



SPARC

Supporting Pastoralism
and Agriculture in Recurrent
and Protracted Crises

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REPORT

PERCEPTIONS OF LAND TENURE SECURITY IN PASTORAL AREAS IN MARSABIT, KENYA

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About SPARC

Climate change, armed conflict, environmental fragility and weak governance and the impact these have on natural resource-based livelihoods are among the key drivers of both crisis and poverty for communities in some of the world's most vulnerable and conflict-affected countries.

Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC) aims to generate evidence and address knowledge gaps to build the resilience of millions of pastoralists, agro-pastoralists and farmers in these communities in sub-Saharan Africa and the Middle East.

We strive to create impact by using research and evidence to develop knowledge that improves how the UK Foreign, Commonwealth & Development Office (FCDO), donors, non-governmental organisations, local and national governments and civil society can empower these communities in the context of climate change.

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1. CONTEXT

Pastoral collective tenure and degrees of tenure security in pastoral systems are not as well understood as tenure and tenure security for settled and individual/household land users. This has important implications for the design of suitable approaches to improve tenure security in such areas, and measuring perceptions of tenure security as a contribution to global land indices.

SPARC undertook a series of case studies in Burkina Faso, Kenya and Sudan to understand collective tenure and perceptions of tenure security among rangelands pastoralists. This was done in collaboration with [Prindex](#), a data platform that carries out global surveys on people's perceptions of tenure security. Particular attention was paid in the studies to understanding any differences between men and women.

A synthesis document can be found on the [SPARC website](#).

Two layers of tenure and tenure security are considered in the study: (1) the group; (2) individuals within the group, understanding that groups are not homogenous.

Our study focused on 'perceived' tenure security, i.e. how secure people feel. This recognised that perceived tenure security can be a function of formal (legal) recognition of access and use rights, as well as an individual or group's experiences.

Specifically, the study aimed to understand the following:

1. How do pastoralist communities and their members access grazing land, what are the terms of that access, and what happens in the case of disputes?
2. What aspects of the tenure regime are most important for pastoralist communities and their members?
3. What is the perceived tenure security of the group, and members of the group, in terms of continued access to resources through the group?
4. What do pastoralist communities perceive to be the main drivers of tenure insecurity?

Findings at community level include: a description of the pastoral community and collective land under study; the de facto tenure system at community level; the characteristics of the local tenure system, perceived tenure security and factors that affect community perceptions; and differences for individuals vis-à-vis the collective.

The study findings will inform the development of indicators to track tenure security in a pastoral context, as well as better interventions to secure tenure in collective pastoral systems. The next step in the process is a series of consultations to identify the indicators for measuring perceived tenure security at scale, and testing of these.

2. INTRODUCTION

The International Livestock Research Institute (ILRI) initiated a study to improve understanding of perceptions of land tenure security in pastoral regions for the Supporting Pastoralism and Agriculture in Recurrent and Protracted Crisis project (SPARC), accessible at the [SPARC project website](#). This project is motivated by the recognition that land tenure in pastoral areas characterised by collective (communal) ownership is intricate and multifaceted.

ILRI, in collaboration with SPARC, is conducting research on land tenure in pastoral areas as part of a broader effort to understand the root causes of conflict. A prior review conducted by SPARC on land tenure and governance in pastoral areas (Flintan et al., 2021) highlighted the mounting pressures on pastoral land and resources over the past two decades. This review emphasised the need to enhance tenure security to ensure pastoral communities' continued access to and use of communal land.

ILRI, in partnership with Prindex and LANDex, is supporting this study to document case studies in three countries. The objectives are to better comprehend pastoral collective (communal) tenure, specifically focusing on perceived tenure security, and to develop characteristics and indicators for measuring it, at both community and individual levels.

These case studies contribute to the discourse on pastoral land tenure security and the diversity of viewpoints involved. One perspective emphasises the importance of legality and statutory recognition and protection as the basis for secure tenure. Under this approach, secure tenure is contingent upon land rights registration, certification and codification anchored in legal and policy frameworks. An alternative perspective contends that tenure security for pastoralists and the functionality of pastoral systems are predicated on flexibility, mobility, robust traditional institutions and authority, and unrestricted movement, which includes collective resource use, access and management. This second perspective places greater emphasis on legitimacy rather than legality. These dual schools of thought and their approaches to securing land tenure rights are responses to longstanding challenges in the management and governance of land and natural resources in pastoral systems, as highlighted by scholars (Ostrom, 1990; Flintan et al., 2021; Galvin et al., 2008).

The core of this debate revolves around the philosophical underpinnings of the relationship between formal and informal or customary rules in land governance and tenure security. Professor Okoth-Ogendo strongly argues against disregarding African customary rules and practices in the analysis of tenure security frameworks. He points out that efforts to 'formalise informal property systems' do not always guarantee tenure security (Okoth-Ogendo, 2006). A more effective approach, as advocated by Kamimoto (2022), is to combine legality with legitimacy, thereby achieving harmony among divergent norms.

These studies align with scholarly literature on communal tenure as endorsed by scholars like Okoth-Ogendo (2006) and (Nyamu-Musembi, 2007), in contrast to the perspective of Garrett Hardin, who views such tenure regimes as problematic. According to (Bruce and Young, 1986), 'communal tenure' systems encompass various rights and duties held by individuals, families, subgroups and larger groups in relation to a range of natural resources. The interplay between individual and collective rights is crucial in this study as the Waldaa community navigates

within its pastoral system. As used in the African context, the term 'communal tenure' has been contentious because it often includes clearly defined individual or family rights to certain types of land and land use (e.g. cropping land) alongside common property resources. Nevertheless, these systems typically involve rights conferred based on accepted group membership and some degree of group oversight of land matters, which relativises individual rights to a greater extent than in private property systems.

Customary tenure has evolved in response to external pressures and influences. In the context of Waldaa, it is essential to recognise the protection of customary collective and individual rights to land and resources by clarifying and documenting customary practices, especially from the perspectives of various groups, including youth and women. This study, therefore, presents various arguments regarding perceptions and community-level practices, using the Waldaa community as a case study of a well-functioning pastoral system in Kenya.

These studies acknowledge the complexity of collective (communal) tenure in pastoral areas, which encompasses a multifaceted system of rights. It analyses two layers of tenure security: the security of the entire community and the security of individual members within that community, including differences related to gender and age. Additionally, the study explores the role of pastoral mobility in the context of tenure rights and pastoralism.

This study examines two dimensions of tenure security: the security of the community as a whole and the security of individual members within that community, taking into account factors such as gender and age.

In addition, we examined the role of mobility within a functional pastoral system. We found that the measurement of tenure security, including individual perceptions and perceived tenure security, is considerably more challenging in pastoral contexts compared to farming or settled households, where there are clear individual land titles for specific demarcated areas. Consequently, pastoral tenure and its varying degrees of security are not adequately captured in global measurement frameworks like Prindex, LANDex and other monitoring platforms contributing to the UN Sustainable Development Goals.

3. LITERATURE REVIEW

We reviewed literature focusing on how pastoralists access and control common resources through collective land arrangements (Hesse and Macgregor, 2006). The literature covers the characterisation of pastoralist land use from the colonial period (1900–1960) through post-independence (1960–1980), the neoliberal structural adjustment era (1980–2000) and up to the present day. It draws on ideas of individual private ownership and private title registration, influenced by de Soto's theories on privatising communal lands for development (de Soto, 2000).

Critics argue that the provisions of the 2010 Constitution, while theoretically sound, lack proper implementation (Odote, 2013). Key pastoralism concepts include collective land access, unclaimed land, trust land, group ranches and common resources which have evolved since colonial times and continue to define pastoralist property rights (Ochieng et al., 2016). Selecting literature for review is challenging, especially in countries where colonial legacies continue to shape formalised systems (Okoth-Ogendo, 1991).

Pastoralism relies on the mobility of natural resources across vast rangelands, especially in Africa's arid and semi-arid regions, influencing social, economic and political dynamics (Mwangi, 2009). Policies promoting land conversion for agriculture, private ranches, wildlife conservancies and horticultural use have led to the loss of pastoral land (Odote and Kameri-Mbote, 2016; Lane and Lubatkin, 1998).

Unlike continuous crop cultivation, pastoralism's intermittent land use is less visible and prone to land conversion (Ogolla and Mugabe, 1996; Republic of Kenya, 1965). In colonial Kenya, pastoral lands were excluded from land administration, favouring individual private land rights (Swynnerton Plan of 1954) (Okoth-Ogendo, 1991). The neglect led to significant land loss to crop farming and conservation reserves, with the Maasai losing 60% of their land (Rutten, 1992). The colonial state considered pastoral land unoccupied and unowned, incorporating it into crown land (Crown Lands Ordinance of 1902 and its 1915 revision). In 1932, the Morris Carter Commission recognised pastoralist claims but granted only user rights (Wanjala, 2000; Morris, 1934).

The Native Land Ordinance of 1938 placed pastoral lands under a trust land tenure regime. Kenya developed three land tenure regimes: private, government and trust lands. Post-independence policies aimed to transform pastoralism into individual private land rights (Rutten, 1992). Customary communal tenure practices sustained pastoralism parallel to statutory law (Okoth-Ogendo, 2002).

Our literature synthesis highlights a collective land tenure system characterised by nomadic transhumance, aligning with pastoralists' use of diverse rangeland landscapes (Robinson and Flintan, 2022; Scoones et al., 2020; Odote, 2013). Rangelands face tenure insecurity due to policies opposing pastoralist collectivism (Greiner, 2016; Kibugi, 2009). Kenya's adoption of individualisation for land rights presented challenges (Alden-Wily, 2018; Kameri-Mbote, 2013; Flintan et al., 2021). Pre-independence trusteeship over pastoral lands continued through the Trust Land Act of 1968. The 2010 Constitution introduced provisions for recognising, protecting and registering community lands, but concerns remain about state control, as seen in the Land Value (Amendment) Act of 2019 (Alden-Wily, 2018). Subsequent sections explore

key concepts in collectively owned lands and resources in pastoral settings, emphasising uncertainty, mobility, flexible social relations, diversification, moral economies, real markets and networked politics (Scoones et al., 2020).

We examine how concepts like commons, tenure security and trusteeship relate to community land rights, particularly collective tenure among pastoralists. Pastoralism literature highlights a way of life based on uncertainty, mobility as a response to environmental variability, and flexible access to land and natural resources. However, the complex social structures within pastoral communities remain poorly understood (Robinson and Flintan, 2022; Odote, 2013; Scoones et al., 2020; Alden-Wily, 2018).

While pastoralists primarily focus on managing grazing lands, they can be categorised as agro-pastoralists, transhumant/nomadic pastoralists and wealthy absentee pastoralists who hire labour to produce livestock for markets. This diversity exists within the same rangeland landscape (Kirimi, 2016). In Kenya, pastoralists face challenges securing their collective land tenure against large-scale projects like transport corridors, energy plants, agricultural investments and wildlife conservancies. These projects often marginalise and dispossess pastoralists (Lind et al., 2020; Chome, 2020; Kibugi, 2017).

Pastoralists grapple with what is known as the ‘paradox of pastoralism’. They recognise the need to formalise tenure while preserving flexible access to extensive rangelands with diverse natural resources (Fernandez-Gimenez, 2002, cited in Robinson and Flintan, 2022). While the risks of formalising community land rights are acknowledged, some argue it is better than no formalisation, as it can protect pastoralists from arbitrary dispossession and fragmentation, legitimise collective management and maintain flexible access (Robinson and Flintan, 2022).

The Kenyan context of pastoralist land tenure traces back to the 1920 demarcation of community land as native reserves under customary law. However, in the 1930s, these areas came under boards of trustees due to the discovery of minerals and other natural resources. This shift led to the separation of native reserves, including rangelands, forests, wetlands and group ranches from the broader rangeland landscape with unsustainable private property rights taking hold (Ogolla and Mugabe, 1996). To address this, pastoralists advocated for categorising pastoral areas as community lands managed by elected committees as outlined in the 2010 Kenyan Constitution and the Community Land Act of 2016. Despite this, pastoralist areas are mainly found in trust land areas in the country’s northern half, including Marsabit, Wajir, Turkana, Garissa, Isiolo, Mandera, Samburu and Tana River Counties. While pastoralists value undivided grazing lands to prevent fragmentation, competition for their land is increasing due to commercial pressures.

Historically, colonial governments misunderstood the extensive livestock production known as pastoralism. Recommendations from commissions like the Morris Carter Commission of 1932, the East African Royal Commission of 1953–1955 and the Swynnerton Plan of 1954 favoured a private land tenure regime to transform pastoralist production. Consequently, pastoralist communities in central and southern rangelands faced displacement due to grazing control programmes and the establishment of game reserves, which aimed to take their grazing lands. The Swynnerton Plan proposed reducing pastoralists’ large herds, introducing markets to absorb excess livestock and providing water supplies to encourage a sedentary lifestyle. These measures were seen as counter-insurgency strategies as the colonial government believed that communal tenure systems were insecure and prone to revolts against colonial rule (Kirimi, 2016).

The following subsections will explore key themes within pastoralism, including the tragedy of the commons, the promotion of private land use over collective tenure, exacerbation of land and resource conflicts, gender inequalities in pastoralist land use and the impact of climate change.

3.1 The concept of commons in pastoralism in Africa

The concept of commons refers to shared ownership of areas within a community, such as swamps, forests and pastures (Alden-Wily, 2018). While the idea of commons pre-dates Roman law, which distinguished between *res communis* (belonging to everyone) and *res nullius* (belonging to no one), rural communities have traditionally managed certain areas collectively, guided by rules that define them as commons (Alden-Wily, 2018). Essentially, commons represent one of the oldest forms of property relationships known to humanity, transcending the controversial notion of pastoralists' use of commons as the 'tragedy of the commons' (Hardin, 1968).

However, alternative conceptualisations such as common property resources (Schlager and Ostrom, 1992; Ostrom, 1990) and the African commons challenge the idea that pastoral lands and natural resources are unowned. This narrative of unowned pastoral lands has led to land enclosures and dispossession of rangelands (Galaty, 2013). These narratives undermine pastoral livelihoods and diverse accumulation processes (Lind et al., 2020).

Understanding commons involves recognising them as resources shared by a group with specific rules for distribution, preservation and promotion. Therefore, it is important to move away from a purely naturalistic view of commons and consider that commons can coexist with state governance. The state should create conditions for communities to manage commons instead of managing them directly (Alden-Wily, 2018; Okoth-Ogendo, 2002). It is crucial to avoid equating commons with open access. Any policies or laws prioritising individual ownership over collective and common access can undermine equitable land access, threaten land tenure security and potentially disinherit existing users like pastoralists.

While scholars and activists decry the erosion and privatisation of commons, new commons are continually emerging in rural and urban areas across Africa. These involve diverse processes of rule and norm generation for governing land relations. These studies focus on how people define tenure content, group boundaries, transfer restrictions, rule-making, governance and documentation. Questions arise about the influence of top-down rules, the emergence of constraints and sanctions to defend pastoral commons and the responses of those in power, including private investors, state officials and local elites.

3.2 The concept of trusteeship as part of commons in Kenya

The conceptualisation of pastoral lands as customary landholdings under trusteeship in Kenya traces back to the 1932 Carter Commission, appointed by the British government to assess African land claims and needs. The commission concluded that African customary land rights were only usufructuary rights, making them ineligible for registration. This legitimised land dispossession without compensation to customary landholders. The recommendations of the Carter Commission led to several laws and regulations, including the 1938 Native Land Trust Ordinance, which converted land in native reserves into trust lands, managed by Native Land Trust Boards.

Under this trusteeship system, Africans retained only usage rights based on their customary practices, with trustees acting as intermediaries between the colonial administration's statutory system and the natives. This arrangement marginalised the native population from engaging with the state or the market. After independence, the trusteeship system persisted, with trust lands administered by local authorities through county councils. These councils had the authority to lease concessions, sanction land alienation, and adjudicate land rights. This extensive political interference in land administration resulted from the logic of trusteeship, which aimed to subvert community collective tenure and property systems by imposing private and state-controlled property rights.

In 1965, a mission led by Lawrence recommended the establishment of group ranches to transform pastoralism into a commercial livestock production system. The government aimed to promote sedentary livelihoods through projects like the Kenya Livestock Development, Livestock Marketing Department and Kenya Meat Commission. However, pastoralists viewed the group ranch concept as a means of protecting their lands from outsiders (Lesorogol, 2005; Rutten, 1992). During the era of structural adjustment policies emphasising privatisation, group ranches near Nairobi experienced subdivision for residential and crop farming, changing the pastoral land use. This subdivision was facilitated through customary law and practices (Mwangi, 2009; Galaty, 1992).

A significant issue arising from group ranch subdivision was the exclusion of women from membership due to patriarchal social structures. Widows, in particular, were allocated small parcels of group ranches in remote areas with limited access to water and transportation routes. While the government did not prevent subdivision, it did not effectively resolve disputes, leaving customary institutions responsible for arbitration. As conflicts escalated, the government's intervention became necessary, but disputes remained challenging to resolve due to the statutory establishment of group ranches.

These developments resulted in conflicts, land fencing, restricted livestock movement, interference with wildlife corridors and human–wildlife conflicts. As multiparty democracy gained momentum in the 1990s, politicians took advantage of deteriorating pastoral livelihoods, inciting land clashes in areas where crop farming had taken root in pastoral regions (TJRC, 2013). Notably, violent clashes occurred between Oromo pastoralists and Pokomo farmers between 2011 and 2013 due to restrictions on livestock movement in established farms within the Tana River Delta.

3.3 Land tenure security in the improvement of pastoralist livelihoods in Africa

To enhance pastoralist livelihoods, ensuring land tenure security is essential. Rather than pursuing policies that aim to convert pastoral land rights into other tenure systems through privatisation, there should be an emphasis on enforcing collective land access. The challenge of land tenure security in pastoralism arises from the use of 'community' to imply open access and 'private land' to imply individualisation, creating ambiguity in the evolution of land tenure rights in pastoral lands (Rutten, 1992). As seen in the group ranch system, privatisation distorts collective land access tenure by granting private land tenure instead of promoting collective group land rights (Lenaola, 1996; Kibugi, 2009). Community land formalisation should not lead to open access but should recognise and protect community members' land rights collectively, excluding all others without permission.

According to the African Union Commission, the United Nations Economic Commission for Africa, the African Development Bank and the Consortium (2010), land tenure refers to 'the nature of and how rights and interests over various categories of land are created or determined, allocated and enjoyed'. It encompasses the methods by which individuals or groups acquire, hold, transfer or transmit property rights in land (Okoth-Ogendo, 1991), answering the question of who holds what interests in what land (Okoth-Ogendo, 1991). It involves three dimensions: people, time and space (Kameri-Mbote, 2008). Tenure security means secure access to and use of land and property (Flintan et al., 2021).

Pastoral lands operate under a collective (communal) tenure system facilitating multiple users whose individual security, differentiated by gender and age within the group, is assumed to be confirmed. However, to ensure tenure security in pastoralism, policies should recognise and protect these rights, including those of women who are often discriminated against due to patriarchal practices. While the legal perspective of tenure security has been addressed through the Community Land Act of 2016, its implementation is crucial. Women's land rights might be secured through patriarchal practices, but the delayed implementation of provisions addressing their tenure security could jeopardise their future land use rights (Odote and Kanyinga, 2021). The practical situation on the ground represents de facto tenure security for pastoralists, irrespective of the legal framework.

Scholarship on pastoral lands' tenure and governance system in Kenya highlights various policies, laws and regulations, such as the National Land Policy of 2009, the Urban Areas and Cities Act (No. 13) of 2011, the County Government Act of 2012, the Community Land Act of 2016, the Tana River County Livestock Grazing Control Act (No. 10) of 2017 and the Land Value (Amendment) Act of 2019. These legal instruments aim to formalise and provide a new property approach to address pastoral security of tenure concerns. However, the state's limited financial and technical capacity to implement and enforce these laws has hindered progress (Odote and Kanyinga, 2021). Additionally, customary land practices that exclude women and youth from decision-making due to patriarchal social organisation contribute to tenure insecurity.

3.4 Pastoralism and gender relations in Kenya

Recent literature on pastoralism acknowledges the progressive 2010 Constitution and the Community Land Act of 2016, which address gender equity in access and land tenure decisions. However, patriarchal social structures that dominate pastoralist societies still discriminate against women regarding access to and use of pastoral resources. Women were excluded from group ranch membership in the past and despite the law's changes, pastoralist patriarchs remain reluctant to include women and youth in registration under the Community Land Act (Odote and Kanyinga, 2021). While women access pastoral land and resources through the pastoral collective, the de facto situation is that their continued access depends on male kinship at marital, clan or lineage levels (Langat, 2017). This limited access restricts women's contributions to their communities despite national policies and legislation promoting women's rights and gender equity.

3.5 Pastoralism and climate change in Kenya

Climate projections indicate that climate conditions over regions like Lodwar, Mandera, Marsabit and Wajir in northern Kenya will become increasingly unpredictable and variable over the next 40 years. These changes pose challenges to land use, especially for pastoralism, which traditionally adapts to climatic variability. Pastoralism is a practical land use choice for drylands with its low-input system and established traditional management institutions. Supporting pastoralism allows for optimal use of areas with low and unpredictable rainfall, hedges against the failure of other less adaptable land uses and benefits from the global demand for livestock products. In variable climates, pastoralism is less susceptible to change compared to sedentary land uses like crop agriculture, livestock ranching and tourism, contributing to economic development and poverty alleviation. Pastoralism is a resilient, low-input land use option well suited for variable climates.

Addressing climate change impacts requires enabling and strengthening pastoralists' adaptive capacity and promoting autonomous adaptation. Pastoralists should be free to act, whether they choose to remain pastoralists or diversify their livelihoods. Increased representation and involvement of pastoralist groups and strengthened institutions and advocacy capacity are critical. Climate change exacerbates the challenges faced by pastoralists due to rising temperatures, unpredictable rainfall, increased droughts, floods and their direct impact on water resources, pastures and forage, resulting in livestock loss in pastoral areas (UNECA, 2011). Large-scale biofuel plantations in pastoralist grazing rangelands worsen climatic conditions, regardless of adaptation and mitigation efforts. Climate change is influenced by environmental factors and social, economic, human rights and governance issues (Rivera-Ferre et al., 2016; Opiyo, 2012).

4. COUNTY CASE STUDY: MANIFESTATIONS OF TENURE SECURITY IN KENYAN PASTORAL REGIONS IN MARSABIT

Approximately 80% of the land in this area is arid or semi-arid, with the majority being pastoral lands. These areas follow a communal tenure system and, although land reforms emphasise land tenure security for sustainable development goals, conflicts persist. These issues are most pronounced in pastoral lands, which have historically relied on customary governance. Communal tenure was constitutionally recognised in 2010, reversing a historical misconception since colonial rule.

This study focuses on the Waldaa community in Sololo, Moyale Sub-county, Marsabit County, northeastern Kenya. It examines how community tenure is experienced and secured, including de jure, de facto and perceived tenure security, and looks at the challenges involved.

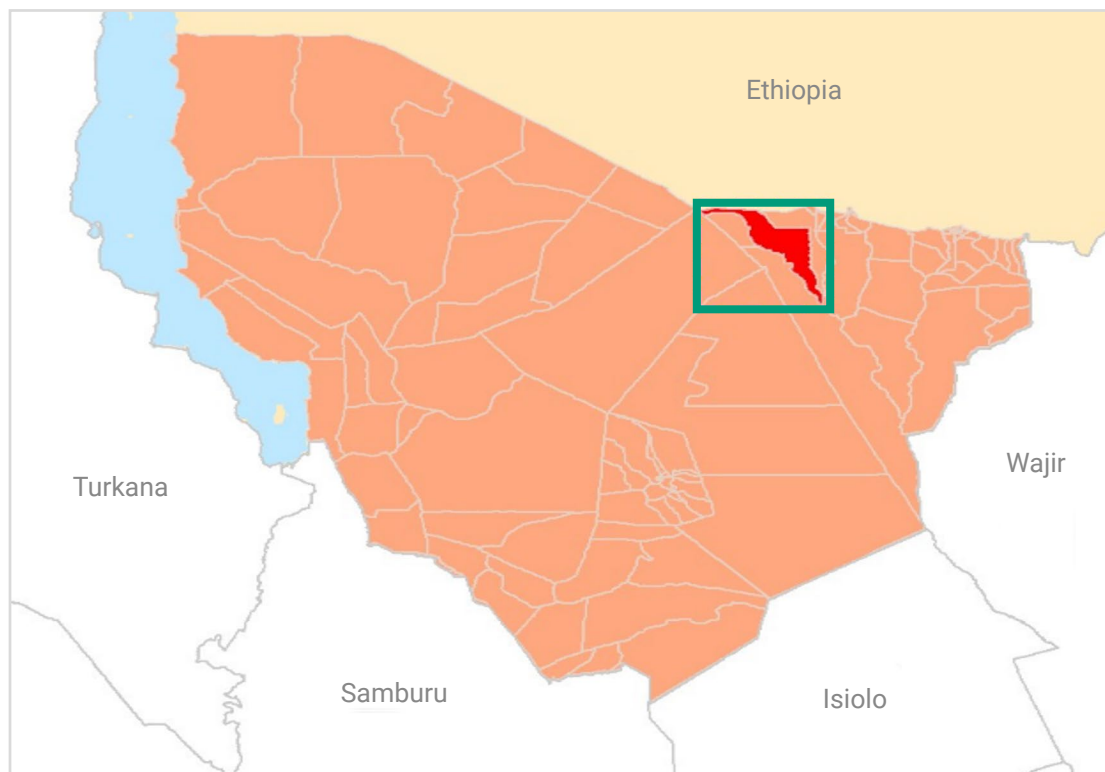
4.1 Description of the community

The Waldaa community is in Marsabit County, specifically Uran Ward, encompassing the lower slopes of Mount Marsabit, the middle slopes of Mount Kulal and the top of Huri Hills. The community practises pastoralism as their primary livelihood, adapted to the region's dryland ecology and variable climate. Comprising approximately 4,700 people, predominantly Borana, they settled in the area in 1982 due to water availability. The name 'Waldaa' signifies its strategic location at the convergence of major roads from neighbouring communities and across borders with Ethiopia. The community borders Uran village in the east and the Ethiopian mountains in the south (Figure 1).

Unlike nomadic pastoralists, the Waldaa community is sedentary, residing year round within approximately 60,282 hectares. Under Article 63, they meet the constitutional definition of a community based on ethnicity, culture or similar community interests.

The community engages in mixed livelihoods alongside pastoralism, including small-scale businesses as a complement during extreme droughts. In 2018, two years after the Community Land Act's promulgation, the Land Development and Governance Institute guided the community towards self-identification and organisation for land registration. They have worked with organisations like the Indigenous Strategy and Institution for Development for training and support. Waldaa community initiated the registration process under the Community Land Act (CLA, 2016).

FIGURE 1. WALDAA LOCATION IN MARSABIT COUNTY



Source: author's creation

Of 550 households, 420 are original community inhabitants, while 130 are immigrants. Membership is primarily through birthright claims, marriage and registration (for migrants residing over three years). Community membership follows defined procedures with periodic reviews. Membership can be lost through application or committee-initiated nullification for habitual rule violations. Revocation involves correction efforts by community elders and adherence to community by-laws. The community membership is flexible and outsiders can apply for membership after meeting eligibility criteria, including a continuous three-year stay within the community.

4.2 Research methods and tools

This qualitative study used an interdisciplinary, participatory approach. Community mapping, where residents created sketch maps based on their knowledge of the area, helped identify current land uses, activity clusters (e.g. social, economic, grazing) and the stone method. These tools provided spatial data on wet- and dry-season grazing areas and livestock mobility and systems. Social research methods included a focus group discussion guide, key informant interviews, face-to-face interviews and participant observation (Figure 2).

FIGURE 2. COMMUNITY FOCUS GROUP DISCUSSION



The research team collaborated with local administration and community leaders to identify key respondents from the 13 villages in Waldaa. This approach ensured a diverse and representative group of 36 stakeholders (25 men and 11 women). Inclusion emphasis included community expertise, historical knowledge of the community, migrant and/or non-migrant, and livelihood practiced. A pre-test exercise of the tools served as a community 'kick-off' workshop to introduce the study to the stakeholders, introduce pastoralist community representatives and gather feedback. The table below presents the schedule of interviews and dates.

TABLE 1. SCHEDULE OF FGD INTERVIEWS AND DATES

Nature of the interview	Participants	Topics/subject presenter	Location	Period
Pre-test	12 (8 men, 3 women, 1 youth)	General understanding of the tools Terms used and their implications to the community's socio-cultural beliefs Time and setting of the engagement terms	Waldaa	8 March 2023
FGD1	12 (6 men, 6 women)	Collectivity, livelihoods and resilience	Waldaa	9 March 2023
FGD2-Part 1	12 (8 men, 6 women)	Pastoral land use and introduction to the management and governance system	Waldaa	10 March 2023
FGD2-Part 1	12 (8 men, 6 women)	The tenure system in place for collective access and use of wet-season pastures	Waldaa	11 March 2023
FGD2-Part 1	6 (2 men, 4 women)	The most important characteristics of the collective tenure system for wet-season grazing	Waldaa	11 March 2023

FGD2-Part 2	7 (3 men, 4 women)	Perceptions of community tenure security in wet-season grazing Perceptions of community mobility security in wet-season grazing Main factors affecting the community's tenure security in wet-season grazing The impact of loss of rights to wet-season grazing Past loss of rights for the group	Waldaa	11 March 2023
FGD2-Part 2	9 (5 men, 4 women)	Perceptions of community tenure security in wet-season grazing Perceptions of community mobility security in wet-season grazing Main factors affecting the community's tenure security in wet-season grazing The impact of loss of rights to wet-season grazing Past loss of rights for the group	Waldaa	13 March 2023
FGD2-Part 3	12 (8 men, 4 women)	Perceptions of community tenure security in wet-season grazing Perceptions of community mobility security in wet-season grazing Main factors affecting the community's tenure security in wet-season grazing The impact of loss of rights to wet-season grazing Past loss of rights for the group	Waldaa	14 March 2023
FGD3	5 women	All topics of the FGD1 and FGD2	Waldaa	15 March 2023
FGD3	4 men	All topics of FGD1 and FGD2	Waldaa	15 March 2023
Joint FGD	22 (12 men, 10 women)	Large group session – all topics	Waldaa	16 March 2023
KII-1	Male	Rangeland and pastoralist expert	Moyale	23 March 2023
KII-2	Male	Civil society representative	Moyale	23 March 2023
KII-3	Male	Researcher	Marsabit	24 March 2023
KII-4	Male	Land expert	Nairobi	29 March 2023
KII-5	Male	Assistant Director, Land Adjudication, Housing and Settlement, Ministry of Lands, Public Works, Housing and Urban Development	Marsabit	27 March 2023
KII-6	Male	Sub-Country Livestock Production Officer	Moyale	28 March 2023

4.3 Data analysis

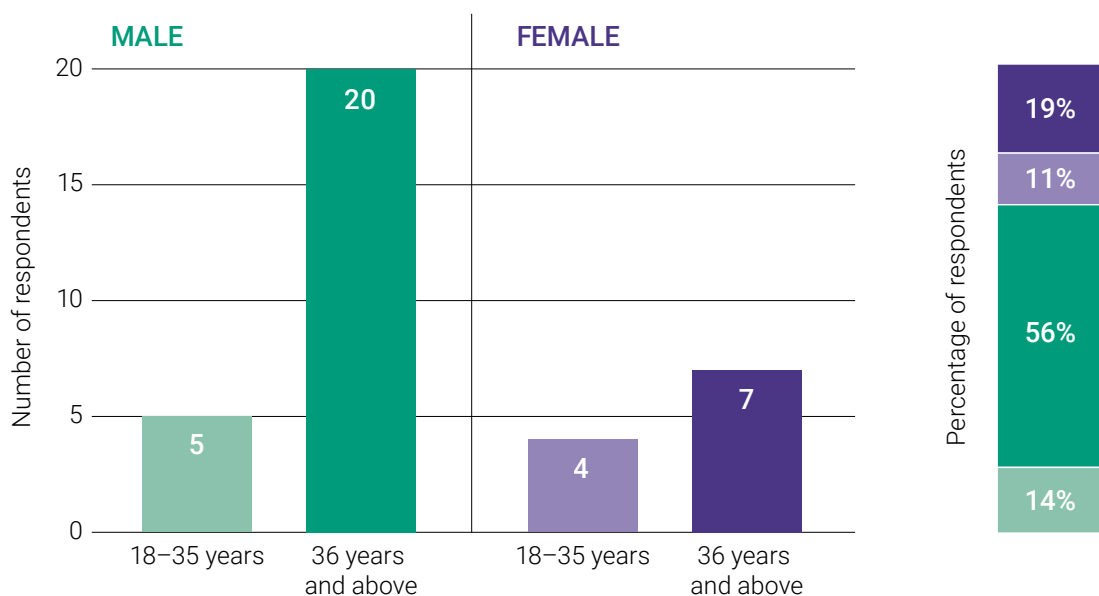
Data collected in the field was transcribed and analysed through content analysis to interpret text data and extract key insights. Narrative analysis, especially from key informant interviews, strengthened the results.

4.4 Stakeholder engagement

The study team ensured that communities understood the research objectives to secure stakeholder support. A pre-test exercise of the tools served as a community 'kick-off' workshop to introduce the study to stakeholders, introduce pastoralist community representatives and gather feedback. An extensive literature review based on available reports, studies and policy documents was conducted.

The research team collaborated with local administration and community leaders to identify key respondents from all 13 villages in Waldaa. This approach ensured a diverse and representative group of 36 stakeholders (25 men and 11 women). Figure 3 illustrates the age and gender distribution of the respondents.

FIGURE 3. GENDER AND AGE OF RESPONDENTS



Source: author's creation

4.5 Limitations

This study has some limitations. There is a risk of misinterpretation in translations, but we took steps to improve accuracy. One of our researchers was fluent in English and Borana for translation. Also, interviewees might have given socially desirable responses, but this was minimised because we cross-referenced individual interviews with group discussions, reinforcing data consistency.

Participant selection could introduce bias since community leaders guided the process. However, the sample size was small and data saturation was reached, reducing the impact of this bias. The findings are likely to represent the Waldaa community.

The study was conducted during a severe drought, making some survey activities challenging due to extreme heat and dust storms. Rain onset disrupted the study towards the end. Obtaining credible data on key questions like human and livestock populations was difficult, exacerbated by a lack of specific Waldaa data at the county level.

Limited existing research on pastoral land tenure security in Marsabit County and nationally posed a challenge, as there is little published data on the topic. Some local county staff were unresponsive or uncooperative during interviews, particularly from the Department of Water.

4.6 Addressing the challenges

To cope with extreme weather, we conducted two daily research sessions in the morning and evening when the weather was cooler. Limited data challenges were mitigated by drawing information from national studies, local researchers and the County Integrated Development Plan. Efforts were made to contact county headquarters staff in Marsabit for specific information.

5. LIVELIHOODS AND RESILIENCE

5.1 Primary livelihoods

The Waldaa community primarily relies on pastoralism, raising cattle, sheep, goats and, recently, camels. The community practises seasonal livestock mobility within a range of 10–20 kilometres between rainy- and dry-season grazing areas.

5.2 Main livelihood and changes over time

When they settled in Waldaa in 1982, the community had numerous livestock and used dry and wet lands effectively. But over the past decade, climatic changes have led to significant shifts. In the last five years, severe droughts have led to livestock losses, pushing the community to start small businesses along the highway and in Sololo. Increasing droughts have also led to increased rangeland degradation, charcoal production, quarrying (mostly by women) and a shift towards camels and goats.

5.3 Main livestock and changes over time

According to community members and their leadership, the most common livestock species are sheep and goats, then cattle. The least common are camels. A few households also keep donkeys and raise chickens for livelihood diversification. The major drought of 2009–2010 decimated livestock and left approximately 1.8 million people at risk of starvation in the Upper Eastern Marsabit, Moyale and Isiolo, among others, were most affected according to the International Federation of Red Cross and Red Crescent Societies (IFRC) Emergency appeal of 2011. The impact of this drought reversed the traditional livelihood practices from keeping cattle and sheep to keeping goats and camels (Turnbull, 2012).

According to community members interviewed, camels have been introduced recently and are a culturally dominant herd among the Somalis but not the Borana community. However, they are considered best in terms of milk and meat quality and drought resistance. Table 2 presents the community's livestock changes over time.

TABLE 2. LIVESTOCK CHANGES IN WALDAA COMMUNITY

Period	Sheep and goats	Cattle	Camels
Ten years ago	30,000	25,000	10,000
Five years ago	6,000	No data	2,000

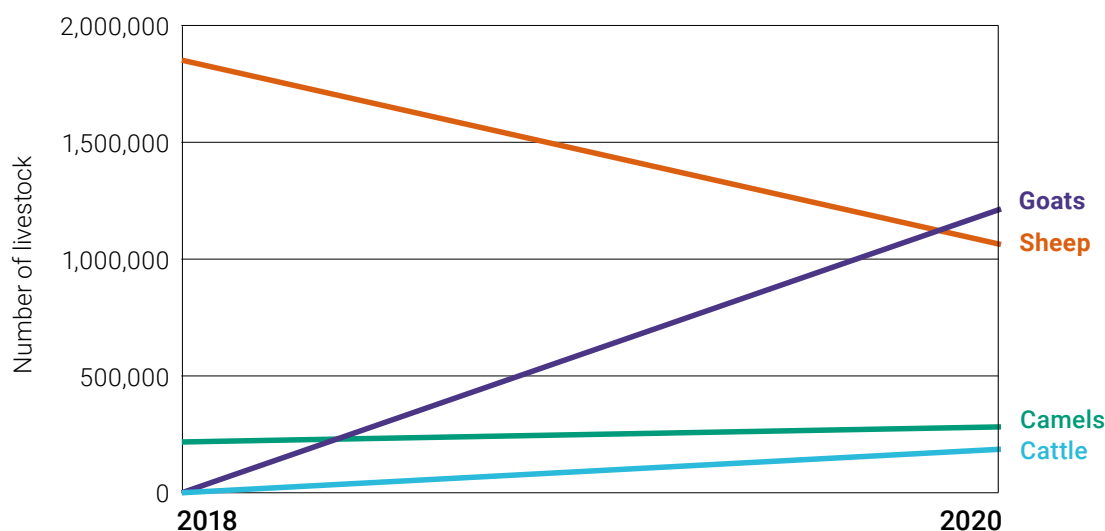
Source: author's creation

Community and livelihood resilience has suffered in the last 10 years due to severe drought and unpredictable weather patterns. There have been changes in livestock numbers since 2018. The cattle population was 420,000 and 186,440 in 2018 and 2022 respectively, in Marsabit County (Marsabit, 2018). There had been a reduction of nearly 50% in the livestock population. However, at the time of the study, there was no data for cattle available in the study area.

On the other hand, the rains have become shorter and more intense, leading to ferocious storm waters, destruction of wet-season feeding patterns and livestock deaths. These changes also bring associated livestock diseases and low reproduction rates, especially among the cattle, and high morbidity rates due to increased cases of livestock diseases. The severity of climate change has also introduced unusual predators like baboons preying on sheep and goats.

Changes within the community include the growing number of camel keepers. A decade ago, the community was not keen on keeping camels. However, due to the resilience of goats and camels, these changes have been adopted to protect against the complete loss of livestock due to drought, as shown in Figure 4 below.

FIGURE 4. LIVESTOCK NUMBERS MARSABIT COUNTY, 2018–2022



Source: author's creation

5.4 Climate resilience and adaptation strategies

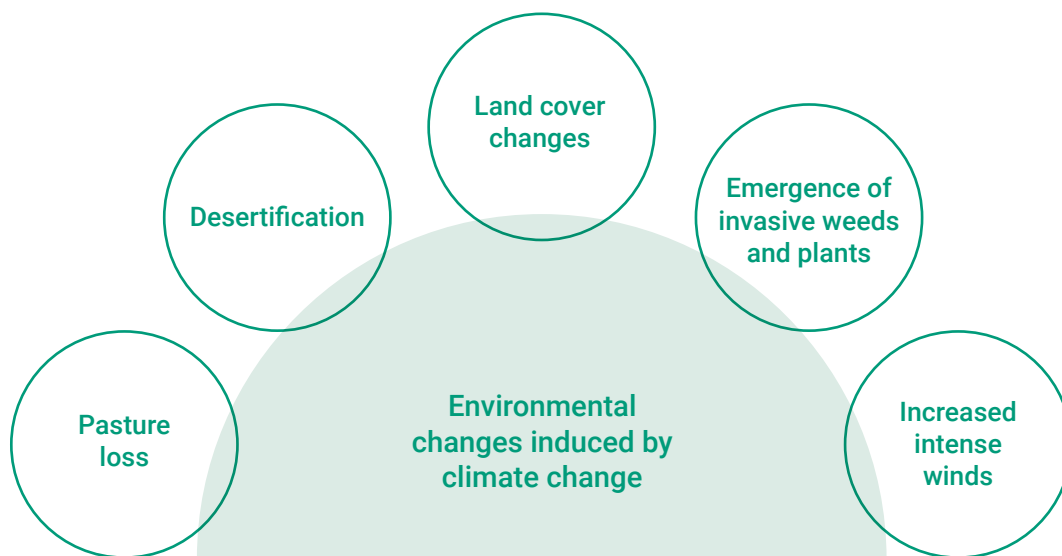
The Waldaa area is part of the broader semi-arid region of Marsabit County, characterised by moderate potential for pastoralism and agriculture. Some areas in Sololo and Moyale also fall within this zone. The climate here is marked by limited annual rainfall and high temperatures. Over the past decade, the area has experienced two rainy seasons – the short rains from March to May and the long rains from October to December. However, in the last five years, there has been a shift towards longer dry periods and unpredictable rainfall patterns.

For the pastoralist community in this region, mobility is a crucial adaptation strategy. Although not often mentioned explicitly, the movement of pastoralists and their livestock in search of strategic land and water resources plays a vital role in building resilience to climate change. National policies related to land use and the environment recognise the importance of mobility

for pastoralists. The National Land Policy of 2009 acknowledges pastoralism as legitimate land use and advocates for flexible cross-boundary access to essential resources like protected areas, water sources, pastures and salt licks. Similarly, the National Environment Policy emphasises the need for a livestock policy that considers livestock mobility and communal management of natural resources.

Climate and development policies recognise pastoralists as a vulnerable group requiring increased climate resilience but often do not explicitly address the significance of mobility (Figure 5).

FIGURE 5. CLIMATE CHANGE INDUCES ENVIRONMENTAL CHANGES



Source: author's creation

The community has undergone climatic changes that have affected their primary livelihoods. These changes encompass environmental shifts such as the loss of pasture for livestock, deforestation, the disappearance of native tree species, heightened wind and soil erosion, increased heat levels and the proliferation of drought-resistant invasive plant species like *Calotropis procera* (Aiton) in riverine areas. These invasive species, including *Acacia oerfota* (wanga), *Acacia mellifera* (Sapansa), *Acacia senegal* (Sigirso) and *Acacia xanthophlea* (Wachu), have had a significant impact on grass cover, inhibiting the regeneration of pastures. In addition to extreme climatic conditions, these changes can also be attributed to the increasing human population within the community and overstocking, particularly when the area experiences favourable pasture conditions due to immigration from neighbouring communities (Figure 6).

To respond to these emerging challenges, the community has adopted various coping and adaptation strategies:

- The scarcity of pasture has prompted a combination of sedentary pastoralism, where livestock are kept near farms and villages year round, especially in dry-season grazing areas, and semi-transhumance, involving the seasonal movement of animals and some people to regions beyond the borders of Waldaa, including neighbouring countries and counties. The primary factor behind this shift is the unpredictability of the usual calendar-based observations that traditionally defined the timing for livestock movements to wet-grazing

areas during the rainy season and back to dry-grazing areas. According to respondents, this is implemented with strict adherence to grazing rules during different seasons. For example, during the rainy seasons, all livestock are moved to the lowlands, which also serve as wet-season grazing areas, located approximately 10 km away from the dry-season grazing and settlement area.

- The community has diversified its livelihoods by adopting alternative sources of income, such as engaging in small businesses, quarrying, selling fuelwood and stone crushing. Some community members also seek formal employment, particularly young, educated individuals who subsequently become sources of income for their larger families. These strategies have been highlighted as responses to climate change and efforts to diversify livelihoods.
- The community has observed that climate unpredictability has made organised livestock evacuation, which involves the transfer of livestock by trucks from Moyale to Isiolo, Laikipia and Ethiopia during prolonged droughts, very challenging compared to previous years when it was possible to predict droughts accurately. According to respondents, in the past, they could move their livestock in a timely manner, preventing large-scale losses due to drought.
- The respondents have also recognised herd diversification as another coping mechanism. This involves the introduction of other livestock types, primarily goats and camels, alongside cattle, which were traditionally dominant.

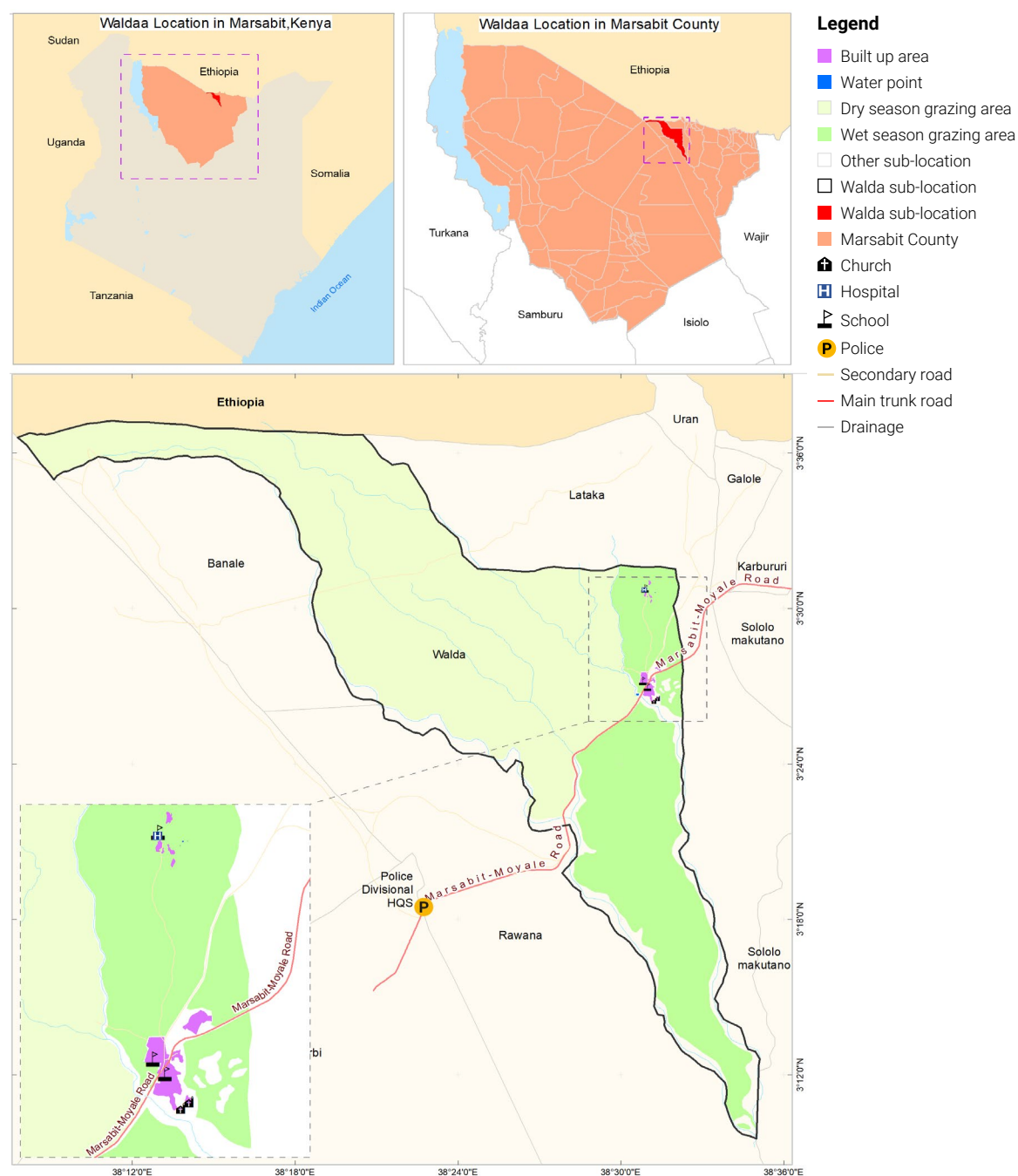
These strategies reflect the community's efforts to adapt to changing environmental conditions and ensure the sustainability of their livelihoods in the face of climate change. Humanitarian organisations, in response to the impacts of drought, then introduced the cash transfer system executed alongside national government programme support for the elderly and vulnerable groups, together with international non-governmental organisations (INGOs), local NGOs and civil society organisations (CSOs), including UN agencies.

FIGURE 6. IMPACT OF FIRST RAINS WITH FLOODS AFFECTING BOTH LIVESTOCK AND PEOPLE



Based on the community's land use-mapping exercise (Figure 7), the land spans approximately 60,282 hectares, divided into two segments: a dry-season grazing area, also serving as their settlement area, covering about 40,000 hectares, and a wet-season grazing area of roughly 20,000 hectares. The community acknowledges that the dry-season grazing land is a more critical part of their territory, representing collective and individual tenure rights. This section is situated along two seasonal rivers, the Urburo and Kolob, with permanent water resources from boreholes used by both humans and livestock, making it the community's settlement area.

FIGURE 8. WALDAA COMMUNITY GRAZING AREAS



Source: author's creation

However, most pastoralists relocate their livestock to Waldaa for water in exchange for pasture resources during dry seasons (Figure 8). This exerts pressure on both water and pasture for the community, leading to the depletion of pasture resources in the context of common shared resources. In times of extreme drought, most animals are migrated to other neighbouring counties, such as Isiolo and Laikipia, and even to neighbouring Ethiopia in search of pasture resources. This is an exceedingly costly journey, typically managed by affluent or privileged community members. An average community member would need to use half of their herds to cover transportation costs to the final destination, which often results in destitution. This is due to the high capital requirements, making it unaffordable for most members.

A closer examination of how the Waldaa community uses the two portions reveals that dry- and wet-season grazing lands are being used as originally defined by traditional rules. These rules mandated strict adherence to instructions for total migration to the wet-season grazing areas. However, the unpredictability of the weather has sometimes led to shorter periods of use of the wet-season grazing areas, reducing from the original 6–12 months to approximately 1–3 months. As a result of these changes, there have been observed shifts in economic activities and the pursuit of alternative livelihoods among community members over the past 20 years. A significant attempt was made to introduce irrigation; however, it did not succeed even after the infrastructure was established. Two primary factors contributed to this failure: the community's lack of farming experience and the vandalism of the irrigation structures.

6.2 Tenure system for collective access and use

The community collectively owns the land and there are management committees endorsed to oversee and regulate the resource use within this territory. Individuals seeking ownership and use of specific land parcels must obtain permission from the land committee. The committee's composition is inclusive, featuring elders, women, youth, religious leaders and representatives of individuals living with disabilities. The Waldaa community strongly emphasises individual and collective land tenure access and resource-use rights.

The Waldaa community values and practises collective land tenure, recognising the existence of individual rights within these collectives. While collective/communal tenure remains dominant for land and resource rights, other forms of tenure exist within the group, including private and public. Private tenure pertains to individual plots within and around urban centres, whereas public tenure covers communal areas such as schools and markets. This diversity within the collectives illustrates how pastoral tenure systems, characterised by flexibility, freedom of movement and governance, interact with the formal system concerning land and natural resource use, access and management. Individuals are accommodated within the collectives and enjoy their claims, demonstrating that the existing system recognises pastoralism as a livelihood system supported by a free-grazing and adaptable approach.

The condition of Waldaa's rangelands does not offer promising alternatives, primarily due to various factors, including soil quality. The county's predominant geological formation consists of volcanic rocks extending from the eastern part of the Rift Valley to the border with Ethiopia. These volcanic rocks are sporadically interrupted by pockets of quaternary sediments and the Mozambique belt. Additionally, extreme temperatures prevail throughout the year, particularly with intense heat from September through March. Nonetheless, the community acknowledges that these rangelands can support only pastoralism. Therefore, this community and its members manage their resources in a sustainable, independent and adaptable manner characterised by rights to common resources and adherence to customary values.

As practised by the community, the collective tenure right spans nearly half a century. This system has generated food and income for the community, contributed to biodiversity conservation and aided climate change mitigation. Table 3 illustrates different land use partners and their respective levels of importance as part of livelihood diversification.

TABLE 3. LAND USE TYPES

Land use type	Level of importance relative to grazing land		
	Less Important	Equally important	More important
Settlement		✓	
Quarrying	✓		
Kitchen garden	✓		
Graveyards	✓		
Infrastructure	✓		
Development	✓		

Source: Study area data

The dry grazing land is accessible to all registered community members and immigrants from neighbouring communities such as Rawana, Sololo, Makutano and Uran. They gain access through negotiated agreements for water and pasture for their livestock. However, under extreme circumstances, non-members are granted only water user rights. The community also mentioned instances where they practise reciprocity in resource use with the neighbouring community of Rawana. This reciprocity involves Waldaa granting access to pasture for Rawana and Rawana providing access to water for Waldaa. However, access to water is restricted, with community members and immigrants required to pay 7 Kenyan shillings (KES) and KES 10 per camel.

The Waldaa community has no documented rules for accessing the dry-grazing land. Nevertheless, they acknowledge the existence of unwritten rules for the sustainable management of resources within the community. This further supports the theory of a functional pastoral system that upholds collective tenure rights for pastoralists. The Waldaa case also aligns with the definition of land tenure regimes as a set of rules and procedures that define and allocate rights of access, withdrawal, management, exclusion and alienation over land. While these bundles of rights are evident in this community, the flexibility, mobility and resource sharing contribute to the tenure security of this group.

6.3 Management of the dry-season grazing area

In implementing the management rules for accessing the various grazing zones, the Waldaa community has established various unit management committees responsible for enforcing access restrictions to critical dry-season resources. However, they acknowledge that climate change has necessitated several changes, influencing the application and enforcement of these rules and norms.

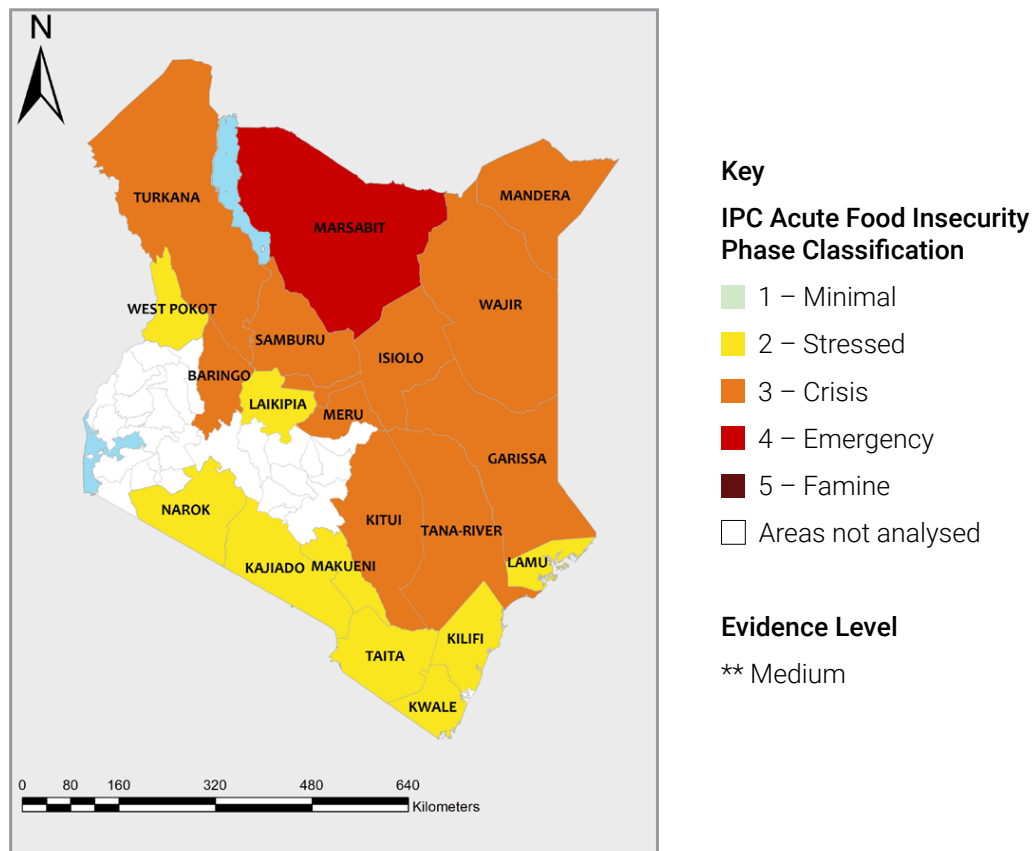
The Borana community has historically been organised through the Dheeda system, essentially grazing clusters. Despite this system, they face challenges in enforcing rules for managing transhumant pastoralism across regions due to multiple changes. As a response, the Waldaa community has chosen a more sedentary lifestyle. At the time of the study, extreme drought was at its peak, resulting in livestock losses to drought, while others had migrated to distant counties and across borders. While internal mobility occurs, outsiders receive access only during drought conditions. Additionally, during dry seasons, movement across boundaries required permission from chiefs, elders and water management and *mazingira* committee members.

As one male elder pointed out, 'We sometimes do not allow camels because they belong to the Somali community, who do not adhere to the rules of water and grazing during the seasons.' During the dry season, for immigrants to gain access to resources, there must be an agreement between the elders from Waldaa and those from the migrating communities regarding:

- the duration of access
- the number of livestock allowed into the Waldaa community
- security provided by the *mazingira* committee responsible for pasture resources in Waldaa
- specific grazing areas accessible to the immigrants
- specific watering points accessible to the immigrants.

6.4 Land use trends

FIGURE 9. PROJECTED ACUTE FOOD INSECURITY IN KENYA, MARCH–JUNE 2022



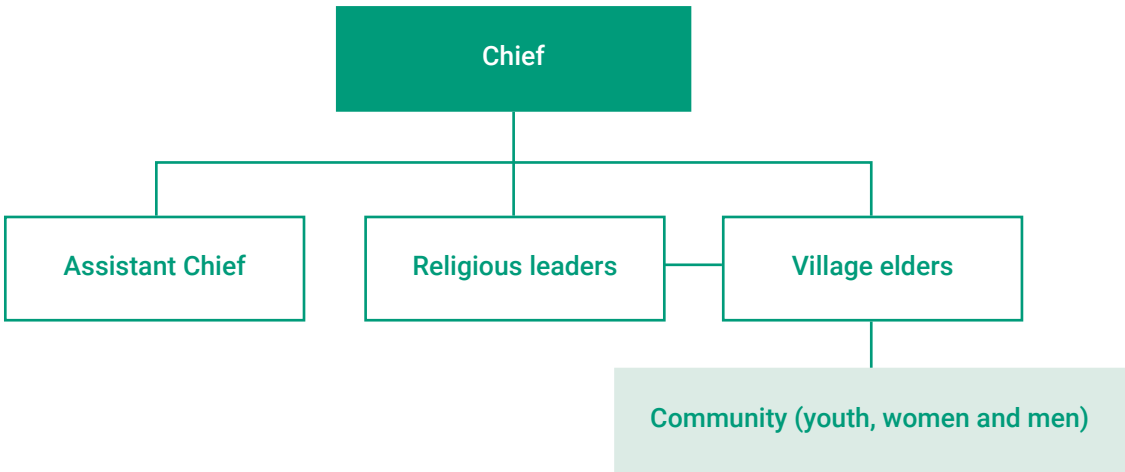
Source: Reliefweb Report, 2022

The research team was informed about the weather changes over the past 10 years (Marsabit, 2018) and the severity of drought. Many mentioned that recovery from the 2016–2017 drought has been difficult and will likely take a generation to fully recover (Figure 9). At the time of the study, Marsabit County had already been classified under the Integrated Food Security Phase Classification (IPC) as Phase 3 (Crisis) or above, including Marsabit (50%), Turkana (40%), Baringo (35%), Wajir (35%), Mandera (35%), Samburu (35%) and Isiolo (30%) (IPC, 2022).

6.5 Governance

An efficient land administration system ensures the recording and protection of land rights, enhances tenure security and facilitates land transactions. Additionally, it provides land users with appropriate documentation to safeguard their land rights and supports processes such as land allocation, resolution of land disputes and fiscal management of land. The current land administration system in Waldaa ensures effective management through the land management committee, which operates based on community-defined rules and the Community Land Act. This act allows for establishing community land management committees. Within the Waldaa community, rules and responsibilities are monitored and enforced by various committees representing different segments of the community, including men, women, youth and elders. Besides the land management committee, two other committees exist: the water management committee and the *mazingira* committee, primarily responsible for managing pasture and grazing areas. The leadership structure in Waldaa is depicted in Figure 10.

FIGURE 10. WALDAA LEADERSHIP STRUCTURE



Source: study data

6.6 Dispute resolution

The effective communal land tenure system in the Waldaa community can be attributed to the following factors:

- strong community cohesion, characterised by a homogenous community with a shared history of resource sharing

- a well-functioning resource management system through various committees
- the presence of community by-laws and regulations governing resource use and access
- equal rights for all individuals in resource sharing

However, the community faces challenges, including delays in community land registration, which can be a complex process. Additionally, the lack of enforcement of community by-laws has resulted in the over-exploitation of the limited available resources.

6.7 Characteristics of the collective tenure system

Climatic factors often drive the migration of pastoralists from one grazing zone to another. The research team asserts that this migration trend is most effective when pastoralists have the flexibility to move. However, two other crucial factors underlie this practice: access and management. These factors are vital because they determine the rights and claims to shared resources, particularly in terms of timing and regulation of use.

In the context of Waldaa, the dry-season grazing land is accessible to community members and registered immigrants as part of the community. Immigrants from neighbouring communities are permitted to access the grazing land and water resources only during the dry season. Community members enjoy unrestricted access to water and pasture, while immigrants must pay for water per camel and can only access specific parts of the grazing land.

The community has established management mechanisms for the dry-season grazing land. Defined rules and regulations govern the management, access and use of resources within the area, including water and pasture. The duration of access often depends on climate patterns. Various committees oversee resource use, including the *mazingira* (pasture) committee, the land management committee and the water resource management committee. These committees are formed through community participation. In addition to these committees, village elders and the chief play a role in conflict resolution within the community. They enforce community by-laws and impose fines on those who violate the rules.

6.8 Perceived tenure security

The history of land tenure transformation in Africa reveals a prevailing trend in which the erosion of collectively held communal grazing lands and natural resources under customary tenure is accelerated by policies supporting the privatisation of formally communal grazing lands. This study examined this notion within a fairly functional pastoral system by understanding the community's perception of tenure security. The study was conducted with a systematic interval/progression, considering the present situation, 5 years, 10 years and over their lifetime. The study also explored how they perceive the same issue concerning their children.

This investigation was prompted by the progressive land reforms in Kenya, involving new policies, legal frameworks and institutional changes since 2009 (including the National Land Policy 2009, Constitution 2010, Land Acts 2012 and Community Land Act 2016). The Waldaa community has taken steps towards registering their land with the Ministry of Lands, which has the potential to promote more intensified livestock production through privatisation. This shift may impact the perception of land tenure among individuals or collectives within

the dry-season grazing areas, potentially leading to restricted livestock mobility in resource-scarce environments. However, to address this concern, the community has the capacity to establish a collective management system based on the land use plan submitted alongside the registration documents.

Table 4 presents the community's perception of tenure security in the dry season. There were 12 participants in the exercise, with 8 believing they are unlikely to lose the right to benefit from (access to and use of) the collective grazing land against their will (Figure 11). They have been trained and are aware of their communal land rights, have established laws governing land use and access and anticipate full land registration soon. Participants who felt somewhat or very likely to lose the land expressed concerns about the potentially lengthy land registration process and the risk of losing it to the government for infrastructure development or neighbouring communities due to intra-community conflicts. They also considered the possibility of future legislative changes that might deny them access to the land. Nevertheless, the community is highly confident that their children within the community will inherit their access and use rights to the collective grazing land for a lifetime.

TABLE 4. RESULTS FROM THE STONE EXERCISE ON COMMUNITY PERCEPTION OF TENURE IN DRY-SEASON GRAZING LANDS

How likely or unlikely do you think it is that your community could lose the right to benefit from (access/use) the collective grazing land against your will?						
	1. Very unlikely	2. Unlikely	3. Somewhat likely	4. Very likely	5. Don't know	6. Refused to answer
During this time next year	8	0	3	1	0	0
Within the next 5 years	11	0	0	0	0	1
Within the next 10 years	11	0	0	0	0	1
During the rest of your lifetime	12	0	0	0	0	0

Source: author's creation

FIGURE 11. USING THE STONE EXERCISE TO DEMONSTRATE LEVEL OF CONFIDENCE



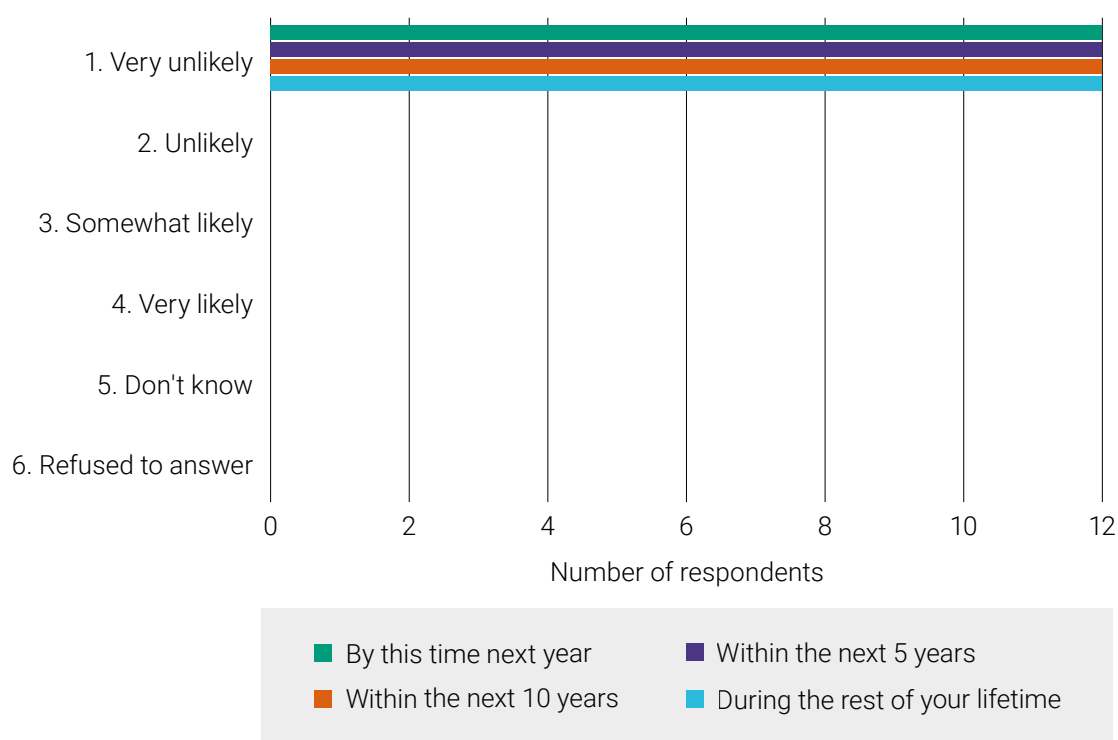
6.9 Perceived mobility security

Pastoralism thrives and remains sustainable through mobility. This practice involves the spatial use of resources and is embedded within a complex tenure arrangement, serving as a major component of pastoralists' resource use and their interaction with space. In a broader context, mobility is understood as the movement of people, networks, ideas, materials and information, focusing on processes of exchange that lead to social change (Sheller and Urry, 2006). For pastoralists, mobility is an integral part of daily life and their socioeconomic and political activities revolve around it. Mobility relies on the existence of routes and corridors, which may sometimes be formally mapped and designated for pastoralist use.

Community members of Waldaa express high confidence in mobility security within the area (Figure 12). This underscores the notion that, while registration or legal recognition is important, traditional land use systems and practices instil even greater confidence in communities. Although the Waldaa community does not have designated livestock corridors, they have well-established mobility patterns and periods during which livestock move between the dry- and wet-season grazing areas. To ensure sustainable resource use, they have divided their land into wet- and dry-season grazing areas, with the dry-season area also serving as their settlement. This dry-season area holds great importance for them.

They have developed rules that govern access and use to the dry-grazing land. For that reason, they strongly believe that they are very unlikely to lose the rights of mobility of livestock and people to and across collective grazing land against their will. They are also very confident that the children in this community will continue to use the rights to the mobility of livestock and people throughout their lifetime.

FIGURE 12. PERCEIVED SECURITY OF MOBILITY BY THE COMMUNITY



Source: author's creation

6.10 Factors affecting tenure security

Figure 13 illustrates the main factors that strengthen the community's unity and enables them to derive benefits from secure tenure of the dry-season grazing land. Community systems and structures have played a significant role in maintaining and benefiting from the land and there have been no documented reports of tenure loss. However, the community is concerned about the lack of legal recognition. Therefore, their top priority is to achieve full land registration. This would provide them with increased security and recognition not only at the county level but also nationally, ensuring the security of their land and its resources.

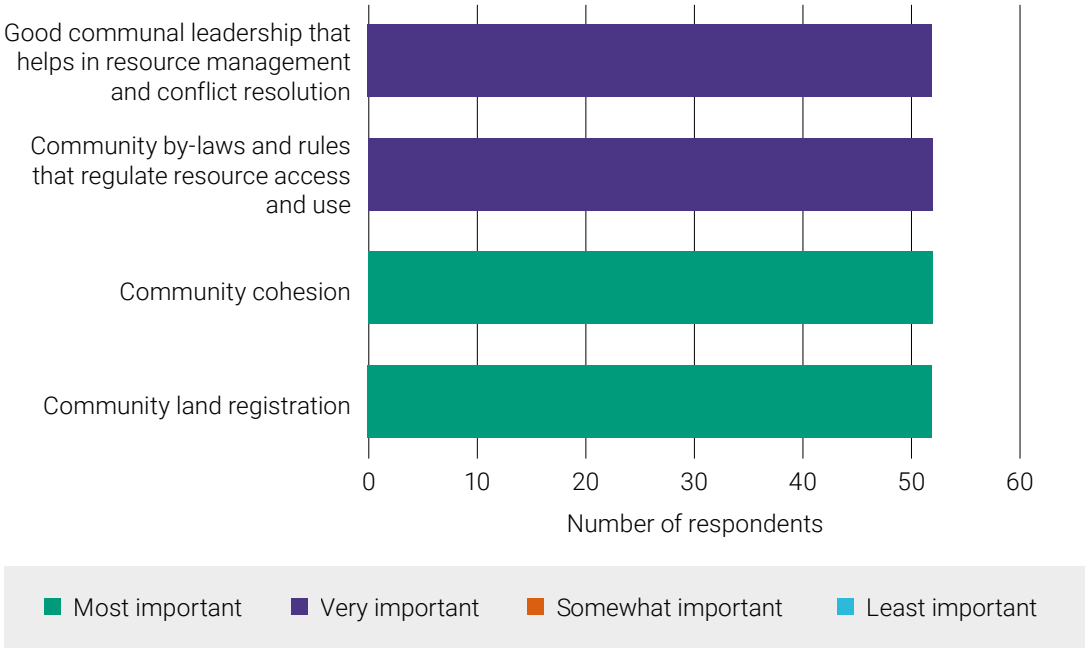
The community also recognises the importance of unity among its members, rooted in a shared history of resource sharing. They view this unity as a crucial factor contributing to the community's ability to maintain the right to use and benefit from the collective grazing land. Additionally, having rules that govern resource access and use, along with effective traditional leadership that aids in conflict resolution, are considered important factors.

The Waldaa community is concerned that failure to complete the land registration process could result in the loss of their rights to benefit from the collective grazing land. This potential loss could happen either to a neighbouring community that might claim the land as customary or to the government as trust land. Furthermore, ethnic conflicts arising from unclear land boundaries pose a threat to their land tenure security, as neighbouring communities were not consulted during the land mapping process.

Community members fear losing the rights to benefit from the collective grazing land if the land registration is not seen to completion. This could be to the neighbouring community that may claim the land as customary land or to the government as trust land. Secondly, ethnic conflict due to unclear land boundaries also threatens their land tenure security since the neighbouring communities were not consulted during the land mapping process.

The loss of rights to the collective grazing land for the community means the loss of their main livelihood. However, the community has never lost land rights before and is very confident they will hold the rights for a lifetime. This can only be strengthened by ensuring that the land is registered.

FIGURE 13. MAIN FACTORS CONTRIBUTING TO COMMUNITY HOLDING AND BENEFITING FROM TENURE SECURITY RIGHTS



Source: author's creation

7. ACCESS, USE AND TENURE SECURITY OF GRAZING LAND FOR INDIVIDUALS

7.1 Tenure system for individual access and use in dry-season grazing land

The tenure system in the Waldaa community acknowledges both individual and collective rights equally. Individual tenure rights within these collectives, particularly those of women, play a crucial role in contributing to productive pastoralism, highlighting key principles of human rights and sustainable livelihood mechanisms. This concept aligns with international human rights instruments that specifically recognise the rights of indigenous peoples and peasants.

For instance, the UN Declaration on the Rights of Indigenous Peoples and the UN Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP) recognise collective rights based on customary land tenure systems and equal individual rights. Similarly, the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests emphasises recognising all legitimate tenure rights, including those of indigenous peoples and communities with customary tenure systems and ensuring gender equality in these rights.

Experts interviewed during this study concur that various policies and legal instruments can effectively safeguard the rights of individuals within collectives. For example, the Constitution's Bill of Rights in Article 40 protects individual and collective rights. While the Community Land Act acknowledges the rights of individuals, it does not grant these rights superiority over collective rights in any way. Professor Okoth-Ogendo challenges the perception that indigenous land rights systems are solely communal, highlighting that individuals also hold tenure rights within these collectives. During discussions with the Waldaa community, individual contributions to the system's success were recognised. However, a minority voice, particularly a woman, expressed concerns about her future rights within the group, especially since she lacks a title in her name.

Further discussion within the larger group revealed that individual rights within the collectives were indeed protected, such as those of a widow and an orphan. However, the woman's fear centred on the future rights of her female children. She advocated for individual land ownership as a more secure mechanism. This underscores the importance of the nexus between individual and collective rights, an aspect that has received limited attention, including in terms of gendered human rights violations.

Barriers faced by pastoralists and indigenous women, including those related to their individual and collective rights, need to be addressed comprehensively. While individual rights to access and land use are protected by community by-laws enforced by village elders, there are instances where collective land rights take precedence over individual rights. The ongoing land registration process in Waldaa presents an opportunity for land use planning to secure diverse tenure systems within collectives and promote and safeguard the rights of individuals, especially women.

Addressing these barriers necessitates respecting, protecting and fulfilling women's collective and individual human rights and analysing the interaction between these rights. Tailored, context-specific strategies are required to protect women's land claims within this complex landscape. Governments must ensure the recognition, protection and respect of all legitimate tenure rights, including customary rights of pastoralists. This involves harmonising functional customary tenure systems with legal frameworks, ensuring that they complement rather than undermine each other.

7.2 Characteristics of the tenure system for individual members

While there is diversity among pastoral communities in the management and ownership of land, the common thread is that they are primarily governed by customary tenure systems in Kenya, covering approximately 60% to 65% of communal lands. Customary tenure in sub-Saharan Africa aligns with the concept of a bundle of rights, encompassing defined individual or family rights to land and land use in conjunction with common property resources. Hence, the term 'communal tenure' has occasionally sparked debate. In this system, rights are granted to individuals or households based on recognised group membership and a level of group oversight in land matters is maintained, establishing a collective or communal dimension to land tenure. In practice, customary tenure involves complex combinations of rights and obligations for individuals, families, subgroups and larger groups related to various resources (e.g. farming, grazing, hunting, wood gathering, water access and mobility), granting different actors distinct access at different times. Waldaa exemplifies this complexity in the interplay between customary and administrative structures.

Within the context of pastoral customary tenure rights, the dry-season grazing areas create a complex relationship between individual and collective rights. Although everyone in Waldaa appears content, as evidenced through interviews and earlier sections of this report, it is a topic that is not widely discussed but remains significant. The assumption that characterises land use in pastoral areas primarily revolves around grazing and has the potential to diminish individual rights. Land is more than just a means of production; it is an integral part of communities' ways of life, culture, identity and spirituality. In this regard, recognising collective rights complements individual rights. The community asserts that individuals, both men and women, have their rights to land use in dry-season grazing areas safeguarded. This protection occurs, firstly, through established structures, institutions, rules and regulations. Secondly, it is reinforced through inclusion in decision-making bodies and interventions aimed at securing both collective and individual rights.

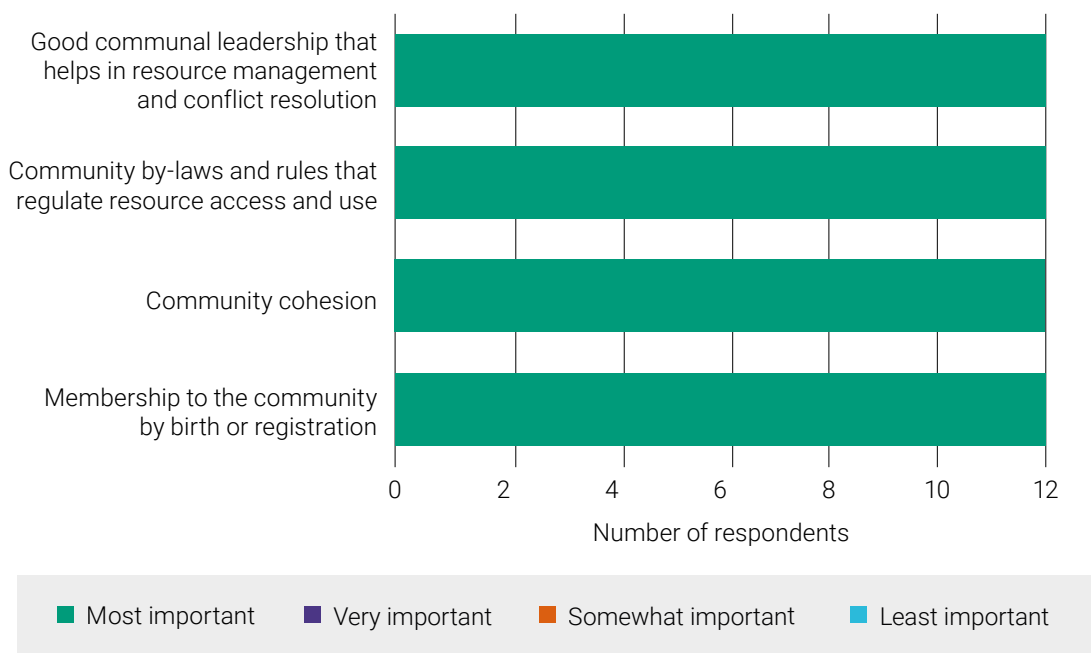
The experience surrounding the implementation of collective and individual land rights within Waldaa demonstrates that individuals, especially women, benefit from the existing mechanisms that recognise and protect both types of rights. However, the study notes that registering the group under the current Community Land Act would further strengthen and potentially reduce risks arising from the recognition of collective land tenure, which should also uphold women's and other individual rights to access and control land and natural resources, especially in dry-season grazing areas. Even though the community recognises and prioritises the rights of people with disabilities, providing them priority in resource allocation to ensure equity, the trend of registration for greater protection would enhance existing positive actions, in both intention and practice.

7.3 Perceptions of tenure security for individuals in dry-season grazing lands

Tenure dynamics come into play, especially when considering the perspectives of both collectives and individuals. The study employed the 'stone' concept to illustrate the sentiments and perceptions surrounding individual tenure security. According to this exercise, individuals within the community firmly believe they are unlikely to lose the right to benefit from (access to and use of) the collective grazing land against their will at any given time. They expressed confidence in the imminent registration of their land, which would grant them full legal ownership. Securing the land through registration instils in them confidence that their children will inherit their access and use rights to the collective grazing land for a lifetime. These dynamics are visually represented in Figure 14.

Leadership, group by-laws, cohesion and membership all emerge as critical factors that, despite the land not being registered yet, drive the community members to prioritise registration and proper land allocation whenever such processes are undertaken to ensure that they are conducted correctly. The application and enforcement of the rules and group by-laws also play a crucial role in ensuring the system's functionality.

FIGURE 14. FACTORS CONTRIBUTING TO INDIVIDUALS HOLDING THE RIGHT TO USE AND BENEFIT FROM THE LAND



Source: author's creation

7.4 Factors affecting individual tenure security

Recognising the interconnectedness of individual rights with the broader collective, the group endeavours to minimise the loss of rights as much as possible. There was not any demonstrable experience of loss from the group. However, the general observation from the study is that the loss of individual rights to access and use the collective grazing land equally

translates to the loss of rights to access pasture and water, which are fundamental for their main livelihood. In such situations, the collective benefit is diminished based on the livelihood losses of its members. The group did not explicitly cite any instances of individuals who have lost such rights, leading to the conclusion that the system has, to some extent, covered individual rights within the collective tenure.

Nevertheless, the respondents did identify three major factors that could contribute to the loss of individual rights within the collectives (Table 5). The community recognises that, while legal recognition has not been a significant issue in the past, it now holds utmost importance in protecting the tenure rights of individuals. Other issues that can potentially increase the risks of loss include unprocedural land allocation and acquisition, and disregarding grazing rules and regulations, especially during the dry seasons.

TABLE 5. FACTORS CONTRIBUTING TO AN INDIVIDUAL LOSING THE RIGHT TO BENEFIT FROM COLLECTIVE GRAZING LAND

Factors	Least important	Somewhat important	Very important	Most important
No land registration				✓
Unprocedural land acquisition				✓
Disregarding the grazing land rules and regulations				✓

Source: author's creation

7.5 Anticipated changes over time and strategies to strengthen rights

There are multiple claims by individuals within the collective tenure rights and often the majority will have their way. This stands on the benefits of individual land tenure rights. The community, however, recognises this and observes the need for improved and reviewed community by-laws to clearly define the individual rights that the elders should enforce to achieve equity. Waldaa community, having very well-defined rules and regulations that govern resource access and use, believe there is no likelihood that the rights of individual community members to access the collective grazing land will change in the future, for that gives them full control. As opposed to the collective community, individuals have in the past lost rights to land use and access, mainly due to unprocedural land acquisition. However, no individual reclaimed ownership since the land belongs to the community.

7.6 Strengthening tenure security: options and strategies

Cousins, in his paper presented at the 2009 Annual World Bank Conference titled 'Potentials and pitfalls in communal land reforms', argues that, in practice, customary tenure comprises complex bundles of individual, family, subgroups' and larger groups' rights and duties to a variety of resources (e.g. rights to farm, graze animals, hunt, gather wood, access water points and transverse), which confer distinct access to different actors at different times (Cousins, 2009). This argument is further supported by various legal perspectives, including those of

human rights advocates, activists and legal scholars, who contend that strengthening tenure for pastoralist smallholder farmers does not rely solely on codification, registration or titling.

Catherine Boone, in her paper titled 'Legal empowerment of the poor through property rights reform' (Boone, 2019), presents another legal perspective, highlighting the inevitable dilemmas that arise when considering the transformation of the institutional context of African agriculture or landholding. Any assignment and registration of rights inherently involve some redistribution of rights and a transformation in the nature of the rights themselves. This explains why land registration and titling proposals and policies have been divisive in many African countries. Thus, this study calls for reflection on the steps to strengthen the tenure system within the Waldaa community and the larger pastoral landscape.

Therefore, it is crucial to understand the foundations of pastoralists' tenure security as discussions on strengthening the system gain momentum, whether through policy and legal means or by fortifying traditional and customary governance systems and structures. Some factors that require deeper examination include flexibility, functional traditional governance systems, supportive policies and laws and mobility, among others. The Waldaa community takes pride in embodying most of these factors, making them a model of a well-functioning pastoral system. To achieve land transformation within rangelands or pastoral lands, key indicators should include the existence of flexible mobility that supports pastoralism. This can be observed through changes in pastoral landscapes in response to various influences essential for planning, policy development and implementation.

The de facto tenure system in the Waldaa community is communal tenure. This has created an opportunity for promoting communal rangeland resource access, use and management collectively and individually, with minimal inter- and intra-community resource-sharing conflicts. The group has established a flexible and communal system of governance for grazing and water sources across a territory or landscape, allowing them access rights over a wide area of rangeland shared with other group members or different groups, thereby enabling them to manage the high variability and uncertainty in resource availability.

In the Waldaa community, seasonal movements control grazing lands, prevent out-of-season grazing, manage natural resources, particularly water and, to a lesser extent, avert potential conflicts with neighbouring communities. The most important aspects of this system that make it well suited for a well-functioning pastoral system are the functional governance structures, the ability to support mobility and the flexibility of user rights between collectives and individuals. Although potential weaknesses may arise concerning future dynamics related to individual tenure rights, the group has maintained a relatively successful relationship between individuals and collectives. Therefore, effective strengthening of the pastoral tenure system should be informed by and observe some of these options and strategies derived from these distinctive features (Table 6).

TABLE 6. STRATEGIES FOR STRENGTHENING THE PASTORALISM TENURE SYSTEM

Options	Strategies
Clarifying tenure rights within the context of pastoralism	Design programmes and interventions that recognise that pastoralists' land tenure rights and claims are complex and are embedded in a range of social relationships, in particular, understanding the governance, institutions and different user rights.
Mapping and planning pastoral land and resources	Use spatial maps to depict pastoral land and resources and apply participatory land use for pastoralists, with members taking the lead.
Developing a conceptual framework to guide policy processes for pastoral land	Provide a conceptual framework for the relationship between pastoralists' land rights customary management and legal regimes to strike a balance leading to synergy, complementarity and not competition. Identify the major implications of that relationship for government policies and programmes in the pastoral areas.
Strengthening governance systems for land management	Identify successes and bottlenecks in land governance, institutions, legal frameworks and tools within the context of de facto communal systems.
Gendering pastoral land use	Work with the pastoral community to develop gender-inclusive mechanisms for land and resource use, management and ownership.

Source: author's creation

8. CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion

Numerous factors contribute to perceived security or insecurity of land tenure rights of pastoralists, whether collectively or individually. First, there is the question of tenure through the registration of rights. While partially true, the assumption that legal recognition through land registration guarantees secure tenure under legal regimes in both *de jure* and *de facto* scenarios does not tell the whole story. The Waldaa community, for example, has existed for close to half a century without legal registration but has retained rights to its land and natural resources. This study suggests that communities can maintain their tenure rights based on existing activities and diverse land uses. However, there is a perceived and real vulnerability to land loss, particularly following the promulgation of the Community Land Act in 2016 and the push to register community/trust lands, both collectively and individually.

The dry- and wet-season grazing lands in Waldaa have faced challenges due to unpredictable weather changes, leading to greater pressure on grazing lands and water resources. The study observed that these challenges stem from shorter periods available for wet-season grazing lands. The systematic increase in population, resulting in more settlements in dry-season grazing areas, has also introduced tenure issues, as livelihood diversification is concentrated in this area. Consequently, the study posits that these factors may lead to tenure dynamics potentially favouring private over collective land use.

These issues also impact perceived tenure rights within pastoral lands. While collective tenure is essential and perceived as secure, increased resource pressure, climate change, exploration of diverse livelihood opportunities and the push for land registration can create perceptions that land registration enhances security and that tenure security is stronger under collective use. However, the study concludes that these perceptions, while important in maintaining cohesion, pose potential challenges that may undermine tenure security. For instance, severe drought can weaken the capacity to enforce resource use rules, leading to a loss of governance authority and system vulnerability.

The study affirms that collective and individual tenure rights can coexist within the framework of pastoralist customary tenure rights of use and access. Vulnerable groups, such as widows and orphans, confirmed that they enjoy equal rights within the group. When systems are functional, all claims and rights can be realised without infringing upon others, whether within collectives or among individuals.

Regarding legal protection, the study notes an increasing willingness of states to formally recognise communal land rights of pastoralists, a welcome development within communal land tenure laws and policies in Kenya. However, pastoral systems often have features that challenge conventional land tenure arrangements. Pastoralists themselves resist territorialisation, maintaining complex and messy patterns of access to grazing land; and yet it is effective.

Our findings emphasise the need for greater advocacy for community-based land governance solutions and strengthening institutions to promote the inclusiveness of traditional governance. In conclusion, the study underscores the necessity for further discussions, research and strengthening pastoralists' tenure systems. The livelihood system depends on rangelands. Without a proper understanding of this system, rangelands' restoration and management in support of pastoralism risk being perceived as conservation versus pastoralism, creating tensions with limited impact on both rangelands and pastoralism. More research is needed on the gendered use of common resources within collective tenure and the norms regulating their allocation and use.

8.2 Recommendations

To address the challenges identified and improve tenure security for pastoralists, the study recommends the following:

1. **Improve tenure regimes for pastoral areas**

Ensure that policies and programmes promoting tenure regimes in pastoral areas involve pastoralist communities at the core of these processes, focusing on community-driven approaches for appropriate rangeland restoration.

2. **Increase awareness and citizen engagement**

Strengthen awareness and engagement mechanisms to provide accurate information to duty holders and rights bearers, reconciling perceptions about pastoralists' land tenure and resource rights.

3. **Enhance dispute-resolution mechanisms**

Establish robust collaboration and networking between government and customary institutions to support customary courts and enforce their rulings. Analyse the context to understand conflict triggers and strengthen cooperation between neighbouring counties and the national government.

4. **Support pastoral mobility**

Develop and enact land tenure laws that recognise and protect pastoral mobility, ensuring pastoral access to natural resources that sustain mobility.

5. **Strengthen policies, laws and institutions**

Ensure the proper implementation of existing policies, laws and institutional frameworks that support pastoralists' land tenure and resource rights. Promote engagement between communities and government through mechanisms like the community land management committees.

6. **Promote social inclusion**

Actively engage women, youth and children in decision-making processes to address perceived tenure issues within collectives. Design programmes that focus on social inclusion.

7. **Build adaptation and resilience**

Develop and implement social protection interventions and restoration projects to enhance pastoralists' resilience to climate change and other risks. Recognise and integrate indigenous knowledge into national disaster risk management policies.

8. Encourage innovative land use planning

Implement innovative and participatory land use planning, considering pastoral and settled areas. Use spatial planning to harmonise property arrangements that reduce conflicts between pastoral land rights, parks and wildlife.

9. Pilot community resource use initiatives

Implement pilot initiatives, such as participatory rangelands management, to enable communities to manage their resources collectively and participate in land use planning.

10. Promote research and documentation

Document successful community initiatives, including customary rangeland management, to inform policy and advocacy efforts in pastoral areas.

11. Use simple technology

Use simple mapping and documentation technologies to identify and protect community resources, including trees and wildlife species. Create maps for livestock and wildlife corridors to optimise resource use.

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