Resource Competition and Conflicts Triggered by Climate Change in the Turkana Kenya- Ilemi Triangle Region Analysis.

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ABSTRACT

This study examines the link between climate change driven resource competition and conflicts in the Turkana-Ilemi Triangle region, with a focus on the broader peace governance dilemma in the Horn of Africa. The objectives of the research are to investigate how these factors exacerbate conflicts and weaken national capacities

The research employs semi-structured interviews and self-administered questionnaires targeting government officials, NGO representatives, and community members. Qualitative data from interviews and open-ended questions are analyzed thematically, while quantitative data from closed-ended items are examined using descriptive and inferential statistics via SPSS.

Findings highlight that regional and bilateral initiatives such as the Horn of Africa Initiative (2014), Ethiopia-Kenya Special Status Agreement (2012), and Kenya-Uganda MoU (2019) have advanced cross-border cooperation, resource access, and security. Nevertheless, persistent climate shocks, recurrent droughts, and insecurity in borderlands continue to fuel instability. Weak governance, structural inequalities, and limited institutional capacity amplify the region's vulnerability to climate-induced conflict.

The study concludes that without strengthened governance, improved resource management, and deeper community engagement especially through the involvement of elders in disarmament conflicts are likely to intensify. Effective adaptation measures, including vocational training, crop insurance, secure land rights, and integrated climate-risk considerations in peacebuilding, are essential to building resilience. Addressing climate-related drivers of conflict through holistic approaches that combine environmental sustainability and conflict resolution is critical for achieving lasting stability in Turkana and similar regions.

Keywords: Climate Change, Resource based conflict, Turkana-Illemi Triangle

INTRODUCTION

The Turkana-Ilemi Triangle, straddling the borders of Kenya, Ethiopia, and South Sudan, represents one of the most fragile borderlands in the Horn of Africa. Its arid and semi-arid landscapes, marked by extreme temperature fluctuations and erratic rainfall, have shaped a pastoralist way of life for centuries. Communities such as the Turkana, Dassenach, Nyangatom, and Toposa have traditionally relied on seasonal migration to access grazing lands and water points(Paulson, 2021). However, over the past two decades, climate variability manifested through recurrent droughts, unpredictable rainfall, and shrinking water sources has disrupted these age-old migratory patterns. The region's environmental pressures intersect with long-standing grievances, unregulated border zones, and the widespread presence of small arms, turning the Turkana–Ilemi Triangle into a persistent hotspot for intercommunal clashes(Abdi, 2016; ENACT, 2021).

Problem Statement

While competition over resources has always been part of pastoralist dynamics, the escalation of violence in recent years suggests that traditional coping mechanisms are increasingly insufficient. Episodes of cattle

raiding, armed confrontations, and retaliatory attacks are now more frequent and more lethal. Weak institutional frameworks, limited cross-border governance capacity, and minimal state presence have allowed disputes to spiral into protracted cycles of conflict. Climate change is not the sole driver of this instability, but it acts as a force multiplier, deepening vulnerabilities and eroding the resilience of already marginalized communities. This intersection of environmental degradation and governance fragility poses a significant challenge to peacebuilding efforts in the region.

Research Gap

Existing research on the Horn of Africa often separates environmental challenges from governance and security issues, rarely integrating both. Moreover, many studies generalize climate-conflict links across the region, overlooking local nuances in areas like the Turkana-Ilemi Triangle. Importantly, community perspectives central to conflict dynamics and resolution are frequently missing. This gap limits the development of targeted policies addressing the complex drivers of instability.

This study explores how climate variability such as droughts and erratic rainfall intensify competition for scarce water and pasture, while weak governance, porous borders, and small arms proliferation heighten tensions among pastoralist groups. It also assesses community-led and cross-border efforts to promote fair resource-sharing and conflict reduction. Grounded in Environmental Security and Peace-Governance Dilemma frameworks, the study combines environmental and institutional factors to provide evidence-based insights for integrated climate adaptation and peacebuilding in the Turkana-Ilemi Triangle.

Methodological Overview

The study employs a mixed-methods approach, combining qualitative interviews with community leaders, government officials, and regional security actors, alongside quantitative analysis of climate data and conflict incident reports. Field research was conducted across key sites in Turkana County (Kenya), the Nyangatom district (Ethiopia), and the eastern areas of South Sudan's Eastern Equatoria State. The multi-scalar design allows for the integration of local narratives with broader regional patterns, ensuring a holistic understanding of the climate-conflict nexus.

The validity of this study was ensured through purposive sampling, which engaged participants with direct experience in peace governance and environmental challenges. Data collection and analysis were conducted concurrently, enabling refinement of insights and reducing bias. An inductive coding process, supported by SPSS for systematic analysis, allowed themes to emerge reliably. Triangulation across community leaders, officials, and civil society actors enhanced credibility, while transparent documentation and reflexivity further reinforced the trustworthiness of the findings.

Significance of the Study

By situating the Turkana-Ilemi Triangle within both national and transboundary contexts, this research underscores the urgent need for integrated policy responses that transcend administrative borders. The findings aim to inform not only academic debates on environmental security but also the operational strategies of policymakers, regional organizations, and development partners. The study's emphasis on community perspectives ensures that proposed interventions are culturally appropriate, politically feasible, and environmentally sustainable.

Ethical Considerations

This study was undertaken with strict adherence to internationally recognized ethical standards for research involving human participants, as outlined by the respondents, from which formal approval was secured prior to fieldwork. Given the sensitivity of resource-based conflicts and the vulnerability of the affected communities in the Turkana–Ilemi Triangle, all interactions with participants were guided by principles of

informed consent, voluntary participation, and respect for cultural norms. Respondents were fully briefed on the purpose of the research, the use of the data, and their right to withdraw at any stage without consequence. To safeguard confidentiality, identifying information was excluded from transcripts and all data were stored securely. Special consideration was given to avoid exacerbating local tensions, ensuring that interviews and discussions were conducted in a manner that did not inflame existing disputes or jeopardize the safety of participants. The research also integrated conflict-sensitive approaches, recognizing the complex interplay between environmental stress, governance, and security in the study area.

Limitations and Comparative Insights

This study faced limitations in accessing reliable data due to political instability and security constraints in conflict-affected areas. Data collection relied on purposive sampling, key informant interviews, focus groups, and secondary sources, which, while rich in qualitative detail, may introduce self-reporting biases and limit statistical generalizability. Geographic focus on Turkana County further constrains the broader applicability of findings across other pastoralist regions. Nonetheless, comparative insights from similar contexts, including Marsabit County in Kenya, northern Uganda, and parts of Ethiopia, reveal recurring patterns of climate-induced resource scarcity, governance gaps, and cross-border tensions driving pastoralist conflicts. These parallels emphasize the wider regional relevance and potential for coordinated policy responses to mitigate such conflicts.

RELATED LITERATURES

The porous borders between Kenya and neighbouring countries, especially Ethiopia, facilitate the smuggling of weapons into Marsabit County, further aggravating the situation ((PD, 2022);(The Star, 2022). This arms trafficking has emboldened criminal activities and fueled resource-based conflicts, particularly in regions such as Laisamis, North Horr, Saku, Turkana East, and Turkana South sub-counties, where banditry and cattle rustling are rampant.

The repercussions of cattle rustling and instability are serious. Lives are lost, livestock critical to the livelihoods of pastoral communities are stolen, and local economies are disrupted. Insecurity impedes market access, curtails the movement of people seeking pasture for their animals, and constrains the delivery of essential services like healthcare (KFSSG/Masabit CSG, 2022). This disruption of market functions and access to pasture is particularly damaging for pastoralist communities, whose survival depends on their ability to move freely in search of grazing land and water.

The struggle for scarce resources has not only led to intercommunal clashes within Turkana but also cross-border conflicts with neighbouring counties and countries. In 2022, the intensification of drought in Turkana and Marsabit further heightened competition over scarce resources, leading to more frequent and violent clashes between communities. These resource-based conflicts were often fueled by the struggle for access to diminishing pasture and water. Some of the attacks in Turkana and Marsabit were perpetrated by communities from neighbouring countries, taking advantage of the region's weak border controls (George et al., 2022);(Acaps Thematic Report, 2022). By September 2022, conflicts were reported near the Ugandan border in areas such as Kalobeyei, Letea, and Lokiriama/Lorengipi wards in Turkana West sub-county, as well as in areas near the Ethiopian border.

The worsening drought in both counties, combined with the escalation of cattle rustling and the proliferation of illegal firearms, has left communities in a state of vulnerability. The environmental stress exacerbates existing intercommunal tensions, creating a cycle of violence that undermines both regional security and governance.

Although Turkana County has made significant strides in establishing a governance framework to address climate change through the Turkana County Climate Change Policy, Act, and Financial Regulation (2021), the root causes of conflicts remain persistent and require deeper intervention. These initiatives, housed within

the Ministry of Tourism, Culture, Natural Resources, and Climate Change, demonstrate a robust attempt to tackle the environmental challenges brought on by climate change. The county has gone as far as creating climate change committees at the ward level to support planning, implementation, and funding for climate-related activities. However, despite these governance efforts, the region still faces resource-based conflicts driven by the very environmental changes these policies aim to mitigate. The climate governance in place focused on public awareness, building resilience, and improving stakeholder engagement has yet to address the deeper, systemic issues such as competition for dwindling natural resources like water and pasture, worsened by climate change. The conflicts in Turkana are further exacerbated by factors like the proliferation of small arms, porous borders, and long-standing ethnic rivalries, which the current climate policies do not fully address.

Climatic shocks are often identified as fundamental triggers of conflict, particularly in regions with limited resources. Concurrently, conflicts can intensify existing vulnerabilities, creating cycles of poverty and conflict at various levels, from households to entire nations. In the Horn of Africa, encompassing countries like Djibouti, Ethiopia, Kenya, and Somalia, these dynamics are particularly pronounced, with Somalia serving as a poignant example of the intricate connections between climatic shocks, conflict, and governance challenges. Solomon et al., (2018)Moreover, the region is facing the compounding effects of climate change and population growth, leading to more frequent and severe catastrophic events, especially in arid and semiarid lowland areas. This escalating situation underscores the urgent need for sustainable resource management, conflict resolution strategies, and climate change adaptation measures in the Horn of Africa to address the complex interplay between environmental factors, conflict dynamics, and vulnerability.

The concept of environmental peace building emerged as the United Nations began to pay more attention to conflicts involving natural resources. Throughout the 1990s, an initiative by Klaus Topfer with in the United Nations Environment Programme (UNEP) played a pivotal role in drawing focus to the significance of natural resources in the context of post-conflict peacebuilding efforts among various UN agencies. Against the backdrop of devastating civil wars in countries like Liberia and Sierraleone during this period, concerns grew about the potential impact of resource scarcity, particularly regarding water, on exacerbating conflicts and perpetuating their recurrence Krampe & Swain, (2021).

The competition for control over natural resources often fuels armed conflicts, with these resources serving as a source of funding for belligerents (Le Billon, 2001). Numerous studies have highlighted the interconnections and consequences of natural resources and the impacts of climate change on conflict and violence(Brock, 1991; Homer-Dixon, 1997). Conversely, other studies have indicated that political and economic factors play a more substantial role in influencing conflict risks and shaping security configurations,(Dalby, 2013; Raleigh & Urdal, 2007).

Furthermore, unfavorable weather conditions can result in elevated food prices through significant reductions in crop yields and subsequent crop supplies. These temporary spikes in food prices are likely to increase the cost of engaging in rebellion, as they diminish the immediate costs associated with participating in conflict Chassang, (2009). Additionally, based on existing theories that suggest temporary disruptions can resolve collective action challenges and motivate individuals towards political objectives (e.g., Acemoglu & Robinson (2001), the rise in food prices caused by climate-related changes may trigger instances of minor political unrest such as demonstrations, protests, and riots This is especially likely in metropolitan settings, where inhabitants may have limited access to cheap alternatives.

Climate change plays a significant role in exacerbating intragroup violence by causing shortages of essential renewable resources such as freshwater, arable land, forests, and fisheries. This relationship is often viewed through a neo-Malthusian lens, which suggests that adverse climatic conditions, such as high temperatures or decreased rainfall, coupled with population growth, result in diminished resources crucial for sustaining human livelihoods. The consequent shortage increases competitiveness among people and groups, resulting in conflicts Homer-Dixon,(2010).

At the national level, the impacts of climate change on resources can trigger conflicts within communities, particularly affecting water-dependent sectors like agriculture and animal husbandry. Moreover, it can contribute to urban unrest, insurgencies, and various forms of civil violence, particularly in developing countries where vulnerabilities are heightened. Scholars also highlight the risk of conflicts emerging over shared resources, such as transboundary water sources, which could escalate into interstate conflicts. This underscores the complex interplay between climate-induced resource scarcity and conflict dynamics Gleditsch et al., (2006)

Also, Galtung (1990) proposed the addition of "ecological balance" as a fundamental human need, emphasizing that violence against nature could lead to ecological degradation and imbalance. This ecological balance, along with the four basic needs (survival, well-being, identity, and freedom), defines peace. Furthermore, (Galtung, 1990) highlighted that violence against nature, whether through direct actions like slashing and burning or structural factors such as industrial activities, can result in environmental issues like dying forests, ozone depletion, and global warming. There findings asserts that the pursuit of sustainable economic growth might inadvertently perpetuate cultural violence by disregarding ecological concerns.

The anthropocentric perspective prevalent in European colonial history underscored how ecological violence was intertwined with the expansion of power by colonizers(Turpin & Lorentzen, 1997). This historical exploitation of the environment has left a legacy of conflict, with ongoing resource exploitation by developed nations from the Global North at the expense of countries in the Global South. The historical development gap created by colonization has led to economic and environmental challenges in many formerly colonized regions, where ecological violence has been utilized as a means to drive development. This link between colonialism and resource exploitation continues to hinder the ability of formerly colonized countries to achieve the conditions necessary for peace and development (Turpin & Lorentzen, 1997).

Natural resources often serve as primary triggers for conflicts, necessitating their integral consideration rather than being viewed as secondary aspects in humanitarian interventions. The influx of displaced populations can have significant implications on the local environment and may lead to competition with host communities over limited natural resources. A pertinent illustration of this phenomenon is observed in Bangladesh, where the large-scale arrival of refugees from Myanmar heightened competition for land resources(Ansar & Md. Khaled, 2021). Local Bangladeshi farmers expressed grievances over the appropriation of agricultural land by humanitarian organizations for expanding refugee camps, highlighting the lack of financial compensation provided to the affected farmers.

Resource Management and Sharing

Natural resources (NR) include minerals, energy sources, forests, land, water, and ocean resources. These resources play crucial roles in enhancing human well-being and are fundamental drivers of economic growth and development (Song, Malin et al., 2023)Natural Resource Management (NRM) involves decision-making processes regarding the utilization and conservation of these resources, ensuring that society benefits from a wide array of provided products and services, including food, clean water and air, biodiversity, and cultural heritage.

In recent years, resource management strategies have expanded from being NGO-led to involving more local actors. These mechanisms aim to break the resource conflict link, fostering stability and sustainable peace. In fragile states, weak governance and exclusionary institutions amplify conflict risks. While climate change may not directly cause conflict, it worsens instability by undermining resilience and intensifying communal tensions. Changes in rainfall, pastoral routes, and farming practices often strain resource-dependent communities, especially where government support and conflict-resolution mechanisms are lacking, increasing the likelihood of localized violence.

In recent years, there has been a notable rise in the adoption of resource management strategies, with international non-governmental organizations initially leading the way[1], but now seeing increasing

involvement from local entities. Many tools aimed at post-conflict management implicitly acknowledge the debated connection between resources and conflict, striving to disrupt these links to promote stability and sustainable peace in the aftermath of conflicts(Raleigh & Kniveton, 2012). Resource management mechanisms are pivotal in mitigating conflicts amidst ecological environmental pressures.

Conflicts often trigger forced migrations due to factors such as agricultural losses and extreme weather events, placing additional strain on receiving areas and escalating environmental pressures Reuveny, (2007). This increased pressure on ecosystems and resources due to conflict-induced displacement contributes to land degradation, deforestation, and overexploitation of natural resources, hindering environmental recovery and conservation efforts. Therefore, conflicts not only cause direct harm to the environment but also exacerbate pre-existing environmental vulnerabilities, posing challenges to addressing the impacts of climate change and effectively managing natural resources in conflict-affected regions Kerber et al., (2021).

It is argued that the effectiveness of government policies designed to protect the environment is a crucial dimension of economic governance that can significantly impact environmental pollution. The credibility of the government in formulating and implementing such policies plays a vital role in ensuring their success. In addition, the quality of regulations is also essential for effective environmental protection. High-quality regulations positively impact the government's ability to articulate sound measures, communicate effectively on guidelines, and enforce rules that foster the development of the private sector. Therefore, it is imperative to ensure that the government's policies and regulations are credible and effective in protecting the environment (Asongu & Odhiambo, 2021)**.**

Background of Turkana

Turkana is situated in the north-western part of Kenya and shares its borders with Uganda, South Sudan, and Ethiopia. (See Figure 1). A temperature range between 24°C and 38°C (mean 30°C) and low precipitation levels result in a mostly arid to partly semi-arid climate and landscape characterised by shrubland, savanna and dessert[2]. Besides the major rivers, Turkwel and Kerio, Lake Turkana is the only significant and permanent source of water which suffers from salinization and decreasing water levels.

The interplay between natural resources and conflict has garnered significant scholarly attention. Two predominant theoretical frameworks have emerged to elucidate this relationship: the scarcity model and the abundance model.

The scarcity perspective, often associated with neo-Malthusian theory, posits that rapid population growth, environmental degradation, resource depletion, and unequal access to resources intensify poverty and income inequality in many developing nations. Such socioeconomic pressures can foster grievances, heightening the potential for rebellion and societal unrest[3]. Land degradation has severely impacted livestock and other land-based livelihoods in Turkana County, with approximately 50% of the land highly degraded. This poses a serious threat to food security, water availability, and grazing areas, resulting in significant economic losses and hardship for pastoral communities(CIDP, 2018). The increasing intensity and frequency of extreme weather events, combined with ongoing land degradation, are expected to heighten the risk of floods and droughts across the county. Land degradation is a major factor negatively affecting human livelihoods, and climate change is exacerbating these issues, further intensifying resource-based tensions.

Turkana, part of Kenya's Arid and Semi-Arid Lands (ASALs), faces acute environmental and governance challenges. Recurrent droughts, scarce resources, and environmental degradation strain pastoralist livelihoods, while poverty, illiteracy, and food insecurity deepen instability. Frequent inter-ethnic and cross-border conflicts over water, pasture, and boundaries driven by livestock rustling and adverse climate amplify tensions. Despite significant oil deposits, the county remains among Kenya's poorest, with deep mistrust among communities. These dynamics make Turkana a critical case for examining how resource scarcity and weak governance fuel conflict.

Conflict Hot spots in the Border Areas

Conflicts over natural resources in north-western Kenya are particularly concentrated along the border areas of Baringo, Samburu, and Turkana counties, with hotspots such as Amaya, Nauyapong, and the wider Pokot-Turkana frontier. These tensions are largely driven by competition for water and grazing land, which becomes especially intense during droughts[4]. Climate variability, with increasingly frequent dry spells, heightens these pressures, forcing pastoralist groups—particularly the Pokot and Turkana to migrate in search of pasture. Such movements often cross administrative boundaries, triggering disputes over land ownership and resource access.

The dynamics of these conflicts are closely tied to environmental conditions. During seasons of adequate rainfall, competition eases, creating temporary "cold spots" of peace. However, these periods are fragile, quickly collapsing when drought returns. Climate change is amplifying this volatility, both by reducing resource availability and by shifting pastoral routes, which disrupts traditional agreements and increases the risk of clashes.

Conflict intensity varies across locations. For example, the Pokot North–Loima border with Uganda sees relatively fewer incidents, while areas like West Pokot–Turkana South and Turkana East, particularly the Tiaty–Turkana East boundary, are far more volatile. Localities such as Kapedo, Lomelo, Kamuge, and Napeitom frequently witness violence. Residents report contested areas like Naruwomoru, Nadome, and Ekipor as dangerous, citing Pokot encroachment on Turkana grazing lands.

Limited state presence and weak law enforcement exacerbate insecurity, leaving borderlands effectively ungoverned. Ethnic mistrust, historical grievances, and the absence of reliable conflict-resolution mechanisms compound the situation. As a result, peacebuilding remains an urgent but highly complex undertaking. The fluid nature of these hotspots underscores how conflict zones shift with environmental stress. For instance, Kulol in Tiaty, once a hotspot, is now relatively calm as drought has displaced Turkana communities deeper into their county, sparking new flashpoints in areas previously less affected.

Figure 1; Maps the areas in Kenya where climate variability has most significantly contributed to conflict.
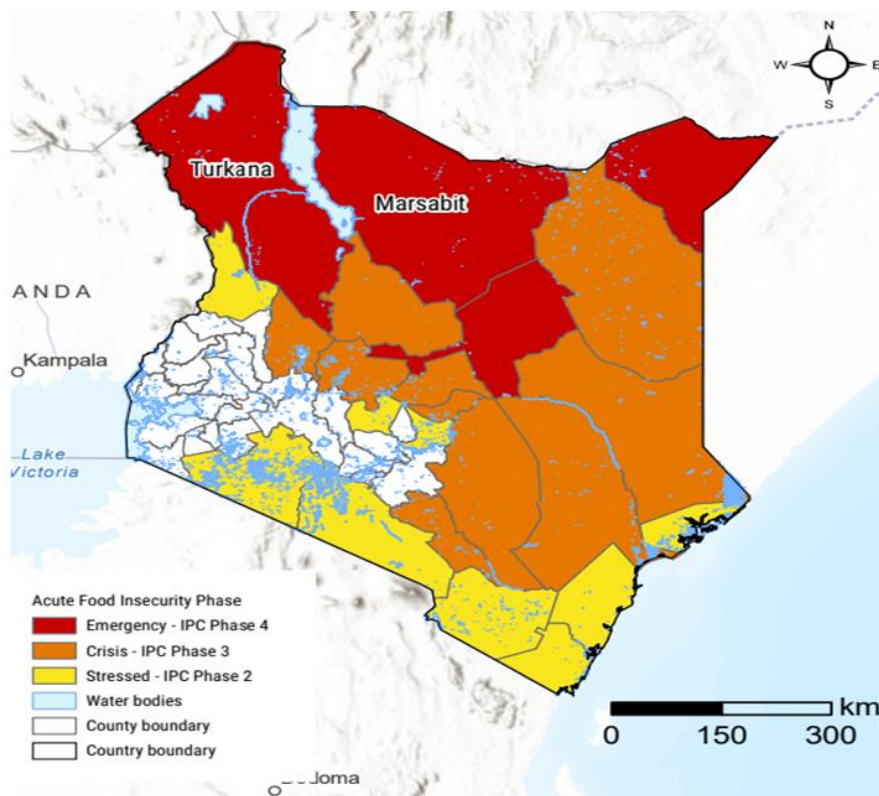

Figure 1: Climate-conflict affected areas in Kenya

The drought has intensified inter-communal tensions, leading to ongoing insecurity and resource-driven conflicts throughout the ASAL region. Many counties in this area have experienced conflicts over limited pasture and water, further fuelled by longstanding rivalries between communities. These clashes have resulted in injuries, loss of life, and livestock theft.

Access to natural resources in the Turkana land, particularly water and arable land, has been constrained due to climate change. At the same time, demand is increasing due the growing population and rapid economic development. Fragility has become more mainstream as people seek ways that boost rivalry among organizations, disrupt other groups, and incite conflict. Due to the changes in resource supply and demand, with factors like dysfunctional resource management, it has escalated local competition which has triggered problems both at the national and international levels.

Increased pressure on natural resources has led to increased competition, access to and control over these resources has become increasingly valuable, Both Kenya and Ethiopia are not resilient enough to manage changing resource availability and the increased competition. A one farmer in the Turkana corridor, narrates that people in the region rely on rain-fed agriculture and vegetation for grazing their animals, people here compete for land,

In addition to the limited and strongly varying resource basis, Turkana has experienced significant political marginalization by the central government in Nairobi which has failed to provide the region with basic services such as access to education and health services(Odhiambo, 2013) with a per capita Gross Domestic (GDP) OF US$171 (UNDP, 2006) and a Human Development Index (HDI) of *0.333 (UNDP 2020),* Turkana is the poorest and least developed country in Kenya (Aurah, 2019) around 75% of the population in the region relies upon food aid for their livelihoods.

Pastoralism, which involves herding livestock such as cattle, sheep, goats, and camels, serves as the primary livelihood for the majority of residents in the Turkana region. However, drought has severely impacted these pastoral communities by depleting both pasture and water sources. This has led to widespread livestock deaths and reduced productivity among the surviving animals. By mid-2022, Turkana had experienced the loss of 439,400 livestock due to the shortage of water and grazing land.

Rainfall at the beginning of the October-December rainy season was below average, offering no relief from the ongoing drought by mid-November. Projections indicate a high likelihood of continued poor rainfall, marking the fifth consecutive season with below-average precipitation in the region. As drought conditions worsen, humanitarian needs are increasing. However, due to limited resources, both the government's and humanitarian organizations' responses have been insufficient to fully address the needs of the affected communities. (OCHA, 21 November 2022).

The environmental challenges facing Kenya, particularly in the Arid and Semi-Arid Lands (ASAL) counties, have had significant impacts on agricultural productivity, livelihoods, and regional security. In line with my research on how ecological environmental factors influence peace governance dilemmas in the Horn of Africa, the persistent environmental stress in ASAL regions such as Turkana highlights the link between environmental degradation and resource-based conflicts. Delayed and erratic rainfall during the long rains of March, April, and May severely affected crop production, pasture availability, and water resources, exacerbating the already fragile situation in these regions.

In certain regions, cross-county border conflicts have intensified due to the discovery of natural resources[5]. Whether these resources are genuinely abundant or merely perceived as valuable, their presence elevates the worth of land in areas that were previously neglected or marginalized. For instance, Turkana County, which has historically experienced conflicts with neighbouring counties, has seen heightened tensions following the discovery of oil reserves and large underground aquifers. These resources have become focal points of contention, as communities from neighbouring counties like West Pokot, Baringo, and Samburu seek a share

in the newfound wealth. This competition over valuable resources has exacerbated pre-existing conflicts, leading to a cycle of reciprocal violence[6].

Herders from pastoral communities in Kenya's arid and semi-arid lands (ASALs) have increasingly migrated to neighboring areas seeking water and pasture due to recurrent droughts. This movement, especially after consecutive failed rainy seasons, has fueled violent theft and banditry[7]. For example, camel herders from Garissa and Tana River counties moved into Kitui, a primarily farming area, causing clashes[8]. On October 5, 2023, a Meru ethnic militia abducted and killed a Somali herder near the Meru-Isiolo border, stealing 250 goats 114 of which were later recovered.

Rain-fed agriculture in ASAL counties suffered from poor and delayed rains, leading to widespread crop failures, especially in southeastern marginal farming areas. Maize production was 7-49% below average in Kilifi, Nyeri, and Meru, with more severe losses in Kitui, Makueni, and Tharaka Nithi. These failures worsened food insecurity, intensifying competition over scarce water and pasture, which further escalates conflicts in counties like Turkana, Mandera, Marsabit, and Baringo.

Environmental degradation has also increased human-wildlife conflicts. In Kilifi, Kwale, and Taita Taveta, elephants invading settlements for water have threatened food security and safety. In Kilifi's livestock farming zones, elephants block access to water and farms, while wildlife attacks on children highlight how environmental stress intersects with local governance and security challenges, complicating efforts to maintain stability and livelihoods.

Organised Crimes - Cattle Rustling

Cattle rustling in East Africa especially in Kenya, Uganda, and South Sudan has shifted from a traditional cultural practice to a sophisticated form of organized crime driven by transnational criminal networks. According to ENACT and the Institute for Security Studies[9], the widespread proliferation of small arms and light weapons (SALWs) has fueled this transformation, turning what was once a small-scale activity into a commercial enterprise with serious economic and security consequences.

In 2017 and 2018, cattle rustling escalated into high-intensity conflicts causing numerous deaths and disrupting human security. For example, Kenya's West Pokot and Elgeyo-Marakwet counties recorded 30 deaths in the first five months of 2019 linked to criminally organized raids. Similar incidents occurred in Uganda and South Sudan, where rustlers crossed borders, leading to fatalities and large livestock losses. Rural pastoralists, vital to the region's beef industry, are especially vulnerable as criminals sell stolen cattle in urban markets worth an estimated $500 million in Kenya alone. This deepens poverty and fuels cycles of revenge attacks in affected communities.

The study also reveals that criminal networks are highly sophisticated, using advanced logistics and market intelligence. They exploit weak cross-border coordination and corruption, with some politicians reportedly bribing communities to support cattle rustling for political gain. These dynamics underscore the complexity of combating rustling, which is now deeply entwined with broader criminal and political interests in the region.

Current Root Causes of Conflicts

Climate Change and Resource Scarcity

Drought and Unpredictable rainfall patterns

In Turkana, recurring droughts have severely reduced water and grazing land availability, intensifying tensions among pastoralist communities over scarce resources. The lack of adequate rainfall has led to increased livestock deaths, weakening households' economic resilience and fueling instability. This environmental stress compounds the broader peace governance dilemma, where fragile ecosystems exacerbate resource conflicts. Addressing these challenges requires sustainable environmental management alongside robust governance systems capable of mediating disputes and promoting peace.

The drought's impact on food security and livelihoods has been profound. Between October and December 2022, about 556,000 people in Turkana faced Crisis-level food insecurity four times higher than in 2020[10]. Crop failures and soaring maize prices have further strained vulnerable households(Danish Refugee Council(DRC), 2022). Livestock losses have also deepened economic hardship; for instance, the maize-buying power from selling one goat nearly halved between 2021 and 2022[11]. The prevalence of cattle raids and violence between communities, exacerbated by the widespread availability of firearms, has increased in severity. These raids peak during the short rains when livestock restocking and cultural rites increase demand. In Samburu and surrounding areas, young warriors target traders and vehicles, disrupting local economies. Without strengthened security and conflict management, cycles of violence and poverty will likely continue to undermine regional stability.

Land Degradation

Land degradation in pastoral regions such as Turkana has significantly worsened due to overgrazing on communal rangelands lacking effective management systems. Studies from northern Laikipia and Samburu(Nkonya et al., 2018) reveal accelerated soil erosion linked to this degradation, which directly threatens the sustainability of pastoral livelihoods. The resulting loss of productive land has intensified food insecurity, particularly during drought periods, increasing community vulnerability to climatic shocks and perpetuating cycles of poverty and resource scarcity. Current land-use policies and resource management institutions remain inadequate to address these challenges, heightening the risk of environmental decline and associated socio-political instability.

Besides, degraded land has driven pastoralist groups to migrate beyond their traditional grazing areas, triggering disputes with neighboring communities[12]. For example, during the 1999-2000 drought, large-scale migrations of the Lekurruki into Mt. Kenya and Samburu and Borana into Meru District escalated ethnic and territorial tensions. The lack of formal mechanisms to regulate cross-boundary resource use and resolve conflicts has compounded these disputes, undermining social cohesion and peace. These findings highlight the urgent need for strengthened governance frameworks and inclusive, adaptive institutions to manage natural resources sustainably and mitigate conflict in pastoral landscapes.

Figure 2; illustrates the distribution of conflict events in Turkana and the neighboring Marsabit District, underscoring the cross-border nature of insecurity.
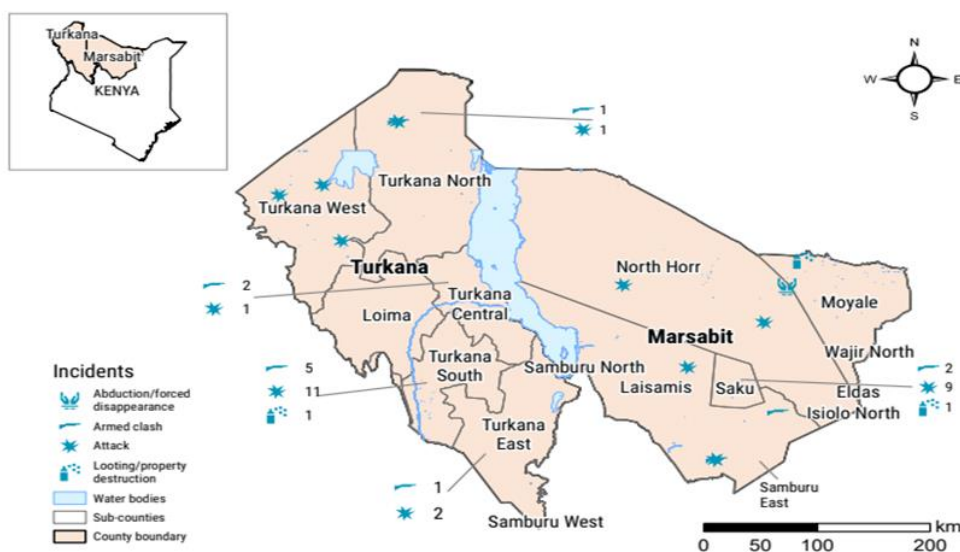

Figure 2: Conflict Events in Turkana Counties and the Neighbouring Marsabit District

Source: Author; using data from ACLED (accessed 04/11/2024)

Resource Scarcity as a threat multiplier to Pre-existing Ethnic tensions

Ethnic clashes among pastoralist communities in northern Kenya often stem from competition over scarce natural resources, such as water and grazing land, exacerbated by environmental degradation and resource depletion. These conflicts are frequently linked to cross-border and regional dynamics, which have intensified the violence through the proliferation of small arms and light weapons. As households acquire arms for self-defence and to assert dominance, the nature of these conflicts has shifted, with groups seeking to protect their resources or gain superiority over neighbouring communities. This arms race has created a dangerous cycle, where communities feel compelled to amass weaponry not only for protection but also to expand their access to resources or wealth through raiding(Mkutu, 2019).

Table 1: Presents the extent to which ethnic identity influences regional dynamics in Kenya, based on field data. The results show significant variation across regions.

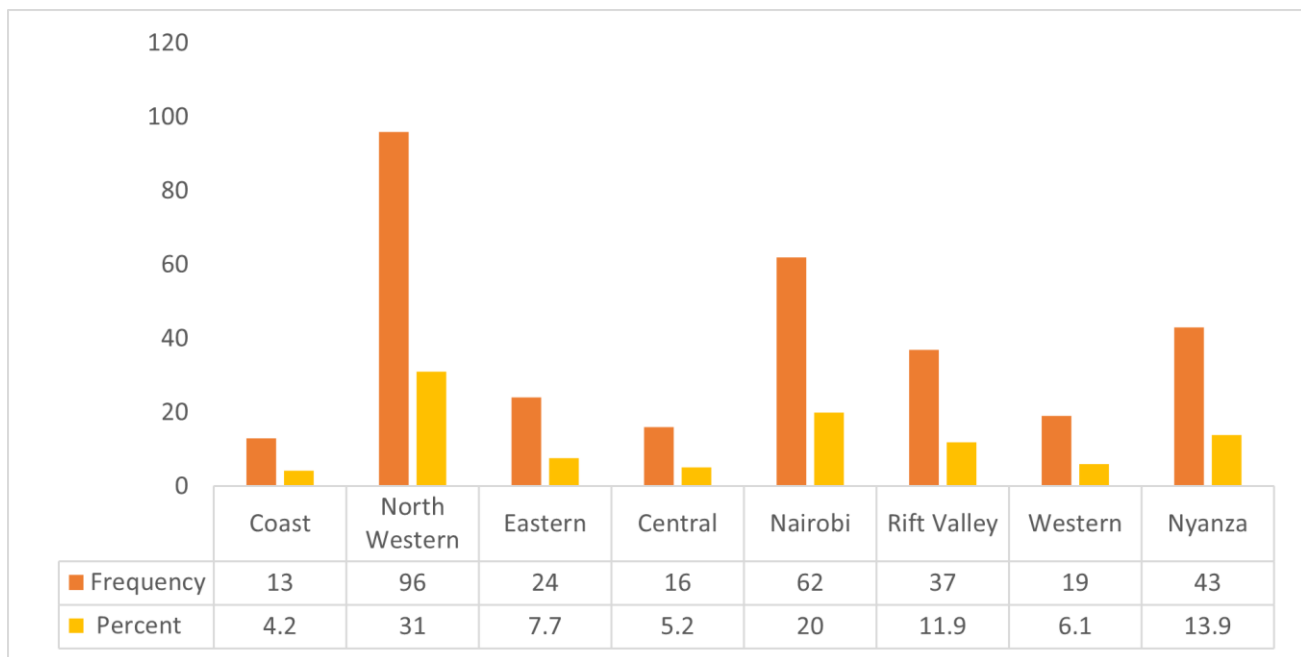|	Coast	North Western	Eastern	Central	Nairobi	Rift Valley	Western	Nyanza
Frequency	13	96	24	16	62	37	19	43
Percent	4.2	31	7.7	5.2	20	11.9	6.1	13.9

Table 1; Extent of Ethnic Identity's Role in Kenya Regions (Field Data)

In examining the data collected on the influence of ethnic identity in conflicts across various regions in Kenya, it becomes clear that ethnic affiliations play a significant role, particularly in the North Western region. This area recorded the highest number of responses (96, 31.0%), indicating that ethnic identity is a crucial factor in the conflicts experienced there.

The Role of Ethnic Identity in Conflict

In North Western Kenya, which includes regions like Turkana, the competition for resources especially water and pasture often leads to conflicts among different ethnic groups. As noted in the report, conflicts in Turkana are largely centered around livestock and essential resources such as water and land. One respondent explained, "Our ethnic identity influences the way we relate to other communities. When resources become limited, we tend to come together as an ethnic group, which can sometimes cause tensions and lead to conflicts with other groups." This response illustrates how ethnic identity can strengthen internal solidarity while also contributing to divisions that may spark conflict. Conversely, regions like the Coast and Central, which reported fewer conflict-related responses (13 and 16 respectively), may experience different dynamics. A respondent from the Coast remarked, "Here, we have a mix of ethnicities, and while there are tensions, they are often resolved through dialogue rather than conflict." This suggests that in areas with greater ethnic diversity, there may be more effective mechanisms for resolving disputes, reducing the likelihood of violent conflict.

Ethnic Regional Differences

Nairobi presents a unique context where urbanization and ethnic diversity appear to mitigate the role of ethnic identity in conflict. Approximately 20% of respondents indicated that economic survival often transcends ethnic affiliations in the city, with one resident noting, "In the city, we are all trying to survive. Ethnic identity matters less when it comes to accessing jobs and services." This suggests that economic factors in urban settings can reshape conflict dynamics, reducing ethnic tensions.

In contrast, regions such as the Rift Valley and Nyanza continue to experience pronounced ethnic conflicts, where identity intersects with political competition and historical land disputes. Respondents emphasized how political leaders exploit ethnic divisions to mobilize support, particularly during election periods, thereby exacerbating tensions. Climate change further intensifies these conflicts by acting as a "threat multiplier," worsening resource scarcity through prolonged droughts and diminished pasture and water availability. This environmental stress amplifies competition among communities, complicating dispute resolution and fueling cycles of violence.

Banditry and illicit arms trafficking, often orchestrated by criminal networks profiting from stolen livestock, further destabilize these regions by undermining local governance and security structures. In Turkana, scarcity of natural resources triggers ethnic tensions that are frequently politicized, with local leaders aligning with specific groups to consolidate electoral support(Ooga Obwogi & Karu Guleid, 2022). This politicization worsens inter-community violence, hampers development, and restricts investment and social services, thereby perpetuating economic marginalization.

Historically, conflicts among pastoralist groups such as the Pokot, Turkana, and Samburu as well as clashes between indigenous Rift Valley communities and post-independence settlers, have been culturally rooted but have evolved into more destructive and complex confrontations(Pkalya et al., 2004). Factors contributing to this escalation include intensified cattle rustling, widespread arms proliferation, inadequate security, weakening traditional governance, land disputes, ethnocentrism, political incitement, and youth unemployment.

The analysis reveals that ethnic identity is a significant contributor to conflicts in various regions of Kenya, especially in the North Western area. However, the degree of its influence varies by region. Urban areas like Nairobi show a trend where economic factors may overshadow ethnic divisions. These findings highlight the importance of developing conflict resolution strategies that are sensitive to the unique ethnic dynamics of each region.

Role of small arms and light weapons (SALW) in escalating resource-driven conflicts.

Since independence, Kenya has grappled with a range of domestic and cross-border conflicts, many of which persist today amidst broader regional instability in the Horn of Africa. Key drivers of conflict include poor governance, poverty, ethnic tensions, terrorism, and competition over scarce natural resources. Cross-border tensions are especially aggravated by instability in neighbouring states such as Somalia and South Sudan.

A critical factor exacerbating these conflicts is the uncontrolled proliferation of small arms and light weapons (SALWs)[13]. Porous borders across the Horn facilitate the unregulated movement of these weapons, intensifying violence and criminal activity. The ready availability of SALWs notably escalates disputes in resource-scarce border regions, including northern Kenya and the Turkana-Pokot border, particularly during drought-induced environmental stress.

The impacts of these conflicts extend well beyond immediate violence. Economically, they disrupt institutions, undermine local economies, and deplete already scarce resources. Sectors like tourism and foreign direct investment suffer significantly, as security concerns deter investors, stifling development opportunities[14]. Socially and politically, ongoing violence deepens community divisions and erodes governance structures.

The Horn of Africa has also witnessed a significant increase in refugees and internally displaced people, a situation exacerbated by the flow of SALWs. Kenya's pastoral regions, especially those near porous borders, face heightened insecurity as these weapons fuel inter-ethnic violence, cattle rustling, and crime[15]. The proliferation of SALWs surged notably after Kenya's 2007 post-election violence, with porous borders, political instability in neighboring countries, and insufficient security frameworks facilitating the arms trade. Refugee influxes further increase weapon availability, exacerbating tensions not only in urban centers but also in rural and pastoral areas such as Turkana, Baringo, and West Pokot[16].

Many of these SALWs originate from international sources including the United States, Europe, and the Middle East, entering Kenya via illicit black markets, often from Somalia and other conflict-affected neighbors[17]. The resultant insecurity has devastated infrastructure schools, hospitals, markets, and roads and disrupted trade and agriculture across affected regions. This cycle of violence and instability undermines sustainable development and regional peace efforts, highlighting the urgent need for coordinated arms control and conflict resolution strategies in Kenya and the broader Horn of Africa.

Increased Gender based violence-GBV

In our study, respondents were asked to describe conflicts arising in their communities due to environmental changes. The data reveals a complex interplay between resource scarcity and increased tensions, particularly in relation to Gender-Based Violence (GBV).

Out of the total respondents, 1.4% indicated that GBV had been a direct consequence of environmental changes in their communities. While this figure may appear relatively low, it reflects an undercurrent of distress and vulnerability that has emerged within the socio-cultural context of the region, especially in response to resource competition and climate-induced stressors. As seen in the Diagram below, the frequency of conflicts over natural resources is much higher, with 28.6% of respondents reporting conflicts over water sources, 33.1% over land use, and 25.4% over food resources. These disputes significantly affect women, whose roles are often intertwined with these resources.

Figure 3; As reflected in Figure 3, gender-based violence has emerged as a significant social challenge affecting stability in the region.
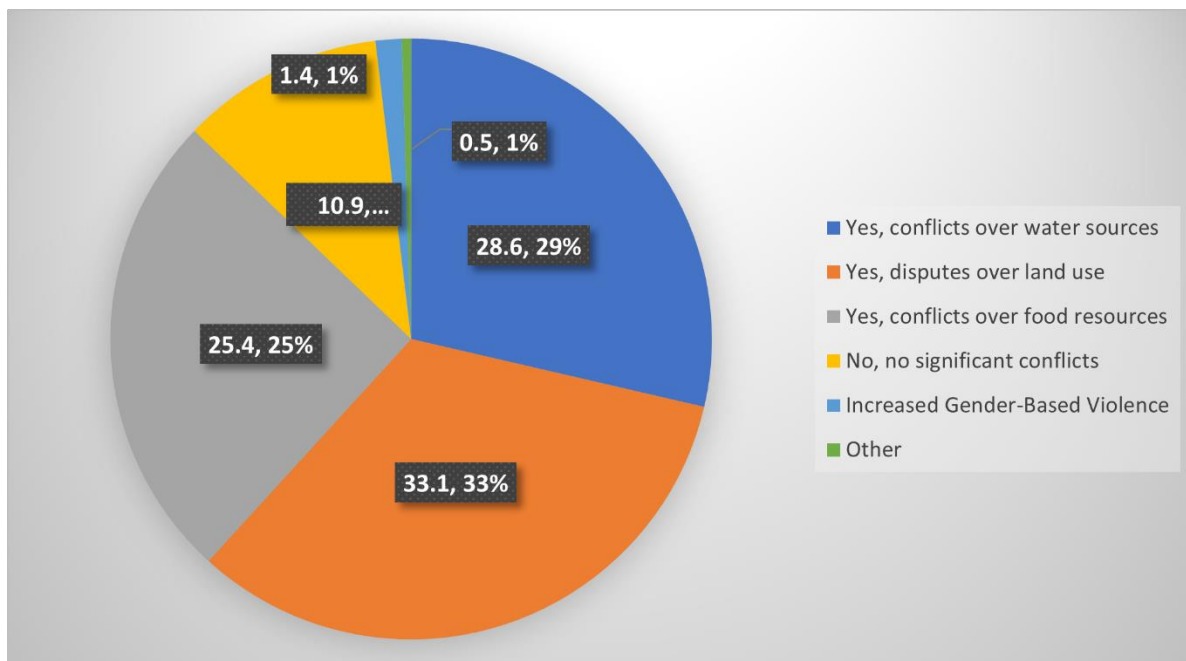

Figure 3: Rate of Gender Based Violence in the Region

Source; Self-generated

While gender-based violence (GBV) may not be the most frequently cited form of conflict, it remains a critical concern, particularly in pastoralist regions affected by environmental stressors such as drought and resource scarcity. Climate change acts as a "threat multiplier," exacerbating competition over diminishing resources and intensifying vulnerabilities among women, who bear disproportionate social and economic burdens.

Recurring droughts and livestock losses have forced many women in pastoral communities to diversify livelihoods, often into informal sectors such as craft-making or small-scale trade. While demonstrating resilience, this shift exposes women to heightened risks of GBV, as they navigate roles that challenge traditional gender norms and face marginalization from decision-making processes related to resource allocation and governance. As one respondent noted, *"Due to the increasing frequency of droughts, I've had to look for other ways to provide for my family... relying solely on livestock isn't enough anymore."*

The increase in female headed households resulting from conflict related deaths or male migration creates a demographic with distinct economic and safety challenges. These women often face greater exposure to exploitation and violence during times of scarcity. Studies(Bob, 2010; Omolo, 2010) illustrate that drought-induced cattle rustling and historical land inequalities contribute to the marginalization and vulnerability of women, including dispossession and exposure to violence.

Women's roles in securing water, food, and fuel place them at heightened risk during periods of resource-based conflict, as they travel through insecure environments. This vulnerability is compounded by the proliferation of small arms and light weapons (SALWs), which escalate the intensity and lethality of ethnic conflicts and resource disputes in regions like Turkana. While men are typically viewed as primary actors in armed violence, women face profound gender-specific impacts. They are both victims and, in some instances, active participants occasionally assuming combat roles in defense of their families or facilitating arms trafficking, often unnoticed due to prevailing gender norms (Opondo et al., 2017).

Conflict-induced displacement further compounds women's insecurity. In Turkana and neighboring regions, displacement and migration linked to environmental stress increase risks of sexual and physical violence, particularly where security forces are unable to protect vulnerable populations effectively. Reports of human rights abuses, including sexual violence perpetrated during displacement and in insecure camps, highlight systemic protection gaps (Simuyu, 2008; Tari & Pattison, 2014).

The prolonged absence of men during livestock migrations sometimes extending up to three years leaves women, children, and the elderly isolated in settlements facing severe food insecurity and malnutrition. The loss of access to critical livestock products such as milk and meat exacerbates nutritional deficits. Beyond physical deprivation, women experience significant psychological distress linked to their caregiving responsibilities amid prolonged family separation, an often-overlooked dimension of environmental and social conflict.

In summary, gender-based violence in the Turkana is deeply intertwined with environmental degradation, resource scarcity, and armed conflict. Addressing these challenges requires targeted interventions that enhance women's protection, economic empowerment, and inclusion in resource governance and peacebuilding initiatives.

Gender Dividends in Environmental Peacebuilding

Addressing gender-specific risks in conflict and post-conflict settings offers a critical pathway to advancing both gender equity and environmental sustainability. A gender-responsive approach improves community resilience by tackling vulnerabilities that conflicts often magnify, in line with the 2016 UNEA-2 resolution(UNEP/EA.2/Res.15, 2016), which underscores the need to address environmental impacts throughout the conflict cycle. Recognizing environmental degradation as a security, development, and humanitarian concern, this approach integrates gender, human rights, and protection of vulnerable populations into peacebuilding and environmental strategies.

Women, often the primary managers of local natural resources, are central to environmental stewardship[18]. Evidence from India, Nepal, and Kenya shows that when women participate in decision-making on water and sanitation, facilities are better maintained, more widely used, and better suited to community needs. Excluding women from such processes weakens environmental reforms and resource management efforts. Integrating their perspectives is therefore not only a matter of equity but a prerequisite for lasting peace and sustainability in conflict-affected regions.

Global frameworks already support this integration. Gender mainstreaming strategies require policies to consider gender implications, and the Women, Peace and Security agenda enshrined in UN Security Council Resolutions 1325 (2000)[19] and 2242 (2015)[20] recognizes women's roles as vital to peacebuilding and environmental governance. Women's active involvement in resource management is increasingly acknowledged as a key factor in preventing resource-based conflicts, including those in regions like Turkana.

However, the interaction of gender and the environment in armed conflict is undeveloped in legal systems. International Humanitarian Law seldom addresses the disproportionate environmental burdens women face. Reports from conflict zones show that environmental harm exacerbates gender inequalities, a concern reflected in the UN Secretary-General's reports on Women, Peace and Security. In 2022, UN General Assembly Resolution 76/300[21] affirmed the right to a clean, healthy, and sustainable environment, echoing IPCC findings that climate change deepens gender disparities and heightens conflict risks[22].

Migration Patterns

The study identifies a direct correlation between environmental stress, migration patterns, and conflict in Turkana County. During periods of severe resource scarcity marked by drying water points and reduced pasture pastoralist groups migrate into territories traditionally occupied by other ethnic communities. Such movements, particularly in drought seasons, frequently trigger violent clashes, with hotspots including Turkana East and the West Pokot border. Cross-border migrations into Uganda and South Sudan further complicate governance, as transnational competition for shared resources undermines regulatory capacity.

Pastoralist communities in Turkana face persistent political and economic marginalization, limiting their ability to adapt to climate change or manage resources sustainably. Historical tensions between Turkana and Pokot intensify when migrating herders enter contested grazing zones, as seen during the 2017-2018 drought-driven displacements. The social impact is significant, with heightened fears of raids, threats to women and children, and disruption of economic activities, deepening regional poverty. Additional strain comes from the presence of over 160,000 refugees in the Kalobeyei Integrated Settlement and Kakuma Camp[23], whose needs for land, water, and grazing resources compete with those of local pastoralists. While humanitarian aid has brought some economic benefits, it has also intensified resource competition, environmental degradation, and tension between host and refugee communities.

LOSS OF LIVELIHOODS

Respondents noted that environmental factors intensify conflicts and erode national capacities, causing severe livelihood losses particularly in Turkana, where economic exclusion is marked by poor access to markets, jobs, education, and healthcare. Heavy reliance on pastoralism, highly vulnerable to climate change and resource scarcity, compounds these challenges.

Frequent droughts and shrinking grazing lands undermine livelihoods, deepening poverty and driving competition over essential resources. Climate variability has led to crop failures, livestock deaths, hunger, and displacement. Unpredictable migrations such as Turkana pastoralists moving into Uganda and Karimojong shifting within Uganda have sparked disputes over water and pasture.

In border areas, conflicts over grazing, water, livestock theft, and cultural differences are common, with porous borders enabling arms smuggling that escalates violence. In December 2019, swarms of desert locusts from

Somalia and Ethiopia invaded Kenya, affecting 37 of 47 counties(Relief Web, 2022). The infestation destroyed crops and grazing lands, worsening food shortages, and continued into late 2020 with a second wave hitting Ethiopia, Kenya, and Somalia, further destabilizing agricultural production.

GOVERNANCE CHALLENGES

The weak government presence in northern Kenya has compelled communities to take security into their own hands, resulting in widespread lawlessness. A leader from the Pastoralists Integrated Support Programme (PISP) points to poor leadership and the breakdown of traditional community values as key factors worsening insecurity. Traditional elders, who once played a central role in mediating conflicts and maintaining peace, are increasingly losing influence as younger groups form independent cliques that disregard customary authority. This erosion of traditional governance has created a power vacuum, where even longstanding practices like elder-sanctioned raids have lost their regulating effect.

In response to the lack of formal security, local communities have established home guards and police reservists to fill the gap. While these groups help maintain some order, their existence has also contributed to a rise in weapon availability. The region's proximity to conflict zones such as Somalia has further intensified the proliferation of firearms, making violence more lethal and difficult to manage. Although firearms sometimes deter petty crime, they also generate fear and mistrust among neighbors, escalating cattle raids and inter-communal violence. Efforts to implement the Nairobi Protocol on Small Arms face significant challenges due to inconsistent firearms legislation across neighboring countries, which hinders effective cooperation and enables traffickers to exploit legal gaps, perpetuating insecurity in the region.

Effectiveneness of governance structures in mitigating resource-based conflicts

A major challenge is ensuring community land allocations based on ethnicity, culture, or shared interests are conducted inclusively and supported by effective, accessible dispute resolution mechanisms(Tari & Pattison, 2014). Such allocations must consider historical contexts to establish stable power dynamics and reduce resource conflicts. While open forums could help address land disputes and revive reciprocal use agreements, the transition may produce winners and losers, risking heightened tensions. Therefore, the process should be deliberate, transparent, and inclusive. Multi-stakeholder resource management experiences show that identifying diverse stakeholders and their interests requires time but leads to sustainable outcomes.

Community participation is crucial for mitigating resource conflicts in pastoral areas (Haro et al., 2005). When communities define their own management plans, ownership and accountability increase, enhancing governance legitimacy and fostering dialogue to address resource scarcity tensions. Tailoring governance to local social and ecological contexts promotes stability and peace.

The Marsabit Integrated Development Program (MIDP) improved water access in underutilized grazing areas, reducing pressure on overgrazed lands and distributing livestock more evenly. This eased competition for scarce resources, supported sustainable grazing, and minimized conflict.

Kenya's military could collaborate with environmental agencies to protect key biodiversity areas by integrating environmental guidelines into operations. Training troops to avoid sensitive zones and working with conservationists aligns military actions with environmental protection and international humanitarian law, supporting both biodiversity and indigenous rights (Helen & Vanessa, 2020).

Shared Governance and Security Solutions; Addressing Climate Change and Conflicts

The Kenyan government and local communities have coordinated efforts to address instability, especially by reducing the proliferation of small arms and light weapons (SALWs)[24]. Key milestones include Kenya signing the Nairobi Protocol in 2004, endorsing Best Practice Guidelines in 2005[25], and joining the East Africa Police Chiefs Cooperation Organization (EAPCOO) Protocol in 2008 to combat cattle rustling through

regional cooperation[26]. These efforts reflect Kenya's political and diplomatic commitment to boosting national and regional security.

Kenya established the Kenya National Focal Point (KNFP) in 2003 to coordinate SALW control policies, align with international agreements, and foster collaboration with regional stakeholders[27]. Given Turkana's proximity to unstable neighbors and porous borders that facilitate arms smuggling, the KNFP's role is vital in curbing illegal firearms influx. Strengthening cross-border cooperation can reduce SALWs, lowering violence in pastoralist communities.

Alongside legal frameworks aligned with the UN Programme of Action, Kenya partners with neighbors like Uganda to limit SALW accessibility. Capacity-building and awareness programs, such as the Multi-Pronged Community-Based Strategy, promote peace and provide economic alternatives to reduce reliance on firearms.

County governments in West Pokot and Turkana have created peacebuilding directorates to address root causes of conflict, including resource competition(ENACT, 2021). Uganda's Karamoja region also benefits from development initiatives focused on livelihoods and security to combat cattle rustling.

Regionally, the Intergovernmental Authority on Development (IGAD) supports peace through its Conflict Early Warning and Response Mechanism (CEWARN), which monitors tensions for timely interventions. IGAD's Drought Disaster resistance and Sustainability Initiative strengthens pastoralists' resistance to drought and environmental shocks, supporting sustainable livelihoods and regional stability. These integrated efforts highlight the importance of combining security and socio-economic strategies to foster lasting peace in the region.

Cross-Border Solutions

Our survey highlights significant progress in cross-border cooperation within the Horn of Africa, largely driven by regional bodies and bilateral agreements. IGAD stands out as the leading actor, coordinating initiatives like the Conflict Early Warning and Response Mechanism (CEWARN) and the Drought Disaster Resilience and Sustainability Initiative (IDDRSI), which target both conflict and development challenges in border areas. The World Bank's Regional Pastoral Livelihoods Resilience Project (RPLRP) also plays a key role in enhancing pastoralist resilience. IGAD policy frameworks, such as the 2018 "Nexus between Informal Cross-Border Trade and Security," facilitate cross-border collaboration.

The 2014 Horn of Africa Initiative launched by IGAD alongside the World Bank, UN, EU, and African development institutions specifically addresses borderland insecurity and underdevelopment, recognizing these zones as critical for conflict prevention and regional integration(World Bank, 2014). World Bank President Jim Yong Kim highlighted its potential to improve access to water, food, healthcare, education, and jobs, emphasizing regional security and cooperation.

Bilateral agreements have strengthened regional stability and economic growth. Significantly, the 2012 Special Status Agreement between Ethiopia and Kenya enhanced economic relations, while following MoUs in 2016 and 2019 between Kenya, Ethiopia, and Uganda focused on animal health, conflict prevention, and economic development in pastoral borderlands[28]. Regular high-level meetings promote peace and development, though tensions, such as Ethiopian incursions pursuing militants, occasionally challenge relations. Despite these, bilateral efforts remain essential for addressing insecurity's root causes and fostering lasting peace in the Horn of Africa.

RECOMMENDATIONS

To strengthen efforts against illicit firearms and insecurity in pastoralist areas, deeper involvement of community elders in voluntary disarmament is essential. Elders, as trusted community voices, can better communicate the roots of insecurity and the reasons behind arms possession, fostering trust and sustainable

outcomes. While government led public meetings have raised awareness, elder engagement in negotiations would enhance effectiveness.

The government must demonstrate stronger political will, allocate sufficient resources, and invest in development projects addressing underdevelopment and instability in affected regions. Shifting the perception of pastoralists from passive aid recipients to active national contributors is crucial. Supporting alternative livelihoods and inclusive socioeconomic policies will better address their challenges.

Effective conflict mitigation requires collaboration among local communities, government agencies, and NGOs through dialogue platforms that share perspectives and resource needs. Establishing community-based resource management committees with diverse representation in Turkana can empower marginalized voices, build trust, and reduce tensions by promoting cooperative resource governance.

Public education on climate change and sustainable resource use via community meetings, radio, and trusted leaders can foster cooperation and resilience. A robust monitoring framework with clear indicators and community participation ensures programs remain relevant and effective. Addressing marginalization involves promoting social, economic, and political inclusion through equitable resource access and political representation to shape responsive policies.

CONCLUSIONS

In conclusion, the situation in the region is unlikely to stabilize due to the forecasted poor rainfall, which will worsen the difficulties already faced by pastoralist and agropastoral communities. Ongoing climate shocks are expected to cause further loss of life, livestock, and food security, intensifying malnutrition and straining the already fragile coping mechanisms of affected populations. The persistent conflict and violence will continue to aggravate these challenges. Addressing these issues requires strengthening governance, improving resource management, and enhancing regional cooperation to create sustainable solutions that promote resilience and long-term stability.

The relationship between climate change and armed conflict in the Turkana region highlights the urgent need for a comprehensive approach to strengthen human security and promote sustainable development. Communities in this area face multiple challenges, including weak governance, structural inequalities, and limited institutional capacity, all of which exacerbate their vulnerability to climate-induced conflicts. Tackling these fundamental issues is key to reducing the risk of conflict linked to environmental changes.

Effective adaptation strategies, such as crop insurance, vocational training, financial support, improved food storage, and secure land rights, can help improve food security and diversify local economies. These measures not only build resilience against climate impacts but also foster stability by encouraging cooperation among communities. It is essential to integrate climate risks into conflict prevention and peacebuilding efforts. This can be done by incorporating environmental sustainability into conflict resolution, peacekeeping missions, and post-conflict recovery. Addressing climate-related challenges in peacebuilding efforts can help prevent future conflicts in areas prone to environmental stress.

A holistic approach that combines climate adaptation and conflict resolution is crucial for creating a more secure and resilient future for communities in Turkana and similar regions. By addressing the links between climate change and conflict, we can promote sustainable development, empower marginalized populations, and ensure fair resource management.

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