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Pastoralist women's perceptions of tenure security and implications for collective tenure regimes, policies and practices

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Land tenure security and perceptions of that security are core characteristics of people's resilience and capacity to adapt to climate change. However there has been limited consideration of perceptions of tenure security in collective tenure systems including in global frameworks for measuring perceptions of tenure security. This paper examines how pastoralist tenure security and particularly, women's tenure security is considered and accommodated for in such collective tenure systems, and the implications for communal land governance and frameworks that attempt to capture the tenure security of these. Focusing on three purposively selected, well-governed pastoralist communities—the Wakilé Allah (Burkina Faso), the Bagagir (Sudan) and the Waldaa Boran (Kenya)—the study focuses on perceptions of both group-level and individual access rights to grazing lands, mobility and related resources, emphasizing the role of customary governance in shaping women's tenure outcomes. Mixed and sex-segregated FGDs conducted between 2022 and 2023 elicited local property practices, threats and opportunities, and probabilistic judgments about losing access over one, five, 10 years and across a lifetime. Findings show that collective tenure can provide meaningful tenure security for women when customary governance is strong, inclusive and enforceable. Among the Bagagir in Sudan and the Waldaa in Kenya, respondents (men and women) generally reported strong perceptions of group and individual security, pointing to group cohesion, reciprocity and institutionalized leadership—including, in the Kenyan case, substantive women's representation—as protective factors. By contrast, the Wakilé Allah in Burkina Faso and particularly women expressed higher short-term insecurity driven by agricultural encroachment and other land pressures, weaker host-community relations and more tenuous governance. Social cohesion plays a crucial role in shaping perceptions of security and well-functioning governance systems. These results make an important contribution to the further development of global land indicators and frameworks measuring perceptions of tenure security and their inclusion of collective tenure. The paper also highlights that pastoralist women like men perceive their tenure security

acquired through the collective to be strong, highlighting the opportunity of strengthening women's tenure through the collective rather than assuming individual titling alternatives.

KEYWORDS

Africa, indicators, pastoralist, perceptions, tenure security, women, rangelands

Introduction

Women's tenure security in collective tenure systems is often ignored, with the focus on the tenure security of the group. The literature on women's land rights focuses on land rights in private property systems and ensuring that women have their names on land ownership documents. In this study, we examine three pastoralist communities with well-functioning governance systems to demonstrate that women can have secure tenure within these systems. This suggests that we should not assume that the individual privatization of rangelands holds the best options for women, but that in most cases, the focus should rather be on strengthening the tenure security of the group and the strength of women's access to rights through the group.

Collective land tenure and tenure security

Millions of people worldwide, both women and men, depend on lands managed through customary, typically collective, community-based tenure systems or commons (Meinzen-Dick et al., 2006; Flintan, 2019; Errico, 2021; Larson, 2012; Alden Wily, 2011). Estimated to cover around 3.1 billion hectares globally (RRI, 2020), these systems have developed over centuries in response to the physical and land-use environment of which they are a part (Cotula and Toulmin, 2007). Because rangelands are multiple-use landscapes, their governance demands layers of tenure rights for different types of resources and resource use distributed over large areas, temporally or geographically defined. Although governance arrangements vary, all require an entity to hold and enforce rights (or claims, if the rights are not recognized by law) and an authority or set of institutions to govern decision-making and rule-making (Larson et al., 2015).

Land tenure security is "the certainty that a person's rights to land will be recognized by others and protected in cases of specific challenges" (FAO, 2002). It is a central characteristic of community and individual resilience and capacity to adapt to climate change (Castro and Kuntz, 2022; McCarthy, 2021). Tenure security may be protected by the state (*de jure* rights) or based on patterns of interaction or use outside the formal realm of the law including customary rights (*de facto* rights) (Lahoti, 2022; Locke et al., 2021; FAO, 2002).

While the concept of tenure security is clear, it is harder to measure it. It is difficult to know *a priori* whether someone's rights or claims will be enforced. But it is possible to study people's perceptions of whether they are tenure secure. Perceptions of tenure security are important because they influence a person's behaviour, including whether they invest in improving the management of land and resources or participate in activities that promote climate adaptation and community resilience. Conversely, perceptions of tenure insecurity can lead to underinvestment, social exclusion, and conflicts, as people spend

unnecessary time and effort trying to protect their access to land (Ren et al., 2019; Prindex, 2024; Musah et al., 2024; Lahoti, 2022). In response, global land indicators have increasingly included perceptions of tenure security as well as indicators of their land rights. Prindex, for example, began measuring perceptions of tenure security in 2020 and completed a second round in 2024, with data from 108 countries and 107,849 interviews (Prindex, 2024). However, such measures have focused on individual tenure security, with limited attention to perceptions of the tenure security of land under group or collective tenure.

In parallel, there has been growing attention to women's land rights, encouraged by the Sustainable Development Goals on gender equality and the demands of women's land rights movements. This attention has focused mainly on ensuring that women have individual rights to private property or where married, jointly with their husband (Agarwal et al., 2021; Doss et al., 2015; Meinzen-Dick et al., 2019; Prindex, 2020) with little attention to securing women's land rights under collective tenure systems (Meinzen-Dick et al., 2025).

In a conceptual framework on women's tenure security on collective lands, Meinzen-Dick and colleagues (2025) identify two dimensions of tenure security that are important. First, the group must have secure tenure. Second, women must have secure tenure within the collective. So, it is both group level tenure security and individual level rights within the group. The latter may involve a person's tenure security regarding accessing collective lands for grazing livestock, collecting water or non-timber forest products. Or it may involve tenure security regarding a parcel of land that has been allocated through the community to the individual, for activities such as farming.

A community's collective rights are not enough on their own. If, for example, local patriarchal power structures or community norms prevent women from exercising their rights to use, benefit from, and govern communal land, they may have limited power despite the collective's legal rights (Meinzen-Dick et al., 2025; Doss et al., 2015; Errico, 2021; Salcedo-La Viña and Giovarelli, 2021).

Thus, understanding how women access land under collective tenure as members of a group is a starting point for improving tenure security. We need to consider both levels; that of the group and of individual group members. It is equally important to understand variations, since not all women use and access land in the same way and may experience land tenure security and governance differently (Flintan, 2021a; Flintan, 2021b).

Rangelands, collective tenure, and pastoral women

Rangelands are the cornerstone of pastoralism and span 54% of the earth's terrestrial surface (ILRIUCNFAOWWFUNEP and ILC,

2021). Rangelands tend to be governed and managed collectively as common land with flexibility of movement and use of temporally and spatially distributed resources based on relations of reciprocity. Customary collective tenure involves complex combinations or ‘bundles’ of rights and obligations for individuals, families, subgroups, and larger groups (Cousins, 2009). These rights and obligations relate to a variety of activities including, grazing, farming, hunting, gathering wood, accessing water, and moving in, out, and across a rangeland, with different actors’ having distinct access at different times.

Nested governance systems provide for multiple layers of rangeland use by both primary users (e.g., livestock herders) and secondary users (e.g., those who cut grass, hang beehives, collect highly lucrative gums and resins, and, increasingly, plant crops) (Flintan, 2021a). Many pastoralist communities believe the land belongs to a spiritual being or God, and customary institutions control collective access to resources and their use. This is very different from the concept of private or state ownership of land. Collectivity and connectivity are essential characteristics of a community’s resilience, including pastoralists’ ability to cope with drought and other shocks (Kim et al., 2022; Béné et al., 2023).

Women’s rights are enacted through collective property practices and governance relations. Customarily, pastoralist women access land and resources as part of their group, and their rights to resources are generally protected, as it is in the group’s interest that women are able to feed their families and contribute to the group’s wellbeing. When functioning well, the group or clan will protect all its members, including women, and in times of need, will redistribute resources, including livestock, to vulnerable group members (Flintan, 2021a). At the same time, collective tenure systems often impose barriers to women’s rights and access to land, because women’s use and control over these lands depend entirely on their position within a group usually governed by men (Meinzen-Dick et al., 2025). With rapid socio-political changes taking place, there is increasing ambiguity as to how to protect women’s tenure security, recognizing that “women do not constitute a uniform social group [and] also because each tenure regime [or system] is complex and carries its own advantages and disadvantages” (Archambault and Zoomers, 2015, p. 4).

With increased pressure on pastoralist lands, one approach has been to move towards the privatization of these land tenure systems, granting parcels of land to individuals. The privatization of land may have negative consequences for women. There are examples of women losing traditional positions and access to land and resources. For example, in India, Maldahari pastoralist women are losing the community status they gained through their traditional pastoralist roles due to shifts toward mechanized crop farming (Agarwal et al., 2021). In Kenya, women lost out during the dismantling and privatization of group ranches, with individual titles granted primarily to men (Flintan, 2011). Increasingly, pastoralist women are not getting married but are living alone, with or without children, which brings both independence and new vulnerabilities (Langat, 2017). Odoko and Levine (2008) aptly describe such situations as women “falling between two stools”. They fall between the protection that should be provided by a strong customary group tenure system and the protection that should be

provided by a functioning formal tenure system that provides an individual with private land rights.

In other cases, women have been able to take advantage of the changes, particularly where they have been able to maintain or strengthen social networks to access land and resources through the larger pastoralist group. Initiatives such as women’s resource leadership forums in Tanzania have strengthened women’s status and agency in land-related decision-making processes and allowed them to access individual plots of land through the group (Dungumaro and Amos, 2019). In Kenya, the NGO Groots is supporting community workshops to discuss more equitable land access. Women role-models or “local champions” have successfully secured their rights and subsequently advocate for women’s land rights more generally (Santpoort et al., 2021; Bullock et al., 2026). In turn, this has strengthened women’s position in pastoral communities, increasing the visibility of their labour contributions and their control over income and decision-making processes, and their role as central nodes in resource governance, management, and access (Archambault, 2016; Flintan et al., 2019).

Simultaneously, over the last two decades, there has been significant growth in land tenure and rights projects targeting women in pastoral areas (Sullivan and McMahon, 2018; Kimuge and Wairimu, 2024), influenced by the global groundswell of women’s rights movements. However, most women’s land rights projects focus on strengthening women’s land rights as individuals rather than on securing the tenure of the group and access to land through the group. When a woman secures a plot of land in her own name, she and her household may benefit in the short term. Individual tenure provides a sense of security while providing household members an anchor from which they can access resources in the broader landscape. However, in the long term, individual titling may leave women more vulnerable than before, as privatization and the reduction of group land and resources weaken the group itself and limit her access to shared resources (Robinson and Flintan, 2022).

Studies considering these issues have highlighted the need for further research to fully understand, the full implications of such processes, particularly in the long term and the relationships between different property regimes, their evolution and impacts. There is a need to unpack the conditions under which collective tenure arrangements present an opportunity for women’s secure access to, control and collective ownership where appropriate over land (Flintan, 2021a; Robinson and Flintan, 2022; Santpoort et al., 2021), so that security through the collective can be strengthened.

In this study we explore these aspects, seeking to improve understandings of pastoralist perceptions of collective rights and women’s rights as part of this collective and to inform the development of global land indicators and frameworks for measuring perceptions of tenure security. Through the collective we capture critical dimensions of pastoralist land tenure security currently missing from global land indicator frameworks and more generally contribute to an improvement in understanding women’s tenure security dynamics as an integral part of this. This enables the development of more appropriate, better-tailored interventions to support women’s land rights, as well as those of the pastoralist group to which they belong.

Materials and methods

The study case studies selected come from well-functioning pastoralist groups with strong customary-rooted governance structures and leadership. This enabled us to focus on understanding group dynamics in a more traditional context, relatively unchanged by internal and external interference, and without complications such as internal leadership conflicts or significant outmigration that may be common in other pastoralist areas. In addition, these three cases each have a supportive, productive, resilient livestock production system that copes relatively well with crises and climate change. Though in different countries, their similarity provides for cross case study comparison.

Reconnaissance visits were made to confirm the suitability of the community and their willingness to participate in the study before research began. Key informant interviews were carried out with community leaders and representatives from nongovernmental organizations and government departments to improve understanding of the context. Fieldwork was undertaken between 2022 and 2023, and though national insecurity during this time increased in Sudan and Burkina Faso, the research teams were able to complete the study.

Focus group discussions (FGDs) were undertaken to reveal how lived property practices in communities in Burkina Faso, Kenya, and Sudan reveal perceptions of land tenure security for men and women in collectively governed pastoral systems. The tool was tested locally and questions adapted to the local context as appropriate. FGDs are well suited for this study because they allow for in-depth discussion to elicit perceptions, norms, and experiences from multiple individuals in a community (CDC, 2018).

Before discussion on perceptions of tenure commenced, a FGD (mixed in Burkina Faso and Kenya, and men only in Sudan due to social norms) was carried out to better understand each pastoralist socio-political system and its dynamics, as context. Participants were chosen in consultation with community leaders to represent different groupings in the society defined by sex, age, community leadership positions, marital status, and wealth to capture these different perspectives. Though this may have led to some bias in selection, we have found this the most socially accepted way to proceed, and we did what we could to ensure that the selection was representative.

Twelve FGDs were then undertaken to discuss perceptions of tenure security, facilitated by a national experienced researcher, who managed the group to optimise participant participation. In each site one mixed FGD was undertaken first to discuss the tenure security of the group generally, its status, dynamics, challenges and opportunities. And then this the group was split by sex to undertake a discussion on perceptions of individual access to rights in the group. In Sudan an additional mixed youth FGD was undertaken as decided by the local researcher. Altogether the FGDs involved 18 participants in Burkina Faso 33, in Sudan and 23 in Kenya.

Our study focused on ‘perceived’ tenure security reflecting underlying property practices, recognizing that perceived tenure security can be a function of formal (legal) recognition of access and use rights and of individual or group experiences. It is these perceptions that reflect underlying property practices and shape

people’s decisions about land and other uses, as well as their sense of wellbeing.

Participants in the FGD1 sessions were asked to select their most important collectively managed grazing land as the focus of the discussion. The session was facilitated by participatory mapping of rangeland resources, including grazing lands, with the map providing a visual focal point for the discussion. Questions were then asked on how the system functioned, recent changes, challenges or opportunities, and responses to these.

Using the grazing land identified by the first group, the next mixed-sex FGD focused on the group’s perceived tenure security of that land. The group was then split to discuss how individuals (men, women, youth, elderly) accessed resources through the group i.e., as individual members of the group, and their perceptions of security of such individual access rights. The latter was a difficult concept to communicate, both with national researchers and with communities, not least because communities do not necessarily think in this way; they access land and resources as a group and do not necessarily think about individual rights.

As part of these FGDs, participants were asked how likely or unlikely they think it is that they could lose their land or property within the next one, five, and 10 years, and within their lifetime. Similar questions were asked about the likelihood of livestock mobility being lost; mobility being an integral part of a pastoralist production system. Participants were also asked whether they thought that their children would inherit the community’s rights of access, use, and mobility. Factors that affect perceived tenure security and insecurity as a group and as individual members of the group, as well as the potential impacts of the loss of rights and prior experience of such loss, were also explored.

The focus group discussions, therefore, captured not only perceptions but also the everyday practices through which pastoral property relations are negotiated and reproduced.

Responses were collected in the local language, translated, transcribed, and analysed using thematic interpretive quality data analysis, following the themes structuring the group discussion questions. The study received ethical approval from the International Livestock Research Institute’s Ethics Committee, and all respondents provided participation consent.

Results

The three case studies

The study took place in three pastoralist communities: (i) the Wakilé Allah, Burkina Faso, (ii) the Bagagir, Sudan, and (iii) the Waldaa Boran, Kenya. These communities were chosen through consultations with academics and pastoralist land tenure experts on where well-functioning, well-governed pastoralist communities could be found in each country.

The Wakilé Allah pastoralist community in Zoundwéogo Province, Burkina Faso, is a Fulani clan-based group numbering around 3,000 people. The Wakilé Allah community moved to the area about 45 years ago from northern Burkina Faso due to severe droughts. The host community, who are Bissa farmers, welcomed

the Wakilé Allah community and gave them land to settle on and graze their livestock, on the condition that the land be freely accessible and used by everyone, with no exclusions. The Wakilé Allah community nurtured a cordial relationship with the chief of the host community. The chief of the host Bissa community maintains overall control and responsibility for the land. The leaders of both communities set the rules and responsibilities. Generally, the Wakilé Allah community takes the lead in decision-making about the land allocated to them, keeping the Bissa chief informed (Sawadogo et al., 2024).

The Bagagir pastoral community in Rahad el Tamor Village, Jabrat El Sheikh Locality, North Kordofan, Sudan, comprises around 2,000 people. People are connected through kinship and common ancestry. The community settled in Rahad el Tamor more than a hundred years ago and has used the land continuously since then. Like many rangeland areas in Sudan, the land formally belongs to the state, with the Bagagir having *de facto* rights of management, exclusion, and alienation. The community has little knowledge of the country's formal (*de jure*) tenure systems. There are oral community rules and responsibilities, known collectively and transmitted from generation to generation. Members of other tribes can join the group, including women through marriage, with the expectation that they will adhere to all group norms and rules. For example, collective work is performed voluntarily for the benefit of friends and neighbours. The community is well known to neighbouring communities and other ethnic groups and maintains strong relationships with neighbouring pastoral communities built over many years (Suliman et al., 2024).

The third case study community, the Boran pastoralists of Waldaa, Kenya, are found in northern Marsabit, close to the Ethiopian border, with residence uninterrupted since the early 1980s. Use of the dry-season grazing area is expanded to pastoralists from far beyond the community in times of need. In the most recent prolonged drought, which lasted to the end of 2022, the grazing ran out resulting in a decimation of livestock. In response, many community members, particularly women, turned to quarrying, charcoal making, and petty trading. The land is held collectively, *de facto* and without a *de jure* legal basis, with group members enjoying management, exclusion, and alienation rights, alongside access and use. The group has been trying to register their land under the national Community Land Act, but the process is protracted, and delays persist (Otieno et al., 2024).

General tenure dynamics

In all three countries, the state's formal legal systems operate in parallel with customary laws and institutions. All communities referred to the latter as their point of reference, highlighting the predominance of customary governance at the local level. Only in Kenya did the community discuss extensively the formal legal system and the opportunities the 2016 Community Land Act provides for strengthening their tenure security despite its slow implementation. There are statements on gender equality and inclusivity in the legislation of all three countries, but community members only referred to them in Kenya. Again, this was in reference to the Community Land Act, which promotes women's equal

rights, and the community sees it as an opportunity to strengthen tenure security for both women and men.

In all three countries, pressures on pastoralist lands and resources are increasing, with respondents highlighting encroachment, loss of lands, and blockages on livestock routes due to shifts to crop farming. Other predominant trends include the privatization of land for both residences and smallholder farming, particularly in peri-urban areas (Burkina Faso), industrial and artisanal mining (Burkina Faso and Sudan), and large infrastructure development in Kenya, namely, the Lamu Port-South Sudan-Ethiopia-Transport Corridor Project (LAPSSET).

In Burkina Faso, the Wakilé Allah pastoralists said land pressures are straining relations with their Bissa farmer hosts, leading to a low level of perceived tenure security. In the other case studies, relations with neighbouring communities are good, at least for the time being.

It was generally agreed in all three communities that men and women have equal access to and use of community lands. However, the pattern of use is typically different for men and women, with mainly men using the land for grazing. They may be joined by children (both boys and girls) looking after small livestock (sheep and goats), some of which are owned by women. Women tend to use the land for other purposes, including collecting fuelwood, non-timber forest products (in Burkina Faso) and medicinal and aromatic plants (in Sudan).

All three groups have a clearly defined, well-structured, functioning, and respected governance system and leadership, which is dominated by men. While the Wakilé Allah group in Burkina Faso has a women's officer and a deputy women's officer, men command the decision-making space. In the Waldaa community in Kenya, leadership is constituted by a council of elders comprising religious and customary leaders including women with strong opportunities to contribute to decision-making processes. In all three case studies, women felt that their voices and interests were considered by the governing bodies, even when women were not formally in positions of power.

Perceptions of group tenure security and insecurity

Most respondents in Burkina Faso, including women and youth, said they felt it was 'somewhat likely' or 'very likely' that the pastoralist group could lose their rights to access their most important grazing land, as well as their mobility in the next year or 5 years. The main reason was agricultural pressures on the land. However, around half the respondents were 'very confident' their children would inherit their group access and use rights and would enjoy these rights throughout their lifetime. These respondents said that because their children are educated, they will be better placed to defend the community's rights to resources. Women and youth were less confident about this than men. While these two responses may seem contradictory, they express hope that the next-generation can resolve some of the challenges. Women highlighted weakening social cohesion as a concern. Younger members of the group were pessimistic and felt that with growing land pressures, they would not be able to hold onto their lands, even though their parents were hopeful that they could do so. On the other hand, older members trusted the village chief's wisdom to prevent such a loss

and had faith in the positive outcomes of the ongoing discussions and negotiations.

Solidarity and cohesion play a key role in strengthening perceptions of the group's tenure security and in fostering ongoing, open dialogue with the host community (where relevant) and neighbouring groups. This dialogue was said to be one of the most important factors preventing group members from losing their rights. Both men and women said that threats to tenure security include weak law enforcement, lack of demarcation of grazing land, erosion of group cohesion, and agricultural encroachment.

In Sudan, the community perceived their tenure as secure, with most men and women saying they think it is "unlikely" or "very unlikely" they will lose their lands or mobility at any point in their lifetime. They also believe that their children will inherit their rights. The community believes in their historical rights to the land, as they were the first to settle in this area and have enjoyed uninterrupted, competition-free use for at least four generations. They consider themselves *asyad elarid* (landowners). A second influencing factor is that the community is an active and respected member of the larger Kababish group, who provide support as needed and in whose wider affairs the Bagagir participate. Third, there is enough good quality grazing land in the area and its surroundings, as well as a lack of mineral deposits, limiting competition and conflict.

In Kenya, most of the Waldaa community has a comparatively high level of tenure insecurity, with most focus group participants believing it is "somewhat likely" or "very likely" that they will lose their rights to their community land in the next year because of the delays in the land registration process. Community members have been observing problems in neighbouring Isiolo communities arising from the recently established large-scale LAPSET Corridor Project. They have seen how communities have been disenfranchised from decision-making processes, and many have been removed from their lands. They are also concerned that legislation could change, resulting in their land rights being lost or neighbours claiming their land. They believe their land tenure would be strengthened by registration under the Community Land Act, but the process is taking too long, which leaves them exposed to the risks they see around them.

Perceptions of individual tenure security

In Burkina Faso, Wakilé Allah perceptions of the security of individual rights to access land and resources through the group were similar to those focused on the tenure security of the group. That is, men thought it was likely that they, as individuals, would be able to continue to access land and resources through the group in the long term, while women were less confident that they would continue to have access. Relationships between community members and with other stakeholders were identified as important factors influencing tenure security, including the group's solidarity, unity, and cooperation. Protection of vulnerable community members, such as widows and divorcees was also considered a priority, as was having a spiritual connection to the land. It was said that differences among women, such as wealth or social commitments, did not strongly influence individual access and use rights to land, even as some households have shifted to more agriculture or the exploitation of timber and non-timber forest products. Flexibility of use and movement, including being able to take their sheep and goats to

grazing lands were considered important – maintaining security of movement is an important aspect of pastoralist tenure security.

In terms of individual rights in Sudan, both men and women said that they felt secure in their belief that they themselves would be able to continue accessing the communal land and resources throughout their lifetime. Participants said group cohesion, a spirit of collectivity, and internal social support networks were essential to ensuring inclusivity and equality across the group. These include social support mechanisms for lending or gifting livestock to poor and more vulnerable community members, prioritizing vulnerable or disadvantaged women as recipients of *nafir* (voluntary activities supporting those in need, e.g., weeding and preparing farmland, or *fazza*, a collective effort to recover stolen animals). Unmarried or widowed women receive care and support from relatives and neighbours. Individuals have strong ethnic identity, with strong social bonds across generations descending from a common ancestor.

However, cultural norms and practices restrict women's mobility, particularly that of young women, who are expected to stay close to the village. In addition, women do not participate in community decision-making processes, and most livestock remains under a husband's control. However, the women interviewed did not express dissatisfaction with the situation and said that they valued the security they gained from the group. Some youth showed a degree of exasperation with the traditions, customary rules, and regulations, and are keen for a greater allocation of individual land titles for crop farming, livestock fattening, or other enterprises.

In Kenya, most community members believe that their ability as individuals to access and use land and resources as members of the group is as secure as the tenure security of the group. As above, this was a relatively low level of tenure security due to infrastructure and agricultural pressures. Members indicated that it was these outside pressures rather than concerns about the group itself that influenced their perceptions of insecurity. This suggests that the communal tenure system serves them well, and that external factors are more to blame for their perceived tenure insecurity. However, one woman disagreed, saying she was worried that her daughters would not get their fair share of communal land and resources. Additionally, examples were given where some members had ignored the group's rules and claimed land for their individual use suggesting some fractures in group cohesiveness. When discovered by community leaders, this land was taken back under the authority of the group. Most community members believe that registering their land under the Community Land Act will improve tenure security for individuals and the group, not least because individual group members (men and women) can be listed in the registration document.

Perceptions of the governance system

Focus group members were also asked to reflect on their governance structures. While there is some variation across communities, all governance structures were reported to be functioning well, and overall community members were satisfied.

In Burkina Faso, men and women said the tenure system was strong, well-functioning, and suited to their lifestyle. All members of the community have the same access. Suggestions to improve it included marking the grazing land and better maintenance of the vaccination enclosure. In addition, women suggested planting trees

that serve multiple purposes. Similar levels of satisfaction were expressed in Sudan and Kenya.

In Burkina Faso and Sudan, more men than women participate in land and resource decision-making processes, with women not playing direct, visible roles in managing, excluding, and transferring rights for the various components of rangeland resources. Yet in Burkina Faso, Wakilé Allah women do hold positions in the group's leadership structure (a women's officer and her deputy), but even so, both men and women said that women do not actively participate in decision-making or in formal dialogue with neighbouring communities.

In contrast, in Waldaa in Kenya, both men's and women's focus group participants said that women are well-respected in the community and strongly positioned in decision-making processes. Women are informed about the risks to their land and support opportunities to protect it through the Community Land Act. Historically, women have been included in Waldaa leadership as equal and valuable members based on their skills and capabilities. They said that their rights to land and resources are considered a birthright equal to that of men and that these rights are protected and upheld for all community members.

When asked about their opinions of their land tenure system overall, Waldaa respondents said the community is strong and cohesive, with a clear tenure system in place. Unity has been built on a long history of resource-sharing. There is equality across the community in terms of access and use of resources, and community leadership is known and respected. The community has the freedom to set and define its own rules. Currently, the community can continue to practice pastoralism and other livelihoods with mobility and flexible access to resources; however, threats loom on the horizon, and they are keen to have their land registered.

Discussion

All pastoralist groups participating in this study emphasized that pressures on pastoralist land and resources have been increasing. External forces include agricultural encroachment and infrastructure development; internal forces are people not abiding by group rules and an increasingly individualistic and commercially-minded youth. Despite these threats, among the Bagagir in Sudan and the Waldaa in Kenya, customary property practices are historically embedded and perceived tenure security is strong at both the level of the group and of individuals. The Kenyan participants (both men and women) also talked extensively about the opportunities offered by the Community Land Act and its potential to further increase tenure security, although its implementation is lagging.

Among the Wakilé Allah of Burkina Faso, who moved into the area less than 50 years ago and are dependent on the good will of their Bissa farmer hosts, respondents were less sure of their rights and both men and women agreed there was a strong chance of losing access to the land within 5 years. The causes include agricultural encroachment, the lack of policy and legislation implementation and deteriorating relations with their host farming community. Men were more confident than women that they could pass on their rights to their children, who they expect will be educated and able to defend those rights in the long run. This somewhat contradictory

opinion (i.e., perceptions of short-term loss and long-term security) could be because men feel the threat is upon them now, and if they can get through this period with their rights intact, then they (and their more educated children) have a greater chance of holding on to those rights in the long term.

Collective property practices shape differentiated access and power relations

Though men and women had different opinions in Burkina Faso, they both agreed with the pastoralists in Kenya and Sudan that the greatest threats to their tenure security come from outside the group, where land rights are not equally distributed among land users, rather than from within it. Customary tenure predominates in all three case study areas, although it has had to adapt to new challenges and changing circumstances. Male leaders dominate governance structures in Burkina Faso and Sudan. Only among the Waldaa pastoralists in Kenya is there good representation and participation of women. Despite this, in general, both men and women across the case study communities expressed the view that the group of which they are a member and their rights to land and resources are satisfactorily egalitarian.

A challenge to prevailing assumptions

This general sense of egalitarianism among men and women in all case study areas challenges prevailing assumptions that women have significantly less access to land and resources than men and are victims of male-dominated institutions and governance systems. Indeed, among the Bagagir pastoralists of Sudan and the Waldaa pastoralists of Kenya, there was a strong sense of group tenure security, and participants emphasized group cohesion, a spirit of collectivity, and social support networks, all essential to ensuring inclusivity and equality, including helping community members in times of need.

Though Bagagir cultural norms and practices restrict women's movements and women do not participate in leadership decision-making processes, the women interviewed did not express dissatisfaction with their situation and valued the benefits of security they got from the group, both in terms of accessing resources and believing that the group would assist them in times of need.

Waldaa women have been included in leadership for as long as people can remember, with their rights to land and resources considered a birthright equal to men's. This central involvement of women in land tenure decision-making appears to positively impact their knowledge of opportunities and threats to their land tenure, highlighting the benefits of women's inclusion.

In Burkina Faso, where the pastoral system and its institutions have a more turbulent history, are less well-established and under greater pressure from external forces, women appeared to have less knowledge about land tenure issues, less influence over decision-making related to land tenure, and less confidence in leaders to protect their lands. However, even here, women expressed confidence that their rights to access land and resources through and within the group would be maintained, and their concern was more about inequalities outside the group in relation to farmers and farming that are influencing the tenure insecurity of the group as a whole.

A common thread that emerged strongly from the case studies was the importance of solidarity (unity, cooperation) and social cohesion within the groups, and the need to keep them well positioned and strong. This could extend to being part of a larger group on which they could call in times of need, such as in Sudan. Dialogue with other communities or stakeholders was emphasized, with the aim of building relationships, keeping open communication channels, explaining challenges, finding joint solutions, and fostering trust and empathy. The weakening of these dialogues was seen as a major threat to the groups' tenure security. The groups work hard to maintain and improve relations, for example, pastoralists uniting to protest encroachment on their lands in Burkina Faso. In Sudan, the social system enhances such relations and cohesion through collective work, such as *nafir* (organized collective voluntary mutual aid activities for those in the community in need), which may extend to helping neighbouring groups. The importance of group cohesion was recognized by both men and women, with women often placing greater emphasis on this. Older group members expressed concern that the youth are more individualistic (even selfish and self-centred), market oriented, and commercial-focused, sometimes working abroad or in non-livestock activities such as gold mining, which could weaken the group's strength in the future. However, even here, there is a reliance on the collective for support, such as relatives sharing the costs of an individual going abroad to work.

Conclusion

This study investigates how perceptions of tenure security operate within collectively governed pastoralist systems, with particular attention to women's experiences across three well-functioning pastoralist system case studies in Burkina Faso, Sudan and Kenya. Using purposive case selection and 12 focus group discussions using probabilistic questioning about the likelihood of losing land or mobility over multiple time horizons, the research captured lived property practices and perceived security at both group and individual levels. The methodological emphasis on perceptions—rather than only *de jure* rights—allowed the study to uncover social processes through which tenure security is experienced, negotiated and reproduced in pastoral contexts and contribute to global land indicator dialogues.

Across the three sites, the study concludes that collective tenure can and does provide meaningful tenure security for both men and women where customary governance is strong, inclusive and enforceable. This is despite all three case studies acknowledging external threats. In the Bagagir (Sudan) and the Waldaa Boran (Kenya), respondents reported high confidence in group-level and individual access rights, pointing to social cohesion, reciprocity and institutionalized leadership (including substantive women's representation in the Kenyan case) as protective factors. By contrast, the Wakilé Allah (Burkina Faso) expressed greater short-term insecurity driven by agricultural encroachment, weaker host-community relations and more tenuous governance; yet many respondents still anticipated longer-term inheritance of group rights, indicating ambivalence between present vulnerability and future expectations. Collectivity and group cohesion are highly valued by group members (both men and women) and are important for facilitating reciprocal relations that help pastoralists cope with drought.

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 privatization of these lands. However, the study's findings challenge prevailing assumptions that individual titling is the primary or universal route to secure land rights in pastoral areas. The evidence shows that strengthening collective tenure including women's effective access within those collectives can deliver substantial tenure security without necessarily resorting to individual privatization, which risks eroding the commons and women's long-term access to shared resources.

Policy implications are threefold. First, global land indicators and monitoring frameworks should explicitly incorporate measures of collective tenure and perceptions of security within collectives, not only individual ownership metrics. Second, interventions aiming to strengthen women's tenure should prioritize reinforcing collective governance institutions and women's representation within them, alongside careful, context-specific consideration of any formalization initiatives. Third, legal and programmatic support (for example, processes enabled by the Community Land Act in Kenya) should be made accessible and paced to reinforce, rather than disrupt, customary institutions.

The study's purposive focus on relatively well-functioning communities limits generalizability to contexts of weak governance or active conflict; further research should disaggregate women's experiences by age, wealth and education and examine contexts where customary authority is contested. Additionally, the robustness of the findings could have been strengthened through research triangulation carrying out follow-up individual interviews or a survey. Nonetheless, by centering perceptions and property practices, this research contributes actionable insights: securing pastoralist women's land rights requires strengthening the collective—its institutions, social ties and channels of inclusion—alongside cautious, equitable engagement with formalization processes. Measuring collective tenure and both women's and men's perceptions of it, helps create a more inclusive policy landscape, ensuring that women's voices and experiences are valued and integral to discussions on land rights and governance.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving humans were approved by International Livestock Research Institute Research Ethics Committee. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

FF: Conceptualization, Methodology, Supervision. Writing – Original draft preparation. MN: Methodology, Data curation, Supervision, Validation. IS: Methodology, Investigation, Data Curation. HS: Methodology, Investigation, Data Curation. KO: Methodology, Investigation, Data Curation. IL: Methodology. AL: Methodology, Reviewing and Editing. RM-D: Conceptualization, Writing – Reviewing and Editing. CD: Conceptualization, Writing – Reviewing and Editing.

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Conflict of interest

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

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