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Contested Landscapes: Environmental Resource Tensions Between Refugees and Host Communities in Ayilo I & II, Adjumani District, Uganda

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Keywords:

*Landscapes,
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Introduction: Uganda has garnered significant international recognition for its progressive refugee policy, which structurally embeds local integration, the right to work, and access to land, aligning with global commitments under the Comprehensive Refugee Response Framework (CRRF). However, this positive policy facade conceals a complex and fragile landscape marked by profound environmental resource pressure, identity negotiation, systemic institutional weakness, and fragile social cohesion. **Methodology:** Focusing on long-term refugee-hosting areas, specifically Ayilo I and Ayilo II settlements in Adjumani District, Northern Uganda, this article uses qualitative fieldwork to critically examine how the scarcity of essential resources, land, water, and forest products, interacts with governance gaps, cultural misunderstandings, and perceptions of inequality to structure conflict dynamics. The analytical framework is situated within global and African comparative displacement contexts to illustrate how the combined forces of resource scarcity, rapid demographic shifts, and institutional limitations jointly contribute to environmental conflict in displacement settings. **Findings:** The core findings demonstrate that environmental resource conflict in Adjumani is simultaneously ecological, institutional, and socio-cultural. **Conclusion and Recommendations:** The article concludes by advocating for integrated, locally grounded approaches to environmental management and conflict reduction, thereby contributing theoretically to the broader scholarship on resource conflict, forced migration, and the evolving dynamics of refugee-host relations. The study recommends land policy dialogue frameworks, enhancing environmental policies, and including refugee-host representation in local governance.

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INTRODUCTION

Uganda's Progressive Policy and Local Resource Strain

Uganda currently hosts one of the largest refugee populations globally, surpassing 1.8 million people by 2025, with South Sudanese refugees forming the majority (UNHCR, 2024). The country's exemplary refugee regime, underpinned by the Refugee Act (2006), the Refugee Regulations (2010), and the Comprehensive Refugee Response Framework (CRRF), champions inclusive refugee protection. This framework is designed to foster self-reliance rather than dependency, granting refugees vital rights such as freedom of movement, the right to work, and crucial access to land for settlement and cultivation (Ahimbisibwe, 2021; Omata, 2018).

Despite this progressive legal structure, the practical realities in districts such as Adjumani in Northern Uganda reveal deep and persistent strains on environmental resources. The relationship between refugees and their host communities, initially characterised by humanitarian generosity and cultural hospitality, has gradually transformed into a complex dynamic defined by mounting resource scarcity, environmental degradation, profound governance limitations, and subsequent socio-cultural tensions. As the refugee population has grown, pressure has escalated on communal land, limited water sources, and dwindling forest resources, consequently generating tensions between the two groups. Environmental resources are fundamental to the daily survival of both refugees and hosts, providing land for cultivation, water for domestic

use, and firewood for essential cooking. Competition invariably emerges when the scale of resource use exceeds the local capacity for regeneration, often leading to manifest conflict. Critically, in contexts like Adjumani, where land tenure is customary, unregistered, and fundamentally embedded within cultural identity, resource competition possesses the capacity to transform into deep-seated conflict (Knight, 2010). Under these conditions, the necessary foundation of social cohesion deteriorates, and ethnic and cultural boundaries are reinforced and hardened (Ager and Strang, 2008).

This article provides a deep analytical account of environmental resource-related tensions between South Sudanese refugees and host communities in Ayilo I and II. It specifically examines how intense competition for land, firewood, grass, and water critically overlaps with systemic governance challenges, cultural incomprehension, and pervasive perceptions of inequality. Adjumani District, located in the West Nile Sub-Region of Northern Uganda, has been a long-term host to South Sudanese refugees for over three decades, experiencing its largest influx following the civil war eruption in 2013. Ayilo I and Ayilo II settlements, established in 2014, are vital sites for this study, as resource competition has intensified due to their immediate proximity to the host community's farmland and shared forest reserves.

The central argument developed here is that environmental resource tensions in Ayilo I and II cannot be explained solely by material scarcity; rather, they are a product of a volatile interplay involving ecological pressure, weak institutional

governance, cultural incomprehension, and asymmetric aid distribution. The study adopts the established Resource Scarcity Theory (Homer-Dixon, 1999; Reuveny, 2007) to frame how sudden demographic shocks in ecologically fragile zones significantly contribute to conflict. It further builds upon forced migration research that accentuates how refugee–host relations are perpetually shaped by historical grievances, the politics of aid distribution, and the intrinsic socio-cultural meanings attached to land and identity (Milner and Loescher, 2011; Omata, 2018).

As academic and policy debates increasingly address the complex environmental dimensions of forced displacement (Krampe & Nordqvist, 2019; Rüttinger et al., 2015), this article contributes significantly to a deeper understanding of how resource conflicts unfold in specific local contexts. It achieves this by systematically connecting the micro-level lived experiences within Ayilo I and II with identifiable national, regional, and global patterns. This rigorous academic positioning is essential because environmental conflict research often risks generalising ecological pressure without thoroughly examining the precise socio-cultural distinctions specific to particular communities.

In summary, understanding environmental resource tensions in Adjumani demands an interdisciplinary approach that impeccably merges crucial insights from environmental studies, conflict analysis, gender studies, migration research, and social anthropology. These tensions reflect deeper structural issues concerning governance, identity, institutional coordination, and the fundamental challenge of social cohesion. Addressing them, therefore, necessitates not only technical ecological interventions but also significant social, cultural, and governance reforms. It is upon this foundation that the subsequent sections build, offering an in-depth exploration of resource governance in refugee settings globally and across Africa, before specifically focusing on Uganda and the empirical findings from Ayilo I and II.

Resource Tension and Governance in Refugee Settings: Global and African Contexts.

Environmental resource tensions in refugee-hosting areas have been widely and comprehensively documented across multiple global regions, demonstrating that the critical challenges observed in Adjumani District are part of a broader, systemic global pattern. When substantial populations are displaced and subsequently relocated, often rapidly, into ecologically fragile regions, the demand placed upon natural resources increases significantly (Jacobsen, 2002; Gleick, 2014). Refugees rely heavily on land, water, and forest resources, particularly in rural settlements that lack adequate alternative energy sources or modern infrastructure. This section expands the global and African contexts to deepen the understanding of how environmental resource tensions systematically unfold in displacement situations.

Global Experiences of Resource Tension.

The Middle East offers some of the most extensively documented examples of resource tension generated by mass displacement. Jordan and Lebanon, which collectively host millions of Syrian refugees, provide crucial lessons for understanding severe resource pressure.

Jordan's pre-existing water scarcity crisis worsened significantly following refugee arrivals, with regional municipalities reporting heightened tensions over borehole access and the necessity of strict water rationing schedules (Al-Azraq & El-Barmelgy, 2018). Public water points, especially in Mafraq and Irbid, became chronic hotspots for daily disputes as both native Jordanians and Syrian refugees were forced to queue for long hours (Ghazal, 2016). Given that Jordan is globally recognised as one of the most water-scarce countries, the massive increased demand from refugee camps and host communities placed unprecedented stress on regional aquifers and municipal supply systems (UNHCR, 2019).

Similarly, Lebanon experienced acute environmental stress. Villages in the Bekaa Valley, whose agricultural livelihoods are highly dependent on irrigation water, reported significant reductions in water availability after the large-scale arrival of Syrian refugees (Stellmach et al., 2018). Host communities widely complained that limited municipal water infrastructure was being redirected toward refugee settlements, fuelling perceptions of institutional bias and inequality (Harb & Atallah, 2015). Furthermore, deforestation increased significantly as refugees cut down trees for necessary firewood and shelter construction, mirroring the degradation patterns subsequently observed in Uganda. These documented cases powerfully demonstrate that resource scarcity in refugee-hosting areas invariably intersects with long-standing weaknesses in governance structures.

Turkey, hosting over 3.6 million Syrian refugees, has faced localised tensions concerning municipal waste management, urban water supply, and overburdened agricultural land (Sak, 2021). In rural districts such as Kilis, disputes frequently emerged over rangelands utilised by refugee livestock owners. Local Turkish farmers argued that the refugee livestock herders overloaded shared pastures, leading to environmental degradation and subsequent conflict (İçduygu, 2015). These instances accentuate how rapidly changing population densities inevitably create intense competition for land-based resources.

In South Asia, Bangladesh's Cox's Bazar region serves as a prominent example of extreme environmental stress resulting from refugee concentration. The arrival of more than one million Rohingya refugees intensified competition for firewood, building materials, and grazing land (UNDP & UN Women, 2018). Deforestation became so severe that satellite imagery documented extensive forest loss within just the first year of settlement. Local Bangladeshi households reported significant tensions as they lost access to traditional areas used for grazing and collecting forest products, concurrently with groundwater levels dropping dramatically in

several districts (Heitzig et al., 2021). Environmental degradation contributed directly to mounting social tensions between the Rohingya and host communities.

Pakistan, which has hosted Afghan refugees since the late 1980s, experienced analogous resource pressure. In Khyber Pakhtunkhwa Province, host communities reported increased competition over grazing land and critical forest resources (Schmeidl, 2002). Afghan refugees were often simplistically blamed for deforestation and land degradation, though subsequent studies demonstrated that both host and refugee communities contributed to environmental decline (Kronenfeld, 2008). The Pakistani example illustrates how environmental impacts are frequently politicised or scapegoated, contributing to negative perceptions of refugees. This dynamic is not dissimilar to the case of Adjumani district, where refugees often bear the full blame for environmental degradation, overlooking the significant contributions of the host community to the same degradation.

Even in Europe, where refugee-hosting regions generally possess stronger infrastructure compared to low-income countries, resource tensions persist. During the 2015 European refugee crisis, small Greek islands like Lesbos reported significant pressure on freshwater sources and waste management systems due to the large numbers of Syrian and Afghan arrivals (Triandafyllidou, 2020). In rural areas of Germany, some residents voiced concerns about increased water consumption and pressure on municipal waste collection systems in towns hosting refugee shelters (Breckner, 2020). These examples clearly illustrate that environmental resource challenges are not confined to low- and middle-income countries; rather, they reflect how rapid population shifts impact local systems everywhere.

African Experiences of Environmental Resource Conflict.

Africa hosts some of the world's most ecologically vulnerable refugee-hosting environments, characterised by vulnerability to climate change, recurrent drought, severe land degradation, and weak institutional governance structures.

In Kenya's Dadaab and Kakuma refugee camps, deforestation became severe as hundreds of thousands of Somali refugees harvested acacia trees for firewood and construction (Rawlence, 2016). Host communities complained that refugee activities encroached heavily upon grazing land, leading to documented conflict with local pastoralists (Pavanello & Scott-Villiers, 2013). Similar dynamics were observed in Kakuma, where competition for pastureland intensified, notably between Turkana pastoralists and refugee livestock owners (Dorothy, 2020). These cases clearly illustrate how the struggle for resource scarcity intersects profoundly with cultural and livelihood systems.

Ethiopia's Gambella Region, hosting large numbers of South Sudanese refugees, has resulted in localised land conflicts where host communities routinely accused refugees of encroaching on traditional farmland, fishing areas, and forests (Yimer, 2020). In several instances, competition over crucial grazing land escalated into violent clashes, reflecting the underlying historical inter-ethnic tensions present in the region (UNHCR Ethiopia, 2019). These instances emphasise that refugee-related environmental conflict is neither unique to Uganda nor solely a consequence of refugee presence but is deeply embedded within broader regional ecological vulnerabilities and pre-existing governance limitations. The Somali Region experienced comparable challenges due to refugee pressure and recurring drought, which intensified disputes over grazing and water between host and refugee pastoralist communities (Mohamud, 2021).

In Tanzania, the presence of Burundian and Congolese refugee camps has generated severe pressure on forest resources. Host communities

surrounding Nyarugusu reported decreased access to fuelwood and building poles due to increased collection by refugees (Milner & Loescher, 2011). Environmental degradation contributed to rising resentment, with residents frequently arguing that humanitarian programs unfairly favoured refugees in service provision while neglecting the persistent needs of the host community (Turner, 2015). This sentiment of perceived favouritism is markedly similar to the Adjumani context, where host communities also articulated concerns about preferential resource distribution toward refugees.

Across West and Central Africa, many refugee-hosting areas are drylands that are inherently vulnerable to desertification. In Chad's Lake Region, competition for land and forest products among Chadian hosts, Nigerian refugees, and IDPs contributed significantly to resource-based tensions (Sirbele, 2023). Niger faced similar dynamics, where pastoralist communities clashed with displaced populations over essential grazing corridors and water points. In the Democratic Republic of Congo (DRC), the influx of returnees and refugees added complex new layers to long-standing land conflicts already existing between various ethnic groups (Vlassenroot, 2013). These African case studies collectively highlight the critical interplay between environmental scarcity, chronic insecurity, and forced displacement.

Tensions around Environmental Resources in Uganda.

Uganda is globally lauded for its progressive refugee policy, yet the implementation environment frequently reveals significant contradictions. The official policy allocates land to refugees for settlement and small-scale farming (Refugee Act, 2006). However, the actual availability of usable land varies significantly by district (Ahimbisibwe, 2021). In districts like Adjumani, which host vast refugee populations, land is generally communally owned under customary tenure. Hosts often feel pressured into giving up ancestral land without sufficient consultation or fair compensation (Omata, 2018). In these sensitive customary contexts, land

transcends being merely an economic asset; it is a profound socio-cultural identity marker. Its transfer, whether intended as temporary or permanent, can easily trigger deep-seated grievances if not managed with the utmost sensitivity.

Evidence of Resource Pressure from Key Refugee Hosting Districts.

In Yumbe District, the Bidibidi Refugee Settlement, which is one of the largest globally, witnessed extensive deforestation within its very first year as refugees collected firewood (UNHCR, 2017). Host communities complained bitterly that refugee activities negatively affected their farmland, grazing areas, and forests, necessitating that residents walk longer distances to collect firewood and substantially increasing the domestic labour burdens placed upon women.

In Moyo District's Palorinya Refugee Settlement, tensions related to land frequently arose where refugee plots bordered host farmland. Inter-group clashes emerged when refugee livestock destroyed valuable crops or when hosts attempted to restrict grazing in areas near the settlement (IRRI, 2019). Similarly, in Arua District's Rhino Camp Refugee Settlement, deforestation became a critical concern as both refugees and hosts cut trees for firewood and charcoal production, leading host communities to perceive the refugee presence as the primary cause of environmental degradation (Kumakech et al., 2022).

Adjumani District: The Focus of this Study.

Adjumani is characterised as a long-term refugee-hosting district situated in an ecological landscape dominated by savannah woodlands, seasonal streams, and agricultural land. The arrival of large numbers of refugees drastically intensified pressure on these limited resources, resulting in land disputes, chronic water shortages, and significant deforestation (LWF, 2023; UNHCR, 2024). Ayilo I and II are among the settlements most severely affected, establishing them as crucial sites for examining the environmental

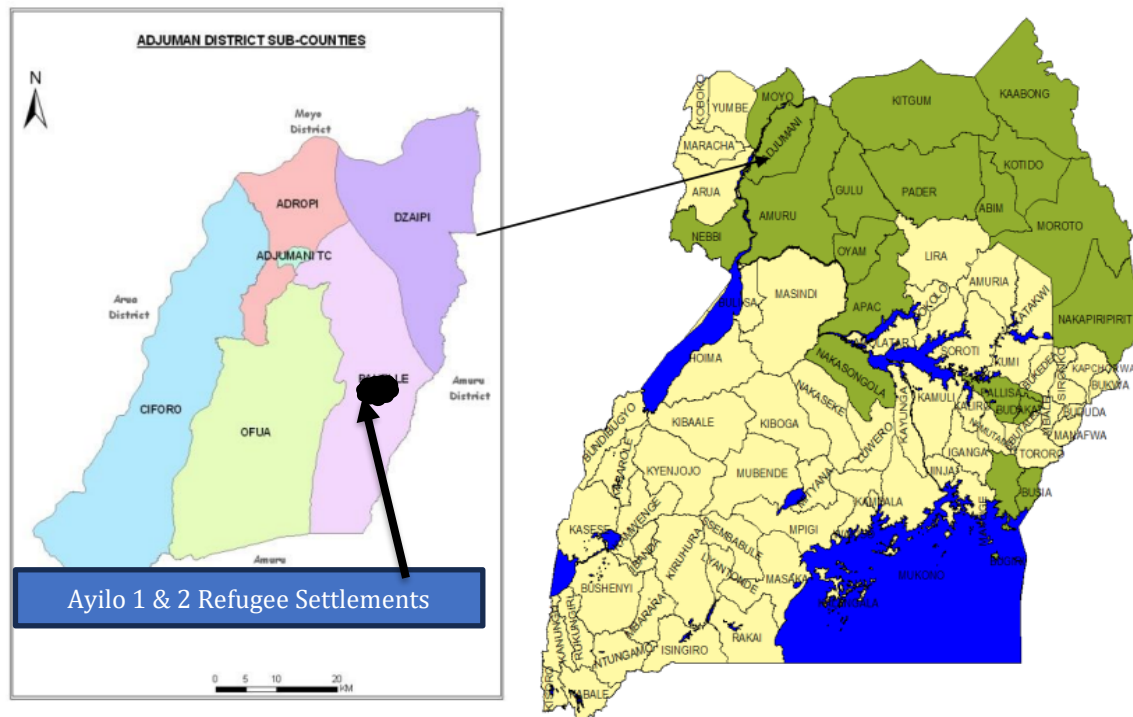
drivers of refugee-host conflict. Their geographical proximity to the host community's farmland and shared forest resources generates daily points of interaction, and thus potential conflict, that simultaneously mirror broader national patterns while also exhibiting unique local dynamics.

METHODOLOGY

This study employed an exploratory qualitative approach rooted in interpretivism, utilising Interpretative Phenomenological Analysis (IPA) to capture the socially constructed meanings individuals assign to resource tensions. Conducted in the high-density Ayilo I and II settlements in Adjumani District, sites chosen for their long-term displacement history and documented refugee-host friction, the research gathered rich, descriptive data from a diverse demographic of Ma'di and Dinka communities.

Data collection involved 31 household interviews, 8 key informant interviews, and 2 focus group discussions, targeting participants through purposive and snowball sampling to ensure direct experience with environmental disputes. Following ethical clearance from Gulu University and administrative approval from the Office of the Prime Minister (OPM), multilingual interviews were transcribed and subjected to thematic analysis. This process identified critical drivers of conflict, including land scarcity, chronic water shortages, firewood competition, and weak institutional coordination. Ethical clearance was obtained from the Gulu University Research Ethics Committee (GUREC) in March 2025 with clearance number GUREC-2024-925. All participants provided informed consent. Participation was voluntary, and confidentiality was maintained throughout the study.

Figure. 1: Map Of Uganda Showing Adjumani District And Ayilo Refugee Settlement.



Source: *Extracted by the Cartographer (Kiigwe Beatrice) and modified by the Researcher*

RESULTS AND DISCUSSION

Findings: Environmental Resource-Related Conflicts in Ayilo Refugee Settlements

Environmental resources are unequivocally at the centre of daily interactions between refugees and host communities in Ayilo I and II. Land, water, and forests form the fundamental basis of survival, livelihoods, and cultural identity. The findings illustrate the complex realities of environmental conflict, substantiated by the detailed narratives provided by participants.

Land Conflicts: Scarcity, Boundaries, and Competing Claims

Land emerged as the single most significant source of tension. While host communities in Adjumani rely on land for both agriculture and livestock grazing under customary tenure systems, refugees often view land through a utilitarian lens, as a temporary resource provided by the government or UNHCR strictly for

survival. This fundamental mismatch in perceptions actively fuels misunderstandings.

Conflicting Perceptions of Ownership: Host communities deeply regard land as ancestral property. Conversely, refugees, often entirely unaware of these critical customary distinctions, sometimes assume all land is government property and therefore available for their use. As one Key Informant noted: *“Many refugees do not understand our land ownership system. They think all land belongs to the government, so they move anywhere they want”*. This observation reflects a common challenge in displacement settings where customary land rights are insufficiently communicated to refugees upon arrival. This misunderstanding exposes a critical governance gap: the lack of formal orientation on customary tenure transforms legitimate survival strategies into actions perceived by hosts as aggression. As Knight (2010) argues, customary land is deeply embedded in identity, rendering unresearcherized access culturally offensive, not merely illegal. This corroborates Ahimbisibwe’s (2021) finding

that the failure to clearly communicate these tenure systems triggers “deep-seated grievances,” making land disputes structurally inevitable rather than simply interpersonal conflicts.

Disputes Over Farmland: Because the land initially allocated to refugees is frequently insufficient for extensive farming, many refugees resort to renting land informally from host community members. However, the prevalent lack of formal documentation creates vulnerability to cases of double allocation and fraud. One refugee recounted a distressing experience: *"We rented land from a host, but another person came and claimed the same land. It caused a big fight"*. Hosts confirmed that disputes over farmland had increased due to continuous population growth. A host woman explained the pressure: *"Land is limited. With many refugees here, conflicts over land, water, and food come up all the time"*. The researcher argues that reliance on informal, verbal rental agreements within a complex customary system fosters structural vulnerability. As refugees attempt to supplement insufficient plots, the absence of formal documentation facilitates fraudulent "double allocations," frequently sparking violence. This confirms Knight's (2010) observation that the inherent ambiguity of customary tenure becomes volatile under demographic pressure, effectively transforming land scarcity into a perpetual cycle of inter-communal friction.

Livestock and Crop Destruction: Unmanaged livestock grazing was identified as a key daily driver of conflict. Refugee livestock, including goats and cattle, frequently stray into host farmlands, devastating crops intended for household subsistence or market sale. Hosts often respond by imposing immediate fines or, critically, engaging in violence. A local leader described the severity of these incidents: *"There have been fights when refugee cattle destroy gardens. Sometimes hosts speared the animals"*. This finding aligns with broader patterns observed in Palorinya and Rhino Camp, where grazing disputes routinely escalate into physical

confrontation. The researcher argues that livestock trespass represents a structural clash of livelihood systems, pastoralism versus agriculture, rather than mere resource competition, thereby transforming agricultural lands into violent flashpoints. This exposes a critical planning weakness: the persistent failure to designate appropriate grazing zones within congested settlements. These findings corroborate Kumakech et al. (2022) and IRRI (2019), who similarly note that in Rhino Camp and Palorinya, unmanaged grazing inevitably escalates into physical confrontation. Ultimately, the researcher contends that spatial congestion severely exacerbates these economic losses, rendering peaceful coexistence precarious.

Conflicts over Firewood and Forest Resources.

Firewood remains essential for cooking and heating, given the absence of widespread alternative energy sources. Both refugees and hosts depend heavily on the same shrinking forests, leading to daily tensions and mutual accusations of environmental degradation.

Refugee Women's Experiences: Refugee women, who shoulder the primary responsibility for fuel collection, reported being harassed, chased, or physically restricted from collecting firewood by host community members. One woman explained her desperate situation: *"Sometimes hosts chase us away when we go to collect firewood. But we have no other way to cook food"*. These restrictions compel women to walk significantly longer distances to find fuel, simultaneously increasing their domestic labour burdens and exposing them to heightened risks of sexual and gender-based violence (SGBV) or arrest for trespass. The researcher argues that energy poverty has thus mutated into a gendered security threat, where the absence of alternative fuel sources effectively criminalises the act of survival. By forcing women to trespass into host territories to cook, resource scarcity exposes them to physical violence and legal harassment. This corroborates observations by Rawlence (2016) and Ahmed et al. (2019), who noted in Dadaab

and Cox's Bazar that deforestation forces women to traverse increasingly dangerous distances. Ultimately, the researcher contends that without urgent alternative energy interventions, environmental pressure creates a trap where basic sustenance comes at the intolerable cost of safety.

Host Community Concerns: Conversely, host communities expressed significant anger over what they perceived as refugee-driven deforestation and a profound lack of respect for local resources. A host elder articulated this grievance clearly: *"Some refugees cut trees without permission. These trees belong to us. They don't even ask"*. Host anger over perceived refugee-driven deforestation mirrors the documented resource pressure and forest loss in Adjumani (NEMA, 2023; Kumakech et al., 2022; UNHCR, 2024). Recent studies confirm that such perceptions fuel deep mistrust and social fracture (Jacobsen, 2002). The researcher argues that transparent, joint resource governance systems and sustained community dialogue are absolutely essential to rebuild lost trust and ensure equitable benefits for local host populations.

Grass for Thatching: Tensions also critically extended to the grass utilised for roofing huts. Refugees are allocated land in settlement areas that often lack adequate grass, forcing them to seek it in surrounding host areas. A refugee woman recalled: *"They refused me to cut grass in their area. But we need grass to roof our huts"*. Hosts justified restricting access to grass by citing the need to protect the environment from overuse, but refugees interpreted these actions as explicit signs of rejection. This fundamental misunderstanding has contributed to rapid deforestation around Ayilo, causing soil erosion and reduced rainfall, which subsequently threatens farming for both groups. The struggle over grass demonstrates the wider, pervasive problem of limited natural resources. Recent studies note that such contested access increases environmental damage and fundamentally weakens trust between communities (Krampe & Nordqvist, 2019; NEMA, 2023; UNHCR, 2024). The researcher argues that shared, well-managed

harvesting systems are necessary to ease tensions and protect Ayilo's highly fragile environment.

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Conflicts Over Water Resources

Competition for water emerged as another major source of tension, particularly due to the limited infrastructure available to adequately serve thousands of people.

Infrastructure Pressure and Queues: Both refugees and hosts reported that the existing boreholes were insufficient for the population size, leading to excessively long queues and

frequent disputes. A male refugee stated: *"Conflicts at water points are the most common. We are too many for the few boreholes"*. Insufficient boreholes create long queues and disputes at water points, as the refugee's statement demonstrates. Recent studies directly link overcrowded water infrastructure to increased daily tensions and heightened gendered risks, especially for women responsible for collecting water (UNHCR, 2024; NEMA, 2023; Krampe & Nordqvist, 2019). The researcher argues that expanding water access, prioritising joint management structures, and regular maintenance would significantly reduce conflict, improve equity, and protect vulnerable households dependent on these scarce services and livelihoods.

Gendered Dimensions of Water Conflict:

Water collection is predominantly the responsibility of women in both communities. Host women reported frequent verbal altercations with refugee women at boreholes, often centred on accusations of "skipping the line" or perceived disrespect for local norms. A host woman reported: *"Our women argue with South Sudanese women about who came first at the borehole"*. These conflicts at water points serve to deepen existing gendered and ethnic divides, rendering the borehole a primary site of chronic social friction. Furthermore, during dry seasons when seasonal streams dry up completely, pressure on the few functioning boreholes intensifies drastically. Refugees described walking long distances to fetch water, while hosts complained of declining water tables, echoing findings from similar settings in Ethiopia and Kenya (Mohamud, 2021).

Awareness, Cultural Misunderstanding, and Social Cohesion.

The environmental resource tensions in Ayilo I and II are not driven purely by physical scarcity; they are profoundly shaped by deeply rooted cultural, linguistic, and social dynamics (Ager & Strang, 2008). The findings strongly suggest that conflict emerges through the crucial intersection

of material constraints, historical land relations, institutional gaps, and culturally mediated misunderstandings.

Awareness Gaps and Land Rights.

One of the most critical factors contributing to sustained tension was the limited awareness of land ownership laws among refugees and, often, some host community members. While Uganda's national laws protect customary tenure, refugees frequently operate under the generalised assumption that settlement land is government-owned and therefore freely accessible. A key informant observed: *"Awareness meetings have not helped much. People still do not understand land rights clearly"*. This systemic lack of legal literacy leads to unintentional boundary encroachments that hosts interpret as deliberate aggression, thereby unnecessarily escalating conflicts that might otherwise be resolved through structured dialogue. This issue aligns with broader findings in Uganda, where complex customary land tenure systems are often poorly understood by all parties (Knight, 2010).

Language Barriers and Miscommunication.

Language differences between refugees (who predominantly speak Juba Arabic, Dinka, or Nuer) and host communities (who speak Ma'di and English) actively fuel misunderstandings. In high-stress environments such as crowded water points, the fundamental inability to communicate effectively often rapidly turns minor disagreements into identity-based conflicts. A female refugee explained: *"Sometimes we think hosts are insulting us because we don't understand their language"*. Similarly, a male host noted that *"Language barriers cause mistrust and misunderstandings between the refugees and us"*. Language barriers in Ayilo intensify everyday tensions by translating simple misunderstandings into identity-based conflicts. As both refugees and hosts noted, not understanding one another's language easily breeds deep mistrust. Recent studies confirm that poor communication in multilingual refugee settings heightens suspicion

and accelerates conflict escalation (Ager & Strang, 2022; Omata, 2020; UNHCR, 2024). The researcher argues that without deliberate language-bridging initiatives, such as providing interpreters, organising joint meetings, and facilitating culturally sensitive dialogue, resource disputes will continue to escalate unnecessarily.

Perceptions of Unequal Aid Distribution.

Host communities frequently perceive refugees as receiving preferential treatment from humanitarian agencies. Refugees receive essential aid such as food rations, non-food items, energy-efficient stoves, and agricultural tools, while hosts, who often live in comparable conditions of poverty, feel systematically excluded. A male refugee noted the direct impact of this perception: *"The host community says refugees are rich because we receive free things. They think we should not use their land"*. This critical sense of inequality motivates hosts to charge refugees higher rent for farmland or deny them access to forest resources as a form of economic balancing or resentment. Host community members also expressed deep resentment that boreholes constructed by NGOs on their ancestral land were managed in ways that primarily prioritised refugee access. This perceived aid bias magnifies local tensions and actively erodes the traditional hospitality that characterised the initial phases of displacement. These findings mirror other studies in Uganda demonstrating that aid inequity fuels significant resentment (Omata, 2018; Ahimbisibwe, 2021).

Social Cohesion and Trust Erosion.

The cumulative effect of these pervasive resource conflicts is the tangible erosion of trust and social cohesion. Both groups are increasingly retreating into their ethnic identities and minimising interaction to avoid conflict. Refugees report feeling unwelcome and fearful, while hosts express acute anxiety about the long-term environmental damage to their ancestral lands. Joint activities decline, and community spaces become sites of tension rather than cooperation.

This widening social divide makes effective conflict resolution more difficult, as the relational foundations necessary for mediation are severely fractured. The cumulative effect is a widening social divide that renders conflict resolution more difficult (Ager & Strang, 2008).

Cultural Differences and Stereotypes.

Hosts frequently view refugees using negative stereotypes, labelling them as “wasteful,” “violent,” or “proud”. Conversely, refugees often view hosts as “selfish” or “unfriendly”. These mutually negative stereotypes reflect deeper identity-based tensions. Female refugees reported that some hosts discouraged interaction, including intermarriage, citing cultural differences. Thus, cultural identity fundamentally shapes resource conflict by reinforcing rigid boundaries between groups. These cultural stereotypes suggest that resource tensions in Ayilo are not only environmental but are also deeply rooted in identity and social boundaries. Recent studies demonstrate that negative labelling between hosts and refugees reinforces fear, severely limits interaction, and increases the likelihood of conflict (Ager & Strang, 2022; Omata, 2020; UNHCR, 2024). Reports of hosts discouraging intermarriage further illustrate the cultural distance. The researcher argues that without addressing these identity-driven perceptions, technical resource-sharing interventions alone cannot build trust or sustain peaceful coexistence.

Researcher’s Personal Reflection.

Conducting this research was not merely an academic exercise but an emotional journey into the heart of a region whose history is profoundly intertwined with my own. I walked through Ayilo’s dusty paths, got a sip of coffee from a local café served in a glass cup, not only as a detached researcher but as a son of Northern Uganda, a child of a land that was a primary victim of LRA conflicts and where displacement has never been a distant, abstract concept.

Many of the scenes I witnessed, women walking long distances for firewood, men arguing fiercely over damaged crops, children queuing for scarce water, were deeply familiar. They echoed the persistent stories told by my own relatives who lived through periods of conflict and scarcity. At times, the interviews felt painfully close to home. There were moments during data collection when I struggled immensely to maintain the necessary emotional distance that academia demands. Listening to a refugee mother recount how she was chased from a forest while collecting firewood instantly reminded me of my own mother navigating difficult times during the LRA conflict.

Sitting with elders from the host community, I discerned the profound frustration in their voices as they described how their ancestral land was being critically strained by external pressures they did not create. Their words carried the weight of generations who have historically relied on the land for dignity and livelihood. I often found myself reflecting on the thin, permeable line separating the researcher and the community members. My identity was instrumental in helping me gain trust, but it also exposed me to profound emotional fatigue. I carried with me the internal conflict of passionately wanting to advocate for both groups: refugees who fled unimaginable suffering and hosts who felt overshadowed by the massive influx of international aid. This dual empathy significantly shaped my interpretation of the findings and served as a constant reminder that durable solutions must consistently honour the shared humanity of both sides. This article reaffirmed my steadfast commitment to peacebuilding, recognising it not merely as a theoretical concept but as a lived, continuous responsibility. It reminded me that environmental conflict is not just statistical data; it is the lived, agonising experience of people striving daily to survive with dignity. As I worked through the transcripts late at night, many voices stayed with me long after the formal analysis was complete. Their resilience, pain, humour, and hope indelibly shaped this manuscript, and they continue to shape the person I am becoming as a scholar of

Refugee, Displacement & Migration and as a son of Northern Uganda.

CONCLUSION

This article demonstrates comprehensively that environmental resource-related tensions in Ayilo I and II are fundamentally multidimensional, reflecting a complex interaction between ecological scarcity, dynamic socio-cultural factors, persistent institutional limitations, and significant governance challenges. The empirical findings reveal that land scarcity, intense firewood competition, critical water shortages, and pervasive deforestation are the central drivers of escalating conflict between refugee and host communities. These resource tensions are further critically compounded by limited awareness of land rights, pervasive language barriers, entrenched cultural misunderstandings, and strong perceptions of unequal aid distribution.

The Ugandan context, notwithstanding its progressive policies, underlines the acute need for stronger coordination between humanitarian agencies, government institutions, and local communities. Effective and sustainable conflict mitigation absolutely requires equitable access to land and water resources, transparent communication regarding land governance structures, substantial investment in viable, sustainable energy alternatives, targeted environmental restoration programs, and sensitive, ongoing, culturally grounded dialogue initiatives. Environmental resource tensions cannot be resolved solely through isolated technical interventions; they demand holistic approaches that fully recognise the interdependence of ecological, social, cultural, and institutional factors. Durable peaceful coexistence necessitates integrated governance reforms that deliberately move beyond technical fixes to address the complex socio-cultural dimensions inherent in environmental governance.

Theoretically, this article contributes significantly to debates within the field of migration studies by

precisely illustrating how environmental scarcity interacts strongly with identity, social cohesion, and institutional structures to shape migration-related conflict. Future research endeavours should critically examine how gender, intergenerational dynamics, and local political leadership specifically shape environmental conflict trajectories in refugee settings, moving beyond simplistic notions of “competition” to reveal the deeply socially embedded nature of environmental tensions.

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Researcher Contribution:

Researcher. Okello Moses Rubangangeyo: Conceptualisation, data collection, analysis, interpretation, and manuscript drafting.

Co-researcher. Dr. Stella Aloyo Apecu: Supervision, theoretical guidance, review, and academic mentorship.

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