

BEYOND ENFORCEMENT: SOCIO-CULTURAL DRIVERS OF WILDLIFE CRIME IN COMMUNITIES ADJACENT TO RUMA NATIONAL PARK, KENYA

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ABSTRACT

Purpose: This study examined the socio-cultural drivers influencing wildlife crime in communities adjacent to Ruma National Park, Kenya.

Methodology: The study adopted an embedded mixed-methods research design that integrated quantitative data from 380 household respondents selected through stratified random sampling with qualitative insights from 20 purposively selected key informants. Quantitative data were analysed using descriptive and multiple regression analysis by the aid of IBM SPSS Statistics Version 26, whereas qualitative data were analysed thematically.

Findings: The findings revealed that livelihood vulnerability ($\beta = .218, p < .001$), human–wildlife conflict ($\beta = .181, p = .001$), community collaboration ($\beta = .147, p = .014$), and conservation awareness programs ($\beta = .123, p = .033$) significantly influenced wildlife crime. Livelihood vulnerability emerged as the strongest predictor, indicating that wildlife crime is linked to local survival economies and socio-economic insecurities.

Conclusion: The study concludes that wildlife crime is a socially embedded phenomenon associated with complex interactions among livelihood conditions. The findings support a shift from enforcement-centered conservation toward integrated conservation approach.

Recommendations: The study recommends that the Kenya Wildlife Service strengthen conflict-mitigation through rapid-response mechanisms, institutionalize community wildlife conservation committees at village and ward levels to enhance information sharing, conflict resolution, allocated Resources for skills training, start-up capital, extension services, and market linkages to support vulnerable community members and enhance conservation awareness programmes.

Keywords: *Wildlife crime, conservation criminology, livelihood vulnerability, human–wildlife conflict, community participation, Ruma National Park.*

INTRODUCTION

Wildlife crime has emerged as one of the most significant threats to global biodiversity conservation and environmental governance. Van Uhm and Nijman (2022) conceptualize environmental crime as part of a broader criminal continuum that intersects with corruption, financial crime, and other serious offenses. The United Nations Office on Drugs and Crime (2024) estimates that illegal wildlife trafficking generates between US\$20 billion and US\$23 billion annually, ranking it among the world's most lucrative forms of transnational organized environmental crime. In countries such as China and Vietnam, organized criminal groups exploit local communities to facilitate poaching and trafficking activities (Van Uhm & Wong, 2021), while informal social networks and trust-based relationships sustain these illegal markets (Costa et al., 2023). Similar patterns have been reported in Nepal and India, where weak governance, poverty, limited community participation, high market demand, and inadequate enforcement capacity contribute to wildlife crime (Paudel et al., 2020; Rana & Kumar, 2023).

Globally, responses to wildlife crime have largely emphasized law enforcement -based interventions and deterrence approaches. substantial investments have been made toward wildlife law enforcement interventions and legal frameworks. In some countries, militarized interventions such as shoot-on-sight policies have been adopted to deter illegal wildlife activities (Paudel et al., 2019). While these measures are grounded in classical deterrence theory, which posit that increasing the certainty and severity of punishment discourages criminal behaviour. Duffy et al. (2019) argue that excessive militarization can undermine institutional legitimacy, weaken community support, and intensify tensions between conservation authorities and local populations. Consequently, scholars increasingly advocate integrated approaches that address poverty, inequality, marginalization, and exclusion from conservation decision-making alongside conventional enforcement measures (Lunstrum et al., 2025). Evidence from India's Mudumalai Tiger Reserve further shows that effective wildlife crime prevention depends on combining enforcement with community participation, conservation awareness, and institutional coordination (Prakash, 2022).

Across Africa, wildlife crime remains a major conservation and security challenge. Livelihood vulnerability has been identified as an important driver of illegal wildlife exploitation, particularly among communities adjacent to protected areas (Muneza et al., 2023; Njoroge & Mutune, 2024). Hübschle (2017) describes such activities as part of “social economies of survival,” where illegal wildlife use functions as an adaptive response

to economic hardship rather than purely criminal behaviour. Studies in South Africa indicate that limited participation in decision-making, livestock predation, crop destruction, and restricted access to natural resources contribute to negative attitudes toward conservation authorities (Angwenyi et al., 2021). Similarly, Nyirenda et al. (2018) found that households experiencing severe wildlife-related losses showed lower tolerance for conservation and greater support for retaliatory actions against wildlife. In Uganda, livelihood insecurity and limited economic opportunities have been linked to poaching, charcoal burning, illegal grazing, and forest-product harvesting in communities adjacent to protected areas (Katswera et al., 2022). Viollaz et al. (2021) further argue that wildlife killings often result from immediate livelihood threats and inadequate conflict-mitigation mechanisms rather than organized criminal intent, while Ayeni et al. (2026) contend that excluding indigenous ecological knowledge from conservation governance undermines community trust and legitimacy.

In Kenya, wildlife crime continues to threaten biodiversity despite stronger legal frameworks and enhanced enforcement mechanisms. Research in the Maasai Mara and Tsavo ecosystems demonstrates strong links between wildlife crime, livelihood vulnerability, and competition over natural resources (Mukeka et al., 2018). Bond and Mkutu (2018) similarly highlight the social and economic costs of human–wildlife conflict, including food insecurity, livelihood disruption, and psychological distress, which may encourage retaliatory wildlife killings and opportunistic poaching (Chepkwony et al., 2025).

Ruma National Park an ecological important protected area and constitutes the only natural sanctuary for Kenya's indigenous population of the endangered roan antelope (*Hippotragus Equinus Langheldi*). However, the park continues to experience considerable conservation challenges. Kimanzi (2018) reported that the roan antelope population remains highly vulnerable to local extinction due to poaching and habitat pressures. Similarly, Gathuku (2022) established that anthropogenic activities such as agricultural expansion, human settlement, habitat degradation, and snaring continue to pose significant conservation challenges within and around Ruma National Park. Communities surrounding the park frequently experience wildlife-related challenges such as human wildlife conflicts and restrictions associated with conservation regulations. Despite the ecological significance of the park and enhanced enforcement centred approach, incidents of wildlife crime continue to occur, limited empirical research has examined how neighbourhood-level

socio-cultural conditions influence wildlife crime among adjacent communities. Existing studies have primarily focused on wildlife populations, habitat management, trafficking networks, and enforcement effectiveness, with less attention given to the social and cultural factors shaping illegal wildlife activities. This study therefore sought to examine the socio-cultural drivers of wildlife crime in communities adjacent to Ruma National Park, Kenya.

Statement of The Problem

Wildlife crime remains a persistent threat to biodiversity conservation in Kenya and continues to occur in communities surrounding protected area, despite enhanced enforcement centered approach, wildlife laws, and other conservation interventions. This persistence suggests that local drivers operating beyond conventional enforcement approaches remain insufficiently understood and addressed. In Ruma National Park, previous studies have largely concentrated on wildlife populations, species conservation, habitat management, and ecological threats, with limited attention to the neighbourhood-level conditions that influence wildlife crime. Consequently, empirical evidence on how socio-cultural factors such as livelihood vulnerability, human–wildlife conflict, community participation, conservation awareness, and cultural beliefs interact to shape wildlife crime remains limited. This knowledge gap constrains the development of targeted, evidence-based, and community-responsive conservation strategies. Therefore, this study sought to examine the neighbourhood-level socio-cultural factors influencing wildlife crime in communities surrounding Ruma National Park, Kenya.

General Objective

To examine the socio-cultural drivers of wildlife crime in communities adjacent to Ruma National Park, Kenya.

Research Question

How do socio-cultural drivers influence wildlife crime in communities adjacent to Ruma National Park, Kenya?

THEORETICAL FRAMEWORK

This study is guided by Social Disorganization Theory (SDT) developed by Shaw and McKay (1942), which posits that crime is more likely to occur in communities characterized by weak social cohesion, limited collective efficacy, ineffective informal

social controls, and low trust in formal institutions. Conversely, communities with strong social networks and shared norms are able to regulate behaviour and discourage deviant activities through informal mechanisms.

Although critics argue that the theory was originally developed for urban settings and gives limited attention to broader political, ecological, and economic processes underlying environmental crime, its emphasis on community organization and informal social control makes it relevant to conservation contexts. The theory provides a useful lens for understanding wildlife crime as a socially embedded phenomenon rather than solely as a consequence of weak law enforcement. In the context of Ruma National Park, Social Disorganization Theory explains how neighbourhood-level conditions, including livelihood vulnerability, human–wildlife conflict, community collaboration, conservation awareness, and cultural beliefs, influence collective efficacy and informal social controls, thereby shaping attitudes toward and participation in illegal wildlife activities.

Literature Review And Theoretical Synthesis

Wildlife crime is increasingly conceptualized as a livelihood-related phenomenon embedded within local socio-economic systems. The livelihood perspective views illegal wildlife exploitation as an adaptive response to economic insecurity, unemployment, and limited income opportunities, with vulnerable households relying on wildlife resources to supplement livelihoods during periods of hardship (Bond & Mkutu, 2018; Katswera et al., 2022; Muneza et al., 2023). In Kenya, livelihood insecurity has similarly been shown to weaken community support for conservation initiatives (Njoroge & Mutune, 2024). Hübschle (2017) describes such practices as “social economies of survival,” where illegal wildlife use becomes normalized as a coping mechanism in marginalized communities. Comparable evidence from China indicates that wildlife exploitation is driven by interrelated subsistence, cultural, medicinal, and commercial motivations (Fang et al. (2021). However, the relationship between poverty and wildlife crime remains contested. While livelihood-based explanations emphasize economic deprivation, other scholars argue that poverty alone cannot account for participation in illegal wildlife activities, since many poor households do not engage in such practices. Instead, wildlife crime is shaped by interactions among structural inequalities, governance failures, market incentives, and institutional relationships (Duffy et al., 2019). Similarly, Van Uhm and Nijman (2022) conceptualize wildlife crime as a continuum encompassing both subsistence actors and

organized transnational networks, suggesting that livelihood vulnerability is only one component of a broader opportunity structure. From the perspective of Social Disorganization Theory, persistent economic deprivation may weaken community cohesion and informal social controls, increasing tolerance for illegal wildlife activities. Yet, empirical evidence on these relationships within protected-area communities remains limited, particularly around Ruma National Park, thereby justifying the present study.

Human–wildlife conflict remains a major socio-cultural challenge for communities adjacent to protected areas, often creating tensions between residents and conservation authorities. Although studies generally agree that wildlife-related losses undermine support for conservation, they differ on how such grievances translate into illegal wildlife activities. Studies across Africa and Asia consistently show that wildlife-related losses and threats to human safety shape local attitudes toward conservation and may increase support for retaliatory actions against wildlife. In rural Beijing, China, Fang et al. (2021) found that frequent and severe crop damage imposed substantial economic costs on farming households and negatively influenced perceptions of wildlife management. Similar patterns have been reported in East and Southern Africa where wildlife-related losses and threats to human safety significantly influence attitudes toward conservation and increase the likelihood of retaliatory wildlife killings and illegal resource use (Mukeka et al., 2018; Viollaz et al., 2021; Burudi et al., 2025). However, other studies challenge the assumption that human–wildlife conflict inevitably results in illegal behaviour. Angwenyi et al. (2021) and Chepkwony et al. (2025) demonstrate that communities often tolerate wildlife-related losses when conservation institutions are perceived as fair, responsive, and inclusive. Procedural justice and institutional trust therefore moderate the relationship between ecological grievances and conservation behaviour. Likewise, Bond and Mkutu (2018) argue that delayed compensation and bureaucratic inefficiencies intensify frustrations and weaken support for conservation initiatives. These findings align with Social Disorganization Theory, which suggests that unresolved conflicts can erode trust, weaken collective commitment to conservation, and reduce informal controls against illegal activities. Despite these insights, most studies focus on measuring wildlife losses and attitudes rather than explaining how ecological grievances evolve into wildlife crime. This gap is particularly evident in communities surrounding Ruma National Park, where human–wildlife conflict remains a persistent but understudied socio-cultural issue.

Community collaboration is a central principle of contemporary conservation governance and community-based natural resource management. Proponents argue that local participation strengthens collective efficacy, improves information sharing, enhances surveillance, and promotes compliance with conservation regulations (Anagnostou et al., 2020). Similarly, Mramba and Mrimi (2024) contend that effective anti-poaching strategies depend not only on institutional capacity but also on community cooperation. Evidence from India's Mudumalai Tiger Reserve further shows that wildlife crime prevention is more effective where communities actively participate in conservation governance (Prakash, 2022). These arguments align with Social Disorganization Theory, which views collective efficacy as a key mechanism through which communities regulate deviant behaviour. Strong social networks and collaborative institutions enhance communities' capacity to monitor illegal activities and enforce conservation norms through informal controls. However, critics question whether participatory conservation genuinely reduces wildlife crime or merely creates symbolic forms of engagement. Massé et al. (2023) argue that many participation programmes provide limited decision-making authority and often reinforce existing power inequalities rather than empowering local communities. Consequently, the effectiveness of community collaboration remains context-dependent and requires empirical verification. Despite growing support for participatory approaches, few studies have examined the independent influence of community collaboration on wildlife crime within specific protected-area settings. This gap remains particularly evident in communities surrounding Ruma National Park, thereby justifying further investigation.

Conservation awareness programmes are widely used to promote wildlife protection and discourage illegal activities, yet their effectiveness in changing behaviour remains contested. Some scholars argue that wildlife crime partly results from limited environmental knowledge and inadequate understanding of conservation laws. Studies by Angwenyi et al. (2021) and Nyirenda et al. (2024) show that conservation education strengthens environmental values and support for wildlife protection initiatives. However, a competing body of literature challenges the assumption that knowledge automatically translates into behaviour change. Travers et al. (2019) argue that educational interventions frequently fail because they overlook the structural realities shaping local decision-making processes. Similarly, Kahler et al. (2023) contend that awareness initiatives have limited impact where underlying inequalities and community grievances remain unresolved. These findings suggest that conservation education is more effective when combined with

livelihood support, equitable benefit-sharing, and participatory governance mechanisms. From a Social Disorganization Theory perspective, awareness programmes can strengthen collective values and informal social controls that discourage illegal wildlife activities. Nevertheless, empirical evidence directly linking conservation awareness to reductions in wildlife crime remains limited, particularly among communities surrounding Ruma National Park, thus necessitating further investigation.

Cultural institutions shape human–wildlife relationships through customary norms, traditional ecological knowledge, rituals, and collective identities. However, scholars differ on whether cultural beliefs promote conservation or facilitate illegal wildlife use. One perspective emphasizes the protective role of indigenous knowledge systems and customary institutions as informal mechanisms of social control that discourage environmentally harmful practices. Studies by Adegbite (2025) and Katswera et al. (2022) show that cultural taboos, traditional ecological knowledge, and customary regulations often promote sustainable resource use and strengthen collective responsibility for wildlife conservation. Conversely, other studies suggest that some cultural practices may legitimize forms of wildlife utilization that conflict with formal conservation laws. Linning et al. (2022) and Ayeni et al. (2026) demonstrate that traditional medicine, ritual practices, and subsistence activities may involve wildlife use considered illegal under state regulatory frameworks. These competing normative systems create tensions between customary institutions and formal conservation governance. The literature therefore indicates that cultural influences on wildlife crime are context-dependent and shaped by local interpretations of wildlife symbolism, customary obligations, and resource use practices. From a Social Disorganization Theory perspective, cultural institutions can either strengthen informal social controls that support conservation or weaken them where customary norms conflict with formal regulations. Despite growing interest in cultural dimensions of conservation, few studies have examined how cultural beliefs interact with livelihood conditions, community participation, and conservation awareness in influencing wildlife crime around protected areas such as Ruma National Park.

Critical Synthesis and Research Gaps

The reviewed literature demonstrates broad agreement that wildlife crime is influenced by socio-cultural conditions operating within communities adjacent to protected areas. Although scholars differ on the relative importance of these factors, there is broad

consensus that wildlife crime cannot be explained solely through enforcement based approaches or individual criminal motivations. Livelihood perspectives emphasize economic vulnerability and limited opportunities as drivers of illegal wildlife activities, while alternative explanations highlight the roles of governance failures, market incentives, and institutional inequalities. Similarly, studies on human–wildlife conflict suggest that wildlife-related losses may encourage retaliatory behaviour, although procedural justice and institutional trust often moderate these effects. Community collaboration and conservation awareness are generally associated with improved conservation outcomes, yet their effectiveness depends on meaningful participation, equitable benefit sharing, and broader socio-economic conditions. Cultural institutions likewise present a dual influence, either reinforcing conservation norms through customary controls or legitimizing wildlife uses that conflict with formal regulations.

These perspectives collectively align with Social Disorganization Theory, which posits that community cohesion, collective efficacy, trust, and informal social controls influence compliance with social norms. Economic deprivation, unresolved conflicts, weak participation, limited awareness, and competing cultural values may undermine these mechanisms and increase tolerance for illegal wildlife activities. Conversely, strong social networks, inclusive institutions, and shared conservation values can strengthen informal controls and discourage wildlife crime. Despite increasing studies on these issues, most studies have examined individual factors in isolation, with limited attention to their combined influence within specific protected-area contexts. In particular, empirical evidence on the socio-cultural drivers of wildlife crime around Ruma National Park remains scarce. This study therefore addresses an important contextual gap by examining how livelihood vulnerability, human–wildlife conflict, community collaboration, conservation awareness, and cultural beliefs collectively shape wildlife crime in communities adjacent to the park.

CONCEPTUAL FRAMEWORK

The study conceptualized wildlife crime as a socially embedded phenomenon influenced by interactions among livelihood, socio-cultural, and institutional factors operating within communities adjacent to protected areas.

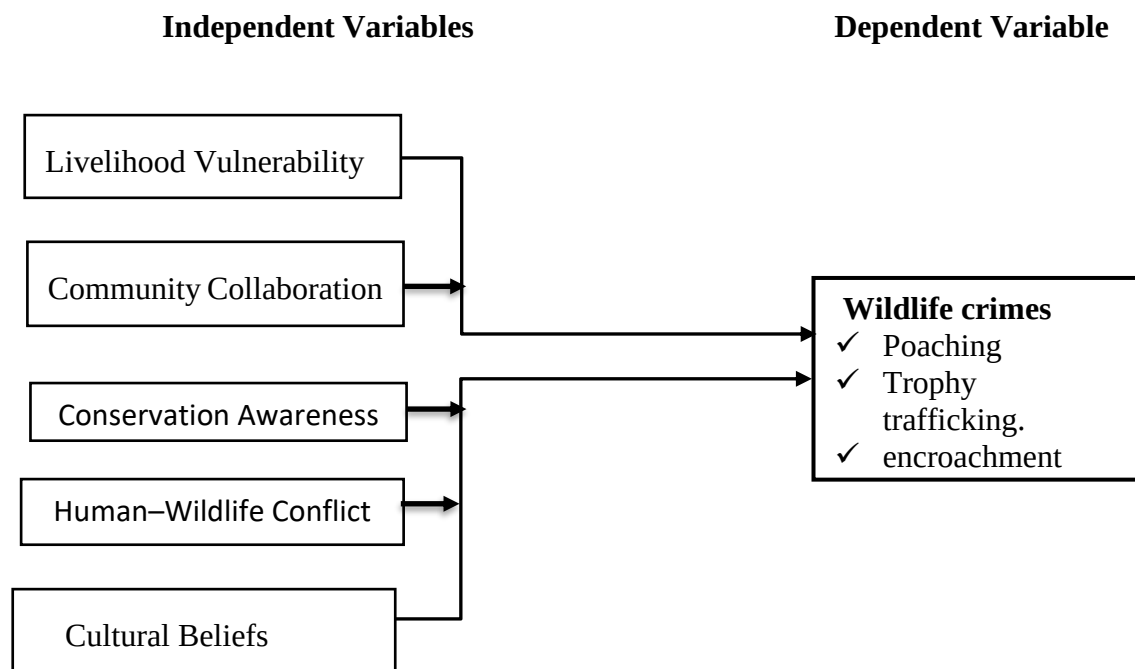


Figure 1: Conceptual Framework

Source: Researcher (2026)

RESEARCH METHODOLOGY

The study adopted an embedded mixed-methods research design, with quantitative methods constituting the dominant component and qualitative methods providing complementary explanatory insights. This design was considered appropriate due to the complex socio-ecological nature of wildlife crime. The integration of the two approaches enabled a more comprehensive examination of the socio-cultural determinants of wildlife crime in communities adjacent to Ruma National Park. The study was conducted in the Lambwe Valley ecosystem in Homa Bay County, Kenya, where Ruma National Park covers approximately 120 km² and serves as Kenya's only protected refuge for the endangered Roan Antelope. Adjacent communities depend mainly on subsistence farming and livestock keeping and frequently experience crop raiding, livestock predation, and restrictions on resource use, making the area suitable for investigating socio-cultural drivers of wildlife crime.

The target population comprised households residing in communities adjacent to the park and key stakeholders involved in conservation governance. A sample of 400 households was selected using stratified random sampling across the three sub-counties bordering the park to ensure adequate geographical representation. In addition, 20 key informants,

including conservation officers, local administrators, farmers, youth leaders, and community leaders, were purposively selected based on their knowledge and experience regarding wildlife conservation and local crime dynamics. The sample size was determined using Yamane's (1973) formula for finite populations.

Primary data were collected using structured questionnaires and semi-structured interview guides. Questionnaire items were measured on a five-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5). The instruments were pre-tested in a neighbouring community with similar socio-economic characteristics. Reliability analysis yielded a Cronbach's alpha coefficient of 0.78, indicating acceptable internal consistency, while construct validity was strengthened through expert review and alignment with existing literature. Quantitative data were analysed using IBM SPSS Statistics Version 26, descriptive statistics were used to summarize respondent characteristics and describe the distribution of study variables. Pearson correlation analysis was used to examine relationships among variables, while Multiple linear regression analysis was subsequently employed to determine the independent contribution of each predictor variable.

Diagnostic tests were conducted to verify regression assumptions, and Variance Inflation Factor (VIF) values below 5 confirmed the absence of harmful multicollinearity among predictor variables. Qualitative data obtained from key informant interviews were analysed thematically through coding, categorization, and interpretation of recurring patterns and themes. Ethical approval was obtained from the relevant institutional authorities before the commencement of data collection. Participation in the study was voluntary, and informed consent was obtained from all respondents. Confidentiality, anonymity, and privacy were maintained throughout the research process, and all information collected was used solely for academic purposes.

RESULTS AND DISCUSSION

Response Rate

A total of 400 questionnaires were distributed to households residing in communities adjacent to Ruma National Park. Of these, 380 questionnaires were successfully completed and returned, representing a response rate of 95 percent, while 20 questionnaires were not returned.

Table 1: Response Rate of Questionnaires

Category	Frequency	Percentage (%)
Questionnaires distributed	400	100
Questionnaires returned	380	95
Non-response	20	5
Total	400	100

The results presented in Table 1 indicate a high response rate of 95 percent. According to Mugenda and Mugenda (2003), response rates above 70 percent are considered adequate for social science research. The high response rate suggests that the data collected are sufficiently representative of the target population and enhances the reliability of the study findings.

Multiple Regression Analysis

Multiple regression analysis was conducted to determine the combined association of socio-cultural factors on wildlife crime.

Model Summary for Multiple Linear Regression

Table 2: presents the model summary results.

Model	R	R ²	Adjusted R ²	Std. Error
1	.508	.258	.226	.50497

The regression model produced an R value of .508, indicating a moderate association between the predictor variables and wildlife crime. The coefficient of determination ($R^2 = .258$) suggests that approximately 25.8 percent of the variation in wildlife crime was explained by the socio-cultural variables included in the model. The remaining 74.2 percent may be attributable to ecological, economic, institutional, and governance-related factors not examined in this study. Consequently, the findings should be interpreted as demonstrating the importance of socio-cultural conditions without implying that they provide a complete explanation of wildlife crime.

Analysis of Variance (ANOVA) Results

An analysis of variance (ANOVA) was conducted to assess the overall significance of the regression model. Table 3 presents the ANOVA results for the regression model.

Table 3: ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	32.246	16	2.015	7.904	.000
Residual	92.563	363	.255		
Total	124.809	379			

The ANOVA results indicate that the regression model was statistically significant, $F(16, 363) = 7.904$, $p < .001$. This finding demonstrates that the independent variables jointly explained a significant proportion of the variation in wildlife crime. The significance of the overall model supports the proposition that wildlife crime is associated with a combination of socio-cultural, livelihood, and community-level factors rather than with isolated individual characteristics.

Regression Coefficients

Regression analysis was conducted on the relationship between wildlife crime and various social cultural variables. The findings are presented in Table 4.

Table 4: Table 4: Regression Results Showing the Association Between Socio-Cultural Factors and Wildlife Crime

Predictor Variable	B	Beta	t	Sig.	VIF
Traditional beliefs	.009	.020	.294	.769	2.180
Cultural ceremonies	.057	.117	1.737	.083	2.220
Wildlife use norms	.060	.104	1.727	.085	1.785
Cultural identity	-.021	-.037	-.589	.556	1.915
Values discourage illegality	.001	.002	.026	.979	1.706
Community collaboration	.076	.147	2.476	.014*	1.724
Social cohesion	-.046	-.080	-1.347	.179	1.706
Community meetings	-.047	-.063	-1.071	.285	1.671
Community–park relations	.044	.066	1.133	.258	1.675
Community initiatives	.012	.017	.295	.768	1.563
Livelihood vulnerability	.123	.218	3.904	.000*	1.526
Awareness programs	.061	.123	2.146	.033*	1.603

Predictor Variable	B	Beta	t	Sig.	VIF
Knowledge of laws	.033	.063	1.115	.266	1.570
Alternative livelihood	-.049	-.069	-1.193	.234	1.620
Compensation mechanisms	-.038	-.051	-.934	.351	1.435
Human-Wildlife Conflict	.116	.181	3.285	.001*	1.486

*Significant at $p < .05$

Discussion

Livelihood vulnerability emerged as the strongest predictor of wildlife crime ($\beta = .218$, $p < .001$), indicating that households facing economic insecurity, limited employment, and few livelihood alternatives are more likely to engage in or tolerate illegal wildlife activities as survival strategies. This finding supports earlier studies linking economic vulnerability to wildlife exploitation (Bond & Mkutu, 2018; Ntuli et al., 2019; Muneza et al., 2023; Njoroge & Mutune, 2024). However, qualitative evidence suggests that livelihood insecurity becomes criminogenic when combined with institutional distrust, perceived exclusion from conservation benefits, and unresolved grievances rather than poverty alone. One village elder noted:

"When harvests fail during dry seasons and opportunities are few, some people turn to wildlife resources as a way of supporting their families."

From the perspective of Social Disorganization Theory, persistent economic hardship may weaken collective efficacy and informal social controls, increasing community tolerance toward illegal wildlife activities. From the perspective of Social Disorganization Theory, persistent livelihood insecurity may weaken collective efficacy and informal social controls, thereby increasing community tolerance toward illegal wildlife activities. The findings therefore underscore the importance of livelihood diversification alongside conventional enforcement measures.

Human–wildlife conflict significantly influenced wildlife crime ($\beta = .181$, $p = .001$). Crop destruction, livestock predation, and threats to human safety emerged as major sources of community frustration and resentment toward conservation institutions. These findings support previous studies showing that unresolved conflicts increase support for retaliatory wildlife killings and illegal resource use (Mukeka et al., 2018; Viollaz et al., 2021; Burudi et al., 2025).

A community farmer explained:

"When domestic animals are killed and crops destroyed by wild animals, compensation takes too long, people lose trust and some begin supporting retaliatory actions against wildlife."

The findings suggest that ecological grievances become criminogenic when accompanied by perceptions of institutional neglect and procedural injustice. This supports arguments by Atuo et al. (2020) and Angwenyi et al. (2021) that communities are more willing to tolerate conservation costs when institutions are perceived as fair, inclusive, and responsive.

Community collaboration significantly predicted wildlife crime ($\beta = .147$, $p = .014$). Communities characterized by stronger cooperation, collective action, and information sharing demonstrated lower tolerance toward illegal wildlife activities, consistent with findings by Anagnostou et al. (2020) and Prakash (2022). These results provide empirical support for Social Disorganization Theory, particularly the role of collective efficacy in strengthening informal social controls. However, qualitative evidence indicates that participation must be meaningful to be effective.

One youth leader observed:

"Sometimes we are invited for consultation community meeting, however the agendas and decisions are decided prior to the community meetings."

This finding reinforces Massé et al.'s (2023) critique that participatory conservation may become symbolic when communities lack meaningful influence over decision-making. Effective collaboration therefore requires transparent governance, equitable benefit-sharing, and shared responsibility for conservation outcomes.

Conservation awareness programmes were also significantly associated with wildlife crime ($\beta = .123$, $p = .033$). Respondents reported that environmental education improved understanding of wildlife laws, ecological values, and the benefits of conservation, supporting findings by Angwenyi et al. (2021) and Nyirenda et al. (2024). However, the results also align with Travers et al. (2019) and Kahler et al. (2023), who argue that awareness initiatives alone cannot address wildlife crime where socio-economic challenges persist.

A conservation officer stated:

"While education is important, livelihood vulnerability often undermines efforts to combat poaching."

The findings therefore suggest that conservation education is most effective when integrated with livelihood support programmes, and community participation initiatives. Cultural variables, including traditional beliefs, ceremonies, wildlife-use norms, and cultural identity, did not demonstrate statistically significant independent effects on wildlife crime ($p > .05$). Although not significant predictors, qualitative evidence indicates that customary institutions historically influenced wildlife use through taboos and traditional sanctions.

One community elder remarked:

"In the past, certain animals were taboo and could not be hunted, but the current generation no longer follows those customs."

These findings suggest that modernization, formal education, religious change, and market integration have weakened traditional mechanisms of social control. While this contrasts with studies emphasizing the conservation value of indigenous knowledge systems (Adegbite, 2025; Katswera et al., 2022), it supports arguments that cultural influences on wildlife use are highly context-dependent and mediated by broader socio-economic and institutional changes (Kahler & Gore, 2015; Linning et al., 2022; Ayeni et al., 2026).

Conclusion

This study examined the socio-cultural factors influencing wildlife crime in communities adjacent to Ruma National Park, Kenya. The findings demonstrate that wildlife crime is a socially embedded phenomenon shaped by livelihood conditions, human–wildlife interactions, community organization, and institutional relationships rather than solely by weaknesses in law enforcement. Livelihood vulnerability emerged as the strongest predictor, indicating that economic insecurity, unemployment, and limited livelihood opportunities increase the likelihood of participation in or tolerance toward illegal wildlife activities. Human–wildlife conflict also significantly influenced wildlife crime, with crop losses, livestock predation, and inadequate compensation mechanisms generating grievances that weaken support for conservation and encourage retaliatory actions.

The study further established that community collaboration and conservation awareness contribute to wildlife crime reduction by strengthening collective responsibility, information sharing, environmental knowledge, and informal social controls. However, awareness programmes are unlikely to achieve lasting outcomes without complementary

livelihood support and inclusive governance mechanisms. Although cultural beliefs have historically influenced wildlife use and conservation practices, they were not found to significantly predict wildlife crime within the study area. This suggests that the influence of traditional cultural institutions may be declining due to modernization, market integration, religious transformation, and changing socio-economic realities.

Generally, the findings challenge enforcement-centred approaches that frame wildlife crime primarily as a law-enforcement problem. Instead, the study supports an integrated conservation governance framework that emphasizes livelihood security, conflict mitigation, community participation, and institutional legitimacy as essential components of wildlife crime prevention.

The study also extends Social Disorganization Theory to protected-area settings by demonstrating that collective efficacy, institutional trust, and informal social controls influence conservation behaviour. It therefore contributes to conservation criminology by providing empirical evidence that effective wildlife crime prevention requires addressing the socio-cultural conditions underpinning human–wildlife interactions and conservation decision-making.

POLICY RECOMMENDATIONS

Kenya Wildlife Service (KWS), Homa Bay County Government, and development partners should prioritize livelihood diversification programmes for households surrounding Ruma National Park. These initiatives should include climate-smart agriculture, beekeeping, fish farming, eco-tourism enterprises, value-addition projects, and youth employment schemes. Implementation should occur within a three- to five-year period through collaborative funding arrangements involving county governments, conservation organizations, and donor agencies.

Kenya Wildlife Service, local administrators, and community leaders should institutionalize wildlife conservation committees at village and ward levels to facilitate information sharing, conflict resolution, community surveillance, and participatory decision-making. The committees should be established within one year and supported through regular training programmes, modest operational budgets, and formal integration into existing community governance structures.

Kenya wildlife service should Integrate Conservation Education with Economic Empowerment Programme, Implementation should be continuous but prioritized within the first two years through schools, churches, youth groups, local radio stations, and community forums. Resources should support educational materials. skills training programmes, start-up capital, extension services, and market linkages.

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