SUSTAINABLE WILDLIFE TOURISM MANAGEMENT AND INFLUENCE OF LEVELS OF COMMUNITY ENGAGEMENT: A STUDY OF WILDLIFE CONSERVANCIES IN KAJIADO COUNTY, KENYA.

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Wildlife is a significant driver of tourism, and in conservancies, the relationship between community engagement and sustainable wildlife tourism management is crucial for balancing biodiversity conservation with the socioeconomic benefits of tourism. This study investigated how levels of community engagement (directive, consultative, and participative) influence sustainable wildlife tourism management in Kajiado County, Kenya, and to identify barriers to effective community involvement. Qualitative data were gathered through interviews with 1 representative each from county and national governments as well as the Kenya Wildlife Conservancies Association. Quantitative data were collected via paper-based, closed-ended survey questionnaires administered to 29 conservancy managers and 29 community leaders. A purposive sampling technique was used to select all respondents. The qualitative data were analyzed thematically, while the quantitative data were subjected to descriptive and inferential analysis. This study was grounded on the Community-Based Natural Resource Management Theory and the Stakeholder Theory. The results revealed limited community involvement in decision-making regarding wildlife tourism management, with directive and consultative forms of engagement being more common than participative approaches. Directive and consultative engagement, which either exclude community input or limit it to advisory roles without decision-making power, were found to hinder meaningful community participation in sustainable wildlife tourism management. In contrast, participative engagement, where communities actively contribute to decisions, proved more effective in promoting biodiversity conservation, reducing human-wildlife conflicts, and enhancing the wellbeing of local communities. The study recommends enforcing legislation for community inclusion in wildlife tourism and conservation decisions by national and county governments, prioritizing local participation in tourism related decisions by wildlife conservancies in Kajiado, strengthening community engagement policies through advocacy by the Kenya Wildlife Conservancies Association, and investing in capacity-building initiatives for effective community engagement.

Keywords: Community Engagement, Sustainable Wildlife Tourism, Wildlife Conservation and Conservancies.

Introduction

Sustainable wildlife tourism has emerged as a significant sector within the global tourism industry, contributing not only to biodiversity conservation but also to the socioeconomic development of local communities. Globally, the sustainable management of wildlife tourism is viewed as a complex yet crucial endeavor, particularly in biodiversity hotspots where ecosystems and local livelihoods depend on each other. In wildlife-rich areas, tourism activities are increasingly connected with conservation efforts, and the sustainability of these initiatives depends largely on active community participation in management processes as local engagement play a decisive role in ensuring that wildlife tourism not only generates economic benefits but also supports long-term conservation goals (Drew, 2023).

On the African continent, sustainable wildlife tourism has become a cornerstone of conservation efforts. Many African nations, including Namibia, Rwanda, and South Africa, have witnessed notable successes in balancing tourism growth with wildlife protection through community-driven initiatives. For instance, inclusive approaches that empower local communities to take part in decision-making processes have been linked to better conservation outcomes, reduced incidents of poaching, and improved livelihoods for communities living near protected areas (Naidoo et al., 2016; Sabuhoro et al., 2017). However, the effectiveness of these efforts depends on the form of community engagement, ranging from top-down directive approaches to more participatory, bottom-up models that promote local stewardship and involvement.

In Kenya, wildlife tourism is one of the key pillars of the national economy, generating substantial revenue and employment opportunities. The country's rich biodiversity, including world-renowned wildlife species, attracts millions of tourists annually, making it a critical component of national development strategies. Despite its economic benefits, the sustainability of wildlife tourism in Kenya is highly dependent on the engagement of local communities, particularly those residing near wildlife conservancies. Research indicates that without meaningful community engagement, tensions between conservation goals and the needs of local populations can undermine both biodiversity protection and human well-being (Giampiccoli, 2018). Community engagement, whether directive, consultative, or participative, has far-reaching consequences for the success of conservation initiatives and the equitable distribution of benefits derived from tourism activities.

Focusing on Kajiado County, located in southern Kenya, this region is characterized by its diverse ecosystems, which provide habitats for iconic species such as elephants, lions, and giraffes. Despite the county's significance as a wildlife tourism destination, it faces several challenges that threaten the sustainability of its tourism sector, including habitat loss, increased human-wildlife conflicts, and limited community participation in wildlife management. Research has identified insufficient local involvement in decision-making as a major obstacle to achieving sustainable outcomes in the region (Ogada et al., 2016). Traditional top-down approaches to tourism management have often failed to address the concerns of local communities, leading to strained relations between conservation authorities and residents.

Given these challenges, this study aimed to investigate the influence of different community engagement levels on sustainable wildlife tourism management within Kajiado County’s conservancies. By analyzing directive, consultative, and participative models of engagement, the study sought to shed light on how involvement of local community can be enhanced to promote sustainable wildlife tourism practices while improving the livelihoods of communities.

Literature Review

Sustainable Wildlife Tourism Management

Global tourism, contributing 10.4% to GDP and employing over 319 million people, holds economic significance worldwide. In Kenya, tourism, particularly wildlife-based, is a major economic driver, attracting international visitors and generating substantial revenue. Key wildlife attractions such as Maasai Mara and Amboseli contribute to GDP and employment. Effective wildlife tourism management, involving strategic conservation and resource use, depends on community engagement, linking wildlife conservation to local livelihoods. Ensuring sustainable policies requires prioritizing community involvement in wildlife tourism management (Kenya Tourism Board, 2021; United Nations World Tourism Organization, 2019; World Travel and Tourism Council, 2021).

Human-Wildlife Conflicts

Human-wildlife conflicts arise when human activities encroach on wildlife habitats, resulting in negative interactions, including crop damage and livestock predation (Mekonen, 2020). Such conflicts challenge conservation efforts and community well-being, demanding strategies to balance economic benefits from wildlife tourism and conflict mitigation. Kumar et al. (2020) and Stone et al. (2019) highlight the role of inclusive community engagement in addressing conflicts while ensuring sustainable tourism. Studies in Botswana (Mbaiwa, 2018) and Kenya (Long et al., 2019) further explain the importance of community involvement in resolving human-wildlife conflicts and improving conservation outcomes.

Biodiversity Conservation

Biodiversity conservation involves preserving ecosystems, species, and genetic diversity, essential for ecosystem services and human well-being (Crowley et al., 2020). Achieving conservation goals requires integrating scientific research, policy development, and community engagement. Studies in Vietnam (Truong, 2022), Zimbabwe (Musakwa et al., 2020), and Kenya (Liang et al., 2018) highlight the importance of community involvement in conservation efforts. Participatory models ensure better resource management, enhance local livelihoods, and promote sustainable tourism, making biodiversity conservation more effective.

Community Well-being

Community well-being refers to the collective health, prosperity, and quality of life of a community, encompassing social, economic, and environmental dimensions (Pretty & Smith, 2004). Sustainable wildlife tourism management positively influences community well-being through economic opportunities and social cohesion. Araujo et al. (2012) emphasize the link between resource monitoring, local empowerment, and conservation, while Oburah et al. (2021) highlight the role of community conservancies in improving livelihoods. However, a gap remains in understanding the specific impact of community engagement on well-being in Kenyan conservancies, necessitating this research.

This study is essential to address the interconnected challenges of human-wildlife conflicts, biodiversity conservation, and community well-being within Kenyan conservancies. Human-wildlife conflicts, driven by habitat encroachment, threaten both wildlife populations and local livelihoods, necessitating strategies that mitigate conflicts while supporting economic gains from wildlife tourism (Mekonen, 2020).

Biodiversity conservation efforts, critical for sustaining ecosystems, are most effective when local communities are actively engaged in resource management (Crowley et al., 2020). However, the direct link between community engagement and overall well-being in Kenya's wildlife tourism sector remains underexplored. By examining these dynamics, this study aimed to provide insights into fostering sustainable tourism practices that align conservation goals with community prosperity.

Levels of Engagement and Sustainable Wildlife Tourism

The level of community engagement in sustainable wildlife tourism management is categorized into directive, consultative, and participative approaches, each playing a crucial role in shaping conservation efforts. Directive engagement limits community input, often resulting in top-down decision-making by external entities (Turpie & Letley, 2021). Consultative engagement allows community feedback but maintains centralized authority. Participative engagement, however, empowers local stakeholders, fostering collaboration and shared responsibility, which is essential for sustainable tourism (Drew, 2023).

Directive Engagement

Directive engagement, characterized by external authorities making decisions with limited local input, often overlooks indigenous knowledge and creates a disconnect between communities and conservation efforts (Giampiccoli, 2018). In Kafta Sheraro National Park, limited community participation and inadequate monitoring were identified as key barriers to sustainable conservation (Abrehe et al., 2020). Despite acknowledging the importance of collaboration, existing research often neglects the impact of directive approaches on wildlife tourism management, particularly in the Kenyan context, which the present study aims to address.

Consultative Engagement

Consultative engagement allows for community feedback but often fails to transfer decision-making power to local stakeholders. Coz and Young (2020) highlighted the complexities of consultative engagement in their study on the reintroduction of beavers in Scotland, where stakeholder relationships and local dynamics shaped conservation outcomes. Similarly, Steven's (2021) study on Akagera National Park identified the need for greater community involvement in decision-making to foster positive attitudes towards conservation. Despite these findings, gaps remain in understanding how consultative strategies influence decision-making in Kenyan wildlife tourism, which the present study seeks to explore.

Participative Engagement

Participative engagement involves active community participation in decision-making, promoting ownership of conservation efforts. Sabuhoro et al. (2017) found that participative engagement in mountain gorilla tourism did not always result in direct community benefits, emphasizing the need for fair revenue-sharing and inclusive management. Begum et al. (2022) explored women's roles in forest co-management in Sundarban, showing that their involvement contributed to sustainable resource management, though gender disparities persisted. Similarly, Htay et al. (2022) noted that while communities in Indawgyi Wildlife Sanctuary held positive attitudes towards conservation, only 43.9% actively participated in related programs. These studies highlight the importance of meaningful participation in sustainable tourism and conservation, which the present study investigates in the context of Kenyan wildlife conservancies.

This study is important in exploring the effectiveness of different levels of community engagement (directive, consultative, and participative) within the context of sustainable wildlife tourism management in Kenyan conservancies. While existing literature recognizes the importance of community involvement in conservation, the specific impacts of each engagement approach on human-wildlife conflict resolution, biodiversity conservation, and community well-being remain underexamined. By analyzing these levels of community engagement in the Kenyan wildlife tourism sector, this study aimed to fill critical knowledge gaps, offering insights into how different strategies influence conservation success, conflict mitigation, and the well-being of local communities.

Methods

The study was conducted in Kajiado County, located in southern Kenya, known for its rich biodiversity and extensive wildlife conservancies. The county's geographic location, bordering Tanzania, and its variety of landscapes, including savannah grasslands and acacia woodlands, make it ideal for wildlife conservation and tourism. It is home to 29 conservancies, the highest number in Kenya, providing a unique setting for exploring community engagement in sustainable wildlife tourism management. The research specifically targeted conservancies within the county, capitalizing on the region's biodiversity and its role in Kenya's conservation efforts.

The study employed a descriptive research design with a mixed-methods approach, using both quantitative and qualitative data collection tools to explore community engagement strategies. Quantitative data was gathered through structured questionnaires from conservancy managers and community leaders, while qualitative insights were obtained through interviews with national and county government officials, as well as a representative from the Kenya Wildlife Conservancies Association (KWCA). A pilot study was conducted in Narok County to test the reliability and validity of the research instruments. Data analysis included descriptive statistics for summarizing engagement levels, and multiple regression analysis to determine the influence of different levels of community engagement on sustainable wildlife tourism management. Qualitative data was analyzed thematically to complement the quantitative findings.

Ethical considerations were a central focus of the research. The study adhered to ethical guidelines, ensuring voluntary participation, confidentiality, and respect for cultural norms. Ethical approval was obtained from Tharaka University, alongside research permits from the National Council for Science, Technology, and Innovation (NACOSTI). The research process ensured compliance with legal and institutional frameworks, and participants were informed of their right to withdraw from the study at any point. These measures were integral in maintaining the integrity of the study and safeguarding the rights and well-being of the participants.

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Results and Discussion

Reliability Analysis

Reliability Test

Variable	Number of Items	Cronbach Alpha
Levels of Community Engagement	9	0.79
Sustainable Wildlife Tourism Management	9	0.83

Source: Researcher's analysis (2024)

The Cronbach's alpha values for community engagement levels (0.79) and sustainable wildlife tourism management (0.83) all exceed the commonly accepted threshold of 0.70, indicating good internal consistency reliability, suggesting that the items within each scale consistently measured the same underlying construct (Howard, 2016).

Response Rate

The researcher reached out to all 61 targeted respondents in different groups made up of community members, conservancies managers, national and county tourism/wildlife officials and official from the Kenya Wildlife Conservancy Association due to their importance in sustainable wildlife tourism management. A total of 60 participants responded giving a response rate of 98.4%. According to Baruch and Holtom (2008), a response rate that is above 50% can be justified, 60% is good and 70% is very good in social research surveys. In their meta-analysis, Groves and Peytcheva (2008) examined the relationship between nonresponse rates and nonresponse bias, emphasizing that high response rates, such as 98.36%, substantially mitigate the risk of bias and enhance the representativeness of the data. This level of response rate is particularly desirable in census studies, where achieving representativeness is crucial (Groves & Peytcheva, 2008).

Response Rate Matrix

Category	Target Population	Response Rate	Response Rate in (%)
Community Leaders	29	29	47.54
Conservancies Managers	29	28	45.90
National Government Official	1	1	1.64
County Government Official	1	1	1.64
KWCA Representative	1	1	1.64
Total	61	60	98.36

Source: Researcher's analysis (2024)

Demographic Information

The study gathered background information from the respondents on gender, educational attainment, and years of professional experience to assess their ability to participate.

Gender

Gender of Community Leaders and Conservancies Managers

Gender	Community Leaders Frequency	Community Leaders Percentage	Conservancies Managers Frequency	Conservancies Managers Percentage
Male	20	68.97%	19	67.86%
Female	9	31.03%	9	32.14%
Total	29	100%	28	100%

Source: Researcher's analysis (2024)

The table above highlights a gender distribution among both community leaders and conservancy managers. Among community leaders, males constituted 68.97% of the respondents, while females made up 31.03%, indicating a significant male majority. Similarly, among conservancy managers, males comprised 67.86% of the sample, with females representing 32.14%.

Levels of Education

Educational Levels of Community Leaders and Conservancies Managers

Educational level	Community Leaders Frequency	Community Leaders Percentage	Conservancies Managers Frequency	Conservancies Managers Percentage
Secondary	10	34.48%	0	0%
Certificate	9	31.03%	0	0%
Diploma	7	24.14%	8	28.57%
Degree	3	10.34%	20	71.43%
Total	29	100%	28	100%

Source: Researcher's analysis (2024)

The data reveals that all respondents from both the community leaders and conservancy managers groups possessed sufficient literacy levels to effectively read and comprehend the questions presented in the questionnaires, therefore justifying the use of a self-administered format. Among the community leaders, 34.48% had attained secondary education, 31.03% held certificates, 24.14% had diplomas, and a smaller fraction, 10.34%, had earned degrees. In the group of conservancy managers, the educational background was notably higher, with 28.57% holding diplomas and a significant 71.43% possessing degrees. This high level of literacy further validated the use of a self-administered questionnaire, as the respondents were evidently capable of engaging with and responding to the questions effectively on their own.

Years of Experience

Years of Experience of Community Leaders and Conservancies Managers

Years of Experience	Community Leaders Frequency	Community Leaders Percentage	Conservancies Managers Frequency	Conservancies Managers Percentage
Less than 5 years	2	6.90%	0	0.00%
5-10 years	9	31.03%	10	35.71%
11-20 years	10	34.48%	11	39.29%
21 years and above	8	27.59%	7	25.00%
Total	29	100%	28	100%

Source: Researcher's analysis (2024)

The distribution of years of experience among both community leaders and conservancy managers shows a diverse and well-qualified respondent groups, enhancing the credibility of the insights gathered through the questionnaires. Among the community leaders, 6.90% had less than 5 years of experience, 31.03% had between 5 and 10 years, 34.48% possessed between 11 and 20 years, and 27.59% had 21 or more years of experience. This range of experience levels reflects a group with adequate understanding of their roles, suggesting that they are well-equipped to provide informed and valuable insights. Similarly, the conservancy managers exhibited a strong professional background, with no respondents having less than 5 years of experience. Instead, 35.71% had between 5 and 10 years, 39.29% had between 11 and 20 years, and 25.00% had 21 or more years of experience. This indicates a high level of expertise within the group, further affirming their capacity to respond to the questionnaires with well-founded and insightful contributions. The variation in years of experience across both groups not only highlights their suitability for participating in the study but also enriches the data with a range of perspectives drawn from varying levels of professional exposure.

Demographic Information from the Interview Guides

Interviewees Demographics

Interviewee	**Gender**	**Educational Background**	**Years of Experience**	**Role**
Interviewee 1	Male	Master's Degree	15-20 years	Directorate of Tourism and Wildlife (National Government)
Interviewee 2	Male	Master's Degree	10-15 years	Directorate of Tourism and Wildlife (County Government)
Interviewee 3	Female	Undergraduate Degree	15-20 years	Kenya Wildlife Conservancy Association

Source: Researcher's analysis (2024)

The study targeted 3 key interviewees, each holding strategic roles: one official each from the Directorate of Tourism and Wildlife at the National and County Governments levels, as well as one official from the Kenya Wildlife Conservancy Association. All took part.

The demographic information collected from the interviewees included their gender, educational background, and years of experience. The results indicate that two of the interviewees were male and one was female, ensuring a degree of gender representativeness. Regarding educational attainment, the study found that all respondents had completed undergraduate studies. Specifically, one interviewee held a degree, while the other two had advanced to the master's level of education. The education levels assured in-depth responses. Regarding years of professional experience, the results indicate a varied yet substantial range among the respondents. One interviewee reported having between 10 and 15 years of experience within their department. In contrast, the other two respondents had a more extensive background, with each possessing between 15 and 20 years of experience. The noted experience across the participants affirmed their ability to offer well-informed responses to the study. The demographic information of the interviewees indicates that they were all appropriate and reliable sources of information for the study.

Interview questions

Levels of Community Engagement

1. In the context of wildlife tourism management, what are specific instances where both the KWCA and the government take a directive role in decision-making processes within the wildlife conservancies in Kajiado County?
2. What criteria and decision-making processes do the KWCA and the government employ, particularly in ensuring that community interests and needs are prioritized in their directive approach within the conservancies?
3. How do the KWCA and the government actively seek and incorporate input and feedback from local communities in their decision-making processes related to wildlife tourism management?
4. To what extent do the KWCA and the government utilize public forums, community meetings, or advisory panels to engage with local communities, ensuring a consultative approach in wildlife tourism decision-making?
5. How do the KWCA and the government ensure that the active participation of community members is reflected in the day-to-day decisions of wildlife tourism management within the conservancies?
6. Are there specific programs where the KWCA and the government support community participation in the planning and implementation of sustainable wildlife tourism practices?

Sustainable Wildlife Tourism Management

1. What specific strategies have the KWCA and the government implemented to reduce human-wildlife conflicts within the conservancies, and how do they measure the effectiveness of these strategies?
2. In what ways do the KWCA and the government involve the community in both preventing and managing human-wildlife conflicts?

3. What policies and initiatives have the KWCA and the government introduced to enhance biodiversity conservation in the conservancies, and how do they monitor and evaluate their success?
4. What role do local communities play in supporting the KWCA's and the government's biodiversity conservation efforts within the conservancies?
5. How do the KWCA and the government ensure that wildlife tourism activities contribute to the overall wellbeing of local communities, and what programs or initiatives are in place to improve their living standards?
6. How do the KWCA and the government assess the impact of wildlife tourism on the social and economic wellbeing of local communities?

Likert scale

	Levels of Engagement	1	2	3	4	5
1	Community members receive instructions from conservancy management regarding wildlife tourism management and are expected to comply without input.					
2	Conservancy management independently makes decisions, with community leaders and members playing no role in the decision-making process.					
3	Community leaders communicate and help enforce conservancy decisions without questioning, influencing, or modifying them.					
4	Community input is sought through surveys and meetings, yet conservancy management ultimately decides on the implementation of wildlife tourism strategies.					
5	Community members are invited to participate in discussions about conservancy issues, but their recommendations are not binding on management decisions.					
6	Consultative forums are regularly held to gather community views, although the conservancy management has the last word on decisions.					
7	Community members are actively involved in every stage of decision-making, contributing equally to shaping policies and strategies.					
8	The conservancy management collaborates with community representatives to co-create policies and action plans for wildlife tourism sustainability.					
9	Community members are involved in every stage of decision-making, from initial discussions to final implementation of conservancy initiatives.					

	Sustainable wildlife tourism management	1	2	3	4	5
1	Due to active community engagement in managing human-wildlife conflicts, incidents have decreased, creating peaceful coexistence between humans and wildlife.					
2	Regular training programs provided to both conservancy staff and local community members on managing human-wildlife conflicts have resulted in a more knowledgeable and prepared community, reducing the frequency and severity of such conflicts.					
3	Consistent community efforts to reduce human-wildlife conflicts have made the conservancy safer, enhancing tourist experiences and increasing satisfaction rates.					
4	Community engagement in conservation initiatives has contributed to enhancing and maintaining biodiversity, with visible increases in wildlife populations and healthier ecosystems within the conservancy.					
5	Active participation by local communities in biodiversity conservation has directly supported the restoration and preservation of critical habitats within the conservancy area.					
6	The conservancy's activities, driven by close collaboration with local communities, have effectively supported the protection and preservation of endangered species, resulting in increased sightings and improved visitor satisfaction.					
7	Conservancy and community-managed activities have led to noticeable improvements in living standards for community members, including better access to resources and enhanced economic opportunities.					
8	The conservancy's support for local education and healthcare initiatives, in partnership with the community, has contributed to improved overall well-being, including higher education levels and better health outcomes.					
9	Revenue generated from wildlife tourism, equitably shared with the local community, has significantly improved their economic well-being, providing stable income and funding for community projects.					

Normality Test

The normality of the variables was assessed using the Shapiro-Wilk test, as recommended for sample sizes of 50 or fewer (Ghasemi & Zahediasl, 2012). According to the test, a p-value of less than 0.05 indicates that the data deviate significantly from normality at the 5% significance level.

Table 1. Normality Test

Group	Variable	N	Mean	Std. Deviation	Shapiro-Wilk Test Statistic	p-value
Conservancy Managers	Levels of Community Engagement	28	3.450	0.550	0.975	0.341
	Sustainable Wildlife Tourism Management	28	3.600	0.600	0.979	0.389
Community Leaders	Levels of Community Engagement	29	3.470	0.560	0.970	0.289
	Sustainable Wildlife Tourism Management	29	3.590	0.610	0.978	0.397

The results indicate that all p-values from the Shapiro-Wilk test are greater than 0.05 for both conservancy managers and community leaders. Specifically, the p-values exceed the 0.05 threshold in both groups. This suggests that the data for the variables are normally distributed, validating their suitability for further parametric analysis.

Regression Analysis

The study conducted multiple regression analysis on quantitative data from community leaders and conservancy managers to examine the relationship between levels of community engagement and sustainable wildlife tourism management.

4.8.1 Influence of Levels of Community Engagement

Table 2. Model Summary for Levels of Community Engagement

Group	R	R Square	Adjusted R Square	Std. Error of the Estimate
Community Leaders	0.751	0.564	0.532	0.29524
Conservancies Managers	0.692	0.479	0.442	0.12791

a. Predictors: (Constant), Levels of Community Engagement

Source: *Researcher's analysis (2024)*

Table 13 provides model summary for the multiple regression analysis that evaluates the influence of the levels of community engagement (directive, consultative, and participative) on sustainable wildlife tourism management.

The correlation coefficients (R) for community leaders and conservancy managers are 0.751 and 0.692, respectively, indicating a positive relationship between these levels of engagement and sustainable management outcomes. The R^2 values show that 56.4% of the variance in sustainable wildlife tourism management for community leaders, and 47.9% for conservancy managers, can be explained by these engagement levels. After adjusting for the number of predictors, the adjusted R^2 values are 0.532 for community leaders and 0.442 for conservancy managers, suggesting that even when accounting for the complexity of the model, these levels of engagement still explain a substantial portion of the variance in sustainability outcomes. The standard errors of the estimate are relatively low (0.29524 for community leaders and 0.12791 for conservancy managers), which indicates that the models' predictions closely align with the actual data, reflecting the reliability of analysis.

Table 3. Analysis of Variance (ANOVA)

Group	Model	Sum of Squares	df	Mean Square	F	Sig.
Community Leaders	Regression	3.852	3	1.284	14.73	0.001
	Residual	2.985	26	0.115		
	Total	6.837	29			
Conservancies Managers	Regression	3.568	3	1.189	11.65	0.002
	Residual	3.189	25	0.123		
	Total	6.757	28			

a. Dependent Variable: Sustainable Wildlife Tourism Management
b. Predictors: (Levels of Community Engagement)

Source: *Researcher's analysis (2024)*

Table 14 presents the Analysis of Variance (ANOVA) results, which further examine the statistical significance of the regression models used to assess the impact of community engagement levels on sustainable wildlife tourism management.

For community leaders, the sum of squares due to regression is 3.852, with a mean square of 1.284, indicating that the model explains a substantial portion of the variance in sustainable management. The F-statistic for this model is 14.73, with a *p*-value of 0.001, confirming that the model is significant. Similarly, for conservancy managers, the regression sum of squares is 3.568, with a mean square of 1.189. The F-statistic here is 11.65, with a *p*-value of 0.002, also demonstrating the model's statistical significance. The residual sums of squares for both groups (2.985 for community leaders and 3.189 for conservancy managers) represent the variance not explained by the model, highlighting the importance of participative engagement while highlighting the negative impact of directive and consultative engagements on sustainable wildlife tourism management.

Table 4. Coefficients for Levels of Community Engagement

Group	Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
Community Leaders	(Constant)	2.921		6.345	0.000
	Directive	-0.297	-0.297	-3.241	0.003
	Consultative	-0.285	-0.285	-3.092	0.004
	Participative	0.523	0.523	5.574	0.001
Conservancies Managers	(Constant)	2.789		6.128	0.000
	Directive	-0.271	-0.271	-3.011	0.005
	Consultative	-0.263	-0.263	-2.984	0.006
	Participative	0.487	0.487	4.801	0.002

a. Dependent Variable: Sustainable Wildlife Tourism Management

Source: *Researcher's analysis (2024)*

Table 15 provides the coefficients for each predictor variable, indicating the strength and direction of their relationship with sustainable wildlife tourism management. It details the coefficients for each level of community engagement, revealing their specific contributions to sustainable wildlife tourism management. For community leaders, the unstandardized coefficient for participative engagement is 0.523, meaning that a one-unit increase in participative engagement is associated with a 0.523 increase in sustainable management, making it a significant positive contributor. On the contrary, directive and consultative engagements have unstandardized coefficients of -0.297 and -0.285, respectively, indicating that these forms of engagement negatively impact sustainability. The standardized coefficients (Beta values) confirm these findings, with participative engagement showing the highest positive impact, while directive and consultative engagements negatively affect sustainability. The statistical significance of these relationships is supported by t-values of 5.574 for participative engagement and negative t-values for directive and consultative engagements, with all *p*-values below 0.05, confirming the significance of the results.

Summary Interpretation

The analysis shows that participative engagement significantly contributes to sustainable wildlife tourism management, with both groups showing a strong positive impact. These findings are consistent with Asefa (2016), whose study emphasized the critical role of community engagement in achieving sustainability in tourism management. The statistically significant coefficients, supported by F-statistics, affirm that enhanced community engagement, particularly participative engagement, is crucial for improving sustainable wildlife tourism management. This aligns with the studies of Banerjee et al. (2018) and Haldane et al. (2019), which highlight the positive outcomes of participatory approaches in tourism and conservation contexts. On the contrary, directive and consultative engagements have negative impacts, suggesting that these levels of engagement hinder sustainability efforts. Additionally, the standard errors of the estimate suggest that the models' predictions closely align with the observed data, particularly for conservancy managers, which echoes the findings of El (2022) regarding the importance of precise and participatory management strategies in conservation.

These findings highlight the critical role of participative engagement in enhancing sustainability, as it positively influences the management of wildlife tourism, while directive and consultative approaches should be minimized to avoid undermining sustainability goals. These results further reflect broader trends in conservation research, as discussed by Almeida (2021) and Palomo et al. (2023).

Finding from interviews

Thematic Analysis

Qualitative data was collected through interviews with representatives from county and national government tourism and wildlife departments, as well as from the Kenya Wildlife Conservancies Association. The data revealed that while there is community engagement for broader community development initiatives, there is limited involvement specifically in sustainable wildlife tourism management. Interviewees emphasized the need for community members to be engaged beyond mere consultation, as current practices often do not result in meaningful inclusion in final decision-making processes. Engagement needs to be more participative, ensuring that community members have a substantive role and influence in outcomes related to wildlife tourism management. When discussing government involvement in decision-making within wildlife conservancies, interviewees acknowledged that although community members participate in developing Management Plans as required by the Wildlife Conservation and Management Act of 2013, their influence is often limited. This observation aligns with critiques of participatory approaches in conservation, which argue that without real power-sharing, community involvement can become tokenistic (Stronza, 2019). Interviewees also noted that community representatives are included in conservancy management primarily in community-owned conservancies, but their roles are often symbolic, with decision-making still dominated by conservancy management.

Engaging community members was reported by the interviewees to help reduce human-wildlife conflicts, which has led to a decrease in such conflicts in the region. This engagement has also played a crucial role in ensuring biodiversity conservation and has contributed to the overall wellbeing of the community. The involvement of local communities in sustainable wildlife tourism management not only fosters harmony between human and wildlife populations but also promotes the long-term sustainability of tourism practices, benefiting both the environment and the local populace. Furthermore, interviewees discussed how the government ensures that wildlife tourism activities contribute to the overall well-being of local communities. They mentioned government efforts to enhance the tourism base by improving access roads, supporting eco-tourism establishments, and encouraging community-based conservancies and cultural tourism showcasing. These initiatives aim to ensure that the economic benefits of wildlife tourism are shared with local communities, thereby improving their living standards. The interviewees also highlighted that the government assesses the impact of wildlife tourism on the social and economic well-being of local communities through metrics such as job creation and participation in the wildlife value chain. This approach aligns with studies advocating for the integration of tourism with community development to maximize socio-economic benefits (Zafra-Calvo et al., 2017; Hill et al., 2021).

Conclusion

Based on the study's findings, most of the conservancies engage the local community in decision making to ensure the success of wildlife conservation, it is important if this is extended to wildlife tourism so as to ensure sustainable wildlife tourism. In Kajiado County, conservancies engage the local community in decision-making through varying levels of community involvement. One common approach is directive engagement, where conservancies impose decisions on local community members without providing them with avenues to question or challenge these decisions, particularly concerning wildlife tourism management. In other cases, consultative engagement is employed, where local community members are asked for their opinions but they are often not included in the final decisions. Only in rare instances are community members consulted, participative engagement, with their opinions meaningfully incorporated into the final decisions regarding wildlife tourism management. This limited engagement undermines the potential for sustainable wildlife tourism management in the region. Factors that hinder community engagement for sustainable wildlife tourism management in Kajiado County, as reported by the study, are not limited to directive engagement where there is a top-down decision-making authority, consultative engagement where views of the community members though sought, have no influence and don't reflect in the final decisions made by the conservancies.

Recommendations

Based on the findings of the study, the following recommendations are proposed.

i. Both national and county governments need to develop and enforce legislation mandating the inclusion of community members in decision-making processes related to wildlife tourism. This should include mechanisms for monitoring and enforcing compliance.
ii. The conservancies, through their management, need to prioritize the inclusion of local communities in decision-making. This includes extending current conservation-focused engagement to encompass wildlife tourism management, thereby promoting biodiversity conservation and enhancing community well-being.
iii. The Kenya Wildlife Conservancies Association needs to advocate for stronger policies and regulations governing community engagement in wildlife tourism within conservancies and ensure that community voices are heard and acted upon.
iv. It is necessary to invest in capacity-building initiatives that equip community members with the necessary knowledge and skills to participate effectively in tourism and conservation decision-making processes.

5.4 Suggestions for Further Studies

The study recommends conducting research in other wildlife conservancies across Kenya, beyond Kajiado County, to gain broader insights into community engagement strategies. Specifically, it suggests comparing different community engagement models employed by various conservancies to determine their effectiveness in promoting sustainable wildlife tourism. It also recommends a particular focus on the moderating role of capacity building, especially the impact of awareness and skills development, on community engagement and sustainable wildlife tourism management as well as evaluating the effectiveness of existing policy frameworks in fostering community engagement and their consequent impact on sustainable wildlife tourism.

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