

Influence of Cultural Beliefs on Human Wildlife Conflict of Residents of Amboseli Conservancies, Kajiado County, Kenya

By

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ABSTRACT

Human-wildlife conflict has intensified due to land-use fragmentation driven by population growth and human activities. This study aimed to assess the impact of socio-economic development on human-wildlife conflict in Amboseli conservancies, Kajiado County, with a focus on the influence of cultural beliefs. A mixed-methods approach and convergent parallel design were employed. Data were collected from 10 key informants, including KWS rangers, and a sample of 38 participants from a population of 76,671 in the Amboseli conservancies community. Primary data were gathered through face-to-face interviews and semi-structured questionnaires, and analyzed using SPSS version 29, applying descriptive, content, and inferential statistics. Results were presented in tables and supplemented by qualitative data organized into common themes. The study found that cultural beliefs significantly influence human-wildlife conflict (composite mean score of 3.81). It recommends that the government promote sustainable development by integrating wildlife conservation into broader efforts addressing poverty, food security, and climate change. The State Department for Economic Planning should also facilitate dialogue between Maasai communities, conservation organizations, and government agencies.

Keywords: Cultural Beliefs, Human-Wildlife Conflict, Conservation Practices, Indigenous Communities, Wildlife Management.

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Introduction

The pre-agricultural and pre-industrial societies across the globe subsisted on hunting and gathering (Brackowski et al., 2018). People and wild wildlife coexisted harmoniously and with little disturbance since they had access to a wealth of high-quality natural resources. Society started to cultivate land to grow crops and domesticate wildlife as a steady source of sustenance during the agrarian revolution. Since they began sedentary farming and domesticating wildlife, people have experienced major losses to their livelihoods due to crop damage and cattle predation by wild wildlife, even if the new way of life guaranteed consistent food supplies throughout the year (Nyerembe and Bushesha 2021). Due to the rising need for habitation and agricultural cultivation, human activities have spread beyond the borders of wildlife protection areas, including important regions used for migration and dispersion as the population has grown. The conflict between humans and wildlife is exacerbated by rising poverty rates and human population growth. One key reason contributing to this conflict is the increased need for arable land. Whereas human-wildlife conflict was fuelled by desire, human-wildlife conflict may be controlled by means of programmes for economic growth.

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conflict was fuelled by desire, human-wildlife conflict may be controlled by means of programmes for economic growth.

How people see themselves in connection to the natural world is one of the most significant differences across cultural personalities (Moola and Roth, 2019). The goal of this partnership might be to dominate or be subjugated by nature. A lot of pre-industrialized tribes think that their destiny is determined by their strong surroundings. Society depends on the environment, and the environment depends on society. On the other hand, contemporary post-industrial civilization naturalists feel that their surroundings are delicate and need human preservation. The shift from hunter-gatherer communities to pastoral societies is characterised by the ideological division of people and environment and the idea of dominance rather than submission. According to Ingold, the idea that cultural progress could only be reached by conquering and rising above the natural world is what drove the division of human nature. Hunter-gatherers, on the other hand, have faith in their surroundings; rather than changing the world, it opens itself to the hunter. Human conduct in human-wildlife conflict is significantly influenced by these differing perspectives on the connection between people and nature (Derham and Mathews, 2020).

The residents of Amboseli conservancies depend on livestock rearing and farming as a means of subsistence. These activities are not just a source of income, but they are deeply intertwined with their cultural identity and way of life (Weinmann, 2018). However, these operations also alter vital animal habitats, often pushing numerous species that were a food source for local predators out of the area. When disrupting their customary food supply, lions and leopards often resort to the next best thing: the local cattle (Nyerembe & Bushesha, 2021). As a result, once the wild predators enter the farmer's cattle holding pen, livestock owners have had to deal with losses of thousands of shillings. However, conflicts between communities and animals are not limited to carnivores. Elephants can also be troublesome, often plundering communal crops (Togoch et al., 2018). A herd of elephants may utterly destroy a field in a matter of hours, destroying the owner's main source of revenue in the process (KNBS, 2021).

Objective of the Study

The purpose of this study was to assess the influence of cultural beliefs on human wildlife conflict of residents of Amboseli conservancies, Kajiado County, Kenya

Research Methodology

The study adopted a convergent parallel design and mixed method approach where the study collected and analysed data simultaneously. The study was conducted in Amboseli conservancies which is in Loitokitok district in Kajiado County. Amboseli conservancies was selected due to its proximity to the renowned Amboseli national park which is one of the country's popular national parks and was declared UNESCO site in 1994 due to its unique ecosystem. The target population was 76,671 from where a sample of 383 was selected using stratified sampling technique and random sampling. A semi-structured questionnaire and an interview guide were used to gather primary data.

Findings of the Study

Human Wildlife Conflict

Respondents' agreement rate with questions on the conflict between humans and wildlife in the Amboseli Conservancies area of Kajiado County regarding socio-economic development was rated and agreed upon, as shown by a mean score of 3.94.

Human Conflict	Wildlife	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Mean	Std. Deviation
		F	%	F	%	F	%	F	%	F	%		
The area has witnessed deaths due to the coexistence conflict		12	4.2	20	7.0	30	10.5	126	44.1	94	32.9	3.9574	1.05285
There has been noted cases of property destruction		16	5.6	11	3.8	21	7.3	68	23.8	166	58.0	4.2660	1.12407
The area has witnessed (Shortage of fauna/flora)		4	1.4	28	9.8	50	17.5	133	46.5	67	23.4	3.8191	.95406
Over the last few years there has been recorded distinction of some animal spices		9	3.1	32	11.2	48	16.8	81	28.3	112	39.2	3.9043	1.14191
The number of tourists both local and international		20	7.0	27	9.4	34	11.9	85	29.7	116	40.6	3.8865	1.24330
The number of livestock killed or injured by predators		4	1.4	66	23.1	13	4.5	100	35.0	99	34.6	3.7943	1.19321
Noted property damage (e.g., destruction of fences, houses, water infrastructure).		9	3.1	34	11.9	50	17.5	52	18.2	137	47.9	3.9716	1.19871
Human injuries or fatalities resulting from encounters with wildlife		13	4.5	50	17.5	19	6.6	86	30.1	114	39.9	3.8440	1.25578
There are recorded reports financial losses incurred by local communities due to HWC incidents		17	5.9	32	11.2	28	9.8	67	23.4	138	48.3	3.9823	1.26112
Total Composite mean												35.43 3.94	10.43 1.16

Most respondents, 33% (F = 94), strongly agreed that there had been an increase in deaths due to human-wildlife conflict in the area, with a mean score of 3.96, indicating a high level of agreement. Additionally, 58% (F = 166) strongly agreed that cases of property destruction had risen, reflected by a mean score of 4.27. Furthermore, 47% (F = 133) agreed that there was a notable decrease in local fauna and flora, with a mean score of 3.82. The study also found strong agreement regarding the increase in recorded extinction of certain animal species over recent years, as shown by a mean score of 3.90. Respondents positively agreed on the rise in local and international tourist visits, with a mean score of 3.89 and F = 116. Lastly, 35% (F = 100) agreed that there had been an increase in livestock killed or injured by predators, as indicated by a mean score of 3.79.

Cultural Beliefs and Human Wildlife Conflict

This study, conducted through a structured questionnaire, sought to assess the respondents' cultural beliefs and human wildlife conflict in the Amboseli conservancies.

Cultural Beliefs and Human Wildlife Conflict

Cultural Beliefs	Strongly Disagree		Disagree		Neither Agree nor Disagree		Agree		Strongly Agree		Mean	Std. Deviation
	F	%	F	%	F	%	F	%	F	%		
Killing a wild animal e.g. a lion is considered a heroic act	72	25.2	18	6.3	16	5.6	20	7.0	156	54.5	3.6028	1.73669
Amboseli and its environs is an ancestral land and the inherited levels are on the (Increase/Decrease)	13	4.5	8	2.8	18	6.3	97	33.9	146	51.0	4.2589	1.02305
Male Maasai are considered the landowners by birth right	63	22.0	16	5.6	14	4.9	59	20.6	126	44.1	4.3369	6.29721
Cattle and other domesticated animals are considered more important than wild animal	42	14.7	13	4.5	45	15.7	52	18.2	130	45.5	3.7624	1.44789
Domesticated animals are given priority due to their economic benefits	43	15.0	26	9.1	33	11.5	80	28.0	100	35.0	3.5957	1.43410
It is believed wild animals only benefit the government through tourism	98	34.3	11	3.8	-	-	62	21.7	111	38.8	3.3121	1.76011
Total Composite mean											22.87	13.70
											3.81	2.28

According to Table 4.2, a majority of the participants, 33% and F=94, strongly agreed that there has been an increase in witnessed deaths due to the coexistence conflict in the area, as shown by the mean score of 3.9574. Results also show that, 31% strongly agreed that the area has witnessed deaths due to the coexistence conflict, 11% neither agreed nor disagreed, 7% disagreed while 4% strongly disagreed.

Regression Analysis

The research determines the relationship between predictor variables and human-wildlife conflict within Amboseli Conservancies, Kajiado County, Kenya. Regression analysis used in the study gave an output of the regression statistics with the version of the IBM SPSS Statistics 29 after cleaning and coding data from the field. In this case, the coefficient of determination was used in explaining the proportion in which the change in the independent variables can be used to explain the change in the dependent variable. In the present study, the dependent variable was the provision of human-wildlife conflict, while climate change, cultural belief served as the independent variables.

Model Summary

The model summary of the relationship between the predictor variables and human wildlife conflict in Amboseli conservancies, Kajiado County, Kenya is as provided.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.545 ^a	.297	.287	.88904

a. Predictors: (Constant), cultural beliefs

From the findings in Table 4.4, $R^2=0.297$ is a 29.7% disparity in human-wildlife conflict in Amboseli conservancies, Kajiado County, Kenya, explained by the model's independent variable. However, a 70.3% unexplained difference in human-wildlife conflict in the Amboseli conservancies, Kajiado County, Kenya, is provided as a result of other unrepresented determinants in the regression model. Based on the above table, the overall conclusion is that the model is good and, hence, can be used for estimation. Based on the results in Table 10, a given relationship was found to be significant, as given by the variables in $R^2=0.287$, which is 28.7%, shows that the relationship between the in cultural beliefs and human-wildlife conflict in Amboseli conservancies, Kajiado County, Kenya, is as provided.

ANOVA Results

From the findings on the Table 4.5, $R^2=0.297$ that is 29.7% disparity in human wildlife conflict in Amboseli conservancies, Kajiado County, Kenya is explained by the independent variable in the model.

ANOVA of the Regression

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	92.552	4	23.138	29.274	.000 ^b
Residual	218.937	277	.790		
Total	311.489	281			

a. Dependent Variable: Human wildlife conflict

b. Predictors: (Constant), Cultural belief.

Majority 70.3% unexplained difference in human wildlife conflict in Amboseli conservancies, Kajiado County, Kenya is as provided is as a result of other unrepresented determinants in the regression model. Based on the above table, the overall conclusion can be definitely made that the model is good and hence can be used for estimation. Based on the results Table 4.5, a given relationship was found to be significant as given by the variable in $R^2=0.287$ that is 28.7% shows that the relationship between the cultural beliefs and human wildlife conflict in Amboseli conservancies, Kajiado County, Kenya is as provided.

Coefficient of Determination

Further, coefficient of determination on the relationship between the predictor variables and the human wildlife conflict in Amboseli conservancies, Kajiado County, Kenya is as tabulated.

Coefficient of Determination

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.785	.333		5.361	.000
Cultural beliefs	-.101	.057	-.098	-1.781	.076

a. Dependent Variable: Human wildlife conflict

The regression analysis was conducted to determine the influence of human wildlife conflict in Amboseli conservancies, Kajiado County, Kenya. As per the SPSS generated table below, regression equation

$$(Y = \alpha + \beta_1 X_1 + \epsilon)$$

Becomes: $(Y = 1.785 - 0.101 + \epsilon)$

From the regression, the human-wildlife conflict influence in Amboseli conservancies, Kajiado County, Kenya, with the independent variable held at a constant, that is cultural beliefs constant at zero, was 1.785.

Discussion of Findings

The study sought to assess the socio-economic developments in the Amboseli Conservancies area of Kajiado County as reflected by response rates with statements and views about human-wildlife conflict. This was demonstrated through a mean score of 3.94, indicating that they agreed. A significant percentage of those surveyed (33% and F=94) strongly agreed that there had been an increase in witnessed deaths due to the coexistence conflict in the area, as shown by a mean score of 3.9574. These findings corresponded with those of Nyerembe and Bushesha (2021), who found out that people settled into sedentary farming and domestication of wildlife have lost their primary source of livelihood because their maize is destroyed by wild animals which endangers their livestock from being predated upon by such wild herbivores, despite this mode ensuring stable food supplies throughout the year. Despite being part of the Maasai culture of rearing domestic animals they have been encroaching forests to feed their cattle which has resulted to wild animal attacks.

Summary, Conclusions, And Recommendations

To what extent does cultural beliefs affect human wildlife conflict of residents of Amboseli conservancies?

The study concluded that the cultural beliefs of the population of the Amboseli conservancies impact the human-wildlife conflict significantly. There was an increase in the killing of wild

animals, as killing animals such as lions is considered a heroic act. It also confirmed that there is an increase in the inherited levels of Amboseli and its environs, which is considered an ancestral land. In this case, it was agreed that it was true that Male Maasai are birthright owners of the land. There was a strong consensus that cattle and other owned animals are of more value than wild animals. Additionally, it was agreed strongly that domesticated animals are more often taken priority due to economic returns, and it was believed that wild animals only benefit the government in terms of tourism.

Theoretical Implications of The Study

The study was based on two theories, the first theory being the Social Conflict Theory. Wilhelm Dilthey (1833–1911) is the theorist associated with the study and the similarity has been found with Karl Max (1818–1883) known for holding the theory. As Karl Max (1818–1883) pointed out, the scarcity of resources causes conflict between nature and people, which is inevitable. This corresponds with the findings of the study as the research has established that apart from the Amboseli region being well-known as a safari destination, people have observed that the presence of human-wildlife conflicts such as elephant crop-raiding or carnivore livestock predation deters tourists from visiting the area. This decline in tourism access affects the earnings from tourism-related services such as hotels, translators, and retailers of local fine arts. The human-wildlife conflict, especially between the region's local pastoralists and wildlife, has therefore affected the economic activities in the Amboseli conservancies. This is a confirmation of the theory application to the current study findings.

Implication of The Study Findings to Development Studies

The implications of the findings of this study to Development Studies are discussed below. These implications can enrich future discourses, investigations, and policymaking in rural development, environmental stewardship, and community interactions. The studies have also grounded the discussion on means as regards the call on the matter of proportionality between wildlife conservation and the benefits of the locals, for instance, pinning down the issue of wildlife corridors. It also profiles the self-organizing process of launching ornithological concerns in the

cities in contrast to rural agricultural practices and strategies on how these two worlds can be connected owing to education projects.

Conclusions

The research findings reveal that the Maasai community are a pastoral semi-nomadic people whose sources of income, money, food, and identity are derived from their livestock. Stock rearing is one way through which they draw their cultural bearings. They also respect the concept of sharing the landscape with wildlife, a focus on living in balance with the wildlife and the wild spaces, and religious and cultural values that some animals such as elephants and lions represent. However, the cultural value and respect for the wild, such as elephants and lions in the community, has gradually been diminishing. Therefore, cases of human wildlife conflict are on the rise. Opposition to land use changes that alter the natural livelihood of the local people's pastureland. Dependence on animal farming instead of crop growing or other economic ventures hence supports the local community holding thousands of livestock, which becomes cumbersome during the dry season.

Recommendations

The study recommends that the government promote sustainable development by integrating wildlife conservation into broader efforts addressing poverty alleviation, food security, and climate change adaptation. This approach should consider Indigenous knowledge systems and support community-based conservation projects to avoid burdening local communities. Additionally, fostering cooperation between communities, wildlife protection authorities, and local governments is essential to effectively address human-wildlife conflicts.

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