
**COMMUNITY STRATEGIES AND MANAGEMENT OF CATTLE RUSTLING
TRANSFORMATIONS IN BARINGO COUNTY, KENYA**

¹ Lawrence Kigen Kiplagat & ² Joseph Karanja, PhD

¹ Master of Security Science and Management, School of Law, Arts and Social Sciences, Kenyatta University, Kenya

² Department of Security, Diplomacy and Peace Studies, Kenyatta University, Kenya

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ABSTRACT

This study sought to analyse the effectiveness of community-based strategies in managing cattle rustling transformations in Baringo County, Kenya. The specific objectives were: to examine influence of community policing adjustments in managing cattle rustling transformations in Baringo County; to assess community awareness programs adopted and their influence in managing cattle rustling transformations Baringo County; and to evaluate community-based surveillance programs and their influence in managing cattle rustling transformations in Baringo County. This study was anchored on situational crime prevention theory. The study employed a descriptive survey design using both qualitative and quantitative approaches. It was a study based on household heads, local chiefs and political leadership and a sample size of 398 respondents. The study respondents were selected by use of stratified purposive sampling and random sampling methods. The use of semi-structured questionnaires and interview guides as instruments was used to collect data. Statistical analysis (descriptive) and thematic analysis was used to analyse the quantitative and qualitative data respectively. The research revealed that cattle rustling in Baringo County had evolved beyond being a cultural activity to being a militarized, money making enterprise perpetuated by economic interests, urban demand, political patronage and unemployment among youths. Although community policing, awareness programs, and indigenous surveillance strategies played a positive role in enhancing vigilance and promoting reconciliation, their usefulness was hindered by a lack of resources, advanced weaponry, political interference, and infrastructural barriers. The research determined that community policing, awareness campaigns, and surveillance systems play the leading role in addressing cattle rustling transformation in Baringo County, and each has a significant potential in ensuring that security, social cohesion and vigilance are enhanced. Nonetheless, their performance was limited by systemic issues, and it is necessary to enhance the effectiveness of institutional support, outreach, and integration of indigenous practices with context-sensitive contemporary interventions. The research proposes a need to increase the government support on community policing, institutionalization of the awareness programme through the continuous sensitization and strengthening of the surveillance systems through integration of the indigenous practices with the flexible technologies, all anchored on the sustained institutional resourcing and coordinated community-state alliances.

Key Word: Community Policing, Community Awareness, Community-Based Surveillance

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INTRODUCTION

The definition of cattle rustling continues to spark debate among various authors due to evolving motivations and operational methods. Aucoin and Mahmood (2017) define cattle rustling as planning, organizing and forcefully stealing livestock belonging to other people or communities from the grazing fields and is motivated by economic gains. On the other hand, Okumu (2020) argue that cattle rustling is a criminal activity with the intent of acquiring cattle for cultural purposes, sale or for meat. According to them, this practice has evolved into a general term that describes stealing cattle from anywhere, regardless of the motivations. Deo *et al.* (2019) further contributes to these definitions through the lenses of Turkana elders, who define cattle rustling as theft of livestock involving a band of armed warriors from neighbouring communities and the raids involve the use of illicit firearms. From a different perspective, Greiner (2013) contributes to this definition that “cattle rustling” as a collective term that entails criminal marketing chains, highway banditry, reckless and brutal murders, ethnic cleansings, and cross-border cattle raids that often degenerate into serious and protracted conflicts among neighbouring communities. Based on these definitions, this study therefore defines cattle rustling as the violent theft of livestock for cultural or commercial purposes, incorporating economic, cultural, and criminal dimensions to capture its evolving nature and security implications.

Throughout the years, this phenomenon has shifted dramatically from relying on community warriors to the rise of sophisticated criminal enterprises, highlighting a concerning transformation in the landscape of organized crime (Gumba, 2020). These transformations raise questions on how grassroots have been readopted or are expected to be restructured in order to address this highly sophisticated crime that was once a cultural practice. For example, a notable transformation is the emergence of heavily armed community vigilantes, criminal gangs, and gun-wielding bandits have emerged. It is noteworthy that this contemporary form of cattle rustling is marked by high levels of organized criminal acts that involve killings, maiming, destruction of lives and property. Considering its structured nature, community led strategies are likely to consider these new complexities so that they can be effective an aspect this study explored.

As a result, the cattle raiding, a highly historical practice, has radically transformed during the last century (Kimani, 2021). Previously, a method to showcase the valor of new warriors and increase livestock in the community, it now turned into a criminal act of generating profits and being characterized by violence (Versity, 2021). This change is more of a response to the forces of colonial economies and the intrusion of capitalism, which explains how outside pressures can transform traditional practices into predatory businesses (Daghar and Okumu, 2021). The history of cattle raiding gives an urgent reason to find and analyze significant changes to develop specific mitigation measures. An example would be that today, the cattle captured is no longer limited to local or regional transactions. Rather, they are taken to butcher shops and slaughterhouses that are in towns and cities hundreds of miles away (Muthike, 2016). This displacement turns the beef and hides of the cattle into commodities in the fast-paced and globalized trade system (Gumba, 2020). This contemporary version of the raid, at the behest of the cash market, forcefully points out the necessity to look at the evolving role that bandits and armed predators play in shaping capitalist transformation, commoditization, emerging threats posed and possible solutions. All these changes pose new challenges to rural livelihoods, economic stability, and social cohesion that require innovative and adaptive solutions. Communities, in turn, have been moving towards more and more localized measures to deal with this widespread problem, utilizing their local resources and expertise to cope with the increasingly sophisticated levels of rustlers. This paper has explored three major community-based strategies community policing, community awareness programs and community-based surveillance systems which have become critical frameworks of curtailing cattle rustling.

As a philosophy and strategy, community policing can help improve trust and safety among the communities, as well as between the law enforcement and the community (Carter and Fox, 2019). According to Marigat (2023), it is a collaborative process in which police and residents have a shared responsibility in crime prevention. Community policing in fighting cattle rustling involves joint patrols, sharing of intelligence and

local security networks to counter the changing methods of rustling. It enhances law enforcement through local knowledge and restoring trust, as observed in Kaduna, Nigeria, where partnerships led to a reduction in the number of cases of rustling (Abubakar et al., 2018). Nonetheless, it is impeded by its limited resource base, insufficient training, and growing sophistication of rustlers, who frequently beat the community-based security forces (Okumu et al., 2019; Mwangi, 2021). The lack of coordination between formal and informal security actors further constrains its effectiveness (Abubakar et al., 2018). Although community policing is one of such strategies, its effectiveness is influenced by enhanced resources, systematic training, and enhanced integration with wider security systems.

Although community policing enhances community security measures, community awareness initiatives focus on eliminating the social factors that contribute to cattle rustling. These programs sensitize locals about the legal, economic, and social consequences of rustling that has transformed into a cultural practice instead of a violent, profitable, and illegal business (Okumu, 2020). These campaigns aim to change attitudes, deter participation, and minimize intercommunal hostilities, using local media, workshops, and community meetings. One of the strengths of awareness programs is that they are accessible to the remote areas unlike resource-intensive policing, they use the available platforms such as radio to reach the remote areas where rustling thrives under a weak governance. Nevertheless, ingrained cultural beliefs still shape the perceptions of rustling and therefore changing behaviour is not easy. In Kenya, as an example, the impact of the programs is limited, and even after awareness, the traditional narratives continue to glorify raiders (Kimani, 2021).

Community-based surveillance systems are built on awareness campaigns, and residents can monitor and report any security threat. These systems as defined by Mwangi (2021) refer to decentralized networks with locals monitoring suspicious activities, reporting them to the authorities and, in some instances, organizing self-defence groups. When organized bandits, who take advantage of remote terrain and lax governance, are being watched, such surveillance can be used to increase safety by enhancing local vigilance and deterring crime. One of the main advantages of such systems is that they provide a decentralized system of protection where formal policing is not effective, such as due to night raids.. However, their effectiveness is limited by significant risks. The growing violence of rustling exposes untrained community volunteers to danger, resulting in high casualty rates (Mwangi, 2021). Additionally, modern rustlers leverage advanced technology, including vehicles and encrypted communication, giving them a strategic advantage over surveillance networks that rely on basic tools. Thus, how community have adopted these mitigation strategies is an aspect this study examined.

The concern on whether and how community led strategies ought to be structured in order for them to be relevant in addressing the transformed nature and emerging complexities associated with of cattle rustling continue to be witnessed. For example, in the United States of America, significant transformation can be pointed out on the mode of operation adopted by the rustlers. According to Gard (2020), while rustlers in the 1960s relied on horseback to drive stolen cattle across vast ranges, the 1970s saw the emergence of more sophisticated methods, including the use of anesthesia administered through hypodermic darts and trained dogs to pull down cattle. In modern times, rustlers operate using pickup trucks and trailers, making theft more efficient. In Oklahoma as a case study, the rise in cattle rustling is closely linked to the spread of methamphetamines and heroin into rural areas (Brandes, 2016). Additionally, the vast size of ranches provides opportunities for rustlers to steal cattle with minimal risk of detection. This transformation in cattle rustling calls for the need to adopt community-based strategies to consider the inclusion of advanced surveillance systems, vehicle mounted community patrols, and cooperative livestock monitoring to mitigate the practice. Given these evolving tactics in cattle rustling, there was a need to examine whether such transformations have been manifested in Kenya, and what were their implications on community-led mitigation strategies.

In Canada, the practice has become sophisticated involving the use of Global Positioning Systems (GPS) and radio-controlled drones to monitor the movement of cattle, coupled with inside help, the cattle rustlers strike

when the owner was away (Clarke, 2023). The use of this advanced technology and insider collaboration has made cattle rustling in Canada more strategic and harder to detect, necessitating improved surveillance and community-based strategies. This study therefore sought to examine how community-based strategies including surveillance are employed to manage the transformation of cattle rustling in Baringo County.

According to Lohmuller (2017) the problem of cattle rustling in Nicaragua has been linked to other organized crimes in the region involving drug traffickers and money laundering whereby the drug money is used to buy large tracts of land, and mostly deforestation and the subsequent establishment of large illegal cattle ranches. This intersection of cattle rustling with drug-related offenses not only poses economic threats but also raises serious issues related to national security. Addressing this intersection of cattle rustling with organized crime requires a multifaceted approach that includes strengthening law enforcement, regulating land acquisition, and enhancing surveillance and the implementation of livestock traceability systems (Daghar & Okumu, 2021). This is because since cattle rustling is driven by complex factors, it requires coordinated efforts to address both the root causes and enforcement challenges. These measures are crucial since they target both the root causes and new methods used. Thus, the evolving nature of cattle rustling, driven by its links to organized crime, has necessitated the need to reshape the strategies employed to combat it (Maina, 2024). However, the effectiveness of these community-based strategies including community policing, community awareness programs and community-based surveillance systems in addressing the transformed dynamics of cattle rustling and its broader security implications remains insufficiently explored. This study therefore sought to delve deeper into how community policing, community awareness programs and community-based surveillance systems have been adopted to manage the cattle rustling transformations. The study additionally sought to establish to what extent these community-based strategies have been and how effective are these approaches in mitigating its broader security implications.

Gumba (2020) describes the contemporary form of cattle rustling as organized crime conducted by international criminal networks. This emerging transformation has been witnessed in Nigeria where Okoli and Iortyer (2014) argue that contemporary rustling in Nigeria has been recently associated with the Boko Haram terrorist group who engage in cattle rustling to finance their activities. In the end, it is important to understand how these grassroots strategies can be reconfigured in order for them to remain effective. This calls for studies to examine the emerging complexities and the extent to which community led strategies have been adopted to such changes.

In northern Cameroon, militants often engage in cattle raids and subsequently transport the stolen livestock to markets in northern Nigeria through intermediaries (Okoli & Iortyer, 2014). This indicates that cattle rustling has transformed from being a local criminal enterprise to a transborder crime that rely on sophisticated operation driven by organized criminal enterprises rather than community warriors. Notably, how communities from different jurisdiction coordinate to address the vice is a concern that warrants further examination. Further, studies have shown that (Daghar & Okumu, 2021; Aucoin & Mahmood, 2017), these groups may employ intermediaries to ensure that their activities run smoothly, highlighting a troubling evolution in this illicit practice. In view of the above, this study aimed to examine whether cattle rustling has taken a transnational direction, expected adjustments in terms of actors, processes and strategies necessary and the extent to which community led strategies have implemented such adjustments.

In Mali, cattle rustling has long been intertwined with the country's war economy and is now deeply embedded in organized criminal networks. Berger (2023) identifies key actors in these networks, including rebel groups, self-defence militias, and violent extremists, all profiting from the lucrative cattle trade. Additionally, these groups operate with the support of spies, intermediaries, transporters, traders, butchers, and corrupt politicians. Spies often young men or herders within the community play a critical role by providing intelligence on potential targets. Once the cattle are stolen, transporters, hired by traders and armed factions, move them over long distances to the market places. More recently, however, as reported by the

Associated Press (2023), the rise of Islamic Jihadists linked to Al-Qaeda has further transformed the practice. These militants strategically position themselves at watering points, knowing herders will inevitably bring their cattle, and then seize the livestock, sometimes remaining in place for days to ensure a successful raid. Given these evolving tactics in Mali, how might similar adaptations in cattle rustling affect pastoralist communities in Kenya, and what proactive measures can be taken to counter these emerging threats? This shift in tactics, that strategically capitalize on the predictable herding patterns, calls for community based resilient strategies, such as community-led surveillances and community policing to counteract cattle rustling.

In South Sudan, cultural traditions such as the payment of bride wealth in cattle promote the vice. Glowacki and Wrangham (2015), noted that the size of the herd is often used as an indicator of the social status of the bridegroom's family and as well as the family of the bride. Therefore, these traditions can act as incentives which have historically promoted and perpetuated cattle rustling among pastoralist communities. However, the outbreak of the civil war in 2013 that lasted for eight years, altered the landscape of cattle rustling. The escalation of violence in the country reached unprecedented levels, as highlighted by Wild (2018), observing that the widespread availability of firearms due to ongoing conflicts contributed to the escalation and transformation of cattle rustling into a militarized activity. What was once a cultural practice evolved into violent, military-style raids, often resulting in significant loss of life. Unlike the past, where the rustlers relied on traditional weapons like spears, they shifted to using automatic rifles, which are readily available. The time-to-time integration into the security forces gives them access to superior weapons, including rocket-propelled grenades. Affirming this unfortunate situation, Kuol (2017) notes that many of the weapons confiscated during disarmament exercises find their way back to the herders either through direct issuance or networks linked to weaponry depots. Given the militarization of cattle rustling in South Sudan, what lessons can be drawn to prevent a similar escalation in Kenya, and how can disarmament efforts be strengthened to curb the proliferation of firearms among pastoralist communities? This significant shift in weaponry raises a pressing concern and emphasizes the need for further study to understand how communities have adapted their strategies to mitigate the impact of militarized cattle rustling with an aim of mitigating the new form of cattle rustling.

In Kenya, whereas there are claims that traditional community leaders and members still control the cases of cattle rustling witnessed in pastoral regions in recent times, a growing body of evidence points to the involvement of new actors (Lomoywara, 2018). The entrance of new actors is a pointer to the transformation in cattle rustling calling for new strategies. These emerging actors may include politicians and businessmen, who are believed to have an increasing role in the cases of cattle rustling observed in pastoral regions in recent times. Given the commercialization of cattle rustling, where unscrupulous businesspeople and political actors facilitate the trade (Cheserek *et al.*, 2012; Kaprom, 2013), the study examined how these community-driven approaches specifically community policing, home guards, awareness programs, and community-based surveillance systems have been adapted to counter the evolving dynamics of rustling.

Although cattle rustling continues to pose a major challenge in Kenya and other countries, its transformation is not clearly articulated. Cases of cattle rustling between different communities often lead to violence and loss of property and lives. The conflicts when left unaddressed have the potential of escalating and potentially having far reaching national security implications. According to Mutethya (2022), cattle rustling is intertwined with various security challenges including the proliferation of small arms and the involvement of organized criminal groups. Furthermore, as explained by Musau *et al.* (2023), the illicit trade of weapons and the existence of bandits who carry heavy armory increase the danger linked to cattle rustling. In such cases, these issues make it harder for the national security forces to cope.

Besides, the transition of the cultural activity into a lethal one, due to the use of firearms in the course of the attacks, made it vital to investigate this issue and look for effective means of addressing rising security problems. Indeed, as Langat (2016) pointed out, the communities under threat start using firearms because

they perceive the government as being indifferent to this problem and incapable of providing protection. The involvement of the security personnel in the cattle rustling is another important matter that has raised concerns both in the community and government circles. Many local administration officials have been found guilty of promoting this crime. As reported by the former Rift Valley Commissioner, some police officers face hard working conditions without medical cover, allowances, proper equipment, and food. Bunei et al. (2016) stressed that these individuals tend to protect the criminals, while Kaprom (2013) noted that they even inform them about the operation of the authorities.

In order to find solutions to the rising threats presented by cattle rustling due to changes in their nature, it was necessary to consider community-based approaches that could help counteract their influence. This paper aimed to investigate the extent to which community-based approaches, such as community policing, community awareness programs, and surveillance, could assist in mitigating cattle rustling in Baringo County, thus promoting national security.

Statement of the problem

The transformation of cattle rustling in Baringo County has been significant, transforming from culturally regulated cattle rustling to highly sophisticated, organized, and violent cattle rustling. The emergence of highly armed gangs, the involvement of organized criminals, commercialization, and high levels of violence has led to a significant effect on security and livelihoods in Baringo County. However, despite the transformations in cattle rustling, most community-based approaches, including the use of home guards, community policing, education campaigns, and surveillance, remain unaltered. There were concerns regarding the effectiveness of these strategies in combating modern cattle rustling.

Historically, community-based strategies have had some level of influence in mitigating cattle rustling activities in Baringo County. Nevertheless, their capability to combat the modern transformation of cattle rustling is questionable. Past literature (Melil, 2018; Kaimba et al., 2011) has extensively investigated the reasons for cattle rustling and its impacts without considering the possibility of restructuring community-based strategies to counter the new trends. The sophistication of cattle rustlers in Baringo County necessitated the assessment of how community-based strategies could be restructured to improve their efficiency.

Objectives of the Study

The general objective of this study was to analyse the effectiveness of community-based strategies in managing cattle rustling transformations in Baringo County, Kenya. The specific objectives;

- To examine influence of community policing strategies in managing cattle rustling transformations in Baringo County, Kenya.
- To assess community awareness programs adopted and their influence in managing cattle rustling transformations Baringo County, Kenya
- Evaluate community-based surveillance programs and their influence in managing cattle rustling transformations in Baringo County, Kenya.

LITERATURE REVIEW

Overview of Cattle Rustling

It was historically perceived that cattle rustling was an approved practice in Kenya that needed the approval and blessing of the elderly (Cheserek et al., 2012). Nevertheless, modern literature indicates the significant change, and now the firearms have a leading role in these raids (Markakis, 2013). In the last several decades, pastoralist communities started adopting an increasingly militaristic approach to cattle raids, thereby leading to an increased level of violence that borders ethnocide sparing neither women nor children. Firearms have become essential items in ensuring that these raids are successful to help in impoverishing some of the pastoralist communities (Mkutu, 2008).

The community of Turkana in Kenya explains the increase in the frequency and intensity of cattle rustling as due to the failure of traditional decision-making structures, especially following the appearance of Ngoroko (Skoggard and Adem, 2010). Nevertheless, the debate does not pay much attention to the increasing number of guns involved in these raids. The 1990s was a significant move out of the traditional cattle rustling practices, with the shift towards cattle rustling with the increased use of firearms. This shift was a clear departure of the traditional approach, where it was usually through intimidation of livestock owners, that cattle rustling emerged, where it was characterized by an increased level of destruction and killings. Moreover, this period was marked by the commercialization of cattle rustling, an aspect that is often mentioned in literature, but the dynamics of the magnitude, networks, and organizational structures are largely undocumented (Lekimain, 2020).

Community Policing Strategy in Managing Cattle Rustling Transformations

Ojewale (2024) took the cattle rustling along the Chad-Cameroon border and analysed the community policing strategies such as joint patrols as a counter to the cattle rustling. The research employed qualitative field research, involving interviews with herders, local leaders, and security personnel in Bongor, Chad and northern Cameroon. It also examined information on rustling networks, such as Boko Haram and ISWAP, and patterns of incidents. Results showed that when pilot joint patrols were launched in 2023, and involved pastoralists and local law enforcement, a 10-15% reduction in the number of rustling incidents in the areas under observation occurred. Besides, security forces gained the trust of the interviewed herders, with 60% of those interviewed willing to share intelligence during patrols. Nevertheless, the topography was challenging, officials who assisted rustlers were corrupt, and the coverage of patrol was also problematic which diminished the efficiency of the program. The authors came to the conclusion that joint patrols were very effective at establishing trust and breaking the rustling networks but needed cross-border coordination and anti-corruption actions to create a stronger effect. Nevertheless, it was necessary to know how comparable strategies work in Baringo County, Kenya, when it comes to handling the developing rustling strategies.

Abubakar et al. (2018) studied the success of community-police partnership in cattle rustling prevention in rural Kaduna State, Nigeria. The study used a case study design with a qualitative focus, through conducting semi-structured interviews with 10 key respondents including a divisional police officer, community leaders, vigilante leaders, and herdsman leaders. Also, the data of the rustling incidents of Kaduna State Police (2014-2016) was analysed. The results showed that the joint patrols between vigilante groups and the police in areas such as Sabon Tasha resulted in a 25% decrease in the cases of reported rustling in 2016 compared to 2015 as the vigilantes were able to provide vital intelligence on the whereabouts of the bandits. When patrols were made up of well-known vigilantes, community trust in law enforcement improved leading to increased tip-offs of rustler activities. Planning police coordination was complicated, however, by such challenges as insufficient equipment (ex: a lack of vehicles) and cases of vigilante overreach. The research found that although joint patrols worked in the rural setting, the sustainability of the practice had to be based on formalised structures and adequate resources to curb vigilante excesses. Hence, the first gap in the research was the need to evaluate the similarities between community-police partnerships in assessing their sustainability, resource limitations, and their effectiveness to reverse the cattle rustling transformations.

Community Awareness Programs in Managing Cattle Rustling Transformations

Ahmadu (2019) examined how communities responded to cattle rustling, with a particular emphasis on the effects of using local FM radio as a tool to raise awareness and promote vigilance. The researchers used mixed-methodology, which focuses on the herders, the employees of Zamfara Radio, and the members of the vigilantes. Forty-five interviews were carried out to obtain the views on the influence media has, and 150 questionnaires were used to measure the exposure to radio programs. Secondly, the ethnographic observations have been conducted in two weeks to determine how radio messages are received and discussed by the rural communities. Results indicated that local FM stations, especially the Zamfara Radio, broadcasted awareness

programs in 2014/2015, which included Hausa-language programs, sharing experience of the herders and warning against rustling networks. Eighty percent of the respondents said that they heard the programs, and 60 percent of the respondents said that the broadcasts were what influenced them in deciding whether to report suspicious activities to the vigilantes. The researchers concluded that, although the media played a crucial role in increasing the vigilance of the community, its effects in minimizing the issue of rustling was minimal due to weak security infrastructure. Nonetheless, the level to which media participation can be translated into real-life cuts in the number of cattle rustling cases is yet to be investigated.

Gumba (2020) explored the value of community radio to create awareness on the consequences of cattle rustling and associating alternative livelihoods, as has been the case with NGOs and the government in Northern Uganda. The research took a mixed-methodology approach, which entailed blending qualitative fieldwork research with quantitative surveys. Implementation of radio programs by RIPAT was captured with field observations and interviews with 20 local herders and NGO staff members provided insight into content and reception. Further, 150 household surveys measured radio listenership, which was estimated at 60% and awareness of anti-rustling messages. Secondary data (NGO reports, government-recorded rustling incidents prior to and after the intervention (2017/2019)) were also analysed. Results showed that in 2017/2018, community radio stations aired informative programs that informed pastoralists about the risks of rustling and the importance of alternative livelihoods. These programs included testimonies of former rustlers and legal warnings, reaching about 60% of the households in the Nabilatuk district. Although this study identified the need of community radio in creating awareness and promoting alternative livelihoods in Northern Uganda, no research was found on whether similar media strategies in Baringo had any impact on behavioural change, better intelligence sharing or even contributed to a decrease in the number of rustling cases.

Community-based surveillance systems in Managing Cattle Rustling Transformations

Mulrooney and Harkness (2022) assessed the effectiveness of smart tag technology in improving farm security by aiding farmers and law enforcement in preventing, tracking, and recovering stolen livestock. Their study utilized a mixed-method approach, including a proof-of-concept mock theft trial conducted in New South Wales, Australia. In this trial, twenty sheep were fitted with Ceres Tags devices equipped with accelerometers and global navigation satellite system (GNSS) technology to monitor movement and activity. The virtual geofence was created and alerts were coded to alert the farmer about important movements or crossing of the boundaries. It was three independent groups of people who included the thieves, the farmer, and the police, who tested the real-time response capabilities of the system. Findings indicated that the tags could provide important information, which could help retrieve stolen livestock within minutes of arriving at the location of the thieves. The research arrived at a conclusion that Ceres Tags is a promising alternative to improve the security of farms by allowing police to respond quickly. Nevertheless, the authors pointed out that the cultural, social and economic factors that contribute to livestock theft in Baringo County are not the same as those in the Australian environment, and as a result, there is a need to carry out localized assessments of such technological interventions.

The study by Anyasi et al. (2018) included the design and implementation of a collar system with GSM and GPS technology. Field tests were done to evaluate its functionality especially its ability to send SMS alerts to the farmers as to where their cattle are, the condition of their batteries and any form of tampering with the device. Its results revealed that the collar was effective in providing real-time tracking information and security alerts in the event that key conditions were met, including cattle crossing a virtual boundary or low battery levels. The system turned out to be a possible anti-theft tool, which was capable of responding to the situation immediately with the help of GPS-based SMS messages. Nevertheless, the research was mainly on individual farmer solutions and not on the integration of local knowledge and technology in a more general, community based approach to the problem of cattle rustling.

Theoretical Framework

Situational Crime Prevention Theory

The theory initially proposed by Clarke in 1980 focuses on a proactive approach that reduces the opportunity to commit crime as opposed to addressing the more general structures in society. It states that criminal behaviour is both an issue of individual disposition and a matter of situational opportunity, wherein offenders act on the perceived opportunities.

Clarke (1995) pointed out that prevention of situational crime strategies are aimed at altering environmental factors to prevent particular crimes by limiting opportunities and reducing potential rewards. The method also uses crime triggering interventions like surveillance, hardening of targets and environmental control measures to deal with immediate crime triggering factors. Instead of focusing on the characteristics of offenders, SCP focuses on crime contexts, targeting particular crime types and hotspots (Clarke, 1995; Eck and Clarke, 2019).

The SCP diverges with the traditional criminological approaches by making the immediate conditions that enable crime its priority as opposed to arresting and punishing criminals. Rather than targeting the underlying social factors such as inequality, SCP focuses on prevention of crime by reducing the chances in a particular setting where crimes are likely to be committed.

SCP uses five basic strategies to limit crime opportunities: making it more difficult to commit a crime, increasing the risk of being apprehended, decreasing the rewards of crime, eliminating excuses to commit a crime and reducing temptations and provocation (Clarke, 2025). The theft of livestock, especially cattle rustling, is an intricate crime that is affected by environmental, social and economic aspects. SCP proposes viable solutions to overcome this problem by focusing on situational aspects that enable theft.

At the community level, the main situational crime prevention strategy is the neighbourhood watch campaigns, which encourages the residents to watch the local properties, and report suspicious activity to the police. Such programs are often combined with larger crime prevention programs also including security inspections and marking of property.

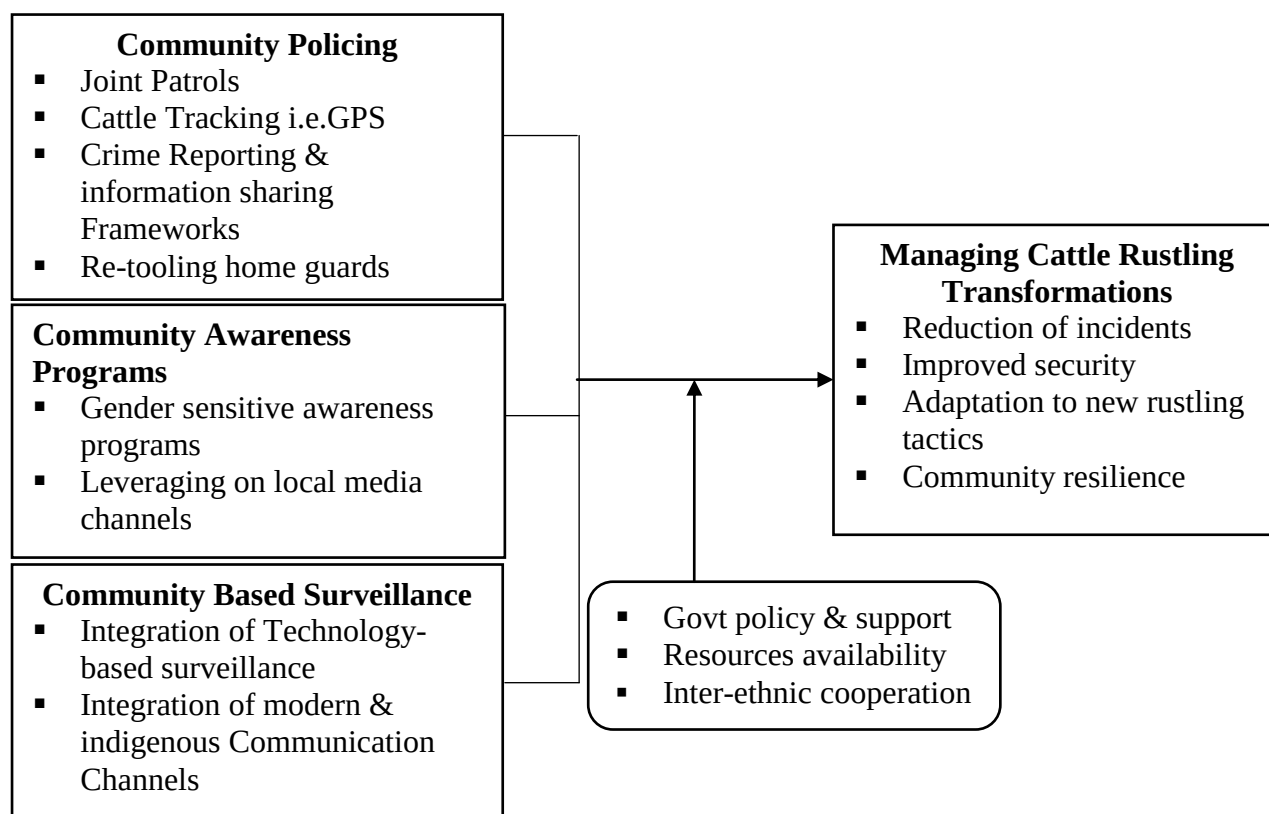
There are two general assumptions on which situational crime prevention works. To begin with, crime is opportunistic and only arises when the motivated offenders find the appropriate targets in the absence of capable guardians (Clarke, 1997). Second, people are rational in making decisions to commit crimes depending on what they weigh under the risks, efforts, and rewards (Cornish and Clarke, 2010). These suppositions imply that criminal behaviour can be discouraged by altering the environment so that there are more risks and efforts and fewer rewards.

The SCP theory applies in this research because it emphasizes the need to adopt proactive and community-based measures in curbing cattle rustling. Instead of acting purely as a reactive response to cattle rustling, changing the security environment by means of localized intervention would be a better approach to reducing cattle rustling and its expanded national security ramifications.

Conceptual Framework

Figure 1 presents a diagrammatic representation of the relationship among the study variables. The study is based on the assumption that the success of the community-based approaches, community policing, community awareness campaigns, and community-based surveillance have a major bearing on the management of cattle rustling transformation. In this context, the community-based approaches are the independent variables. These refer to the main interventions for managing cattle rustling and these include: community policing approaches (joint patrols, reporting of crimes, intelligence sharing, and training of home guards); community awareness programs (gender sensitive campaigns and exploitation of local media outlets); and community-based surveillance (technological surveillance and the combined usage of contemporary and traditional means of communications).

Cattle rustling transformations form the dependent variable.



Independent Variable

Intervening Variables

Dependent Variables

Figure 1: Conceptual Framework

METHODOLOGY

Research design

This research used descriptive survey design using both qualitative and quantitative approaches since it is intended to avail useful detailed information on community-based strategies adopted and their impact on cattle rustling transformations in Baringo County, Kenya. The qualitative approach focused on synthesizing the collected data while quantitative approach focused on analysing numerical values, charts and tables.

Target Population

The target population denotes a particular subset or segment within the broader population that serves as the main focal point of a study. The study targeted residents of Baringo County targeting household heads, local chiefs and political leadership. Baringo County has a total population of 666,763 and 142,518 households (Kenya National Bureau of Statistics [KNBS], 2019). The study targeted 116 local administrators (chiefs) and 44 Members of County Assembly (MCAs) as shown in Table 3.1.

Sample Procedures and Sample size

Yin (2016) describes purposive sampling as the deliberate selection of units most likely to provide relevant information for a study. This research used stratified purposive sampling to ensure adequate representation of each distinct group, with random selection within strata to minimize bias. Respondents including Administration Chiefs and MCAs were randomly sampled to ensure adequate representation.

Stratified sampling was used to divide the county into its 7 sub-counties. The sample size was determined using Taro Yamane's (1973) formula, ensuring a representative selection of participants.

Data Analysis

After completion of data the collection exercise, the data underwent a cleaning process, which included checking for errors or omissions, thereby ensuring uniformity, completeness, consistency, and accuracy of the data (Cooper & Schindler, 2014). The data was then entered into the computer and coded. Analysis was conducted using SPSS software version 26. Descriptive analysis was employed to analyse quantitative data, and the findings were presented using various visual aids such as charts, tables, and graphs. For qualitative data obtained from structured interviews, thematic analysis was conducted. The researcher identified recurring themes and relationships, including the repetition of specific words and phrases, to derive meaningful insights.

RESULTS

Response Rate

The study sought to establish the level of participation of respondents by analysing the rate of questionnaire return. Results indicated the proportion of questionnaires that were successfully returned compared to those not returned or incomplete.

Community Policing Strategy in Managing Cattle Rustling Transformations

The first objective of the study was to examine the influence of community policing strategies in managing cattle rustling transformations in Baringo County, Kenya. Respondents were asked to indicate the extent to which they agreed with different aspects of community policing, and the findings are summarized in Table 1.

Table 1: Community Policing Strategy in Managing Cattle Rustling Transformations

Statement	SD	D	U	A	SA	Mean	SD
	%	%	%	%	%		
Joint patrols with law enforcement have been effective in reducing cattle rustling incidents.	5.9	5.6	11.2	21.4	55.9	4.16	1.19
The availability of anonymous reporting channels encourages more cases to be reported.	5.3	14.6	8.4	20.2	51.6	3.98	1.29
Information sharing between security agencies and local communities has strengthened the identification and arrest of rustlers.	5.9	7.1	6.2	21.1	59.6	4.21	1.20
Regular security meetings between law enforcement and the community have strengthened trust and cooperation in combating cattle rustling.	4.7	10.2	5.3	21.1	58.7	4.19	1.20
Active participation of community members in security initiatives has contributed to a notable decline in cattle rustling.	3.7	8.4	1.6	33.5	52.8	4.23	1.08
Community policing programs have enhanced local safety and reduced the fear of cattle rustling attacks.	3.4	2.5	0.6	44.1	49.4	4.34	0.89
Community policing strategies should be expanded to further enhance the fight against cattle rustling.	0.9	1.2	5.0	35.1	57.8	4.48	0.73
Weighted Mean						4.23	1.08

From the analysis, a notable majority of the respondents, 77.3% agreed that joint patrols between community members and law enforcement had helped in reducing cattle rustling incidents. Similarly, 71.8% of respondents supported the view that anonymous reporting mechanisms encouraged the reporting of cattle rustling cases.

Information sharing between security agencies and local communities was also reported as a critical community policing strategy, with 80.7% agreement. Regular security meetings were equally valued, with 79.8% of respondents agreeing that such forums strengthened trust and cooperation.

Regarding whether active participation of community members in security initiatives had contributed to a notable decline in cattle rustling, a majority of the respondents, 86.3%, acknowledged that active involvement in security initiatives had contributed to a decline in cattle rustling. This was reinforced by perceptions of improved safety, where an overwhelming 93.5% agreed that community policing programs reduced fear of cattle rustling attacks. Importantly, the strongest consensus, 92.9%, was recorded on the need to expand community policing strategies further. The overall mean, 4.23 (SD = 1.08) indicated that most respondents agreed that community policing strategies were effective in managing cattle rustling transformations. This effectiveness is largely explained by improved information sharing with security agencies, regular security meetings that strengthened trust and cooperation, and active community participation that enhanced local surveillance and early response. The combination of law enforcement support and community knowledge enabled these strategies to adapt to emerging cattle rustling transformations.

In reinforcing the survey findings, a key informant highlighted the practical realities of joint patrols between community members and National Police Reservists, emphasizing both their value and the challenges they face in confronting well-armed rustlers stating that:

"One of the strategies has been joint patrols involving local community members and the National Police Reservists. The locals know the terrain very well, including the escape routes that rustlers often use, while the NPRs bring in training and weapons. However, the cattle rustlers have superior weapons and equally have a very good knowledge of the terrain. For this strategy to work effectively, there is need for better facilitation of the NPR in terms of weapons and collaboration between the community members and security agencies." KIR12

This account highlighted that the joint patrols by the NPR leveraged the locals' knowledge of the terrain and escape routes in addition to formal security training to combat this criminal activity. This reinforced the quantitative finding that joint patrols with law enforcement were effective in reducing cattle rustling incidents (Mean = 4.16, SD = 1.19). The findings reported above resonate with the observations made by Ojewale (2024) who noted that while joint patrols strengthened community trust and weakened rustling networks, their effectiveness depended on effective cross-border collaboration. Beside the use of joint patrols, another key strategy highlighted by respondents was the use of informants, where spies from both communities secretly shared intelligence on planned raids as one key informant stated:

".....another important strategy has been employed is the use of informants or spies from both communities who secretly share intelligence on planned raids. This advance warning gives security teams and community defenders time to prepare, organize patrols, or even intercept the raiders before they strike. By relying on information from within, the communities have been able to prevent major losses and reduce the success of cattle rustling attempts." KIR5

Concurring with this perspective, another informant stressed the importance of intelligence shared by the community members in assisting the NPR's operations stating that:

".....the NPRs depend a lot on intelligence from villagers whereby the community members alert them immediately when they spot strange movements, armed groups, or hear of a planned raid. Because these reservists are drawn from the community and know the terrain, they act quickly on the tips. This has prevented many raids and allowed animals to be recovered. Without this sharing of information, the NPRs would be working blindly." KIR3

These accounts emphasise the importance of advance knowledge of the cattle rustlers planned criminal activities which are used the security agencies as actionable intelligence to thwart the planned cattle rustling activities before, they are actually executed thus averting the destructive aftermath of the raids. This reinforced the quantitative finding that information sharing between security agencies and local communities strengthened the identification and arrest of rustlers (Mean = 4.21, SD = 1.20). This finding mirrors those of Koringura (2024) who observed that evening raids are often executed stealthily by small groups driving stolen livestock across borders, but such attempts are usually foiled when intelligence is effectively shared and ambushes are set. Building on the foundation laid by peace meetings in fostering dialogue and reconciliation, respondents also highlighted the Nyumba Kumi initiative as another community strategy with one key informant observing that:

“..... the Nyumba Kumi initiative is present, but it is very different from the one launched at the national level by the former President Uhuru. The locals are organized in clusters to monitor any suspicious behaviour in the neighbourhood and share this information to the administration. However, the lack of resources has reduced its effectiveness. For instance, many people do not have airtime to call security officers to communicate, if the government could provide better facilitation, this program could be a powerful tool because communities already know who lives among them and can easily identify strangers.” KIR13

This account underscores the importance of the Nyumba Kumi Initiatives through the sharing of information, whereby the community members alert security agents when they spot suspicious people and movements within their localities. This serves as an alert to security agencies to investigate and prepare for planned cattle rustling activities. This reinforced the quantitative finding that information sharing between security agencies and local communities strengthened the identification and arrest of rustlers (Mean = 4.21, SD = 1.20). This finding aligns with those of Matiko and Hamasi (2022) who noted that the Nyumba Kumi initiative played a critical role in the curtailing of the spread of small arms and light weapons, which contributed to increased cases of cattle rustling. Hence, by enhancing collaboration between communities and security agencies, the smuggling of the small arms is contained together with the cattle rustling activities. This implies that community-based intelligence networks form a critical pillar in countering cattle rustling, but their effectiveness can be enhanced through seamlessly integrating it with the rapid response capacity of the NPR, hence transforming the involvement of the local communities into tangible security outcomes. Beyond intelligence-sharing, the study respondents also emphasized that peace meetings which facilitated dialogue between the members of the Tugen, Ilchamus and the Pokot communities was another important strategy that went a long way in addressing the grievances stating that:

“.....the peace committees have been very instrumental because they bring together elders, women, and youth from rival communities to discuss incidents. When animals are stolen, the committees negotiate their return before retaliation happens and this has reduced revenge killings and cycles of violence. It is a grassroots structure that works because it is respected by both sides.” KIR 2

These sentiments are pointers to the effectiveness of peace committees as trusted grassroots mechanisms for conflict resolution, where inclusive dialogue prevents escalation and retaliatory violence. Moreover, it illustrates how local legitimate structures can be used to disrupt cycles of cattle rustling-related conflict through prioritizing negotiation in place retaliatory responses. This reinforced the quantitative finding that regular security meetings between law enforcement and the community have strengthened trust and cooperation in combating cattle rustling (Mean = 4.19, SD = 1.20). This finding corroborates those of Melil (2018) who observed that government-led peace meetings, organized in collaboration with church leaders, elders, and local authorities, have played a vital role in Baringo County by offering forums for communities to voice grievances, foster reconciliation, and suggest solutions to address cattle rustling.

Summing up, the triangulation of the quantitative and qualitative findings revealed that community policing was widely regarded as among the important community-oriented strategies in managing cattle rustling transformations. These findings revealed that involving the local communities through joint patrols, use of spies/informants from the rival communities and the Nyumba Kumi initiatives provided an opportunity to gather critical information which assists in anticipating and disrupting the raids. Moreover, through the arranged peace meetings trust, reconciliation and averting of retaliatory attacks. However, despite its reported effectiveness, resource constraints, superior weaponry of the raiders, political interference and cross border dynamics contributed to the weakening of its overall impact. These findings therefore imply that whereas community policing offers an important framework that involved the rival communities in managing the practice, its full potential is yet to be realized calling for enhanced coordination and increased support from the government.

While the findings indicate strong support for community policing strategies, they also raise critical questions about the capacity of these approaches to sustainably address the evolving and increasingly sophisticated nature of cattle rustling. This concern informed the second objective of the study, which sought to assess the community awareness programs adopted and their influence in managing cattle rustling transformations in Baringo County, Kenya.

Community Awareness Programs in Managing Cattle Rustling Transformations.

The second objective of the study was to assess the community awareness programs adopted and their influence in managing cattle rustling transformations in Baringo County, Kenya. Respondents were asked to indicate the extent to which they agreed with different aspects of awareness initiatives, and the findings are summarized in Table 4.4. From the analysis, 61.2% of the respondents agreed that community awareness programs had increased knowledge of anti-rustling laws among local residents, while 23.9% disagreed. Similarly, 76.7% of respondents supported the view that awareness campaigns had effectively reduced retaliatory attacks related to cattle rustling, while 22.1% expressed dissent. Community cohesion also emerged as a key outcome of awareness programs, with 88.5% of respondents agreeing that awareness initiatives had strengthened social unity in combating cattle rustling. In addition, 74.6% of the respondents concurred that public sensitization efforts had improved trust between the community and law enforcement, while 18% disagreed.

Table 2: Community Awareness Programs in Managing Cattle Rustling Transformations

Statement	SD	D	U	A	SA	Mean	SD
	%	%	%	%	%		
Community awareness programs have increased knowledge of anti-rustling laws among local residents.	8.4	15.5	14.9	38.5	22.7	3.52	1.23
Awareness campaigns have effectively reduced retaliatory attacks related to cattle rustling.	8.1	14.0	1.20	20.5	56.2	4.03	1.37
Community awareness initiatives have strengthened social cohesion and unity in combating cattle rustling.	1.2	7.10	3.10	50.0	38.5	4.17	0.89
Public sensitization efforts have improved trust between the community and law enforcement in addressing cattle rustling.	4.3	13.7	7.50	22.7	51.9	4.04	1.24
Workshops and community forums on cattle rustling prevention have positively influenced attitudes toward peaceful conflict resolution.	7.5	14.9	11.5	38.8	27.3	3.64	1.24
Community awareness programs should be expanded to enhance their impact on crime prevention and social stability.	3.1	0.3	1.2	27.6	67.7	4.57	0.82
Weighted Mean						4.00	1.13

From the analysis, 61.2% of the respondents agreed that community awareness programs had increased knowledge of anti-rustling laws among local residents, while 23.9% disagreed. Similarly, 76.7% of respondents supported the view that awareness campaigns had effectively reduced retaliatory attacks related to cattle rustling, while 22.1% expressed dissent. Community cohesion also emerged as a key outcome of awareness programs, with 88.5% of respondents agreeing that awareness initiatives had strengthened social unity in combating cattle rustling. In addition, 74.6% of the respondents concurred that public sensitization efforts had improved trust between the community and law enforcement, while 18% disagreed.

Concerning whether workshops and community forums on cattle rustling prevention had positively influenced attitudes toward peaceful conflict resolution, 66.1% of the respondents were in agreement, while 22.4% of the respondents were of the contrary opinion. The strongest consensus, 95.3%, was recorded on the need to expand community awareness programs to enhance their impact on crime prevention and social stability.

The overall mean of 4.00 (SD = 1.13), indicated that most respondents agreed that community awareness programs were effective. This effectiveness is mainly attributed to sensitization efforts that reduced retaliatory attacks, strengthened social cohesion, and improved trust between communities and law enforcement. By promoting dialogue, restraint, and collective responsibility, awareness programs helped communities adapt their responses to the evolving nature of cattle rustling.

In reinforcing the survey findings, emphasizing on the contribution of awareness programs in managing the transformation of cattle rustling through the prevention of retaliatory attacks, a key informant remarked that:

"Through these awareness programs, our people have come to understand that retaliating after a raid only fuels an endless cycle of violence and therefore, we encourage our community members to address these issues of cattle rustling locally, through mediations facilitated by government officers and the elders rather than resorting to revenge. This has significantly reduced the frequency of retaliatory attacks and promoted a culture of dialogue, showing that conflict can be resolved without bloodshed." KIR6

This narration underscored the role of community awareness programs in reshaping attitudes toward cattle rustling by discouraging retaliation and promoting dialogue-based conflict resolution. Through these programs as narrated by the key informants, it was evident that sustained sensitization, supported by elders and government officers, had contributed to reduced retaliatory violence as well as normalization of peaceful resolution of conflicts. This confirmed the quantitative finding that awareness campaigns have effectively reduced retaliatory attacks related to cattle rustling (Mean = 4.03, SD = 1.37). Similar findings were reported by Achumani and Ong'ong'a (2024) who averred that enhancing public awareness campaigns can socially influence the cattle rustlers to stop engaging in the harmful effects of the practice. Moreover, Achumani and Ong'ong'a (2024) argued that the use of community radios could expand this message. Therefore, this suggest that awareness programs can potentially lead to the transformation of community attitudes from cycles of revenge to peaceful dispute resolution in issues related to cattle rustling, but their long-term effectiveness can be strengthened through continuously sensitizing and using broader platforms of communication such as community radios to reach a larger population. Building on this, another key informant emphasized the central role of elders in reinforcing the message of awareness programs, noting that:

"During community awareness programs, the elders remind the people of the dangers and futility of revenge. They use their authority and respect within the community to calm emotions, encouraging restraint among the community members. When a family or a community loses their livestock, its truly a painful experience and the first reaction is revenge. So really, the awareness programs contribute to pacifying the emotions of community before even the raid is executed. In this way, through these programs, social cohesion is strengthened by encouraging forgiveness and

mutual respect. Their involvement also reinforces the trust between generations and keeps the community focused on peace rather than violent retaliations." KIR1

This implies that awareness programs, when reinforced by the respected authority of elders, have the potential to transform community responses from cycles of revenge to constructive dialogue, thereby strengthening social cohesion and ensuring sustainable peace in managing cattle rustling. Extending from the role of elders in discouraging revenge, the awareness programs were further credited with fostering local responsibility and enhancing the resolution of cattle rustling dispute with a key informant narrating that:

"These awareness programs have emphasized local responsibility in handling cases of stolen livestock. Leaders from the Pokot community, for example, are informed of any stolen animals and take the initiative to assist in tracking down the culprits. In many cases, they also negotiate for the return or compensation of the stolen animals. This practice not only resolves disputes without escalating into retaliatory attacks but also improves trust between the communities." KIR5

These narrations underscored the importance of community awareness programs in promoting local ownership of conflict resolution by empowering community leaders to take responsibility in addressing livestock theft. Through negotiation and restitution, these initiatives prevent further escalation into violence while strengthening intercommunal trust and cooperation. This perspective is consistent with that of Taylor *et al.* (2024), who averred that communities often disillusioned by their respective state's failure to guarantee their security often take responsibility upon themselves of addressing livestock theft, a practice that in the absence of proper structures fuels retaliatory cycles. Aligned with these views are those of Eneyew and Ayalew (2023) that indicated that the erosion of traditional institutions has intensified these dynamics, since elders previously mediated disputes and enforced compensatory agreements that sustained peace. Collectively, these insights indicated that awareness programs help to revive traditional conflict resolution practices by reinstating community-led mechanisms of accountability and reconciliation, thereby contribute to the management of cattle rustling.

In summary, the combined findings demonstrated that community awareness programs were pivotal in reshaping attitudes and practices around in managing cattle rustling transformations. The convergence of findings underscored that awareness programs were not only educational tools but also platforms for cultivating social cohesion, peaceful conflict resolution, and inter-community trust. Nonetheless, the variation in responses, particularly on knowledge of laws and trust in authorities, indicates that inclusivity, accessibility, and contextual sensitivity remain critical. Expanding awareness programs with tailored approaches is therefore essential for sustaining peace and reducing the drivers of cattle rustling. While community policing and awareness programs were largely viewed as effective, questions remain regarding their capacity to provide continuous, real-time prevention against increasingly sophisticated cattle rustling tactics. This concern necessitated the third objective, which sought to evaluate community-based surveillance programs and their influence in managing cattle rustling transformations in Baringo County.

Community-based surveillance systems and Management Cattle Rustling Transformations

The third objective sought to evaluate community-based surveillance programs and their influence in managing cattle rustling transformations in Baringo County. The findings are presented in Table 4.4. A majority of respondents, 85.1%, affirmed that frequent community patrols had significantly reduced cattle rustling incidents. On the responsiveness of surveillance teams, 83.2% acknowledged their effectiveness in preventing incidents, reflected in a mean of 4.21 (SD = 1.15).

Interestingly, respondents were less convinced about the effectiveness of integrating modern surveillance technology, such as livestock tagging and tracking, with indigenous monitoring techniques, with more than 90% of respondents disagreeing that such integration had improved security outcomes. Community-led

security initiatives, such as night patrols and intelligence gathering, also received strong support, with 90.6% of respondents affirming their role in strengthening local security.

Table 3: Community-based surveillance systems and Management Cattle Rustling Transformations

Statement	SD	D	U	A	SA	Mean	SD
	%	%	%	%	%		
Frequent community patrols have significantly reduced cattle rustling incidents in our area.	3.1	6.5	5.3	52.8	32.3	4.05	0.96
The response time of community-based surveillance teams to security threats is effective in preventing cattle rustling.	4.7	8.7	3.4	27.6	55.6	4.21	1.15
Community-led security efforts, such as night patrols and intelligence gathering, have strengthened local security.	2.2	5.3	1.9	57.1	33.5	4.15	0.86
There is effective coordination between community members and law enforcement in surveillance and response to cattle rustling threats.	1.9	11.8	2.2	51.6	32.6	4.01	1.00
The use of traditional knowledge, such as tracking stolen livestock and identifying rustlers, remains a valuable component of surveillance efforts.	1.2	4.7	1.9	49.4	42.9	4.28	0.82
Weighted Mean						4.14	0.96

Coordination between community members and law enforcement was endorsed by 84.2% of respondents. As to whether the use of traditional knowledge, such as the tracking of stolen livestock and identifying rustlers remained a valuable component of surveillance efforts, 92.3% of the respondents were in agreement. The overall mean of 4.14 (SD = 0.96) indicated that most respondents agreed that community-based surveillance systems were effective in managing cattle rustling transformations. This effectiveness is largely attributed to the continued use of traditional knowledge, particularly livestock tracking skills, which enables communities to quickly detect, trace, and respond to raids. Combined with timely response by community surveillance teams, this local expertise has strengthened early warning mechanisms and enhanced the ability of communities to counter emerging cattle rustling tactics.

In reinforcing the survey findings, key informants provided narrated their perspectives and experience on the community-based surveillance systems in managing cattle rustling, with respondents consistently portraying the community as the first line of defence against cattle rustling. One key informant remarked that:

“Our people are the first line of defence because we are the ones who notice early signs of raids. When we see suspicious movements, strange footprints, or hear unusual noises at night, we immediately alert others. This early scouting helps us prepare and sometimes even stops the raid before it begins.” KIR4

In support of this perspective, another key informant emphasized the proactive interventions undertaken by communities, stating that:

“Many times, raids are derailed or prevented by the community before the security forces even arrive. We do this by raising alarms, blocking escape routes, or creating noise that forces the rustlers to retreat. Our actions buy time for the security teams to come and reinforce.” KIR8

Complementing this account, another key informant observed that community-based surveillance also made use of indigenous knowledge systems, particularly in tracking stolen livestock remarking that:

“We still rely a lot on traditional knowledge like tracking the rustlers and following the stolen livestock. The community can trace animal footprints, identify unique patterns, and even tell which direction the raiders went. With such tracking skills, we often recover stolen animals or at least provide law enforcement with a clear trail to follow.” KIR5

These accounts collectively illustrate that community-based surveillance plays a critical preventive and responsive role in managing cattle rustling. By combining early warning mechanisms, collective action, and indigenous tracking knowledge, communities are able to disrupt raids, delay offenders, and enhance the effectiveness of formal security responses. This demonstrates that local vigilance and traditional skills significantly strengthen surveillance capacity, particularly in remote areas where state security presence may be delayed. This reinforced the quantitative finding that the use of traditional knowledge, such as tracking stolen livestock and identifying rustlers, remains a valuable component of surveillance efforts (Mean = 4.28, SD = 0.32). These findings mirror that of Gumbo *et al.* (2020) who argued that local communities possess invaluable knowledge about the movements and networks of cattle rustlers, making their early warnings and vigilance critical components in security responses. Their participation fosters trust, enhances information flow, and empowers communities to take ownership of peacebuilding efforts. Building on this recognition of community vigilance as the backbone of surveillance, another key informant who worked as a Livestock Officer reflected on attempts to complement these traditional mechanisms with modern technologies narrating the challenges faced:

“I can tell you that we have tried using technology like RFID ear tags to track stolen cattle, but it has not worked out. A few years ago, we piloted a digital tracking system in parts of Tiaty and Baringo North, but the tags were unreliable in our rugged terrain, and the cattle rustlers quickly figured out how to remove them or slaughter the animals before they could be traced. It is a challenge considering that we do not have the necessary infrastructure including reliable electricity and internet to support GPS collars or real-time monitoring systems. Even if we did, the cost is too high for most pastoralists, and the government has not invested enough to scale it up.” KIR15

In line with this account, another key informant who also reflected on the integration of modern surveillance technologies narrated similar frustrations stating that:

"I have seen how cattle rustling continues to hurt our people, and there is no advanced technology helping us. We heard about GPS trackers and electronic tags being tested in other counties, but here in Baringo, nothing like that is working. The government tried some digital system a while back, but it failed because rustlers just cut off the tags or took the cattle to remote areas where no one could track them. We need better solutions, but the terrain and poor roads make it hard to bring any technology to our community." KIR9

These accounts highlight the limited effectiveness of modern surveillance technologies in the context of Baringo County, where the rugged terrain, inadequate infrastructure, high costs, and adaptive tactics by rustlers undermine their functionality. The narratives underscored that, without sustained government investment and context-appropriate technological solutions, community surveillance continues to rely predominantly on traditional vigilance rather than integrated modern systems. Oshibanjo and Samani (2022) observed that while GPS and other technological tracking systems like RFID ear tags have been employed to monitor and trace stolen cattle, their effectiveness is limited in rugged terrains, due to issues such as unreliability, ease of removal by rustlers, inadequate infrastructure, and high costs, which hinder widespread adoption among pastoralists in Nigeria. This implies that while modern surveillance technologies hold theoretical potential, their practical limitations in pastoralist settings reinforce the dominance of traditional community-based mechanisms. This is because such technologies require significant investment in

infrastructure, ensure that they are affordable and the geographical setting, otherwise they remain unsustainable, hence necessitating reliance on indigenous knowledge systems as the preferred line of defence against cattle rustling.

The convergence of quantitative and qualitative findings demonstrated that community-based surveillance is an important cornerstone in managing cattle rustling in Baringo County. Engaging in local patrols, use of intelligence networks, and traditional tracking practices were regarded as highly effective in disrupting raids and deterring the cattle rustlers, reflecting strong community ownership of security. Nevertheless, the presence of systemic gaps in patrol coverage, limited institutional support, and inadequate resources constrain sustainability. Whereas attempts were made to pilot modern technologies such as RFID ear tags and GPS tracking in Baringo and other pastoralists counties, they were met with failure due to the rugged terrain with poor network connection, infrastructural deficits, and high costs, with rustlers adapting quickly to bypass them. Considered together, these findings suggest that the most suitable approach lies in employing hybrid strategies which will strengthen community-police partnerships while selectively integrating context-appropriate technologies to complement indigenous knowledge systems.

Regarding the first objective on community policing strategy in managing cattle rustling transformations, the findings clearly revealed a strong level of consistency in the impact of community policing efforts on the management of cattle rustling transformations in Baringo County as evidenced by the high level of concordance indicated by the weighted mean score of 4.23 (SD = 1.08). The effectiveness of community policing can be credited to information sharing, security meetings, and community engagement as they helped detect and respond to raid attacks early enough. Consistent with the Situational Crime Prevention Theory, the effectiveness of community policing can be explained in terms of the creation of opportunities to increase the risk of being detected and interrupted by creating an opportunity for surveillance of criminal activities. Joint patrol efforts and intelligence, together with community engagement, increased the risk of detection and interruption, therefore discouraging cattle rustling. This is consistent with the works of Ojewale (2024) and Koringura (2024), who emphasized the need for intelligence-based and community-led initiatives aimed at disrupting livestock rustling.

For the second objective, the findings revealed a consistent recognition that community awareness programs are quite effective in handling changes linked to cattle rustling since there is a mean of 4.00 (SD = 1.13). Community awareness programs proved to be effective due to the process of sensitization which curtailed retaliation attacks, enhanced social integration, and created room for negotiation and self-restraint. In line with SCP theory, the programs worked by removing any form of justification for criminal acts and minimizing the provocations that usually lead to retaliatory crimes. Through changing people's attitude and making them adopt peaceful reactions, the community awareness programs reduced the situations that promoted cattle rustling. This finding agreed with Kimani (2021) and Okumu (2020), who highlighted the importance of awareness as a way of transforming the community towards cattle rustling. However, the findings also revealed that the scope and longevity of such programs are limited by ineffective dissemination channels and inconsistent involvement.

With regard to the third objective, it was evident from the findings that the use of community-based surveillance systems had an enormous impact on the management of the cattle rustling transformation process since the weighted mean was found to be 4.14 (SD = 0.96). Such high levels of effectiveness were mainly due to the use of indigenous approaches including livestock tracking and intelligence information. In other words, the results obtained from this study support the concepts put forward within SCP theory as the use of the approaches mentioned above increases the risk of detection and interception thus discouraging the would-be criminals from committing crimes. In this respect, the results confirmed the conclusions of Mwangi (2021), who stressed the importance of decentralized surveillance for local communities' security. At the same time,

attempts to employ modern methods of surveillance using, for instance, RFID and GPS technology failed because of the lack of necessary infrastructure, high costs, and the adaptability of rustlers.

In summary, the research findings revealed that community-based strategies can be effective when applied to address cattle rustling transformation since they eliminate opportunity, increase risk and reduce situational factors of committing crime, in accordance with the SCP theory. However, their effectiveness and sustainability are limited due to lack of availability of resources, technological gaps and institutional failures thus underscoring the need for strengthened support and coordinated implementation.

CONCLUSION AND RECOMMENDATIONS

The findings of this study underscored the centrality of community policing strategies in addressing cattle rustling transformations in Baringo County, revealing both the strengths and constraints of community-driven security approaches. From the findings, it was clear that the success of community policing efforts is mainly dependent on the combination of local knowledge with security measures that facilitated intelligence gathering, early warnings and quick response to any arising threat. It was established from the qualitative data that the strategies implemented include use of informants, formation of Nyumba Kumi and peace committees that helped in the prevention of attacks, retrieval of stolen livestock, and minimization of revenge attacks through dialogue and negotiation. However, the limitations associated with the application of these strategies included lack of adequate funding, failure to adequately mobilize and train NPR, better weaponry possessed by rustlers, political meddling and cross border issues.

The findings of this study underscored the central role of community awareness programs in shaping local perceptions and responses to cattle rustling transformations in Baringo County. The findings demonstrated that their effectiveness was primarily linked to sensitization efforts that reduced retaliatory attacks, strengthened social cohesion, and improved trust between communities and law enforcement. The involvement of elders and local leaders was particularly critical, as it enhanced the legitimacy of these programs and facilitated the promotion of dialogue, restraint, and collective responsibility, enabling communities to adjust their responses to the evolving nature of cattle rustling. However, the analysis also indicated that this effectiveness is limited by inadequate outreach and underutilization of diverse communication platforms, which restricts broader community engagement. The study therefore concluded that while community awareness programs are a key mechanism for reducing violence and fostering reconciliation, their long-term impact depends on sustained sensitization efforts and the expansion of communication strategies to ensure wider and more consistent coverage.

The findings of this study highlighted the fundamental role of community-based surveillance programs in mitigating cattle rustling transformations in Baringo County. The analysis indicated that the observed success is due to the use of indigenous knowledge, focusing mainly on the skills of monitoring livestock, as well as the rapid reaction of community surveillance groups. All these aspects assisted in improving early warning and intervention processes for dealing with any kind of raids. It should be noted, however, that the integration of modern technology in monitoring had proven to be ineffective due to several issues, namely infrastructure problems, cost, difficult terrain, and adaptation of cattle rustlers to the situation. This means that the use of technological innovations alone will not provide effective results in the study area. Therefore, the conclusion can be made that, while being an important element of monitoring and an effective strategy in itself, community surveillance needs more efforts in order to become sustainable.

The study recommended the following;

- To strengthen the role of community policing in managing cattle rustling, the study recommends enhancing community policing through the provision of adequate weapons, communication tools, and transport means to the NPR and local security personnel and the establishment of an intelligence

sharing system as well as joint security forums that will improve coordination and response in case of cattle rustling incidences.

- To maximize the impact of community awareness programs, the study recommends enhancing community awareness activities through continuous sensitization conducted by community elders and leaders in addition to sensitization through the media such as the local radio stations in order to achieve permanent behaviour change and to reduce instances of reprisal attacks among others.
- To improve the effectiveness of community-based surveillance, the study recommends establishing a community surveillance network system using effective indigenous practices as well as technology that can be afforded to monitor any cattle theft incidences and link such information with security institutions for timely action.

Suggestions for Further Studies

In light of the findings and conclusions, the following areas are suggested for further research:

- This study recommends that future research should explore the long-term effectiveness of community policing strategies in regions experiencing evolving cattle rustling dynamics, with particular focus on how political interference, resource allocation, and cross-border factors shape their sustainability.
- This study recommends that future research should investigate the long-term impact of community awareness and sensitization programs in transforming cultural attitudes across different generations, with emphasis on how youth, women, and local leaders influence reconciliation and peacebuilding processes.
- This study recommends that future research should examine the integration of indigenous surveillance practices with modern technological innovations, assessing the feasibility, affordability, and adaptability of hybrid surveillance systems in pastoralist settings.

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