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Social-Economic factors and implementation of community-based conservation projects in Ololorashi - Olgulului group ranch, Kajiado County, Kenya

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Abstract

An abstract is a summary of entire paper should be written in Cambria with font size- 10. Author can select Normal style This study investigates how socio-economic factors influence the implementation of community-based conservation (CBC) projects in Oleoresin–Olgulului Group Ranch, Kajiado County, Kenya. It applies the Social-Ecological Systems Framework and Empowerment Theory to examine the interaction between education, traditional practices, infrastructure, and household income in shaping conservation outcomes. The research recognizes that effective conservation depends on community participation, social empowerment, and economic stability. The area faces environmental threats such as deforestation, overgrazing, and water scarcity, compounded by climate change and land-use pressures. Using a descriptive research design and data collected from 156 respondents through questionnaires, the analysis conducted using SPSS (Version 25) showed that socio-economic factors collectively explained 86.04% of the variation in CBC project implementation ($R^2 = 0.8604$). All variables had a significant positive influence: community literacy ($\beta = 0.787$), community infrastructure ($\beta = 0.582$), household income ($\beta = 0.668$), and traditional practices ($\beta = 0.748$). These results indicate that communities with higher literacy levels, better infrastructure, stable incomes, and strong traditional values are more successful in implementing conservation initiatives. Literacy enhances awareness and decision-making; infrastructure facilitates accessibility; income stability supports participation; and traditional practices strengthen local ownership and sustainability. The study concludes that empowering local communities socially and economically is crucial for effective and sustainable conservation. It recommends investment in education, infrastructure development, and livelihood diversification to enhance community engagement and project success. Furthermore, it suggests exploring additional socio-cultural and political dimensions influencing conservation across other group ranches near Amboseli National Park. Overall, the findings emphasize that conservation initiatives must integrate social and economic realities to achieve long-term ecological and community development goals.

Keywords: Community-Based Conservation; Socio-Economic Factors; Sustainable Development

1. Introduction

Project management in conservation acknowledges the significant impact of social and economic factors on planning, execution, and outcomes. Variables such as community norms, cultural practices, financial concerns, resource allocation, stakeholder participation, and educational inequities play a crucial role in shaping people's involvement in project design and implementation. Socioeconomic circumstances, encompassing economic levels, education, cultural norms, and resource accessibility, are pivotal in determining community engagement, acceptance, and sustainability of conservation activities. The research project "Social-Economic Factors and Implementation of Community-Based Conservation Projects" employs the Social-Ecological Systems (SES) Framework and empowerment theory to examine the intricate interplay between socio-economic dynamics and ecological aspects in conservation efforts. By exploring

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the relationships between local socioeconomic contexts, community involvement, and conservation outcomes, the study aims to develop strategies that balance ecological goals with community needs, promoting empowerment and long-term engagement. Community-based conservation (CBC) underscores the involvement of local communities for mutual benefits and long-term success, yet effectiveness varies, leading to conflicts and criticisms. The Community Conservation Resilience Initiative (CCRI) globally analyzes community conserved places and territories, enhancing their resilience. In Kenya, various successful community-based conservation initiatives, such as Lewa Community-based Conservancy, Mara Naboisho Conservancy, Ol Pejeta Conservancy, Ewaso Lions, Mukogodo Forest Trust, Kijabe Forest Trust, Arabuko-Sokoke Forest Project, Kakamega Environmental Education Programme, Mount Kenya Trust, and the Bongo Surveillance Project, exemplify a commitment to balancing conservation with the well-being of local communities.

1.1. Socio Economic Factors

Social-economic factors are a variety of interrelated elements from the social and economic spheres that have an impact on different characteristics of people and societies. These variables include employment possibilities, economic growth, poverty levels, inflation, resource distribution, and infrastructure development, as well as education, occupation, income, healthcare, cultural norms, and social inequality. They influence opportunities, interactions, and general wellbeing collectively, which is essential for addressing problems, creating policies, and promoting sustainable development. Studies have pointed out key social economic factors in community conservation projects such as Traditional land-use practices, cultural beliefs, education levels, income sources, and access to alternative livelihood opportunities are critical considerations (Agrawal and Redford, 2020). These factors shape the perspectives and engagement of the local community in conservation efforts (Ezebilo, 2021). A thorough understanding of these social-economic factors is vital to identify potential challenges and opportunities for collaboration between conservationists and local communities (Brooks et al., 2022). Cultural beliefs, social norms, and traditional practices can either support or hinder conservation efforts (West et al., 2006). In this study, social economic factors will be measured by looking at the community literacy encompasses gauging information access, social capital, and knowledge. Community infrastructure assessment considers water and road availability, as well as social facilities. Household income levels are measured through employment status and financial mobilization. Traditional practices evaluation involves capturing traditional ecological knowledge, resource management methods, tenure systems, and adherence to social norms. These measurements collectively provide insights into the impact and sustainability of community-based conservation efforts.

1.2. Implementation of Community-Based Conservation Projects

Project implementation refers to the practical execution of planned activities aimed at achieving the project's intended objectives. Kikwatha (2019) defines project implementation as where the project team converts the project strategy into actionable steps to meet its goals. In construction projects for instance, this may involve construction, installation, testing, and any necessary revisions may all fall under this stage's purview. Dudley et al (2011) points out that implementing community conservation programmes entails carrying out efforts that involve the local community in the sustainable management and protection of biodiversity and natural resources. Collaboration in planning, capacity building, resource management, stakeholder involvement, and monitoring are all part of this approach, which aims to advance both conservation objectives and social welfare.

1.3. Ololorashi - Olgulului Group Ranch

The Ololorashi - Olgulului Group Ranch in Kajiado County, renowned for its rich biodiversity, faces severe environmental threats like illegal hunting, overgrazing, deforestation, and water scarcity exacerbated by climate change, alongside land conversion and infrastructure development due to its proximity to urban centers. To address these challenges, a community-based conservation project has been initiated, aiming to investigate the impact of social-economic factors on its success. This study recognizes the importance of involving local communities in conservation efforts, emphasizing their active participation in decision-making processes to ensure both ecological preservation and community development. The approach holds promise for mitigating environmental challenges in Ololorashi - Olgulului Group Ranch while considering the socio-economic dynamics of the local population.

1.4. Statement of the Problem

Understanding how socio-economic elements intricately affect conservation outcomes is crucial for the effective implementation of community-based conservation efforts. Although it is agreed that community involvement in development projects is important, little is known about the precise impact that socioeconomic considerations have on the success of community-based conservation initiatives. The Ololorashi - Olgulului Group Ranch in Kajiado County, an ecologically significant but vulnerable area suffering environmental issues as a result of hunting, grazing, deforestation, and urbanization, is the subject of this study's attempt to fill this knowledge gap. A community-based conservation

project is suggested as a solution to these problems. However, the success of this strategy depends on how well socioeconomic factors are included.

Conceptually, the existing research recognizes the influence socio-economic issues have on how communities engage in conservation, but it doesn't go into great detail on how these influences specifically influence the results of such programmes. Due to this gap, it is unclear how local opinions and attitudes, traditional land use practices, cultural beliefs, education, income sources, access to alternative livelihoods, and local perceptions and beliefs all affect the ecological and economic consequences of the project. The Ololorashi - Olgulului Group Ranch is situated in a particular contextual void. Although the ecological significance and difficulties of this region are recognized, little research has been done to particularly examine how socio-economic elements in this community connect with conservation efforts. There is still a lack of knowledge concerning the interactions between socioeconomic issues and conservation outcomes in this particular ecosystem because the context-specific dynamics of the Ranch are still understudied.

Prior research provides a foundational understanding of socio-economic factors' relevance to conservation, but a methodological gap exists in comprehensively studying these factors in the context of the Ololorashi Olgulului Group Ranch. A detailed investigation that integrates quantitative and qualitative methods to assess traditional practices, cultural influences, education, income sources, livelihood options, local perceptions, and attitudes is needed. Existing studies often focus on a subset of these factors or lack a holistic approach, leaving a methodological gap in understanding the Ranch's specific socio-economic dynamics and their impact on conservation initiatives.

Addressing these conceptual, contextual, and methodological gaps will provide a deeper understanding of how socio-economic factors influence the implementation and outcomes of community-based conservation projects in the Ololorashi - Olgulului Group Ranch. It will contribute valuable insights to both the specific context and the broader discourse on effective community-oriented conservation strategies. Therefore, this study is focused on answering the question to what extent the Social-Economic Factors and Implementation of Community-Based Conservation Projects?

Objectives of the Study

- To investigate how Education level influence, the implementation of Community-Based Conservation project in Ololorashi - Olgulului Group Ranch, Kajiado County, Kenya
- To assess how Traditional practices influences the implementation of Community-Based Conservation project in Ololorashi - Olgulului Group Ranch, Kajiado County, Kenya
- To evaluate how Infrastructure influences the implementation of Community Based Conservation project in Ololorashi - Olgulului Group Ranch, Kajiado County, Kenya
- To investigate how Household incomes influence the implementation of Community Based Conservation project in Ololorashi - Olgulului Group Ranch, Kajiado County, Kenya

2. Literature review

2.1. Performance of children support programs.

The evaluation of project performance hinges on the essential elements of cost, time, and quality, as outlined by Shurygin and Krasnova (2017), with quality emphasizing the comprehensive features necessary for a product to meet its intended purpose. Meanwhile, vulnerable children (VCs) and orphans face the unsettling prospect of involvement in illegal activities such as drug trafficking and sexual exploitation, as highlighted by Brown and Jain (2020). Despite their innate desire to live, these children may be coerced into engaging in illicit pursuits. UNICEF's findings reveal that around 15 million children globally have lost one or both parents due to AIDS and HIV, with nearly 12 million residing in Sub-Saharan Africa. These children confront myriad challenges, including the loss of inheritance rights, vulnerability to abuse, and assuming the responsibility of heading their households (Neustroeva, Yudina, Kozhurova, Neustroeva and Nikolaev, 2018). Moreover, in many African nations, nearly half of the children enrolled in primary schools struggle to access secondary education due to caregivers' financial limitations at that level (Aratani, Lazzeroni, Brooks-Gunn and Hernández, 2019).

2.2. Community Literacy and Implementation of Community-Based Conservation Project

Community literacy, encompassing the ability of individuals to read, write, and communicate effectively, extends beyond individual improvement to enhance community-wide communication, problem-solving, and critical thinking. Collaborative efforts among community members, organizations, and institutions are crucial for fostering empowerment and active engagement in various societal aspects. The positive impact of literacy on community growth

and the overall economy is significant, as it opens doors to employment and educational opportunities, ultimately addressing poverty. In a study by Putri Anggini and Siti Rodliyah (2020), digital literacy is highlighted as a key aspect for individuals seeking knowledge and acquiring new skills to adapt to ongoing changes. Literacy, especially in English for newcomers to Canada, plays a vital role in developing social ties and peaceful cohabitation. Moreover, literacy is essential for meaningful participation in community-level empowerment initiatives, enabling honest and informed interaction with authorities. Despite its crucial role, low levels of literacy in emerging economies pose a challenge, emphasizing the importance of active community empowerment as a strategy for improving literacy and fostering local impact. Morgan's (2016) study in Guatemala reveals persistent high levels of illiteracy, particularly in rural and indigenous communities, despite international efforts to address the issue.

2.3. Traditional Practices and Implementation of Community-Based Conservation Project

The integration of modern projects with traditional best practices is crucial for enhancing efficiency and sustainability, establishing a harmonious synergy between innovation and time-tested methodologies. Traditional practices, deeply rooted in cultural history and local knowledge, play a pivotal role in the success of Community-Based Conservation (CBC) projects by offering valuable insights into sustainable resource management and ecosystem preservation. Assessments by Brooks (2013) and Finn and Castille (2017) emphasize the significance of traditional practices, beliefs, and norms as key determinants in the implementation of community-based conservation projects. These studies reveal a harmonious coexistence between traditional ecological knowledge and the effectiveness of conservation efforts, enriching the cultural fabric of communities. This collaborative learning process, as argued by Whyte (2013), encourages communities to engage in reciprocal learning, shaping conservation methods aligned with their beliefs and fostering a strong commitment to protecting natural resources. Overall, the incorporation of traditional traditions into CBC projects empowers communities, instills a sense of ownership, and promotes a peaceful cohabitation with nature.

2.4. Community infrastructure and implementation of Community Based Conservation project

Research by Mureithi et al. (2018) in Northern Kenya emphasized the crucial role of infrastructure in supporting community-based conservation initiatives. Similarly, Kalvelage et al. (2021) found in their study in Kenya and Namibia that conservancies contribute to economic growth, yet insufficient infrastructure poses a significant obstacle. Purwoto et al. (2021) explored infrastructure projects with a PPP scheme in Indonesia, revealing a correlation between socio-economic factors and infrastructure development impact. Odoyo (2013) focused on community initiatives in Homa Bay County, stressing the pivotal role of project infrastructure and advocating for careful design. Sabarish et al. (2017) evaluated social and economic elements in conservation programs, highlighting the essential role of infrastructure for sustainability. Collectively, these studies underscore the undeniable significance of robust infrastructure in ensuring the success, sustainability, and efficacy of various projects, be it community-based conservation, socio-economic development through infrastructure projects, or the overall implementation of initiatives. The consensus is clear: adequate and efficient infrastructure serves as the foundation for successful endeavors in these domains.

2.5. Community household income and implementation of Community Based Conservation project

The intricate interplay between household incomes, community involvement, and financial sustainability is a pivotal area of research across infrastructure, conservation, and community development. Understanding how income levels impact participation, goal adoption, and project sustainability enables the optimization of various initiatives for desired outcomes. Kikwatha, Kyalo, and Mulwa (2017) underscored the significance of household income in supporting dairy goat projects, emphasizing its role in project beneficiary selection. Community participation in empowerment programs is influenced by financial levels, as demonstrated by Rashied and Begum (2016), who found that financially contributing communities are more likely to successfully implement development projects. Viravaidya and Hayssen (2021) caution against overreliance on donors, advocating for at least 60% of funding to come from local contributions for community empowerment organizations. Busienei's (2017) study links recipients' income levels to the financial viability of NGOs in Nairobi, stressing the importance of financial sustainability beyond donor support. Yasin's (2019) emphasis on fundraising events for non-profit goals highlights the dynamic environment critical for success in empowerment, development, and conservation initiatives. The synthesis of income, community engagement, and financial strategies creates a resilient, self-sustaining project landscape, fostering transformative change and long-lasting impact beyond donor dependencies.

2.6. Theoretical Framework

2.6.1. Social- Economic Theory

Max Weber's "Theory of Social and Economic Organization," published in 1947, is a seminal work in sociology that explores the growth of organizations through changes in authority structures, market expansion, legal advancements,

and the interplay of social and economic dynamics. Weber's theory delves into the connections between social structures and economic systems, emphasizing how organizational structures, cultural norms, and social interactions influence economic activity and vice versa. It underscores the importance of understanding the social context in which economic actions occur and how these interactions impact broader aspects of society, including power structures, institutions, and value systems. In the context of social-economic aspects and community-based conservation initiatives, Weber's theory becomes highly relevant. It highlights the intricate interplay between economic factors, legal frameworks, market dynamics, cultural norms, and leadership structures that shape conservation efforts. By considering power dynamics, cultural norms, and economic factors, Weber's theory provides valuable insights into the success of conservation projects, emphasizing the need to comprehend these complex interactions for effective execution in community-based conservation programs.

2.6.2. Program Theory

In 1995, Huey Chen introduced program theory, placing significant emphasis on understanding the processes of change and determining responsibility for those changes. Recognized for its thorough problem-solving methodology, program theory has long been a valuable tool for projects, emphasizing the incorporation of assessments to enhance findings. It provides strategies for influencing stakeholders involved in evaluations, addressing effective resource allocation and support for the intended target audience. Uitto (2010) utilizes a theoretical framework to illustrate the outcomes of control and assessment, enabling the identification of expected and unexpected effects and the assignment of project outcomes. In the context of conservation initiatives, program theory offers a structured approach to analyze how social-economic factors, including community engagement, resource allocation, and economic considerations, interplay to shape the success and impact of community-based conservation projects. Through program theory, the intricate cause-and-effect relationships between these factors and the effective execution of conservation efforts become clearer, facilitating a more comprehensive analysis and strategic decision-making process.

2.7. Conceptual Framework

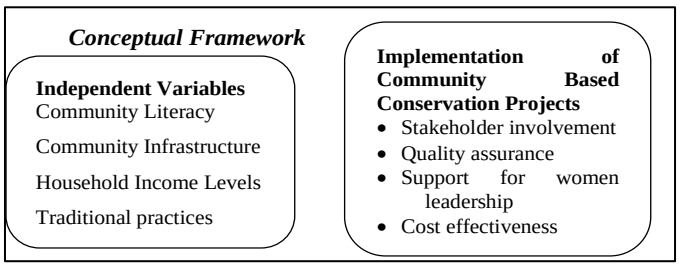

Figure 1 Conceptual Framework

3. Material and methods

3.1. Research methodology

3.1.1. Research Design

This study employed descriptive research design. Descriptive research design enables the researcher to use questionnaires and interview to collect opinions, attitudes and habits of people as well as educational and societal issues of the people. This research design is appropriate because it involves collecting data from a sample of individuals or groups in order to describe certain characteristics, behaviors, opinions, attitudes, or other aspects of a population.

3.1.2. Sample Size and Sampling Procedure

The sample size and sampling procedure of this project was arrived at in the following ways: Kothari (2018) defines sample size as a portion of the total population that provides a broad view on the subject of the study. A reliable sample size determination is essential to research since it ensures an accurate representation of the wider population. From a total target population of 1271, an optimal sample of 132 being ranch owners and 24 project officials using the Krejcie and Morgan table from 1970.

3.1.3. Research Instrument

For this study, the researcher made use of questionnaires in the gathering of primary data. The choice of this instrument is informed by its advantages such as; it is free from the bias of the interviewee and respondents had ample time to give well thought out answers.

3.1.4. Validity of the Research Instrument

This study used four different kinds of validity. The research tool's alignment with its intended goal was first determined by determining its face validity, which was verified by consulting project management professionals. Secondly, content validity guaranteed that questions accurately delve into the principles of the study, which have been reinforced through questionnaire pilot testing. Thirdly, construct validity, which is supported by a thorough literature assessment, verifies that variables correspond to theory. Lastly, criterion or predictive validity was measured by criteria or predictive validity gauges using a five-point Likert scale from earlier research.

3.1.5. Data collection procedure

Data was collected using a questionnaire with both open ended and closed ended questions structured to meet the objectives of the study and administered to the respondent through the research assistant

3.1.6. Data Analysis Technique

Data was analyzed using Statistical Package for Social Sciences (SPSS Version 25.0). Referencing of all received questionnaires was done and coding of questionnaire items was done for facilitating data entry. After data cleaning which entailed checking for errors in entry, descriptive statistics such as frequencies, percentages, mean score and standard deviation was estimated for all the quantitative variables and information presented inform of tables. The qualitative data from the open-ended questions was analyzed using thematic content analysis and presented in narrative form.

Inferential data analysis was done using multiple regression analysis. Multiple regression analysis was used to establish the relations between the independent and dependent variables.

4. Results and discussion

4.1. Regression analysis

Table 1 Model Summary

Model	R	R-Square	Adjusted R- Square	Std. Error of Estimate
1	0.913	0.8604	0.7932	0.6172

The results in summary model show that the four independent variables considered in this study account for 0.8604 which is 86.04% and this indicates the remaining 13.96% is contributed by other factors which were not considered in this study and therefore it is imperative to conduct further research to explore the additional factors which influence implementation of community-based conservation projects.

4.2. Analysis of Variance ANOVA

Table 2 Variance ANOVA

Model		Sum of Squares	Ds	Mean square	F	Sig.
1	Regression	3.1813	3	0.82432	5.2181	.0178a
	Residual	5.7203	141	0.2861		
	Total	8.9016	144			

The significance value, which stands at 0.0178, is below the conventional threshold of 0.05. Consequently, the model demonstrates statistical significance in its capacity to predict the influence of social-economic factors; on the implementation of community-based conservation projects in Kenya. Furthermore, when comparing the calculated F-

value of 5.2181 to the critical F-value of 3.23 at a 5% significance level, it becomes evident that the overall model holds statistical significance.

4.3. Regression Coefficients

Table 3 Coefficients

	Unstandardized Coefficients		**Standardized Coefficients**	**T**	**Sig**
	B	Std. Error	Beta		
(Constant)	1.261	0.8146		2.726	.0258
Community literacy	0.787	0.1778	0.263	5.112	.0036
Community infrastructure	0.582	0.2622	0.163	4.635	.0118
Household income level	0.668	0.2828	0.225	4.845	.0133
Traditional practices	0.748	0.3385	0.419	3.358	.0.265

A multiple regression analysis was carried out to ascertain the relationship between the implementation of community-based conservation projects and the four variables. Based on the SPSS-generated table provided in table 4.10, the equation ($Y = \beta0 + \beta1X1 + \beta2X2 + \beta3X3 + \beta4X4 + \varepsilon$) can be expressed as: $Y = 1.261 + 0.787X1 + 0.582X2 + 0.668X3 + 0.748X4$

According to the established regression equation, with all other factors held constant at zero (community literacy, community infrastructure, household income level and traditional practices), the coefficient for the implementation of community-based conservation projects is 1.261. The data analysis also reveals that, when all other independent variables are set to zero, a one-unit increase in community literacy leads to a 0.787 increase in the implementation of community based conservation projects, a one-unit increase in community infrastructure results in a 0.582 increase, a one-unit increase in household income level to a 0.668 increase, and a one-unit increase in traditional practices results in a 0.748 increase in the implementation of community based conservation projects. This suggests that community literacy have the most substantial impact on the implementation of community-based conservation projects, followed by traditional practices.

The coefficient for community literacy (X1) in the regression equation is 0.787. This means that, when all other factors such as community infrastructure, household income level, and traditional practices are held constant at zero, a one-unit increase in community literacy leads to a 0.787 increase in the implementation of community-based conservation projects. This result suggests that community literacy has a substantial positive impact on the implementation of community-based conservation projects. In practical terms, communities with higher levels of literacy are more likely to be actively engaged and informed about conservation efforts, leading to a greater success in the implementation of such projects. The study therefore rejects the null hypothesis which assumed that there is no significance relationship between community literacy and implementation of community-based conservation project in Ololorashi - Olgulului Group Ranch in Kajiado County Kenya.

The coefficient for community infrastructure (X2) is 0.582. This implies that, under the condition that all other variables are set to zero, a one-unit increase in community infrastructure leads to a 0.582 increase in the implementation of community-based conservation projects. This result indicates that having better community infrastructure contributes positively to the implementation of conservation projects. Improved infrastructure may facilitate access to conservation areas, transportation of resources, and overall community engagement in conservation activities. The study therefore rejects the null hypothesis which assumed that there is no significance relationship between community infrastructure and implementation of community-based conservation project in Ololorashi - Olgulului Group Ranch in Kajiado County Kenya.

The coefficient for household income level (X3) is 0.668. This signifies that, when the other independent variables are held constant at zero, a one-unit increase in household income level results in a 0.668 increase in the implementation of community-based conservation projects. This finding suggests that higher household income levels have a favorable impact on the implementation of conservation projects. Households with greater financial resources may have more capacity to invest in conservation efforts or participate in income-generating activities linked to conservation. The study therefore rejects the null hypothesis which assumed that there is no significance relationship between household

income level and implementation of community-based conservation project in Ololorashi - Olgulului Group Ranch in Kajiado County Kenya.

The coefficient for traditional practices (X4) is 0.748. In the scenario where all other variables are at zero, a one-unit increase in traditional practices leads to a 0.748 increase in the implementation of community-based conservation projects. This result indicates that traditional practices, when aligned with conservation goals, can have a significant positive influence on the success of conservation projects. Communities that integrate conservation into their traditions and customs are more likely to be committed to sustainable practices. The study therefore rejects the null hypothesis which assumed that there is no significance relationship between traditional practices and implementation of community-based conservation project in Ololorashi - Olgulului Group Ranch in Kajiado County Kenya

Community Literacy and Implementation of Community-Based Conservation Projects: The study delves into the crucial role of effective communication in community-based conservation projects, emphasizing the impact of community literacy on successful implementation. With a regression coefficient of 0.787, indicating a 78.7% contribution to success, the findings align with prior research, stressing the importance of literacy in fostering community understanding and engagement. The limitations in literacy levels hinder employment opportunities and effective participation, especially in English-dominated project settings.

Community Infrastructure and Implementation of Community-Based Conservation Projects: Examining the influence of infrastructure on conservation initiatives, the study underscores the significance of well-maintained roads and utilities. The regression coefficient of 0.582 suggests a positive impact on project implementation by facilitating access to conservation areas and resources. These findings are consistent with prior research, highlighting the essential role of infrastructure in accelerating and sustaining community-led conservation efforts.

Household Income Level and Implementation of Community-Based Conservation Projects: The study explores the relationship between household income levels and community participation in conservation projects. With a regression coefficient of 0.668, the findings indicate a positive correlation, emphasizing that higher incomes contribute to successful project implementation. Aligning with previous research, the study underscores the influence of financial resources on community engagement and highlights the challenges faced by lower-income households in actively participating in conservation goals.

Traditional Practices and Implementation of Community-Based Conservation Projects: Examining the fusion of traditional practices and modern conservation, the study portrays traditional practices as integral to the success of community-based conservation projects. The regression coefficient of 0.748 emphasizes the positive influence of traditional practices, contributing 74.8% to implementation success. Echoing prior research, the study showcases the harmonious coexistence of traditional practices and conservation, illustrating the Maasai community's adaptive shift towards wildlife preservation.

5. Conclusion

Research findings, conclusion and recommendation

The summary of findings and discussion is presented based on each variable/objective the findings are linked to the literature review and thematic responses from interviews and focused group discussion.

Community Literacy and Implementation of Community-Based Conservation Projects: The study delves into the crucial role of effective communication in community-based conservation projects, emphasizing the impact of community literacy on successful implementation. With a regression coefficient of 0.787, indicating a 78.7% contribution to success, the findings align with prior research, stressing the importance of literacy in fostering community understanding and engagement. The limitations in literacy levels hinder employment opportunities and effective participation, especially in English-dominated project settings.

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Recommendations

Based on the conclusions of this investigation, it is suggested that

The study found out that the community literacy is very low and this variable had the highest score meaning it has the highest influence. This study recommends that the national and county government of Kajiado considers it as a priority to have many schools which will help the current generation to go through formal education so that they can be able to read and write as well as communicating to the donors. This will go a long way in improving the implementation of the conservation projects which will lower human-wildlife conflict

The study concludes that community infrastructure has positive and significant influence on the implementation of community-based projects. Infrastructure encompasses various aspects such as roads, transportation networks, utilities (water and electricity supply), and communication systems. The presence of these elements plays a pivotal role in the efficient execution of community-based projects. The study recommends a comprehensive plan to be adopted to ensure that the infrastructure is improved in this area for the projects to be implemented wholly.

The study concludes that household income has positive and significant influence on the implementation of community-based conservation projects. The study recommends incentives which are geared towards empowering the community financially so that they can be involved fully in the implementation of these community-based conservation projects.

Suggestions for further studies

Below suggestions are made based on the research findings: This current study focused on socio-economic factors that influence implementation of community-based conservation projects and found that the four independent variables considered in this study account for 86.04%. This study therefore suggests a further study to explore other factors which were not accounted for in this study and their influence on the implementation of these conservation projects.

This study was based in Ololorash-Olgulului ranch, since there many ranches in Kajiado county and particularly those which are near Amboseli national park, this study suggests a similar study in these other ranches to triangulate the findings with these of the current study.

A similar study should be done to look into socio-cultural factors that influence implementation of these conservation projects. This will help in pointing out some of the cultural practices which may influence the implementation of these projects either positively or negatively.

Compliance with ethical standards

Acknowledgments

The author expresses sincere appreciation to the Ololorashi–Olgulului community members for their cooperation during data collection. Gratitude is also extended to Kajiado County Government and the African Conservation Centre (ACC) for their institutional support and facilitation of field activities. Special thanks to all respondents, research assistants, and local leaders who provided valuable insights that enriched the study.

Disclosure of conflict of interest

The author declares that there are no known conflicts of interest or competing financial interests related to the publication of this manuscript. The study was conducted independently and was not influenced by any commercial or institutional interests.

Statement of ethical approval

The present research work does not contain any studies performed on animals or human subjects by any of the authors. However, all ethical considerations regarding community engagement and informed consent were observed during fieldwork.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study. Participants were briefed on the purpose of the research, assured of confidentiality, and informed that their participation was voluntary and could be withdrawn at any time without consequence. If studies involve information about any individual e.g. case studies, survey, interview etc., author must write statement of informed consent as "Informed consent was obtained from all individual participants included in the study.

Compliance with Ethical Standards

The research was conducted in accordance with established ethical guidelines for social science studies. All procedures involving data collection, analysis, and reporting were carried out with integrity, transparency, and adherence to professional research standards. The study ensured respect for local community values, confidentiality, and voluntary participation throughout the research process.

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