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Research article

Socio-economic impacts of conservation policies on women's livelihoods in forest-dependent communities around Cross River National Park, Nigeria

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ABSTRACT

This study examines the socio-economic implications of conservation policies for women's livelihoods in forest-dependent communities around Cross River National Park, Nigeria. A quantitative survey design was used, with questionnaires administered to 439 women across eight communities and 45 settlements. Data were analysed using descriptive statistics, correlation analysis and paired-sample t-tests. Findings indicate that conservation measures in the study area are predominantly enforcement-oriented, with limited community participation. Women's income levels declined following access restrictions, while adaptive responses were constrained by limited institutional support and financial access. Women's monthly income shifted downward after park-related access restrictions: the mean coded income category declined from 3.0 to 2.1, and the difference was statistically significant, $t(438) = 32.00$, $p < 0.001$. Women responded through improved farming, informal trade, skill acquisition and credit-based strategies, but these responses were constrained by limited finance, weak institutional support and restricted access to conservation-related employment. The study highlights the need for inclusive, gender-sensitive conservation approaches that combine biodiversity protection with livelihood support, benefit-sharing and women's participation in park governance and tourism value chains.

KEYWORDS

Conservation policy; women's livelihoods; forest-dependent communities; income change; Cross River National Park

Introduction

Tourism and conservation policies are central to biodiversity protection and local development in communities located near protected areas. National parks can support ecotourism, employment and environmental stewardship, but they can also reshape land use, restrict access to resources and alter established livelihood systems (Agyeman et al., 2019; Etta et al., 2024; Tang & Adesina, 2022). These effects are especially significant in forest-dependent communities, where farming, non-timber forest products and informal trading remain important sources of household income. Cross River National Park (CRNP) in

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Nigeria provides a useful case for examining this conservation-livelihood interface because the park combines strong biodiversity objectives with communities whose daily economies remain closely linked to forest resources (Onnoghen et al., 2025). Although protected areas may create tourism and conservation opportunities, such benefits are often unevenly distributed. Women are particularly exposed to these uneven outcomes because they frequently rely on forest-based resources for food, fuel, subsistence farming, petty trade and small-scale income generation (Armitage et al., 2020; Eneyo et al., 2022; Eneyo, 2024a; Amaro et al., 2023). Where access restrictions are implemented without adequate community participation or livelihood support, conservation can reduce women's economic options and shift livelihood risks to households already facing limited financial and institutional support. Recent African tourism scholarship therefore emphasises the need to connect conservation planning with community participation, benefit-sharing, skills development and inclusive tourism value chains (Ayad & Dwedar, 2025; Bello et al., 2025; Kimbu & Tichaawa, 2018; Mtani et al., 2023; Eneyo et al., 2023; Eneyo, 2024b; Anzman-Frasca et al., 2023).

Despite this growing literature, less empirical attention has been given to the gendered income effects of conservation policy in forest-adjacent communities. Many studies examine community-level effects (Agyeman et al., 2019; Eneyo & Itu, 2024; Bello et al., 2025; Kimbu & Tichaawa, 2018), but fewer isolate how conservation-related access restrictions affect women's income, employment options and adaptive strategies over time (Etta et al., 2024; Tang & Adesina, 2022; Eneyo & Archibong, 2024; Asad, 2024; Nkogho-Beyeme et al., 2026; Beyeme et al., 2023; Botha et al., 2021; Eneyo & Essien, 2024). This study addresses that gap by examining women's livelihood conditions in communities surrounding CRNP. It asks: (1) How have conservation policies associated with CRNP influenced the economic stability of women in forest-dependent communities? and (2) What adaptive livelihood strategies have women adopted in response to these changes? The objectives are to assess reported changes in women's monthly income, identify adaptive livelihood strategies and propose practical interventions that can better align conservation with gender-sensitive local development. The study is timely because current conservation debates increasingly recognise that ecological protection and local wellbeing cannot be treated as separate policy domains. When park rules reduce access to farmland, forest products or income-generating spaces, affected residents may interpret conservation as an externally imposed cost rather than as a shared public good. For women, this tension is heightened by unequal access to paid conservation employment, weak representation in decision-making and limited ownership of productive assets. A gender-sensitive assessment is therefore necessary to identify whether conservation policy is protecting biodiversity while also protecting the livelihood foundations of adjacent communities. The present study is positioned within hospitality, tourism and leisure scholarship because protected areas are also tourism spaces. If park-based tourism is expected to support sustainable development, it must create pathways through which adjacent communities participate in and benefit from tourism activities. This is particularly important for CRNP, where tourism, conservation education and biodiversity protection are often discussed together, but where local women's access to practical benefits remains uncertain. The study contributes to scholarship on conservation governance and tourism by examining how protected-area management influences women’s livelihood inclusion and community wellbeing in forest-dependent settings.

Literature review

Gendered livelihoods and conservation policies

The relationship between conservation policy and rural livelihoods is shaped by access to resources, local participation and the distribution of costs and benefits. In forest-dependent communities, women's livelihoods often combine subsistence farming, collection of non-timber forest products, informal processing, petty trade and household care responsibilities. Restrictions on forest access may therefore affect women not only as income earners but also as household resource managers. Such effects are intensified by gendered constraints in access to credit, land, formal employment and decision-making structures (Armitage et al., 2020; Dragouni & Fouseki, 2018). Participation is a recurring theme in the conservation and tourism literature. Community-based and participatory approaches are associated with stronger local ownership, better compliance and more equitable benefits, while top-down enforcement can weaken trust and create resistance (Mtani et al., 2023; Wijayanti et al., 2023; Woyo & Musavengane, 2023). For women, meaningful participation is particularly important because conservation decisions often affect the resources used in household survival strategies. Where women are excluded from planning, livelihood losses may remain invisible and compensation or alternative livelihood programmes may be poorly targeted. Gendered livelihood vulnerability also has an institutional dimension. Women's dependence on forest resources is not simply a matter of occupational preference; it is shaped by land tenure arrangements, household responsibilities, limited access to formal credit and weaker participation in local governance. Consequently,

a conservation rule that appears neutral at policy level may have uneven effects when implemented in practice. Restrictions on resource collection, farming areas or movement within forest spaces can remove income streams that are difficult for women to replace quickly. This is why the analysis of conservation impact must move beyond aggregate community outcomes to examine who loses access, who receives benefits and who participates in decisions. A related issue is the difference between conservation awareness and livelihood transformation. Awareness campaigns may improve knowledge of conservation objectives, but they do not automatically resolve lost income or employment exclusion. For education to become transformative, it must be connected to skills, finance, market access and practical roles within conservation and tourism systems. This distinction is important in the present study because respondents reported educational activities, but they also reported limited employment and livelihood support. The findings are therefore interpreted with attention to both the presence of programmes and the depth of their socio-economic effect.

National parks, tourism and socio-economic change

National parks are increasingly positioned as instruments of biodiversity conservation, tourism development and sustainable development. Recent studies show that protected-area tourism can contribute to sustainable development when it is linked to community participation, benefit-sharing and institutional coordination (Bello et al., 2025; Onnoghen et al., 2025; Sodansou & Foronda-Robles, 2025). However, conservation benefits are not automatic. Tourism opportunities may be captured by better-connected actors, while local women remain concentrated in low-paid or informal activities unless targeted skills development, employment pathways and enterprise support are provided. The African tourism literature also stresses the role of capacity-building and inclusive value chains. For example, studies on host community wellbeing, innovation and tourism competencies emphasise that local benefits depend on practical access to training, markets, finance and decision-making spaces (Ayad & Dwedar, 2025; Kalulu et al., 2025; Wahdiniwaty et al., 2025). These insights are relevant to CRNP because women's conservation-related employment appears limited, and the economic benefits of park-based tourism do not seem to offset the losses associated with restricted forest access. The implication is that conservation policy must be assessed not only by ecological outcomes but also by its local distributional effects. Protected areas may stimulate local economies through visitor spending, conservation jobs, guiding, hospitality services, craft markets and food supply chains. However, these opportunities require enabling conditions. Communities need information, training, capital, mobility, market connections and institutions that intentionally include groups who might otherwise be excluded. Where these conditions are absent, tourism can exist beside adjacent communities without substantially improving their livelihoods. This problem is especially visible when women remain outside technical, ranger, guiding and managerial roles, even though their households bear part of the opportunity cost of conservation. Recent work on protected-area tourism and sustainable development therefore points to the need for integrated governance. Conservation agencies, tourism authorities, local governments and community organisations must coordinate rather than operate as isolated actors. Integrated governance matters because livelihood problems rarely have single solutions. A household that loses forest access may require farm extension, start-up capital, transport, market links and secure participation in tourism value chains. The study's analysis of preferred interventions is therefore used to identify whether women seek isolated assistance or broader packages of support.

Livelihood adaptation and research gap

When conservation policies restrict access to forest resources, affected households commonly diversify into improved farming, petty trade, wage labour, skills acquisition or credit-supported enterprise. These strategies can reduce vulnerability, but only when they are supported by finance, market access, extension services and institutional backing (Eneyo et al., 2022; Rule et al., 2022; Viñals et al., 2023). Without such support, adaptation may simply represent coping rather than sustainable livelihood transformation. Three gaps remain important for the present study. First, gender-disaggregated evidence on income changes around protected areas remains limited. Second, livelihood adaptation is often discussed without measuring whether alternative strategies compensate for reduced resource access. Third, context-specific evidence from communities surrounding CRNP is needed because governance, resource dependence and tourism opportunities vary across protected-area landscapes. This study responds to these gaps by presenting quantitative evidence on women's reported income shifts, adaptive strategies and preferred development interventions in forest-dependent communities around CRNP. This review indicates that the main analytical issue is not whether conservation is valuable, but whether conservation costs and benefits are distributed equitably. The current framework supports three expectations. First, enforcement-heavy conservation may reduce women's access to livelihood assets where compensating support is weak. Second, participatory and benefit-sharing arrangements are likely to improve both livelihood outcomes and conservation legitimacy.

Third, adaptation strategies can reduce vulnerability only when supported by institutions, finance and markets. These expectations inform the conceptual framework used in this study. Another important concern in the literature is benefit distribution. Conservation institutions may report community engagement or development support, but local households assess such initiatives through everyday outcomes, including income, access to resources, employment and the ability to meet household needs. A programme may therefore be present but still inadequate if it is irregular, inaccessible to women, or disconnected from markets. For this reason, the present study distinguishes between reported conservation or educational activities and the livelihood outcomes that women associate with those activities. This distinction enables the analysis to move beyond the existence of interventions and consider whether they are sufficient for livelihood sustainability.

Conceptual framework

Sustainable livelihoods-conservation impact framework

This research is guided by a Sustainable Livelihoods–Conservation Impact Framework. The framework links conservation policy to livelihood outcomes through three main pathways: access to livelihood assets, available adaptive strategies, and the institutional arrangements within which women make livelihood decisions (Figure 1). It draws on the Sustainable Livelihoods Framework (SLF), which conceptualises livelihood outcomes as the result of interactions among assets, institutions, vulnerability contexts, and livelihood strategies (DFID, 1999; Armitage et al., 2020; Tang & Adesina, 2022). Within this framework, conservation policy is treated as an institutional force that may restrict or enable access to natural, financial, social, human, and physical assets. Where enforcement dominates and participation is limited, women's asset bases may weaken and adaptive choices may narrow. Conversely, inclusive conservation approaches, including benefit-sharing mechanisms, training, and access to credit, can expand livelihood options and improve outcomes.

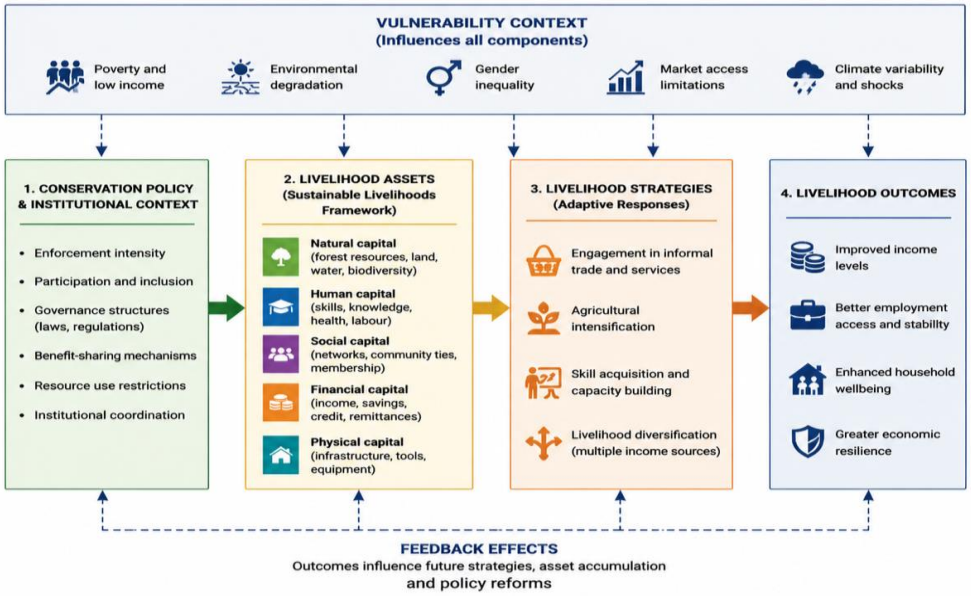

Figure 1: Sustainable livelihoods-conservation impact framework
Source: Authors' adaptation from DFID (1999)

The framework illustrates how conservation policies and institutional arrangements influence women's access to livelihood assets, shape adaptive strategies and ultimately affect livelihood outcomes. Vulnerability context factors interact with all components. The framework therefore treats women's income, employment access, and adaptive strategies as livelihood outcomes shaped by policy implementation. It does not assume that conservation is inherently harmful or beneficial. Instead, it examines how conservation is experienced under specific institutional conditions. This framework recognises that rural incomes are shaped by multiple interacting economic, environmental, and household-level factors beyond conservation policy alone.

Methodology

The study was conducted in eight forest-dependent communities around CRNP, Nigeria: Iko Esai, Aking, Ifumkpa, Okwangwo, Oban, Bumaji, Katabang and Neghe. CRNP covers approximately 4,000 km2 and includes the Oban and Okwangwo divisions. The surrounding communities depend largely on farming, non-

timber forest products and other forest-related activities, making them sensitive to conservation-related restrictions. A survey-based quantitative research design was adopted to examine the socio-economic implications of conservation policies for women's livelihoods. The study population comprised women residing in forest-dependent communities surrounding CRNP. Purposive sampling was used to select respondents who were directly affected by conservation restrictions and engaged in forest-related or conservation-affected livelihood activities. In total, 439 women were surveyed across 45 settlements within the eight communities. Primary data were collected between February 2024 and January 2025 using a structured questionnaire administered by trained enumerators. The instrument covered socio-demographic characteristics, conservation measures, educational initiatives, employment opportunities, reported income conditions before and after park-related access restrictions, adaptive livelihood strategies, challenges and preferred development interventions. Interviewer-administered questionnaires were used where literacy constraints required support. Field observations and informal community engagement were also used to contextualise responses. Because the income comparison relies on respondents' retrospective reporting, the findings should be interpreted as reported income shifts associated with park-related restrictions rather than as a longitudinal panel measurement.

The questionnaire contained closed-ended items on reported conservation measures, educational programmes, income categories, livelihood options and preferred interventions. Income was measured in categories rather than exact amounts to improve recall and reduce respondent discomfort. For the before-after comparison, respondents were asked to report their income category before and after park-related access restrictions as they experienced them. This retrospective design enabled comparison across the same respondents, but it also introduces recall limitations; therefore, the discussion interprets the results cautiously and avoids claims of strict causality. The pilot exercise was used to check wording, sequencing and respondent understanding. Ambiguous items were revised before the main survey. Enumerators were briefed on neutral questioning, confidentiality and how to assist respondents with limited literacy without influencing their answers. During data cleaning, incomplete item responses were retained where other valid information was available, which explains why some descriptive tables report valid response totals below the full sample of 439. Data were analysed using SPSS and checked for internal consistency before reporting. Descriptive statistics were used to summarise frequencies, percentages and mean values. Variations in valid response counts across tables reflect item non-response during data collection. A paired-sample t-test was used to compare reported income categories before and after park-related access restrictions, while correlation analysis assessed the association between the paired income measures. Statistical significance was assessed at $p < 0.05$. Participation was voluntary, informed consent was obtained, and respondents were assured of confidentiality and anonymity.

Results

Conservation measures and community participation

Respondents identified conservation measures in the study area as predominantly enforcement-oriented. As Table 1 shows, arrests accounted for the largest proportion of reported measures (41.7% of valid responses), followed by education (21.9%) and empowerment-related measures (10.5%). Community involvement was the least reported measure (0.7%). This pattern suggests that visible conservation practice is experienced mainly through enforcement rather than through participatory or development-oriented mechanisms.

Table 1: Reported conservation measures adopted around CRNP

Measure	Frequency	%
Job creation	41	9.8
Community involvement	3	0.7
Incentives	34	8.2
Education	91	21.9
Empowerment	44	10.5
Credit facilities	30	7.3
Arrests	173	41.7

Note: Percentages are based on valid responses for this item (n = 416); the overall survey sample was 439.

Educational initiatives and women's employment

Educational programmes were present, but their scope was limited. Table 2 shows that wildlife campaigns (22.0%) and ecological workshops (20.9%) were the most reported initiatives, while 31.9% of respondents reported combined exposure to more than one type of programme. These activities may raise awareness, but they do not necessarily provide livelihood replacement. Respondents also reported limited conservation-related employment for women, with opportunities largely concentrated in custodial and indirect support roles rather than ranger, technical or management positions.

Table 2: Educational programmes reported in forest-dependent communities

Programme	Frequency	%
Wildlife campaigns	20	22.0
Ecological workshops	19	20.9
Environmental engagement	9	9.9
Safety communication	14	15.4
Combined programmes	29	31.9

Note: Percentages are based on valid responses for this item (n = 91).

Income changes

The income distribution shifted downward after park-related access restrictions. Before the restrictions, the largest group of valid respondents (37.4%) reported monthly income of ₦30,000-₦40,000, and 9.2% reported earnings above ₦50,000. After the restrictions, the proportion earning below ₦20,000 increased to 42.2%, while the proportion earning above ₦50,000 fell to 4.5% (Table 3). Inferential analysis confirms that this reported income decline is statistically significant. The mean coded income category declined from 3.0 before restrictions to 2.1 after restrictions. The paired-sample t-test showed a significant mean difference of 0.90 income-category points, $t(438) = 32.00$, $p < 0.001$ (Table 4). This result indicates a statistically significant reported reduction in women's income categories following conservation-related access restrictions.

Table 3: Monthly income distribution before and after park-related access restrictions

Income range (₦)	Before: frequency	Before: %	After: frequency	After: %
<20,000	88	21.2	176	42.2
20,000-30,000	98	23.6	143	34.4
30,000-40,000	156	37.4	55	13.2
40,000-50,000	35	8.5	23	5.4
>50,000	39	9.2	19	4.5

Note: Percentages are based on valid income-category responses (n = 416).

Table 4: Paired-sample analysis of reported income categories

Statistic	Value
Mean before restrictions	3.0 (SD = 1.1)
Mean after restrictions	2.1 (SD = 1.0)
Paired correlation	$r = 0.80$, $p < 0.001$
Mean difference	0.90
t-test	$t(438) = 32.00$, $p < 0.001$

Note: Income was analysed as coded income categories; higher scores indicate higher income categories.

Adaptive livelihood strategies and required interventions

Women reported multiple adaptive livelihood strategies in response to reduced forest access and lower income. Table 5 indicates that improved farming was the most reported strategy (27.2%), followed by informal economic activities (25.0%) and skill acquisition (20.9%). Credit access and incentives were reported less frequently, suggesting that many adaptation strategies are being pursued with limited external support. Respondents strongly preferred integrated support measures rather than isolated interventions. Table 6 reveals that 72.6% selected a combined package of financial assistance, infrastructure development, incentives and credit facilities. This preference indicates that women view livelihood recovery as a multi-dimensional problem requiring coordinated support rather than one-off assistance.

Table 5: Adaptive livelihood strategies reported by women

Strategy	Frequency	%
Improved farming	113	27.2
Informal economic activities	104	25.0
Skill acquisition	87	20.9
Credit facilities	68	16.3
Incentives	44	10.6

Note: Percentages are based on valid responses for this item (n = 416).

Table 6: Development interventions required by women

Intervention	Frequency	Percentage %
Financial assistance	39	9.4
Incentives	24	5.8
Infrastructure development	34	8.2
Credit facilities	15	3.6
Combined package of support	302	72.6
Other/not stated	2	0.5

Note: Percentages are based on valid responses for this item (n = 416).

The results show a coherent pattern. Enforcement is the most visible conservation measure, community involvement is weak, women's conservation-related employment is narrow, and reported income declined after park-related access restrictions. At the same time, women are not passive; they pursue farming improvements, informal trade, skills and credit-related options. The central issue is that these adaptive strategies appear insufficiently supported. The findings therefore point to a policy gap between biodiversity protection and livelihood replacement. The results also indicate that the preferred interventions are comprehensive rather than isolated. The high preference for a combined support package suggests that

women understand their livelihood constraints as interconnected. Credit without markets, skills without start-up capital, or conservation education without employment access may have limited impact. This result is important for policy design because it suggests that single-component interventions are unlikely to address the full range of constraints experienced by women in CRNP-adjacent communities.

Discussion

Findings demonstrate that conservation policies around CRNP are experienced by many women through enforcement, restricted access and limited economic inclusion. The prominence of arrests as a reported conservation measure suggests that compliance mechanisms are more visible than participatory livelihood support. This finding is consistent with scholarship showing that exclusionary conservation models can generate adverse socio-economic outcomes in resource-dependent communities (Armitage et al., 2020; Swatuk, 2021; Tang & Adesina, 2022; Eneyo, 2024b). The contribution of the present study is to show that these outcomes are gendered: women who depend on forest resources experience conservation costs through reduced income and constrained livelihood options. The very low level of reported community involvement is also important. Participatory governance is widely recognised as a condition for durable conservation because it strengthens trust, local ownership and compliance (Dragouni & Fouseki, 2018; Mtani et al., 2023; Eneyo & Archibong, 2024). In the CRNP context, however, participation appears too limited to offset the economic effects of access restrictions. This disconnect may weaken both livelihood security and conservation legitimacy. The finding supports recent research arguing that protected-area tourism and conservation must be linked to local development and community benefit-sharing if they are to advance sustainable development outcomes (Nkogho-Beyeme et al., 2026; Bello et al., 2025; Onnoghen et al., 2025; Sodansou & Foronda-Robles, 2025; Eneyo & Essien, 2024). The income results provide the clearest empirical evidence of livelihood pressure. The significant decline in mean income category suggests that conservation-related restrictions are associated with reduced economic stability for women. However, the study does not claim that conservation alone caused the decline. Income changes may also reflect broader rural economic pressures, market conditions, household characteristics and climate-related constraints. Nevertheless, the consistency between income decline, reported restricted access and the demand for livelihood support strengthens the interpretation that conservation policy has materially affected women's economic conditions.

Adaptive strategies such as improved farming, informal trading and skills acquisition show resilience, but they also reveal the limits of unsupported adaptation. Without credit, extension support, market access and access to tourism value chains, adaptation may remain a coping response rather than a pathway to sustainable income recovery. This is why women in the study favoured comprehensive support packages. The findings therefore reinforce the sustainable livelihoods argument that assets, institutions and adaptive capacity must be addressed together (Eneyo et al., 2022; Viñals et al., 2023; Eneyo & Itu, 2024). The finding on educational programmes requires careful interpretation. Education was the second most reported conservation measure, which indicates that awareness activities are present. However, education appears to function mainly as information provision rather than as an economic empowerment mechanism. In conservation settings, this difference is critical. Awareness may encourage compliance, but livelihood security requires practical alternatives. If women are told to reduce forest dependence without being offered viable substitutes, education may be perceived as one-directional communication rather than genuine participation. The employment finding is equally significant. The absence or near absence of women in ranger, technical and management positions suggests that conservation labour markets may reproduce existing inequalities. This limits women's income opportunities and also reduces the diversity of knowledge available to park management. Women often possess detailed knowledge of forest products, household resource use and community needs. Including them in conservation employment and decision-making can therefore improve both equity and the quality of conservation practice.

The study also refines the way income change should be discussed. The significant before-after difference provides strong evidence of reported economic decline, but the design remains cross-sectional and retrospective. For that reason, the study frames the income decline as associated with park-related restrictions rather than as proof of a single causal pathway. This cautious interpretation strengthens the manuscript by aligning the statistical evidence with what the design can support. The results have theoretical significance because they show how the sustainable livelihoods perspective can be applied to conservation policy at a gender-disaggregated level. The findings confirm that livelihood assets are not affected equally across social groups. Natural capital is reduced when access to forest resources is restricted, financial capital is weakened when income falls, and human capital is underused when women are excluded from skilled conservation and tourism roles. Social capital is also affected where participation in decision-making

remains limited. The framework therefore helps explain why women may adapt but still remain vulnerable when institutional support is weak.

Practical implications and significance of findings

The practical significance of the study is that conservation agencies, park managers and local authorities should move from enforcement-dominant conservation towards livelihood-integrated conservation. First, women should be represented in community conservation committees and benefit-sharing structures. Second, conservation education should be linked to practical livelihood support, including agroforestry extension, small enterprise training, microcredit and market access. Third, park-related employment should deliberately include women in ranger support, visitor services, guiding, nursery management, monitoring and eco-enterprise roles. Fourth, tourism-linked value chains should be opened to women's cooperatives through procurement, craft markets, food supply, guiding support services and community-based tourism products. For policy, results suggest that conservation success should be measured not only through enforcement outputs but also through equity indicators such as women's income stability, participation and access to alternative livelihoods. A gender-sensitive monitoring system would help park managers identify whether livelihood interventions are reaching the women most affected by conservation restrictions. Such an approach can strengthen compliance, reduce conflict and support both biodiversity protection and local wellbeing. At community level, livelihood support should be designed with women's groups rather than merely delivered to them. Cooperative models could help women pool resources for agro-processing, craft production, catering, nursery operations and guided community experiences. Park authorities could also reserve a proportion of procurement opportunities for women's enterprises in adjacent communities. Such measures would make conservation benefits more visible and reduce the perception that the park only restricts local livelihoods.

At research and monitoring level, the findings show the importance of tracking valid response numbers, gender-disaggregated outcomes and the quality of participation. Future park monitoring should document not only arrests, patrols and awareness campaigns, but also women's employment, income recovery, access to credit, representation in committees and participation in tourism value chains. These indicators would make it easier to evaluate whether conservation is becoming more inclusive over time. The study's limitations should also be acknowledged. The sample was purposively selected and the results should not be generalised statistically to all women around CRNP or to all protected areas in Nigeria. The income comparison relies on retrospective self-reporting, which may be affected by recall bias and changes in prices over time. In addition, the study used income categories rather than exact income values, so the paired-sample analysis measures movement between categories rather than precise monetary loss. These limitations do not invalidate the findings, but they require cautious interpretation and support the need for follow-up studies using longitudinal, qualitative and mixed-method evidence. Despite these limitations, the evidence is useful for decision-makers because it identifies specific points where conservation policy can be improved. Evidence indicates that women need more than awareness campaigns. They need structured participation, access to paid roles, viable livelihood alternatives and support packages that combine finance, training, infrastructure and market linkages. If such measures are integrated into conservation planning, CRNP can strengthen biodiversity protection while reducing the livelihood costs borne by adjacent communities. This dual focus is essential for conservation legitimacy and for the long-term sustainability of park-community relations. This makes the evidence directly relevant to journal readers interested in responsible tourism, inclusive conservation governance and sustainable rural development.

Conclusion

This study examined the socio-economic impacts of conservation policies on women's livelihoods in forest-dependent communities around CRNP. The evidence indicates that women experience conservation through restricted resource access, limited participation in conservation-related employment and a significant reported decline in income categories. Although women have adopted alternative livelihood strategies, these responses are constrained by limited finance, weak institutional support and restricted access to tourism opportunities. The study contributes gender-disaggregated evidence on the livelihood effects of protected-area governance and highlights the need for conservation models that integrate ecological objectives with women's economic security. Future research should use longitudinal data and mixed methods to assess how different conservation benefit-sharing models affect women's livelihoods over time.

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