

EFFECT OF RESOURCE COMPETITION ON INSECURITY IN SAMBURU COUNTY, KENYA

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Accepted: September 28, 2026

ABSTRACT

Insecurity remains a major socio-economic challenge affecting pastoral communities in Samburu County, Kenya, characterized by cattle rustling, banditry attacks, inter-community conflicts, displacement of households, destruction of property, loss of lives, and disruption of socio-economic activities. Despite various interventions aimed at addressing insecurity, the problem persists due to interconnected socio-economic factors affecting pastoral communities. While previous studies have examined multiple determinants of insecurity, limited empirical attention has focused specifically on the role of resource competition in shaping insecurity outcomes in Samburu County. The purpose of this study was to assess the effect of resource competition on insecurity in Samburu County, Kenya. The study was anchored on Resource Conflict Theory, which explains how competition over scarce resources can generate tensions and conflicts among communities dependent on those resources. The study adopted a descriptive research design and employed a mixed-methods approach involving both quantitative and qualitative data collection techniques. The study targeted 133 respondents comprising 100 household heads and 33 key informants drawn from relevant administrative, security, community, religious, political, business, and community-based institutions within Samburu West Sub-County. Due to the relatively small target population, a census method was adopted. Primary data were collected using structured questionnaires and key informant interviews. Quantitative data were analyzed using descriptive statistics, correlation analysis, and multiple regression analysis, while qualitative data were analyzed thematically. The findings revealed a strong positive and statistically significant relationship between resource competition and insecurity ($r = 0.754$, $p < 0.01$), with resource competition emerging as the strongest predictor of insecurity in the multiple regression model ($\beta = 0.487$). The findings further established that competition over grazing land, water resources, pasture, and livestock resources significantly contributed to conflicts, livestock raids, and inter-community insecurity in Samburu County. The study concludes that resource competition is a significant determinant of insecurity in Samburu County, particularly among pastoral communities whose livelihoods depend heavily on access to scarce natural resources. The study recommends strengthening community-based resource-sharing mechanisms, promoting negotiated access to grazing land and water resources, strengthening traditional and community-based conflict-resolution mechanisms, and enhancing collaboration between county governments, national government agencies, local communities, and development partners to address resource-related conflicts and promote sustainable peace and socio-economic development in Samburu County, Kenya.

Keywords: Resource Competition, Insecurity, Pastoral Communities

CITATION: Joash, T. J., & Kipchumba, H. (2026). Effect of resource competition on insecurity in Samburu County, Kenya. *Reviewed Journal International of Social Science and Humanities*, 7 (1), 697 – 709.

INTRODUCTION

Insecurity remains a major challenge to economic development, social stability, human welfare, and sustainable development. Its effects include loss of lives, population displacement, destruction of property, disruption of livelihoods, and reduced access to essential social services. Contemporary literature therefore considers insecurity a multidimensional phenomenon influenced by social, economic, environmental, and institutional conditions (Detges, 2022; Mach et al., 2019). Resource competition is increasingly associated with insecurity, particularly in communities whose livelihoods depend on natural resources. Climatic changes, droughts, demographic pressure, and lack of basic necessities contribute to insecurity among communities who require land, water, pastures, and other essential livelihood sources. Resource competition is especially prevalent among the pastoralists community since livestock production requires mobility and access to suitable grazing and watering grounds (Benjaminsen & Ba, 2019; Okoli & Atelhe, 2020).

Globally, resource-related pressures have been associated with insecurity in countries experiencing environmental and livelihood challenge. In Syria, for instance, Mach et al. (2019) found out that environmental pressure and scarcity of resources had contributed to the increased risks of conflicts among communities whose livelihood was based on natural resources. In India, von Uexkull and Buhaug (2021) found out that environmental shocks limited livelihood chances and increased competition over scarce resources among the communities depending on agriculture for survival.

In Africa, the relationship between natural resources and insecurity is particularly evident in areas affected by recurrent drought and environmental degradation. Benjaminsen and Ba (2019) found that reduction of pasture and water availability contributed to increased conflict between pastoral communities in Mali especially during drought periods. In Nigeria, Okoli and Atelhe (2020) identified that conflicts related to accessing natural resources had led to violence, displacement, destruction of properties and livelihood losses. This indicates the effects of shortage of basic resources on peaceful co-existence among vulnerable groups.

In East African countries, climatic variation and pastoral mobility have remained significant in influencing conflict dynamics. For instance, in Kenya, Linke et al. (2019) found out that rainfall variability contributed to conflict patterns in pastoral communities where drought resulted into shortage of pasture and water availability. In Ethiopia, Ide and Detges (2021) found that climatically induced variations could lead to insecurity through limited economic opportunity and pressure on natural resources. Such situations expose pastoral communities to conflicts, livestock raiding and displacements.

In Kenya, these challenges occur mainly in the arid and semi-arid areas where livestock production is a major source of livelihoods. Changing of land use, privatization of land, pastoral mobility and restriction in accessing traditional grazing lands have contributed to resource use change patterns among pastoral communities in northern Kenya. Greiner (2020) established that these changes increased tensions among communities, while Lind et al. (2020) identified access to water and pasture as an important dimension of pastoral conflict. Resource governance has therefore become an important consideration in efforts to address insecurity in Kenya's pastoral regions.

Samburu County is one of the pastoral areas where insecurity remains persistent. The county has been affected by cattle rustling, banditry, conflicts between communities, household displacements, property destruction, human and livestock losses, and disruption of socioeconomic activities. Reliance on livestock farming, coupled with recurrent drought and shifting land tenure regimes, has made the local communities highly vulnerable.

According to Boone et al. (2024), there is a change in the land tenure system and access to grazing grounds that affects the livelihood strategies of the pastoralists in Samburu County. Conflict arising from issues concerning grazing grounds, watering points, ownership of land, and livestock movement may thus lead to insecurity.

Despite the growing literature on pastoral conflicts, climate variability, land-use change, and livelihood vulnerability, limited empirical evidence has specifically established the effect of resource competition on insecurity in Samburu County. Previous studies have largely addressed broader conflict and livelihood dynamics, leaving insufficient evidence on how competition over essential resources influences insecurity within the county's pastoral setting. This study therefore sought to address this gap by assessing the effect of resource competition on insecurity in Samburu County, Kenya.

Statement of the Problem

Insecurity remains a persistent challenge in Samburu County despite interventions by the government, community leaders, non-governmental organizations, and other stakeholders to promote peace and stability. Inter-community clashes, raids on cattle, as well as revenge and retaliatory attacks continue to occur in the county and affect the livelihood and daily activities of the people. Insecurity in the pastoral region is facilitated by insufficient physical infrastructure, challenging terrain, lack of government presence in some parts, possession of illegal weapons, and resource competition involving pasture and water (Lekapuo, 2023). It is worrying that these events keep occurring despite the various interventions that have been used to curb insecurity.

Resource competition in the context of insecurity is an important concept in Samburu County as the livelihood of its people greatly depends on pasture and water resources. When there is a shortage of these resources, there might be competition among the communities for their use, and hence the risk of disputes increases. Various efforts including those of the government, community leaders, NGOs, and others have been taken to manage the insecurity in the area. However, the continuing insecurity suggests that it is not yet solved (Lekapuo, 2023).

Previous studies have examined different aspects of insecurity in pastoral areas. According to Bond (2014) from Laikipia County, conflict amongst the pastoralists has been associated with cultural activities, natural resources management, and poor governance and has impacts on pastoralism, agriculture, political security, and health. Kabiru (2024) looked at ways through which insecurity can be mitigated, while Ernest (2024) discussed different causes of insecurity with emphasis on involvement of different stakeholders in conflict resolution. Majtenyi (1998) discussed conflict between Uganda People's Defence Forces and the Lord's Resistance Army and its impact on society. However, despite the importance that all the articles give to conflict and insecurity, they were either undertaken in different locations or broader aspects of the issue.

There is therefore limited empirical evidence establishing the specific effect of resource competition on insecurity in Samburu County. Existing studies have largely examined broader causes of conflict and insecurity without sufficiently isolating how competition over scarce resources influences insecurity within the county's pastoral context. This creates a contextual and empirical gap in understanding the contribution of resource competition to insecurity in Samburu County. Therefore, this study sought to address this gap by assessing the effect of resource competition on insecurity in Samburu County, Kenya.

LITERATURE REVIEW

This section reviews the theoretical and empirical literature on resource competition and insecurity. It also presents the conceptual framework and identifies research gaps that justify the current study.

Theoretical Framework

The study used Resource Conflict Theory and Human Security Theory as its foundational theories to explain the relationship between resource competition and insecurity in Samburu County. According to Resource Conflict Theory, the scarcity of and competition for resources lead to conflict between communities. According to Human Security Theory, insecurity of resources leads to the threat of people's security and prosperity. These theories help to understand how the pressure of resources may lead to insecurity and what impact such insecurity has on pastoral communities.

Resource Conflict Theory

Resource Conflict Theory, developed by Thomas Homer-Dixon (1994), explains that scarcity of essential natural resources can increase competition and contribute to conflict among groups that depend on those resources. The theory claims that conflict can occur due to the scarcity of resources, increased demand, and unequal access to existing resources. These issues become increasingly significant for pastoralist communities since they heavily rely on the use of the land, pastures, and water sources for their survival. It is argued that resource pressures can lead to conflicts concerning the access, use, and control of natural resources. Pastoralist communities during periods of resource shortages can migrate together with livestock in search of pastures and water, thus meeting other communities in need of these resources. In situations where there are no effective mechanisms for sharing resources, conflicts can escalate into livestock raids and other violence between communities. In Samburu County, communities depend considerably on livestock keeping, making grazing land, pasture, and water important livelihood resources. Persistent drought and limited availability of these resources may increase competition among pastoral communities and contribute to disputes and insecurity. Resource Conflict Theory was therefore relevant to this study because it explains how competition over scarce resources can create tensions that contribute to insecurity in Samburu County.

Human Security Theory

Human Security Theory was advanced by the United Nations Development Programme (UNDP) in 1994 through the *Human Development Report*. The theory has expanded the idea of security from the protection of the state to the protection of people against threats to their lives and well-being. Economic security, food security, health security, environmental security, personal security, community security, and political security are among the aspects identified as human security by the theory. According to the theory, insecurity is not necessarily the threat of physical harm to human beings but rather a situation that threatens people's livelihoods and basic needs. Conflicts may result in death and loss of livestock, forced migration, destruction of property, disruption of economic activities, and lack of access to essential services. These results make communities vulnerable to the threats. Conflicts and resource disputes in Samburu County could pose risks to the pastoral communities because of loss of lives and livestock, forced migration, disruption of livelihoods, and destruction of property. These are the effects that would have an impact on the security and socio-economic welfare of pastoral households. Human Security Theory was therefore relevant to this study because it provides a basis for understanding how insecurity affects individuals, households, and communities in Samburu County.

Relevance of the Theories to the Study

Resource Conflict Theory and Human Security Theory provide a complementary framework for explaining the relationship between resource competition and insecurity in Samburu County. According to Resource Conflict Theory, tension and conflict arise due to scarcity and competition over natural resources like grazing areas, pastures, and water among pastoral groups, and according to Human Security Theory, the insecurity created by these conflicts affects the well-being of individuals in terms of their safety and livelihood. In combination, both theories form a theoretical framework that allows one to understand how pressure over natural resources may lead to conflicts involving deaths, loss of livestock, destruction, and livelihood disruptions. The theories therefore provide a useful foundation for examining the effect of resource competition on insecurity and understanding the importance of effective resource management and community-based approaches to improving security in Samburu County.

Empirical Review of Literature

Resource Competition and Insecurity

Mach et al. (2019) examined climate as a risk factor for armed conflict across vulnerable regions in Asia, Africa, and Europe. In this study, the researcher analyzed existing literature to identify the connection between climatic stress, resource scarcity, and conflict. It was found out that the climate-induced resource

scarcity involving water, land, and means of livelihood resulted in increased competition and thereby raised the likelihood of conflict. Resource competition was another connection between environmental pressures and conflict. But, the present study involved several geographies and did not include insecurity among pastoralists.

Von Uexkull and Buhaug (2021) examined livelihood vulnerability, resource scarcity, and conflict in environmentally stressed regions globally. The research adopted the quantitative approach of conflict data to show how the reduction in resource availability impacted people relying on agricultural and pastoral livelihood. The results indicated that the reduction in availability of resources made people vulnerable to conflicts because of competing for the livelihood resources. However, the research was mainly focused on livelihood vulnerability and not insecurity.

Benjaminsen and Ba (2019) investigated resource competition and pastoral conflicts in Mali. In this research, the impacts of pasture use on community conflicts were investigated. It was found out that when there was low availability of the natural resources, there were higher conflicts between communities especially when droughts happened. The competition for pasture and water turned out to be one of the factors causing the conflicts between the communities. Despite being useful information coming from the pastoralist area, the study is limited in terms of its applicability to the conditions of Samburu County.

Okoli and Atelhe (2020) examined farmer-herder conflicts and competition for natural resources in Nigeria. The research investigated how the struggle for grazing grounds and water impacted insecurity in the communities in question. The results indicated that the competition of resources was one of the causes of violence, displacements, damage to properties, and disruption of livelihoods. Nonetheless, the research considered the conflict between farmers and herders alone whereas the competition of resources among the pastoral communities in Samburu County might be different.

Greiner (2020) examined changes in land systems, pastoral mobility, and resource competition in northern Kenya. The study sought to determine the impact of changes in land use systems on the access by pastoralists to vital resources. It was found out that privatization of land, conservancy agreements, lack of mobility and access to traditional grazing land contributed to increasing competition and conflict among pastoralists. Though pertinent to the Kenyan pastoral situation, the study focused more on the aspect of land use than insecurity.

Lind, Okenwa, and Scoones (2020) investigated resource access, pastoral livelihoods, and conflict dynamics in northern Kenya. The results showed that conflicts and insecurity among pastoralist communities were partly caused by competition for water and grazing space. Moreover, environmental challenges and scarcity of resources had been linked to heightened vulnerability and conflict within these communities. However, the research was general about the livelihood of the pastoralists and not specifically about insecurity caused by resource competition. The current study addresses this gap by specifically examining the effect of resource competition on insecurity in Samburu County, Kenya.

Identified Gaps

Existing empirical studies show that competition over natural resources is associated with conflict and insecurity in different geographical settings. The findings from global studies and from studies carried out in Mali and Nigeria suggest that scarcity of water, pasture, land and other livelihood resources increases competition and makes communities vulnerable to conflicts (Mach et al., 2019; von Uexkull & Buhaug, 2021; Benjaminsen & Ba, 2019; Okoli & Atelhe, 2020). However, the studies were either of a wide geographical coverage or done in countries outside Kenya making them difficult to be applied directly in the pastoral context of Samburu County.

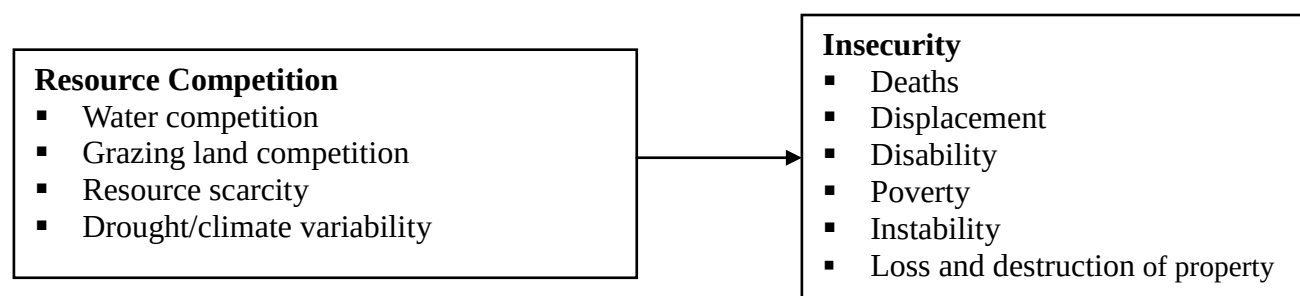
Studies carried out in Northern Kenya have also given information on resource access and pastoral conflict. For instance, Greiner (2020) has studied the changes in land systems, pastoral mobility and access to grazing resources, whereas Lind, Okenwa, and Scoones (2020) have carried out a study on resource access,

livelihoods and conflict dynamics. The studies have helped to understand issues relating to resource-related conflict although they have mainly focused on land use change and pastoral livelihoods but not how the competition for resources causes insecurity in Samburu County. Moreover, there is little empirical data on the connection between insecurity and specific dimensions of resource competition, such as competition for grazing grounds, water, pasture, and livestock. The dimensions of resource competition have often been mentioned in the discussion on pastoralist conflict without being linked directly to the issue of insecurity.

Therefore, there remains a need for context-specific empirical evidence on the effect of resource competition on insecurity in Samburu County. This study addresses the identified gaps by examining the relationship between resource competition and insecurity using both quantitative and qualitative evidence within the pastoral context of Samburu County, Kenya.

Conceptual Framework

The conceptual framework illustrates the relationship between resource competition and insecurity in Samburu County, Kenya. Resource competition was operationalized through key dimensions including water competition, grazing land competition, resource scarcity, and drought and climate variability, which influence insecurity measured through deaths, displacement, disability, poverty, instability, and loss and destruction of property.



Independent Variable

Dependent Variable

Figure 1: Conceptual Framework. Source: (Researcher, 2026)

METHODOLOGY

The study used a descriptive research design because it enabled the researcher to examine the effect of resource competition on insecurity in Samburu County, Kenya. Descriptive research design allows for the systematic collection and analysis of data to describe relationships among variables without manipulating the study environment (Kothari, 2014). The design allowed the researcher to collect both quantitative and qualitative data and investigate the relationship between resource competition and insecurity in their natural environment.

The study aimed at 133 respondents, including 100 household heads and 33 key informants who were selected among National Government Administration Officers, National Police Service, religious leadership, Mara Vision, political leadership, Moran leaders and the business community. As the target population was small in size, the study utilized the census method where all the respondents were incorporated into the study.

Collection of data involved the use of structured questionnaire and semi-structured key informant interview guide. The questionnaire consisted of both closed and open-ended questions whereby closed questions were measured through a five-point Likert scale. A pilot study that was carried out involved 13 respondents in Samburu East Sub-County since the location had socio-economic characteristics similar to those of the study area.

Content validity was checked by reviewing the research instruments by supervisors and research experts while reliability was measured by use of Cronbach's Alpha, where 0.70 and above was acceptable (Mugenda & Mugenda, 2003). Quantitative data were coded and analyzed using SPSS version 26. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the data, while correlation analysis and regression analysis were conducted to establish relationships between the study variables. Qualitative data were analyzed using content analysis in accordance with the study objectives and presented narratively alongside the quantitative findings.

RESULTS AND DISCUSSION

The study evaluated resource competition to determine its effect on insecurity in Samburu County, Kenya. Resource competition was assessed through competition over grazing land, water resources, pasture scarcity, livestock resources, and its contribution to livestock raids and inter-community conflicts.

Resource Competition and Insecurity

The study was to assess the effect of resource competition on insecurity in Samburu County, Kenya. Respondents rated statements addressing competition over grazing land, water resources, pasture scarcity, livestock resources, and their contribution to insecurity, livestock raids, and inter-community conflicts. The results are presented in Table 1.

Table 1: Descriptive Statistics on Resource Competition and Insecurity (N = 97)

Statement	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)	Mean	Std. Dev.
Competition over grazing land contributes to insecurity in Samburu County	2 (2.1)	5 (5.2)	11 (11.3)	42 (43.3)	37 (38.1)	4.10	0.88
Competition over water resources increases conflicts among communities	1 (1.0)	4 (4.1)	9 (9.3)	44 (45.4)	39 (40.2)	4.19	0.82
Scarcity of pasture contributes to livestock-related conflicts	2 (2.1)	6 (6.2)	12 (12.4)	43 (44.3)	34 (35.0)	4.04	0.91
Competition for livestock resources influences insecurity levels	3 (3.1)	7 (7.2)	13 (13.4)	41 (42.3)	33 (34.0)	3.97	0.96
Resource competition contributes to livestock raids and inter-community conflicts	1 (1.0)	5 (5.2)	10 (10.3)	40 (41.2)	41 (42.3)	4.19	0.85
Cumulative Mean						4.10	0.88

Source: Researcher, 2025

Table 1 presents the descriptive findings on resource competition and insecurity in Samburu County. Overall, respondents reported a high level of agreement that resource competition was associated with insecurity, as indicated by the cumulative mean of 4.10 and standard deviation of 0.88. Competition over water resources and the contribution of resource competition to livestock raids and inter-community conflicts recorded the highest mean scores of 4.19, with standard deviations of 0.82 and 0.85, respectively.

In terms of competition over water sources, 44 people (45.4%) and 39 (40.2%) strongly agreed that competition over water sources was one of the causes of conflict between the communities, giving an aggregate agreement of 85.6%. Also, 40 people (41.2%) and 41 (42.3%) strongly agreed that resource competition caused livestock raids and conflicts between communities, with an overall agreement of 83.5%. The results show that competition over water and other important livelihood sources is related to conflicts among pastoral communities. The results confirm Balfour, Obando, and Gohil (2020) where the authors

identified water insecurity among pastoral communities in northern Kenya as a result of socio-ecological circumstances and unequal distribution of water sources.

Competition over grazing land also emerged as an important contributor to insecurity, recording a mean of 4.10 and a standard deviation of 0.88. Forty-two respondents (43.3%) agreed, and 37 (38.1%) strongly agreed that competition over grazing land contributed to insecurity, representing a combined agreement of 81.4%. Similarly, scarcity of pasture recorded a mean of 4.04 and a standard deviation of 0.91, with 43 respondents (44.3%) agreeing and 34 (35.0%) strongly agreeing that pasture scarcity contributed to livestock-related conflicts. These findings indicate that inadequate access to grazing land and pasture places pressure on pastoral livelihoods and may increase movements in search of pasture and water, thereby increasing competition over shared resources. This finding supports Navarro, Saleh, and Owino (2025), who linked pastoral conflict in the Karamoja Cluster to environmental scarcity and resource competition. It is also consistent with Wafula et al. (2022), who demonstrated that access to pasture and water is important in shaping pastoral mobility and resource-use patterns in Kenya.

Competition for livestock resources recorded the lowest mean of 3.97 and standard deviation of 0.96. Nevertheless, 41 respondents (42.3%) agreed and 33 (34.0%) strongly agreed that competition for livestock resources influenced insecurity levels, representing a combined agreement of 76.3%. This indicates that resources required to sustain livestock, including pasture and watering points, remain important in shaping security conditions within pastoral communities. Pressure on these resources may increase competition and compromise peaceful coexistence among neighbouring communities. The finding is consistent with M'Mbogori, Kinyua, Ibrae, and Lane (2022), who highlighted the importance of water management, indigenous institutions, and access to pastoral water systems in maintaining pastoral resilience in Marsabit County, northern Kenya. Their findings demonstrate that access to and management of essential livestock resources are important to the sustainability of pastoral livelihoods.

Further findings showed that resource competition was frequently associated with insecurity. Of the 97 respondents, 49 (50.5%) indicated that resource competition always contributed to insecurity, while 28 (28.9%) indicated often, 15 (15.5%) indicated sometimes, and 5 (5.2%) indicated never. Taken together, 79.4% of the respondents indicated that resource competition either always or often contributed to insecurity. This demonstrates the perceived importance of resource competition in explaining insecurity within the study area. Regarding the major sources of resource competition, grazing land competition was identified by 82 respondents (84.5%), followed by water resource competition at 78 (80.4%), resource scarcity at 74 (76.3%), unequal distribution of resources at 61 (62.9%), and land ownership competition at 58 (59.8%). The findings indicate that grazing land, water resources, and general resource scarcity are the most prominent dimensions of resource competition in Samburu County. These findings corroborate Detges (2022), who linked resource scarcity and livelihood challenges to conflict risks in vulnerable dryland communities. They are also consistent with Opiyo et al. (2022), who observed that environmental conditions and resource availability influence pastoral resource use and mobility in northern Kenya. This suggests that changes in the availability and accessibility of grazing land, water, and pasture can influence pastoral movements and competition over available resources.

The qualitative findings supported the quantitative results by identifying drought, scarcity of pasture and water, competition over grazing areas, pastoral mobility, land ownership, and boundary disputes as factors contributing to resource-related insecurity. Respondents indicated that drought reduced pasture and water availability, forcing pastoral communities to migrate in search of resources and increasing competition over shared grazing areas and watering points. This finding is consistent with Navarro, Saleh, and Owino (2025), who associated pastoral conflicts in the Karamoja Cluster with environmental scarcity and resource competition.

Land ownership and boundary disputes were also reported as influencing resource access and insecurity. This supports the quantitative findings, where 58 respondents (59.8%) identified land ownership competition and 61 (62.9%) identified unequal resource distribution as determinants of resource competition. The findings suggest that insecurity is influenced not only by resource scarcity but also by the manner in which available resources are accessed, owned, and distributed. This observation is consistent with Greiner (2020), who found that changing land-use arrangements and restrictions on pastoral access to traditional grazing resources increased competition and conflict in northern Kenya.

Community-based interventions were also identified as important in managing resource-related conflicts. Thirty respondents (30.9%) indicated that community interventions promoted equitable resource sharing to a great extent, 27 (27.8%) to a very great extent, and 22 (22.7%) to a moderate extent. Respondents further identified elders' interventions, peace talks, dialogue, negotiated access, and resource-sharing arrangements as mechanisms for managing resource-related disputes.

This finding agrees with M'Mbogori, Kinyua, Ibrae, and Lane (2022), who highlighted the importance of indigenous institutions and traditional resource-governance systems in supporting pastoral resilience in northern Kenya. It also supports the importance of locally based institutions in governing access to critical pastoral resources and resolving disputes associated with their use.

Overall, the qualitative findings confirm that drought, pastoral mobility, resource scarcity, land disputes, and unequal access to resources contribute to resource-related insecurity in Samburu County. They also demonstrate the importance of community dialogue, elders' involvement, and negotiated resource-sharing arrangements in managing resource-related conflicts.

Taken together, these findings suggest that resource-related insecurity in Samburu County is shaped not only by the scarcity of essential resources but also by competition over their access, ownership, and distribution. This is consistent with Maringa, Mugambi, and Mutunga (2020), who established that competition over limited grazing resources significantly predicted grazing conflicts in northern Kenya. Therefore, strengthening community-based resource management, negotiated access to grazing land and water, and local conflict-resolution mechanisms may help reduce resource-related tensions and promote peaceful coexistence among pastoral communities, consistent with Robinson et al. (2021), who emphasize the importance of locally grounded and flexible resource-management institutions in pastoral rangelands.

Correlation Analysis

The correlation analysis was conducted to determine the relationship between resource competition and insecurity in Samburu County, Kenya.

Table 2: Correlation between Resource Competition and Insecurity

Variables	Resource Competition	Insecurity
Resource Competition	1.000	
Insecurity	0.754**	1.000

Correlation is significant at the 0.01 level (2-tailed).

The results in Table 2 show a strong and statistically significant positive relationship between resource competition and insecurity in Samburu County ($r = 0.754$, $p < 0.01$). The study found that competition over resources results in higher insecurity among pastoralist communities in Samburu County. This relationship shows that increased competition over resources such as grazing areas, pasture, and water leads to increased tensions and conflicts between communities, as well as livestock raids and resource-based conflict. From the results of the research, it can be noted that competition over resources is a key element that causes insecurity in Samburu County. These results align with those by Benjaminsen and Ba (2019), who showed that

competition over critical pastoral resources such as pasture and water leads to tension and conflict among pastoralist communities.

Regression Analysis

To assess the extent to which resource competition predicts insecurity in Samburu County, a regression analysis was conducted.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.803	0.645	0.629	0.338

Predictor: Resource competition

Table 3 shows that the regression model accounted for a substantial proportion of the variation in insecurity in Samburu County. The coefficient of determination ($R^2 = 0.645$) indicates that social norms, education level, weapon availability, and resource competition jointly explained 64.5% of the variation in insecurity. The adjusted R^2 of 0.629 further indicates that the model retained substantial explanatory power after accounting for the number of predictors included. The remaining 35.5% of the variation may be associated with other factors not included in the model. These findings indicate that insecurity in Samburu County is influenced by a combination of socio-economic factors rather than a single determinant.

Analysis of Variance

To evaluate the overall significance of the regression model, an Analysis of Variance was conducted. The F-statistic was used to establish whether the predictors jointly provided a statistically significant explanation of insecurity in Samburu County.

Table 4: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	69.842	4	17.461	68.513	0.000
Residual	38.603	92	0.420		
Total	108.445	96			

The ANOVA results in Table 4 show that the regression model was statistically significant ($F = 68.513$, $p < 0.001$). This implies that the social norms, educational level, presence of weapons, and competition for resources together served to offer a statistically significant forecast of insecurity in Samburu County. The significant value of the F-test implies that the entire regression model offered an adequate explanation of insecurity beyond mere coincidence.

Regression Coefficients

The regression coefficients were used to determine the contribution of resource competition to insecurity in Samburu County while accounting for the other predictors included in the regression model.

Table 5: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.621	0.114	–	5.447	0.000
	Resource Competition	0.331	0.038	0.487	8.711	0.000

The results in Table 5 show that resource competition had a positive and statistically significant effect on insecurity in Samburu County ($B = 0.331$, $\beta = 0.487$, $p < 0.001$). The unstandardized coefficient ($B = 0.331$) indicates that, holding all other independent variables constant, a one-unit increase in resource competition was associated with a 0.331-unit increase in insecurity. Furthermore, the standardized coefficient ($\beta = 0.487$) indicates that resource competition had the strongest effect on insecurity among the socio-economic factors included in the regression model. This implies that increased competition over scarce resources such as grazing land, pasture, and water contributes significantly to insecurity in Samburu County. The finding is consistent with Amoah et al. (2025), who associated farmer-herder conflicts with resource scarcity, climatic pressures, land tenure challenges, and inter-community violence.

CONCLUSION AND RECOMMENDATIONS

The study concludes that resource competition has a significant and positive influence on insecurity in Samburu County, Kenya. The rivalry for land, grazing, watering, pastures, and livestock results in increased tension and insecurity among the pastoral communities, leading to livestock raiding. Drought and resource scarcity worsen the situation because pastoral mobility becomes inevitable in search of pasture and water sources.

It is further established from this study that resource competition is one of the determinants of insecurity in Samburu County. Scarcity of essential resources, unequal resource allocation, and rivalry over land ownership are some of the situations that lead to resource competition among the communities, thus increasing insecurity. Resource competition is one of the factors to consider when examining insecurity in the pastoral society of Samburu County.

Overall, while insecurity in Samburu County is influenced by several socio-economic factors, resource competition plays a particularly important role in shaping insecurity. Addressing resource-related insecurity therefore requires effective management of scarce resources, equitable resource-sharing arrangements, resolution of land-related disputes, and stronger cooperation among neighbouring pastoral communities.

The study recommended that the County Government of Samburu collaborate with national government institutions to strengthen the management of grazing land, pasture, and water resources. Measures should be put in place to promote equitable access to these resources and strengthen resource-sharing arrangements, particularly during periods of drought and resource scarcity.

The research recommends improving land governance and mechanisms of dispute resolution to deal with conflicts arising from land ownership issues, demarcation, grazing land, and use of natural resources. It is important to ensure that mechanisms for resolving disputes related to land and resources are effective to avoid escalation of these disputes into inter-community conflicts.

The study recommends an improved community-based approach to management of resources and conflict resolution. In this case, involvement of community elders, community leaders, peace committees and other community structures in dialogue, peace-building, negotiation on resource access and sharing of resources will be very helpful.

The study recommends improved cooperation between county and national government authorities, local communities, community leaders and development partners in dealing with security issues related to resources. Cooperation will help with sustainable development of water sources, pastures, drought preparation, and negotiated grazing. The study further recommends strengthening community participation in peacebuilding and resource governance. Community dialogue, peace meetings, awareness initiatives, and locally negotiated resource-sharing mechanisms should be promoted to reduce tensions over scarce resources and enhance peaceful coexistence and stability in Samburu County.

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