. This design was appropriate because it enabled the systematic collection of patterns in perceptions, community benefits, and challenges associated with tourism. In addition, a total of one hundred (100) respondents were targeted to ensure representation of both stakeholder groups. This number was considered adequate to detect associations in Chi-square tests with moderate effect sizes at 95% confidence (Cohen, 2018).

Data Collection

Data were collected using structured questionnaire consisting of closed- and open-ended questions covering demographic information, motivations, experiences, physical attributes of the site, economic impacts, challenges, suggestions for improvement *amongst others*. Key Informant Interviews (KIIs) was conducted with site managers, local leaders, and government tourism officials to obtain contextual and policy-related insights. Observation checklist was used to assess infrastructure, environmental conditions, and service facilities on site. Participation was voluntary, with informed consent

obtained from all respondents. Anonymity and confidentiality were assured, and no personal identifiers were recorded. Permission to conduct the study was granted by the local tourism authority and community leaders.

Data Analysis

Out of the distributed questionnaire, 64 (64% response rate) were retrieved, comprising 38 visitors and 26 community residents. The remaining 36% with missing data and/or inconsistencies were discarded. Data were coded and analyzed using SPSS v26. Data analysis involved computing frequencies, percentages, and means to summarize respondent characteristics and responses. Effect sizes were calculated using Cramer's *V* to assess the strength of associations (Cohen, 2018). Reliability for multi-item sections like perception of benefits, challenges *etc.*, was assessed using Cronbach's alpha, with values above 0.70 considered acceptable for internal consistency (Nunnally, 2008). In addition, the Pearson Chi-square tests (χ^2) examined associations between socio-demographic factors and key categorical outcomes i.e., perceived benefits, reported challenges *etc.* Statistical significance was set at $p < 0.05$. The choice of Chi-square tests was justified by the categorical nature of the variables and the aim of detecting relationships without assuming normal distribution (Agresti, 2023). Finally, qualitative data from interviews and open-ended responses were analyzed through thematic analysis to identify recurring patterns related to benefits, challenges, and recommendations (Braun and Clarke, 2016).

Table 1: 4x4 Methodology Matrix Linking Objectives, Data, Analysis and Outcomes

Objective	Core Data Collected	Primary Analysis	Output Indicators
1. Identify primary attractions and benefits for tourists	Tourist Questionnaire: - Motivations, attractions visited, satisfaction ratings, facility ratings - Demographic profile: age, gender, income, household size	Descriptive: Frequencies, percentages, mean Thematic analysis Cross-tabs	Ranking of attractions; % of tourists citing each benefit
2. Assess socio-economic benefits to host community	Resident Questionnaire: - Employment, income opportunities, enterprise creation, service/amenity changes - Demographic profile: age, gender, income, household size	Descriptive: Frequencies, percentages, Thematic analysis; Chi square (χ^2)	% reporting specific benefits; significant associations (χ^2 , p , effect sizes)
3. Document challenges faced by tourists	Tourist questionnaire: Transport, sanitation, safety, costs, crowding	Descriptive: Frequencies, percentages, Chi square (χ^2) Thematic analysis	% reporting each challenge; significant demographic differences
4. Examine negative impacts perceived by residents	Resident questionnaire: Environmental (waste, vegetation), socio/cultural, economic displacement	Descriptive: Frequencies, Chi square (χ^2) tests	% reporting each negative impact; significant predictors

(Source: Field survey, 2021)

RESULTS AND DISCUSSION

Socio-Economic Profile of Respondents

As shown in Table 2, the majority (52%) of tourists and a slightly lower number (44%) of residents were male, indicating a relatively balanced gender composition among both groups in the study area. The age distribution showed that the largest group (60%) was 28-37 years, followed by 18-27 years (28%). Nunoo and Yankson (2022) observed that tourism-active communities in Ghana had a high proportion of young and middle-aged adults, as these groups are more economically active and adaptable to emerging opportunities. Babafemi *et al.* (2021) also reported more age diversity among residents in Owu Waterfall communities in Nigeria. Marital status differed significantly ($\chi^2=13.54$, $p<0.01$), with 72% of tourists being single compared to only 31% of residents. This may be linked to younger tourists having more leisure time and fewer household obligations. The presence of foreign tourists (8%) though modest, indicates international reach but underscores that Erin-Ijesha is still largely a domestic attraction, a trend common to many Nigerian natural sites due to limited global promotion (Okonkwo & Akintunde, 2020).

The occupation data showed that most (40%) tourists were students, while 36% of residents were farmers and 33% traders, suggesting the dependence of the local people on small-scale commerce sectors for sustenance (Table 2). Similar patterns were documented by Snyman (2024) in Southern Africa, and Oduntan (2021) in Southwestern Nigeria where agriculture is typical of rural economies that diversify income sources through seasonal tourism-related trade and services. Education level also varied significantly ($\chi^2=28.62$, $p<0.001$). Most (92%) tourists had tertiary education reflecting the higher tendency of educated individuals to engage in nature-based leisure travel (UNWTO, 2022). Conversely, residents had a broader distribution, but 39% had completed secondary education, and 33% had tertiary education. This is notably higher than the national average for rural communities (NBS, 2020), suggesting relatively good literacy levels in Erin-Ijesha. Ashley & Roe, (2022) have also associated higher education with greater capacity to leverage tourism opportunities, including small-scale entrepreneurship.

Table 2: Socio-Economic Profile of Visitors and Local Residents in Erin-Ijesha

Variables	Proportion of respondents (n = 64)	
	Tourists (%)	Residents (%)
Nationality		
Ghanaian	2.6	0.0
South African	5.3	0.0
Nigerian	92.1	100.0
Gender		
Male:	52.0	43.6
Female:	48.0	56.4
Age group (in years)		
18–27	28.1	25.6
28–37	60.1	33.3
38–47	12.0	20.5
48+	0.0	20.5
Marital status		
Single	72.1	30.8
Married	28.0	69.2

Variables	Proportion of respondents (n = 64)	
	Tourists (%)	Residents (%)
Educational attainment		
None	0.0	10.3
Basic/Primary	1.0	17.9
Secondary/College	8.0	38.5
Tertiary	92.0	33.3
Main occupation		
Student	40.0	0.0
Public sector worker	28.0	0.0
Trading	0.0	33.3
Self-employed / Artisan	24.0	20.5
Unemployed / Farming	0.0	35.9
Others	8.0	10.3

Rounding may result in numbers not adding up to 100%; Source: Field survey, 2021

Attractions and Benefits for Visiting Erin-Ijesha Waterfalls

The thematic analysis showed that majority of visitors (88%) identified scenic beauty and natural landscape as their main reason for visiting, and often linking it to a sense of peace and aesthetic pleasure (Figure 3). Oluyemi & Shitu (2024), noted that natural scenery was the primary driver for domestic visitors to Arinta Waterfall. A smaller proportion of tourists cited accessibility/proximity (32%) and recommendations from friends/family (40%) as primary motivators. This suggests that word-of-mouth remains influential, but infrastructural improvements could further increase site accessibility and competitiveness compared to better-connected destinations.

In addition, as shown in Figure 3, photography and nature appreciation (80%) scored highly, reinforcing a global trend where tourist destinations gain popularity through visual

media sharing particularly among younger travelers (UNWTO, 2022; Gossling & Higham, 2021). Similarly, recreational activities (72%), such as swimming and hiking, as a motivating factor is consistent with findings from Ayikunnugba Waterfalls in Oke-Ila Orangun, Nigeria, where over 90% of tourists visited primarily for leisure and relaxation (Aremu & Adeyemo, 2019). The Chi-square test showed no significant differences in motivation were found by gender ($\chi^2 = 4.21$, $p > 0.05$), but motivations varied significantly by age group ($\chi^2 = 11.36$, $p < 0.05$), with younger visitors more likely to cite recreational activities and photography. Cultural significance (60%) of the site were also strong motivators, indicating that Erin-Ijesha offers a blend of physical activity, local history and identity. This finding aligns with Kumi *et al.* (2018), who reported that heritage value increases site loyalty and repeat visitation.

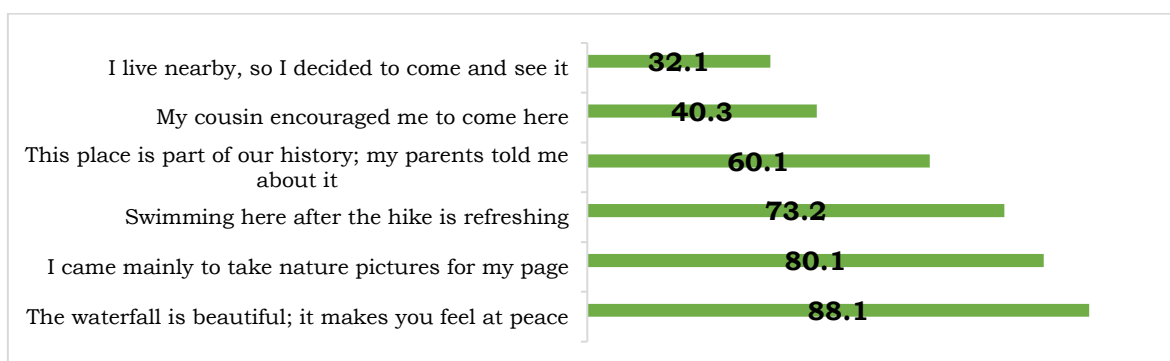


Figure 3: Motivations for visiting Erin-Ijesha Waterfalls; n = 25; multiple responses allowed; Figures are in percentages (%); Source: Field survey, 2021

Socio-Economic Benefits to the Host Community

Over half of the residents (56%) indicated that tourism at Erin-Ijesha Waterfalls created direct employment opportunities at the site including cleaning, security, and guiding visitors, to informal transport and porter services (Table 3). The boost to local businesses/petty trading (49%) particularly in food, beverages, and souvenirs was the second most common benefit. However, few (33%) respondents noted improvements in local infrastructure linked with site access and maintenance (Table). Also, cultural pride and promotion (31%) and market access (28%) were cited. A smaller proportion (n = 9) mentioned skills acquisition

through tourism-related training, while a minority (n = 6) reported no notable benefit to the community. The Chi-square analysis revealed that occupation type was significantly associated with reporting a boost to local businesses ($\chi^2 = 8.17$, $df = 2$, $p = 0.017$), suggesting that traders were more likely to perceive direct benefits from visitor spending compared to farmers or unemployed residents. By contrast, the association between education level and reporting skills training/experience was not significant ($\chi^2 = 6.24$, $df = 3$, $p = 0.10$), suggesting that participation in informal up-skilling is relatively broad across education categories.

Table 3: Integrated Quantitative and Qualitative Results on Economic and Social Benefits Perceived by Residents

Derived Values	Proportion of respondents (n = 39)		
	Number	(%)	Illustrative Quote/Themes
Direct jobs at the site	22	56.4	Some of our youths are employed as cleaners and security men (Male, 34 years, farmer)
Growth to local businesses	19	48.7	Visitors buy my drinks and snacks after climbing the falls (Female, 40 years, trader)
Improved image & cultural pride	12	30.8	Now more people know our town because of the waterfall (Male, 50 years, artisan)
Improved local infrastructure	13	33.3	Sometimes they do road grading, build some facilities near the site (Female, 38 years, trader)
Better market access	11	28.2	People who visit the site demand for local products (Female, 45 years, vendor)
Skills and capacity building	9	23.1	I have learnt to speak politely to visitors (Male, 26 years, vendor)
Unequal benefit distribution	6	15.4	Only those selling at the site benefit; others see no change (Male, 55 years, farmer)

Source: Field survey, 2021; % calculated on n = 39; multiple responses allowed

The finding that employment is the most cited benefit aligns with global evidence that nature-based tourism can serve as an important rural employer (Ibrahim, 2021; Ashley, *et al.*, 2020; Scheyvens, 2019). In addition, similar patterns have been observed in other African nature-based tourism destinations, where tourism-related jobs were identified as a key poverty alleviation pathway for community members (Olorunfemi *et al.*, 2021; Snyman, 2024). The prevalence of petty trading reflects the role of Erin-Ijesha Waterfalls as a steady market for local microenterprises. Nunoo & Yankson (2022), and Kumi *et al.*, 2018 noted that tourism to Wli Waterfalls in Ghana significantly increased sales for small-scale traders in the surrounding community. The infrastructure benefit cited in the study is consistent with evidence that popular attractions can catalyze improvements in access roads and utilities, though such upgrades at Erin-Ijesha are still partial and uneven compared with international benchmarks (Telfer & Sharples, 2015). Improved image and cultural pride demonstrates the socio-cultural dimensions of tourism benefits, whereby residents take pride in their town's recognition and status as a tourist destination. Scheyvens (2019) reiterates that tourism can reinforce local identity and support cultural expression when communities feel included in site management and storytelling. In the study, skills and capacity building may not be formally certified; they nonetheless enhance job creation and the community's ability to capture tourism-related income (Ashley & Roe (2022).

Finally, the presence of no perceived benefit is a useful caution. Oduntan (2021) and Babafemi *et al.* (2021) found similar patterns in other waterfall sites, where some residents especially those distant from the tourist-spending zones could not experience tangible gains derived from tourism. Notably, the significant link between occupation and perceived benefits reinforces *Social Exchange Theory*, i.e. people who directly participate in tourism are more inclined to perceive it positively, as the personal gains outweigh any potential costs (Gursoy *et al.*, 2022).

Challenges Experienced by Tourists visiting Erin-Ijesha Waterfalls

As shown in Table 4, the most frequently reported challenge was poor road access (60%), followed by inadequate visitor facilities (56%). About 36% cited high or inconsistent entry fees, while 35% identified poor waste management. Concerns about security were expressed by 24% of visitors, and 20% complained about poor site maintenance (Table 4). The Pearson Chi-square tests showed a significant ($\chi^2 = 9.41$, $df = 4$, $p = 0.041$) association between education and inadequate facilities indicating that literate visitors were more likely to be dissatisfied with infrastructure and service quality. In addition, the association between age group and poor access roads as a challenge was significant ($\chi^2 = 9.72$, $df = 3$, $p < 0.05$), with older visitors more likely to report this issue.

Table 4: Challenges Experienced Based on the Visitors' Agreement to each Statement

Challenge	Proportion of respondents (n = 25)		
	Number	Percentage (%)	Themes
Poor access roads and transportation	15	60.1	The road to the waterfall is in bad shape, especially during the rainy season (Female, 32 years)
Inadequate visitor facilities	14	56.0	We couldn't find a clean restroom and had to manage (Male, 25 years)
High or inconsistent entry fees	9	36.2	The price changes sometimes; it is not stable (Male, 28 years)
Poor waste management	8	35.1	The way people dispose waste here is alarmingly (Male, 38 years)
Safety and security concerns	6	24.0	No visible security presence when we arrived (Female, 30 years)
Poor site maintenance	5	20.1	The steps are slippery and overgrown in some places (Male, 24 years)

Source: Field survey, 2021; % calculated on n = 25; multiple responses allowed

The predominance of poor access roads as a challenge is a common constraint in nature-based tourism across Nigeria and West Africa where inadequate access roads deter potential visitors and increase travel costs (Olorunfemi *et al.*, 2021; Aremu & Adeyemo, 2019). Inadequate visitor facilities including clean restrooms, shaded seating, and waste management systems reflects a broader infrastructure deficit in rural tourist sites, factors known to limit repeat visitation and length of stay (Okonkwo & Akintunde, 2020; Oduntan, 2021; UNWTO, 2022). High or inconsistent entry fees reflect weak pricing transparency and policy consistency. Okello & Yerian (2019) emphasizes that unpredictable fees erode trust and can deter repeat visits, particularly in domestic tourism markets. Safety and security concerns and poor site maintenance were less frequently reported but are still important for destination reputation. Ajani *et al.* (2024), reported where the lack of visible security and overgrown paths at Ayikunnugba Waterfalls discouraged elderly and family groups from visiting. The association between education and greater dissatisfaction with infrastructure aligns with studies indicating that more literate tourists often have

higher expectations for service quality and facilities (Weaver, 2016). Therefore, addressing these infrastructure and service challenges could improve visitor satisfaction and encourage longer stays, generating greater economic benefits for the host community.

Negative Impacts of Tourism Perceived by Residents

The result presented in Table 5 shows the negative impacts of tourism as reported by residents of the host community. The most (46%) frequently reported negative impact was littering and waste generation followed by noise (39%) and overcrowding (31%). The Chi-square tests showed that occupation type was significantly ($\chi^2 = 7.56$, $df = 2$, $p = 0.023$) associated with reporting overcrowding as a negative impact, especially by traders, likely due to their dependence on movement and stall access during peak times. A smaller proportion (26%) reported moral concerns and 21% mentioned environmental degradation (Table 5). Notably, 13% felt there were no negative impacts from tourism at Erin-Ijesha Waterfalls.

Table 5: Integrated Quantitative and Qualitative Results on Negative Impacts of Tourism Reported by Residents

Negative Impact	Proportion of respondents (n = 39)		
	Number	%	Themes
Littering and poor waste disposal	18	46.2	Visitors leave bottles and nylon everywhere after the day (Female, 41 years, trader)
Increased noise and disruption	15	38.5	During festive times, the noise from music and shouting is too much (Male, 54 years, farmer)
Congestion during peak periods	12	30.8	The place gets too crowded on holidays, and we can't move freely (Female, 35 years, artisan)
Moral concerns	10	25.6	Some youths misbehave and dress in ways that are against our culture (Male, 57 years, community elder)
Damage to natural environment	8	20.5	Some trees and plants are cut down for firewood or to clear paths (Male, 38 years, farmer)
No negative impact noticed	5	12.8	We have not seen anything bad, only good things (Female, 30 years, trader)

Source: Field survey, 2021; % calculated on n = 39; multiple responses allowed

In the study, residents expressed frustration over plastic bottles, food wrappers, and other refuse left behind by visitors. This issue is a recurring challenge in waterfall and nature-based destinations where solid waste management systems are weak (Ajani *et al.*, 2024). Similar findings have been documented at Wli Waterfalls in Ghana, where littering by visitors threatened both aesthetic appeal and ecological health (Nunoo & Yankson, 2022). Increased noise and disruption and congestion during peak periods was another significant concern, particularly during festive seasons when amplified music, shouting, and celebrations spill into surrounding residential areas. Telfer and Sharpley (2015) highlight that such disturbances can erode resident satisfaction and alter the traditional soundscape, leading to cultural fatigue in long-standing communities. Moral concerns reflect perceived cultural erosion, with respondents mentioning inappropriate dressing, public displays of affection, and substance use by some young visitors. Noise, overcrowding, and cultural erosion, though less frequently reported, are nonetheless important considerations for sustainable tourism planning, particularly in maintaining local cultural integrity, an issue widely discussed in *Social Exchange Theory* literature (Gursoy *et al.*, 2022). Moreover, environmental degradation including cutting of vegetation for firewood or to create paths reflects the tension between increased human activity and ecosystem integrity. Babafemi *et al.* (2021) reiterates that unsupervised visitor activity can accelerate erosion and habitat disturbance. However, it is

worth noting that only few residents reported no negative impact, suggesting that not all community members perceive tourism as harmful. This diversity of views suggests that community attitudes toward tourism impacts are shaped by personal experience, occupation, and level of engagement with visitors.

CONCLUSION

The study examined the socio-economic characteristics of visitors and residents, the attractions and benefits of Erin-Ijesha Waterfalls, as well as the challenges and negative impacts associated with tourism in the area. The results showed that tourists were predominantly young and highly educated. The Erin-Ijesha Waterfalls attracts visitors primarily for its scenic beauty, opportunities for nature photography, and recreational activities such as hiking and swimming. Cultural and historical value also played a significant role, highlighting the site's multidimensional appeal. On the downside, these benefits were tempered by infrastructure deficits particularly poor road access, inadequate sanitation and limited accommodation. On the other hand, most residents were mainly engaged in farming and trading, with a portion benefiting directly from tourism-related employment. For instance, tourism was found to contribute positively to the local economy through job creation, increased petty trading, and enhanced community pride. The tourism economy has created new income streams and fostered skill development, though informally. However,

residents reported environmental challenges such as littering, vegetation damage, and congestion, alongside social issues like noise disturbances and moral concerns over visitor behavior. Although, some residents perceived no negative impacts, these concerns, if unaddressed, could undermine community support for tourism development. The insights from this study could guide policymakers, tourism managers, and community leaders in designing strategies to enhance balanced conservation goals with socio-economic development and ensuring that tourism remains a sustainable asset for both the community and future generations in the study area and/or similar contexts.

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