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Local Perceptions of Droughts and Conflicts in Laikipia West Sub-County, Kenya

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ABSTRACT

Laikipia West Sub County in Kenya experiences frequent droughts and conflicts. This study sought to analyse local communities' perceptions of the relationship between drought and conflicts in Laikipia West Sub County, Kenya. The study examined trends in droughts and conflicts in Laikipia West Sub County between 2007 and 2018 and analysed local views on the relationships between droughts and conflicts. Primary data was collected using questionnaires and semi-structured interviews with key informants involving 174 participants. The study also relied on secondary data from the County Government of Laikipia and other government agencies. This study has found that severe droughts in the study area occur in the months of January to March and this also the period when most conflicts happen. An analysis of narratives from participants in the study showed that local perceptions of droughts and conflicts are mostly influenced by ethnicity and livelihood conditions. Residents of Laikipia West Sub County identified at least ten drought adaptations strategies which can be implemented in their localities. This study has revealed opportunities for collaboration between local communities and governments to address droughts and conflicts in Laikipia West Sub County. The findings of this study will be useful in formulating long term strategies to mitigate droughts and conflicts in the study area.

Keywords: Droughts; Conflicts; Laikipia West Sub County; Pastoralists.

JEL Classification: Q34, R58.

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1. Introduction

Droughts are a common phenomenon in semi-arid environments of Africa; they bring resource scarcity especially in dry land environments. Studies in East Africa have shown that among pastoral communities, there are traditional mechanisms of managing resource scarcity during dry periods (Few and Tebboth, 2018; Atsiaya et al. 2019). These mechanisms revolve around communal decisions on mobility and established rules on seasonal access to water and grazing resources. However, these

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traditional mechanisms are under threat due to the high demand and competition for scarce resources by both local and non-local pastoralists. Some researchers have argued that the breakdown of traditional mechanisms of regulating access to resources in East Africa has led to conflicts that are now rampant during dry seasons (Bond, 2014).

In semi-arid parts of Africa, intra and inter communal conflicts occur during drought periods (Maina, 2017). During dry seasons, pastoralists compete for scarce resources mainly grass and water for their animals. Conflicts are also rife in landscapes shared between pastoralist and farmers especially when livestock encroach on cultivated land. Human wildlife conflict incidences also tend to increase during the dry season in most semi-arid parts of Africa where wild animals especially elephants roam into farms in search of water and pasture (Kamau, 2017). During dry seasons, there is increased killing of small game for meat due to scarcity of food.

Droughts and conflicts in Kenya have led to loss of human lives and property, reversal of decades of development efforts and peace, increase in the numbers of displaced persons and diversion of critical resources from development projects.

In East Africa, droughts are a hazard whose frequency and intensity are expected to increase due to climate change (Mubaya et al. 2012). Unfortunately, countries in East Africa have fewer resources to respond and adapt to droughts. Lack of proper drought adaptation strategies especially in the context of climate can cause serious economic losses to farmers, increase food insecurity in rural areas and trigger resource conflicts.

As other studies in East Africa have shown, local histories play an important role in shaping local perceptions (Warurii, 2015; Atsiaya et al, 2019). A proper understanding of landscape history can provide insights to relationships between droughts and conflicts.

Laikipia West Sub county (LWSC) is prone to agro-pastoral conflicts (Few and Tebboth, 2018) when farmers and pastoralists compete for resources mainly pasture and water. In 2017, thirty people including ten policemen were killed by armed herders who forcefully invaded ranches, conservancies and private crop farms in the sub county (Daily Nation, November 6, 2017). The fight over access to and control of resources especially land, pasture and water in the semi-arid area is a major cause of these conflicts. The socio-political and historical contexts in which these conflicts occur dictate their intensity and complexity. LWSC has a high illiteracy and unemployment rate. The population of the county is of diverse ethnicities, mobilization of ethnic identities especially around election seasons exacerbates these conflicts. Attempts to address conflicts in the sub county have not borne fruits because interventions are usually top-down and ignore local socio-economic and historical contexts.

This study focused on LWSC in central Kenya and sought to gain local insights of the relationship between droughts and conflicts in the sub county. The study employed mixed methods including interviews with local residents, analysis of climate data and media reports about conflicts incidents in Laikipia County. The study found that most conflicts in LWSC occur during the dry season and tend to worsen during election years. This study revealed that while droughts are natural, conflicts in LWSC are an outcome of the social and political transformations that have taken place in the larger Laikipia landscape since the beginning of the 20th century.

This paper contributes to literature on political ecology and conflict studies. Most political ecology literature have stressed on the importance of examining local histories to understand present day conflicts. The paper shows that a nuanced mixed methods research is capable of unpacking complex environment-related conflicts and therefore contributes to debates on the role of social sciences in conflict resolution.

The next section of this paper reviews relevant literature on conflicts and provides a justification for this study. The other sections present the results of the study and a discussion of these results follows. The last section of the paper concludes by identifying the policy implications of this study.

2. Literature review

Conflicts and droughts have received much attention from scholars. Some scholars use a simple resource scarcity-conflict thesis (Homer-Dixon, 1994; Collifer and Hoeffler, 2005). Others focus on mitigation and adaptation strategies for drought and conflicts (Solh and Ginkel, 2014; Duinen et al, 2014). In a study of farmers drought adaptation in south west Netherlands, Duinen et al (2014) identifies

two types of adaptation to droughts; private and public adaptation. The scholars defined private adaptation as ‘the behavioral responses of individual farmers to drought for private benefit’ and include strategies such as planting more drought resistant varieties and irrigation (Duinen et al- 2014, p 1082). Public adaptation is defined as ‘the adaptive responses of governments often required to reinforce private initiatives’. Such responses by government may include financial incentives, public awareness on droughts. Understanding the factors that influence private adaptation mechanisms can guide the formulation of public drought adaptation strategies that can improve livelihoods and reduce drought related conflicts.

Other studies have focused on local perception of droughts and conflicts (Mubaya et al., 2012; Aldunce et al, 2017). These studies have shown that local perceptions of droughts and conflicts can contribute to the formulation of drought and conflict mitigation strategies. Understanding local people’s perceptions of droughts as well as their relationships with conflicts opens up a number of opportunities. This understanding can reveal what can be done to adapt to droughts and mitigate conflicts, who will do it and who will benefit from such efforts.

LWSC is one of the hotspots of human-wildlife conflicts in Kenya. Research in LWSC has shown a correlation between cases of human wildlife conflicts and occurrence of droughts in the sub county (Githinji et al., 2019).

Studies have been conducted on conflicts in Laikipia County ((Bond, 2014; Warurii, 2015; Maina, 2017). However, these studies have not explored how local perceptions of droughts and conflicts can contribute to drought adaptation strategies and lasting solutions to conflicts. This study sought to gain insights from local communities’ perceptions of drought and conflicts and explored how these insights can contribute to solving these challenges. The study also seeks to promote traditional mechanisms of managing resource scarcity. Bond (2014) has argued that resource conflicts need to be analyzed in relation to their local contexts by considering the historical, social, ecological and institutional dimensions of conflict situation. Other scholars of conflicts have emphasized the importance of analyzing the perceptions of actors in the landscape (Ogalleh et al., 2012; Aldunce et al., 2017).

According to Laikipia County Integrated Development Plan (2018-2022) (Laikipia County Government-2018), there are 46 ranches in the county. These ranches occupy about 50% of the county’s land mass and 32 of them are privately owned. Pastoralists have no right to graze their animals in the privately owned ranches. Attempts to force their way into these ranches result to conflicts with ranch owners and government security officers.

3. Study area

This study was conducted in LWSC, one of the three sub counties in Laikipia County in Kenya (Fig. 1).

Due to its location on the leeward side of Mt Kenya, Laikipia County is vulnerable to low rainfall and frequent dry spells. Major droughts recur after every 8-10 years in the county (Huho et al., 2010; Atsiaya et al., 2019). This leads to famine and local poor people are forced to depend on relief food. Droughts cause reduced river flow, this sometimes leads to tension between upstream and downstream residents who depend on river water. Water and pastures become scarce during droughts, a situation that causes livestock death.

The other two sub counties in the county are Laikipia East and Laikipia West. Laikipia County is located in a semi-arid region of the former Rift valley province of Kenya and on the north-west side of Mt. Kenya. Its Latitude position is between 0017’South and 00 45’ North. Longitude location 360 15’East and 370 20’East. It is ranked the 15th largest county based on land size. It covers an area of 9462 Sq. km. The altitude of Laikipia ranges between 1000 meters and 2600 meters above sea level. Low lying areas in Laikipia West and North sub counties are drier, pastoralism is common in the two sub-counties. The higher areas are wetter and have higher potential for farming. The western and southern parts of the county have cool and temperate climate with both rainy and dry seasons. Laikipia County border’s semi-arid counties of Isiolo, Baringo and Samburu. When drought affects these counties pastoralists from these counties move tens of thousands of cattle into Laikipia farmlands and conservation areas triggering conflicts (<https://www.kenyatalk.com/index.php>). Laikipia is a cosmopolitan county with at least twenty three ethnic groups living in the county. The Kikuyu and Maasai ethnic groups form the majority of the population in the county. Other ethnic groups living in the county include the Borana,

Somali, Samburu, Turkana, Kalenjin, Meru, Kenyans of European and Asian descent among other ethnic groups.

LWSC is divided into four wards for administrative purposes namely; Olmoran, Rumuruti, Sipili

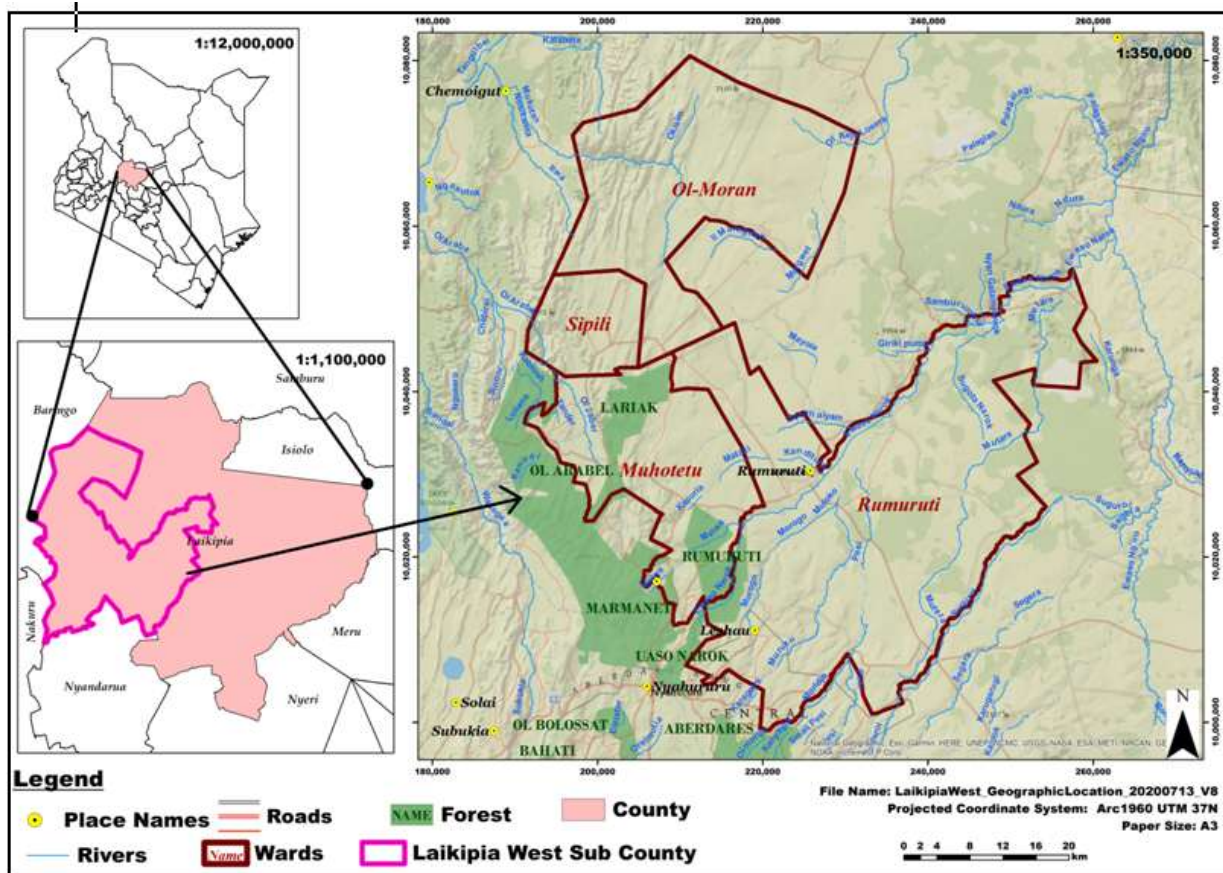


Figure 1: Map of the study area in Laikipia West Sub County

and Muhotetu. The sub county covers an area of approximately 2,783.80 sq. km and has an estimated population of 200,000 people. LWSC was selected as the study area due to the prevalence of conflicts and droughts in the sub county.

Events in LWSC have been shaped by the history of the larger Laikipia landscape. When the British colonists came to Kenya, the Maasai occupied and grazed most of the rangelands of Laikipia. The British identified vast plains of Laikipia as ideal for cattle ranching and large scale farming. In 1904, the British signed a Treaty with the Maasai who agreed to be resettled in two reserves; one in the Southern Reserve 300 kilometers southwest of Laikipia and another Northern reserve in Laikipia. In 1911, this treaty was revised and the Maasai lost the Northern Laikipia reserve. The colonial government gave the land left by the Maasai to European settler farmers and ranchers as part of the ‘white highlands’. After Kenya got independence from British rule in 1963, many Europeans sold their ranches to government schemes and commercial land buying companies. The independent Kenya government encouraged people from other communities to buy land and settle in Laikipia. The biggest beneficiaries were business and political elite who bought entire ranches. Many kikuyu peasant farmers bought small farms from land buying companies and settled in arable areas formerly occupied by white settlers.

4. Methods and procedures

This study sought to address the main research question: what are the residents of LWSC perceptions of the relationship between drought and conflicts? To answer these questions, the study was guided by three objectives: (i) To examine local perceptions of droughts and conflicts in the study area (ii) To analyse local views on the relationships between droughts and conflicts in the study area, (iii) To gain local insights on potential solutions to conflicts in the study area. To achieve these objectives, the study employed a mixed-methods approach (Hesse-Biber, S.N 2010; Lecompte and Schensule, 2013) to gain a better understanding of droughts and conflicts in LWSC.

In order to understand the trends of droughts in LWSC, historical climate data on rainfall and temperature between 1988 and 2018 was obtained from the Kenya Meteorological Department. The study relied on data from the Armed Conflict Location and Event Data Project (ACLED) website, newspaper reports, narratives from key informants to construct a historical timeline of conflicts in the sub county in the last 30 years. ACLED collects real time data on the locations, dates, actors, fatalities and types of all reported political violence in various locations across the globe (<https://data.humdata.org/dataset/acled-data-for-kenya>).

In order to gain an understanding of local perceptions of droughts and conflicts, this study relied on questionnaires which were filled in face-to-face interviews with 150 household heads spread across the sub county (Table 1).

Other 24 semi-structured interviews (six from each ward) were held with key informants including village heads, government officials and local politicians. Between January and June 2019,

Table 1: Sample size of households selected in each ward

Ward	Registered voters population	Target Population(N) 5% of registered voters	Sample Size (n) 10% of target population.
Rumuruti	11925	596	60
Muhotetu	7059	353	35
Olmoran	6327	316	31
Sipili	4878	244	24
Total	30189	1509	150

Source: Laikipia County Commissioner's Office, 2019

interviews were conducted with the 174 participants in twelve villages across the sub county. In each of the four wards, three villages were purposefully sampled to ensure diversity in ethnicity and livelihood activities.

The researcher identified households and groups in villages selected with the help of local assistant chiefs and local research assistants who gave information about the people and groups that existed in their areas of jurisdiction. There was emphasis in selecting household heads who had lived in their villages for at least twenty years. In cases where the household head was missing, the next senior most house hold member above 18 years of age was interviewed. Most interviews were conducted in Swahili. Local research assistants who had firsthand knowledge of the villages helped to translate in cases where respondents could not communicate in Kiswahili. The researcher was present in all the interviews; she took notes and asked additional questions to the respondents. Informed consent was sought from all participants prior to interviews.

5. Results

5.1 Local perceptions of droughts in Laikipia West Sub County

Residents of LWSC perceive drought as one of the most constraining extreme of climate to human livelihood in their locality. Majority of residents in the sub county engage in rain fed agriculture. Maize is the most common crop in the sub county and covers about 51% of the total planted area (ROK 2019). Other crops grown in the sub county are maize, beans, wheat, potatoes and vegetables. Livestock keeping and pastoralism are also a major source of livelihoods in the sub county. During severe dry periods, residents of LWSC face a shortage of water, food and pasture for their animals.

Local perceptions of drought varied depending on participants' level of education, occupation, age, location, and the number of years they have lived in the study area. Majority of respondents who are farmers, described a drought as 'lack of water and pasture'. In their responses, they put emphasis

on poor harvest and invasion of their crop farms by livestock owned by pastoralists as characteristics of droughts. Farmers also described drought as a period when there is a rise in cases of human wildlife conflict and inter-communal conflicts. Majority of respondents who are pastoralists associated droughts with death of livestock and the huge losses incurred when livestock die of starvation.

Overall, majority of participants in the villages sampled viewed drought as a cause of death and social and economic disruption in their area. An interviewee from Bondeni village in Sipili Ward stated:

When we see drought, we see death of our people and livestock. During droughts, our neighbors invade our villages to steal livestock. We also experience attacks by wild animals. The attacks by cattle raiders and wild animals sometime lead to human death.

In villages dominated by farmers, human wildlife conflict was reported as a major cause of distress during dry periods. Villagers narrated that they stayed in their farms at night in order to keep off wild animals especially elephants.

Participants generally agreed that droughts cause an increase in incidents such as cattle raids, wildlife poaching, human wildlife conflicts and ethnic conflicts. Ethnic conflicts are triggered by competition for scarce resources especially water and pasture.

From the study, 99% of respondents reported that the dry season occurs in the months between January to March. Majority of respondents reported that since 2008, the annual January to March dry season is increasing becoming more severe as more water and pasture shortages are been experienced. The residents said that high levels of poverty in the sub county make them unable to cope with drought. According to local narratives the following areas were the worst hit by drought: Mahiga, Kabati, Kamwenje, Marura, Sosion, Olmoran, Sipili and Rumuruti. Majority of the respondents felt that the national and county governments should assist communities to adapt to drought conditions.

5.1.1 Past droughts in the study area

Residents narrated that LWSC and other parts of Laikipia County experienced severe droughts in 1975, 1984, 2000, 2009, 2016 and part of 2017. This was corroborated with rainfall and temperature data obtained from local weather stations (Table 2).

Residents said that droughts have occurred in the area in a cycle of about ten years. Some participants said that they understand the drought cycle and prepare in advance to cope with the drought. Other participants said that they had no resources to adapt or cope with drought and this

Table 2: Average annual rainfall and temperature data in Laikipia West Sub County

Year	1988	1991	1994	1997	2000	2003	2006	2009	2012	2015	2016	2017	2018
Rainfall (mm)	610	520.5	570.8	950.55	290.6	800	605.6	335.1	822	713.4	358.45	420.78	650.34
Temperature (° C)	18.22	19.54	19.89	18.32	21.34	19.57	20.22	19.54	18.34	18.45	19.37	18.2	18.9

Source: Kenya Meteorological Department, Laikipia County office, 2019

affects their social and economic wellbeing. An interviewee from Mtaro village in Olmoran ward narrated:

In the 1970s and 1980s, there was severe famine locally known as ng'aragu ya mianga (famine of cassava) because residents ate cassava since other food types were not readily available. Majority of the residents survived on ngima ya gathika (maize flour mixed with water to make a bread) made from imported yellow maize since the locally grown white maize was scarce. The government would also provide the yellow flour as relief food to poor residents.

Residents unanimously agreed that the droughts in LWSC have become more frequent especially since the 1990s. An interviewee from Kiriko village in Sipili stated:

The pattern of droughts in this area have changed since 1990, they have become more frequent. Each year, there is a prolonged dry spell despite the rains.

There was consensus among respondents that the severity of droughts is determined by the impacts they have on the community. These impacts included; the number of people who died of starvation and death of livestock. Other indirect impacts included children dropping out of school and ethnic conflicts as people fight for scarce resources especially water and pasture.

5.1.2 Causes of drought in Laikipia West Sub County

Residents of LWSC reported that droughts are triggered by both human and natural factors. About 90% of interviewees said that deforestation has contributed to the prevalence of droughts in the sub county. An interviewee from Mithuri village in Olmoron Ward lamented:

Deforestation is on the rise in this area. Firewood is the main source of domestic energy. Charcoal burning has become rampant in Marura village in Olmoron ward and Majani village in Muhotetu ward. Some residents of these villages eke their living from making charcoal which is sold in urban areas especially Nyahururu town.

The narratives given by participants attributed the droughts in their areas to the reduction of vegetation cover. They said that when the land is left bare after trees are cut, very little moisture is available in the soil and the atmosphere. Participants reported that large sections of Marmanet Forest have been destroyed to create room for land for settlement and cultivation (Fig 2). Majority participants said that the forest is facing high levels of human encroachment.

5.1.3 Drought adaptation strategies

Participants had different views on best strategies to adapt to drought conditions. Majority of respondents reported that shallow wells and dams were used to reduce water shortage during droughts. However, it was reported that some dams are silted and cannot hold large volumes of water



Figure 2: Images taken in Marmanet Forest in Laikipia West Sub County in June 2019. There is rampant charcoal burning and illegal cultivation in sections of the forest

to meet the water demand in the area. One farmer from Kaharati area in Sipili explained:

We are very desperate, our tomatoes are drying up in the farms. We wake up at 3 am to pump water to our farms from the dam before other farmers have woken up. Sometimes, there is no water in the dam for pumping. We are ready for any intervention that will ensure there is more water for farming.

Most participants reported that they harvest rain water from the roof of their houses. However, they said that due to limited resources, they are not able to buy or construct large storage structures.

Creating a market for livestock during drought periods was reported as a strategy to minimize livestock losses. Participants explained that when the number of livestock is reduced, the demand for pasture decreases and therefore less conflicts. However, in some communities especially the Maasai, it is a cultural taboo to dispose livestock because of drought. The Maasai believe in moving around with their livestock in search of pasture and water in times of scarcity.

Farmers reported that they plant drought resistant crops to adapt to droughts. The common drought resistant crops planted are cassava, sorghum, millet and katumani maize. However, most farmers said that they lacked fertilizer and hybrid seeds to increase yields. Some respondents said that they stored grains and other food after a bumper harvest for use during droughts. Respondents who are pastoralists also reported that they store hay and other livestock feeds during wet seasons to feed their animals during dry periods. Some participants pointed out that although storing food and hay was

an important adaptation strategy, the majority of farmers in LWSC lacked storage facilities. This result to post harvest losses when food is attacked by weevils and other pests.

A shift from traditional activities mainly farming and pastoralism was mentioned as a key adaptation measure to droughts. Respondents who engaged in non-farming activities such as small retail businesses reported that they are less affected by droughts than farmers and pastoralists. However, they reported that they suffer losses when ethnic conflicts triggered by droughts occur. When violent conflicts occur business premises are sometimes looted by criminals who take advantage of skirmishes to steal from shops and other retail outlets.

The Government of Kenya and the County Government of Laikipia provide relief food to residents of Laikipia during times of drought. Although a few respondents reported that this was an important adaptation measure to droughts, majority of participants felt that relief food creates a dependency syndrome and can make people lazy. An interviewee from Mithuri village in Olmororan said:

The best way to help a needy person is not to give him fish but to show him how to fish.

Most participants said that relief food is usually limited and therefore not a good coping mechanism.

Religion plays an important role in the lives of majority residents in LWSC. Some participants said that prayers can solve drought challenges. This group of participants believe that frequent droughts are a punishment from God. One respondent from a religious sect locally known as Akorino stated:

These are end times; God is angered by our sinful nature. Human beings have lost sense and respect for God and other humans. We have shed a lot of blood with our own hands through the many conflicts we have had in the past and at present. We need to repent and appease the spirit of God to forgive us and stop punishing us anymore through droughts and other calamities. Even when it rains, many people are still losing their lives through floods and landslides.

5.1.4 Are the authorities doing enough to address droughts?

Majority respondents (74.81%) said that the national and county governments had not done enough to implement drought adaptation and mitigation strategies in LWSC. Respondents made proposals of interventions that should be implemented by the national and county governments to mitigate the effect of droughts. This includes building more dams, sinking boreholes, constructing water pans to collect surface runoff for irrigation. Participants said that the water collected should be supplied to homesteads. Other interventions include government subsidies for inputs such as fertilizers, drought resistance seeds should be supplied to farmers to ensure high yields from their crops. Participants also pointed that the government should provide trainings to local communities on the importance of conserving forests and planting more trees.

Majority participants said that the government should support and mobilize communities to produce and plant tree seedlings in their farms in order to increase tree cover. They also emphasized the need for the national and local government to support people to acquire water harvesting equipment such as water tanks.

Residents of LWSC said that the county and national government should develop capacity building programmes for local communities. Participants said that these programs would be an opportunity for communities to come together and share ideas on improving their livelihoods. , Majority residents said they needed training on how to plant and market fruits like avocados, mangoes, oranges and other profitable activities such as poultry farming.

Participants also mentioned that there is need to develop conflict resolution mechanisms between farmers and pastoralists because most of the conflicts between the two groups occur during a drought. Other participants called for measures to ensure rational use of resources during drought situations. For example, farmers who relied on dams for irrigation should minimize abstraction during dry seasons so that downstream water users can also get water.

5.1.5 Involvement of local people in drought mitigation and adaptation

Residents of LWSC emphasized the need for government officials to engage communities at the grass root level so as to become more familiar with issues affecting them. Sixty eight (68) of respondents said that the national and county governments do not engage local communities in the

fight against drought. Majority of participants said that most programmes are developed in offices and the views of local people are usually not sought. An interviewee from Umoja village in Sipili ward stated:

The wearer of the shoe knows where it pinches most. Sisi dio tunajua makali ya kiangazi wao wako kwa ofisi sisi tuko mashinani (We are the ones who know the harshness of droughts, they are in the offices, we are on the ground)

Participants said that there is a perception among some government officials and political leaders that residents of LWSC are illiterate and therefore not capable of interrogating government programs and plans. They said that because of this perception, government officials come with ready-made programs and budgets for local people to rubber stamp without being asked to provide their input.

Unanimously, participants said that genuine public consultation meetings should be done before projects meant to address the challenges of drought are implemented. They said that this would reduce cases of sabotage or vandalism of property in the case of boreholes, dams and water pans since community members will feel the need to protect these projects. This would also avoid a situation where a project is implemented to benefit a few influential individuals at the expense of majority of the community members.

Residents of LWSC also proposed that communication about drought adaptation and mitigation measures by the government should be passed to all communities without discrimination. This will ensure that all individuals are able to make the right decisions based on the information given.

In order to ensure that the most needy community member's benefit from government relief support during droughts, respondents said that village elders and local leaders should be asked to identify the most deserving beneficiaries. Other participants said that church leaders were also key in identifying the most vulnerable people in the community.

At least half of participants mentioned that forming self-help groups where members support each other in buying tanks and digging water pans can be a good strategy among poor households.

Other measures to cope with drought mentioned by majority participants included: reducing the size of livestock herds, using modern farming methods as advised by agricultural extension officers, selling farm produce when the market price is optimal. Participants said that food prices are low during the harvesting season. Having enough food stocks to sustain farmers in case of drought or poor harvest was also mentioned as an adaptation measure. A vast majority of respondents said all communities in LWSC should embrace education and accept to take their children to school to increase opportunities of earning a living.

5.2 Local perceptions of conflicts in Laikipia West Sub County

Through interviews and focus group meetings, residents of LWSC said that violent conflicts are a long standing problem in their area. Residents identified conflict hotspots in each of the four wards in the sub county as shown in Table 3.

Table 3.

Conflict hotspots and resident communities in each ward

Ward	Conflict hotspots	Communities resident in the Ward	Most common type of conflict
Sipili	Wagwachi, Kharati, Sosion, Mutito, Ndinaka, Rubere, Naibron	Samburu, Kalenjin, Kikuyu, Turkana, Somali, Pokot, Baluhya, Maasai	Cattle rustling, human wildlife conflict
Olmoran	Olmoran, Kamwenje, Survey, Magadi, Loriek, Njangiri	Turkana, Pokot, Kikuyu, Kalenjin, Maasai, Kisii, Meru,	Cattle rustling

		Somali,Samburu	
Muhotetu	Ndurumo, Karaba, Majani,Ngamore, Mwenje, Gatundia, Majani	Somali,Turkana, Kikuyu, Kalenjin Baluhya,Kisii, Meru	Human wildlife conflict
Rumuruti	Lorien, Aiyam, Mutamaiyu, Ndurumo	Kikuyu, Kalenjin,Somali, Samburu,Turkana, Kisii, Maasai	Ethnic conflicts

*Communities which form a majority of the population in each ward have been underlined

In questionnaire interviews, 92 % of respondents reported that conflicts have increased in frequency in the last ten years (Table 4).

Seventy eight percent (78%) of participants in the study identified two types of conflicts that have been prevalent in the area: conflicts over resources and human wildlife conflicts. Participants reported that conflicts over resources mainly involved pastoralists, small scale farmers and ranchers. Human wildlife conflicts were generally blamed on elephants and were reported to affect mainly pastoralists and crop farmers.

Seventy two (72) percent of farmers reported that most conflicts over resources occurred during election years. It was reported that conflicts in LWSC occurred in the following presidential

Table 4: Historical timeline of selected conflict incidents in Laikipia West Sub County

Year	Event
January 1998	Four people were killed in Ol Moran area by alleged armed Pokot, Samburu and Turkana raiders.
May 2007	Nine armed cattle rustlers were killed by the Kenya Police in Ol Moran during a cattle recovery operation. About 200 stolen cattle were recovered.
January 2008	About 60 young Kikuyu men were killed in Rumuruti area in a retaliation attack after one Turkana man was burnt to death for stealing goats.
March 2008	25 people were killed and about 8000 displaced in LWSC when two communities- Turkana and Tugen clashed with Kikuyus.
March 2017	Tristan Voorspuy a ex-British soldier was killed by armed pastoral herders in Sosian Ranch which he co-owned.
April 2017	Kuki Gallman a prominent conservationist was injured by herders when they invaded Laikipia Nature Conservancy which she owned.
July 2017	A contingent of Anti Stock Theft Unit police officers ran into an ambush in Matuiku village in LWSC. Six police officers were killed by armed bandits including a Deputy Police Commandant
Nov 2017	At least 300 cattle are allegedly killed by police in Ratia village in LWSC.
October 2018	Armed cattle rustlers shot and killed an elderly woman at her home in Gathanji, after attempting to steal her cows.

election years; 1992, 1997, 2002 ,and 2007 and 2008. Kenya has a five year election cycle, the first multiparty elections were held in 1992. A farmer from Aiyam village in Rumuruti ward stated:

Most incidences of violence in this area occur during election seasons. As the elections approach, there is a sense of lawlessness and pastoralists move around with their animals in crop lands and private ranches. This causes confrontations among farmers, pastoralists and ranch owners which escalate to violent conflicts.

Majority of farmers reported that conflicts were more severe in years when droughts were experienced in the study area. According to local narratives, the periods; 1997, 2008 and 2009, 2012-2015 and 2017 experienced drought conditions. Farmers reported that conflicts had become more common since 2008 suggesting a relationship between conflicts and droughts in the study area. Respondents reported that demand for pastures and water had grown over the years as the number of people and livestock increase. Majority of participants reported that the tendency by pastoralists to invade ranches in search of pasture was a cause of violent conflicts in LWSC. One interviewee from Rumuruti narrated that in March 2017, he saw a group of about ten thousand heavily armed pastoralists drive thousands of cattle to ranches and conservancies in the subcounty. The interviewee reported that the pastoralists came from Samburu, Pokot, Isiolo and Baringo counties. This story is corroborated by newspaper reports which recorded many incidents of conflicts between ranchers and pastoralists in 2017.

Cattle raids were identified as a major cause of conflicts especially among pastoralists. One interviewee from Bondeni village of Sipili ward stated;

Cattle raids are major cause of conflicts, when one community is raided and lose livestock, the community plans a counter raid to recover the stolen livestock.

5.2.1 Ethnic animosity, stereotypes and conflicts

In one of the focus group meetings, a participant from Olmorani narrated an incident that happened in March 2008. He reported that on one morning, members from the Tugen and Turkana communities attacked Kikuyu villages and killed twenty five members of the Kikuyu community. This incident also displaced 8000 people. The attackers were reportedly retaliating the killing of one member from the Turkana community allegedly by Kikuyus after he was caught stealing goats. Some participants in the focus group meeting said that it was unusual for two communities to gang up against one community and this showed the level of ethnic antagonism in the sub county.

Discussions during focus group meetings revealed that some communities used historical land claims to assert their rights to access resources at the expense of other communities. It was reported that some members from the Maasai and Samburu communities believed that they had the right to invade and steal livestock from other communities. In pre-colonial times, the Maasai and Samburu occupied most of Laikipia County and used it for nomadic pastoralism. During the colonial period in Kenya, the Maasai and Samburu were displaced from their native lands to create room for settler agriculture and commercial ranching. In the post-colonial period, other communities have settled in Laikipia County. This has made it difficult for the Maasai and Samburu to practice their traditional grazing practices without coming into conflict with farming communities. It was clear from the meetings that the historical land claims played a major role in exacerbating ethnic conflicts. One of the interviewees reported;

The Maasai are not happy to see other communities settled here. They invade our farms and claim to have the right to graze in our farms because they believe all land belongs to them

Majority of Kikuyu interviewees expressed resentment towards the Tugens and Samburus for allegedly stealing their livestock under the guise of traditional cattle raiding. The Kikuyus lamented that these communities have refused to abandon the cattle raiding culture which they termed as outdated. It was clear from interviews and focus group discussions that cattle raiding was a major trigger of ethnic conflicts in LWSC. The Kikuyus also complained that members from other pastoral communities in Laikipia County are allowed to own guns by security authorities while the Kikuyus are not allowed. It was also reported that recruitment of Kenya Police Reservists was biased towards pastoral communities and agro-pastoralists like the Kikuyu were not given an equal chance during recruitment.

In a counter narrative, the Kikuyus were accused of being poor in keeping secrets because their defense plans always leak out before they are executed. Some participants argued that the Kikuyus buy livestock from all communities and therefore are the biggest beneficiaries of stolen livestock which they buy at cheap prices and later sell at a profit.

Some Kalenjin participants narrated that the Kikuyus took the best land in the sub county that previously belonged to the Kalenjins who currently live in poor rocky land. Kalenjin participants argued that their young men practice cattle raiding as a traditional rite of passage. One participant reported;

During traditional circumcision ceremonies, young Kalenjin men are taught how to conduct cattle raids. When a successful cattle raid is done and a young man returns with cattle from another community, they are promoted to another age set. But not all Kalenjins believe in cattle raiding.

Turkana participants in the study felt that they are despised by other communities due to their relative poverty. These participants complained that they were denied land in LWSC. One Turkana participant from Aiyam village in Rumuruti reported that a prominent Kikuyu politician from the subcounty, the late G.G Kariuki once told the Turkanas they would 'find their land in heaven'. Although claims that the Turkana were dispossessed of their land could not be verified, such perceptions caused bitterness among the Turkanas and was reportedly used as a justification for stealing property from other communities.

In general, Somali participants in the study showed an indifferent attitude towards conflicts. This attitude is captured in the comments of one Somali participant from Olmoran ward who stated;

During conflicts the Somalis are able to sell guns so we have no problem with conflicts, they make business for us.

In focus group meetings, it was reported that some Somalis who were hawking clothes in the sub county were actually gun sellers. However this allegation could not be verified.

Interviewees reported that ethnic animosity was prevalent in the market centers. In Rumuruti market which is dominated by the Kalenjins and Samburu, the Pokots are 'not allowed' to invest in the market since they are perceived to be the cause of theft on the market. In Olmoran market, which is dominated by the Kalenjins and the Pokot, the Samburu are 'not allowed' to do business in the market. This is due to the perception that the Samburus cause fights in the market when they come looking for their stolen cattle.

Some residents reported that even when security operations are done, there are suspicions that they are targeted at certain communities.

5.2.2 Marginalization and poor leadership

LWSC has relatively high poverty levels compared to other parts of Kenya; most of the villages have poor roads, lack electricity and piped water. Interviewees in Olmoran reported that criminal gangs took advantage of poor accessibility to stage attacks in their ward because the police cannot reach quickly due to bad roads. Residents said that it was difficult for security officers to pursue criminals especially when they escape through bushy paths that are not accessible using a vehicle.

According to the Kenya National Bureau of Statistic about 20% of Laikipia County's population is illiterate. Illiteracy in the county is highest among pastoral communities (KNBS 2019). Forty percent of respondents reported language barrier among illiterate residents was a hindrance to social integration.

Conflicts were also blamed on selfish leaders who thrived on ethnic divisions to maintain their grip on power. Politicians exploit cultural divergence divide residents. One interviewee from Gedion village in Olmoran ward bitterly lamented,

'We elect corrupt leaders; they don't care anything about us. They only come in when there is a crisis. The politician's interest is to achieve their own selfish motives; they only act to protect their own but not the community at large. Surely, we don't have any security here'.

An analysis of responses through questionnaire interviews show that 64% of the respondents felt that the government has not been doing enough to solve conflict in LWSC. Only 36% of respondents especially from Olmoran, Sipili and Muhotetu feel the government have been trying.

6. Discussion

As other studies have shown, (Kamau and Sluyter 2017; Evans and Adams 2018) colonial and post colonial landscape transformations in Africa are the root cause of the most intractable conflicts in the continent. Laikipia County is a perfect example of how colonial and post colonial land use policies and practices have resulted to a new landscape prone to inter-communal and human wildlife conflicts. The introduction of private property regimes in traditionally common access resources have led to confrontations between pastoralists, small holder farmers and ranchers. These conflicts have been

amplified mainly by droughts and population growth in Laikipia County. Every dry season, cattle herders resist the human ordering of landscape (Creswell 1996) into spaces for settlements, farming and wildlife conservation by intruding into private ranches and small holder farms.

Narratives from the residents of LWSC indicate that farmers and pastoralists in the subcounty have contradictory attitudes about the ownership of land and access to grazing pastures in the area. On the one hand, farmers and ranchers believe in the right to private property and the exclusive use of their land. On the other hand, pastoralists believe in communal use of land and free movement of livestock in the landscape. The attitudes of some pastoral groups towards the use of land and resources in LWSC are reinforced by historical claims to land. The Maasai and Samburu who are mainly the pre-colonial inhabitants of Laikipia have grievances about loss of traditional grazing lands during the colonial period. Most of the traditional grazing land has been put to other uses including cattle ranching and small holder farming making it incompatible with traditional nomadic pastoralism.

Indigenous communities in Laikipia County resist the introduction of land use practices that are incompatible with their grazing practices. Persistent conflicts in LWSC are 'every day acts of resistance'(Scott 1985) by pastoral communities who feel disadvantaged by 'immigrants' who 'took' their grazing land. State-peasant relations over land in Laikipia County become strained every dry season when pastoralists disrespect private property rights and invade private ranches and small holder farms in search of pasture. As residents narrated, attempts to forcefully remove herders from ranches by the police have been met with equal force by herders who hold firearms illegally. Such cases of violence directed at the police demonstrate disenchantment with the state and political elites.

Ethnic mistrust plays an important role in fuelling conflicts in LWSC. Participants in this study revealed deep seated ethnic animosity among communities living in LWSC. Some of the causes of this animosity are competition for scarce resources including land, water and pastures especially in drought seasons. Ethnic animosity is magnified by political competition; it was evident that most severe conflicts have occurred during periods of elections in Kenya. During these times, there is increased exposure to political rhetoric that encourages ethnic identification and hatred of other communities. Politicians also raise consciousness of historical grievances in order to win votes and makes promises to address such grievances once they get into power.

Narratives from the residents indicate a serious concern about degradation of Marmanet Forest. It was clear from the participants that the forest is facing several challenges ranging from overexploitation, encroachment and poor community involvement in forest management. The local forest officer lamented that although many trees have been cut down, very few are planted in the sub county. Therefore, efforts to rehabilitate the degraded parts of Marmanet forest would likely receive a lot of support from residents of the sub county. Restoration of the forest would in the long term mitigate the effects of climate change on water availability in the sub county.

Narratives from respondents also indicate a concern about the degradation of riparian areas in the sub county. During field visits in the sampled villages, it was observed that some rivers and springs were drying up. This was attributed to over abstraction of water from stream and rivers for irrigation purposes.

There is need to strengthen community level governance structures such as Community Forest Associations (CFAs) and Water River Users Associations (WRUAs) These local groups can oversight community user rights over resources and provide security to forests through community scouts. Experiences in other parts of Kenya have shown that forest scout programs are effective in deterring forest destruction particularly in areas where they work together with forest rangers (Okumu and Muchapondwa 2020). WRUAs can negotiate with water users especially farmers who practice large scale irrigation on sustainable use of river water. CFAs and WRUAs can help mitigate resource use conflicts in LWSC.

6.1 Human wildlife conflicts

Historical accounts by local residents in LWSC indicate that elephants moved into Laikipia County in the 1970s in response to ivory poaching in the northern county of Samburu. The 1970s saw unprecedented ivory hunting in Kenyan rangelands. A Presidential ban on ivory hunting put in place in 1973 did not deter the killing of elephants in Kenya due to high demand of ivory in the international market. Elephants occupy the ranches some of which have been dedicated for wildlife conservation.

The ranches especially the private ones are a safe haven for elephants and more browse is available due to limited access by livestock (Evans and Adams 2018). In community ranches, elephants have to compete with people and livestock for water and pasture. Due to their roaming nature, elephants leave the ranches and stray in small holder farms to eat and damage food crops. About 34 % of land in LWSC is occupied by small holder farmers who bear the brunt of human wildlife conflict.

It was clear from narratives by participants that incidences of crop depredation are more common during the dry season. Elephants prefer fresh and soft plant materials especially maize crops to dry and withering grass during the dry season. The use of electric fences as a measure to stop elephant's movements from ranches into farms is widely used in LWSC. However, due to the migratory nature elephants, and the need for large spaces to roam, fences are not a perfect solution to human-elephant conflicts. Elephants routinely break fences and stray to farms and settlement areas and sometimes cause human injury and death. This results to conflicts between ranchers, farmers and conservation authorities.

The economic benefits of wildlife tourism are a strong justification for ranches free of livestock and other human activities. While it is true that ecotourism is a more sustainable form of resource use when compared with practices such as livestock grazing, in LWSC, most communities in Kenya are yet to see the benefits of ecotourism. The capital needed to set up ecotourism ventures is beyond the reach of rural communities in Laikipia County. Even where these ventures have succeeded, little benefit accrues to the very poor households. In addition income from tourism is highly vulnerable to swings in demand. It was clear from local narratives that human wildlife conflicts in the study area can be mitigated by sharing tourism benefits with local communities and compensation to victims of the conflict.

7. Conclusion and policy implication

The main objective of this study was to understand local perceptions of the relationships between droughts and conflicts in LWSC. To achieve this objective, 150 questionnaire interviews, semi-structured interviews with 24 key informants were conducted in the study area between January and June 2019. Responses provided by residents of LWSC show a strong relationship between droughts and conflicts. An analysis of trends of droughts and conflicts show that inter-communal clashes and violent incidents such as cattle rustling occurred mainly during periods of drought. This is particularly the case in the years 2008 and 2017 when low rainfall was recorded in the study area. By using a political ecology approach (Zimmerer and Basset 2003; Robbins 2004) to understand human-environment relations, this study has shown that while droughts in LWSC are recent phenomena associated with global climate change, conflicts in LWSC are not natural, they are socially constructed. At the bottom of these conflicts is the fight over access and control of resources in the sub county.

This study shows that ethnicity and livelihood conditions of residents of LWSC play an important role in shaping their perceptions of droughts and conflicts. Participants from farming communities tended to blame conflicts on 'backward practices' of pastoralists. Participants from pastoralist communities especially the Maasai and Samburu showed a sense of 'entitlement' to land in LWSC due to their pre-colonial occupation of the land. These perceptions evolve into ethnic hatred and manifest themselves during times of crisis such as droughts. Since it is not possible for pastoralists to return to pre-colonial pastoral mobility, there is need to formulate rules for access to grazing resources in times of droughts.

It was clear from narratives provided by participants that economic activities in LWSC are being constrained by a growing population, changing climatic conditions and fluctuating prices of agricultural commodities. Although some residents were skeptical of local and national government's interventions, majority of residents expressed hope that the county and national governments had the ability to mitigate drought and conflicts in LWSC. Political ecologists have warned that ignoring local voices while formulating policies implemented in rural settings has resulted to the creation of the same problems intended to be solved (Adams and Hutton 2007). There is need for intervention policies to be framed at more local level with the input from local residents of LWSC.

Our findings offer a nuanced understanding of the relationships between droughts and conflicts in LWSC. This study has several policy implications. First, the study shows that addressing the livelihood concerns of the residents of LWSC especially during times of droughts is key to mitigating

conflicts. There is need for deliberate policies on drought adaptation in the larger Laikipia landscape. This study asserts that a 'bottom up' approach during formulation of these policies is more likely to generate lasting solutions to droughts. Secondly, the study reveals that ethnic mistrust and hatred fuel conflicts in LWSC. There is need for strategies to manage ethnic diversity in the larger Laikipia landscape. An example of such a strategy could be formation of a county-level peace forum.

More importantly our research points to a need for a policy framework for conflict anticipation, prevention and resolution in Kenya. We recommend that such a framework should integrate traditional institutions such as village/clan elders in conflict resolution.

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