African Journal of Hospitality, Tourism and Leisure 2025, Vol. 14 No. 2 pp. 481-490
ISSN: 2223-814X

Balancing Livelihoods and Conservation in Protected Areas: Insights from Forest-Adjacent Communities

Usang Nkanu ONNOGHEN
Department of Environmental Education, University of Calabar, Nigeria, Email, uonnoghen@unical.edu.ng

Inyang Ochi INYANG
Department of Accounting, University of Calabar, Nigeria, Email, inyangochi@gmail.com,

Comfort Nkongho AGBOR
Department of Environmental Education, University of Calabar, Nigeria, Email, commyspaco@yahoo.com

Simon Kanong-Osowo AJOM
Department of Urban and Regional Planning, University of Calabar, Nigeria, Email, ajomsimon@unical.edu.ng

Columba Apeh APEH
Department of Theatre and Media Studies, University of Calabar, Nigeria, Email, apehcolumba@unical.edu.ng

Nsagha Nkang OSAJI
Department of Human Kinetics and Health Education, University of Calabar, Nigeria, Email, pingosaji76@gmail.com

Edwin ONUOHA
Department of Environmental Resource Management, University of Calabar, Email, okoroalbert211@gmail.com

Iheoma Onyekachi IWUANYANWU
Department of Geography and Environmental Science, University of Calabar, Nigeria, Email, omaiwuanyanwu@gmail.com

Violet Bassey ENEYO
Department of Geography and Environmental Science, University of Calabar, Nigeria, Email, violeteneyo@unical.edu.ng
Corresponding Author

Abstract

Balancing conservation objectives with rural livelihoods presents a persistent governance challenge in protected areas. This study investigates how livelihood dynamics influence conservation outcomes in the buffer zone of Cross River National Park (CRNP), Nigeria. The objective is to examine the drivers of park encroachment and assess the effectiveness of alternative livelihood interventions. Primary data were collected from three forest-reliant communities (Oban, Nsan, and Mkpot) using household surveys, in-depth interviews, and focus group discussions. Results show that subsistence farming and the harvesting of non-timber forest products (NTFPs) notably bush mango and Afang leaves dominate local livelihoods. Despite periodic interventions, continued encroachment reflects programme failures marked by irregular implementation, limited funding, and weak alignment with local needs. Respondents cited inadequate credit access, poor market linkages, and insufficient training as core constraints to sustainable livelihood transitions. Conservation enforcement, in the absence of viable alternatives, is widely perceived as punitive rather than participatory. The study highlights the need for long-term, community-responsive livelihood strategies that complement conservation efforts. Institutional trust, co-management, and culturally appropriate interventions are essential for building local cooperation and ecological resilience. The research extends the sustainable livelihoods framework by positioning institutional reliability, policy continuity, and stakeholder inclusion as central to successful conservation outcomes in forest-adjacent communities.

Keywords: Sustainable livelihoods, conservation conflict, sustainable development, protected areas, Cross River National Park

How to cite this article: Onnoghen, U.N., Inyang, I.O., Agbor, C.N., Ajom, S. K., Apeh, C.A., Osaji, N.N., Onuoha, E., Iwuanyanwu, I.O. & Eneyo, V.B. (2025). Balancing Livelihoods and Conservation in Protected Areas: Insights from Forest-Adjacent Communities. African Journal of Hospitality, Tourism and Leisure, 14(2):481-490. DOI: https://doi.org/10.46222/ajhtl.19770720.625

Introduction

Protected areas have become important instruments in global biodiversity conservation. They help preserve threatened ecosystems, safeguard endangered species, and sustain critical ecological processes. Nevertheless, the implementation of conservation strategies in many developing countries often involves stringent restrictions on forest resource use. These restrictions frequently overlook the essential needs of neighbouring communities, who depend heavily on these resources for their survival (Abbasi et al., 2022; Acha-Anyi, 2020; Ahmed & Dar, 2023; Bhalla et al., 2016). In areas characterised by high levels of poverty and limited alternative economic opportunities, such conservation restrictions can result in conflicts, economic hardship, and resentment among local populations. This tension is especially pronounced in communities adjacent to forests. Across sub-Saharan Africa, communities commonly rely on farming, hunting, and harvesting non-timber forest products (NTFPs) to maintain their livelihoods (Achieng et al., 2023; Chami & Mjema, 2024; Elshaer et al., 2024; Eneyo et al., 2022; Fordham et al., 2018). When conservation policies restrict forest access, these communities often experience significant declines in income and food security (Ghaderi et al., 2022; Gumede & Nzama, 2020; Inah et al., 2022; Krittayaruangroj et al.,

Open Rubric

2023). Conservation laws are frequently enforced without adequate consultation, compensation, or meaningful inclusion of affected communities. Such exclusion fosters conflict, weakens compliance, and increases illegal resource extraction and boundary encroachment within protected areas (Chiwaridzo & Dzingirai, 2024; Eneyo & Essien, 2024; Legatzke et al., 2024). Nigeria's Cross River National Park (CRNP) exemplifies these challenges. The Park, a key conservation site in West Africa, aims to protect one of the region's last remaining tropical rainforests. The establishment and enforcement of CRNP regulations have notably affected the livelihoods of surrounding communities, particularly those in the Oban sector (Eneyo & Essien, 2024; Undelikwo et al., 2025). Restrictions imposed by park authorities have significantly limited farming practices, which are critical to local livelihoods. Additionally, residents' access to forest products traditionally gathered for food, medicine, and trade has markedly decreased. Consequently, local residents have expressed dissatisfaction with the park's management and enforcement approaches, highlighting perceived neglect of their socio-economic needs (Abukari & Mwalyosi, 2020; Eneyo & Essien, 2024; Inah et al., 2022; Ndem et al., 2025). This research investigates how communities near CRNP adapt their livelihood strategies in response to conservation pressures. Specifically, it identifies the primary livelihood approaches adopted by these communities, examines the socio-economic challenges they face, and explores the coping mechanisms employed. Although significant global research has examined sustainable livelihoods, protected area management, conservation, and community participation in tourism (Simpson et al., 2025; Spenceley & Snyman, 2017; Stone & Stone, 2022; Stone et al., 2022; Udonwa et al., 2024; Zhang et al., 2022), empirical studies specifically addressing these issues in the context of CRNP remain limited. This study addresses this knowledge gap, contributing context-specific insights to inform broader discussions on equitable and effective protected area management. Balancing conservation goals with human development needs continues to be a significant global challenge, and insights from context-specific research offer valuable lessons for conservation strategies worldwide.

Literature review

Sustainable livelihoods and protected area conservation

The concept of sustainable livelihoods has become increasingly prominent in global conservation and development discussions. Sustainable livelihoods refer to people's ability to sustain themselves economically and socially, using available resources without compromising ecological integrity (Acquah et al., 2022; Agyeman et al., 2019). The Sustainable Livelihood Framework (SLF), commonly employed in conservation studies, classifies livelihood assets into five distinct categories: human, natural, social, physical, and financial capital (Akeh et al., 2023; Eneyo et al., 2022). This framework systematically analyses how communities leverage these assets to sustain their livelihoods amidst external pressures, including conservation-related constraints. Protected areas are integral to biodiversity conservation strategies worldwide but often restrict local communities' access to vital resources (Altinay & Taheri, 2019; Anunobi & Okpoko, 2024). Such restrictions frequently lead to substantial livelihood disruptions, particularly in sub-Saharan Africa. Studies conducted by Demelash (2024) and Eneyo & Essien (2024) highlight significant adverse effects on communities heavily dependent on farming, hunting, and NTFPs when conservation policies restrict access to these resources. Such restrictions often reduce food security and household incomes, deepening socio-economic challenges for affected communities (Inah et al., 2022; Makwindi & Ndlovu, 2021). Conservation measures often produce unintended socio-economic consequences for forest-dependent communities. Studies across sub-Saharan Africa indicate that conservation initiatives generally prioritise ecological outcomes, neglecting local socio-economic realities and community needs (de Grosbois & Fennell, 2022; Makwindi & Ndlovu, 2022). For instance, research by Manico et al. (2020) and Mmopelwa et al. (2023) demonstrated how stringent conservation regulations directly resulted in increased poverty, loss of traditional employment opportunities, and restricted market access among forest-dependent communities. Additionally, conservation enforcement typically lacks adequate consultation, fair compensation, and meaningful participation from affected communities (Ndlovu et al., 2024; Quynh et al., 2021; Ramukumba, 2021). The absence of inclusive approaches often leads to tension, reduced compliance, increased illegal resource extraction, and boundary infringements within protected areas (Pestana & Gageiro, 2014; Pranita et al., 2022; Suliyanto et al., 2025; Tengan et al., 2024; Trišić et al., 2023). Such exclusionary conservation practices undermine long-term conservation goals and community resilience, contributing to persistent conflicts and disputes between local communities and conservation authorities.

Communities affected by conservation regulations typically employ various strategies to adapt to livelihood disruptions. Livelihood diversification, involving the adoption of alternative economic activities, is fundamental to enhancing community resilience, as highlighted by Pasanchay & Schott (2021) and Reindrawati (2023). Communities frequently engage in alternative activities, such as petty trading, livestock farming, and skill acquisition, to offset the economic impacts resulting from reduced forest access (Eneyo et al., 2022; Mchunu et al., 2021; Nyaupane et al., 2022; Silva et al., 2023). Despite these adaptive strategies, communities often face considerable barriers, including limited financial resources, inadequate infrastructure, and weak institutional support, hindering effective livelihood diversification and increasing vulnerability (Krittayaruangroj et al., 2023; Neiman et al., 2010; Parvin et al., 2021; Samal & Dash, 2023). Nigeria's CRNP exemplifies these conservation and livelihood challenges. Established primarily to conserve the region's remaining tropical rainforests, CRNP has significantly influenced local livelihoods, particularly in the Oban sector (Eneyo & Essien, 2024; Undelikwo et al., 2025). According to research by Inah et al. (2022) and Ndem et al. (2025), local communities around CRNP are heavily reliant on agriculture and forest products for daily subsistence and economic activities. Park regulations restricting farming practices and reducing access to NTFPs for food, medicine, and trade have consequently led to widespread dissatisfaction among residents. Residents perceive conservation measures as economically damaging and socially inequitable, highlighting a critical need for more inclusive conservation practices (Eneyo & Essien, 2024). Extensive global research has examined sustainable livelihoods,

protected area management, community participation, and tourism (Simpson et al., 2025; Stone & Stone, 2022; Stone et al., 2022; Udonwa et al., 2024). However, specific empirical investigations focusing explicitly on livelihood dynamics within Nigeria's CRNP context remain limited. Existing studies primarily offer broad overviews of conservation impacts without detailed, context-specific insights into local communities' responses and adaptation strategies. This study addresses this research gap by providing empirical evidence on livelihood adaptation within CRNP communities, contributing to a deeper understanding of how conservation strategies can effectively align with sustainable local livelihoods. Insights from this study will potentially inform equitable and sustainable conservation approaches, not only in Nigeria but also in similar contexts worldwide.

Conceptual framework: SLF

This study adopts the SLF as its guiding analytical lens. Originally developed by Scoones (1998) and later adapted by the United Kingdom's Department for International Development (DfID) in 1999, the framework offers a structured method for understanding how people construct and sustain their livelihoods under varying socio-economic and environmental conditions. The SLF facilitates the analysis of how communities respond to vulnerability, manage resources, and interact with policy and institutional structures to achieve long-term sustainability (Scoones, 1998; Inah et al., 2022). Livelihood assets are classified into five core categories: human capital, encompassing education, health, and skills; natural capital, including land, water, and biodiversity; social capital, referring to networks, norms, and trust-based relationships; physical capital, which consists of infrastructure, tools, and technologies; and financial capital, involving income, credit, and savings (Abbasi et al., 2022; Abukari & Mwalyosi, 2020; Eneyo & Essien, 2024). These capitals operate interactively within a broader context of institutional policies, socio-economic structures, and ecological dynamics (Ghaderi et al., 2022; Gumede & Nzama, 2020). Adaptation and resilience are fundamental principles of the SLF. Households continuously adjust their strategies based on access to assets, environmental pressures, and external interventions. Financial capital often enables or restricts access to other capitals, thus influencing the overall livelihood trajectory (Eneyo & Essien, 2024; Undelikwo et al., 2025). Livelihood decisions are shaped by power relations, governance quality, and institutional inclusivity (Ahmed & Dar, 2023; Bhalla et al., 2016; Eneyo et al., 2022; Scoones, 2013). Evidence from recent studies confirms the framework's applicability across diverse settings. Scholars have explored how livelihood capitals influence poverty alleviation, particularly in resource-constrained and conservation-restricted communities (Kizanlikli et al., 2023; Kuguyo & Gandiwa, 2023; Kuseni et al., 2024). In rural settings affected by conservation restrictions, such as the CRNP, the SLF allows for a contextual analysis of how policies alter access to assets, disrupt income streams, and affect survival strategies (Akeh et al., 2023; Eneyo et al., 2022; Natarajan et al., 2022). Application of the SLF in this study facilitates the identification of equitable policy pathways that align conservation goals with sustainable community livelihoods. The framework contributes to the formulation of adaptive, inclusive strategies for environmental governance, particularly in settings where conservation intersects with socio-economic vulnerability.

Figure 1: SLF (source: Scoones, 1998; Pamungkas and Jones, 2021)

Methodology

This study adopted a descriptive survey design to examine how conservation policies impact the livelihoods of forest-adjacent communities of the CRNP, Nigeria. The research focused on communities including Oban, Nsan and Mkpot. Primary data were collected using structured questionnaires, designed to capture household socio-economic profiles, livelihood strategies, and perceptions of conservation policies. Data collection instruments were pre-tested to ensure validity and reliability. The study applied purposive sampling to select 3 communities located within five kilometres of the park boundary, based on their proximity and dependence on forest resources. Within each community, systematic random sampling was used to select

household heads, ensuring representative coverage across the study area. Quantitative data were analysed using both descriptive and inferential statistical techniques. Descriptive statistics such as means, percentages, and frequencies summarised household characteristics and livelihood activities, among other variables. Inferential analysis was performed using Contingency Chi-Square test to determine if alternative livelihood strategies between Oban, Nsan and Mkpot community members show a significant relationship. Statistical analyses were conducted using SPSS version 25, and all results were interpreted at a 95% confidence level. Ethical clearance was obtained from relevant institutional review boards, and informed consent was secured from all participants prior to data collection.

Results

Livelihood structures and forest dependency

Livelihood activities within the three surveyed communities (Oban, Nsan, and Mkpot) demonstrate a predominant reliance on land-based and forest-linked occupations. Farming emerged as the most widely practised economic activity, engaging 38.8% of respondents. This was followed by the collection of NTFPs at 28.0%, and petty trading at 9.2%. Minor contributions were also recorded from hunting (3.6%), craftsmanship (6.0%), and transport services (7.2%). These findings suggest that natural resources remain central to rural economic structures. Notably, NTFP collection is not only a supplement to farming but also a primary source of household food and income security.

Table 1: Livelihood activities by community

S/No	Occupation	Oban	Nsan	Mkpot	Total	%
1.	Farming	35	22	40	97	38.8
2.	Petty Trading	8	6	9	23	9.2
3.	Civil Service	5	2	4	11	4.4
4.	Hunting	3	2	4	9	3.6
5.	NTFPs Collection	28	16	26	70	28.0
6.	Craftsmanship/Carpentry	5	4	6	15	6.0
7.	Transport Services	7	5	6	18	7.2
8.	Others (e.g., Mat Making)	4	3	3	10	2.8

A breakdown of collected forest items shows that Afang leaves (Gnetum africanum) accounted for 20.8%, followed by Achi leaves (19.6%), and other species like bitter kola and hot leaves, which further reinforce the nutritional and commercial role of forest biodiversity in sustaining rural livelihoods (Figure 2). This occupational pattern reflects a deep entanglement between conservation landscapes and human survival strategies. The persistent reliance on forest products indicates the necessity for any conservation measure to consider the embedded economic roles of forest ecosystems.

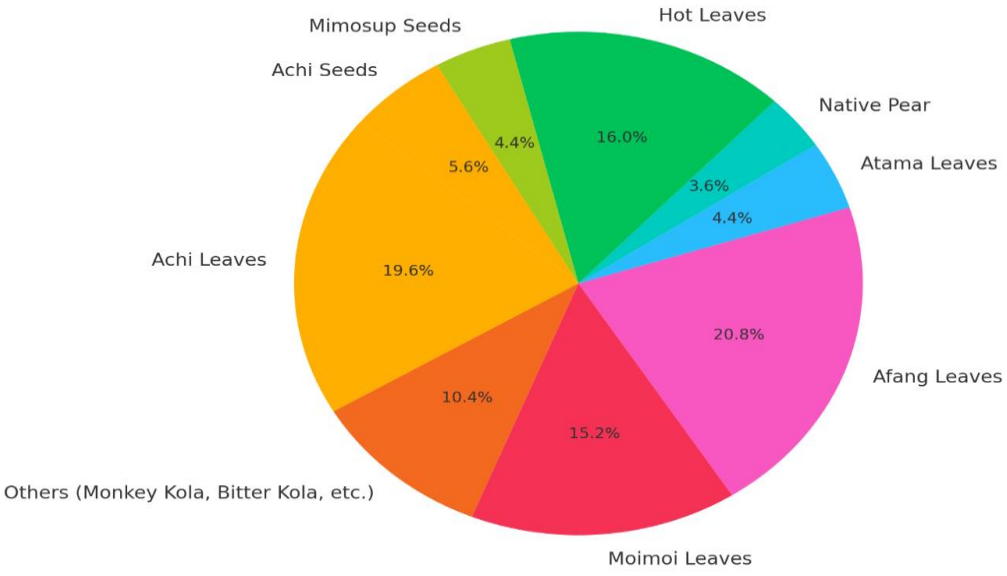

Figure 2: Major forest products collected (%)

Household income and livelihood preferences

Household income distribution across the surveyed communities illustrates the economic vulnerability of residents living adjacent to the CRNP. Approximately 35.2% of respondents reported monthly earnings of ₦10,000 or less, while 32% earned between ₦10,001 and ₦20,000. Only 32.8% reported incomes above ₦20,000 per month (Table 2). These figures underscore the low-income status of the majority of forest-edge households, reflecting their reliance on subsistence economies and seasonal forest produce.

Table 2. Monthly household income levels

S/No	Income category from forest products (₦)	Frequency	%
1	Below 5,000	42	16.8
2	5,000 – 10,000	46	18.4
3	10,001 – 20,000	80	32

4	Above 20,000	82	32.8
	Total	**250**	**100**

In exploring future livelihood directions, respondents identified a strong preference for activities that offer more stable and sustainable economic prospects. Access to farming inputs and improved seedlings was most frequently cited, accounting for 58.0**%** of all responses (Table 3). This was followed by vocational training and skill acquisition (18.8%), livestock farming (12.4%), market gardening (6.0%), and microfinance access (4.8%). These results suggest a growing desire among local residents to transition from extractive forest-based activities to more stable market-linked enterprises. However, the current income levels suggest limited capacity to independently initiate such transitions without external financial support or institutional facilitation.

Table 3. Preferred livelihood options across communities

S/No	Preferred livelihood strategy	Oban	Nsan	Mkpot	Total	%
1	Farming inputs & improved seedlings	50	35	60	145	58.0
2	vocational training and Skill acquisition	20	13	14	47	18.8
3	Livestock farming	12	10	9	31	12.4
4	Market gardening	8	4	3	15	6.0
5	Access to microfinance	10	0	2	12	4.8

Spatial differences in alternative livelihoods

The study applied a Chi-square (χ^2) test to determine whether statistically significant differences exist in preferred alternative livelihood strategies across the three communities: Oban, Nsan, and Mkpot. The aim was to assess if spatial variation affects livelihood choices, thereby informing tailored intervention strategies. The results on Table 4 show a Chi-square statistic of 34.52, which exceeds the critical value of 15.507 at 8 degrees of freedom and a 95% confidence level ($p < 0.05$). This indicates a significant relationship between community location and the type of alternative livelihood strategies preferred by respondents. These findings reveal that livelihood preferences are not uniform across all support-zone communities. For instance, Oban residents predominantly opted for farming inputs and livestock support while Nsan also showed interest in vocational training and access to microfinance. Mkpot expressed inclination toward a combination of market gardening and skill acquisition. This spatial variation suggests that socio-economic conditions, access to infrastructure, education levels, and past exposure to development programmes may shape how communities perceive and prioritise livelihood opportunities. It also implies that a one-size-fits-all approach to livelihood intervention would likely fail in the CRNP context. Tailored strategies are essential to address the heterogeneous needs and capabilities of these communities.

Table 4. Chi-square test summary for livelihood preferences by community

Test Parameter	Value
Chi-Square Statistic (χ^2)	34.52
Degrees of Freedom (df)	8
Critical Value (0.05)	15.507
Significance Level	95%
Statistical Significance	Yes

Interpretation Note: Values suggest a strong association between location and livelihood preference.

Patterns of forest encroachment and motivation

Field data from interviews, focus group discussions, and park enforcement records indicate that forest encroachment within the CRNP's Oban sector is largely driven by livelihood pressures rather than deliberate criminality. The analysis of enforcement records between 2016 and 2024 reveals a rising trend in forest trespass incidents, with a peak of 64 arrests in 2022. Among the key motives cited for encroachment were farming (38%), poaching (25.2%) and medicinal herb collection (17%). Other causes include bush burning, logging, and boundary disputes. Additionally, community respondents frequently justified their actions by citing lack of alternative livelihoods, limited access to farmland outside the park, absence of follow-up support after prior interventions and unawareness or poor understanding of park boundaries and regulations. This trend highlights a pattern of necessity-driven infractions, where survival needs override compliance with conservation laws. Notably, the years with the highest enforcement numbers coincided with periods of limited or absent intervention support (as corroborated in Table 5). The implications are twofold: (i) forest protection efforts must integrate livelihood security mechanisms, and (ii) community sensitisation and participatory boundary management are essential to reduce human-park conflicts.

Table 5. Summary of forest trespass arrests and dominant motives (2016–2024)

Year	Number of Arrests	Dominant Trespass Motives
2016	6	Farming, Poaching
2017	18	Poaching, Herb Collection
2018	6	Farming, Logging
2019	29	Farming, Poaching
2020	44	Farming, Herb Collection
2021	43	Farming, Bush Burning
2022	64	Farming, Poaching
2023	36	Herb Collection, Bush Burning
2024	59	Farming, Poaching
Total	**305**	**Most frequent: Farming (38%), Poaching (25.2%)**

Effectiveness of intervention programmes (2016–2024)

Findings reveal that between 2016 and 2024, a series of intervention programmes were introduced to reduce forest dependency and mitigate livelihood-related encroachments in communities bordering the CRNP. These interventions included skill

acquisition workshops (e.g., snail farming, tailoring), provision of farming inputs and seedlings, installation of cassava processing mills, micro-credit facilities, and ecotourism-related vocational training (Figure 3). Moreso, the timeline analysis of intervention frequency and distribution reveals inconsistency and poor continuity. Notably, years such as 2019 and 2022 saw a cluster of multiple programmes, whereas others (e.g., 2017, 2020) had either no or limited activity. This lack of consistency may have contributed to persistent economic vulnerability and the resurgence of forest trespassing, as shown in earlier enforcement trends. In addition, focus group feedback and survey data further underscore mixed community reactions. For instance, in Nsan, snail farming training was praised, yet lack of start-up capital rendered the programme ineffective. Also, in Oban, a cassava mill was installed but soon became non-functional due to poor maintenance and absence of technical support. Mkpot residents sampled highlighted that absence of market linkages made even successful skill acquisitions economically unsustainable. Despite these challenges, 66.5% of respondents acknowledged some level of positive impact, particularly in areas such as skill acquisition and exposure to livelihood diversification. However, the absence of follow-up mechanisms, performance monitoring, and market integration was cited as a major limitation to long-term sustainability.

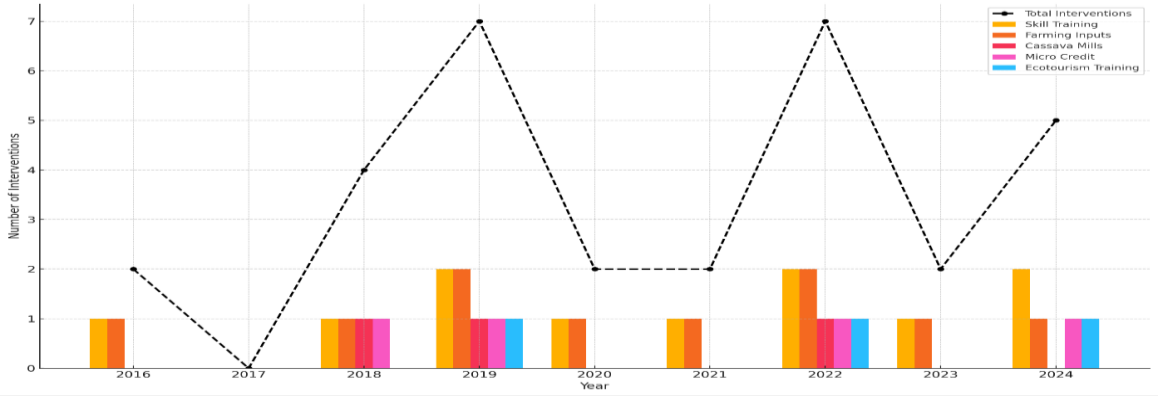

Figure 3: Yearly distribution of intervention types (2016–2024)

Stakeholder recommendations and sustainability prospects

Insights from focus group discussions and survey responses reveal a shared recognition among stakeholders of the urgent need to align conservation strategies with sustainable livelihood frameworks. Respondents including community leaders, local farmers, women's cooperative members, and park officials highlighted that the sustainability of conservation goals in the CRNP depends heavily on the successful implementation of locally embedded, economically viable alternatives to forest-dependent activities. When asked to prioritise livelihood strategies for long-term conservation success: 58.2% of stakeholders recommended the expansion of structured alternative livelihood programmes, particularly those linked to agriculture, livestock rearing, and eco-enterprise development. 19.3% advocated for improved vocational training centres with market-driven skills. 16.8% emphasised enhanced access to farming inputs and infrastructure. Only 5.7% prioritised microfinance and credit reforms, although these were consistently cited as critical enablers for scaling other interventions. The low ranking of financial access schemes is not indicative of disinterest, but rather a reflection of prior failed or inaccessible microfinance models. Respondents expressed concern over the lack of transparency, high collateral demands, and poor follow-up support associated with previous credit schemes. Nevertheless, many still viewed credit access as a foundational requirement for the success of any livelihood transition initiative. Furthermore, several respondents stressed the need for: Participatory conservation planning, integrated resource governance frameworks, and market access facilitation. The sustainability of conservation in CRNP therefore hinges not merely on ecological control but on developing livelihood ecosystems that are productive, self-sustaining, and inclusive.

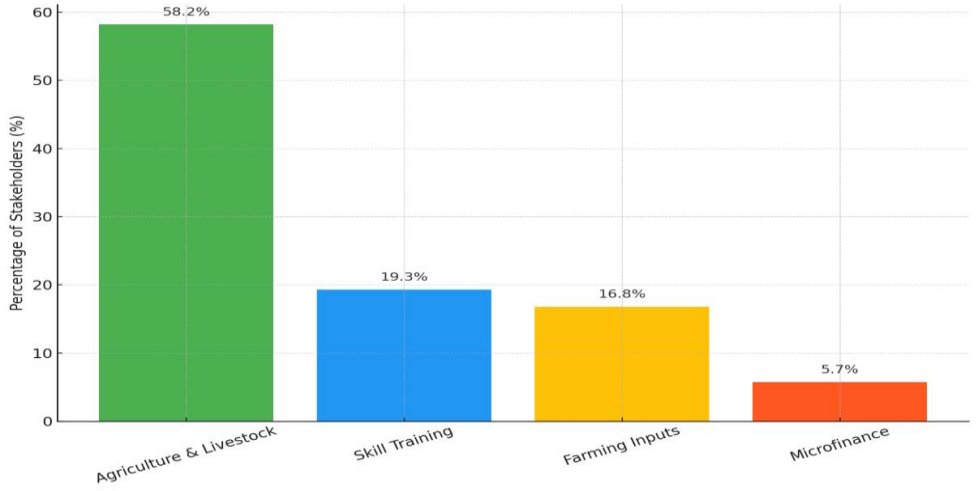

Figure 4: Stakeholder preferences for sustainable livelihood strategies in CRNP

Furthermore, several respondents stressed the need for participatory conservation planning, where community voices influence the design and timing of interventions. Again, integrated resource governance frameworks that improve synergy between conservation actors and development agencies and market access facilitation, especially for agricultural and processed products was also suggested by some of the respondents. The respondents reveal that sustainability of conservation in CRNP therefore hinges not merely on ecological control but on developing livelihood ecosystems that are productive, self-sustaining, and inclusive. Aligning livelihood diversification with ecological objectives will require not only infrastructure and capital but also trust-building and co-management between park authorities and local stakeholders.

Key constraints to livelihood development

The analysis of community responses indicates that limited access to credit remains the most significant constraint to sustainable livelihood development, with 32.6% of respondents identifying it as a major barrier (Table 6). Poor market linkages and recurring human-wildlife conflict also emerged as critical challenges, both of which undermine the profitability and reliability of land-based livelihood strategies. Respondents further observed that vocational training, in isolation, is inadequate without sustained mentorship, accessible markets, and financial capital. These findings underscore the need for a multi-faceted livelihood strategy that integrates infrastructure development, financial inclusion, and participatory community planning.

Table 6. Key constraints to livelihood development in CRNP support-zone communities

Constraint type	% of respondents	Illustrative quotes or observations
Lack of access to credit	32.6	"We are trained but have no capital to start anything." – Woman, Nsan
Poor market linkages	21.4	"Even if we process cassava, there is no good road to carry it to market."
Human-wildlife conflict	17.8	"Crops are eaten by animals from the park, especially during dry season."
Inadequate vocational skills	13.2	"Most of our youths have no skills apart from farming or hunting."
Exclusion from programme design	9.7	"Government just comes and does things without asking us."
Irregular interventions	5.3	"Sometimes help comes, then we wait years before anything else happens."
Total	**100.0**	

Discussion

The findings of this study reveal nuanced insights into the intersections of livelihoods, conservation pressures, and stakeholder perceptions in the CRNP buffer zone. Results show that farming continues to dominate across the studied communities *Oban, Nsan,* and *Mkpot* highlighting the centrality of subsistence agriculture to household survival. This dominance of land-dependent occupations, particularly farming and NTFP harvesting (for example, bush mango, *Afang* leaves), confirms previous work highlighting the entrenched dependence of forest-adjacent populations on nature-based livelihoods (Achieng et al., 2023; Chami & Mjema, 2024; Elshaer et al., 2024). However, the high incidence of illegal park access for farming and poaching further illustrates the tension between livelihood needs and conservation mandates. Analysis of arrest records reveals that peak trespassing episodes coincide with years lacking livelihood support interventions. This affirms the view of Achieng et al. (2023) and Eneyo et al. (2022) that conservation enforcement, when decoupled from viable economic alternatives, is perceived as repressive rather than collaborative. The irregularity of intervention programmes as illustrated in the timeline suggests an ad hoc approach to community support. While some years (for example, 2018, 2022) experienced concentrated activity, others were marked by neglect. This fragmentation undermines trust and reduces the cumulative impact of support programmes (Ndem et al., 2025; Inah et al., 2022). Community feedback also underscores dissatisfaction with programme implementation: issues of poor market access, lack of credit systems, and non-functional training mechanisms remain prominent. These constraints were reported by both household respondents and key informants and resonate with the conclusions of Fordham et al. (2018) and Elshaer et al. (2024), who observed that community buy-in declines when interventions do not align with local needs or lack post-training continuity. Stakeholders across all three communities demonstrated clear preferences for economically rewarding and locally suitable alternatives such as livestock rearing, cassava processing, and gardening. This mirrors the findings of Abukari & Mwalyosi (2020) and Inah et al. (2022), who argue that interventions are more likely to succeed when culturally compatible and immediately beneficial. Moreover, 66.5% of respondents reported that while they had participated in livelihood support projects, the lack of follow-up and market infrastructure limited long-term adoption and success. The constraint data further reinforces this: over 31% identified lack of credit as the most pressing issue, followed by poor market access (22.6%) and inadequate training (18%). These issues have consistently undermined rural development programmes in Nigeria, including conservation-related efforts (Eneyo et al., 2022). The findings suggest that sustainable conservation in CRNP cannot be divorced from livelihood transformation. Unless interventions are long-term, well-funded, and supported by enabling institutions, park-community conflict will likely persist. Hence, the study advocates for a holistic, stakeholder-driven conservation strategy that centres local livelihood needs. Interventions must be tailored, continuous, and embedded in broader development policy frameworks. Only through such an integrated approach can the goals of biodiversity conservation and rural poverty reduction be jointly realised in the CRNP context.

Conclusion

This study examined the interconnections between community livelihoods, conservation enforcement, and socio-environmental conflict in the buffer zones of CRNP, Nigeria. Data collected from Oban, Nsan, and Mkpot communities revealed a persistent reliance on land-based subsistence practices, particularly farming and the extraction of NTFPs, as principal sources of livelihood. The persistence of park encroachment and unsustainable land-use practices, despite periodic intervention efforts, indicates that existing livelihood programmes remain insufficient, irregular, and culturally disconnected from local realities.

Several structural barriers continue to hinder successful livelihood transitions. Respondents identified limited access to credit (31.4%), inadequate training and follow-up (18%), and weak market integration (22.6%) as core constraints. Stakeholder feedback further exposed a gap between conservation policies and the socio-economic realities of buffer zone residents. Many community members expressed conditional support for conservation, grounded in expectations of tangible and sustained economic benefits. Theoretically, this study contributes to the sustainable livelihoods and tourism literature by extending the SLF. Findings reveal that successful livelihood transitions in conservation settings depend not solely on material assets or income alternatives, but also on political continuity, institutional reliability, cultural legitimacy, and inclusive governance mechanisms. These elements have often been underemphasised in traditional livelihood models. By situating stakeholder co-management, enforcement dynamics, and local trust as central determinants of conservation outcomes, the study enhances understanding of how integrated governance can facilitate tourism-supported rural development. Tourism-based conservation models, including community and ecotourism strategies, require local ownership, transparent benefit-sharing mechanisms, and coherent policy delivery. In the CRNP context, the disconnection between rural development and environmental protection continues to undermine conservation success. Interventions must prioritise locally relevant, scalable initiatives supported by reliable credit, functioning markets, and participatory governance systems. Further research should assess the long-term socio-economic and ecological effects of tourism-supported interventions. Additional inquiry into the application of digital platforms for enhancing local participation and accountability in conservation planning would also provide value. Achieving sustainable conservation in CRNP demands a comprehensive shift in planning and implementation. Integrating livelihood development within environmental governance offers a path forward. Community members, when recognised as partners rather than targets, possess the capacity to uphold conservation goals while securing their economic future. A balanced, inclusive approach presents the most viable route toward preserving biodiversity alongside enhancing rural resilience.

References

Abbasi, S., Mirdamadi, S. M., Omidi Najaf Abadi, M. & Farajollah Hosseini, S. J. (2022). Designing a Model of Rural Ecotourism Entrepreneurship Development with a Qualitative Approach. *Geography and Development*, 20(66), 131–160. http://dx.doi.org/10.22111/J10.22111.2022.6716

Abukari, H. & Mwalyosi, R. B. (2020). Local Communities' Perceptions about the Impact of Protected Areas on Livelihoods and Community Development. *Global Ecology and Conservation*, 22, e00909. https://doi.org/10.1016/j.gecco.2020.e00909

Acha-Anyi, P. N. (2020). Leisure Tourism and Sustainable Livelihoods in the Eastern Cape Province of South Africa. *African Journal of Hospitality, Tourism and Leisure*, 9(4), 500–514. https://doi.org/10.46222/ajhtl.19770720-33

Achieng, A. O., Arhonditsis, G. B., Mandrack, N. E., Febria, C. M., Opaa, B., Coffey, T. J., Irvine, K., Masese, F. O., Ajode, Z. M., Barasa, J. E., Obiero, K. & Kaunda Arara, B. (2023). Monitoring Biodiversity Loss in Rapidly Changing Afrotropical Ecosystems: An Emerging Imperative for Governance and Research. *Philosophical Transactions of the Royal Society B*, 378(1881), 20220271. https://doi.org/10.1098/rstb.2022.0271

Acquah, E., Owusu, D. A., Nkrumah, E. E., Anane Agyei, P. & Asare, R. (2022). Sustainable Ecotourism Development and Visitor Satisfaction: The Case of Bomfobiri Wildlife Sanctuary, Kumawu, Ghana. *International Journal of Sustainable Development & World Ecology*, 29(8), 797–811. https://doi.org/10.1080/13504509.2022.2105412

Agyeman, Y. B., Yeboah, A. O. & Ashie, E. (2019). Protected Areas and Poverty Reduction: The Role of Ecotourism Livelihood in Local Communities in Ghana. *Community Development*, 50(1), 73–91. https://doi.org/10.1080/15575330.2019.1572635

Ahmed, N. & Dar, S. A. (2023). Residents' Responsible Behaviour in Cultural Heritage Tourism: The Role of Cultural Intelligence and Tourism Impacts. *African Journal of Hospitality, Tourism and Leisure, 13*(4), 673–681. https://doi.org/10.46222/ajhtl.19770720.552

Akeh, L. B., Bassey, B. J., Odok, A. O., Odok, E. A., Uttah, C., Idika, D. O., Onnoghen, U. N., Akpanika, E. N., Onabe, D. B. & Eneyo, V. B. (2023). Insecurity and Its Economic Impact on Calabar Nightclubs, Nigeria. *African Journal of Hospitality, Tourism and Leisure*, 12(4), 1603–1617. https://doi.org/10.46222/ajhtl.19770720.452

Altinay, L. & Taheri, B. (2019). Emerging Themes and Theories in the Sharing Economy: A Critical Note for Hospitality and Tourism. *International Journal of Contemporary Hospitality Management*, 31(1), 180–193. https://doi.org/10.1108/IJCHM-02-2018-0171

Anunobi, H. N. & Okpoko, P. U. (2024). An Assessment of Tourism Infrastructure in the Niger Delta Region of Nigeria. *African Journal of Hospitality, Tourism and Leisure*, 13(3), 682–692. https://doi.org/10.46222/ajhtl.19770720.553

Bhalla, P., Coghlan, A. & Bhattacharya, P. (2016). Homestays' Contribution to Community-Based Ecotourism in the Himalayan Region of India. *Tourism Recreation Research*, 41(2), 213–228. http://dx.doi.org/10.1080/02508281.2016.1178474

Chami, M. F. & Mjema, E. (2024). Local Community Engagement and Gazettement Approach in Managing and Conserving Pangani Historic Town in Tanzania. *Built Heritage*, 8(1), 31. https://doi.org/10.1186/s43238-024-00148-x

Chiwaridzo, O. T. & Dzingirai, M. (2024). Climate Change Resilience Strategies for Safeguarding Sustainable Tourism in Zimbabwe. *Environment, Development and Sustainability*, 1–24. https://doi.org/10.1007/s10668-024-04885-y

de Grosbois, D. & Fennell, D. A. (2022). Sustainability and Ecotourism Principles Adoption by Leading Ecolodges: Learning from Best Practices. *Tourism Recreation Research*, 47(5–6), 483–498. https://doi.org/10.1080/02508281.2021.1875170

Demelash, D. (2024). Potentials and Challenges for Religious Tourism Development: The Case of Qoma Fasiledes Church, Ethiopia. *International Journal of Economic Behavior and Organization*, 12(4), 213–222. https://doi.org/10.11648/j.ijebo.20241204.13

Elshaer, I. A., Azazz, A. M. & Fayyad, S. (2024). Residents' Environmentally Responsible Behavior and Tourists' Sustainable Use of Cultural Heritage: Mediation of Destination Identification and Self-Congruity as a Moderator. *Heritage, 7*(3), 1174–1187. https://doi.org/10.3390/heritage7030056

Eneyo, V. B., Attah, F. M., Antai, A. S., Adie, H. I. & Ochiche, C. A. (2022). Tourism Viability Status of Kwa Falls Ecotourism Site of Aningeje Rural Community, Cross River State, Nigeria. *Environment and Ecology Research*, 10(2), 125–132. https://doi.org/10.13189/eer.2022.100202

Eneyo, V. B. & Essien, D. A. (2024). Economic and Social Impacts of Cultural Festivals: A Comprehensive Analysis of Calabar Carnival, Nigeria. *Nigerian World Tourism Journal (WTJ)*, 2(1), 07–116.

Eneyo, V. B. & Essien, D. A. (2024). Unlocking the Economic Potential of Nigeria's Tourism Industry. *Nigerian Journal of Social and Development Issues (NJSDI)*, 11(1), 116–133.

Fordham, A. E., Robinson, G. M., Blackwell, B. D. & Cleary, J. (2018). Contributing to Sustainable Community Livelihoods: Corporate Social Responsibility Programmes of Resource Companies. *Rural Society*, 27(3), 224–242. https://doi.org/10.1080/10371656.2018.1504798

Ghaderi, Z., Shahabi, E., Fennell, D. & Khoshkam, M. (2022). Increasing Community Environmental Awareness, Participation in Conservation, and Livelihood Enhancement Through Tourism. *Local Environment*, 27(5), 605–621. https://doi.org/10.1080/13549839.2022.2048812

Gumede, T. K. & Nzama, A. T. (2020). Enhancing Community Participation in Ecotourism Through a Local Community Participation Improvement Model. *African Journal of Hospitality, Tourism and Leisure*, 9(5), 1252–1272. https://doi.org/10.46222/ajhtl.19770720-82

Inah, E. O., Eneyo, V. B., Odey, S. A., Ushie, M. A., Udonwa, R. E., Esuabana, S. B., Ekpo, E. E., Akintoye, O. A. & Ajake, A. O. (2022). Anthropogenic Impacts on Water Quality of Kedong Stream in Idomi, Yakurr, Nigeria. *Environment and Ecology Research*, 10(6), 738–748. https://doi.org/10.13189/eer.2022.100609

Kizanlikli, M. M., Margazieva, N., Asanova, K. & Gundogdu, I. (2023). An Assessment of Eco Hotel Practices and Green Marketing Perceptions: An EcoLabelling Model Proposal for Hotels in Kyrgyzstan. *Journal of Cleaner Production*, 420, 138438. https://doi.org/10.1016/j.jclepro.2023.138438

Krittayaruangroj, K., Suriyankietkaew, S. & Hallinger, P. (2023). Research on Sustainability in Community-Based Tourism: A Bibliometric Review and Future Directions. *Asia Pacific Journal of Tourism Research*, 28(9), 1031–1051. https://doi.org/10.1080/10941665.2023.2276477

Kuguyo, T. T. & Gandiwa, E. (2023). The Influence of Coordinated Wildlife-Based Tourism Marketing Mix Strategies on the Overall Tourism Performance of Zimbabwe. *African Journal of Hospitality, Tourism and Leisure*, 12(4), 1236–1247. https://doi.org/10.46222/ajhtl.19770720.428

Kuseni, M., Hermann, U. & Sifolo, P. (2024). Profiling Ecotourists at a South African Wetland Park Based on Demographics and Participation in Ecologically-Responsible Tourism Practices. *African Journal of Hospitality, Tourism and Leisure*, 13(3), 478–485. https://doi.org/10.46222/ajhtl.19770720.531

Legatzke, H., Current, D. & LaPan, C. (2024). Applying the Sustainable Livelihoods Framework to Examine the Efficacy of Community-Based Tourism at Equitably Promoting Local Livelihood Opportunities. *Tourism Planning & Development*, 1–21. https://doi.org/10.1080/21568316.2024.2391509

Makwindi, N. & Ndlovu, J. (2021). Prospects and Challenges of Community-Based Tourism as a Livelihood Diversification Strategy at Sehlabathebe National Park in Lesotho. *African Journal of Hospitality, Tourism and Leisure*, 10(1), 333–348. https://doi.org/10.46222/ajhtl.19770720-104

Makwindi, N. & Ndlovu, J. (2022). Cultural and Heritage Tourism as an Alternative Rural Livelihood Diversification Strategy for Communities Living Adjacent to the Sehlabathebe National Park in Lesotho. *African Journal of Hospitality, Tourism and Leisure*, 11(2), 901–918. https://doi.org/10.46222/ajhtl.19770720.265

Manico, J. B., Leonido, L. & Gouveia, L. B. (2020). Carvão Sustentável – Um Projeto de Gestão Ambiental Despertando a Tecnologia dos Briquetes nas Comunidades Urbanas e Periurbanas em Angola – Huambo. *RICTS | Revista Internacional de Ciências, Tecnologia e Sociedade*, 3(2), 128. https://doi.org/10.37334/ricts.v3i2.42

Mchunu, A. J., Nyikana, S. & Tichaawa, T. M. (2021). Assessing the Pro-Environmental Behaviour Associated with Small-Scale Sport Tourism Events. *African Journal of Hospitality, Tourism and Leisure*, 10(6), 1811–1827. https://doi.org/10.46222/ajhtl.19770720.194

Mmopelwa, G., Moswete, N., Mulalu, M., Sebego, R. & Mulale, K. (2023). Assessment of Ecotourism Potential and Constraints of Community-Based Sclerocarya Birrea Kernel Production in Tswapong North, Botswana. *African Journal of Hospitality, Tourism and Leisure*, 12(5SE), 1922–1938. https://doi.org/10.46222/ajhtl.19770720.475

Natarajan, N., Newsham, A., Rigg, J. & Suhardiman, D. (2022). A Sustainable Livelihoods Framework for the 21st century. *World Development*, 155, 105898. https://doi.org/10.1016/j.worlddev.2022.105898

Ndlovu, N., Sifolo, P. P. S. & Tshipala, N. (2024). Leveraging Online Digital Technologies for Sustainability in Community-Based Rural Tourism. *Studia Periegetica*, 46(2), 97–114. https://doi.org/10.58683/sp.2006

Neiman, Z., Saraceni, R. F. & Geerdink, S. (2010). Levantamento Quali-Quantitativo da Produção Científica sobre Ecoturismo no Brasil. *Revista Brasileira de Ecoturismo (RBEcotur), 3*(3). https://doi.org/10.34024/rbecotur.2010.v3.5899

Parvin, F., Jamshidi, M. J. & Mohammadifar, Y. (2021). A Model to Develop Ecotourism Industry in Iran with Emphasis on Information Technology. *Geography and Environmental Sustainability*, 11(2), 35–53. https://doi.org/10.22126/GES.2021.6316.2370

Ndem, S. E., Owan, E. J., Ayeni, Q. O., Ejikeme, O. B., Utam, E. U., Ugal, B. U., Jerome, A.J., Benjamin, I.J., Ushie, C.A., Ogodo, F.A. & Eja, E. I. (2025). Impact of National Park Management Strategies and Programmes on Sustainable Livelihood of Rural Communities in Cross River State, Nigeria. *Multidisciplinary Reviews*, 8(7), 2025214-2025214.https://doi.org/10.31893/multirev.2025214

Nyaupane, G. P., Poudel, S. & York, A. (2022). Governance of Protected Areas: An Institutional Analysis of Conservation, Community Livelihood, and Tourism Outcomes. *Journal of Sustainable Tourism*, 30(11), 2686–2705. https://doi.org/10.1080/09669582.2020.1858089

Pamungkas, W., & Jones, T. E. (2021). Indonesia's Mountainous Protected Areas: National Parks and Nature-Based Tourism. In Nature-Based Tourism in Asia's Mountainous Protected Areas: A Trans-regional Review of Peaks and Parks (pp. 111–131). Springer. https://doi.org/10.1007/978-3-030-76833-1_6

Pasanchay, K. & Schott, C. (2021). Community-Based Tourism Homestays' Capacity to Advance the Sustainable Development Goals: A Holistic Sustainable Livelihood Perspective. *Tourism Management Perspectives*, 37, 100784. https://doi.org/10.1016/j.tmp.2020.100784

Pestana, H. & Gageiro, J. (2014). Análise de Dados para Ciências Sociais: A Complementaridade do SPSS (6ª Edição). *Revista, Atualizada e Aumentada, 1*(2). https://doi.org/10.13140/2.1.2491.7284

Pranita, D., Sarjana, S. & Mushofa, B. M. (2022). Mediating Role of Sustainable Tourism and Creative Economy to Improve Community Wellbeing. *African Journal of Hospitality, Tourism and Leisure*, 11(2), 727–740. https://doi.org/10.46222/ajhtl.19770720.253

Quynh, N., Hoai, N. T. & Loi, N. V. (2021). The Role of Emotional Experience and Destination Image on Ecotourism Satisfaction. *Spanish Journal of Marketing – ESIC, 25*(2), 312–332. https://doi.org/10.1108/SJME-04-2020-0055

Ramukumba, T. (2021). A Critical Review of Environmental Governance, Land Restitution, and Tourism in Protected Areas. *African Journal of Hospitality, Tourism and Leisure*, 10(6), 1916–1931. https://doi.org/10.46222/ajhtl.19770720.200

Reindrawati, D. Y. (2023). Challenges of Community Participation in Tourism Planning in Developing Countries. *Cogent Social Sciences*, *9*(1), 2164240. https://doi.org/10.1080/23311886.2022.2164240

Samal, R. & Dash, M. (2023). Ecotourism, Biodiversity Conservation and Livelihoods: Understanding the Convergence and Divergence. *International Journal of Geoheritage and Parks*, 11(1), 1–20. https://doi.org/10.1016/j.ijgeop.2022.11.001

Scoones, I. (1998). *Sustainable rural livelihoods: A framework for analysis* (IDS Working Paper No. 72). Institute of Development Studies. https://doi.org/10.2139/ssrn.2294679

Scoones, I. (2013). Livelihoods perspectives and rural development. *The Journal of Peasant Studies*, 36(1), 171–196. https://doi.org/10.1080/03066150902820503

Silva, S., Silva, L. F. & Vieira, A. (2023). Protected Areas and Nature-Based Tourism: A 30-Year Bibliometric Review. *Sustainability*, 15(15), 11698. https://doi.org/10.3390/su151511698

Simpson, F. O. L., Titeca, K., Pellegrini, L., Muller, T. & Dubois, M. M. (2025). Indigenous Forest Destroyers or Guardians? The Indigenous Batwa and Their Ancestral Forests in Kahuzi-Biega National Park, DRC. *World Development*, 186, 106818. https://doi.org/10.1016/j.worlddev.2024.106818

Spenceley, A. & Snyman, S. (2017). Protected Area Tourism: Progress, Innovation and Sustainability. *Tourism and Hospitality Research*, 17(1), 3–7. https://doi.org/10.1177/1467358416646

Stone, M. T. & Stone, L. S. (2022). Impacts of Tourism on Nature Conservation and Community Development in Protected Areas. In *Handbook of Tourism Impacts* (pp. 245–261). Edward Elgar Publishing. https://doi.org/10.4337/9781800377684.00029

Stone, M. T., Stone, L. S. & Nyaupane, G. P. (2022). Theorizing and Contextualizing Protected Areas, Tourism and Community Livelihoods Linkages. *Journal of Sustainable Tourism*, 30(11), 2495–2509. https://doi.org/10.1080/09669582.2021.2003371

Suliyanto, S., Rahab, R. & Fauzi, D. R. (2025). Antecedents and Consequences of Unforgettable Tourist Experiences in Natural Tourist Destinations. *African Journal of Hospitality, Tourism and Leisure*, 14(1), 229–236. https://doi.org/10.46222/ajhtl.19770720.603

Tengan, C., Maayir, G., Kuusogre, A. & Sakyi, R. (2024). Will Satisfied Visitors Always Revisit and Recommend? Evidence From Kakum National Park – Ghana. *African Journal of Hospitality, Tourism and Leisure*, 13(2), 301–307. https://doi.org/10.46222/ajhtl.19770720.510

Trišić, I., Nechita, F., Milojković, D. & Štetić, S. (2023). Sustainable Tourism in Protected Areas—Application of the Prism of Sustainability Model. *Sustainability*, 15(6), 5148. https://doi.org/10.3390/su15065148

Udonwa, R. E., Eneyo, V. B. & Iyam, M. A. (2024). Effects of Lifestyle Factors on Weight Variations Among Adolescents in Southern Cross River State, Nigeria. *Nigeria Journal of Home Economics*, 12(10), 25–33. https://doi.org/10.61868/njhe.v12i10.305

Undelikwo, J. U., Abuul, T. B. T. & Uloko, I. J. (2025). Evaluation of Poaching and Anti-Poaching Activities in Cross River National Park, Cross River State Nigeria. *Journal of Research in Forestry, Wildlife and Environment*, 17(1), 228-245.

Zhang, X., Zhong, L. & Yu, H. (2022). Sustainability Assessment of Tourism in Protected Areas: A Relational Perspective. *Global Ecology and Conservation*, 35, e02074. https://doi.org/10.1016/j.gecco.2022.e02074