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Women's tenure security on collective lands: A conceptual framework

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ABSTRACT

Within discussions of land and resource rights, there is growing attention to women's rights, mostly in terms of household and individual rights to private property. This leaves unanswered questions about whether and how women's land rights can be secured under collective tenure, upon which billions of people worldwide depend. There is an important gap in conceptual tools, empirical understanding, and policy recommendations on this topic. To address this gap and lay the foundations for a sound body of empirical studies and appropriate policies, we develop a conceptual framework to improve understanding of women's land rights under collective tenure. We discuss what secure tenure for women on collective lands would entail, then what factors would affect women's tenure security. We give attention to particularities of rangelands, forests, and other types of collective lands as well as commonalities across types. A key theme that emerges is that for women to have secure tenure under collective tenure, the collective (group) itself must have tenure security and the women must have secure rights within this collective. The latter requires us to consider the governance structures, how men and women access and control land, and the extent to which women have voice and power within the collective. More consistent analyses of collective tenure systems using the conceptual framework presented in this paper can help to identify which action resources are important for groups to secure rights to collective lands, and for women to advocate for their rights within the group.

1. Introduction

The importance of secure land tenure is widely acknowledged in both research and practice. Within discussions of land and resource rights, there is growing attention to women's rights, spurred by the need to achieve gender equality as a goal in its own right, and as endorsed by the Sustainable Development Goals. Evidence demonstrates the instrumental value of women's land and resource rights for a range of developmental outcomes (Agarwal, 1994; Quisumbing and Maluccio,

2003; Meinzen-Dick et al., 2019). An additional motivation comes from the demands of land rights and women's movements. 1

Much of the policy and research attention has been focused on household and individual rights to private property (Agarwal, 2003; Doss et al., 2015; Meinzen-Dick et al., 2019). This leaves unanswered questions about whether and how women's land rights can be secured under collective tenure. Billions of people worldwide depend on resources that are held or used collectively (Errico, 2021; Flintan, 2019; Otieno et al., 2024; Sawadogo et al., 2024; Sulieman et al., 2024). This

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¹ See for example: https://www.empowerwomen.org/en/who-we-are/initiatives/landrights-and-sdgs, https://www.landesa.org/securing-womens-land-rights-ch allenges-and-solutions/, https://www.landcoalition.org/en/newsroom/collective-womens-land-rights-commitment/; https://stand4herland.org.

² We use the term "collective" to refer to some form of group that is larger than a household. This may be a clan, lineage, or Indigenous People, a geographic community, or a smaller, defined group such a forest user group. "Collective tenure" refers to land that is held, managed and/or used by a group (Giovarelli et al., 2016). This corresponds to what RRI (2020) refers to as "community-based tenure." In some cases, these lands may be formally owned by the state, with varying degrees of recognized use and management rights for groups of users.

includes both commons (such as many forests and rangelands) where land is held and managed collectively as well as communal property in which the land is held collectively but may be allocated to individuals to manage (Alden Wily, 2011; Otsuka and Place, 2001). Such lands are especially important for Indigenous Peoples and local communities. Many of these are customary systems that have developed over centuries in response to the characteristics of the environment, the land use and governance needs (Cotula and Toulmin, 2007; Sulieman et al., 2024; Otieno et al., 2024; Sawadogo et al., 2024). While both men and women rely on collective lands for products and ecosystem services, they often have different knowledge, uses, and priorities; collective lands may be especially important to women where they have weaker or no claims on private lands.

Deere and León (2001) point out that, although the Indigenous and women's movements have advocated for land rights, their demands and priorities have pulled in different directions. Indigenous movements have sought recognition of their collective property and their customary practices, but customs may discriminate against women as individuals. Also, the process of recognizing collective tenure is likely to change internal governance authority and power relations and can be problematic (Larson et al., 2015a). Indeed, because internal governance is seen as an integral part of Indigenous commons (Monterroso et al., 2019), external attention to internal affairs can be seen as antithetical to recognizing the tenure of the group. Even Indigenous women's movement focused on gender equality in land rights recognition have sometimes been accused of promoting "individual land rights" and undermining collective rights. In this paper, we seek to move beyond this tension to recognize the importance of collective property rights and customary practices while also providing a framework to analyze how women's tenure security may be supported within these contexts.

The areas under various forms of collective tenure are substantial: in a study of 42 countries covering half the world's land area, RRI (2020) estimates the area to be over 3.1 billion ha, or 49.2 % of the area (ranging from 30.6 % of the Latin American countries to 69.5 % of the African countries studied). Often these types of land are part of a landscape mosaic of land uses and tenure types, including individual, collective, and public lands (Robinson, 2019). In rural contexts, indigenous or customary land use and ownership patterns within collectively-held lands are made up of a complex mesh of overlapping and temporally defined claims to land and natural resources (Robinson and Flintan, 2022). Some lands are used privately by families such as for agricultural purposes, while others are used collectively for pasture or forest resources, or in furtherance of the health, prosperity and religious practices of the greater community. Some areas may be left in reserve for the use of future generations; for the shifting patterns of agriculture necessitated by fluctuations in rainfall, crop rotation and soil fertility; or to accommodate changing community needs.

Collective tenure differs from individual tenure because it requires coordination among users to manage the provision and appropriation of land or resources across multiple users (Andereis and Janssen, 2013) and to adjudicate land and resource-related conflicts. Thus, local governance arrangements are vital. Such arrangements vary across tenure systems, whether customary or formal, but all require a particular entity that holds the right (or claim, if the right is not recognized by law) and an authority or set of institutions to govern decision and rule-making (Larson et al., 2015a). For example, a particular clan or tribe may hold the right with a chief who has decision-making authority (common in Africa); an Indigenous group may hold the right with an elected authority to enforce decisions (common in Latin America); or a forest user group or livestock keeper association may hold the right to determine the head of the group (common across regions). By setting and enforcing rules, these institutions shape the sustainability and equity of benefits from collective resources. Women's involvement in these institutions is key if women's needs are to be met, including their role in sustainable resource management (Mwangi and Mai, 2011; Monterroso et al., 2021).

In addition to agricultural or residential lands held under collective tenure, the commons are often the source of a range of resources necessary to household and community sustenance and survival, including many types of food, fiber, fodder, spices, medicinal plants, materials used for building or artisanal products for subsistence and sale, as well as supporting ecosystem services (Qureshi and Kumar 1998; Sawadogo et al., 2024 Sulieman et al., 2024). Both rich and poor households use collective lands, with the poorer relying on them for a higher proportion of their livelihoods, particularly as a safety net in lean seasons or years (Otieno et al., 2024; Qureshi and Kumar 1998; Shackleton et al., 2001).

While collective resources are important to both men and women, there are often differences in their collection and use of resources, and they may value these resources differently. For example, women are often responsible for collecting water, firewood, fodder, and medicinal plants, whereas men may be more involved in obtaining poles or timber for building (Ridgewell et al., 2007).

Despite women's reliance on collective resources, women's rights are invisible in many analyses of collective tenure, resulting in insufficient understanding of the extent to which women are considered members of the collective, and the extent and security of their rights to use collective resources, let alone to make decisions on how to manage them. Meanwhile, studies of factors affecting women's land rights have focused on individual rights (for a review of such studies, see Meinzen-Dick et al., 2019), rather than for women's rights within collective tenure. Despite this continuing tension, efforts by women living on collective lands have sought ways to ensure their tenure security, particularly by seeking a voice in the governance of these lands (Giovarelli et al., 2016; Salcedo-La Viña and Giovarelli, 2021).

In addition, efforts to address the research gap between women's land rights in communal land and other forms of collective tenure have increased during the last years (Beban and Bourke Martignoni, 2021; Claeys et al., 2022; Gamuccio, 2024; LANDESACenter for Women's Land Rights and Resource Equity, 2016; RRI, 2017, 2025; Flintan et al., forthcoming).). However, addressing questions of how to strengthen women's tenure requires a nuanced understanding of particular contexts and gender relations (Collins, 2018). There remains an important gap in conceptual tools, empirical understanding, and policy recommendations on women's land rights within collective tenure. To address this conceptual gap and lay the foundations for a sound body of empirical studies and appropriate policies, we develop a conceptual framework about women's land rights under collective tenure.

A conceptual framework facilitates meta-analyses and allows us to better understand the factors affecting women's collective tenure security across contexts, which can subsequently be used to design and evaluate interventions to strengthen women's land rights. Our conceptual framework can be used by researchers, policy-makers, practitioners, and advocates working on issues of collective tenure security for comparative analysis and for identifying key constraints and possible points of intervention to strengthen women's land rights.

We begin by briefly discussing our methodology. We then present our conceptual framework for that identifies factors affecting women's tenure security under collective tenure, followed by a more detailed discussion of each component of the framework, using illustrations from the literature. We give attention to particularities of rangelands and forests as well as commonalities across different types of collective lands.

For women to have secure rights under collective tenure, and to overcome the tension between collective and women's land rights, two dimensions need to be addressed. First, the collective holding the land must itself have tenure security. Second, the women must have secure rights within the collective, which requires us to consider the governance structures and the extent to which women have voice and power within the collective. We therefore identify factors affecting each of these.

2. Methodology

Our methodology for developing this conceptual framework is based on a synthetic review of theoretical and empirical literature on tenure security and women's land rights. We draw on previous conceptual frameworks for examining women's land rights (e.g. Doss and Meinzen-Dick, 2020; Giovarelli et al., 2016); conceptual frameworks for studying collective tenure and the commons, notably the Institutional Analysis and Development (IAD) conceptual framework of Ostrom (2011); and the criteria for identifying security of tenure by Place et al. (1994) and Salcedo-La Viña and Giovarelli. (2021). We then illustrate our conceptual framework using examples from other studies of collective land tenure, from both peer reviewed and grey literature. We supplement this literature review with our own research and observations, which includes extensive work on forests, rangelands, wetlands, and other forms of commons and collective tenure, as well as our research and advocacy on women's land and resource rights more generally.

Our intention is not to provide a comprehensive review of the status of women's rights under collective land tenure globally or a prescriptive statement of what should be done, but rather to provide a conceptual framework and common language that could bridge between analyses of women's land rights (which has tended to focus on individual tenure) and analyses of common property or collective tenure which have often neglected gender aspects and have not been as explicit about security of tenure. Examples highlight issues that are particularly relevant to understand women's tenure security on collective lands.

3. Conceptual framework

Our conceptual framework, illustrated in Fig. 1, builds on one developed by Doss and Meinzen-Dick (2020) to analyze women's land tenure security under private individual property, which, in turn derives from the Institutional Analysis and Development (IAD) conceptual framework (Ostrom, 2011). The IAD framework has been applied to a wide variety of contexts and topics, to identify key structural or contextual conditions that influence how actors interact to produce outcomes, which, in turn, influence future conditions. Di Gregorio et al. (2008) adapted the IAD framework to specifically address property rights interactions, adding attention to threats and opportunities that may intervene between the contextual conditions and the action situation. They also unpack the Action Arena to highlight that different actors

may hold and draw on different action resources. Doss and Meinzen-Dick (2020) applied this to women's land rights, but with a focus on individual and household-level and rights. We adapt the framework and explicitly focus on the dimensions that are relevant for women's tenure security on collective lands.

The conceptual framework has four components.

- 1) *Context* is the fundamental starting point for understanding tenure security.
- Catalysts for Change include threats and opportunities that interact with initial conditions to strengthen or weaken women's tenure security.
- 3) *Action Arena* includes all actors who affect women's tenure security and the action resources used by the actors to promote their respective interests with regard to land.
- 4) Women's Land Tenure Security is the outcome of the interactions in the action arena. It requires both tenure security for the collective as well as women's voices being represented within the governance of the collective.

A key feature of the IAD framework is the feedback from outcomes to (re)shape the context. Because it is important to understand the meaning of women's tenure under collective systems, we begin with a detailed discussion of this outcome in Section 4. We then discuss the other components of the framework, focusing on how they shape both the collective tenure for the group and women's voice and governance within the group.

4. Women's collective property rights and tenure security

Land tenure security can be defined as "the certainty that a person's rights to land will be recognized by others and protected in cases of specific challenges" (FAO, 2002:18). Place et al. (1994) identify three aspects of tenure security that are relevant for both individual and collective tenure: breadth, duration, and assurance, which are broadly comparable, respectively, to the completeness, durability, and robustness dimensions of tenure security identified by Salcedo-La Viña and Giovarelli (2021). We begin with a discussion of these aspects and how they are relevant to understanding women's tenure security under collective tenure. We emphasize both the tenure security of the collective and the extent to which women's rights are recognized and exercised within the collective.

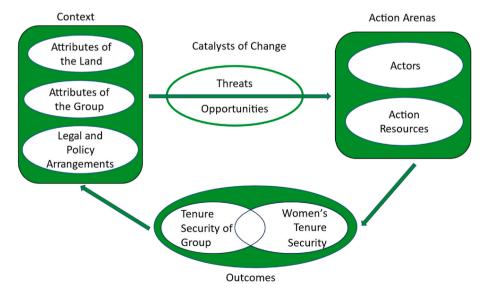


Fig. 1. Conceptual framework of factors affecting Women's land tenure security in collective tenure. Source: Adapted from Ostrom (2011); Doss and Meinzen-Dick (2020).

4.1. Breadth (completeness) of rights

The notion of bundles of rights—including the rights to use, manage, exclude or alienate land and resources—is important in the literature on property rights, with "ownership" often thought of as including all these rights. Under a private property rights regime, it is commonly asserted that the greater breadth or number of rights—especially alienation rights—over an entire bounded area means greater tenure security (FAO, 2002). This notion has been challenged by research in both individual (Broegaard, 2005) and collective (RRI, 2018) property rights regimes, demonstrating that alienation rights are not necessary for secure tenure. Under collective tenure, use, management and exclusion rights may be particularly salient – as long as no one is able to alienate the land from the group.

For collective tenure, whether a particular group (such as a pastoralist community or a forest user group) holds a complete or partial bundle of rights over a defined area is relevant. For example, does the group have the rights to manage the land and to exclude outsiders? Do people outside the group have the right to plant, claim and cut certain trees? Who holds the right to transfer the land to other uses or users?

Within the area of land under collective tenure, individuals, communities and institutions – including state agencies – may hold complex overlapping rights (Sikor et al., 2017) layered as a landscape, a forest or a rangeland to a farm plot or a tenure niche such as a tree or well (Flintan, 2012). Individuals within a given community will have nested and multidimensional rights and relations differentiated by gender, age, status, and purpose of use (Howard and Nabanoga, 2007; Flintan, 2012). For example, collective tenure provides for multiple uses of rangelands, taking into account the needs of both primary users such as local pastoralists, and secondary users such as visitors or those who access the rangeland to cut grass, hang beehives or collect honey, tap trees for lucrative gums and resins, and, increasingly, plant crops. Use rights within forests are similarly varied and nuanced, with many groups holding different management, use, and access rights to the same forest.

Women are often not recognized as having independent rights to land and natural resources, and their uses of communal lands are considered "secondary" to what men have defined as priority uses such as livestock or timber. It is therefore important to understand whether such secondary rights are recognized, both by the group and by the state. Security of use rights for women may also depend on whether they also have management rights. These are often weak if women have limited voice in their communities concerning the use of these resources (Errico, 2021). For instance, access rights to land and management of néré fruits in Burkina Faso is controlled by men, limiting women's benefits (Pehou et al., 2020). Thus, Salcedo-La Viña and Giovarelli (2021) include having a say in the governance as a component of completeness of rights. This say in governance (which implies management rights) is important to ensure that the resource will be available when needed, thereby strengthening security of use rights.

4.2. Duration (durability)

Because of the spatial and temporal variability of collective resources (discussed below), use and access rights may vary between seasons or even over years, to accommodate fluctuations in the quantity and quality of resources, or allow certain users to access land or resources seasonally or under specific circumstances. This might include rights to harvest products only when there is an abundance (Howard and Nabanoga, 2007) or to access grazing reserves during a drought. Often rights of use and access strengthen over time, especially where the users are seen to be investing in the resources, e.g., planting trees.

The extent to which temporal changes in rights to collective resources are a source of security or insecurity therefore depends on local conditions and history of use. While the importance of use rights may vary over time, management rights and rights to transact or bequeath usually have a longer time horizon. Indeed, where land is seen as part of

a group's heritage and identity, tenure security concerns may extend to generations yet to come. This is particularly true of Indigenous Peoples' ancestral lands, which are also protected by international conventions (e.g., UNDRIP).

For women, the issue is not only the duration of the rights held by the collective, but also the nature and duration of women's membership in the group. If rights are derived from membership in a tribe or lineage, women's tenure security will depend on whether they are considered full members of that group or whether their claims are contingent upon being married to (or being the unmarried daughter of) a member (Giovarelli et al., 2016). Women's status in a community changes more than for men, with marriage making a significant difference. Inheritance rights, such as whether unmarried daughters are allocated land; whether women who marry outside their natal community retain rights to inherit land from their parents and whether those who marry into a community have rights to retain some land or access to commons resources if they are divorced or widowed are important in shaping women's tenure security (Adoko et al., 2011).

4.3. Assurance (robustness)

Assurance relates to the exercise and enforceability of rights, especially when under threats such as eviction or encroachment, Reviewing concepts of tenure security, Valkonen (2021:2) argues that if "tenure security relates to a sense of comfort that what one has is recognized and protected by authorities and institutions and will not be taken away when one needs it" then breadth and duration are less important than the ability to exercise specified rights over the relevant timeframe. Enforceability, in turn, is affected by the social and legal legitimacy of rights, the claimants' knowledge of and ability to exercise their rights, the physical and social accessibility of forums for claiming rights, and the degree of state backing for the rights.

In the context of collective tenure, a woman faces two levels of concerns about the assurance of her rights: whether the rights of the collective are enforceable, and whether her rights within the group are enforceable. Regarding the first level, the social and physical marginality of groups such as pastoralists and many Indigenous Peoples limits the assurance of collective land rights. Alden Wily (2018) points out that weak state recognition of land holders' rights to both customary land rights and common property often dates to colonial eras (see also Larson et al., 2022). Currently, the tenure insecurity of rural communities is compounded by factors such as corrupt governance systems that promote land-grabbing by national and local elites (Knight, 2022), large-scale land acquisitions for national and international investors, and government infrastructure projects. Effective organization and mobilization by Indigenous Peoples and their allies has been an important way to secure rights (Larson et al., 2022).

The marginality of women within their communities and particular sources of vulnerability of women impact the enforceability of their rights as part of the collective. When CIFOR's Global Comparative Study on forest tenure reforms held workshops in Peru and Uganda to discuss the driving forces of secure and insecure tenure, both mixed sex groups and women's groups identified many similar issues, but women in Peru also mentioned violence in their communities, the need to strengthen indigenous identity and morale within the family and community, climate vulnerability, and the need of specific spaces for women to participate at all levels. In Uganda, women mentioned domestic relations and the specific ways in which women are discriminated against in resource access. Notably, even if women have the right to collective lands as individuals rather than as part of a household, the groups in Uganda confirmed that, in general, women's control over resources is closely dependent on their relationships with their spouses or other male relatives. They are reliant on their male kin to provide and/or defend the assurance of their rights within the collective (Zamora and Monterroso, 2017; Larson et al., 2023).

For individuals, and for women as a group, the key to secure tenure

within collective property rights regimes is having voice and decisionmaking power in community land governance. Although women and men often have a common interest in overall security of the collective lands, because of their gender-differentiated work and roles, they often have different knowledge about what resources exist within those common lands; different interests in particular resources within those lands; and different ideas about how the collective lands should best be managed. In action-based research in Uganda, Liberia, Mozambique and Nepal, Knight et al. (2012, 2016) found that when asked about what resources existed within a certain common area, men could often only list a handful of species, while women were able to list many more. As such, when men alone make rules for how commons should be governed, they may fail to include rules that comprehensively address the full range of resources found within commons. In Nepal, women's participation in rule-making resulted in rules that not only improved women's rights within the community, but also improved overall community use and management of local lands and natural resources (Knight, 2018). Thus, efforts to secure collective land rights are likely to be insufficient unless there is attention to the governance arrangements within the collective, as well as social norms that affect the implementation of those governance arrangements.

5. Context

Many contextual factors can be considered; we have grouped these as attributes of the land; attributes of the group; and the legal and governance arrangements. In the following section, we highlight key factors relevant to women's tenure security on collective lands. This is not a rigid list; some factors (e.g., land tenure) could be examined under multiple headings.

5.1. Attributes of the land

The characteristics of the landscape and ecosystems shape how land is used and the dominant livelihoods practiced by the communities who live and work there. Landscape and livelihoods, in turn, impact the structure of land tenure, including the different ways that men and women access, use, and manage land.

Many forests or rangelands are left under collective tenure because they have lower perceived value compared to prime agricultural or urban lands. Infrastructure such as roads, irrigation, or electricity increase the availability of different livelihoods and thus the pressures on tenure security. If the resources on the lands are valuable to outsiders, then there may be threats to tenure security of the group. Size of the resource units also matter, because women often have less access to resources on more distant lands because of physical or social restrictions on how far they can travel.

Collective lands can hold a wide range of resources. Resource heterogeneity and variability between seasons, years, and pieces of the landscape on collective lands often lead to diverse and overlapping uses by different individuals, depending on their gender, age, and position within the community (Robinson and Flintan, 2022). Wheareas relatively homogeneous farm lands can be divided among households, using resources such as rangelands or forests requires a socio-cultural and institutional system that provides for collective governance, flexibility of movement, and the sharing of resources that vary over space and time.

5.2. Attributes of the group

Because communal land rights are socially embedded (Julia and White, 2012), characteristics of the groups that hold land rights affect women's land rights in multifaceted ways. Key attributes include the history, identity, and culture of the groups, how membership is defined, internal governance arrangements, and social relationships. All of these attributes are gendered.

History, Identity and Culture: Communal rights to land are often

related to history of occupation and investment. In many African communal areas, those dwelling in an area longer having stronger claims than newer "settlers". India's Forest Rights Act recognizes "the forest rights and occupation in forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be recorded" (GOI, 2006). Groups with Indigenous identity can claim particular protections under international legal agreements (as discussed below).

Identity and culture also affect women's rights within the group. Patriarchal norms and practices can restrict women's rights to resources as well as to voice in governance of the resources. However, there is a wide range of cultural practices among groups with collective tenure, which change over time, calling for careful attention to current practices in communities.

Membership: The group holding collective tenure may be defined by clan, customary institution, age-set, religion, or ethnicity, or have been formed based on the use of a particular piece of land or resource. The group may be formally and legally constituted, such as forest or water user groups or cooperatives, or may be recognized only by customary or other law, rules and regulations. The group's membership may be tightly defined and closed to new members or have very high standards for new members, or membership may be more fluid and open. All of these will influence the extent to which the group has secure tenure.

How membership in the groups is defined has very important implications for women's land rights (Larson et al., 2015b; Errico, 2021). In patrilineal and patrilocal societies where membership in the group is identified through the male line and social location of the man, women who marry into the group may only be considered members through their relationship with their husband and lose access if they divorce or if their husband dies, particularly if there are no sons, and most certainly if they move away from their ex-husband's village (Giovarelli et al., 2016). For example, a comparative study on forest tenure reforms in collective lands in Peru, Indonesia, and Uganda found that while most processes required the establishment of a legal community level organization, women are not always considered full members with full decision-making power (Monterroso et al., 2019). In Indonesia, community forest user groups (Hutan Kemasyarakatan, or HKm) were formed to allocate forest permits, but these were granted to individual household heads, limiting women's ability to be considered members (Siscawati et al., 2017). Additionally, women may have to leave their village when they marry someone from outside the community, divorce, or are widowed. In Peru, in case of divorce or the death of a spouse, a woman's rights over Brazil nut extraction are returned to the community; the woman cannot retain the rights. While these rules are argued with the intention to protect the collective from outsiders from acquiring land by marriage, social biases determine how these are enforced, affecting women and men differently.

Internal governance: The governance arrangements within the groups holding collective land rights are critical to the security of those rights. Effective governance that ensures ongoing investment in stewardship of common resources and restricting withdrawals to sustainable levels is key to ensuring that resources and biodiversity are maintained for equity of use by all. Effective governance may also affect whether the collective can retain its rights in the face of outside threats (Monterroso et al., 2019). But strong governance that is effective in sustaining the resource base does not necessarily mean that the needs of all members are met, nor does it assure an equitable distribution of costs and benefits in management of the resources.

Customary land management and administration systems reflect power relations within a family or community. Land management decisions may be made by leaders (e.g. chiefs), or by groups of elders, as defined by customary or statutory law, and positions of chief or elders are often only available to men. It is therefore important to ask what voice and influence women have in communal governance and decision-making, and the extent to which rules (and their enforcement) take both

women's and men's interests into account. As male-dominated customary institutions come under greater pressure to include women, and as women gain more confidence and the skills and capacities to be good leaders, women are increasingly taking part in local land governance: such as in Ethiopia, after implementation of participatory rangeland management (PRM) (Flintan et al., 2019) and in Tanzania, where Women's Leadership Forums supported by a local NGO have resulted in women taking up more leadership positions in village government (Dungumaro and Amos, 2019).

Communal assemblies or new organizational structures such as boards, committees, or user groups with responsibility for community land governance may have requirements or quotas for women's membership. However, it is important to go beyond numbers of members, to consider how effectively women are involved in decision-making (Agarwal, 2010). In Uganda, Liberia, Mozambique and Nepal, fieldwork revealed that when women's "participation" in land governance and rulemaking was equated only with "attendance" at meetings, this alone was insufficient to strengthen women's rights. Rather, women must: 1) actively speak up during rule-making and decision-making meetings; 2) be listened to; and 3) have their ideas and opinions integrated into the final rule or decision being made. (Knight et al., 2012; Knight, 2018).

Social relations: While the patterns of social relations within the group may affect tenure security, if stronger social relations result in better ability to withstand external pressures, they have a particular impact on women's tenure security within the group. Toulmin and Quan (2000:6) note: "The question of who gains access to land and on what terms can only be understood by seeing how control over land is embedded within the broader patterns of social relations." Age, education, family relations and social class influence the channels that women can use to claim their rights, and individual women exercise agency in choosing which channels to use. Status and age also make a difference. Social relations may partially substitute for direct voice in governance. Not all decision-making related to land takes place through formal governance channels: women may find ways to influence their husbands or other men or women who have a voice. This can include 'pillow talk' where women influence their husband during private times such as in bed; by withholding food or sexual services; and by influencing male relatives including elder sons with whom mothers often have a very close relationship (Flintan, 2008). For instance, in West Kalimantan where women of status or older women may be allowed in some male-dominated decision-making platforms; single, young women are not, yet they find ways to ensure that their ideas are heard, by asking older women to voice them (Siscawati et al., 2017).

5.3. Legal and policy arrangements

The tenure rights of groups, and of women within groups, exist within the broader context of legal and policy frameworks that affect land and resource management. Women's tenure security on collective land can only be as secure as the group's rights to the land. Much land held under collective tenure is governed by customary law rather than formal law, with varying degrees of recognition by the state. Thus, it is important to ask: Is collective tenure recognized formally by the state? How strong are these claims? Are these claims seen as legitimate tenure rights by the broader community in the area? Several types of laws and policies are particularly relevant in this regard, as well as in influencing the rights that women have within their communities.

Constitutional law: The national constitution often specifies how customary law intersects with formal law, and sets out basic principles that govern land tenure dynamics. The constitution may vest all land in the state, or it may recognize rights of individuals or groups to have varying types of land rights. For example, Uganda's Constitution (1995, [Amended, 2005]) includes customary land as a statutorily recognized form of tenure, governed by customary law; and while Article 40[5] of the Ethiopian Constitution vests all land ownership in the state and

prohibits sale of land, it also recognizes some collective use rights: "Ethiopian pastoralists have the right to free land for grazing and cultivation as well as the right not to be displaced from their own lands" (Abebe and Flintan, 2021). This primarily impacts the tenure security of the group; constitutional provisions for women having equal rights to land often apply primarily to individual or household lands.

National law: Laws that govern land, land administration, specific ecosystems and natural resources (including forests and rangelands), and real or immovable property are key to understanding the dimensions of land tenure in each country. These laws can provide insight into formal land tenure frameworks, and, in some cases, how customary land rights are treated within formal law and state justice systems. These dimensions affect the tenure security of the group. Formal provision for women's land rights are often insufficiently detailed, and may not be implemented or enforced in practice (FAO, 2013). Often, formal laws do not address women's rights to collective lands at all. A comparative analysis of law and regulations on women's rights to collective forests in 30 countries and 80 community-based tenure regimes in those countries (RRI, 2017) found that on 93 % of countries got full credit on constitutional protections against discrimination; for community-specific property rights, only 29 % of the cases got full credit for protecting women's membership rights, while only 3 % provide adequate protection for women's voting rights in community-level governance and 5 % adequately protect women's leadership rights.

While national laws have broad coverage, the extent to which they apply in practice varies. A UN study found that "at least 115 countries specifically recognize women's property rights on equal terms with men" (UNWOMEN and OHCHR, 2013: 3), but concluded that implementation and enforcement is weak. The study noted that "even in countries where good laws exist, women frequently do not enjoy their rights to access and control productive resources. Implementation is too often hindered by sociocultural norms and women's lack of knowledge of their entitlements" (Ibid).

Legal pluralism: Under legal pluralism, both customary and statutory law may be recognized or applied (FAO, 2013). In these contexts, understanding the relationships in practice is important (Benda-Beckmann, 2006). Statutory recognition is often particularly important for collective tenure security when dealing with outsiders. Giovarelli and Richardson (2016) note that women's land rights are more secure when they have both cultural and legal legitimacy and when they are recognized in statutory law, customary law, and community and family norms. Conflicts may be handled through customary processes or through statutory courts. As such, it is necessary to both understand customary rules and practices concerning women's tenure rights as well as work with customary justice systems to address instances of injustice and inequity. Examining pastoral women's land rights and policy and legislation in Ethiopia, Belay and Flintan (2021) note that while adhering solely to the customary system will likely not benefit the interests and rights of women in the long term, in the short term legal pluralism provides additional avenues for land users, including women, to access their land rights and options of where to turn for legal assistance. In their fieldwork, Knight et al. found that women's empowered contribution to participatory rulemaking resulted in the elimination of customary rules that discriminated against women, undermined women's tenure security, and contravened their interests and in the addition of new rules that strengthened women's rights both within the household and within the collective (Knight et al., 2012; 2018).

International legal agreements: Numerous international conventions provide a solid foundation for collective rights to land, including the Convention concerning Indigenous and Tribal Peoples in Independent Countries of the International Labour Organization (ILO 169), the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and the Ramsar Convention for the protection of wetlands. Others provide a foundation women's rights to land and resources, including The Convention on the Elimination of All Forms of

Discrimination against Women (CEDAW). And others include both, including the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGTs) and the Sustainable Development Goals (SDGs) (Errico, 2021). These provide principles and indicators to monitor progress that can be useful for advocacy and accountability, but are unlikely to have much impact unless they are enacted in local laws.

6. Catalysts of change

While the initial context shapes the nature of collective land rights and women's rights, events and external interventions may catalyze changes to women's tenure security Such catalysts include both threats and opportunities. By identifying potential threats, it is possible to consider how to mitigate or overcome them. It is also important to identify how legal reform processes, openings for new projects and interventions can support more equitable access to land and resources and give greater voice to social movements. Here we highlight some of the threats and opportunities that are particularly relevant to both the tenure security of the group and women's tenure security within the group.

6.1. Legal and policy reforms

Legal and policy reforms may directly address land and land tenure, such as the formalization of tenure, or forest or rangelands policy. Reforms may also address broader issues, such as quotas for women in governance bodies, which indirectly impact tenure security.

The formalization of land rights, through titling or privatization, often has negative consequences for collective tenure. In many instances, the privatization of land breaks up collective lands and distributes them among individuals either from the community or outsiders. Tenure security then becomes only relevant at the individual level. These processes of formalization often exclude women. Mwangi (2007) shows how the Kenyan process of rangeland privatization granted land titles to men; the only women who received titles were widows, who received much smaller holdings. Women lost access rights through the collective and did not directly gain from individualized tenure—a process that Adoko and Levine (2008) refer to as "falling between two stools." Even in cases where reform processes aim to formalize collective tenure, the priority tends to be on interventions that formalize individual tenure rights (Monterroso et al., 2021). This increases pressure for individualizing collective rights, simultaneously increasing the vulnerability of collective lands (Monterroso et al., 2019).

While customary and indigenous forms of tenure governance systems still predominate across many countries, these forms of tenure continue evolving both in response to external pressures and to processes such as formalization (Errico, 2021). Even when formalization recognizes group rights rather than individual rights, establishing power and responsibilities around the type of decisions that the designated "representative" of the group can make internally and externally over resources and rights can result in tensions, conflicts and competition (Larson et al., 2015a; Larson, 2010). Fitzpatrick (2005) and Errico (2021) reflect on the outcomes that these external processes have had on individual interests and rights within collectives. They argue that while formalization may improve the tenure security of primary right-holders, secondary rights, e.g., sharecropping, fuelwood, and grazing groups of pastoralists, may result in the dispossession of women, ethnic minorities, and other vulnerable groups. These works suggest that as tenure insecurity increases, as a result of pressures over the division and sale of communally held land, tensions over individualization could end up dispossessing some groups within collectives or excluding certain groups from accessing benefits. For instance, in Indonesia, increasing pressure to expand oil palm plantations has created a "land rush" and resulted in land dispossession for indigenous women and their families (Elmhirst et al., 2017).

Within collective tenure, consolidating or documenting the rights of one group may weaken or erase the land rights of other groups who also have legitimate, historical rights to the land. The complex interrelations between rights and rights-holders can be considered a "web of interests" (FAO, 2002; Arnold, 2002). Vesting all rights—especially exclusion and alienation rights—in one group inherently cuts off the access and use rights and future claims of others. Pastoralists with customary claims to graze their herds on crop fields after harvest may lose these rights when farmers are granted exclusive title. Or women who depend on gathering firewood, medicines and other resources necessary to household survival from a forest may lose access when an investor or a neighboring community is granted exclusive title. Meinzen-Dick and Mwangi (2009) caution that formalization processes such as individual titling may not only undermine the rights of women, but "cut the web of interests" that are important for the functioning of collective tenure.

Formalization of collective lands or forests may grant rights to the entire village or collective (Larson et al., 2018). This may involve titling or registering land in the name of the community (as under India's Forest Rights Act or ejidos in Mexico), or land use planning processes, such as Tanzania's joint village land use planning processes, which provide rights to grazing lands for pastoralist communities (Kalenzi, 2016). This may increase or decrease opportunities for women to participate in governance. In Mexican ejidos, García-Morán and Yates (2022) report that although the law gives men and women equal rights, masculinist governance practices limit women's land rights in practice. In Peru, formalization of Indigenous communities in the Amazon requires the development of community statutes defining institutional arrangements, and some women have taken the opportunity to change rules of participation, such as eliminating requirements that a woman had to be married to access village land (Larson et al., 2019). Thus, formalization opens up a complex set of possibilities, both positive and negative (Flintan, 2010).

In addition to reforms directly related to land tenure, other policy reforms can affect women's participation in governance and the benefits they derive from collective tenure. In a policy reform process, the state will define the rules for membership and participation. For example, under the social forestry reforms in Indonesia, households participate in the initiative, usually represented by the male head (Siscawati et al., 2017). In Uganda, under collaborative forest management agreements, membership is individual, and men and women may both opt in (Nsita et al., 2017). Thus, reforms may be inclusive or exclusive of women.

6.2. Development projects and interventions

Development projects implemented by government agencies and NGOs concerning collective lands may be designed specifically to have an impact on tenure security, such as Namati's programs to help communities secure collective lands and address internal governance arrangements (Knight et al., 2012; Knight, 2018). Or they may affect tenure security indirectly, by developing enterprises using forest or rangeland products and requiring that only members of established cooperatives can access the resources.

The effects of development projects will vary across groups of women. For example, in northern Kenya, when a 30-year process of transformation from pastoralism to agro-pastoralism introduced enclosures for land rehabilitation, women were more willing to embrace the new land use techniques as they were less mobile than the men. The enclosures created new women-dominated livelihood strategies such as poultry production. But only women whose households had access to an enclosure were able to benefit (Nyberg et al., 2015).

Projects to empower women or increase their voice within public forums may strengthen women's tenure security if they increase women's voice in governance of collective lands (Knight et al., 2012). Namati's work with communities in securing collective tenure in Uganda and Liberia included drafting new local rules, or bylaws, that included provisions that women and youth must have elected

representatives on permanent governing bodies responsible for community land and natural resource management. This led to increases in women's substantive and procedural rights. Procedurally, the process appears to have shifted community members' perceptions that land is "men's business;" and women reported feeling that their community took women's opinions seriously during the by-laws drafting discussions. Substantively, the process provided an opportunity for women and other vulnerable groups to actively challenge discriminatory customary norms and practices and argue for the inclusion of stronger protections for their land and inheritance rights.

6.3. Civil wars and conflict

Land is often at the root cause of conflicts and civil wars (Verwimp, 2005). Such conflicts often destabilize the rights over collective lands. In addition, men and women experience the impacts of conflicts and post-conflict recovery differently, with implications for tenure security. For instance, in Colombia, post-conflict negotiations aimed at reducing the vulnerability of ethnic communities highlight how land rights are affected by violence and displacement. In 1991, constitutional reforms recognized collective tenure and promoted legal protection for Indigenous resguardos and Afrodescendant Community Councils (Ruiz, 2018). Later in the context of peace negotiations, new frameworks were put in place to establish community reparations focusing on the recognition of women's rights to land (Cramer and Wood, 2017). However, Colombian regulation tended to homogenize women; violence against Indigenous and Afrodescendant women was used as a means of deterritorialization and dispossession, discontinuity of cultural knowledge and norms, and as a barrier to exercising legal and customary use rights over their collective territories (Bolaños Cardenas and Monterroso, 2022).

6.4. Transformation of rural economies

Many aspects of rural transformation affect both collective land rights and women's land rights. New opportunities may increase the pressure on land, especially from outsiders. As a result, communities are redefining ideas about belonging and inclusion in ways that can undermine the land rights of women and members of minority groups. In particular, women who married into the community, members of minority groups, and outsiders (i.e., people who were not born into the community but moved there as adults) often have the weakest land rights and may be the first to be disenfranchised of their access and use rights Knight (2010). New market opportunities for products from collective lands may similarly result in some people losing rights within the community.

Transformation of rural economies is often associated with men's migration to areas with greater opportunities. This has implications for the governance of collective lands. If many men leave, those remaining may have a harder time advocating for their land rights. But, as the men leave, there may also be opportunities for women to take on new roles in the governance of the collective, but increased time constraints on women when men migrate may also limit their ability to participate in meetings and governance (Agarwal, 2010).

6.5. Large-scale land acquisitions

Large scale land acquisitions, or the threat of them, may influence tenure security on community lands (Alden Wily, 2011). Governments may also seize land through compulsory acquisition procedures, by gazetting collective community lands for national parks or other conservation areas. In such "fortress conservation" processes, the state seizes collective lands, and turn them into public lands or nature reserves, with restrictions on their use. This affects both men and women, but often in different ways, depending on their prior uses of the land and the extent to which they benefit from the new land uses, such as through employment. One of the key issues for lands under collective tenure is

who has a voice in the negotiations with the state and the private firms. Often male leaders, rather than the collective governance structure, have a seat at the table, meaning that women's voices, concerns and interests may not be heard and considered. A second dimension is whether women are included in the negotiations, whether the specific concerns of women are recognized, whether their needs are part of the agreements, and whether they receive compensation. In Cameroon, for example, Nnoko-Mewanu (2016) relates how only men were invited to the meeting with investors that demarcated the land, resulting in a map that did not reflect women's uses of the land and forests. Women were not only discouraged from participating, but even threatened if they spoke up. Similarly Vázquez-García and Sosa-Capistrán (2021) found that a renewable energy company in Mexico excluded women and many men from decision-making about renting ejido land by negotiating individually with a few men who captured the economic benefits and excluded others from participating in decisions.

7. Action arenas

In action arenas, actors mobilize action resources to influence change. Two action arenas are relevant for women's land tenure security on collective lands: the arenas in which the collective seeks to ensure their land rights within the national and local context; and the arenas in which women seek to ensure their land rights within the collective. For each arena, it is important to identify both the relevant actors and the action resources upon which they can draw.

7.1. Securing collective rights

In the first action arena, community members are actors, though community leaders (often men) are often most involved. Key external actors may include local and national government leaders, as well as those working in public institutions that affect the collective lands and their resources such as departments of forestry, water, rangelands, livestock, and agriculture. NGOs, both local and international, may influence tenure security by providing information, resources, or advocacy on these issues (Santpoort et al., 2021). Civil society may be relevant actors, particularly Indigenous People's movements and women's movements (Deere and León (2001). Finally, international institutions, such as those responsible for treaties or those involved in implementing projects, may be relevant actors in some contexts.

In this first arena, the action resources needed would be: the ability to mobilize people and speak persuasively in public arenas, as well as money, legal knowledge, and connections to politicians or other influential people. The ability to access research and advocacy to support the claims of the collective is another resource; these may be available through alliances with broader groups. Social mobilization has been key to advance processes of recognition of collective lands (Monterroso et al., 2019). In the Peruvian Amazon, Indigenous mobilization was key for implementation, resulting in the titling of over 12 million hectares for 1300 Indigenous communities (Monterroso et al., 2017). Programs to build women's leadership and networks have helped secure land rights for women as well as their communities (RRI, 2019). For example, the Maasai Women's Development Organization was able to help secure collective land rights through certification, as well as ensuring that women's land rights were clearly defined (Goldman et al., 2016).

7.2. Securing women's rights

In the second action arena, where women are securing their rights within the community, the actors include men and women of different age groups. Both migrants and long-term community members are potential actors. Those in leadership positions within the community, such as chiefs or religious authorities, are particularly relevant actors. In addition, there are numerous group actors, such as family lineages, age sets, councils of elders, or other community lands governance

institutions as well as groups managing particular resources, such as forest users' associations. Government officials or NGOs may be influential external actors.

Many of the action resources from the first arena can also be important in this arena, including legal knowledge and external alliances, such as from NGOs, as well as building alliances with chiefs, officials, religious leaders and other influential people to champion women's land rights (as illustrated by Santpoort et al., 2021 for four African countries). However, some action resources for women to secure their rights within the community may differ from those in the first arena. The ability to speak up within community governance structures may be useful, but where women speaking in public runs counter to social norms, connections to family members or other social networks may be a more important action resource, used to mobilize others to advocate for women's interests (Archambault, 2016). Women may gain more approval, and have stronger claims on resources, if they are seen as good wives and mothers, and are claiming resources to fulfill those customary roles.

Soto-Alarcón and González-Gómez (2021) show how women in a Mexican ejido used their ethical commitment to community health and wellbeing, as well as solidarity of their cooperative and support from an NGO to negotiate with male relatives and communal authorities for access to medicinal plants and land to build a processing facility. Nno-ko-Mewanu (2016) provides rich examples of action resources in Cameroon, including claims of being a "native" of the area (and calling others—even those who have lived in the community all their lives—"strangers"); status, influence, and power in community decision-making; information; money; lawyers; intimidation and threats of violence or loss of benefits. Her summary of Piacenza's (2012) study of a palm oil project in Kalangala, Uganda illustrates how women's strategies to access arable land were influenced by the action resources they had—and did not have:

The underlying power relations, and women's lack of access to social networks, limited control over family income, and their relative weakness in addressing authority and accessing political circles visà-vis men shaped the negotiation over access, control and use of land. This caused most women to rely on intra-household negotiations over land use rights, which were in turn influenced by the woman's social status in the community, and the degree of inequality in terms of asset ownership and participation in household decision-making (Nnoko Mewanu, 2016:129).

In Tanzania local NGOs supported pastoralist women to establish pastoral women's rights leadership forums (WRLFs) to provide a space for them to learn about and defend land rights, strengthen women's leadership and public participation, and enhance women's economic empowerment. A WRLF is made up of 20 women and four Maasai male customary leaders. Customary leaders are trained on issues surrounding women's social welfare challenges and how these can be addressed. Some WRLF members have also been trained to act as paralegals to support women in their community to claim their rights (Dungumaro and Amos, 2019).

Ideas from successful groups may provide insights for others who are struggling. In so doing, we can identify what interventions might be useful. Where women lack key action resources, it may be possible to build them up. Examples of this would be legal literacy or paralegal programs that familiarize women with their land rights (Knight et al., 2012). Changing the way action arenas operate may reduce the constraints women face. For example, because rural women often have limited mobility, ensuring that key discussions take place close to where they live (rather than in district headquarters), and in times and locations that are acceptable and convenient for women to attend would reduce the disadvantages they face. Acknowledging women's agency means asking them what they want and how interventions can assist them.

8. Conclusions

Women's tenure security on collective lands face double jeopardy: rights on collective lands are often less secure than on private individual lands, and women's land rights tend to be less secure than men's. For women to have tenure security, they need both the group to have secure tenure and to have a voice in the governance of the group. Yet there has been substantially less research or policy attention to this issue than to women's rights on private lands.

Better conceptual tools are needed to understand women's land rights under collective tenure, to lay the basis for better empirical studies, leading to sound policy recommendations for these important, but often overlooked, lands. This conceptualization needs to begin with a better understanding of what tenure security means for women on communal lands and commons, considering both the rights of the group, as well as women's rights within the group.

In this paper, we provide a conceptual framework for analyzing the factors that influence women's land tenure security under collective tenure. While any framework has some subjectivity in what factors to include and exclude, we hope that by basing this on the IAD conceptual framework that is widely used for study of collective resource rights and expanding the Doss and Meinzen-Dick (2020) conceptual framework for studying women's land rights, it covers the key aspects to consider for women's land rights under collective tenure.

The framework would work for other people who access land under community tenure, such as youth or those defined as strangers within the community. Their tenure security will be based on both the tenure security of the collective lands and their voice in the governance of these lands. The context, action resources, and action arenas may differ somewhat from those related to women's tenure security, but the basic framework holds.

Before designing policies or interventions, it is useful to understand the four components described in the conceptual framework: context; catalysts for change; action arenas; and outcomes. Better attention to documenting these different components within research on collective lands will facilitate analyses across studies. Individual studies often do not locate their analysis within the broader context and thus leave out information that would be relevant for comparison. Rich descriptive and analytical data on the context provides a means to identify, across studies, which factors may be different, and thus which factors may be shaping women's tenure security or the potential for change. For example, the entry points for strengthening women's land rights would be very different in collective systems based on customary tenure and those where interventions have created formal governance structures like forest user groups. More consistent analysis of the components of this conceptual framework may also decrease the potential for interventions to have negative unintended consequences.

Collective lands face a range of threats and opportunities. These may result from changes in formal policy, including land titling and registration programs. While there are documented instances of land titling programs strengthening (or weakening) women's private land rights, there has been less attention to titling or registration to secure collective land rights (exceptions include: https://www2.cifor.org/gcs-tenure/; Larson et al., 2010; Knight et al., 2012; Knight et al., 2016; Knight, 2018). Even if registration programs improve tenure security of the collective, there needs to be attention to governance arrangements ensuring that women have secure membership and voice in the governance of the collective lands.

Often, as we have documented, changes may have both positive and negative consequences. These consequences will depend on the extent to which different actors can mobilize the appropriate resources to have their voice heard and to shape policy development and implementation, both that the national level and within the group.

More consistent analyses of collective tenure systems are needed to identify which action resources are important for women to advocate for the rights that matter for them within the group, and for the various

types of groups to secure their rights to collective lands. We anticipate that this conceptual framework can contribute to building such an evidence base, and to identifying locally-contextualized strategies that can strengthen tenure security.

CRediT authorship contribution statement

Ruth Meinzen-Dick: Writing – review & editing, Writing – original draft, Visualization, Project administration, Methodology, Conceptualization. Cheryl Doss: Writing – review & editing, Writing – original draft, Visualization, Methodology, Investigation, Conceptualization. Fiona Flintan: Writing – review & editing, Writing – original draft, Conceptualization. Rachael Knight: Writing – review & editing, Writing – original draft, Conceptualization. Anne M. Larson: Writing – review & editing, Writing – original draft, Conceptualization. Iliana Monterroso: Writing – review & editing, Writing – original draft, Conceptualization.

Declaration of competing interest

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No data was used for the research described in the article.

References

- Abebe, A., Flintan, F., 2021. Women's land rights: customary rules and formal laws in the pastoral areas of Ethiopia – complementary or in conflict? Rangelands Res. Rep. 4. Nairobi, Kenya: ILRI. http://www.celep.info/wp-content/uploads/2021/10/20 21-Abebaw-Flintan-RangelandsRR_4.pdf.
- Adoko, J., Levine, S., 2008. Falling between two stools: how women's land rights are lost between State and customary law in Apac district, Northern Uganda. In: Englert, Birgit, Daley, Elizabeth (Eds.), Women's Land Rights and Privatization in Eastern Africa. Boydell & Brewer, James Currey, Rochester, NY, pp. 101–120. Woodbridge, Suffolk.
- Adoko, J., Akin, J., Knight, R., 2011. Understanding and Strengthening Women's Land Rights Under Customary Tenure in Uganda. OXFAM Report.
- Agarwal, B., 1994. A Field of One's Own: Gender and Land Rights in South Asia. Cambridge University Press, Cambridge, UK.
- Agarwal, B., 2003. Gender and land rights revisited: exploring new prospects via the state, family and market. J. Agrar. Change 3 (1-2), 184–224.
- Agarwal, B., 2010. Gender and Green Governance: the Political Economy of Women's Presence Within and Beyond Community Forestry. Oxford University Press, Oxford, UK.
- Alden Wily, L., 2011. The Tragedy of Public Lands: Understanding the Fate of the Commons Under Global Commercial Pressure. International Land Coalition, Rome.
- Alden Wily, L., 2018. Collective land ownership in the 21st century: overview of global trends. Land 7 (2), 68. https://doi.org/10.3390/land7020068.
- Anderies, J.M., Janssen, M.A., 2013. *Sustaining the Commons*. Tempe, AZ: Center for Behavior, Institutions and the Environment. Arizona State University.
- Archambault, C., 2016. Re-creating the commons and re-configuring Maasai women's roles on the rangelands in the face of fragmentation. Int. J. Commons 10 (2), 728–746.
- Arnold, C.A., 2002. The reconstitution of property: property as a web of interests. Harv. Environ. Law Rev. 26, 281–364.
- Beban, A., Bourke Martignoni, J., 2021. "Now the Forest Is Over": transforming the Commons and Remaking Gender in Cambodia's Uplands.". Front. Sustain. Food Syst. 5, 700990, https://doi.org/10.3389/fsufs.2021.700990
- Belay, A., Flintan, F., 2021. Women's land rights: customary rules and formal laws in pastoral areas of Ethiopia complementarity or in conflict? ILC Rangelands Initiative Research Report no. 4. https://cgspace.cgiar.org/bitstream/handle/105 68/114248/RangelandsRR_4.pdf?sequence=1&isAllowed=y.

- Benda-Beckmann, F. von, 2006. The multiple edges of law: dealing with legal pluralism in development practice. World Bank Legal Rev. 2, 51–86.
- Bolaños Cardenas, O., Monterroso, I., 2022. Achieving political rights, enhancing forest livelihoods: latin American Indigenous and Afrodescendant women's views. In: Bulkan, J., Palmer, J., Larson, A.M., Hobley, M. (Eds.), Handbook of Community Forestry. Routledge.
- Broegaard, R.J., 2005. Land tenure insecurity and inequality in Nicaragua. Dev. Change 36 (5), 845–864. https://doi.org/10.1111/j.0012-155X.2005.00438.x.
- Claeys, P., Lemke, S., Camacho, J., 2022. Women's communal land rights. Front. Sustain. Food Syst. 6, 877545. https://doi.org/10.3389/fsufs.2022.877545.
- Collins, A.M., 2018. Financialization, resistance, and the question of women's land rights. Int. Fem. J. Polit 21 (3), 454–476.
- Cotula, L., Toulmin, C., 2007. Conclusion. In: Cotula, L. (Ed.), Changes in "Customary" Land Tenure Systems in Africa. International Institute for Environment and Development. London. pp. 103–111.
- Cramer, C., Wood, E.J., 2017. Introduction: land rights, restitution, politics and war in Colombia. J. Agrar. Change 17 (4), 733–738. https://doi.org/10.1111/joac.12239.
- Deere, C.D., León, M., 2001. Empowering Women: Land and Property Rights in Latin America, vol. 349. University of Pittsburgh Press.
- Di Gregorio, M., Hagedorn, K., Kirk, M., Korf, B., McCarthy, N., Meinzen-Dick, R., Swallow, B., 2008. Property Rights, Collective Action, and Poverty: the Role of Institutions for Poverty Reduction. IFPRI, Washington, DC. https://doi.org/10.2499/ CAPRiWP81. CAPRI Working Paper 81.
- Doss, C., Meinzen-Dick, R., 2020. Land tenure security for women: a conceptual framework. Land Use Policy 99. https://doi.org/10.1016/j.landusepol.2020.105080 (2020).
- Doss, C.R., Kovarik, C., Peterman, A., Quisumbing, A., van den Bold, M., 2015. Gender inequalities in ownership and control of land in Africa: myths versus reality. Agric. Econ. 46 (3), 403–434. https://doi.org/10.1111/agec.12171.
- Dungumaro, J., Amos, M., 2019. Pastoral Women's Rights and Leadership Forums, Tanzania: Experience, Impact and Lessons Learned. ILRI, Nairobi, Kenya. Rangelands Research Report 3. https://hdl.handle.net/10568/106430.
- Elmhirst, R., Siscawati, M., Basnett, B.S., Ekowati, D., 2017. Gender and generation in engagements with oil palm in East Kalimantan, Indonesia: insights from feminist political ecology. J. Peasant Stud. 44 (6), 1135–1157. https://doi.org/10.1080/ 03066150.2017.1337002.
- Errico, S., 2021. Women's right to land between collective and individual dimensions. Some insights from Sub-Saharan Africa. Front. Sustain. Food Syst. 5, 335. DOI=10.3389/fsufs.2021.690321.
- FAO (Food and Agriculture Organization of the United Nations), 2002. Land Tenure and Rural Development (Land Tenure Studies No. 3). Rome, Italy.
- FAO (Food and Agriculture Organization of the United Nations), 2013. Governing Land for Women and Men: a Technical Guide to Support the Achievement of Responsible gender-equitable Governance of Land Tenure. https://doi.org/10.1016/j.ibiod.2014.06.005 (Governance of Tenure Technical Guide No. 1). Rome, Italy.
- Fitzpatrick, D., 2005. 'Best Practice' options for the legal recognition of customary tenure. Dev. Change 36, 449–475. https://doi.org/10.1111/j.0012-155X 2005.00419 x
- Flintan, F., 2008. Women's Empowerment in Pastoral Societies. IUCN, Kenya. https://www.iucn.org/sites/dev/files/import/downloads/gender format.pdf.
- Flintan, F., 2010. Sitting at the table: securing benefits for pastoral women in land tenure reform in Ethiopia. J. East. Africa. Stud. 4 (1), 153–178.
- Flintan, F., 2012. Making Rangelands Secure: past Experience and Future Options. International. Land Coalition, Rome. https://hdl.handle.net/10568/97099.
- Flintan, F., 2019. Innovations to Help Secure Pastoral Land Tenure and Governance.

 Presentation at PIM Webinar. https://pim.cgiar.org/files/2019/03/PIMWebinar-Flintan-ppt.pdf. (Accessed 28 March 2019).
- Flintan, F., M. Nassef, H. Sulieman, K. Otieno, I. Sawadogo, I. Langdown and A. Locke. Forthcoming. Understanding and Characterizing Collective Tenure and Tenure Security in Pastoral Systems in Burkina Faso, Kenya and Sudan. London: Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC).
- Flintan, F., Ebro, A., Eba, B., Assefa, A., Getahun, Y., Reytar, K., Irwin, B., Yehualashet, H., Abdulahi, M., Gebreyohannes, Z., Awgichew, S., Gudina, D., 2019. Review of Participatory Rangeland Management (PRM) Process and Implementation. ILRI, Nairobi, Kenya. Rangelands Research Report 2. https://hdl. handle.net/10568/106017
- Gamuccio, T., 2024. Women's land tenure security as a pathway to climate change mitigation and adaptation. Landesa. Unpublished report. https://www.landesa.or g/wp-content/uploads/WomensTenure_ClimateChange_EvidenceScan_2024.pdf.
- García-Morán, G., Yates, J.S., 2022. In between rights and power: women's land rights and the gendered politics of land ownership, use, and management in Mexican ejidos. World Dev. 152, 105804. https://doi.org/10.1016/j.worlddev.2021.105804.
- Giovarelli, R., Richardson, A., 2016. Land tenure security for women: threats and effectiveness of interventions. What do we know? Res. Equity Friday Harbor. https://landwise.resourceequity.org/records/2837.
- Giovarelli, R., Richardson, A., Scalise, E., 2016. Gender and collectively held land: good practices & lessons learned from six global case studies. Res. Equit. Landesa.
- GOI (Government of India), 2006. Forest Rights Act, 2006. Act, Rules and Guidelines. Ministry of Tribal Affairs and UNDP, New Delhi. https://tribal.nic.in/downloads/F RA/FRAActnRulesBook.pdf.
- Goldman, M.J., Davis, A., Little, J., 2016. Controlling land they call their own: access and women's empowerment in Northern Tanzania. J. Peasant Stud. 43 (4), 777–797. https://doi.org/10.1080/03066150.2015.1130701.
- Howard, P.L., Nabanoga, G., 2007. Are there customary rights to plants? An inquiry among the Baganda (Uganda), with special attention to gender. World Dev. 35 (9), 1542–1563. https://doi.org/10.1016/j.worlddev.2006.05.021.

- Julia, White, B., 2012. Gendered experiences of dispossession: oil palm expansion in Dayak Hilbun community in West Kalimantan. J. Peasant Stud. 39 (3–4), 995–1016.
- Kalenzi, D., 2016. Improving the implementation of land policy and legislation in pastoral areas of Tanzania: experiences of joint village land use agreements and planning. In: ILC Rangelands Initiative Rangeland Paper No. 7. https://hdl.handle. pet/10568/79796
- Knight, R., 2010. Statutory Recognition of Customary Land Rights in Africa: an Investigation into Best Practices for Lawmaking and Implementation. FAO, Rome. FAO Legislative Study 105.
- Knight, R., 2018. Power to the people: a case study on participatory local land and natural governance in Nepal, Namati and CSRC. https://namati.org/resources/powe r-to-the-people-a-case-study-on-participatory-local-land-and-natural-governance-innepal/.
- Knight, R., 2022. Tackling Political Land Corruption: the Need for a Multi-Disciplinary, Participatory Approach. FAO. https://www.fao.org/3/cc0079en/cc0079en.pdf.
- Knight, R., Adoko, J., Auma, T., Kaba, A., Salomao, A., Siakor, S., Tankar, I., 2012. Protecting Community Lands and Resources: Evidence from Liberia, Mozambique, and Uganda. Namati, Washington DC.
- Knight, R., Brinkhurst, M., Vogelsang, J., 2016. Community land protection facilitators guide. Namati. https://namati.org/resources/community-land-protectionfacilitators-guide/.
- LANDESA, Center for Women's Land Rights and Resource Equity, 2016. Gender and collectively held land: good practices and lessons learned from six global case studies. https://cdn.landesa.org/wp-content/uploads/2016-Best-Practices-Synthesis.Report.pdf
- Larson, A.M., 2010. Making the 'rules of the game': constituting territory and authority in Nicaragua's indigenous communities. Land Use Policy 27 (4), 1143–1152. https://doi.org/10.1016/j.landusepol.2010.03.004.
- Larson, A.M., Barry, D., Dahal, G.R., Colfer, C.J.P. (Eds.), 2010. Forests for People. CIFOR. https://www.cifor-icraf.org/knowledge/publication/2977/.
- Larson, A.M., Cronkleton, P.J., Pulhin, J.M., 2015a. Formalizing indigenous commons: the role of 'authority' in the formation of territories in Nicaragua, Bolivia, and the Philippines. World Dev. 70, 228–238. https://doi.org/10.1016/j. worlddev.2015.02.004.
- Larson, A.M., Dokken, T., Duchelle, A.E., Atmadja, S., Resosudarmo, I.A.P., Cronkleton, P., Cromberg, M., Sunderlin, W., Awono, A., Selaya, G., 2015b. The role of women in early REDD+ implementation: lessons for future engagement. Int. For. Rev. 17 (1), 43–65.
- Larson, A.M., Solis, D., Duchelle, A.E., Atmadja, S., Resosudarmo, I.A.P., Dokken, T., 2018. Gender lessons for climate initiatives: a comparative study of REDD+ impacts on subjective wellbeing. World Dev. 108, 86–102.
- Larson, A.M., Monterroso, I., Cantuarias, P., 2019. Gender and the Formalization of Native Communities in the Peruvian Amazon. Center for International Forestry Research. CIFOR Infobrief #238.
- Larson, A.M., Frechette, A., Ojha, H., Lund, J.F., Monterroso, I., Riamit, K., Baa, O.E., 2022. Chapter 4: land rights of indigenous peoples and local communities. In: The Land Gap Report 2022. https://landgap.org/downloads/2022/Land-Gap-Report_Chapter-4.pdf.
- Larson, A.M., Monterroso, I., Liswanti, N., Tamara, A., 2023. What is forest tenure (in) security? Insights from participatory perspective analysis. For. Pol. Econ. 147, 102880.
- Meinzen-Dick, R., Mwangi, E., 2009. Cutting the web of interests: pitfalls of formalizing property rights. Land Use Policy 26 (1), 36–43. https://doi.org/10.1016/j. landusenol.2007.06.003.
- Meinzen-Dick, R.S., Quisumbing, A.R., Doss, C.R., Theis, S., 2019. Women's land rights as a pathway to poverty reduction: a framework and review of available evidence. Agric. Syst. 172, 72–82. https://doi.org/10.1016/j.agsy.2017.10.009.
- Agric. Syst. 172, 72–82. https://doi.org/10.1016/j.agsy.2017.10.009.

 Monterroso, Iliana, Cronkleton, Peter, Pinedo, Danny, Larson Larson, Anne M., 2017.
 Reclaiming Collective Rights: Land and Forest Tenure Reforms in Peru (1960-2016).
 Center for International Forestry Research (CIFOR). https://doi.org/10.17528/cifor/006426.
- Monterroso, I., Larson, A.M., Mwangi, E., Liswanti, N., Cruz-Burga, Z., 2019. Mobilizing change for women within collective tenure regimes. Research Consortium on Women's Land Rights.
- Monterroso, I., Paez-Valencia, A.M., Gallagher, E., Chesterman, S., Meinzen-Dick, R., Enokenwa Baa, O., Elias, M., 2021. Enhancing Women's Resource Rights for Improving Resilience to Climate Change. CIFOR-ICRAF and International Fund for Agricultural Development (IFAD). https://doi.org/10.17528/cifor/008268.
- Mwangi, E., 2007. Subdividing the commons: distributional conflict in the transition from collective to individual property rights in Kenya's Maasai land. World Dev. 35 (5), 815–834.
- Mwangi, E., Mai, Y.H., 2011. Introduction to the special issue on forests and gender. Int. For. Rev. 13 (2), 119–122.
- Nnoko-Mewanu, J.M., 2016. Who is Not at the Table: Land Deal Negotiations in Southwestern Cameroon. Iowa State University. Graduate Theses and Dissertations, 15781. PhD Dissertation. https://lib.dr.iastate.edu/etd/15781.
- Nsita, S.A., Nakangu, B., Banana, A.Y., Mshale, B., Mwangi, E., Ojwang, D., 2017. Forest Tenure Reform Implementation in Uganda: Current Challenges and Future Opportunities. Flyer. CIFOR: Bogor, Indonesia. https://www.cifor.org/publications/pdf_files/flyer/7520-Flyer.pdf.
- Nyberg, G., Knutsson, P., Ostwald, M., et al., 2015. Enclosures in West Pokot, Kenya: transforming land, livestock and livelihoods in drylands. Pastoralism 5, 25. https://doi.org/10.1186/s13570-015-0044-7.
- Ostrom, E., 2011. Background on the institutional analysis and. Policy Stud. J. 39 (1), 7–27. https://doi.org/10.1111/j.1541-0072.2010.00394.x.

- Otieno, K., Lumumba, O., Odote, C., Akinyi, L., Wari, G., Ongesa, L., Nassef, M., 2024. Perceptions of Land Tenure Security in Pastoral Areas in Marsabit, Kenya. Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC), London. https://hdl.handle.net/10568/151879.
- Otsuka, K., Place, F., 2001. Issues and theoretical framework. In: Otsuka, K., Place, F. (Eds.), Land Tenure and Natural Resource Management: a Comparative Study of Agrarian Communities in Asia and Africa. Johns Hopkins University Press, Baltimore, MD, pp. 3–33.
- Pehou, C., Djoudi, H., Vinceti, B., Elias, M., 2020. Intersecting and dynamic gender rights to néré, a food tree species in Burkina Faso. J. Rural Stud. 76, 230–239.
- Piacenza, C., 2012. Negotiating Gendered Property Relations over Land: Oil Palm Expansion in Kalangala District, Uganda. Cornell University: Land Deal Policy Initiative (LDPI).
- Place, F., Roth, M., Hazell, P., 1994. Land tenure security and agricultural performance in Africa: overview of research methodologies. In: Bruce, Migot-Adholla (Eds.), Searching for Land Tenure Security in Africa, Dubuque, Iowa. Kendall Hunt Publishing.
- Quisumbing, A.R., Maluccio, J., 2003. Resources at marriage and intrahousehold allocation: evidence from Bangladesh, Ethiopia, Indonesia, and South Africa. Oxf. Bull. Econ. Stat. 65 (3), 283–327. https://doi.org/10.1111/1468-0084.t01-1-00052.
- Qureshi, M.H., Kumar, S., 1998. Contributions of common lands to household economies in Haryana, India. Environ. Conserv. 25 (4), 342–353.
- Ridgewell, A., Mamo, G., Flintan, F., 2007. Gender and Pastoralism Vol. 1: Rangeland and Resource Management in Ethiopia. SOS Sahel, Addis Ababa. https://www.dlci-hoa.org/assets/upload/monities-and-marginalized-groups-documents/20200804040421102.pdf.
- Robinson, L.W., 2019. Open property and complex mosaics: variants in tenure regimes across pastoralist social-ecological systems. Int. J. Commons 13 (1), 1–23. https://www.thecommonsjournal.org/articles/10.18352/ijc.903/.
- Robinson, L., Flintan, F., 2022. Can formalization of pastoral land tenure overcome its paradoxes? Reflections form East Africa. Pastoralism. Research Policy and Practice 12. https://doi.org/10.1186/s13570-022-00250-8.
- RRI (Rights and Resources Initiative), 2017. Power and Potential: a Comparative Analysis of National Laws and Regulations Concerning Women's Rights to Community Forests. RRI, Washington, DC. https://doi.org/10.53892/PMYV6840.
- RRI (Rights and Resources Initiative), 2018. At a Crossroads: Consequential Trends in Recognition of Community-based Tenure from 2002-2017. Washington, DC.
- REI (Rights and Resources Initiative), 2019. Strengthening Indigenous and Rural Women's Rights to Govern Community Lands. Washington, DC.
- RRI (Rights and Resources Initiative), 2020. Estimate of the Area of Land and Territories of Indigenous Peoples, Local Communities, and Afro-descendants Where their Rights have Not been Recognized. Technical Report, Washington, DC.
- RRI (Rights and Resources Initiative), 2025. Resilience and Resistance: Indigenous, Afrodescendant, and Local Community Women's Statutory Rights to Community Forests. Rights and Resources Initiative, Washington D. C. https://doi.org/ 10.53892/OSTZ6441.
- Ruiz, V., 2018. Collective land tenure in Colombia: background and current status. In: CIFOR InfoBrief, No. 199. CIFOR, Bogor, Indonesia.
- Salcedo-La Viña, C., Giovarelli, R., 2021. On Equal Ground: Promising Practices for Realizing Women's Rights in Collectively Held Lands. World Resources Institute, Washington D.C.. https://doi.org/10.46830/wrirpt.19.00007
- Santpoort, R., Steel, G., Mkandawire, A., Ntauazi, C., Faye, E.H., Githuku, F., 2021. The land is ours: bottom-up strategies to secure rural women's access, control and rights to land in Kenya, Mozambique, Senegal and Malawi. Front. Sustain. Food Syst. 5. https://doi.org/10.3389/fsufs.2021.697314.
- Sawadogo, I., Illy, E.K., Ly, B., Diallo, S., Badini, I., Magnini, J., Nassef, M., 2024. Characterising Collective Tenure Security in Pastoral Systems in Burkina Faso. Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC), London. https://www.sparc-knowledge.org/publications-resources/characterising-collective-tenure-security-burkina-faso.
- Shackleton, C.M., Shackleton, S.E., Cousins, B., 2001. The role of land-based strategies in rural livelihoods: the contribution of arable production, animal husbandry and natural resource harvesting in communal areas in South Africa. Dev. South. Afr. 18 (5), 581–604.
- Sikor, T., He, J., Leestrelin, G., 2017. Property rights regimes and natural resources: a conceptual analysis revisited. World Dev. 93, 337–349. https://doi.org/10.1016/j. worlddev.2016.12.032.
- Siscawati, M., Banjade, M.R., Liswanti, N., Herawati, T., Mwangi, E., Wulandari, C., Tjoa, M., Silaya, T., 2017. Overview of Forest Tenure Reforms in Indonesia. CIFOR: Bogor, Indonesia. CIFOR Working Paper No. 223.
- Soto-Alarcón, J.M., González-Gómez, D.X., 2021. Collective rural women access, use, and control over communal land in Mexico: a post-capitalist feminist political ecology approach. Front. Sustain. Food Syst. 5. https://doi.org/10.3389/fsufs.2021.657413.
- Sulieman, H.M., Omar Adam, Y., Naile, S., 2024. Collective Tenure of Pastoral Land in Sudan: Evidence from North Kordofan. Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC), London. https://www.sparc-knowledge.or g/publications-resources/characterising-collective-tenure-security-sudan.
- Toulmin, C., Quan, J., 2000. Introduction to evolving land rights, policy and tenure in Africa. In: Toulmin, C., Quan, J. (Eds.), Evolving Land Rights, Policy and Tenure in Africa. IIED with DFID and NRI, London, pp. 1–30.
- Unwomen, Ohchr, 2013. Realizing Women's Rights to Land and Other Productive Resources. New York and Geneva.
- Valkonen, A., 2021. Examining sources of land tenure (in)security. A focus on authority relations, state politics, social dynamics and belonging. Land Use Policy 101, 105191. https://doi.org/10.1016/j.landusepol.2020.105191.

Vázquez-García, V., Sosa-Capistrán, D.M., 2021. Examining the gender dynamics of green grabbing and ejido privatization in Zacatecas, Mexico. Front. Sustain. Food Syst. 5. https://doi.org/10.3389/fsufs.2021.657413.

Verwimp, P., 2005. An economic profile of peasant perpetrators of genocide: micro-level evidence from Rwanda. J. Dev. Econ. 77 (2), 297–323.

Zamora, A., Monterroso, I., 2017. Regional and Local Perspectives on Tenure Insecurity in the Loreto and Madre De Dios Regions of Peru, vol. 246. CIFOR Info Brief. https:// doi.org/10.17528/cifor/006637.