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Relational approach to the climate narratives and pastoral conflicts: an analysis of 2004–2013 Samburu-Pokot conflict

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The relationship between climate change and violent conflict, particularly climate-induced conflict grounded in neo-Malthusian environmentalist assumptions, has been debated since the end of the Cold War. This debate has been prominent in drought-affected regions such as the Sahel and the Horn of Africa, where pastoralists have been central. This study examines the link between climate change and conflicts among pastoralists, focusing on the clashes between the Samburu and Pokot in North-Central Kenya in 2004. A relational approach was employed. Fieldwork was conducted to analyse 129 cases from 2004 to 2013 and to assess their relationship with rainfall data for the same period. The analysis revealed a general correlation: more severe conflicts occurred during periods of heavier rainfall. Monthly aggregated data further indicated that conflict intensity decreased during dry periods. Contrary to dominant climate narratives—which suggest that drought-induced scarcity escalate violence—the findings support earlier studies highlighting a higher risk of conflict during wetter periods. Annual data analysis suggests that the motivation for conflict may centre on territorial acquisition, politically incited by elites exploiting climate narratives, rather than livestock raiding. In conclusion, greater emphasis should be placed on understanding pastoralists who construct dynamic hybrid networks of environment, politics, and pastoralism, rather than applying universal climate narratives indiscriminately. Pastoralists do not simply accept a linear path from scarcity to violence but implement risk-reduction strategies, avoiding conflicts during dry periods. Policies should support pastoralists' potential as reliability professionals while minimising political incitement exploiting climate narratives.

KEYWORDS

climate change, Kenya, conflict, climate narrative, relational approach

Introduction

Research question

The relationship between climate change and violent conflict, particularly climate-induced conflict rooted in neo-Malthusian environmentalist assumptions, has been debated since the end of the Cold War (Kaplan, 1994; Homer-Dixon, 1999). Following former UN Secretary-General Ban Ki-moon's 2007 characterisation of Darfur as 'the first climate change conflict', the climate–conflict nexus has received considerable international attention. Numerous studies argue that climate change has intensified conflicts in sub-Saharan Africa (Meier, et al., 2007; Burke et al., 2009; O'Loughlin et al., 2012; Hendrix and Salehyan, 2012). This debate has been particularly prominent in drought-affected regions such as the Sahel and the Horn of Africa, where pastoralists, as the principal inhabitants, have been central to this discourse. Mainstream narratives assert that climate change degrades rangelands, creating resource scarcity that triggers violent pastoralist conflicts. These narratives have shaped widespread policies and interventions targeting African pastoralists.

However, a key question arises: Is the climate narrative universally applicable to each instance of pastoralist conflict? This study examines this question by exploring the climate–conflict relationship in the 2004 Samburu-Pokot clashes in North-Central Kenya, drawing on original ethnographic data. Rather than assessing general climate–conflict trends across the region, the study questions how relevant these narratives are to the lived experiences of pastoralists enduring conflict, drought, and political turmoil. Therefore, reconsidering climate narratives from particular pastoral livelihood and the experience will be explored, instead of applying scenarios of climate narratives to the context of pastoralists.

This study does not discern climate narratives as given unquestionable truths but as constructed realities. "Policy narrative" refers to those stories—scenarios and arguments—that are taken by one or more parties to the controversy as underwriting and stabilising the assumptions for policymaking in the face of the issue's uncertainty, complexity, or polarisation (Roe, 1994). In line with this argument, climate narratives appear as common stories developed around high uncertainty of climate change to justify the assumptions underwritten by scientists, journalists, politicians, practitioners, or citizens. According to Roe (1994), these narratives have their beginning, middle, and end and unfold as arguments—with premises and conclusions—used by policymakers to justify decisions. Aforementioned mainstream narratives of climate conflict of pastoralists mostly follow the typical storyline of policy narratives. The story that climate change deteriorates the rangeland environment and leads to the scarcity of natural resources such as pasture and water is "the beginning." This is followed by "the middle," in which these environmental pressures are said to trigger herder-related violent conflicts. Finally, at "the end," external agencies propose countermeasures such as sustainable rangeland management. In African pastoral societies, the environmental narratives have been widely invoked to underpin various interventions from outside since colonial times (Homewood, 2008: 80). In fact, the climate narrative has been applied to the Samburu-Pokot conflict that erupted in 2004. The newspaper article titled, "Drought triggers rise in killing: Ranging famine blamed for clash over few resources" expressed this conflict with a typical climate narrative.[1] The article asserts that "in a report titled Pastoralists' Voices, the UN agency said the severe drought sweeping across the country was responsible for the resource-based conflicts and related deaths in pastoral areas."

Theoretical framework and analytical approach

This analysis employs a relational approach (Konaka and Little, 2021; Konaka et al., 2023; Scoones, 2023a; West et al., 2020; 2024) to look at the relationship between climate and conflict. The relational approach examines the dynamic relationship between humans and nature within situated and embedded contexts, rather than applying existing reductionists or substantialist assumptions developed by development and humanitarian sectors to the local context (West et al., 2020; Konaka et al., 2023; Scoones, 2023a). The reason the relational approach is employed here is threefold. Firstly, the relational approach sees the objects as movements of relational networks, while the modernist approach sees the objects as distinct entities or substances (West et al., 2020; Maru, 2020; Scoones, 2023a). Secondly, the relational approach highlights hybrid and interpermeate networks without reducing humans to nature and nature to humans, while the modernist approach reduces humans to nature or nature to humans (West et al., 2020; Roe, 2023). Thirdly, the relational approach assumes multiple worlds as a hybrid of humans and nature, while modernists assume one world exclusively represented by Western natural science in a privileged way (Viveiros de Castro, 1998; Escobar, 2017; De la Cadena and Blaser, 2018). Therefore, the relational approach underscores 'relational ontology' constructed by indigenous populations as a matter of world making *per se*, beyond the view to see them as just sheer representation or recognition of one world which exists "out there" (West et al., 2020; Konaka et al., 2023). This approach foregrounds both secondary effects of climate politics and locally embedded ontologies.

1 Daily Nation, 9 October 2009.

The relational approach to the climate change issues of African pastoralists has come to appear since the mid-2010s onwards with seminal works (Schareika, 2014; Goldman et al., 2015; Goldman et al., 2017; Krätli, 2017). Drawing on the Woɗaaɓe pastoralists case in Niger, Schereika (2014) pointed out that "local environmental knowledge should be studied as contained, created, and realised, or 'constructed', in dynamic processes of social interaction." Goldman et al. (2015): 2 suggest that "we need to address not only what and how Maasai know about climate and droughts (epistemology), but what a drought is for Maasai (ontology), and if this is (always, sometimes) the same or different from what a drought is for scientists, NGOs, and government agencies concerned with buffering the effects of drought locally." In the same line of arguments, drawing on the cases of Kenyan and Mongolian pastoralists, Krätli (2017): 144 demonstrated that "pastoralists" understanding of the phenomenon refers to a *relationship* (accessibility of pasture and water) rather than a state of things (number of precipitations, be it rain or snow)'. Following these insights, this study attempts to demonstrate the relational approach to the climate–conflict nexus, which has not been discussed in the approach.

Ethnographic research question

Using this approach, this study ethnographically highlights the relationship between climate change and conflict in Northern Kenya and the North Rift Valley, where pastoralism dominantly provides the only feasible modes of subsistence production under the unpredictable and variable environment of arid and semi-arid dryland. To attest to the validity of the applicability of mainstream climate narratives to the contextual conflict case, the ethnographic research question is asked: Are conflicts more likely to occur during dry periods (seasons or years) when natural resources such as pasture and water become scarce? Schilling and his colleagues (Schilling et al., 2011: 1) developed 'the "Resource Abundance and Scarcity Threshold" (RAST) hypothesis, which suggests that in times of sufficient rain, raiding is mostly conducted preceding and during the long and short rains. But when rains partly or completely fail and a certain threshold of resource scarcity is reached, raids are conducted despite the less fortunate restocking conditions as a means to secure or gain control over watering points and pasture.'

Climate change has made considerable impacts on the environment and the livelihood of the pastoralists of the area who inhabit drylands, where rainfall is erratic and in great fluctuation. The impacts of climate change on pastoralists' environment settings are manifesting as climate destabilisation and polarisation, rising temperature, decreasing rainfall, and increased frequency of droughts and floods (Eriksen and O'Brien, 2008; 2013; Herrero et al., 2010; Hulme et al., 2001). Samburu pastoralists also reported that "drought was increasingly prolonged, frequent and severe." "The effects of drought are felt by livestock, wildlife, vegetation and human beings." "The pasture area dwindles, water sources run dry, most seasonal rivers dry up, and the livestock are hard hit (Boruru et al., 2011: 101)." We can assume high probabilities that climate change brought imminent difficulties to pastoralists. Hence, the point here is how such difficulties are related/unrelated to the conflicts of the area.

Conflict among pastoralists in the area, which has a long history dating back to pre-colonial times, has mostly taken the form of collective livestock raiding accompanied by homicides, typically carried out by youth warrior groups organised either through age-based systems or predatory private armies. Besides climate change, automatic weapons, which political and business elites procured for the pastoralists, are the most notable backdrop behind conflicts. It is widely assumed that the spread of automatic weapons has intensified and escalated the conflict since the 1970s, mainly due to inflows from Uganda, Sudan, and Somalia following intra- and international wars and the collapse of political systems in the Horn of Africa (Bollig, 1990; Bollig, 1993; Gray et al., 2003; Mkutu, 2006; 2008; Ember et al., 2012; 2014). However, overestimation of the impact of weapons on the conflict has been cautioned (Krätli and Swift, 1999; Eaton, 2008).

The primary cause of conflicts suggested by researchers quite varies: competition over scarce resources (Markakis, 1998; Kumssa et al., 2009; Ember et al., 2012; Ember et al., 2014; Schilling et al., 2012; Opiyo et al., 2012); cultural reasons associated with honour and bride price livestock (Anderson, 1986; Bollig, 1990; Bollig, 1993; Bollig and Österle, 2007; Schilling et al., 2012); restocking purpose against chronic drought (Hendrickson et al., 1998; Witsenburg and Adano, 2009; Boruru et al., 2011; Mose, 2021); commercial purpose raiding (Hendrickson et al., 1998; Bollig, 1990; Krätli and Swift, 1999; Ltipalei et al., 2019); and incitements by political and business elites (Hendrickson et al., 1998; Galaty, 2005; Eaton, 2008; Opiyo et al., 2012; Okumu et al., 2017; van Baalen and Mobjörk, 2018).

Several researchers (Bollig, 1990; Krätli and Swift, 1999; Opiyo et al., 2012; Mose, 2021) have pointed out that no single reason can fully explain the conflict, as multiple causes—cultural, commercial, and political—overlap and are interconnected. However, it is not enough to say that multiple factors are at play. What this study seeks to address is how multiple factors permeate each other in a particular context.

This study focuses on the particular series of conflicts between Samburu and Pokot that erupted in 2004. This conflict has been studied by numerous researchers (Straight, 2009; 2017; Greiner, 2012; 2013; Okumu, 2013; Holtzman, 2016; Ltipalei et al., 2019; Ervin, 2020; Konaka, 2021); however, none of them mentioned the relationship between climate change and conflict. The author conducted fieldwork analysing 129 conflict cases between 2004 and 2013 and examined their relationship with precipitation data from the same period. This study draws

on all original ethnographic data collected in the field, whereas all prior research (Witsenburg and Adano, 2007; 2009; Ember et al., 2012; 2014; Schilling et al., 2011; Opiyo et al., 2012; Adem et al., 2017) have largely relied on historically documented archives.

Despite the increasing severity of conflict, climate change and conflicts in Samburu County have remained under-researched compared to neighbouring Turkana and Marsabit Counties. While numerous studies have explored the relationship between climate and conflict in counties in Northern Kenya, such as Marsabit (Witsenburg and Adano, 2007; 2009; Ember et al., 2014) and Turkana (Ember et al., 2012; Schilling et al., 2011; Opiyo et al., 2012; Adem et al., 2017), little attention has been paid to Samburu County, located between the two, leaving a missing link in the research field. Witsenburg and Adano (2007), for instance, found that livestock raiding in Marsabit became more violent during the rainy season, when grass, water, and healthy livestock were abundant—results that contradicted mainstream climate narratives. By contrast, Ember et al. (2012), Ember et al. (2014) argued that conflicts intensified during the dry season—results that support the mainstream climate narratives. Considering the contradictory findings, there seems to be growing interest in how climate change and conflict are interrelated in Samburu County, a region with different conditions from those previously studied, and in what patterns emerge that either support or challenge the climate narrative.

The next section outlines the materials and methods of this research, mentioning field research, data collection, method, and two ethnic groups of this research target. It will be followed by the result and discussion section, which includes a chronological outline (in the results section) followed by an analysis of the relationship between precipitation and conflict data, the latter subdivided into monthly aggregated analysis and yearly aggregated analysis of the relationship between precipitation and conflict data. Lastly, the conclusion and policy implications are mentioned.

Materials and methods

Field research, data collection, and method outline

Documentary records concerning the series of conflicts between Samburu and Pokot that erupted in 2004 are extremely limited, and the IDMC report includes chapter headings such as 'Lack of information' and 'Conflict-induced IDPs neglected' to address this (IDMC, 2006: 33). The processes involved in the conflict have been handled in an extremely political and informal manner, resulting in only a very limited number of records being identified through searches of official documents such as parliamentary records, Hansard reports, and court records. Among these, it was confirmed that the 'Naivasha Peace Accord' was signed in October 2006 by Members of Parliament, Chairpersons of the Peace Committee, and the Provincial Commissioner of the Rift Valley Province.[2]

Consequently, the primary sources obtained through fieldwork and reports from news media inevitably constitute the bulk of the available materials. Field research on the Samburu-Pokot conflicts was conducted intermittently over 14 months between 2004 and 2025, primarily at five sites where conflict was most intense: Logorate, Longewan, Nkutoto Arus, Poro, and an anonymous location, "Ntufork [pseudonym]"[3] in Laikipia County. Supplementary research took place at Lolmorok, Kisima, and Amaya (Baringo County) (Figure 1). Fifty-one interlocutors (49 Samburu and 2 Pokot) participated in the research. The findings were further supplemented by anonymous group discussions with Pokot elders conducted by a Samburu, who has many Pokot friends and once resided on Pokot land. Although time elapsed between the onset of the conflict and the study's completion, the primary research was conducted relatively early, between 2009 and 2012. Analysing its findings and conducting supplementary research, interrupted by COVID-19, took considerable time. Consequently, it is unlikely that the respondents' memories had become vague. The author visited them repeatedly and built rapport. The research followed the ethical guidelines of the Declaration of Helsinki and authorisation was obtained from the relevant Kenyan authorities.

Sampling was limited to cooperative individuals present in the conflict areas and was effectively random. Some interlocutors were known to the author from earlier fieldwork among the Samburu since 1992. While most informants were men directly involved in the conflict, 26 women who had been displaced were included to mitigate gender bias. Information was obtained directly from individuals who experienced conflict first-hand, whether as victims, witnesses, or perpetrators. Hearsay was minimised, though not all data derive from eyewitness accounts.

The main field research method comprised mainly semi-structured qualitative interviews, supplemented by focus group interviews and literature reviews. Northern Maa language was used primarily with Samburu speakers, and Swahili with Pokot speakers. Collecting conflict information in the area was an extremely difficult task since locals were quite reluctant to talk about their criminal activities. While attackers tended to underreport their own actions, victims tended to exaggerate them, making it necessary to repeatedly correct the research data. It took a considerable amount of time before attackers

2 "The Naivasha Peace Accord Between the Pokot And Samburu Communities" https://css.ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-securities-studies/pdfs/Pokot%20-Samburu%202006.pdf [accessed 13 December 2025].

3 To protect the interview participants, the specific location of the settlement is withheld and indicated by the pseudonym, "Ntufork."

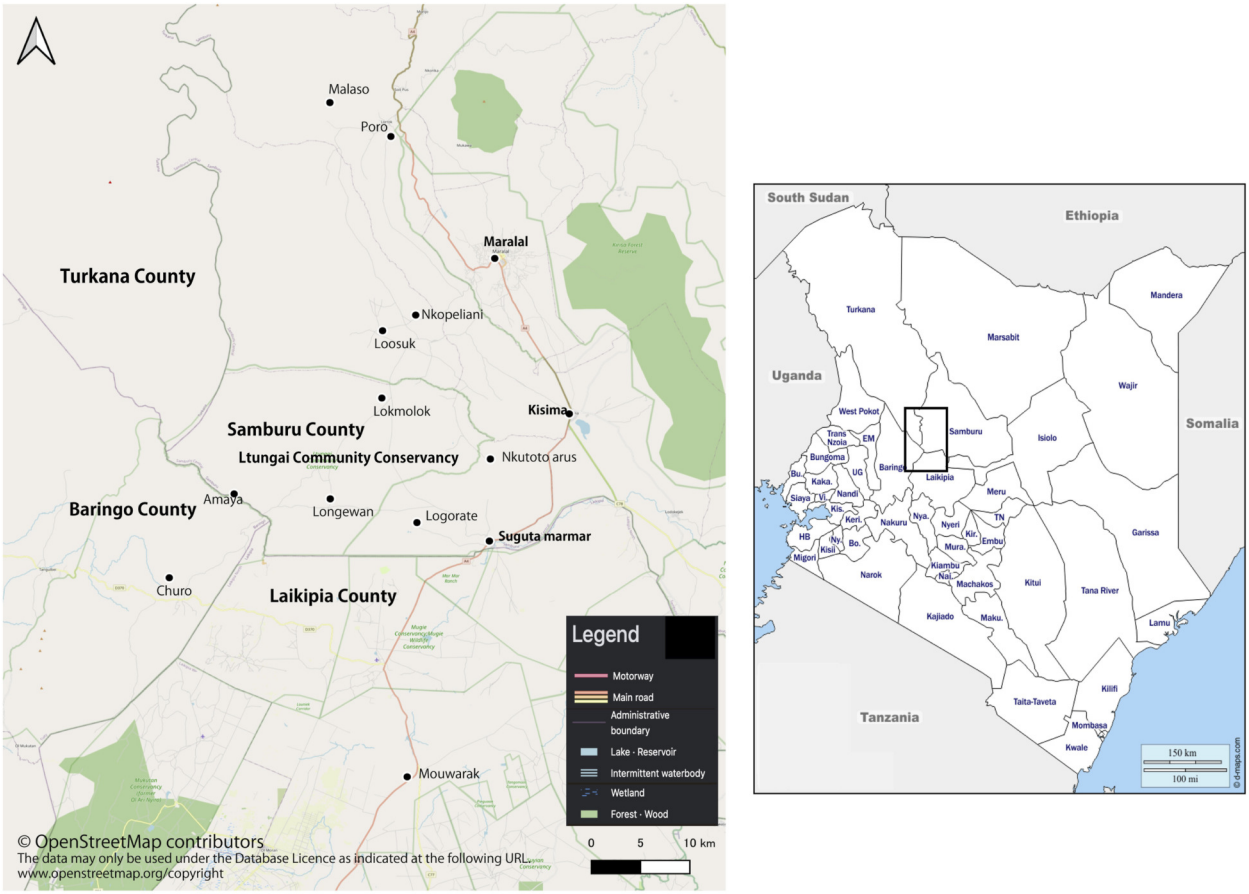

FIGURE 1
Outline map of the Samburu-Pokot conflict zone.

opened up about the crimes they had committed. Pokot, who were mostly attackers, were quite reluctant to talk about what they did and often lie blatantly because they are afraid of being arrested by the police, being cursed by elders, and being punished by political and business elites. Therefore, it became necessary to depend on the Samburu interlocutors. Each incident was cross-checked against multiple sources to eliminate rumours and "rural myths" (Sellen, 2003; Eaton, 2008). Although most interlocutors were Samburu, key incidents were verified with Pokot accounts. Some of the information came from Samburu who remained in Pokot territory or maintained Pokot contacts during the conflict. Despite these best efforts, the author admits that significant skew in the sample of survey participants may have had some impact on the balance of the information presented. The field data were compiled as a database of the chronological conflict data set.

The conflict erupted in 2004, largely subsided by 2009, but sporadic clashes continued into the mid-2010s before recently re-emerging. The author extracted 233 records which covers 10 years of data from 2004 to 2013 from the chronological conflict data set. It comprises 129 records of conflict incidents, 25 records of peacebuilding efforts, 18 records of displacement, 14 records of aid, 8 records of disarmament, and 39 records of related information. Incidents involving livestock looting, homicides, injuries, and property destruction between two ethnic groups were classified as conflict events; clashes with the government, personal disputes, and intra-ethnic incidents were excluded. Livestock losses were recorded based on witnesses' estimates, as precise accounts during raids were impractical. In contrast, casualty numbers were generally reliable, as victims were usually identified individually.

Each incident record comprises the month and location, casualty details, estimated livestock numbers and species, the estimated number of raiders, and other relevant information. Some incidents were not officially documented, with bodies left unburied and later scavenged by wildlife. Precipitation data for the same period were obtained from the Kenya Metreological Department archives. Rainfall data for Samburu were calculated as the average of Samburu West and Laikipia North sub-counties, while data for Pokot were averaged across Baringo South and Tiaty sub-counties.

TABLE 1 Articles documenting conflicts between the Samburu and Pokot, 2004–2013.

Date	Media	Title	Category
2004/7/14	Daily Nation	130,000 facing famine in Samburu	Peacebuilding
2004/11/27	The Standard	Army abandons search for stolen ammunition	Friction with government
2005/4/23	The Standard	Don't deploy the army, kanu legislators urge state	Disarmament
2005/5/18	The Standard	State issues amnesty for firearms	Disarmament
2005/5/23	The East African	Disarming pastoralists: Kenya cannot go it alone	Disarmament
2005/5/30	The Standard	Operation to disarm north rift residents starts today	Disarmament
2005/6/4	The Standard	1,600 guns recovered in North Rift region	Disarmament
2005/6/28	The Standard	1,588 guns recovered as exercise enters second month	Disarmament
2006/4/19	Daily Nation	One more shot dead as violence escalates	Incident reports
2006/4/20	Daily Nation	MPs blame themselves for crisis in the North	Protest, petitions, or denunciations
2006/4/22	Daily Nation	Kaparo to chair peace meeting in clashes area	Incident reports
2006/4/23	Daily Nation	Raiders strike on day of national prayers	Incident
2006/4/24	Daily Nation	Cattle raids: This is the way out, by MPs	Peacebuilding
2006/4/25	Catholic Information Service for Africa	Is government unable to stop these murderers?	Impact of conflict
2006/4/26	Daily Nation	3,000 herdsmen flee to Uganda	Disarmament
2006/4/28	Catholic Information Service for Africa	Valley of death swallows up people, livestock	Disarmament
2006/4/29	The Standard	State plans to disarm the Pokot are complete	Disarmament
2006/5/10	The Standard	18 firearms recovered in gun hunt	Disarmament
2006/5/22	Daily Nation	Politicians fuelling the conflict by arming and inciting their people	Disarmament
2006/5/22	Daily Nation	70 guns recovered in disarmament exercise	Disarmament
2006/5/22	Daily Nation	Where vicious cattle rustlers call the shots	Incident reports
2006/5/24	The Standard	Moi institute in peace bid	Peacebuilding
2006/7/23	Daily Nation	Branding of livestock likely to end conflict among herdsmen	Peacebuilding
2006/8/4	The Standard	Bandits kill herders in night attack	Incident reports
2006/8/23	Daily Nation	Peace envoy in valley of death	Peacebuilding
2006/9/1	Daily Nation	Churches launch peace plan for hostile communities	Incident reports
2006/9/17	The Standard	Small arms fan conflicts in laikipia	Incident reports
2006/9/17	Daily Nation	State accused of using too much force at ranch	Protest, petitions, or denunciations
2006/10/5	Daily Nation	Why former army boss is on the horns of dilemma	Protest, petitions, or denunciations
2006/10/6	Daily Nation	Church calls for end to clashes	Peacebuilding
2006/10/6	Daily Nation	Church expresses concern over ethnic skirmishes	Peace building
2006/10/6	Daily Nation	Killings continue despite heavy presence of armed officers	Protest, petitions, or denunciations
2006/10/6	The Standard	Uproar as MPs debate evictions demo	Conflict in general
2006/10/17	IRIN	Pokot, samburu conflict displaces thousands	Impact of conflict
2006/10/25	Daily Nation	Uneasy calm as polls race begins	Conflict in general
2006/11/5	The Standard	Samburu and Pokot pledge to end cattle rustling	Peacebuilding

(*Continued*)

TABLE 1 Continued

Date	Media	Title	Category
2007/1/5	The Standard	Samburu clash victims cry for justice	Protest, petitions, or denunciations
2007/5/22	Catholic Information Service for Africa	Fear of more attacks reigns in areas recently hit by clashes	Friction with government
2007/5/24	Daily Nation	Laikipia cattle raids continue despite State's security pledges	Friction with government
2007/5/29	The Standard	Leaders say police killed 70 in laikipia	Friction with government
2007/6/28	Daily Nation	War on bandits tops campaign as poll nears	Conflict in general
2007/7/8	The Standard	17 people killed in dawn attack	Incident reports
2007/7/10	Daily Nation	Peace talks set for next week	Protest, petitions, or denunciations
2007/8/21	IRIN	Insecurity, conflict affect education in northern region	Impact of conflict
2008/2/22	The Standard	Ten die as warriors clash over cattle	Incident reports
2008/3/31	Daily Nation	Laikipia violence linked to illegal arms	Disarmament
2008/4/24	Daily Nation	New minister takes the bull by the horns in grazing dispute	Protest, petitions, or denunciations
2008/4/30	Daily Nation	Why herders Won't surrender their firearms just yet	Disarmament
2009/9/13	Daily Nation	31 killed in laikipia cattle raid	Incident reports
2009/10/6	Daily Nation	Drought triggers rise in killings	Incident reports
2009/12/16	Daily Nation	Lightning raid Nets 24 rifles in Laikipia	Incident reports
2010/9/24	IRIN	Voices of peace in a land of conflict	Conflict in general
2010/12/23	Daily Nation	Peace caravan gives herders a chance for good night's sleep	Peacebuilding
2011/7/7	The Star	Laikipia elders agree to bury the hatchet	Peacebuilding
2013/3/21	The Star	MPs pledge on security	Peacebuilding
2013/7/26	The Star	Elders hold peace forum	Peacebuilding

The above field dataset has been cross-checked with documentary sources to the extent available. Information available concerning the conflict between the Samburu and Pokot peoples occurring in the region from 2004 to 2013 was gathered from Kenyan newspaper articles (The Daily Nation, The Standard, The Star, and The East African), religious media (Catholic Information Service for Africa) and humanitarian media (IRIN: The Humanitarian News and Analysis Service), as well as ACLED conflict data. During this period, 217 articles containing some reference to Samburu–Pokot conflict were collected. After excluding those concerning different regions or involving other ethnic groups such as the Turkana and Kikuyu, 57 articles were identified as highly relevant to the conflict examined in this paper. However, as the articles did not contain information of equivalent precision to that collected by the author, they could not be merged with the author's dataset.

As shown in Table 1, a detailed examination of these 57 articles revealed that 14 concerned disarmament, 12 comprised incident reports, 12 dealt with peacebuilding, 7 covered protests, petitions, or condemnations, 4 addressed friction with the government, 4 covered conflict in general, and 3 dealt with the impact of conflict. Of these, all articles concerning incident reports were cross-referenced with the field dataset. While some regional variations and numerical discrepancies were noted, complete consistency was confirmed for every single case.

An overview of the Samburu and Pokot

The Samburu mainly inhabit Samburu County and parts of Laikipia County in north-central Kenya. They speak the northern dialect of the Maa language, part of the Eastern Nilotic group (Sommer and Vossen, 1993). The population is 333,471 according to the 2019 national census (Kenya National Bureau of Statistics, 2019). Samburu County can be roughly divided into the highlands (*ldonyo*), with a general altitude of 1,500 m and the lowland plains (*Lpurkel*), with an altitude ranging between 1,140 m and 1,500 m (Pas, 2018), while transhumance between highland and lowland has been dominant (Sperling, 1987; Simpson and Waweru, 2021; Lelenguyah et al.,

2024). The conflict between Samburu and Pokot mostly erupted at the western edges of the highlands. The land in this area is largely owned by group ranches established mostly in the 1980s. However, until the subdivision of land in the late 2010s, the usufruct rights of pasture and water have been communal and unfragmented. Their predominant livelihood is semi-nomadic pastoralism rearing cattle, goats, and sheep, while livelihood diversification has progressed with rainfed farming of maize, beans, and other vegetables, trading, transport business, and various types of wage earnings after droughts have become more frequent.

The neighbouring Pokot, part of the broader Kalenjin group, mainly reside in West Pokot County and Baringo County in Kenya, with some communities in Uganda. The population of Pokot in Kenya is estimated at 778,408 (Kenya National Bureau of Statistics, 2019). The Pokot are divided into agro-pastoral hill Pokot and pastoral lowland Pokot (Bollig, 2006). Until the 1990s, the land ownership was communal and unfragmented. Subsequently, wildlife conservation, sedentarisation, and land-use intensification progressed (Greiner, 2016). The Pokot involved in the conflict with Samburu are predominantly pastoralists who live in the eastern edge of the lowlands in Baringo County, while rainfed maize cultivation has been practised at highland around Churo since the 1960s (Greiner et al., 2013; Hauke-Peter, 2022). It is reported that the extensive grass vegetation in the region has been declining, while the bush vegetation strongly increased and different invasive species rapidly expanded through the 20th century (Little, 2019; Hauke-Peter, 2022). Although pastoralism remains central, farming, wage labour, trade, honey production, alcohol brewing, and other activities have become increasingly important.

Results

Backdrops of the conflict

This summary of this and subsequent sections outlines the conflict as revealed by field and documentary research; further details are available elsewhere (Konaka, 2021; 2023). The relationship between Ltungai community conservancy and conflict has already been discussed in the paper (Konaka, 2023) and will not be repeated here, as it does not directly relate to climate and conflict, the subject of this paper.

Before 2004, Samburu and Pokot were generally peaceful, maintained through a ritual peace agreement. "Until recently, the two groups were closely allied, bonded by a ritual oath undertaken, by most accounts, before living memory, with the slaughtering of livestock from their respective herds and ritual burying of spears (Holtzman, 2016: 42)." During the 1990s, the Samburu and Pokot maintained such cordial relations that they even jointly raided Turkana. In the border regions, both Samburu and Pokot shared grazing lands, and instances were observed of them forming joint settlements and intermarrying.[4]

The origins of the conflict trace back to a bush speech delivered by Pokot political elites during the 2000 election campaign, at a time when the entire region was suffering from severe drought.[5] The content of the bush speeches presented here was confirmed through confidential information inadvertently disclosed by an intoxicated Pokot individual to Samburu residents following a Pokot election campaign event held in Churo.[6] The speech content has been confirmed by the anonymous Pokot interlocutor as well.[7] The elites falsely claimed that Losuk belonged historically to the Pokot, citing the term *Suk* (meaning Pokot) as evidence. However, there is no historical record to support the claim that Pokot lived permanently in Losuk and current residents of Losuk have never heard it over generations. The elites urged the lowland Pokot to seize Samburu lands bordering the highlands—Poro, Losuk, Lolmorok, Longewan, and Logorate, the locations with plentiful pasture and water. They promised to distribute the land they had seized from Samburu to the residents of Pokot. It is evident that the claims of Pokot political elites can be categorised as a "climate narrative" of the competition over scarce resources. The speech was warmly welcomed by the assembled supporters. Political elites from Pokot were elected as authorised politicians in 2002.

Such narratives inciting territorial expansion, and the orchestration of these by political elites, appear to have been conducted covertly, making documentary evidence extremely difficult to find. However, the following accounts appearing in NGO reports, newspaper articles, and research papers provide some corroboration. Therefore, it seems impossible to dismiss them as rumour or falsehood.

> 'In Samburu, respondents reflected this by noting that the fighting which is taking place is between two groups which are usually at peace with each other. "Traditionally, the Pokots and Samburus do not fight, so maybe someone is engineering this", stated one member of the Samburu Peace Committee (IDMC, 2006: 37).'

4 Source: interviews with two Samburu elders from Longewan on 7 September 2012; an interview with a Pokot elder from Amaya on 9 September 2012.

5 Source: an interview with a Pokot youth from Amaya on 9 September 2012; an interview with a Pokot elder from Amaya on 10 September 2012; an interview with a Samburu elder from Longewan on 7 September 2012; an interview with a Samburu elder from Logorate on 4 September 2010. Pokot political elites also claimed that signs reading *sugi*' (the Samburu word for Pokot in the plural) existed during the colonial era, however, this too is highly questionable.

6 Source: an interview with two Samburu elders from Longewan on 7 September 2012. Naturally, no official parliamentary records exist for such matters, as they pertain to illegal activities.

7 Source: an interview with a Pokot elder from Amaya on 10 September.

> 'He [Samburu MP] says. "It is hard to return guns if your foes do not do the same. Some of them are armed by politicians."[8]'

> 'More tragically, lives have been lost in bloody raids traced to politics. It is said the Pokot are fighting to expand the borders of a new district, to be hived off Baringo, that they were promised.[9]'

> 'The MP, who also spoke to the Nation at Maralal Town, said the rustlers believed to be from East Pokot, were after Samburu land stretching for about 90 kilometres from Amaya on the border of East Pokot and Samburu District to Parkati on border of Turkana, Samburu and East Baringo districts.[10]'

> 'Many Samburu I know add that political elites use profits from mafia style livestock raids to finance their campaigns (Straight, 2009: 25).'

Chronological overview of the conflict

The beginning of the conflict was a skirmish that a Samburu youth cut the wrist of a Pokot youth during the quarrel over the he-goat that was to be sold at a Loibor enkare livestock market located at Malaso, Poro in April 2004.[11] This incident invited several subsequent snowball expansions of the conflict in Poro, however, the conflict scale has been small at that time. In subsequent clashes, a Samburu man cut off the testicles from the corpse of a Pokot man, causing Pokot's anger to escalate (Holtzman, 2016: 65).

This series of conflicts seems to have stirred up Pokot political elites who had been planning to invade Samburu highland territory since 2000. Several troops were organised on a large scale by the political elites, while other spontaneous troops carried out small and sporadic livestock raiding. In April 2004, organised Pokot troops with armed combatants attacked Losuk, Lolmorok, Longewan, and Logorate—all those areas that Pokot political elites had incited their supporters to reclaim in their speeches.[12] They killed Samburu residents, torched houses, raided hundreds of livestock, and robbed household property. It was witnessed in Amaya that the success of the surprise attack was celebrated by the Pokot locals, and that a lorry belonging to a Pokot political elite was transporting hundreds of automatic weapons suspected to be procured from illicit traders in Uganda.[13]

Fighting expanded into Laikipia County after July 2004.[14] Samburu also smuggled hundreds of automatic weapons from Uganda, Ethiopia, and Somalia and counter-attacked Amaya and other border areas of Pokot, triggering a snowballing escalation of the conflict.[15] In October 2004, 400 Pokot troops further attacked Nkutoto Arus deeper inside Samburu territory but were repelled, suffering approximately 50 casualties.[16]

In March 2005, displaced and evacuated Samburu convened the first meeting at Nkopeliani to return to their home territory.[17] They decided to construct clustered settlements (*lolora*) at borderland to Pokot to assure the collective defence and to demonstrate their territoriality. As a result, ten clustered settlements have been constructed at the border belt zone. In May 2005, troops of six hundred were dispatched again to the inner area of the Samburu territory, Nkutoto Arus; however, the raid was unsuccessful, resulting in 24 Pokot deaths.[18] A captured prisoner confessed that Pokot political elites had ordered the attacks.

In May 2005, Samburu retaliated at Atalia,[19] but suffered casualties when government forces killed them with heavy weapons. In August 2007, they established a heavily armed settlement in a location 'Ntufork [pseudonym].'[20] The settlement specialises in defence. Despite repeated raids, livestock has never been stolen from that settlement. In June

8 Daily Nation, 22 May 2006.

9 The Standard, 5 January 2007.

10 Daily Nation, 10 July 2007.

11 Source: an interview with a Samburu elder from Longewan on 2 and 7 September 2012; an interview with a Pokot elder from Lonyek in Laikipia County on 3 September 2012; an interview with a Samburu woman from Amaya on 10 September; an interview with a Pokot youth from Amaya on 9 September 2012; an interview with a Pokot youth from Amaya on 12 September 2012; an interview with a Samburu elder from Malaso on 23 August 2021; an interview with a Samburu elder from Malaso on 24 August 2021.

12 Source: an interview with a Samburu elder from Longewan on 6 and 7 September 2012; an interview with a Pokot youth from Amaya on 9 September 2012; an interview with a Samburu woman from Amaya on 10 September 2012.

13 Source: an interview with a Samburu elder from Longewan on 6 September 2012. His Pokot friend warned him that Pokot political elites were smuggling weapons and planning a major attack on Samburu.

14 Source: an interview with a Samburu elder from Kisima on 20 February 2007; an interview with a Pokot youth from Amaya on 9 September 2012.

15 Source: an interview with a Samburu elder from Logorate on 28 August 2012.

16 Source: an interview with a Samburu elder from Lomgewang on 2 and 7 September 2012; an interview with a Pokot youth from Amaya on 9 September 2012; an interview with a Pokot elder from Amaya on Sept. 12, 2012.

17 Source: an interview with a Samburu elder from Logorate on 4 September 2010; an interview with a Samburu elder from Logorate on 18 September 2010.

18 Source: an interview with a Samburu elder from Longewan on 2, 7, and 8 September 2012; an interview with a Pokot youth from Amaya on 12 September 2012.

19 Source: an interview with a Samburu elder from Kisima on Feb. 20 2007; an interview with a Samburu elder from Longewan on 7 and 8 September 2012; an interview with a Pokot youth from Amaya on 9 September 2012.

20 Source: an interview with Samburu elders from Laikipia on 2 and 10 September 2010.

2005 and April 2006, large-scale disarmament operations were conducted by a government joint security force in the North Rift Valley.[21] It has been reported in newspapers that Pokot fled to Uganda to conceal illegal weapons.[22]

In September 2009, 24 Samburu were massacred by 240 Pokot troops at Kanampiu near Mouwarak in Laikipia County,[23] and the news was reported.[24] The injured were taken to hospital by Red Cross aircraft. On the same day, 360 Pokot troops were deployed to the clustered settlement at location "Ntufork" and 120 raiders were killed. One of the reasons why the conflict mostly ended at the end of 2009 is that the Pokot came to realise that the clustered settlement at location "Ntufork" was a formidable opponent and almost impossible to defeat. It is witnessed in Amaya that Pokot elders were discussing ending the conflict after that day.[25] Another reason for the conflict's end is that this incident ignited political intervention at the national level, and political pressures were directed at the Pokot political elites. At a peace meeting in March 2010, a political elite from Pokot admitted instigating the conflict for electoral gain.[26] He addressed fellow Pokot to refrain from invading Losuk and other border-belt zones and urged recognition of pre-war boundaries.

Even after the conflict had nearly ended, small-scale livestock raiding continued for 10 years because automatic weapons had already spread to both Samburu and Pokot and hostility and fear between them did not disappear. In August 2010, an inter-ethnic mobile phone network was created[27] to track stolen livestock and prevent escalation. Both Samburu and Pokot locals cooperated to search for livestock raiders together. This innovation is credited with helping to limit the spread of conflict. Additionally, Pokot raiders increasingly targeted other neighbouring ethnic groups in Baringo County, such as ILchamus and Tugen, for livestock and territory (Little, 2019: 152–153).

Quantitative overview of the conflict

A quantitative overview of the Samburu-Pokot conflict from 2004 to 2013 is presented in Table 2. A total of 129 incidents were recorded, resulting in 622 deaths: 262 Samburu and 360 Pokot, indicating that Pokot casualties were 1.37 times higher. The total number of livestock attacked, converted into Tropical Livestock Units (TLU),[28] was 25,480. Pokot forces were responsible for 111 incidents, nearly twice the number attributed to the Samburu (58 incidents). The Pokot also raided 21,207 TLU of livestock—more than five times the Samburu total of 4,169 TLU. These findings are consistent with the raiders' perception that, while the Pokot captured more livestock, they also suffered greater losses.[29] They further confirm the effectiveness of the aforementioned clustered settlement's strategy, which prioritised intercepting attackers to minimise the loss of Samburu livestock.[30]

Chronological analysis of the relationship between precipitation and conflict data

Monthly precipitation variations in the Samburu and Pokot areas from 2004 to 2013 are presented in Figure 2. Rainfall was highly erratic in both areas, as is common in Northern Kenya. However, the rainfall patterns generally recognised by Samburu are loosely reflected: a trimodal rainfall distribution with *Ngergerwa* (April–May), *Lorikine* (July–August), and *Ltumlen* (October–November), and a pronounced dry season (*Laamei drop*) from December to February. The Pokot rainfall pattern is similar. Bollig (2006) reports that the Pokot divide the year into a main rainy season (*pengat*, May–August) and a dry season (*komoy*, December–February), broadly corresponding to the data. The Pokot area receives more rainfall overall, although both groups acknowledge that Samburu lands remain better suited for livestock due to advanced sedentarisation, *de facto* land privatisation, and the spread of invasive alien species in Pokot territory (Huho, 2012; Mutsotso, 2013; Greiner, 2016; Little, 2019; Hauke-Peter, 2022).

21 The Standard, 30 May 2005 and 4 June 2005; The Standard, 29 April 2006; Daily Nation, 26 April 2006; Catholic Information Service for Africa, 28 April 2006.

22 The Standard, 28 June 2005 and 29 April 2006.

23 Source: an interview with Samburu elder man and woman from Laikipia on 1 September 2010; an interview with Samburu elders from Laikipia on 10 and 11 September 2010; an interview with a Samburu elder from Longewan and a Samburu woman from Amaya on September 10 2012; an interview with a Pokot youth from Amaya on 9 September 2012; an interview with a Pokot elder from Amaya on 12 September 2012.

24 Daily Nation, 13 September and 6 October 2009; The Star, 7 June 2011 and 26 June 2013.

25 Source: an interview with Samburu elders from Logorate on 1 and 2 September 2010; an interview with Samburu elders from Laikipia on 11 September 2010; an interview with a Samburu woman from Longewan on 10 September 2012, an interview with a Pokot youth from Longewan on 9 September 2012; an interview with a Pokot elder from Amaya on 3 September 2012.

26 Source: an interview with Samburu elders from Logorate on 1 and 2 September 2010; an interview with Samburu elders from Laikipia on 11 September 2010; an interview with a Samburu woman from Longewan on 10 September 2012, an interview with a Pokot youth from Longewan on 9 September 2012; an interview with a Pokot elder from Amaya on 3 September2012.

27 Source: an interview with Samburu elders from Logorate on 3 September 2010; an interview with a Pokot youth from Longewan on 9 September 2012; an interview with a Pokot elder from Amaya on 3 September 2012. Also see (Konaka, 2023).

28 1 TLU = 1 head of cattle or 10 head of goats or sheep.

29 Source: an interview with a Samburu elder from Kisima on 20 February 2007.

30 Source: an interview with Samburu elders from Laikipia on 11 September 2010.

TABLE 2 An overview of the Samburu-Pokot conflict from 2004 to 2013.

Total incidents	Samburu death toll	Pokot death toll	Total death toll	Samburu injured	Pokot injured	Total injured	Cattle looted	Small stock looted	TSL looted[a]	Raiders
Samburu Pokot total										
129	262	360	622	145	7	152	24,089	13,906	25,480	12,116
Attacks by Pokot										
111	204	321	525	128	6	134	20,043	11,636	21,207	8,641
Attacks by Samburu										
18	58	39	97	17	1	18	3,986	1,830	4,169	3,535

[a]1 TLU, 1 head of cattle or 10 head of goats or sheep (Source: research by the author).

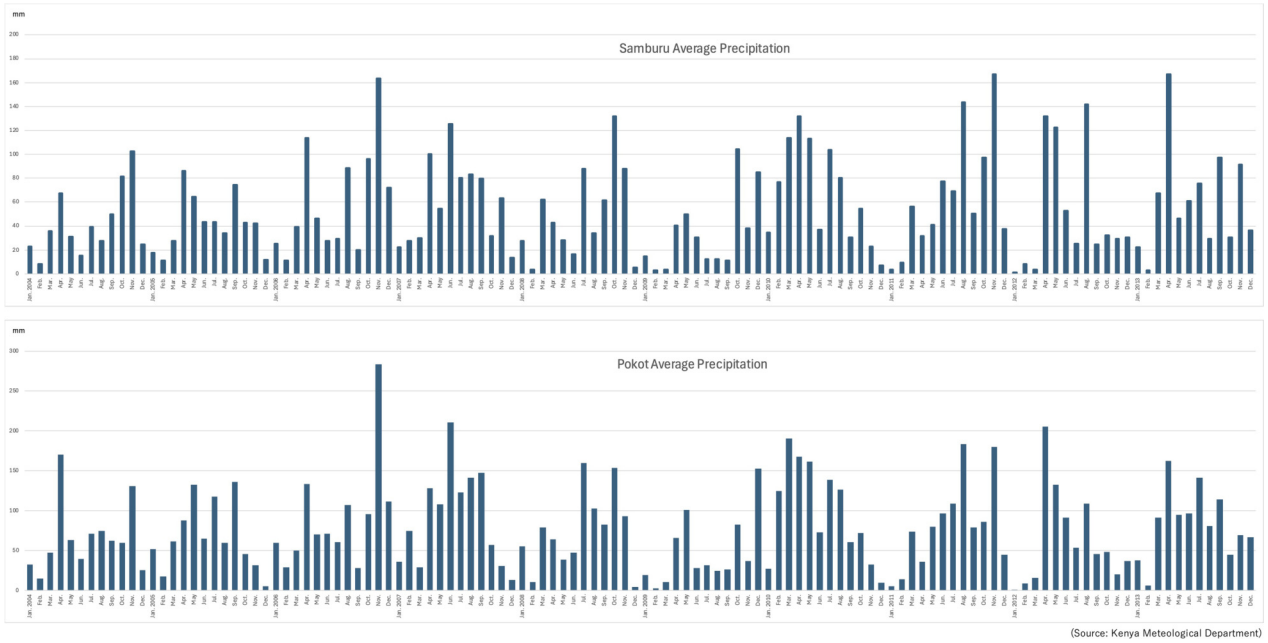

FIGURE 2
Precipitation averaged by month in Samburu and Pokot area from 2004 to 2013.

Precipitation averaged by month and the number of conflict incidents in Samburu and Pokot area during the same period is presented in Figure 3. Incidents have declined since the end of 2009, when conflict subsided; this trend is consistently seen across all subsequent (Figures 4–13). No month-to-month correlation between precipitation and incident counts is evident. However, there are several months with a high number of incidents during periods of heavy rainfall such as April 2004, July 2005, August 2006, April 2007, April 2009, and June 2011. In contrast, the dry season (December–February) generally saw fewer incidents. Overall, there is a loose pattern of increased conflict during rainy periods.

Precipitation averaged by month and the TLU of stolen livestock in Samburu and Pokot area during the same period is presented in Figure 4. Again, no direct correlation appears, though higher TLU thefts often occurred in wetter months, such as April 2004, September 2004, and September 2005. Notably, the largest livestock thefts were recorded shortly before heavy rains—March 2006, September 2006, and September 2008—suggesting raiders anticipated seasonal changes. In contrast, during the dry season (December to February), the number of TLU tends to be relatively low. In sum, livestock raiding tended to increase during or just before rainy periods.

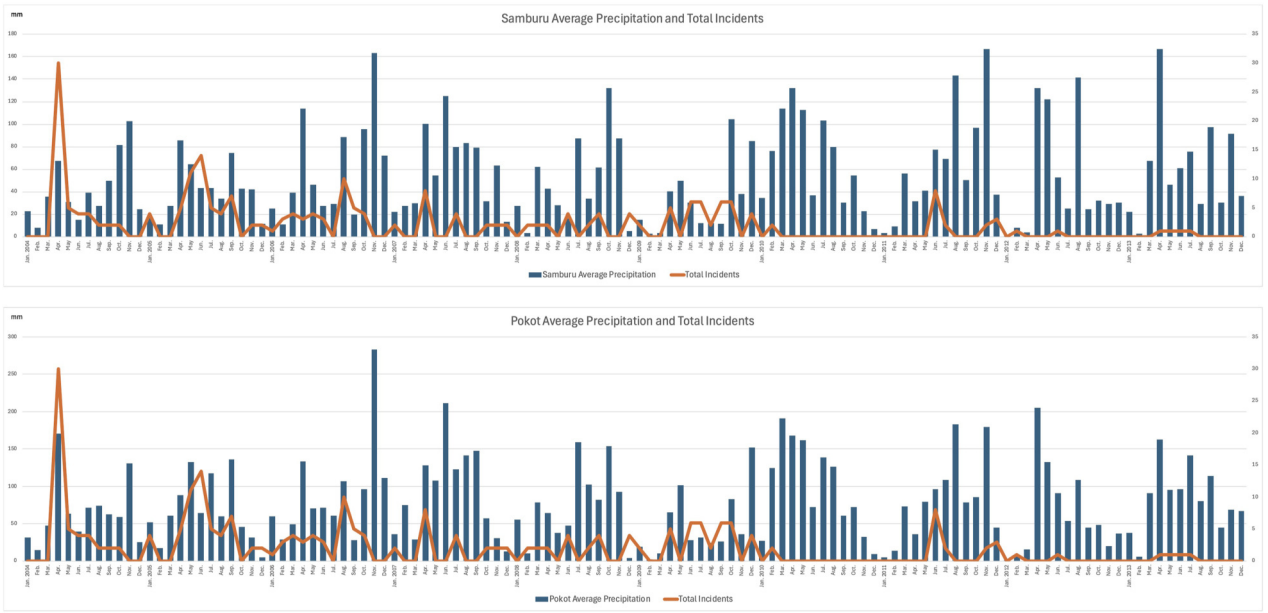

FIGURE 3
Precipitation averaged by month and conflict incidents in Samburu and Pokot area from 2004 to 2013.

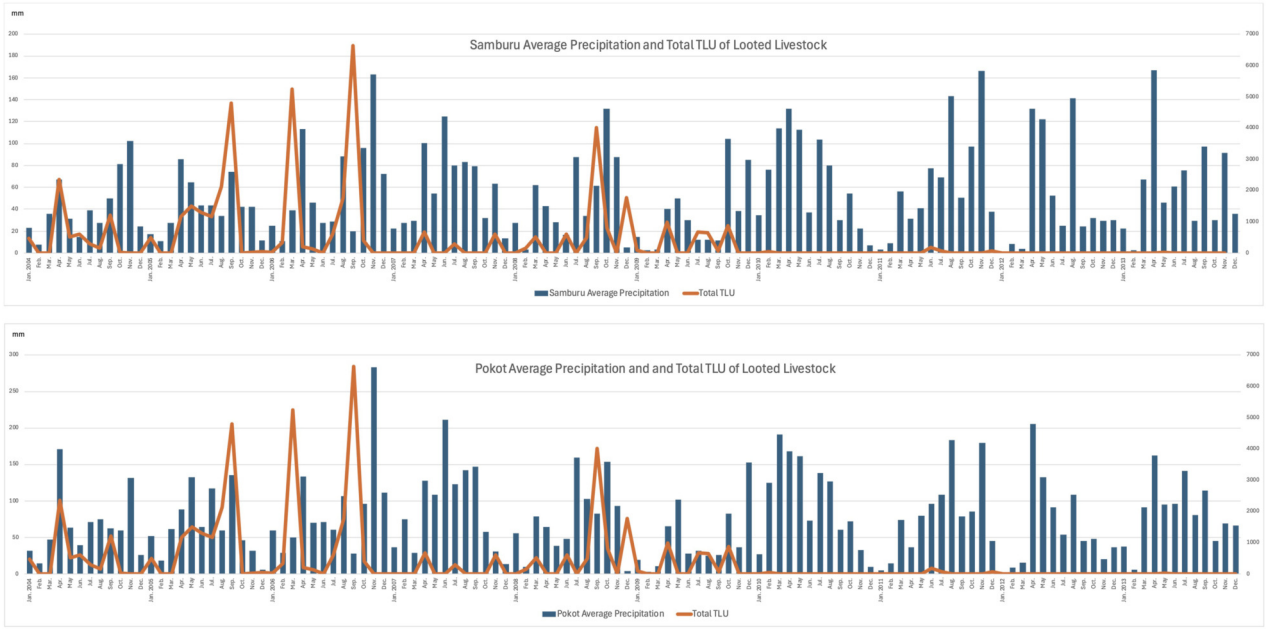

FIGURE 4
Precipitation averaged by month and TLU of looted livestock in Samburu and Pokot area from 2004 to 2013.

Precipitation averaged by month and the death toll in Samburu and Pokot during the same period is presented in Figure 5. The graph shows a less clear correlation between precipitation and death toll, compared to the number of incidents and the TLU of stolen livestock. Notably, an extremely high death toll is recorded in September 2009,

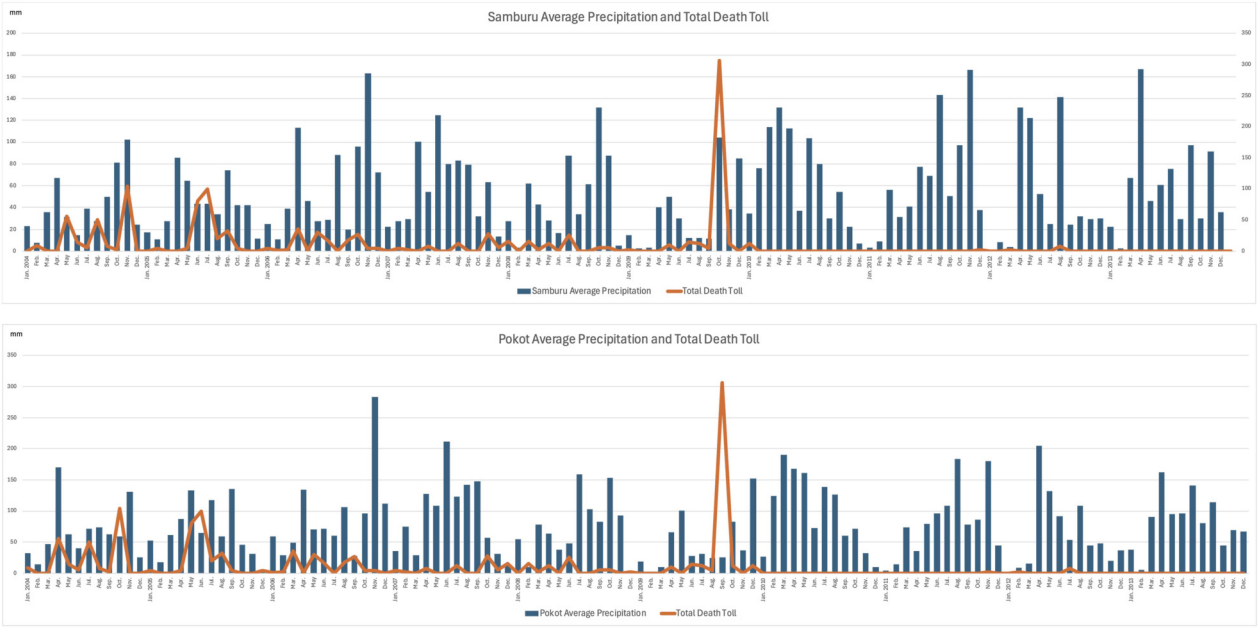

FIGURE 5
Precipitation averaged by month and death toll in Samburu and Pokot area from 2004 to 2013.

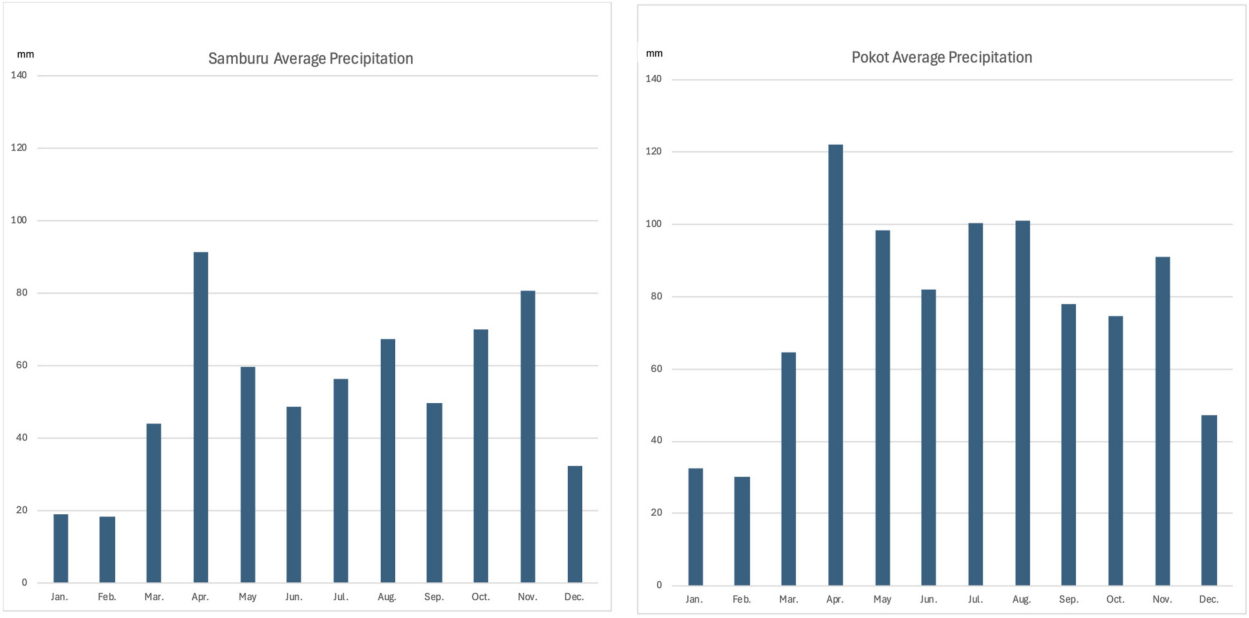

FIGURE 6
Monthly aggregated precipitation in Samburu and Pokot area from 2004 to 2013.

which reflects the heavy clashes at Kanampiu and the location "Ntufork," as mentioned above. Rainfall of that month shows a high contrast between Samburu area and Pokot area, heavy rain in Samburu and scanty rain in Pokot. Nonetheless, fewer deaths were generally recorded during the dry season.

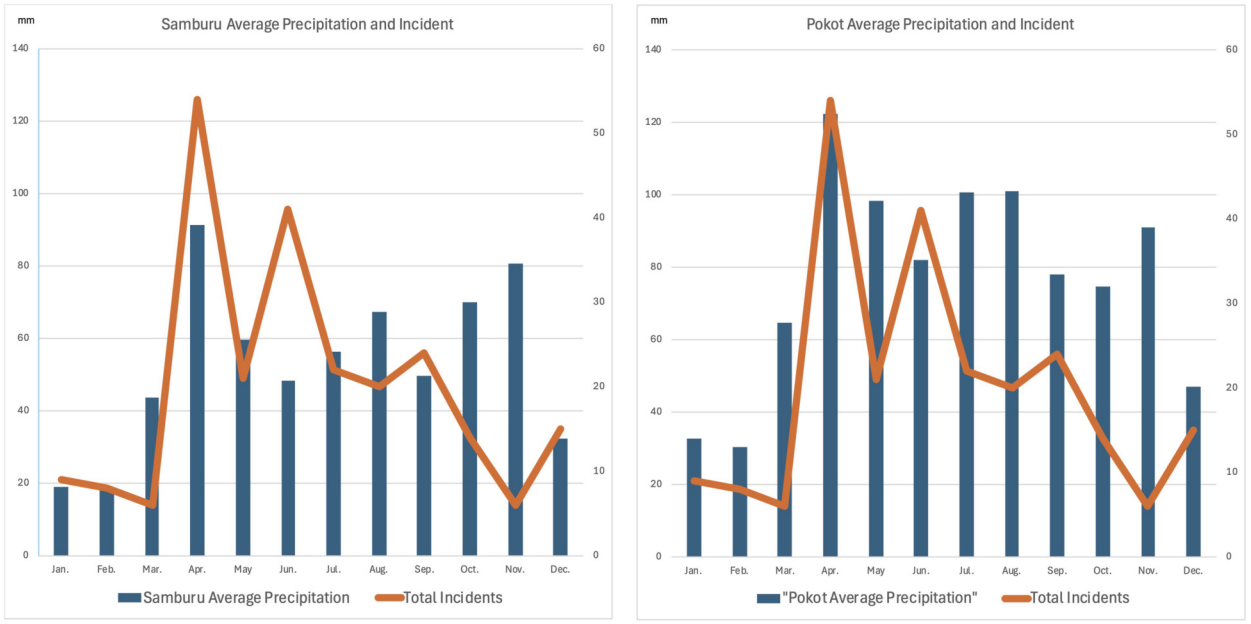

FIGURE 7
Precipitation and conflict incidents reaggregated on a monthly basis in Samburu and Pokot area from 2004 to 2013.

FIGURE 8
Precipitation and TLU of looted livestock reaggregated on a monthly basis in Samburu and Pokot area from 2004 to 2013.

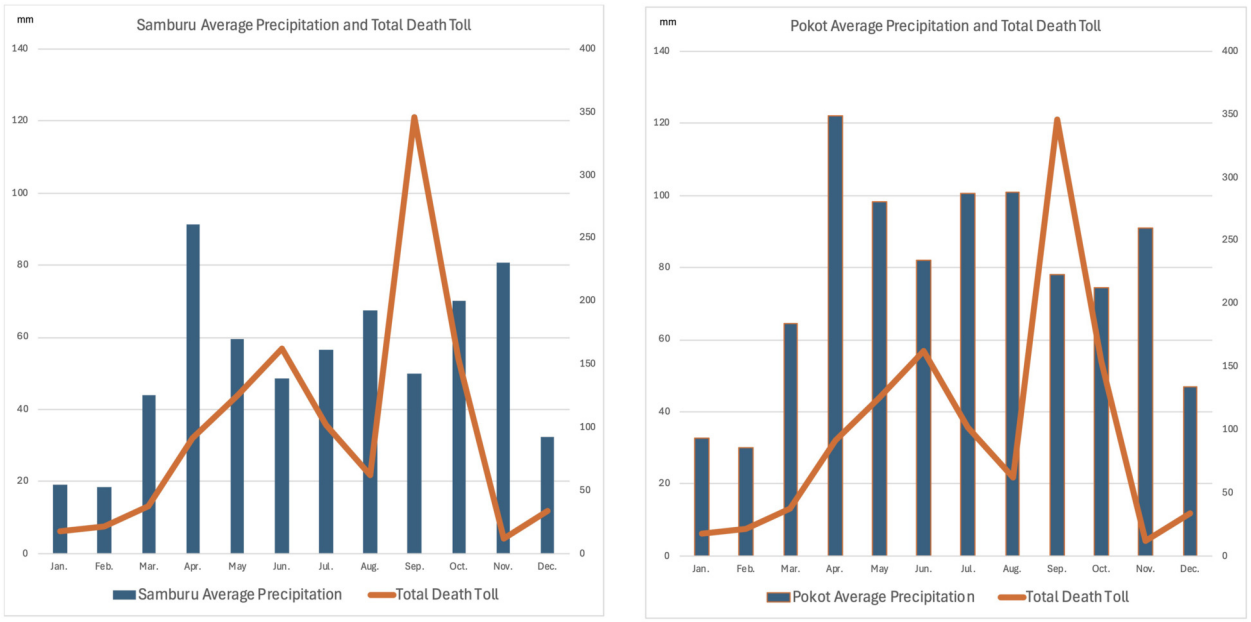

FIGURE 9
Precipitation and death toll reaggregated on a monthly basis in Samburu and Pokot area from 2004 to 2013.

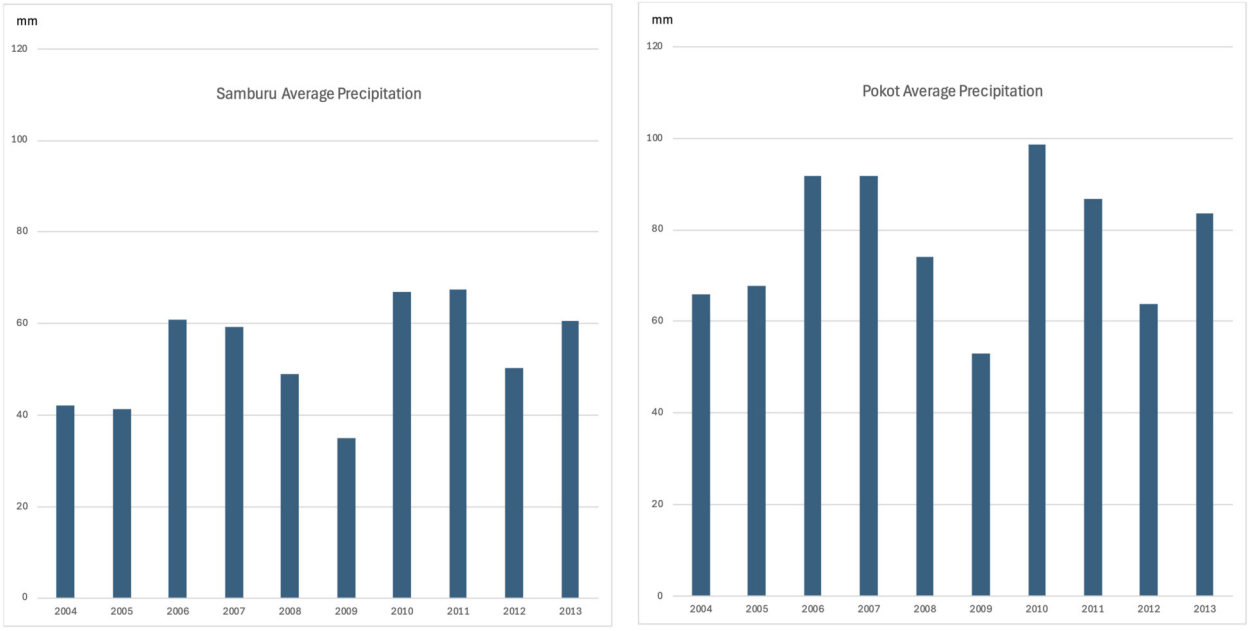

FIGURE 10
Yearly averaged precipitation in Samburu and Pokot area from 2004 to 2013.

FIGURE 11
Precipitation and conflict incidents reaggregated on a yearly basis in Samburu and Pokot area from 2004 to 2013.

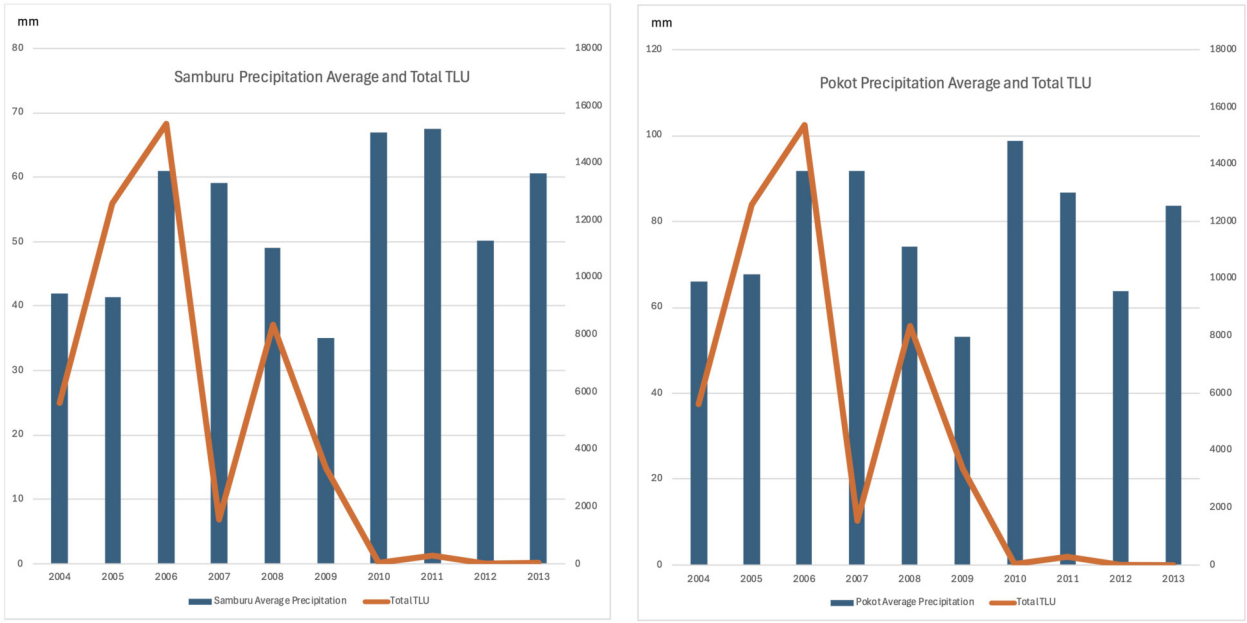

FIGURE 12
Precipitation and TLU of looted livestock reaggregated on a yearly basis in Samburu and Pokot area from 2004 to 2013.

Monthly aggregated analysis of the relationship between precipitation and conflict data

Precipitation and conflict data from 2004 to 2013 were aggregated on a monthly basis to examine seasonal variations. The monthly data represent 10-year averages. Figure 6 shows precipitation in Samburu and Pokot, with consistent rainfall from March to November and a marked decline from December to February, creating a distinct dry season.

Figure 7 displays monthly precipitation and the number of conflict incidents. Both graphs indicate that incidents were highest during the rainy season, peaking in April, and lowest during the dry season, particularly in February. Overall, conflict occurrence increased during wetter months and declined in drier periods.

Precipitation and TLU of stolen livestock, reaggregated on a monthly basis, in Samburu and Pokot during the same period is presented in Figure 8. Both graphs indicate that, overall, TLU of stolen livestock is relatively high during rainy season, while low during dry season, though the trend is less pronounced as shown in Figure 7, with some discrepancies observed. In sum, livestock theft is relatively high during the rainy season, although the pattern may not be entirely consistent, while livestock theft is low in the dry season.

Figure 9 shows precipitation and monthly death tolls. Although fatalities were generally higher in the rainy season and lower in the dry season, the trend was less pronounced, exhibiting greater variability compared to incidents and livestock theft.

Yearly aggregated analysis of the relationship between precipitation and conflict data

Precipitation and conflict data from 2004 to 2013 were aggregated annually. Yearly averages are shown in Figure 10. Both graphs indicate that 2004, 2005, and 2009 experienced significantly low precipitation and were recognised as drought years in previous studies on Samburu (Boruru et al., 2011; Pas, 2018) and Pokot (Huho, 2012; Mutsotso, 2013).

Figure 11 presents the annually aggregated precipitation and incident data for Samburu and Pokot during the same period. Drought years recorded higher numbers of incidents, while wetter years saw fewer, which appears to support dominant climate narratives linking scarcity to conflict.

Figure 12 presents the annually aggregated precipitation and TLU data on stolen livestock for the same regions and period. Both graphs show no clear relationship between rainfall and TLU. Rather, the TLU of stolen livestock tended to be low during drought years. This result contrasts with the findings of the yearly aggregated analysis of the relationship between precipitation and the number of incidents.

Figure 13 presents the annually aggregated precipitation and death toll data for Samburu and Pokot during the same period. It is quite evident from the graphs that the death toll was higher during drier years. This result aligns with the results of the monthly aggregated analysis of the relationship between precipitation and the number of incidents; however, it contrasts with the results of the monthly aggregated analysis of the relationship between precipitation and the TLU of stolen livestock.

Discussion

Chronological analysis of the relationship between precipitation and conflict data

The chronological analysis can be summarised as follows. Firstly, although no strong correlation was identified, there is a general pattern indicating that conflict incidents, livestock thefts, and fatalities tended to increase during the rainy season. This finding contrasts with the dominant climate narrative, which suggests conflict intensifies in dry periods when pasture and water are scarce. Secondly, the highest numbers of livestock stolen (in TLU) were recorded shortly before periods of heavy rainfall. This supports the restocking theory (Witsenburg and Adano, 2009; Ember et al., 2012; Opiyo et al., 2012) and RAST hypothesis (Schilling et al., 2011), which posits that large-scale raiding often occurs before the rainy season, enabling herders to replenish losses from the dry season and raise livestock under improved conditions. Thirdly, an exceptionally high death toll was recorded in September 2009, reflecting major clashes coinciding with heavy rainfall in Samburu and scant rainfall in Pokot. While this might suggest that Pokot planned attacks when their territory was dry and the Samburu area was favourable, interlocutors reported that the assault aimed to expel Samburu who had established a temporary grazing camp in the disputed border zone.[31] Thus, it is estimated that the focus of the attack was not pastures or water resources, but the territory along the border.

Monthly aggregated analysis of the relationship between precipitation and conflict data

The monthly analysis shows no strong correlation between precipitation and conflict data. However, a general pattern emerges: conflict incidents, livestock thefts, and fatalities tend to be less frequent during the dry season and increase during the

31 Source: an interview with Samburu elders from Laikipia on 10 September 2010.

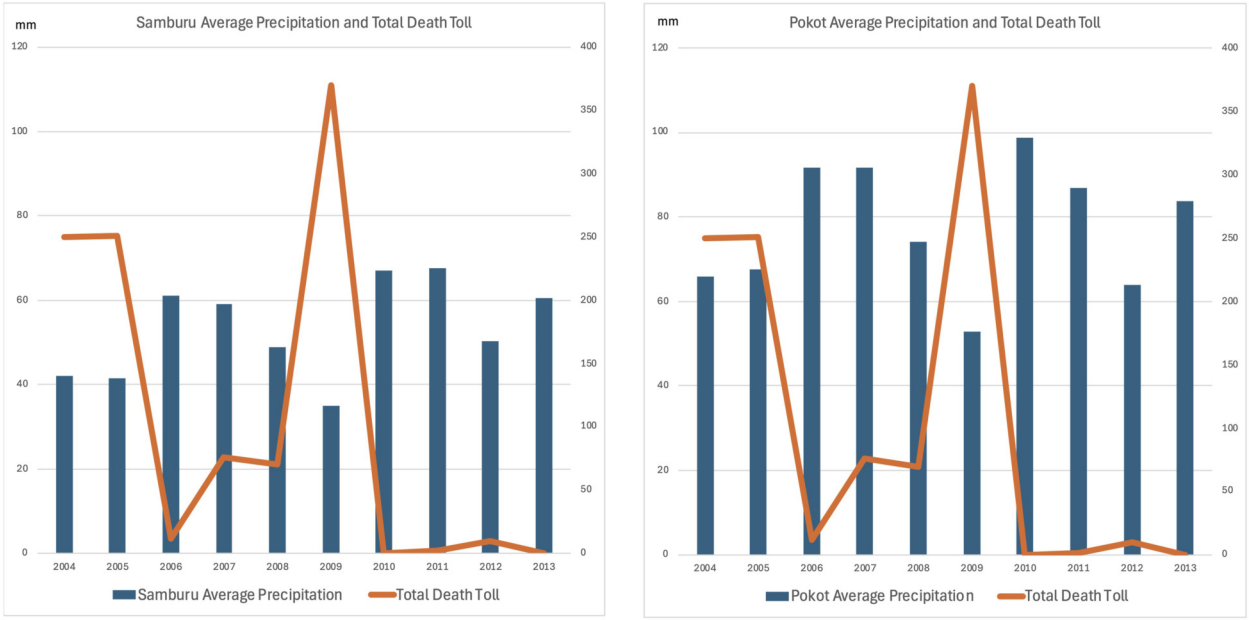

FIGURE 13
Precipitation and death toll on a yearly basis in Samburu and Pokot area from 2004 to 2013.

rainy season. This finding clearly contradicts the dominant climate narrative, which claims that conflict intensifies when pasture and water are scarce. No evidence from the data supports the notion that violence escalates in dry periods.

Both chronological and monthly aggregated analyses consistently show that conflict scale is typically smaller during dry months and larger in rainy periods. This pattern is corroborated by Samburu interlocutors across affected borderlands, who shared the following observations:

> 'During the rainy period, Pokot do not come to raid because then they are too busy for husbandry to raid.'[32]

> 'Both Samburu and Pokot cannot fight during the dry period because warriors must take their animals to grazing camps.' 'However, younger boys can graze near settlements during the rainy season.'[33]

> 'Pokot do not come to raid during the dry periods, because they know our cattle are very thin and cannot be driven away.' 'Both Pokot and Samburu are very careful to avoid unnecessary conflict at the border where water and pasture is plentyful.'[34]

> 'We find more enemies during rainy periods when cattle are fat, and they have enough pasture on Pokot land.'[35]

> 'During rainy periods, conflict is common, while during dry period conflict is rare.' 'During dry period, pastoralists must travel far to look for pastures and cattle are thin and unable to run.' 'When we see a Pokot watering cattle, we normally wait until they leave, and vice versa.'[36]

The interviews demonstrate the relational ontology of pastoralists, as all collaborators consistently stated that conflicts were more likely during the rainy season. Contrary to dominant climate narratives suggesting that droughts drive violence through resource scarcity, these findings align with earlier studies showing heightened conflict during wetter

32 Source: an interview with a Samburu elder from Poro on 2 February 2025.

33 Source: an interview with a Samburu elder from Losuk on 10 February 10 2025; an interview with a Samburu elder from Malaso on 17 February 2025.

34 Source: an interview with a Samburu elder from Lorumorok on 3 February 2025; an interview with a Samburu elder from Malaso on Feb. 17, 2025.

35 Source: an interview with a Samburu woman from Longewan on 4 February 2025; an interview with a Samburu elder from Loiwoting on 16 February 2025.

36 Source: an interview with a Samburu elder from Laikipia on 6 February 2025; an interview with a Samburu elder from Loiwoting on 16 February 2025.

periods (Witsenburg and Adano, 2007; 2009; Eaton, 2008; Galaty, 2005; Mieth, 2012; Mose, 2021). Pastoralists often shared scarce resources rather than fighting over them. Before the conflict, it was common for Pokot herds to graze in Samburu highlands during the July–August (*Lorikine*) rains, and for Samburu herds to use Pokot lowland during the October–November (*Ltumren*) rains. Conflict alone disrupted this cooperation.

This raises the question of why violence increased during the rainy seasons. The reasons the interlocutors offered for the increase partly echo Witsenburg and Adano's (2009) descriptions of 'opportunistic raiding' and the 'resource curse' (Adano et al., 2012): fattened livestock were easier to steal and drive home. Viewing pastoralists as 'reliability professionals' (Roe, 2020) helps explain their actions. Rather than simply reacting to rainfall as measured by climatologists, pastoralists experience weather through the uncertainties of their livelihood. In times of drought, they prioritised sustaining grazing camps over raiding, reducing risks to the entire pastoral system. In the midst of conflicts, rather than focusing solely on conflict or drought, pastoralists consider both as a part of pastoralism. If we view pastoralists as reliability professionals, it is unsurprising that, during periods of simultaneous conflict and drought, their actions aimed to reduce the risk of collapse of the entire pastoral system by eliminating conflict as a temporary high-risk mode. The mode is operated under the 'just for now (times of drought)' logic and 'just this way (concentration on grazing)' logic. By doing so, pastoralists prevent the collapse of the entire pastoral system due to dual risks of conflict and drought. In a nutshell, the pastoralist ontology, underpinned by the logic of reliability professionals, implies a strategic avoidance of conflict during droughts because dual risks might invite the collapse of whole pastoral system as 'critical infrastructure' (Roe, 2020).

Yearly aggregated analysis of the relationship between precipitation and conflict data

The result of the yearly analysis of the relationship between precipitation and conflict data can be summarised as follows. Although no strong interrelation was found, there is a general pattern in which incidents and deaths tended to be larger during drought years, and lower in wetter years, seemingly supporting climate narratives. In contrast, the number of livestock stolen (TLU) was lower during drought years and higher during wetter years. This means that although violence increased in drought years, few animals were actually stolen. What does this inconsistency suggest? Does it really confirm the narrative that drought-driven scarcity causes conflict?

When examining each conflict in drought years (2004, 2005, and 2009), it becomes clear that politically organised, large-scale attacks dominated over small-scale raids. These attacks appeared aimed more at seizing territory than livestock. In such cases, houses were burned and people killed, but livestock theft was minimal. For example, in the Kanampiu massacre of September 2009, 24 people, including women and children, were killed, yet no livestock were stolen. Ltipalei et al. (2019): 249 reported that "according to a Pokot elder, this massacre was meant to teach Samburu a lesson. The Samburu were explicitly warned not to move their settlements into a zone claimed by Pokot." Similarly, during the major assaults from Losuk to Logorate in 2004, and at Nkutoto Arus in 2004 and 2005, the focus was territorial control rather than raiding. Therefore, while incidents and fatalities rose during drought years, there is no evidence that local pastoralists fought over scarce resources.

The findings that incidents and the death toll tend to be high during drought years seem to support the dominant climate narrative. However, there is no evidence to prove that local pastoralists competed over scarce resources resulting in conflict. As described, what was revealed was the opposite, with pastoralists carefully avoiding conflict over scarce resources during dry months. Rather than being derived from the actual events among local pastoralists, this scenario seems to have been constructed in the minds of political elites—impoverished Pokot due to climate change should invade Samburu territory with rich pasture and water.

If so, what kind of problems arose over land in Pokot? Greiner (2016): 530 reported that "increasing sedentarisation and the intensification of land use, particularly the spread of rain-fed crop cultivation, led to strong contestation over land, and increasing claims of individuals to ownership" among Pokot after 1990s. The *de facto* privatisation of land in Pokot has been reported by other researchers as well (Mutsotso, 2013; Hauke-Peter, 2022). Huho (2012) noted that during droughts, Pokot lowlanders moved to highlands, claiming ownership of arable land and sparking disputes. 'Loss of livelihood sources and the search for alternative sources during droughts forced the affected community members living in lowlands to move to the highlands, claiming ownership of the arable land triggering conflicts' (Huho, 2012: 461; see also Greiner, 2016: 534).

Given these facts, although it remains a hypothesis for the time being due to the difficulties of collecting direct evidence, a hypothesis can be proposed. The narrative of the Pokot political elite seeking to invade the Samburu highlands appears to have been produced based on a template justifying the Pokot lowlanders' migration to the Pokot highlands during droughts, as shown above. Setting aside the validity of this hypothesis, there is no doubt that political incitement is involved in this conflict case, and as indicated earlier, this is also suggested by newspaper articles and prior research. The problem, however, is that it is extremely difficult to distinguish genuine climate-related conflicts from the products of climate narratives. As a result, there is a risk of misinterpreting these politically driven conflicts as spontaneous resource conflicts and adopting misguided policies.

Therefore, it is overly simplistic to interpret the apparent increase in conflict during drought years as merely pastoralists competing over scarce resources. Moreover, as is evident from the fact that the narrative of the lowland Pokot encroaching upon the territory of the highland Pokot was first recounted during the drought of 2000, and that the same narrative was also recounted during subsequent droughts, drought years are also periods when political narratives concerning climate are readily mobilised. As these cases have demonstrated, it is necessary to consider the possibility that political processes are at play.

This result partially supports the RAST hypothesis (Schilling et al., 2011). However, in this conflict, even if raids occurred to secure watering points and pastures when resource scarcity reached a threshold, as the hypothesis suggests, this was not the result of a universal principle being embodied in a linear process. Taking the climate narrative into account, what occurred when the threshold was exceeded was rather the result of organised incitement by political elites.

Conclusion

Firstly, we return to the ethnographic question posed at the introduction: are conflicts more likely to occur during dry periods when resources are scarce? Both the chronological and monthly analyses showed that conflicts were less frequent in dry periods. This suggests that climate narratives claiming conflict inevitably intensifies during drought do not apply in this case. While part of this pattern may reflect the "opportunistic behaviour of raiders" (Witsenburg and Adano, 2009) or the "resource curse" (Adano et al., 2012), the more important factor is the pastoralist ontology underpinned by the logic of "reliability professionals" (Roe, 2020). Pastoralists strategically avoid conflict during dry period to prevent the collapse of pastoral systems as "critical infrastructure" (Roe, 2020).

What is problematic in dominant climate narratives is the linear assumption—held by outsiders unfamiliar with the reliability operations of pastoralist—that resource scarcity automatically leads to violence. As Seter et al. (2018): 169 suggest, "resource scarcity is never the most important cause and it does not explain well the differences in conflict intensity." In reality, pastoralists intervene with risk-reduction practices, actively avoiding conflict in dry periods. Their adaptability and ingenuity (Krätli and Schareika, 2010; Catley et al., 2013; Roe, 2020; Scoones, 2023c; Konaka, 2021) can deter conflict and should be supported by policy. If this is the case, we should consider policies that support and empower pastoralists to undertake risk-reduction intervention process between resource scarcity and violence, rather than policies that assume resource scarcity will inevitably lead to conflict and then try to prevent it.

In contrast, the yearly aggregated analysis showed higher numbers of incidents and fatalities during drought years, which may appear to confirm the climate narrative. However, this pattern does not reflect spontaneous conflict over scarce resources. As documented, scarcity of pasture and water became severe after communities evacuated for safety, not before (cf. Bollig, 1990). The results suggest that climate narratives were produced by political elites to gain votes. Here again, assuming a simple progression from scarcity to violence is misleading. As Scoones et al. (2019): 234 asserts, "scarcity is defined relationally and can be manufactured, both politically and discursively." In this case, "resource scarcity" was constructed and narrated to deflect discontent onto neighbouring groups. Policies should be framed to minimise the risk of political incitement by elites.

Secondly, we reconsider the primary question: is the climate narrative universally applicable to all pastoralist conflicts? The study suggests the relationship between rainfall, drought, and conflict is more complex than commonly assumed. In this conflict case, the environment, politics and pastoralism are so permeable and hybridised that it is extremely difficult to explain the conflict in terms of a single factor.

The amount of precipitation is by no means a determinant of conflict and therefore can hardly be explained as the conflict being caused by a competition over scarce resources, as evidenced by the high prevalence of conflict in rainy periods. The research findings in Samburu County support what Witsenburg and Adano (2007) revealed in Marsabit County in that conflict intensified during rainy periods. However, it contradicts what Ember et al. (2012) revealed in Turkana County, which underscored that conflict intensified during dry periods. How should we understand these inconsistencies?

However, whether conflict intensifies during the dry or rainy periods is not the core issue. Even with Samburu, the lowlands and highlands differ: in the lowlands, drought drives conflict because pastures and water are concentrated along borders, while highlands have alternative grazing areas.[37] From a relational approach, conflict should be seen as dynamic movement within hybrid networks of environment, politics, and pastoralism (Scoones, 2023a). The variations between regions are not inconsistencies but reflections of the regional differences in the dynamic movements within complex hybrid networks of the rain–conflict nexus. While climate undoubtedly affects conflict, the idea that universal principles link climate to violence everywhere is questionable. Rather, one must be cautious in promoting such principles because they may be exploited as the justification for the universal climate policies, resulting in external interventions that do not take into account the different realities of pastoralists. It is important to stress that

37 Source: an interview with a Samburu elder from Archers Post on 18 and 22 March 2025. Adem et al. (2017): 1 also notes that "much of the raiding by the Turkana on others occurs along the borders where the rainfall pattern is relatively reliable."

these findings do not deny that scarcity can contribute to conflict. Rather, the problem is that this idea has often been applied uncritically applied as a narrative, without considering intervening processes.

Political factors also do not fully explain conflict. If they did, we would expect spikes during Kenya's general election years (2007 and 2013) but no such pattern emerged (Krätli and Swift, 1999). As Okumu et al. (2017) note, competition for political influence and scarce resources is closely intertwined. However, the situation is more complex. The climate narrative itself and the way political elites exploit it are often indistinguishable. When elites manipulate climate narratives, the political dimension becomes obscured. Hence, climate and politics are so interpenetrating in this context that there are no independent and linked climate and political realms. Ironically, these conflicts can then be labelled as examples of a climate–conflict nexus, when in fact, a "pseudo climate–conflict nexus." Thus, reducing conflict to a single factor or multiple factors—climate, politics, or pastoralism—is insufficient. What is needed here is a holistic perspective that sees the environment, politics, or pastoralism as a hybrid network of relations, rather than as an entity, discarding any reductionism. Furthermore, as this study shows, it is important to highlight how these factors interpermeate in specific contexts, not simply point out the overlaps and connections between these factors.

Policy implications

Lastly, several policy implications on the climate–conflict nexus of Northern Kenya pastoralists proposed by the relational approach can be summarised in five key points as follows.

1. Policies should recognise how pastoralists construct their worlds through dynamic movements of hybrid networks of environment, politics, and pastoralism, rather than applying universal climate narratives. Overemphasising climate alone risks oversimplifying and misguiding interventions.
2. Rather than assuming scarcity automatically causes violence, policymakers should consider the complex intervening processes. Even if violence occurs during drought, political incitement may be an important factor.
3. While climate narratives are now widely accepted, they should not be adopted uncritically. Policymakers must be alert to the risk that political elites exploit these narratives to stir fear and justify violence. Policies should instead embrace uncertainty and support their resilience overcomes the fear of it (Scoones, 2023a; Scoones, 2023b; Scoones, 2023c; Konaka, et al., 2023; Semplici and Campbell, 2023).
4. Pastoralists do not simply accept the linear process of resource scarcity leading to violence, but intervene with risk-reducing processes in between, avoiding conflicts during the dry periods. This has the potential to deter conflict, and external stakeholders should maximise its potential. Policies should empower them to sustain these practices, for example, by supporting inter-ethnic participatory initiatives to coordinate grazing routes, manage water use, or track livestock theft (Eaton, 2008; Konaka, 2021).
5. Policies should be framed in a way that minimises the risk of political incitement by elites. For instance, legal and administrative systems should prevent elites from inciting ethnic violence, such as compliance training for candidates and safeguards whistleblowers. If conflicts were automatically triggered by drought, then a drought monitoring system would have prevented them; however, this is unlikely, and political monitoring is equally necessary. Special attention is warranted during rainy seasons and dry years when political conflict is more likely.

The limitations and prospects of research

This study demonstrated that a relational approach can illuminate the complexities of pastoralist conflict beyond climate narratives and offers diverse insights for policy. However, the author acknowledges that the discussion in this study is constructed on the basis of information overwhelmingly derived from Samburu interlocutors, and that it is built upon this imbalance. It is therefore difficult to assess how this bias affected the research objective of examining the climate–conflict nexus, and any assessments remain speculative. Nevertheless, it appears to be factual that numerous Pokot attacks on Samburu occurred, underpinned by incitement from political elites. Consequently, due to the general reluctance of the Pokot to discuss the conflict, it cannot be entirely ruled out that instances of Samburu attacks on Pokot were overlooked in this investigation. Nevertheless, the conflict between the Samburu and Pokot has reignited in recent years, and as speaking about this conflict has become more sensitive for them, gathering information remains difficult. The author is well aware that conflict investigations involve exaggeration and underreporting concerning criminal activities. Research materials were rigorously verified to minimise these factors, though it cannot be asserted that all informants conveyed the complete facts.

There are also likely limitations in the evaluation of rainfall data. Given the significant local variation in the ecological conditions of both ethnic groups, it may be argued that the average rainfall data referenced in this study, derived from broad administrative regions, may not necessarily reflect the ecological conditions faced by each conflict party at the time. Naturally, as both ethnic groups move in search of pasture and water, relying solely on rainfall data from broad administrative regions has

inherent limitations. Thus, the author does not claim that the findings of this research are based on entirely reliable sources or possess absolute accuracy.

However, if it is argued that debate on climate–conflict nexus is impossible without entirely reliable sources, there is a concern that opportunities to discuss conflicts that are difficult to investigate and have been neglected, such as those examined in this study, will diminish further and effectively be buried. This is despite the fact that the climate narrative of disputes over scarce resources is being taken for granted without compelling evidence. Conclusions possessing a degree of validity, even when based on incomplete information as previously stated, can be considered to hold some value.

Furthermore, as this study is geographically and temporally confined to a series of conflicts and a ten-year period, its generalisability remains inherently limited. The author acknowledges the need for additional comparative research covering longer timeframes and broader geographical areas. To generalise the findings of this study by assuming they are applicable to other regions would in fact run counter to the relational approach advocated herein. Moreover, ongoing research is currently revealing new evidence indicating complex land issues underpinning recent conflicts, which will be addressed in future studies.

Data availability statement

The datasets presented in this article are not readily available because it contains descriptions of illegal activities which may compromise the confidentiality of information sources. Requests to access the datasets should be directed to the corresponding author. Requests to access the datasets should be directed to SK, africanlake@gmail.com.

Ethics statement

The studies involving humans were approved by The research ethics committee of the University of Shizuoka. The studies were conducted in accordance with the local legislation and institutional requirements. The ethics committee/institutional review board waived the requirement of written informed consent for participation from the participants or the participants' legal guardians/next of kin because Participants offered verbal consent, since many of them were illiterate.

Author contributions

Study design: SK. Fieldwork Study design: SK. Fieldwork and data analysis: SK. Writing: SK. data analysis: SK.

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Conflict of interest

The author(s) declared that this work was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

The author(s) declared that generative AI was not used in the creation of this manuscript.

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References

Adano, W. R., Dietz, T., Witsenburg, K., and Zaal, F. (2012). Climate change, violent conflict and local institutions in Kenya's drylands. *J. Peace Res.* 49 (1), 65–80. doi:10.1177/0022343311427344

Adem, T. A., Ember, C. R., Skoggard, I., Jones, E. C., and Faas, A. J. (2017). Dangerous geography: spatial distribution of livestock raiding in northwestern Kenya. *Ethnology* 51 (1), 1–30. Available online at: https://www.jstor.org/stable/43657284.

Anderson, D. (1986). Stock theft and moral economy in colonial Kenya. *Africa* 56 (4), 399–416. doi:10.2307/1159997

Bollig, M. (1990). Ethnic conflicts in north-west Kenya: pokot, Turkana raiding 1969–1984. *Z. für Ethnol.* 115, 73–90. Available online at: https://www.jstor.org/stable/25842144.

Bollig, M. (1993). Intra-and interethnic conflict in northwest Kenya: a multicausal analysis of conflict behaviour. *Anthropos* 88 (1), 176–184. Available online at: https://www.jstor.org/stable/40462755.

Bollig, M. (2006). *Risk Management in a Hazardous Environment: Comparative Study of Two Pastoral Societies*. New York: Springer.

Bollig, M., and Österle, M. (2007). ""We turned our enemies into baboons": warfare, ritual and pastoral identity among the pokot of northern Kenya," in *The Practice of War: Production, Reproduction and Communication of Armed Violence*. Editors A. Rao, M. Bollig, and M. Böck (New York: Berghan Books).

Boruru, E. O., Ontita, E., Okelo Ogara, W., and Otienoh Oguge, N. (2011). "Climate change and the emergence of helter-skelter livelihoods among the pastoralists of Samburu East District, Kenya," in *Experiences of Climate Change Adaptation in Africa, Climate Change Management*. Editor W. L. Filho (Berlin: Springer), 97–110.

Burke, M. B., Miguel, E., Satyanath, S., Dykema, J. A., Lobell, D. B., and Kates, R. W. (2009). Warming increases the risk of civil war in Africa. *Proc. Natl. Acad. Sci. U. S. A.* 106 (49), 20670–20674. doi:10.1073/pnas.0907998106

Catley, A., Lind, J., and Scoones, I. (2013). *Pastoralism and Development in Africa: Dynamic Change at the Margins* (London: Routledge).

De la Cadena, M., and Blaser, M. (2018). *A World of Many Worlds* (Durham: Duke University Press).

Eaton, D. (2008). The business of peace: raiding and peace work along the Kenya-Uganda border (part I). *Afr. Aff.* 107 (426), 89–110. doi:10.1093/afraf/adm085

Ember, C. R., Adem, T. A., Skoggard, I., and Jones, E. C. (2012). Livestock raiding and rainfall variability in northwestern Kenya. *Civ. Wars* 14 (2), 159–181. doi:10.1080/13698249.2012.679497

Ember, C. R., Skoggard, I., Adem, T. A., and Faas, A. J. (2014). Rain and raids revisited: disaggregating ethnic group livestock raiding in the Ethiopian-Kenyan border region. *Civ. Wars* 16 (3), 300–327. doi:10.1080/13698249.2014.966430

Eriksen, S. H., and O'Brien, K. (2008). *Climate Change in Eastern and Southern Africa: Impacts, Vulnerability and Adaptation*. Oslo: Department of Sociology and Human Geography, University of Oslo.

Eriksen, P., de Leeuw, J., Thornton, P., Said, M., Herrero, M., and Notenbaert, A. (2013). "Climate change in Sub-Saharan Africa: what consequences for pastoralism?," in *Pastoralism and Development in Africa: Dynamic Change at the Margins*. Editors A. Catley, J. Lind, and I. Scoones (London: Routledge), 71–81.

Ervin, G. M. (2020). "Now we sleep without our shoes the story of the Laikipia peace caravan," in *Locally Led Peacebuilding: Global Case Studies*. Editors S. L. Connaughton and J. Berns (Lanham: Rowman and Littlefield), 47–59.

Escobar, A. (2017). *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of World*. Durham: Duke University Press.

Galaty, J. (2005). States of violence: ethnicity, politics and pastoral conflict in East Africa. *Geogr. Res. Forum* 25, 105–127.

Goldman, M. J., Daly, M., and Lovell, E. J. (2015). Exploring multiple ontologies of drought in agro-pastoral regions of Northern Tanzania: a topological approach. *Area* 48 (1), 1–7. doi:10.1111/area.12212

Goldman, M. J., Turner, M. D., and Daly, M. (2017). A critical political ecology of human dimensions of climate change: epistemology, ontology, and ethics. *Wiley Interdiscip. Rev. Clim. Change* 9 (1), e526. doi:10.1002/wcc.526

Gray, S., Sundal, M., Wiebusch, B., Little, M. A., Leslie, P. W., and Pike, I. L. (2003). Cattle raiding, cultural survival, and adaptability of East African pastoralists. *Curr. Anthropol.* 44 (Suppl. ment), S3–S30. doi:10.1086/377669

Greiner, C. (2012). Unexpected consequences: wildlife conservation and territorial conflict in Northern Kenya. *Hum. Ecol.* 40 (3), 415–425. doi:10.1007/s10745-012-9491-6

Greiner, C. (2013). Guns, land, and votes: cattle rustling and the politics of boundary making in northern Kenya. *Afr. Aff.* 112 (477), 216–237. doi:10.1093/afraf/adt003

Greiner, C. (2016). Land-use change, territorial restructuring, and economies of anticipation in dryland Kenya. *J. East. Afr. Stud.* 10 (3), 530–547. doi:10.1080/17531055.2016.1266197

Greiner, C., Alvarez, M., and Becker, M. (2013). From cattle to corn: attributes of emerging farming systems of former pastoral nomads in east Pokot, Kenya. *Soc. and Nat. Resour.* 26 (12), 1478–1490. doi:10.1080/08941920.2013.791901

Hauke-Peter, V. (2022). *Pokot Pastoralism: Environmental Change and Socio-Economic Transformation in North-West Kenya*. Woodbridge: James Currey.

Hendrickson, D., Armon, J., and Mearns, R. (1998). The changing nature of conflict and famine vulnerability: the case of livestock raiding in Turkana District, Kenya. *Disasters* 22 (3), 185–199. doi:10.1111/1467-7717.00086

Hendrix, C. S., and Salehyan, I. (2012). Climate change, rainfall, and social conflict in Africa. *J. Peace Res.* 49 (1), 35–50. doi:10.1177/0022343311426165

Herrero, M., Ringler, C., Steeg, J. v. d., Thornton, P., Zhu, T., Bryan, E., et al. (2010). *Climate Variability and Climate Change and their Iimpacts on Kenya's Agricultural Sector*. Nairobi: ILRI.

Holtzman, J. D. (2016). *Killing Your Neighbors*. Berkley: University of California Press.

Homer-Dixon, T. (1999). *Environment, Scarcity and Violence*. Princeton: Princeton University Press.

Homewood, K. (2008). *Ecology of African Pastoralist Societies*. Oxford: James Currey.

Huho, J. M. (2012). Conflict resolution among pastoral communities in west Pokot County, Kenya: a missing link. *Acad. Res. Int.* 3 (3), 458–468. Available online at: http://www.savap.org.pk/journals/ARInt./Vol.3(3)/2012(3.3-52).pdf.

Hulme, M., Doherty, R., Ngara, T., New, M., and Lister, D. (2001). African climate change: 1900-2100. *Clim. Res.* 17, 145–168. doi:10.3354/cr017145

IDMC (Internal Displacement Monitoring Center) (2006). *I am a Refugee in my Own Country*. Geneva: Internal Displacement Monitoring Centre.

Kaplan, R. D. (1994). *The Coming Anarchy: Shattering the Dreams of the Post Cold War*. New York: Random House.

Kenya National Bureau of Statistics (2019). *2019 Kenya Population and Housing Census, Volume IV: Distribution of Population by Socio-Economic Characteristics*. Nairobi: Kenya National Bureau of Statistics.

Konaka, S. (2021). Reconsidering the resilience of pastoralism from the relational and contextual perspective of reliability: the case of conflicts between the Samburu and the pokot of Kenya, 2004–2009. *Nomadic Peoples* 25 (2), 253–277. doi:10.3197/np.2021.25020

Konaka, S. (2023). "Contextualizing resilience to material culture of pastoralists and humanitarian assistance in northern Kenya," in *Reconsidering Resilience in African Pastoralism: Towards a Relational and Contextual Approach*. Editors S. Konaka, G. Semplici, and P. D. Little (Kyoto: Trans Pacific Press), 219–250.

Konaka, S., and Little, P. D. (2021). Introduction:rethinking resilience in the context of East African pastoralism. *Nomadic Peoples* 25 (2), 165–180. doi:10.3197/np.2021.250201

Konaka, S., Semplici, G., and Little, P. D. (2023). "Introduction: rethinking resilience in the context of East African pastoralism," in *Reconsidering Resilience in African Pastoralism: Towards a Relational and Contextual Approach*. Editors S. Konaka, G. Semplici, and P. D. Little (Kyoto: Trans Pacific Press), 1–24.

Krätli, S. (2017). Pastoral localization of humanitarian aid: the need to re-qualify the pastoral context. *Afr. Study Monogr. Suppl.* 53, 141–146. doi:10.14989/218909

Kratli, S., and Schareika, N. (2010). Living *off* uncertainty: the intelligent animal production of dry land pastoralists. *Eur. J. Dev. Res.* 22, 605–622. doi:10.1057/ejdr.2010.41

Krätli, S., and Swift, J. (1999). *Understanding and Managing Pastoral Conflict in Kenya*. Brighton: University of Sussex.

Kumssa, A., Jones, J. F., and Williams, J. H. (2009). Conflict and human security in the north rift and north eastern Kenya. *Int. J. Soc. Econ.* 36 (10), 1008–1020. doi:10.1108/03068290910984786

Lelenguyah, G., Nyangito, M., Wasonga, O., and Bett, R. (2024). Seasonal distribution of livestock in Samburu county, northern Kenya: a response to variable pasture and water in semi-arid rangelands. *Afr. J. Range and Forage Sci.* 41 (2), 103–116. doi:10.2989/10220119.2023.2210611

Little, P. D. (2019). When "green" equals thorny and mean: the politics and costs of an environmental experiment in East Africa. *Afr. Stud. Rev.* 62 (3), 132–163. doi:10.1017/asr.2019.41

Ltipalei, J., Kivuva, J. M., and Jonyo, F. O. (2019). Conflict escalation within the nilotic pastoral communities of Northern, Kenya. *Int. J. Humanit. and Soc. Stud.* 7 (9), 244–255. doi:10.24940/theijhss/2019/v7/i9/HS1909-037

Markakis, J. (1998). *Resource Conflict in the Horn of Africa*. London: Sage.

Maru, N. (2020). A relational view of pastoral (im)mobilities. *Nomadic Peoples* 24 (2), 209–227. doi:10.3197/np.2020.240203

Meier, P., Bond, D., and Bond, J. (2007). Environmental influences on pastoral conflict in the Horn of Africa. *Polit. Geogr.* 26 (6), 716–735. doi:10.1016/j.polgeo.2007.06.001

Mieth, R. (2012). "In between cattle raids and peace meetings: voices from the Kenya/Uganda border region," in *Spaces of Insecurity: Human Agency in Violent Conflicts in Kenya*. Editors K. Witsenburg and F. Zaal (Leiden: African Studies Centre), 63–87.

Mkutu, K. A. (2006). Small arms and light weapons among pastoral groups in the Kenya–Uganda border area. *Afr. Aff.* 106 (422), 47–70. doi:10.1093/afraf/adl002

Mkutu, K. A. (2008). *Guns and Governance in the Rift Valley: Pastoralist Conflict and Small Arms*. Bloomington: Indiana University Press.

Mose, W. O. (2021). "Resources, climate change, and implications to positive peace among the pastoral communities in Kenya," in *The Palgrave Handbook of Positive Peace*. Editors K. Standish, H. Devere, A. Suazo, and R. Rafferty (Singapore: Palgrave Macmillan Singapore), 1–14.

Mutsotso, B. M. (2013). Conflict and social change: the east Pokot pastoralists adjustment to conflict. *Int. J. Humanit. Soc. Sci.* 2 (8), 126–134.

O'Loughlin, J., Witmer, F. D., Linke, A. M., Laing, A., Gettelman, A., and Dudhia, J. (2012). Climate variability and conflict risk in East Africa, 1990-2009. *Proc. Natl. Acad. Sci.* 109 (45), 18344–18349. doi:10.1073/pnas.1205130109

Okumu, W. (2013). *Conflict over Ltungai Conservancy: A Case of Fatal Competition Over Grazing Land and Water Among the Samburu and Pokot In North-Western Kenya: Paper Presented at the International Conference On 'Large Scale Agricultural Investments in Pastoral Lowlands of the Horn of Africa: Implications for Minority Rights and Pastoral Conflicts*. Addis Ababa: Institute of Peace and Security Studies, Addis Ababa University.

Okumu, W., Bukari, K. N., Sow, P., and Onyiego, E. (2017). The role of elite rivalry and ethnic politics in livestock raids in northern Kenya. *J. Mod. Afr. Stud.* 55 (3), 479–509. doi:10.1017/S0022278X17000118

Opiyo, F., Wasonga, O., Schilling, J., and Mureithi, S. (2012). Resource-based conflicts in drought-prone northwestern Kenya: the drivers and mitigation mechanisms. *Wudpecker J. Agric. Res.* 1 (11), 442–453. Available online at: https://backoffice.biblio.ugent.be/download/2074372/3239525.

Pas, A. (2018). Governing grazing and mobility in the Samburu lowlands, Kenya. *Land MDPI* 7 (2), 1–24. doi:10.3390/land7020041

Roe, E. (1994). *Narrative Policy Analysis: Theory and Practice*. Durham: Duke University Press.

Roe, E. (2020). *A New Policy Narrative for Pastoralism? Pastoralists as Reliability Professionals and Pastoralist Systems as Infrastructure, STEPS Working Paper, 113*. Brighton: STEPS Centre.

Roe, E. (2023). When complex is as simple as it gets: guide for recasting policy and management in the anthropocene. *IDS Work. Pap.* 589. doi:10.19088/IDS.2023.025

Schareika, N. (2014). The social nature of environmental knowledge among the nomadic Woɗaaƃe of Niger. *Ecol. Soc.* 19 (4), 42. doi:10.5751/ES-07056-190442

Schilling, J., Akuno, M., Scheffran, J., and Weinzierl, T. (2011). *On Arms and Adaptation: Climate Change and Pastoral Conflict in Northern Kenya, Working Paper CLISEC-15*. Hamburg: University of Hamburg Research Group Climate Change and Security.

Schilling, J., Opiyo, F., and Scheffran, J. (2012). Raiding pastoral livelihoods: motives and effects of violent conflict in north-western Kenya. *Pastoralism* 2 (25), 1–16. doi:10.1186/2041-7136-2-25

Scoones, I. (2023a). "Resilience in the drylands: contested meanings," in *Reconsidering Resilience in African Pastoralism: Towards a Relational and Contextual Approach*. Editors S. Konaka, G. Semplici, and P. D. Little (Kyoto: Trans Pacific Press), 354–366.

Scoones, I. (2023b). Confronting uncertainties in pastoral areas: transforming development from control to care. *Soc. Anthropology/Anthropologie Soc.* 31 (4), 1–19. doi:10.3167/saas.2023.04132303

Scoones, I. (2023c). *Pastoralism, Uncertainty and Development. Warwickshire* (Rugby, Warwickshire: Practical Action Publishing).

Scoones, I., Smalley, R., Hall, R., and Tsikata, D. (2019). Narratives of scarcity: framing the global land rush. *Geoforum* 101, 231–241. doi:10.1016/j.geoforum.2018.06.006

Sellen, D. (2003). Comments to 'Cattle raiding, cultural survival and adaptability of East African pastoralists. *Curr. Anthropol.* 44 (Suppl. ment), S24–S25.

Semplici, G., and Campbell, T. (2023). The revival of the drylands: Re-learning resilience to climate change from pastoral livelihoods in East Africa. *Clim. Dev.* 15 (9), 779–792. doi:10.1080/17565529.2022.2160197

Seter, H., Theisen, O., and Schilling, J. (2018). All about water and land? Resource-related conflicts in East and West Africa revisited. *Geojournal* 83 (1), 1–19. doi:10.1007/s10708-016-9762-7

Simpson, G. L., and Waweru, P. (2021). The implausible persistence of pastoralism: samburu transhumance from their nineteenth-century origins through the period of colonial rule. *J. Middle East Afr.* 12 (2), 225–249. doi:10.1080/21520844.2021.1909379

Sommer, G., and Vossen, R. (1993). "Dialects, sectiolects, or simply lects? The Maa language in time perspective," in *Being Maasai: Ethnicity and Identity in East Africa*. Editors T. Spear and R. Waller (London: James Currey), 25–37.

Sperling, L. (1987). *The labor organization of Samburu pastoralism. PhD Thesis*. Montreal: McGill University. Available online at: https://www.researchgate.net/publication/357535280_The_labor_organization_of_Samburu_pastoralism (Accessed July 17, 2025).

Straight, B. (2009). Making sense of violence in the 'badlands' of Kenya. *Anthropol. Humanism* 34 (1), 21–30. doi:10.1111/j.1548-1409.2009.01020.x

Straight, B. (2017). Uniquely human: cultural norms and private acts of mercy in the war zone. *Am. Anthropol.* 119 (3), 1–15. doi:10.1111/aman.12905

van Baalen, S., and Mobjörk, M. (2018). Climate change and violent conflict in East Africa: integrating qualitative and quantitative research to probe the mechanisms. *Int. Stud. Rev.* 20 (4), 547–575. doi:10.1093/isr/vix043

Viveiros de Castro, E. (1998). Cosmological deixis and amerindian perspectivism. *J. R. Anthropol. Inst.* 4 (3), 469–488. doi:10.2307/3034157

West, S., Haider, L. J., Stålhammar, S., and Woroniecki, S. (2020). A relational turn for sustainability science? Relational thinking, leverage points and transformations. *Ecosyst. People* 16 (1), 304–325. doi:10.1080/26395916.2020.1814417

West, S., Haider, L. J., Hertz, T., Garcia, M. M., and Moore, M. (2024). Relational approaches to sustainability transformations: walking together in a world of many worlds. *Ecosyst. People* 20 (1), 2370539. doi:10.1080/26395916.2024.2370539

Witsenburg, K., and Adano, W. R. (2007). "The use and management of water sources in Kenya's drylands: is there a link between scarcity and violent conflicts?," in *Conflicts Over Land and Water in Africa*. Editors B. Derman, R. Odgaard, and E. Sjaastad (Oxford: James Currey), 215–238.

Witsenburg, K. M., and Adano, W. R. (2009). Of rain and raids: violent livestock raiding in Northern Kenya. *Civ. Wars* 11 (4), 514–538. doi:10.1080/13698240903403915