bicc report

GENDER RELATIONS IN THE FACE OF CLIMATE CHANGE AND CONFLICT AT THE KENYA–UGANDA BORDER

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Project Development. Security. Armament.

Conflicts reached unprecedented levels in 2022 and 2023. Meanwhile, some of the most severe droughts to date have affected the region in consecutive years.

This study set out to examine how climate change, conflict and gender relations interact in this context in the region.

CONTENTS

SUMMARY

The climate–gender–conflict nexus describes the interplay between climate change, conflict and gender relations. Pastoralist societies in the cross-border region between Kenya and Uganda have recently experienced severe droughts, while conflict involving pastoralists has also reached unprecedented levels. The effects of climate change and conflict differ between men and women, making the climate–conflict nexus a gendered issue. With pastoralist livelihoods threatened by extreme droughts, men and women take on new roles and responsibilities. With our study, we aim to understand the impact of climate change and conflict on gender relations, examining the adaptation mechanisms adopted by men and women in response to these challenging times. To this end, we conducted a survey that reached 297 participants from Moroto District (Uganda) and Loima sub-county (Turkana, Kenya) in October 2024.

We hypothesised that shifts away from pastoralism would be associated with changes in gender roles, which would challenge existing gender attitudes. However, although gender roles have changed significantly, we found that gender attitudes with regard to decision-making in households and in the public are surprisingly resistant to change, with decision-making power still predominantly located in men.

We chose this cross-border region due to its different climatic and ecological conditions, which result in varying, albeit similar sets of livelihoods, and different policies adopted in response to conflict and climate adversities. Adopting a comparative perspective has enabled us to analyse the impact of shifts away from pastoralism to alternative livelihoods and government and non-government interventions addressing climate and conflict

on gender relations and social conflicts. Moroto, which is less dry than Loima, has been more heavily affected by armed conflict in recent years. At the same time, Moroto has experienced more intense and forced disarmament exercises (in 2001–2002, 2006 and 2023) than Loima (in 2002, 2006 and 2019), as well as the accelerated development of a mostly artisanal but increasingly industrial mining industry.

KEY FINDINGS

Finding 1: While fertile regions are more affected by climate anomalies and experience increased social change, they also experience higher levels of conflict and violence than arid regions.

We find that recent climate anomalies affected Moroto, characterised by more fertile conditions, more severely than Loima, where vegetation and livelihoods have already adapted to arid conditions. This has led to greater disruption in Moroto, resulting in higher levels of conflict and violence, as well as higher rates of social change compared to Loima. Although the rate of socio-economic change appears to be higher in the Ugandan border area than in that of the Kenyan area (due to more opportunities for commercial agriculture and mining, the consequences of recent disarmament exercises and a more pronounced perceived change in gender attitudes), respondents perceive Moroto to be more affected by violence at the communal and regional level than Loima.

Finding 2: New livelihoods come with new gender roles, but gender attitudes towards decision-making persist

Our survey results show that livelihoods have diversified from pure pastoralism to other complementary, and sometimes completely new occupations. While these new livelihoods have resulted in new gender roles, existing gender attitudes remain unchanged. Both sides of the border exhibit similar patterns in how gender roles and gender attitudes have (or have not) changed: Despite a generally more equal distribution of tasks, responsibilities and access to schooling, men still dominate in decision-making on both sides of the border. We argue that it is this tension between changes in gender roles and continuities in gender attitudes that explains some of the social conflicts currently experienced in the region.

Finding 3: People affected by droughts perceive more violence at the communal and household level.

The impact of droughts seems to play a role in the perception of violence: Those affected by drought perceived more violence at the communal and household level than those not affected. This suggests that destitution through drought may be associated with increased domestic violence, a pattern also observed in other studies. While levels of domestic violence are very high on both sides of the border, in Moroto, people who lost livestock due to drought in the last five years experienced twice the average frequency of domestic violence in their community, whereas in Loima, the

frequency remained the same regardless of whether they had been affected by drought or not. This indicates a lower ability to adapt to climate adversities in Moroto.

Finding 4: Gender equity and women empowerment programmes receive mixed perceptions.
We find that civil state interventions for gender equity and women's rights appeared to have a positive effect: the survey results show an improvement in the level of domestic violence among a large proportion of respondents in Moroto over the past 10 years, which is plausibly linked to sensitisation campaigns about gender equity by the district administration. Conversely, respondents partly attributed the increase in teenage pregnancies to the scholarisation of girls.

Finding 5: State interventions are a double-edged sword. Higher levels of state violence are associated with lower levels of domestic violence. However, despite being linked to a reduction in armed confrontations, disarmament exercises have significant negative effects on communal well-being.
We find that repeated militarised disarmament exercises are systematically perceived as violent and unjust and ineffective in ending cycles of armed conflict in the region and improving the everyday security of Karamojong and Turkana. Disarmament exercises that have taken place have consistently been reported as very violent, even traumatic, events, experienced by male and female respondents in our survey. Some scholars have also reported that such exercises have reduced climate resilience by limiting pastoralist mobility, leaving women and children exposed to bandit attacks in their homesteads. Our survey data at least does not contradict this: Respondents participating in disarmament exercises do not report prolonged routes to grazing areas.

INTRODUCTION

Climate change poses a significant threat to livelihoods across the globe, disproportionately affecting women (UNFCCC, 2022). Indigenous peoples who depend directly on natural resources are especially vulnerable to climate adversities[1], as are pastoral communities in the Kenya–Uganda border region. In this transition zone between arid and humid ecoregions, conflicts involving pastoralists reached unprecedented levels in 2022 and 2023 (Navarro et al., 2025). Meanwhile, some of the most severe droughts to date have affected the region in consecutive years (NASA Earth Observatory, 2022). While the linkages between climate change and conflict, the so-called climate–conflict nexus, are highly contextual, there is an emerging consensus that climate change can act as a multiplier, exacerbating pre-existing political and social tensions (Mach et al., 2019). This

[1] In this study, we specifically examine the effects of climate adversities in recent years. Funk et al. (2023) found that recent droughts experienced in East Africa had been exacerbated by climate change. We will refer to climate adversity in the following.

is often the case in regions dependent on agriculture, particularly when combined with other socio-economic and political factors such as political marginalisation (Koubi, 2019). Furthermore, research suggests that climate and conflict have distinct impacts on men and women, underscoring the inherently gendered nature of the climate–conflict nexus (Smith et al., 2021): In rural areas of developing countries, women often rely on natural resources to sustain themselves and their families, which increases their vulnerability to changes in resource availability (McOmber, 2020).

At the same time, conflict may heighten violence against women and girls or restrict their access to essential services such as justice systems, education and healthcare—particularly sexual and reproductive health services (OHCHR, 2025). To capture these interconnections between climate change, gender relations and conflict, scholars have introduced the term "climate–gender–conflict nexus" (Smith et al., 2021).

RESEARCH SUGGESTS THAT CLIMATE AND CONFLICT HAVE DISTINCT IMPACTS ON MEN AND WOMEN, UNDERSCORING THE INHERENTLY GENDERED NATURE OF THE CLIMATE–CONFLICT NEXUS

However, rather than viewing conflict as arising from the differing vulnerabilities of women and men to climate change, we argue that in pastoral and agropastoral societies climate adversities affect women and men equally, though in different ways, creating societal stress that escalates into social conflict. On the one hand, changes in gender roles caused by a changing environment can lead to social conflict, changing levels of (domestic) violence, establishing a bidirectional link between conflict and gender (see Figure 1). On the other, these changes may also lead to more cooperation between men and women, thereby improving gender relations.

The Kenya–Uganda border is affected by both climate adversities and violent conflicts, making it a target for a range of climate adaptation and peacebuilding initiatives. These interventions are part of the set of social, political and economic factors that affect livelihoods and conflicts in the first place. Colonial and postcolonial interventions by state and aid agencies have played a key role in transforming pastoralist livelihoods in East Africa (Caravani, 2018). More recently, these "have become increasingly bound into processes of state territorialisation, large-scale infrastructure and resource development, and regional trade and investment" (Lind et al., 2020, p. 2).

Droughts, armed conflicts and disarmament campaigns in the region have also contributed to this process of "de-pastoralisation" (Caravani, 2018, p. 1; Stites & Akabwai, 2010), prompting pastoralist communities to shift from pure animal husbandry towards hybrid forms of pastoralism. This transition has diversified

FIGURE 1: SIMPLIFIED VISUALISATION OF THE CLIMATE–GENDER–CONFLICT NEXUS

their livelihoods, encouraged sedentarisation in settlements and towns in former dry-season grazing areas (Lind et al., 2020). In response, men and women had to adopt new roles, with women increasingly engaging in new income-generating activities and challenging pre-existing gender roles (Stites, 2019).

MEN AND WOMEN HAD TO ADOPT NEW ROLES, WITH WOMEN INCREASINGLY ENGAGING IN NEW INCOME-GENERATING ACTIVITIES AND CHALLENGING PRE-EXISTING GENDER ROLES.

Our study will explore how the ongoing climate crisis and (armed) conflicts are changing gender relations in (agro)pastoralist societies at the Kenya–Uganda border.[2] As a border region, the study area lends itself to the study of the climate–gender–conflict nexus through a comparative lens in two different contexts. Our aim is to identify how this interplay unfolds in the region against the backdrop of different climates, livelihood compositions and disarmament policies, and to explore how men and women actively shape this interplay. To this end, we conducted an extensive household survey with quantitative and qualitative questions in two neighbouring administrative areas on both sides of the border:

[2] This *bicc report* draws on empirical research undertaken in the framework of the project "Security, armament and development in recipient countries of German arms exports", as well as on insights generated in the framework of the project "Violent Futures? Contestations along frontiers in East Africa" of the DFG-funded research consortium CRC 228 "Future Rural Africa—Future Making and Socioecological Transformations" (B03 Violent Futures - Collaborative Research Center TRR 228).

Loima sub-county (in Turkana county, Kenya) and Moroto District (Uganda).

Our objective was to address the following question: "How do climate change adaptation practices and armed conflict affect gender relations and social conflict in pastoralist societies at the Kenya–Uganda border?

While previous studies have shown that these shifts to new livelihoods and the subsequent deconstruction and reconstruction of gender relations are occurring in the region among pastoralists, our study aims to identify recent changes in response to severe droughts and unprecedented increases in conflict over the last five years (2018–2023). Our study has five goals:

1. to assess the regional impact of recent climate adversities and armed conflict on pastoralist societies in the Kenya–Uganda border region;
2. to identify the livelihoods pursued as adaptation mechanisms in response to these challenges. We will also evaluate the extent to which different adaptation practices have resulted in new gender roles and attitudes, as well as generated new social conflicts;
3. to assess whether additional stress from recent climate change-induced droughts has exacerbated gender relations and violence at different levels;
4. to assess the role and impact of interventions addressing gender equity and women's empowerment;
5. to analyse the role and impact of development, peacebuilding and disarmament interventions within this transformation process.

Our study is structured as follows: In Section 2, we explain the relevance of the climate–gender–conflict nexus for the region and provide an overview on existing literature on the topic in the study area. In Section 3, we describe the methodology applied to fulfil our research aims. In Section 4, we present our main results, which we contrast with existing literature. In Section 5, we provide our main conclusions.

WHY THE NEXUS MATTERS IN THE KENYA–UGANDA BORDER REGION

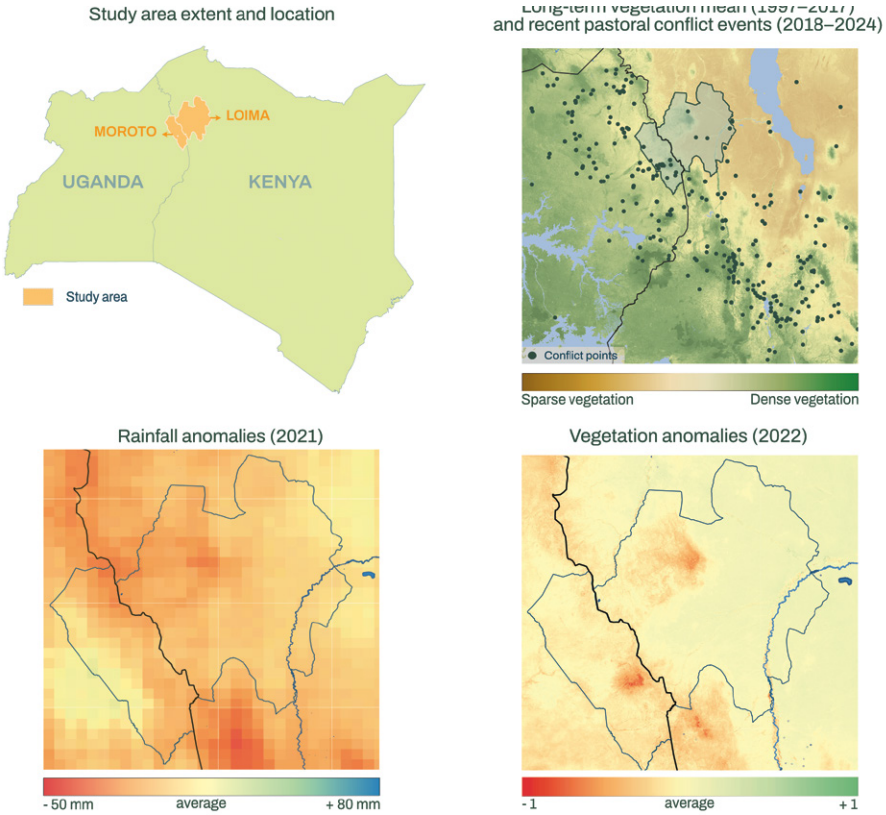
This *bicc report* focuses on the Kenya–Uganda border region in East Africa, part of what is commonly referred to as the Karamoja Cluster. The region's harsh and highly variable climatic conditions (Nicholson, 2017) have historically made transhumant pastoralism the predominant economic activity there, as it is well-suited to its high seasonal and regional variability. This system uses seasonal and cyclical migration of herded animals to overcome resource scarcity, whilst most of the group (primarily women) remain in their camps (Markakis, 2004).

The political border between Uganda and Kenya also divides the region into two different ecoregions: While Loima is arid, and vegetation is rather scarce, Moroto has higher tree density and, due to topography, a comparatively wetter climate. In recent years, the region has experienced unprecedented droughts (NASA Earth Observatory, 2022). However, the recent rainfall anomalies recorded during these droughts have affected the Ugandan side of the border more severely, resulting in greater changes in vegetation than in the already drier Loima (see Map 1).

Following the droughts in 2021, which had serious effects on vegetation in the years after, pastoral conflicts in the Karamoja Cluster increased by 104 per cent between 2021 and 2023, with half of these events being lethal (see Figure 2). In Uganda, these conflicts were mainly concentrated in the Moroto and Amudat Districts, in Kenya, in the Western and Rift Valley provinces. This correlates positively with higher vegetation density, but also with those areas where below-average rainfall had the strongest effect on natural resources (Navarro et al., 2025) (see Map 1).

Historically, communities along the border have been caught in cycles of

MAP 1: LONG-TERM VEGETATION PATTERNS, PASTORAL CONFLICT EVENTS AND RECENT VEGETATION AND RAINFALL ANOMALIES IN THE STUDY AREA



Data: Landsat (USGS, 2023); Climate Hazards Center InfraRed Precipitation with Station Data (CHIRPS) (Funk et al., 2015); Copernicus Sentinel-2 (ESA, 2023); Armed Conflict and Location Event Data Project (ACLED) (Raleigh et al., 2010). Administrative boundaries from UN OCHA (2025).

FOLLOWING DROUGHTS IN 2021, WHICH HAD SERIOUS EFFECTS ON VEGETATION IN THE YEARS AFTER, PASTORAL CONFLICTS IN THE KARAMOJA CLUSTER INCREASED BY 104 PER CENT BETWEEN 2021 AND 2023.

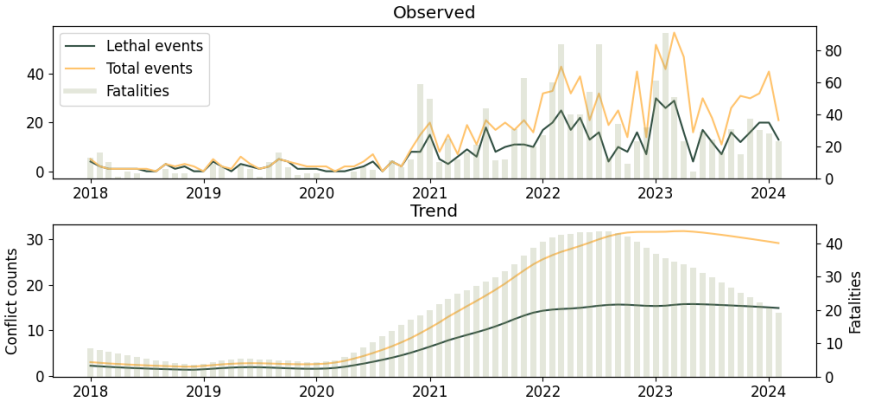
raids and counter-raids over decades. The supply of automatic small arms and light weapons (SALW) from regional war zones in South Sudan and Ethiopia to Kenya, and from the overthrow of Idi Amin in 1979 in Uganda, has escalated intercommunal conflicts (Eulenberger et al., 2020; Mirzeler & Young, 2000). Numerous disarmament attempts by governments on both sides of the border have led to fewer armed confrontations and a decade of relative peace between 2007 and 2019 (Longoli et al., 2024). However, this has had a negative effect on the local pastoralist economy (Eulenberger et al., 2020) and reduced their climate resilience by limiting their mobility (Stites & Akabwai, 2010).

Furthermore, uneven disarmament has often resulted in increased attacks on disarmed communities (Onditi, 2022). Following this period of peace, large-scale and commercialised livestock theft has become a real issue in Karamoja again, as various pastoralist communities have re-armed (Longoli et al., 2024).

Nevertheless, collective resilience mechanisms within pastoralist communities remain highly relevant, serving as important institutions for conflict mitigation and being adaptive in times of drought or displacement. Practices such as informal livestock sharing arrangements (e.g., aleya and akiriket systems), communal pasture rotation and reciprocal labour exchange continue to provide valuable buffers against shocks. In Moroto and Loima, traditional peace pacts—such as the Lokiriama Peace Accord—have historically supported intergroup cooperation and resource sharing, even during periods of ecological stress.

With respect to violence in the borderlands near Moroto District, the area has remained relatively free from attacks for some time (Eulenberger et al., 2020). However, the sharp rise in armed conflicts

FIGURE 2: PASTORAL CONFLICT EVENTS IN AND AROUND THE KARAMOJA CLUSTER



Data: ACLED, 2024 (Raleigh et al., 2010)

since 2021, as documented by ACLED data, appears to be primarily driven by inter-community conflicts (Navarro et al., 2025). These conflicts have been partly attributed to policies restricting cross-border migration, which have historically impeded mobility. Across East Africa, reduced mobility to access dry-season grazing areas has heightened vulnerability to climate adversities such as droughts (Lind et al., 2020), including along the Kenya–Uganda border (Navarro et al., 2025). The search for and competition over new fertile pastures have increasingly brought herdsmen into conflict with their peers (Chilambe et al., 2022).

Conflicts also arise from a hybrid governance landscape in which formal state institutions and informal customary authorities coexist, often in tension (Obonyo & Muhumuza, 2021). Traditionally, the elderly and *kraal* leaders have played a central role in regulating access to pasture, mediating disputes, and guiding seasonal movements across the border (Carlson et al., 2012). However, state-led disarmament, mineral investments and NGO-led interventions have disrupted these institutions, often without providing adequate replacements (Caravani, 2018; Stites et al., 2016). This has weakened the governance systems that supported negotiated access and resilience, fostering tensions, confusion and occasionally contestation over mobility rights, particularly in areas with overlapping claims or transhumance routes (Shmelev & Filipová, 2017). In such contexts, the 'political settlement' around natural resource access becomes unstable, with authority contested and legitimacy fragmented across actors. The resulting governance vacuum undermines both adaptation and peacebuilding efforts (Carlson et al., 2012).

This hybrid governance terrain influences not only how communities adapt to climate pressures, but also how gendered roles and conflicts evolve, particularly in areas where customary institutions historically excluded women from decision-making (Saferworld, 2020; Stites et al., 2016).

CONFLICTS ALSO ARISE FROM A HYBRID GOVERNANCE LANDSCAPE IN WHICH FORMAL STATE INSTITUTIONS AND INFORMAL CUSTOMARY AUTHORITIES COEXIST, OFTEN IN TENSION

In the Kenya–Uganda border region, in response to recent climatic adversities, herdsmen have shifted their pastoral routes, resulting in longer absences from the camps. During these periods away, women have taken on new tasks, diversifying household livelihoods. These socio-ecological changes have given women new responsibilities and new forms of empowerment.[3] However, as

[3] Women, who previously often worked in the fields to feed their families, have increasingly begun producing charcoal to sell in the cities and buy food. Some men gave up herding to mine limestone, gold, or marble instead (interview Zachary Angella Lochoro). Children are also working in the mines (interview Marion Akiteng). Others are selling their land and cattle and are migrating to nearby cities (interview Mark Longole).

patriarchal traditions are progressively challenged and male-dominated pastoral livelihoods face increasing threats, incidents of sexual and gender-based violence are also on the rise (UNDP, 2022). Peacebuilding and disarmament operations that successfully reduced lethal conflicts have been found to inadvertently exacerbate violence against women, leading to an increase in domestic violence (Stites & Howe, 2019).

THIS HYBRID GOVERNANCE INFLUENCES HOW COMMUNITIES ADAPT TO CLIMATE PRESSURES AND HOW GENDERED ROLES AND CONFLICTS EVOLVE

In the Karamoja Cluster, societies are traditionally centred around livestock:

> Livestock are *the* central component to the processes of customary law, paid as compensation for wrongs committed, sacrificed as a means of making amends and exchanged in bonds of social reciprocity that secure relationships (…) and guarantee assistance in difficult times ahead (Carlson et al., 2012, p. 31).

Accordingly, masculinity in Karamoja's pastoral societies is strongly linked to cattle ownership, which is essential for paying the bride price. Patriarchal traditions deeply impact women's lives, manifesting in practices such as child marriage and female genital mutilation, domestic violence, a heavy workload including household and caregiving tasks and limited participation in decision-making within families and in the public sphere. Although the government and NGOs in the Karamoja Cluster actively promote awareness of domestic violence and women's and human rights, several barriers hinder effective implementation. For one, communities predominantly rely on traditional customary justice systems grounded in patriarchal structures, which makes the reporting of incidents challenging (Carlson et al., 2012). For the other, negative experiences with national security agents cause marginalised and stigmatised pastoral communities to avoid reporting incidents to official institutions (Saferworld, 2020).

Over the past five years, the Kenya–Uganda border region has experienced droughts of unprecedented severity, compelling local communities to undertake major adaptations in their livelihoods. At the same time, conflicts among pastoralists have escalated to unprecedented levels. Consequently, external interventions addressing both climate- and conflict-related issues have, in turn, contributed to creating new realities on the ground, which have reshaped the climate–gender–conflict nexus.

METHODOLOGY

We conducted a household survey to investigate the recent developments that have shaped the climate–gender–conflict nexus in the study region.[4]

Prior to the survey, we undertook a comprehensive literature review, covering both academic and grey literature relevant to the region. We also analysed ACLED data to map and depict temporal trends in armed conflicts. Our study also drew on a survey conducted in early 2024 by bicc in the Karamoja Cluster, which focused on climate adversities and the proliferation of small arms and light weapons (SALW). We conducted seven preparatory key informant interviews with different stakeholders from Uganda in July 2024 to identify relevant survey themes and refine the survey questions.

[4] We would like to express our gratitude to the research participants who took part in the survey and the key informant interviews, the Karamoja Herders of the Horn (KHH) survey team who conducted the survey under challenging conditions in a volatile security context, and the respective local authorities for facilitating the research. We also acknowledge the crucial contributions of the following individuals as part of the KHH survey team: Ngiro Ezekiel, Kokoi Godfrey, Asiyo Jeremiah and Namuya Emmanuel. Furthermore, comments from regional stakeholders during a dissemination workshop in Moroto, Uganda, in March 2025, as well as feedback from colleagues within bicc on earlier versions of the bicc report greatly contributed to improving the study.

TABLE 1: DIFFERENCES BETWEEN THE TWO CASE STUDIES IN THE STUDY AREA

	Moroto	Loima
Climatic characteristics	Wet and dry season	Hot and dry
Resource availability	Higher	Lower
Impact of negative climate anomalies	Higher	Lower
Conflict occurrence	Higher	Lower

These semi-structured interviews provided detailed insights into local adaptation strategies and government and civil society interventions aimed at diversifying livelihoods, empowering women and building peace in the region. They helped us further understand the most recent context and informed our approach to sensitive topics, including gender relations, conflict and domestic violence.

WE CONDUCTED A HOUSEHOLD SURVEY AND SEVEN PREPARATORY KEY INFORMANT INTERVIEWS WITH DIFFERENT STAKEHOLDERS FROM UGANDA TO IDENTIFY RELEVANT SURVEY THEMES.

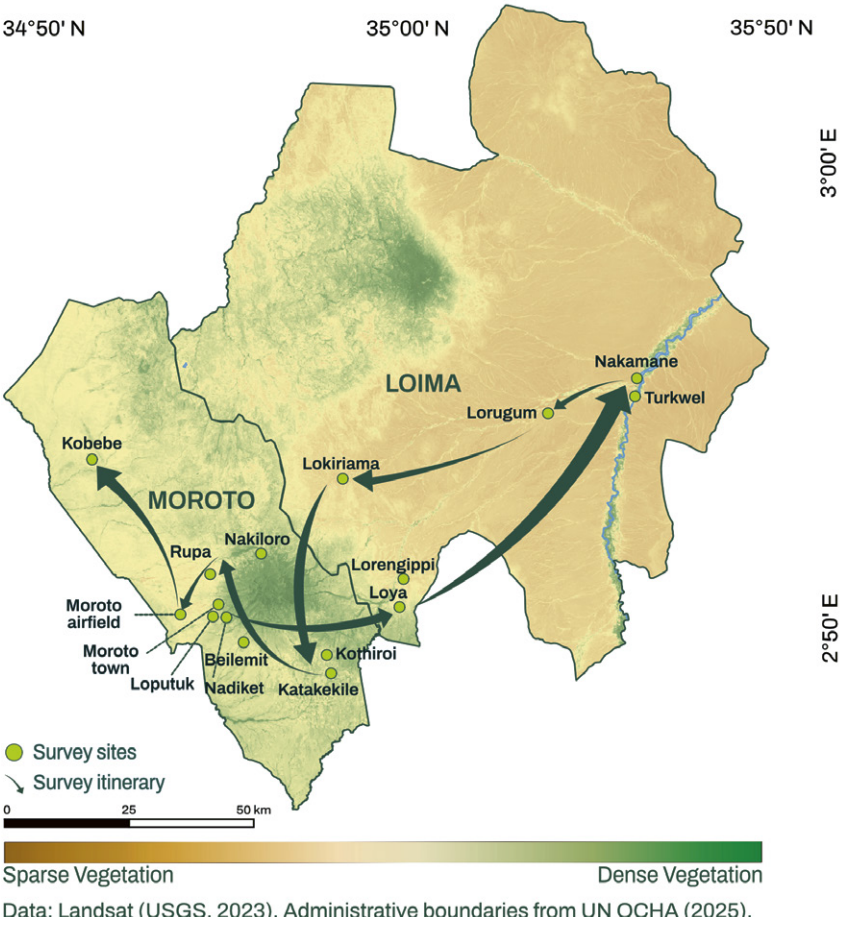
We recruited most of our key informants from an existing network of scholars, NGO-workers, policymakers and (local) government officials. All interviews were held via Zoom and recorded with the participants' consent.

For the household survey, we selected locations on both sides of the Kenya–Uganda border—Loima sub-county in Turkana, Kenya, and Moroto district in Uganda (see Map 2). Both sites were selected based on differing impacts from recent droughts; Loima, with its generally more arid climate, was less affected than Moroto, as well as varying levels of violent conflict and peacebuilding and development interventions. Moroto experienced higher conflict levels involving pastoralists over the last five years and an extensive disarmament exercise in 2023, while Loima was comparably less affected by conflict.

We randomly selected sites to ensure representativeness, with an emphasis on covering the diverse livelihood types pursued by local populations. We interviewed 297 individuals in 16 locations—six in Loima and ten in Moroto.

The survey contained approximately 90 questions on climate adaptation strategies, perceptions of violent conflict, gender issues and the impact of interventions

MAP 2: SURVEY LOCATIONS AND ITINERARY



on livelihoods. We asked respondents to reflect on changes in these perceptions over time, using timescales associated with strong memory markers identified in the preparatory interviews—such as the peaceful decade ten years ago, unprecedented droughts, important disarmament exercises, COVID-19-related mobility restrictions and the recent rise in conflict over the past five years. A detailed description of the survey's content and structure can be found in the Annex.

Our research team included bicc researchers and a survey team of the Karamoja Herders of the Horn (KHH)[5]. After collaboratively developing the questionnaire, the KHH survey team conducted the household survey in October 2024. The bicc team then analysed the data in collaboration with the local survey leader (co-author of this report). To interpret the results, we leveraged the Uganda-based research team's contextual knowledge and engaged participants at a regional hybrid dissemination workshop in Moroto in March 2025, to help contextualise specific survey findings.

[5] Karamoja Herders of the Horn (KHH), formerly Karamoja Development Forum (KDF), is an indigenous NGO based in Moroto that stands up for the rights of pastoralists and ensures the protection and development of their livelihoods. They support community institutions so that the community is aware of its rights and is able to defend them.

RESULTS

Our survey reached 297 people—156 in Moroto (89 women, 67 men) and 141 in Loima (78 women and 62 men), who self-identified as Karamojong in Uganda and Turkana in Kenya.[6] We will begin by presenting the survey results on regional differences in climate change adaptation, focusing on livelihood changes and their association with violence. We then present survey results that show that both conflict and climate change have influenced livelihoods, which in turn have created new task distributions between men and women and altered pre-existing gender roles. Despite these changed gender roles, survey data indicates that gender attitudes toward gendered decision-making appear to be resistant to change. Nevertheless, we find broad agreement with certain aspects of gender equality, such as girls' education and women's participation in income generation. We then turn to survey participants' perceptions of social conflicts and violence at regional, communal and household levels. Finally, we assess the role of interventions in supporting, initiating or overlooking these changes and evaluate their perceived impact on the climate–gender–conflict nexus.

[6] The mean age of participants was 40 years. A majority (190 individuals) had no formal education, while 75 had attended primary school and 36 had completed secondary education. Only nine participants had gone on to tertiary or university studies.

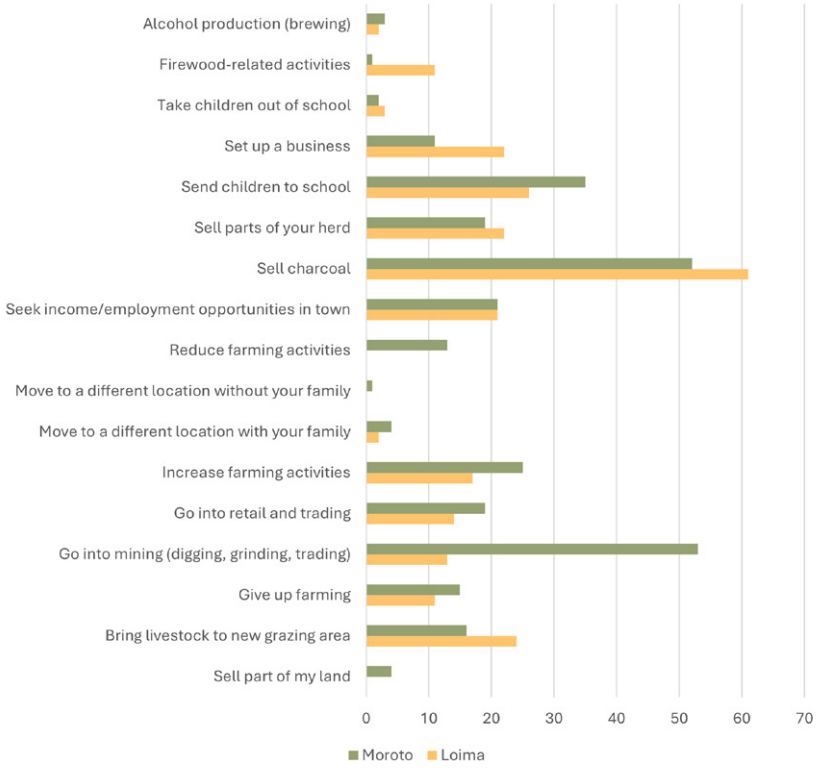
FERTILE REGIONS FACE HIGH CLIMATE VARIABILITY AND SOCIETAL CHANGE

In response to the severe climatic conditions of the past five years, almost all respondents[7] reported adopting new strategies or coping mechanisms to address the effects of severe droughts (see Figure 3).

Most adaptation strategies involved taking up new occupations or modifying—or even abandoning—previous livelihoods. We observed a significant shift away from (pure) pastoralist activities toward other forms of work, such as casual labour, mining, charcoal production, alongside agriculture. Many respondents considered these additional or alternative occupations as part of a broader pastoralist livelihood, if geared towards restocking

[7] Out of 297 respondents, 293 shared information on their adaptation strategies / coping mechanisms in response to the drought of the past five years.

FIGURE 3: MAIN CLIMATE CHANGE ADAPTATION STRATEGIES/ COPING MECHANISMS BY DISTRICT/ SUB-COUNTY



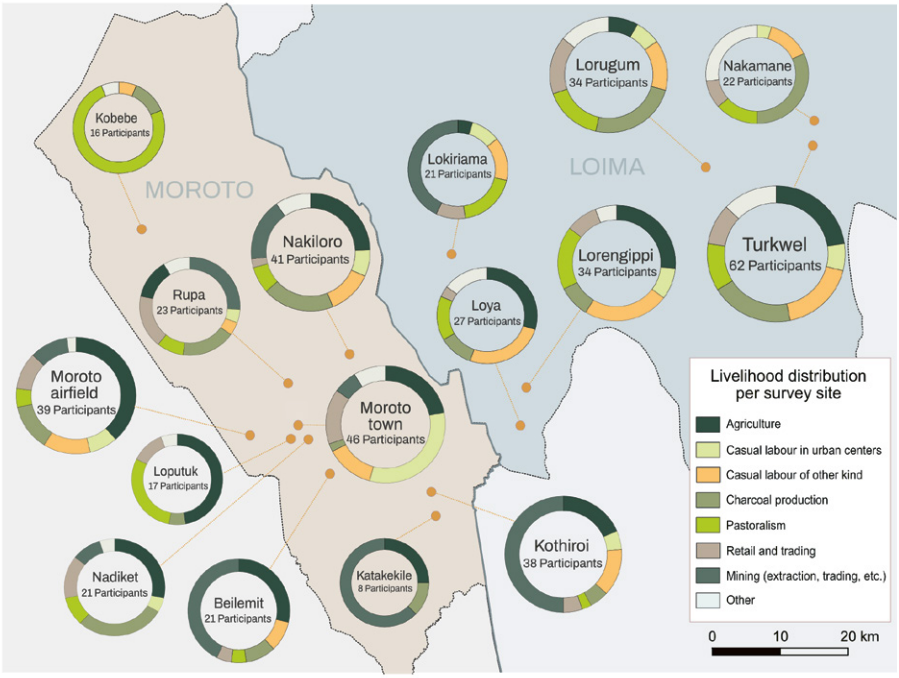
their herds, for instance. Most pursued multiple livelihoods simultaneously—more so in Loima than in Moroto—while a minority relied on a single occupation[8].

This diversification reflects the greater need to diversify incomes under harsher climatic conditions (in Loima), which may also have allowed them to develop a stronger resilience towards climate adversities.

Eighty per cent of respondents stated that they had received no government or NGO support for most of their climate adaptation strategies. Some pastoralists also adapted to climate change by changing their transhumant routes, often travelling longer distances. These changes

[8] In Moroto, 69 of the 156 respondents reported relying on a single source of livelihood and income, compared to 47 of 141 in Loima. The remaining respondents in both locations engaged in multiple combined occupations. In Moroto, the most common single livelihoods were pastoralism (18 out of 69) and mining (15), followed by agriculture (10), casual labour in urban centres (9), retail and trading (7) and charcoal production (6). In Loima, pastoralism (10 out of 47) and retail and trading (10) were the most common 'sole' livelihoods, followed by charcoal production (9).

MAP 3: MAIN LIVELIHOODS PER SURVEY SITE



Data: Survey conducted in October 2024 in different areas of Moroto District (156 participants, 89 female, 67 male) and Loima Constituency (141 participants, 78 female, 62 male). Administrative boundaries from UN OCHA (2025).

reflect not only climatic shifts but also the sharp rise in violent conflict over the past five years. Slightly more respondents changed their routes or spent longer periods apart from their partners due to conflict than due to drought.[9] Regardless of whether conflict and climate pressures intersect in these cases, both significantly affect relationships between men and women.

Livelihood shifts followed similar patterns across the border and between male and female respondents, though some activities were clearly gendered—charcoal production being mostly women-dominated, and livestock-related work mostly dominated by men. Mining, however, which has emerged as a major activity in Moroto, showed no significant gender disparity. Here, some respondents reported reducing farming activities or selling land in response to the recent droughts, reflecting the higher level of

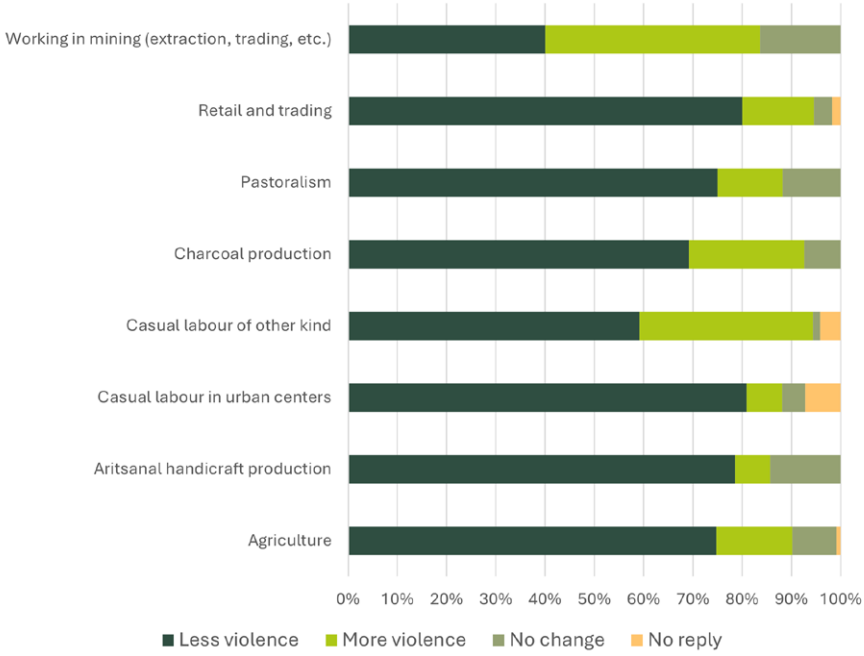
[9] Eighteen participants responded that the distance to destination pastures had increased, nine claimed due to conflict, while seven attributed this to droughts, two to drought and armed attacks. Eleven participants claimed that they spent more time separated from their partners, five of whom due to conflict and armed attacks, three due to droughts and three because of both.

climate-related hardship compared to respondents from Loima.

Respondents perceived greater community-level violence in certain occupations, particularly in mining (see Figure 4). In Moroto, where mining is a prominent climate adaptation/coping strategy for respondents, the high value of the extracted minerals attracts raids (Wagner & Hunter, 2020). Engaging in mining as a climate change adaptation strategy reveals multifold links within the climate–conflict nexus and the climate–gender–conflict nexus, as it typically involves the entire family in income-generating activities, keeping children away from school and reshaping gender roles. Respondents perceived domestic violence to be comparatively higher among miners and pastoralists than in other occupations (see Figure A 1 in Annex).

In our survey, we asked participants to share which livelihoods they would pursue if they could choose. Nearly 90 per cent of respondents aspire to work in livelihoods different from their current ones, 50 per cent would like to work in agriculture, one-third would like to pursue education and aspire to a well-paid job, and the same proportion would like to engage in agro-pastoralism and in activities related to tree-planting.

FIGURE 4: VIOLENCE PERCEPTIONS IN THE LAST FIVE YEARS COMPARED TO THE LAST TEN YEARS IN THE COMMUNITY BY OCCUPATION



A CONSIDERABLE NUMBER OF RESPONDENTS NOTED CHANGES IN GENDER RELATIONS OVER THE PAST 20 YEARS ON BOTH SIDES OF THE BORDER.

NEW LIVELIHOODS, NEW GENDER ROLES– PERSISTING ATTITUDES

A considerable number of respondents noted changes in gender relations over the past 20 years on both sides of the border, although respondents in Loima saw fewer changes. The most notable difference emerged between genders: More men than women believed that gender relations had changed, a difference that stood out most in Loima. This difference may stem from the fact that these changes challenge men's societal positions and are therefore more strongly felt by them. By contrast, the more similar perceptions between men and women in Moroto may be attributed to a higher rate of social change in the district.[10]

[10] More than one-third of respondents (106 out of 297) felt that gender relations have changed over the past 20 years, while slightly fewer than one-third (92 out of 297) saw no change. The remainder responded "maybe" or did not reply. There were no major differences between Moroto and Loima. In both counties, however, more men than women thought that gender relations have changed. In Loima, nearly twice as many women (30) thought that gender attitudes had not changed over the past 20 years as those who believed they had (18), compared to Moroto, where the numbers were 32 versus 26, respectively

SURVEY RESULTS ALSO SHOWED THAT WOMEN ARE MORE INVOLVED IN DECISIONS ON LAND AND THE SALE OF ANIMALS, MEN AND WOMEN BUILD HOUSES, UNLIKE IN THE PAST AND INCREASINGLY SHARE DECISION-MAKING AND RESPONSIBILITIES

Our qualitative questions allowed for a deeper insight into the perceived changes in gender roles: Some respondents spoke very positively about changing gender roles, often linking them to improved relations between partners: “Men and women go and do the work together”, “both members in the community share ideas”, or “these are positive relationships as both women and men go for gold mining together”. Also, despite all the difficulties, some respondents highlighted positive aspects of confronting climate adversities: “Drought has made all men and women resilient and proactive”.

When asked for concrete examples of how gender roles have changed, respondents explained that “women and men do the same or similar tasks”, or even “men and women are doing equal work”. Survey results also showed that women are more involved in decisions on land and the sale of animals, men and women build houses, unlike in the past and increasingly share decision-making and responsibilities: “Now buying land is the responsibility of both men and women”. Respondents also mentioned government sensitisation campaigns on sharing household chores, which appear to have some effect: “The men also see that women can get tired”. Notably, a considerable number of women identified themselves as heads of households—a phenomenon found in urban and rural settings on both sites.[11] Women accounted for more than half of regular household income providers,[12] and land ownership was not uncommon either[13].

To test our hypothesis that changing livelihoods affect gender roles and, consequently, gender attitudes, we cross-analysed the gender attitudes of respondents from the four main livelihood groups—pastoralism, mining, casual work in urban areas and agriculture—in both study areas. On the one hand, we found that most respondents agreed with statements asserting that women and girls ‘should provide income for a

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[11] Of the women interviewed, 60 per cent identified themselves as heads of household, including nearly 50 per cent of married women. This was particularly true among divorced (9 of 24) and widowed women (22 of 24). Over 90 per cent of male respondents identified as head of household, with the lowest proportion among single men (58%). Regionally, a higher percentage of women were heads of household in Loima compared to Moroto (67% versus 57%).

[12] Among respondents, 94 per cent reported having no regular income. Only six per cent (17 individuals) had regular income, mainly from their own businesses, with a few employed by the government and only one from livestock sales. Four female respondents indicated they were the main income provider, one that it was the wife, probably referring to herself, and three female respondents said income was provided by both husband and wife. Two male respondents indicated that income was provided by both husband and wife, two by the husband and one by himself.

[13] More women reported working in agriculture (86 women) compared to men (69 men). Of these women, 42 identified as landowners, while 63 men declared themselves landowners.

living', 'engage in peacebuilding' and attend school. This also corresponded with the responses on actual schooling.[14] Remarkably, more pastoralists than farmers believed that girls should attend school and that women should provide income for the family.

On the other hand, an equally high number of respondents expressed strong agreement with statements reflecting traditional gender divisions.[15] Care for elderly family members was considered a joint responsibility of men and women, while childcare was viewed predominantly as a woman's role, and the provision of security as a man's responsibility.[16] No systematic connection emerged between certain livelihoods and gender attitudes, which refutes the hypothesis that livelihood changes is associated with shifts in gender attitudes.

Attitudes towards decision-making remain surprisingly resistant to change. Across all livelihoods and in both regions, the majority of respondents, both male and female, disagreed with the statement that 'women and girls should be the main decision-makers in the household'. However, they clarified later that decision-making depends on the domain, with some matters assigned to men and others to women (see Table A 1 in the Annex).

Regarding public decision-making on resource management, men remain overwhelmingly dominant. Responses to questions on current and previous practices related to access to pastures showed that decisions on livestock movements and on granting access to visiting herders are primarily taken by men—specifically elders and *kraal* leaders—who are also perceived as the legitimate decision-makers. Women currently have no role in such processes, and both men and women largely consider this appropriate. Interestingly, we found that 20 years ago, in two localities (Nakiloro and Lokiriama), women co-decided on pasture access—a practice that has since stopped. There is variation across localities regarding who makes decisions about access to pastures.

ARMED CONFLICT HAS PROVEN TO CONTRIBUTE TO CHANGES IN GENDER RELATIONS TO A SIMILAR EXTENT AS CLIMATE CHANGE, YET SUCH CHANGES IN GENDER RELATIONS CAN ALSO BE THE CAUSE OF SOCIAL TENSIONS.

The mismatch between new gender roles and change-resistant gender attitudes generates new challenges for both men and women. (Pastoralist) men continue to be regarded as the main breadwinners,

[14] Of the respondents in Loima and Moroto, 71 per cent clearly agreed that boys and girls should attend school. Support for women's participation in peacebuilding was even higher, with 86 per cent agreement in Moroto and 66 per cent in Loima.

[15] These role distributions were also described as "traditional" during some key informant interviews (for example, interviews with Zachary Angella Lochoro and Mark Longole).

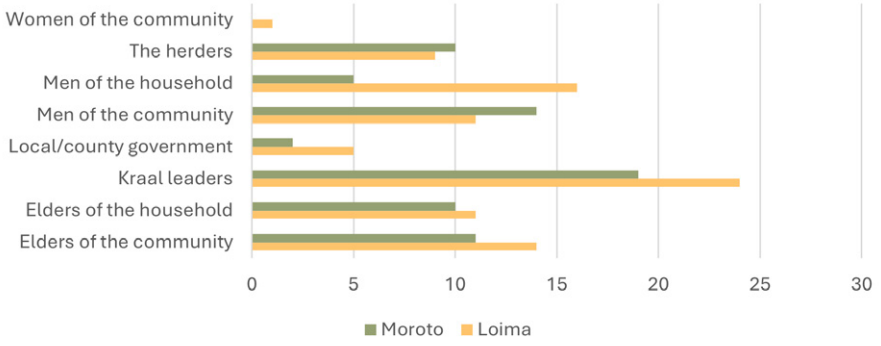
[16] Of the women, 82 per cent believed that women and girls should stay at home and care for children, compared to 72 per cent of men who hold the same view.

a perception that can fuel frustration during periods of economic hardship.

Alcohol abuse was cited as a problem for both women and men on both sides of the border. Several respondents drew direct links to drought, alcohol abuse and domestic violence: 'Men are to provide food regardless. This has led to domestic violence in some areas'. 'Too much drinking within households leads to more violence'. Drastic changes in gender roles, in combination with hardly changing gender attitudes, may lead to social conflict because a highly dynamic social field clashes with political norms that are resistant to change.

Armed conflict has proven to contribute to changes in gender relations to a similar extent as climate change, yet such changes in gender relations can also be the cause of social tensions. This underscores the bi-directional nature of the relationship between conflict and gender relations.

FIGURE 5: DECISION-MAKING ON LIVESTOCK MOVEMENT



THE MISMATCH BETWEEN NEW GENDER ROLES AND CHANGE-RESISTANT GENDER ATTITUDES GENERATES NEW CHALLENGES FOR BOTH MEN AND WOMEN.

DROUGHT: LINKED TO PERCEPTIONS OF RISING COMMUNAL AND HOUSEHOLD VIOLENCE

Respondents who lost livestock due to droughts also reported higher rates of regional and community-level violence. In Moroto, more respondents perceived increased violence over the past five years compared to Loima, reflecting ACLED data and the higher proportion of livestock loss on the Ugandan side of the border. Twenty per cent of research participants lost a family member to armed violence. Although they also perceived a reduction in violence compared to ten years ago, ACLED data show an opposite trend.[17] Overall, most respondents believed that violence at regional, community and household levels has declined over the past five years compared to ten years ago (60–70%).

[17] This may be because Loima was relatively less affected by violent conflict than neighbouring counties in Kenya. Also, respondents may have been referring primarily to the most recent period when answering the question, reflecting a reduction in conflicts over the past year.

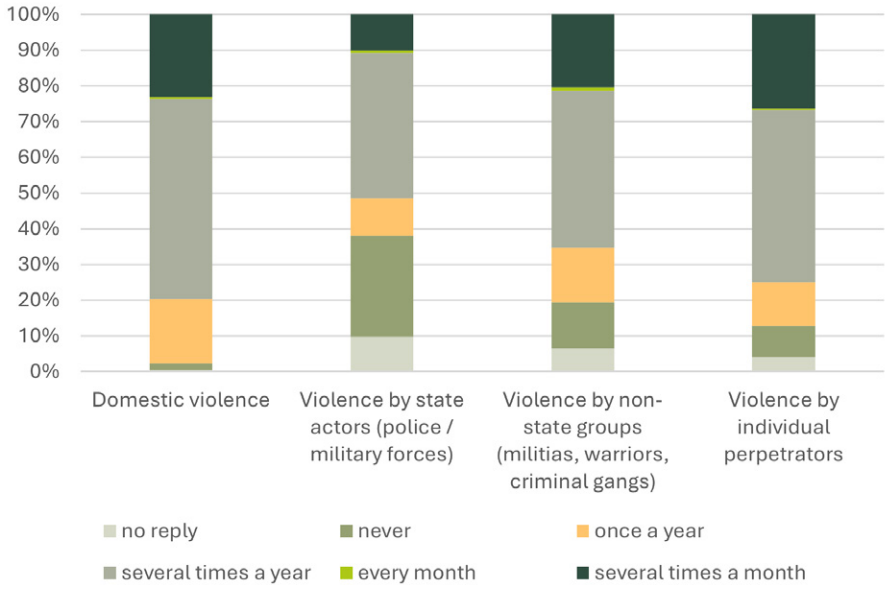
However, when asked to name concrete examples of violence over the past five years and compare them to ten years ago, respondents stated that there was only slightly less violence now than earlier: Close to 60 per cent (65% ten years ago) estimated that people in their community experienced domestic violence several times a year, and 40 to 50 per cent (45%–60% ten years ago) reported experiencing violence perpetrated by state or non-state armed groups and criminals several times a year (see Figure 6). This is why we interpret the reported overall reduction in violence as perceived by the majority of respondents as a subjective experience that they associate with reduced armed violence since the year 2023 compared to previous years (see conflict trends in Figure 2), rather than in the timespan of five to ten years we asked about.

Drought was frequently associated with increased social conflict. Respondents described adverse effects on family cohesion, with some explicitly attributing marital breakdown to climate stress: "Drought has brought divorce".

The underlying reasons given included:

- "Couples become separated in search of work."
- "Drought keeps men far away from home."

FIGURE 6:FREQUENCY OF DIFFERENT KINDS OF VIOLENCE EXPERIENCED IN THE COMMUNITY OVER THE PAST FIVE YEARS



- "Most men have neglected their families in search of survival in towns."
- "Families are broken; spouses have started to blame each other for the lack [of basic necessities]."
- "Poverty and lack of food have brought about conflicts between husbands and wives."
- "The relationship is becoming tough. Women also take control of what they acquire."
- "Hunger has separated most families."
- "Yes, hunger has caused disrespect between a man and a woman in most of the households in this condition."

Still, some emphasised that these effects were reversible: "Hazards like drought scatter men and women, but the rains bring them together."

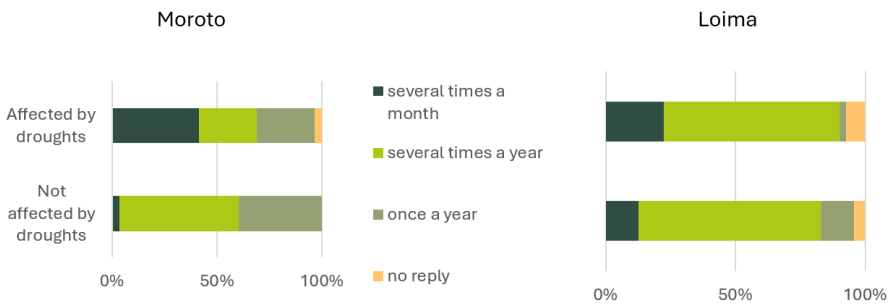
As indicated above, drastic changes in gender roles, in combination with hardly changing gender attitudes, may lead to social conflict. Domestic violence remains a serious concern in Loima and Moroto, even though changing gender roles also foster improved family relations through increased mutual understanding and support. In Loima, around 80 per cent of women and men witnessed domestic violence more than once a year in their community—both a decade ago and now. In Moroto, the figure was even higher ten years ago, exceeding 90 per cent.[18] Not only is domestic violence more prevalent in Moroto than in Loima, but women in Moroto even estimated that very frequent domestic violence ("several times a month") has slightly increased in the past five years compared to ten years ago.[19] At the same time, a large segment of respondents in Moroto observed improvements: Fewer women and men now believe that domestic violence takes place more than once a year, with figures declining from 90 per cent to 80 per cent among female respondents and from 95 per cent to 73 per cent among male respondents. This suggests a divide in Moroto, with a smaller segment of the population perceiving deteriorating conditions in domestic violence, while a larger segment observes some progress.

"DROUGHT HAS BROUGHT DIVORCE."

[18] We asked respondents about their perceptions of domestic violence ten years ago and compared them with recent perceptions over the past five years. Ten years ago, 95 per cent of male and 91 per cent of female respondents in Moroto found that domestic violence was perpetrated more than once a year in their community. Of all respondents, 24 per cent (men) and 19 per cent (women) even perceived that domestic violence was perpetrated "several times a month" in their community. In Loima, 77 per cent of male and 81 per cent of female respondents, fewer than in Moroto, reported that domestic violence was perpetrated more than once a year. Unlike in Moroto, more female (22%) than male respondents (16%) in Loima found that domestic violence was perpetrated "several times a month" in their community.

[19] Perceptions of domestic violence in the past five years have differed considerably from those reported ten years ago. In both regions, in the past five years, more respondents perceived domestic violence as being perpetrated "several times a month" (Moroto: 25% of male and 23% of female respondents; Loima: 21% of male and 25% of female respondents).

FIGURE 7: PERCEIVED FREQUENCY OF DOMESTIC VIOLENCE IN COMMUNITIES OVER FIVE YEARS, BY DROUGHT IMPACT



Among households in Moroto that lost livestock over the past five years, approximately 40 per cent reported witnessing domestic violence several times a month— nearly twice as many as the number of households in Loima who witness domestic violence several times a month. This suggests lower resilience to drought-related stress in Moroto. Possible explanations may include the generally drier climate in Loima or higher climate anomalies during recent droughts in Moroto. Literature on the consequences of past disarmament exercises in Moroto reports reduced pastoral mobility and overall resilience during droughts as military-protected livestock *kraals* replaced the traditional *kraals* protected by pastoralists themselves (Stites & Akabwai, 2010).

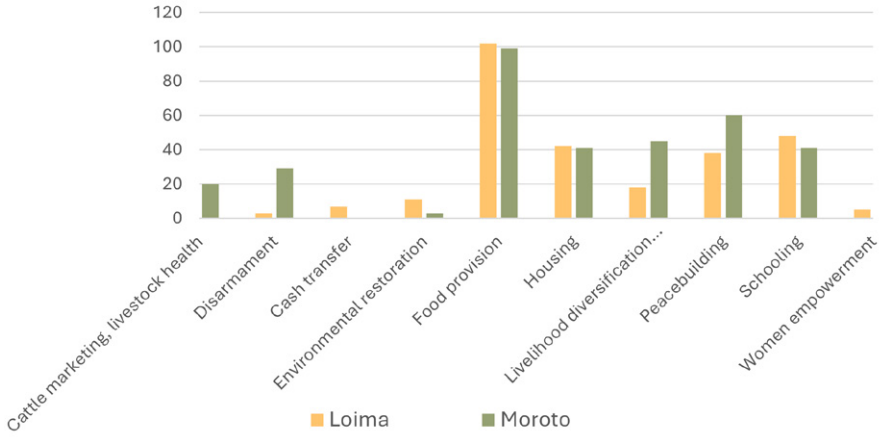
Overall, changes in gender roles driven by climate adaptation and coping practices, together with strains on family relations arising from droughts and conflicts, highlight the complex interactions between gender relations, climate and armed conflict. Investigating why exposure to climate adversities and violence were closely related for the survey respondents was beyond the scope of this study.

DRASTIC CHANGES IN GENDER ROLES, IN COMBINATION WITH HARDLY CHANGING GENDER ATTITUDES, MAY LEAD TO SOCIAL CONFLICT.

INTERVENTIONS ON GENDER EQUITY AND WOMEN'S EMPOWERMENT: MIXED VIEWS

The majority of survey participants have taken part in interventions related to food provision, with around 100 participants in Loima and Moroto, respectively. Far fewer respondents took part in interventions for housing, and schooling was markedly lower. Peacebuilding initiatives were more prominent in Moroto than in Loima, as were interventions on livelihood diversification strategies. More respondents from Moroto took part in these. Only a small number of respondents engaged in interventions empowering women. Participation in disarmament interventions was much higher among Ugandan respondents than their Kenyan counterparts (see Figure 8).

FIGURE 8: PARTICIPATION OF SURVEY RESPONDENTS IN PEACEBUILDING AND DEVELOPMENT INTERVENTIONS OVER THE PAST FIVE YEARS



While more than one-third of survey respondents reported receiving support for schooling, a significant number of children were still not attending school, particularly in Moroto and among respondents working in agriculture and mining.[20] Although sending children to school is an important, future-oriented adaptation strategy, it remains largely concentrated in urban areas.

We also asked respondents to indicate which interventions had positive or negative effects on their living conditions and added open questions so they could provide examples of how these had improved or negatively affected their lives (Figure 9). Peacebuilding interventions were widely regarded as helpful, with nearly all participants reporting a positive impact (except for nine). We noted differences in perceptions between localities but found no systematic link between peacebuilding interventions and reduced perceptions of violence. Livelihood diversification and environmental restoration interventions received mixed assessments. For example, anti-charcoal measures restricted income-generation opportunities and led to arrests, creating fear among communities. Food provision,

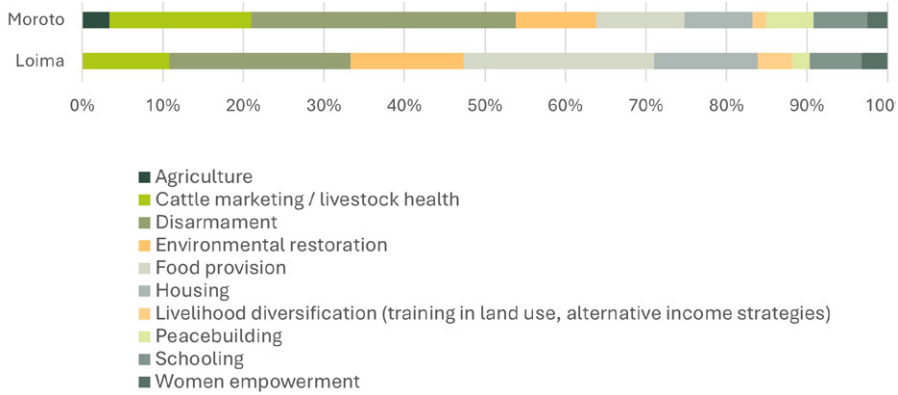
[20] In certain locations, 70 per cent or more of respondents reported that children were not going to school: Loputuk (50% agriculture, 30% pastoralism), Kobebe (75% pastoralism), Katakekile (more than 50% mining). Relatively high percentages of respondents without children in school (35 and 50 per cent) were found in Nakamane (high rate of charcoal production, firewood fetching and casual labour), Moroto airfield (very mixed livelihoods with approximately 35% of agriculture), Lokiriama (45% mining, 20% pastoralism) and Kothiroi (50% mining, 20% agriculture).

housing and cattle marketing interventions were also viewed negatively, though this largely reflected dissatisfaction with the quantity of support provided rather than the intervention as such.

MANY EXPRESSED CONCERN THAT EARLY PREGNANCIES ARE AN URGENT PROBLEM FOR SCHOOL-GOING GIRLS.

We found that child marriages and teenage pregnancies are pressing social concerns in the survey region. In their replies to qualitative questions, respondents attributed changing attitudes to child marriage in Moroto over the past ten years to sensitisation campaigns on gender equity by the district administration. This means that some measures by the state have been effective. However, remarkably, more than seven per cent of respondents in both study sites perceived initiatives on schooling as negative. Respondents commented that "girls now go to school", and "nowadays the girls are given freedom by parents to make decisions by themselves of whom and when to marry", which respondents attribute to widespread government/ district awareness-raising programmes. Still, many also expressed concern that early pregnancies are also an urgent problem for school-going girls. On the one hand, they linked early pregnancies to Western culture and technologies, such as mobile phones and to peer pressure, as girls begin relationships without the knowledge of their parents. On the other hand, they attribute child marriages primarily to poverty, and in one case, to periods of conflict. Sensitisation campaigns for girls' rights therefore appear to have contradictory effects: They promote girls' education and autonomy, yet, in combination with economic hardship during drought and conflicts, they may also contribute to early marriages.

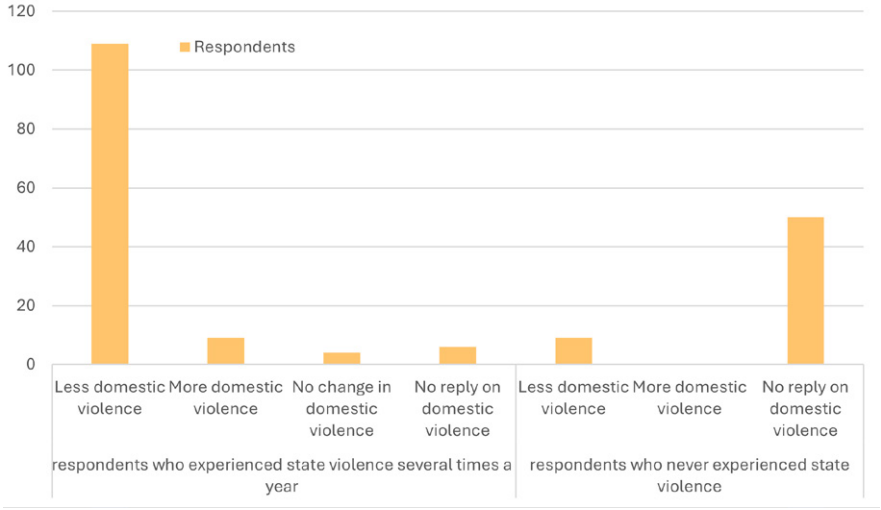
FIGURE 9: INTERVENTIONS PERCEIVED TO HAVE A NEGATIVE IMPACT ON LIVELIHOODS



STATE ACTIONS CURB VIOLENCE YET UNDER-MINE CLIMATE–CONFLICT RESILIENCE

Survey results suggest that state interventions in violence have mixed effects on survey respondents. On the one hand, we find that there appears to be a trade-off between frequent experience of state violence and fewer occasions of domestic violence: Respondents who experienced violence by state actors "several times a year" reported a decrease in violence at all levels (regional, communal and in their households), while those who "never" experienced state violence reported a decrease of violence at all levels, except in their households. A remarkably high number of respondents did not reply, potentially reflecting the negative consequences of state absence in relation to domestic violence.

FIGURE 10: PERCEIVED CHANGES IN DOMESTIC VIOLENCE BY FREQUENCY OF STATE VIOLENCE EXPERIENCE



On the other hand, respondents in Moroto experienced disarmament as especially severe. They consistently reported a climate of fear, excessive corporal punishments (some resulting in deaths) and arrests of innocent people by security agents. These actions prompted men to stay away from home during disarmament exercises, leaving women alone. Respondents more frequently described the psychological and physical violence that pastoralist communities experienced during these state-led operations in Moroto than the violence they faced from incursions by Kenyan communities (e.g. the Pokot) after such exercises. While 60 respondents reported having experienced negative consequences of disarmament themselves, 44 cited positive impacts. Strikingly, in Moroto, only four people directly affected by disarmament said that violence in their community and their region had increased over the past five years compared to the preceding decade. This suggests that, despite the violent nature of the disarmament exercises, many perceived an overall reduction in regional and community violence, particularly armed conflicts.

RESPONDENTS MORE FREQUENTLY DESCRIBED THE PSYCHOLOGICAL AND PHYSICAL VIOLENCE THAT PASTORALIST COMMUNITIES EXPERIENCED DURING STATE-LED OPERATIONS IN MOROTO THAN THE VIOLENCE THEY FACED FROM INCURSIONS BY KENYAN COMMUNITIES

Literature on past disarmament exercises corroborates the poor human rights record of these operations in Uganda (Stites & Akabwai, 2010). Scholars have also deemed them ineffective in ending cycles of armed conflict in the region in the long term, as the renewed outbreaks of violence after 2019 demonstrate (Longoli et al., 2024). Everyday security for Karamojong pastoral households—especially women and children who remain in the camps—has barely improved, with criminal attacks on homesteads reportedly increasing.

Disarmament is also reported to have reduced climate resilience by limiting pastoralist mobility and preventing the elderly and sick from accessing cattle *kraals* for protein intake and rest during droughts (Stites & Akabwai, 2010). Our survey data does at least not exclude that the mobility of disarmed pastoralists is restricted: respondents participating in disarmament exercises do not report prolonged routes to grazing areas, whereas others do.

CONCLUSION

The cross-border region between Kenya and Uganda has faced a series of severe droughts alongside an unprecedented surge in violent conflicts in recent years. This study set out to examine how climate change, conflict and gender relations interact in this context in the region. By conducting household surveys in two neighbouring regions with distinct climatic and political characteristics, we explored how adaptation strategies to drought and violent conflict have reshaped gender roles and gender attitudes and whether and how these shifts have contributed to increased violence at the domestic, community and regional levels. We also assessed how local populations perceive government and NGO development and peacebuilding interventions within this transformation process.

Our findings show that recent changes in the climate and conflict have pushed many households to adopt new occupations, sometimes alongside their traditional livelihoods. These shifts have altered the division of tasks and, thus, gender roles and, in some cases,

challenged pre-existing gender attitudes. We argue that much of the current social conflict stems from the tension between evolving gender roles and persistent gender attitudes.

Certain occupations were more affected by violence than others. The mining sector, in particular, a major employer for many pastoralists affected by recent droughts in Uganda, has brought not only new forms of violence but also keeps children away from school and has exposed them to health and safety risks, as entire families work at the mining sites. We also found that domestic violence was highest among pastoralists and miners. Although sensitisation campaigns and state presence appear to have reduced levels of gender-based violence for some, a significant proportion of respondents perceived an increase in domestic violence.

WE ARGUE THAT MUCH OF THE CURRENT SOCIAL CONFLICT STEMS FROM THE TENSION BETWEEN EVOLVING GENDER ROLES AND PERSISTENT GENDER ATTITUDES.

Households that suffered the greatest livestock losses due to drought were significantly more likely to experience violence on all levels— particularly so in Moroto (Uganda). Compared to Moroto, Loima (Kenya) experienced less disruption from climate adversities and conflict, and correspondingly less transformation in gender relations. In Uganda, recent droughts have accelerated changes in resource availability, profoundly disrupting pre-existing economic systems and driving greater change in gender relations.

We find that despite substantial changes in gender roles and some aspects of gender equality, such as girls' education, enjoying great support in the region, attitudes towards decision-making remain stubbornly unequal: Men still hold authority in households and the public spheres. Only a small share of respondents reported having participated in women's empowerment programmes. However, our results suggest that women's empowerment may take place indirectly, such as peacebuilding initiatives or sensitisation for girls' education. Still, with some respondents associating teenage pregnancies with education in school, we believe that future schooling programmes for girls should integrate sexual and reproductive health education in school, to avoid this.

Respondents largely viewed peacebuilding interventions as mostly beneficial, but experienced disarmament operations, especially in Moroto, as very severe and traumatic. Reviewing disarmament exercises is crucial to prevent further harm to pastoralist communities.

Customary dispute resolution by elders and *kraal* leaders continues to mediate access to pasture or water in some areas, particularly in the absence of formal state presence. Yet, external pressures—from militarised disarmament to land commodification—are eroding these systems.

Acknowledging and supporting these communal strategies is key to designing interventions that build on, rather than bypass, endogenous forms of resilience. As 80 per cent of respondents expressed a preference for nature-based livelihoods (agriculture, pastoralism, environmental restoration), we recommend encouraging programmes on livelihood diversification and climate change adaptation that align with those aspirations.

ALTHOUGH SENSITISATION CAMPAIGNS AND STATE PRESENCE APPEAR TO HAVE REDUCED LEVELS OF GENDER-BASED VIOLENCE FOR SOME, A SIGNIFICANT PROPORTION OF RESPONDENTS PERCEIVED AN INCREASE IN DOMESTIC VIOLENCE.

Given the survey's cross-sectional design and perception-based responses, associations between climate stressors, changing gender roles and violence should be interpreted cautiously. Further qualitative and longitudinal research would be needed to establish causal relationships more robustly.

The study's findings are highly relevant for regional and national policy frameworks aimed at strengthening pastoral resilience, gender equality and peacebuilding in border regions. They underscore the need for policies that recognise and support cross-border mobility—a historical adaptation strategy—which is now constrained by insecurity and uneven disarmament. Regional frameworks such as IGAD's Transhumance Protocol (2021) offer a framework for safe, regulated and negotiated mobility across borders; however implementation remains limited.

At the national level, Uganda's NDPIII (2020/21–2024/25) and Kenya's County Integrated Development Plans (CIDPs) for Turkana and other pastoral counties commit to peacebuilding, livelihood diversification and women's empowerment. However, these strategies must better reflect pastoralists' lived experiences, particularly the gendered impacts of disarmament and climate-driven displacement. Strengthening the link between lived realities and institutional responses is essential for building sustainable and equitable resilience in pastoralist borderlands.

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ACRONYMS AND ABBREVIATIONS

ACLED	Armed Conflict Location & Event Data Project
bicc	Bonn International Centre for Conflict Studies
CIDPs	County Integrated Development Plans (Kenya)
CRC	Collaborative Research Centre
DFG	Deutsche Forschungsgesellschaft
IGAD	Intergovernmental Authority on Development
KHH	Karamoja Herders of the Horn
NDPIII	Third National Devlopment Plan (Uganda)
NGO	Non-governmental organisation
SALW	Small arms and light weapons

ANNEX

HOUSEHOLD SURVEY CONTENTS AND STRUCTURE

We structured the survey into nine sections, arranging the questions in a way that would allow us to first gather general information that we expected respondents would be comfortable sharing, such as biographical details and their perceptions of gender roles, attitudes and the impacts of climate and conflict on their livelihoods. The final sections addressed more sensitive topics, including financial security and perceptions of conflict and violence on the regional, community and household levels. The final section focused on perceptions of peacebuilding and development interventions.

Alongside quantitative questions, we included open, qualitative questions in the survey. The responses to these questions provided important context for interpreting some of the quantitative results, revealing how gender relations intersect with climate adversities, adaptation strategies, violent conflicts and development interventions. Where possible, we paired questions about perceptions and attitudes with questions about reported actual changes on the same topics, enabling us to compare stated beliefs and lived experiences.

Before the start of the survey, respondents were informed about the aim of the study, the topics covered and their rights to skip questions or quit the survey at any time.

LOCATION SPECIFICATIONS

The first section aimed to gather information on the location, including geographical coordinates, the specific survey location and whether others were present besides the respondent.

BIOGRAPHICAL INFORMATION

The second section covered gender and age, as well as whether the respondent was the head of the household, their marital status, nationality, length of residence at the survey location and asked which ethnic or tribal groups the respondents identified themselves with (open question). It also covered the respondents' level of schooling or academic education.

HOUSEHOLD SIZE AND STRUCTURE, AS WELL AS LIVELIHOODS

This section addressed household size and structure, as well as the main livelihoods. Based on their responses, survey participants were guided through more

specific questions about their occupations. Examples include questions, for instance, for pastoralists, about land ownership and size, herd size and activities pursued within the sector.

SCHOOLING OF CHILDREN

For households with children, this fourth section on schooling gathered information using gender-specific questions on school enrolment and scholarships received by girls and boys. We also asked gender-specific questions about other activities outside of school, such as children helping out around the house.

GENDER RELATIONS AND ATTITUDES NOW AND 10 YEARS AGO

This next section was about perceived societal expectations for women and girls versus men and boys. Respondents could agree, somewhat agree, neither agree nor disagree, somewhat agree and disagree on statements about what women and girls or men and boys should do, such as "take care of the elderly", "stay at home and care for the children", "earn an income", "provide food for the family", "provide security", "engage in peacebuilding", "go to school", "be the main decision-maker in the household", etc. Open-ended questions, such as "in which areas should women/men make decisions?" invited the respondents to share further details. We then asked survey participants whether they thought attitudes towards gender roles had changed over the past 20 years, and, through an open question, if so how. A set of questions addressed child marriage and whether attitudes towards this had changed over the past 20 years, followed by an open question on the possible reasons behind these changes.

In addition, respondents were asked about the groups of people who make decisions about access to pastures and herding routes, how these decisions are made now and 20 years ago, and how they should be made (normativity).

CLIMATE CHANGE ADAPTATION STRATEGIES/ COPING MECHANISMS

This section addressed climate change and adaptation strategies or coping mechanisms implemented in over the past five years in response to recent droughts, and whether these had been supported by external actors, such as governments, NGOs or other initiatives.

Here, we created subsections addressing different livelihoods and their response mechanisms towards climate adversities and conflict. Pastoralists, for example, were asked to reply to questions about whether distance to greener pastures had increased compared to ten years ago, on the causes (climate or conflict, or both), on the time spent separated from families (due to climate or conflict) and decision-making in resource management, etc. We also asked about the personal impact of climate change and violence and invited open-ended reflections on

how recent climate events had affected gender relations in their community. We asked those who had changed livelihoods to casual work in urban areas or mining about commuting distances and the safety of travel routes. Finally, we asked about their aspirations and whether they would like to pursue a different livelihood. We asked the same for their children.

FINANCIAL SECURITY

This section examined respondents' financial security through questions about their use of electricity or different energy sources, possession of cooking appliances (gas stove, charcoal stove, etc.), telecommunication devices and transportation. Questions included whether their household had a regular financial income, about its source, the main provider, spending priorities and savings.

CONFLICT AND VIOLENCE

Here, we asked respondents to share their perceptions of changes in violence over the past five years compared to the past ten years, at the regional, community and household levels. We then asked how frequently, in their perception, people in their community had experienced violence caused by individual perpetrators, domestic violence, violence by state and non-state actors over the past five years. We asked how many people had been personally affected by violence in in the last five years. We then repeated the same questions for the past ten years. This allowed us to contrast perceptions of different kinds of violence over time and according to the actors involved.

PEACEBUILDING AND DEVELOPMENT INTERVENTIONS

In this last section, we gathered information on how the respondents had or had not benefited from different interventions. We also asked them who had been targeted by different interventions (food provision, housing, livelihood diversification, cattle marketing/livestock health, schooling, women's empowerment, peacebuilding, disarmament, environmental restoration), and who they believed should be targeted instead. Respondents were also asked to assess which interventions had positive or negative effect on their living conditions and to provide examples of how they had improved or negatively affected their lives (open questions).

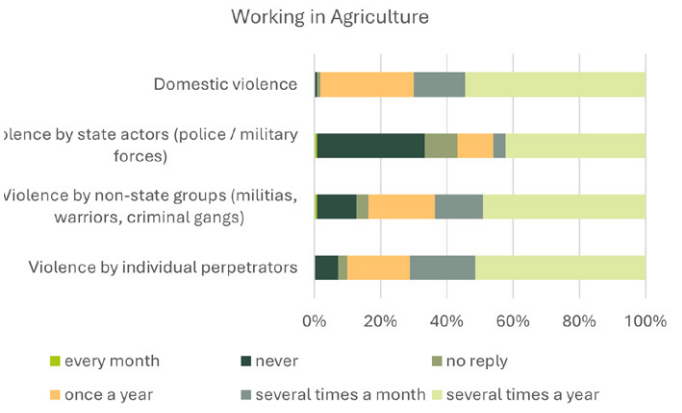
TABLES AND FIGURES

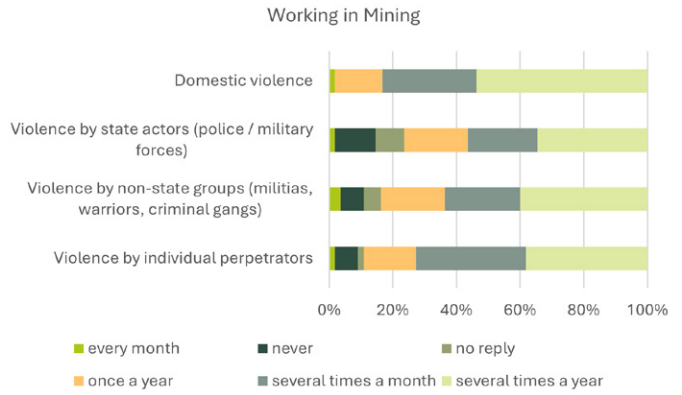
TABLE A 1: ATTITUDES REGARDING GENDER ROLES. REPLIES TO THE QUESTION: "IN WHICH AREAS SHOULD WOMEN AND MEN RESPECTIVELY MAKE DECISIONS?"

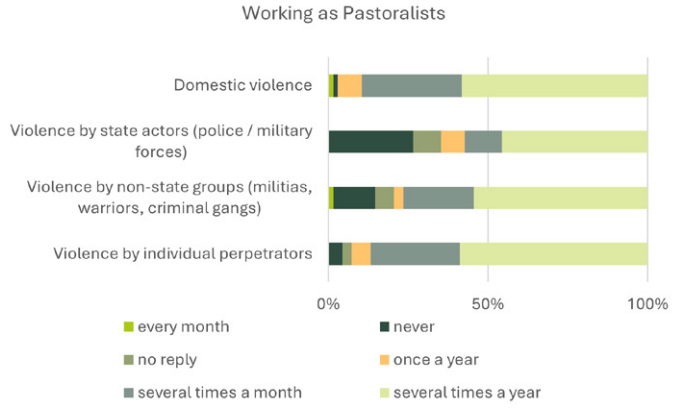
	Women should…	Men should…
High	• take care of household tasks (cooking, hygiene)	• take care of the security
	• take care of family and children (health and clothing of children)	• look after and herd the livestock
	• take care of firewood and water collection	• provide food
	• take care of weeding the land	• buy and sell land/ cattle/ minerals
	• build houses (particularly in Loima), including cutting poles	• take care of business/ financial investments
	• do garden work	• go mining
		• make long-term plans for the development of the family and ensure they are reached
Low	• buy/ get food	• provide healthcare
	• fencing the home	• provide education (school fees) of children
	• schooling arrangements of children	• building a home
	• raising/ educating children	• taking care of the elderly and the children
	• be in charge of traditional marriage initiations	• cultivate crops
	• help in mining/ marble extraction	• oversee children's marriages
	• milking animals*	• taking care of the garden
	• harvesting	• sharing resources among wives
		• burning charcoal
		• taking care of the garden

* The role of pastoralist women in Karamoja in milking animals left near the home and caring for some of the animals (ruminants, young offspring) has actually reduced over time, following disarmament exercises that have supplanted traditional *kraals* with army-protected *kraals*, and due to grazing areas being further away from home (Stites et al., 2010).

HOW OFTEN DID PEOPLE IN YOUR COMMUNITY EXPERIENCE THE FOLLOWING KINDS OF VIOLENCE IN THE PAST FIVE YEARS?







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The Kenya–Uganda border region provides a compelling case study for exploring how climate change and various interventions shape conflict and gender dynamics. Over the past five years, pastoralist communities in the Karamoja Cluster have faced multiple crises. Their diverse adaptation strategies have contributed to an ongoing redefinition of gender roles, even as underlying gender attitudes have remained largely unchanged. This disconnect has, in turn, fuelled new forms of social tensions, including rising levels of domestic violence that manifest differently across the border. Drawing on a household survey conducted in October 2024, this *bicc report* offers insights to help policymakers and NGO practitioners design conflict- and gender-sensitive programmes.

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