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Reviewing gender roles, relations, and perspectives in small-scale and community forestry – implications for policy and practice

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ABSTRACT

This study synthesises published research on gender relations in small-scale and community forestry to examine how gender roles, dynamics, and identities are understood in the literature. We also assess the ways in which gendered social relations can be more effectively incorporated into policies and practice. After initial screening, 140 papers were systematically reviewed. Thematic analysis revealed that gender relations have been studied in small-scale and community forestry under different approaches and to various depths but were frequently equated to women's issues. Although normative gendered roles within households and communities may persist, there are opportunities for breaking through stereotypes. Most common findings were that small-scale and community forestry increases gender equity in rural communities but can have adverse effects if women are not genuinely included in decision making. Leaving women's perspectives out of decision-making processes can be harmful to their livelihoods. Further, as women often distribute the benefits from small-scale and community forestry to households and communities, their absence in decision making is detrimental to society. Policies that promote ways to incorporate the perspectives of men and women in small-scale and community forestry can benefit from the resultant broader knowledge bases and objectives. When gender inequities are pronounced, gender-targeted approaches might be necessary. Other factors that explain social stratification, such as ethnicity and age groups, must also be taken into consideration. Small-scale and community forestry can provide opportunities to broaden the scope of livelihoods, decision making, and contribute to a more gender-equitable engagement.

1. Introduction

Small-scale and community forestry take place in landscapes in which actors have different objectives and motivations and are entitled to different levels of access to resources and decision-making power. A combination of factors defines a person or social group roles, opportunities, expectations by society, and limitations. One of these factors is gender. In rural settings, men and women have unequal access to basic necessities, land-use rights, and earning opportunities (Agarwal, 1989; Mwangi et al., 2011). Adding to that, responsibilities at the household and community levels are still deeply attached to gendered roles in many parts of the world (e.g., Kiptot, 2015). The understanding of the dynamics (i.e., the relationships and interactions) stemming from such societal constructs and norms can help target efforts to increase the sustainability and equity in the use of natural resources, including forests. This has been long acknowledged. For example, the 1995 Beijing Platform for Action emphasised the crucial involvement of women in natural resources and environmental decisions at all levels, from local through to global, to ensure gender perspectives on the environment are included in policy making and practice (United Nations, 1995).

In parts of the world, *small-scale and community forestry* has become an important practice to overcome forest degradation and to restore degraded landscapes, promote productivity of natural and planted forests, and to manage lands using trees as one of the main components of

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the system. *Small-scale and community forestry* includes the establishment of woodlots with a focus on timber production but excludes industrial forestry operations such as plantations and the logging of natural forests by large corporations. This provides a specific set of economic and social objectives, motivations, stakeholder engagement, and land-use systems (Harrison et al., 2002). Small-scale forestry researchers have changed from a narrower production-oriented focus to a broader perspective (Brandl, 2007), which includes gender studies (e.g., Fischer et al., 2010). Discussion on gender relations was found in a fifth of the papers included in a systematic review on smallholder reforestation and livelihoods in the tropics (Ota et al., 2018), which indicates that gender relations is a topic of importance in the area of work.

This study seeks to address multiple research questions concerning gender relations and the implications for practice and policy. We aim to synthesise literature on small-scale and community forestry and gender, to better understand how gender roles, dynamics, and identities shape this sector and vice-versa. We also set out to discuss relevant governance considerations and the ways in which gendered social relations can be more effectively addressed in small-scale and community forestry including the potential obstacles and opportunities to contribute to greater equality. Finally, we provide conclusions and recommendations for policy and practice based on the available literature.

2. Methods

A comprehensive, though not exhaustive, literature review was undertaken. A systematic literature search was carried out using the Scopus database on October 30, 2019, targeting all documents available in the database to that date, using the following search string:

TITLE-ABS-KEY ("forest restoration" OR "forest and landscape restoration" OR "forest landscape restoration" OR "reforestation" OR "smallholder forestry" OR "small-scale forestry" OR "community forestry" OR "community-based forestry" OR "community-based forest management") AND TITLE-ABS-KEY ("gender" OR "women" OR "woman" OR "female" OR "male" OR "men" OR "man")

The search yielded 488 documents, of which 140 papers complied with the inclusion criteria and were read in full by at least one member of the team. The inclusion criteria were: i) document deals with small-scale and community forestry but not with industrial forestry; and ii) terms related to gender in titles, abstracts and keywords refer to humans and to genders (as in some of the resulting papers "female" and "male" were used to refer to animals or plants, and in some cases the term man was used to refer to humans – e.g., man-made). A subset of these 140 papers is cited in this synthesis. Data of interest to the study were extracted from each individual publication based on questions in Box 1. Adding to that, proposed guidelines for research and practice, and important and useful information were noted for consecutive analysis. A thematic analysis of the data extracted was carried out (Braun and Clarke, 2006) and the main themes are discussed in the following sections.

Table 1
Frequency geographical regions were focus of papers in the review.

Region	n
South Asia	69
East Africa	16
Southeast Asia	11
North America	8
Central America	7
West Africa	7
Central Africa	6
East Asia	6
South America	3
Northern Europe	2
Melanesia	1
Southern Africa	1
Southern Europe	1

3. Gender relations and small-scale and community forestry

Gender relations have been studied in small-scale and community forestry under different approaches and with different levels of depth, from gender issues being mentioned marginally through to a gender analysis with clear methodology. Much of the literature implicitly equates gender issues with women's issues. Most of the papers in this review that had research questions directly related to gender relations were focused on women's limited access to resources, opportunities, and power. Publications reviewed only focused on the masculine and feminine genders and did not consider other genders.

Out of the 140 papers included in the analysis, 38% were about forest-related activities in Nepal ($n = 44$ exclusively in Nepal, $n = 8$ focused on India and Nepal and $n = 1$ focused on Kenya and Nepal). The second most frequently studied country was India with 20 papers. Nepal and India were followed by China ($n = 6$), Uganda (n = 6) and Canada ($n = 5$). About half of the papers were in Southeast Asia. East Africa was the second most frequent region (Table 1).

Community forestry for multiple uses was the most frequent forest activity ($n = 76$). This was followed by use of specific forest products, reforestation, and conservation. Community forestry was the main forest activity in South Asia. Manuscripts from the South Asian region were also the ones that dealt with gender issues with more depth.

The main themes extracted from the literature will be discussed in four separate subsections that are highly interconnected. The first and second subsections are centred around the ways in which gender roles and relations affect small-scale and community forestry and vice-versa. Then, governance issues stemming from gender relations and roles are discussed. Finally, we discuss how development initiatives can help address gender inequalities.

3.1. How do gender roles and relations affect small-scale and community forestry?

In general, the discourse in the selected papers on the division of roles in the household followed the common perception in rural areas

Box 1
Guiding questions for data extraction

What country or countries was the study focused on?
What forest activity was carried out?
What evidence was presented on the ways in which gender relations affect small-scale and community forestry?
What evidence was presented on the ways in which small-scale and community forestry affect gender?

across the world, but principally in low- and middle-income countries. While men are involved in higher-value economic activities such as timber growing or extraction, women are more involved in lower-value or subsistence products, such as the collection of non-timber forest products and production of agroforestry crops (e.g., Benjamin, 2010; Egunyu and Reed, 2015; Gupte, 2004; Villamor et al., 2017).

The gendered division of roles in the household can be analysed in terms of *production*, *reproduction* and *community management* (Moser, 1989). Productive work brings income to the household, reproductive work refers to childbearing, rearing and caring of others, and community management comprises all communal activities from the provision of collective consumption products to decision-making about use of resources.

Women, particularly poor women, often perform tasks that provide low monetary returns for themselves. In Tanzania, for example, charcoal production is mostly carried out by socially and economically marginalised women who have no adequate source of income or a husband or family to be supported by (Butz, 2013). These women are subject to further marginalisation due to being involved in charcoal production, since there is strong opposition to it in the villages due to both environmental and cultural reasons. However, there are no alternatives due to their economic marginalisation. Men, who often have more (and more profitable) income opportunities only get involved in alternative livelihoods when the compensation to do so is high enough to make up for the foregone income. In Nepal, men usually have the priority to be the household representative in community-forestry groups when there is a restriction of one member per household (Lama and Buchy, 2002), and women get involved only when the opportunity cost for men is higher than the benefits from community forestry. Women tend to perform tasks in community groups that are unappealing to men and might provide labour contribution even when there are no payments for it. This uneven value of labour of men and women raises an important implication for the design and implementation of forestry projects with smallholders and communities. Policy and practice must avoid perverse outcomes and ensure that women do not end up even more disadvantaged. The timing and type of activities related to forestry must carefully consider other economic activities that men and women might be involved in to avoid burdening women with additional workload if men have more profitable alternatives.

Besides economic activities, knowledge on forest ecology, conservation, use, and management is also gendered (Agarwal, 2009; Singh et al., 2018). Women often have greater knowledge on indigenous biodiversity in India (Singh et al., 2013; Singh et al., 2014) and food plants in Mexico and in India (García-Flores et al., 2019; Singh et al., 2014) than men, and elderly women in China are the most knowledgeable group in this aspect (Yang et al., 2018). Elderly women also have greater knowledge on medicinal tree species in Mexico (García-Flores et al., 2019). Tribal and indigenous people in India have played critical roles in conserving biodiversity using traditional ecological knowledge and institutions (Singh et al., 2018), and in many cases women can be essential in passing on biodiversity-related knowledge to the next generations (e.g., Pokharel and Suvedi, 2007; Singh et al., 2013). This differentiated knowledge base between genders means that, in efforts to build traditional knowledge into new forestry systems, it is essential to engage women, and particularly those from groups that are more likely to hold this type of knowledge.

Because of the gendered roles attributed to men and women, their land-use preferences differ. Women favoured multipurpose tree and agroforestry species in the Democratic Republic of Congo and in Mexico (Dumont et al., 2019; Terrones et al., 2011) and products that are useful for the household in Thailand (Benjamin, 2010), while men often targets income generation and more valuable products such as timber. These different roles and preferences also lead to different perception of and involvement in land-use interventions promoted by external agencies (e.g., Chinangwa et al., 2017; Ezebilo, 2012; Lestari et al., 2019; Mehta and Kellert, 1998; Saigal, 2000). Conservation projects, for example, sometimes have low female support, as they can have a particular negative impact for women. While men are more likely to participate in protection activities, such as in China (Chen et al., 2013), and might receive remuneration for that, women might lose access to important resources for the household, such as in India (Rout, 2018). Nevertheless, biodiversity conservation could particularly benefit from gender equality in forest governance, as women often have a more conservation-friendly view on the use of natural resources than men (e.g., Agarwal, 2009, 2015b; Leone, 2019; Pokharel and Suvedi, 2007; Ray et al., 2017), although not always (e.g., Robertson and Lawes, 2005; Rout, 2018). The different roles, objectives, and perspectives of men and women highlight the need for both sexes, as well as different social groups, to be included in the negotiation process among stakeholders on the use of natural resources.

Gendered roles, knowledge, and division of economic resources result from cultural norms that define different spaces for men and women. Women are sometimes excluded from development activities and devote most of their time to the domestic environment. Men are often more exposed to forces of globalisation and formal education, and less dedicated to tasks around the household (Singh et al., 2014). Different levels of bridging and bonding capital may be related to different genders. While bonding social capital refers to social capital within a group, bridging social capital refers to social capital across groups (Woolcock and Narayan, 2000). Women seem to play a stronger role on bonding social capital while men have greater bridging social capital (e.g., Lewark et al., 2011; Sharma et al., 2015). Hence, while men have greater access to information and support, women have a greater social role within the community. Both bonding and bridging social capital are key factors for the success of community forestry groups (Baynes et al., 2015; Herbohn et al., in press). These strengths combined allow for the integration of resources and objectives, and initiatives benefit from including both male and female perspectives (Agarwal, 2009; Hoskins, 1980), and from having men and women fully involved.

Economic, market, and population shifts and trends can reshape gendered roles associated with land use and management. In Panama, for instance, decreasing need for household gardens, fishing, and gathering reduces women's gender roles in land use and increases their time in the household (Sharma et al., 2015). Physically demanding tasks in Nepal depended on the availability of adult male labour (Olsen and Larsen, 2003). Nevertheless, in some occasions women occupy male-dominated positions that require physical strength, as in British Columbia (Ekers, 2014). Women taking on work that has traditionally been perceived as male domain is often one of the consequences of population trends, as discussed in Box 2.

3.2. How do small-scale and community forestry positively and negatively affect gender roles, relations, and identity?

Decentralised institutions and approaches like Community Forestry Groups, Community-based Forest Management, and Participatory Forest Management can increase the benefits to women and the poor and their decision-making power in small-scale and community forestry (e.g. Gobeze et al., 2009; Sharma et al., 2017). There is however concern that participation in forestry activities may be a burden for women. Yet, easier access to firewood, fodder, grass, and other essential products can assist with the domestic responsibilities ascribed to women (Agarwal, 2015a; Boyer-Rechlin, 2010; Giri et al., 2008). Thus even incremental equity can contribute to higher income, access to forest products and services, access to micro-credit, generation of employment (McDougall et al., 2013a), greater diversity of species and land use systems (Dumont et al., 2019), and fairer distribution of benefits (Buffum et al., 2010). Despite the generalised perception that productive work is a male domain, women can also receive income from collecting and selling forest products, including non-timber forest products (e.g. Avocèvou-Ayisso et al., 2009). Women often use income from such activities for meeting household needs like food, clothing, and school fees (e.g., Butz,

Box 2
Population trends affecting gendered roles in small-scale and community forestry

Population trends are not only transforming local economic structures but also changing gender relations. Male outmigration is frequently considered a driver of changing traditional roles, allowing women to get involved in previously-thought male activities, which can contribute to increasing their autonomy and decision-making power. (e.g. Giri and Darnhofer, 2010a, 2010b; Giri et al., 2008; Lama et al., 2017). In other cases, the departure of men can create an extra burden for women who are expected to fulfil extra roles in the household (e.g. Oli and Treue, 2015).

In Nepal, for example, a high prevalence of male outmigration has been pointed out as providing significant scope to enable the participation of women in community forestry (Giri and Darnhofer, 2010a). This can be beneficial in terms of forest conservation, as women tend to be more concerned about sustainable forest management since they carry the prime responsibility for collecting forest products. However, experiences and perspectives of women about their participation vary, with an increase in autonomy in decision-making but also a greater work burden and increased stress. Women with migrant husbands suffer disproportionately from time poverty, which can actually limit their engagement in activities outside the household and that are not directly essential for subsistence.

Alternatively, outmigration of women can also influence forest conservation. In Indonesia, for instance, women who left their land to work as domestic laborers in Asian cities are sending home remittances to invest in rural resources, enabling investment in forest understory species (Peluso and Purwanto, 2018). The investment of women ended up having a major effect on agrarian environments, forest ecologies, resource production patterns, household economies, and labour relations.

2013). Increased gender equity can also lead to capital transformation with benefits for both sexes and social status. It can increase social networks, improve organisational skills (Coleman and Mwangi, 2013), and promote positive attitudes towards conservation (Chen et al., 2013). Adding to that, the wider community benefits from the involvement of women in forestry usually invest income in household or public goods and services. In Nepal, for example, some women-only groups were covering all or part of the salary of government school teachers (Buchy and Rai, 2008).

Socioeconomic and gender equality is grouped together as one of the five key factors impacting on community forestry group success, along with intra-group governance, flows of benefits, government support, and property rights (Baynes et al., 2015). In Nepal participating in committees is mostly seen as a male role, as it belongs to the public sphere, leaving women with low access to decision making, although they are often the main forest users (Pokharel and Tiwari, 2013). The active involvement of women in community groups has increased the attention to the needs of women and enabled them to participate in decision making related to the use of communal resources and benefit sharing (Giri et al., 2008; Subedi and Timilsina, 2016). Participation in community forest groups can also generate a new identity for women and increase awareness of the benefits brought by forests in landscapes (Rout, 2018). Community forestry is an important catalyst in bringing women outside of the domestic sphere (Prasad Timsina, 2003). In Canada, for instance, forestry was for some women the first foray into waged work and an empowering experience (Ekers, 2014). Engagement can also increase one's knowledge, awareness, and stake in forest management, for both men and women, which may lead to higher confidence and a more active role in the community forest groups in a feedback loop (Egunyu and Reed, 2015; Giri and Darnhofer, 2010a; Giri et al., 2008).

Although positive impacts of small-scale and community forestry on gender equity were frequent in the literature, negative impacts, particularly for women, can result from inadequate support or exclusive community forest group management. Without consideration of gendered roles, resources and commitments, mechanisms of participatory exclusions lead to inefficient approaches, the needs of certain groups not being met, and can even deepen disparities between groups and genders (Agarwal, 2001; Benjamin, 2010; Lama and Buchy, 2002). For example, forest protection can come at a high cost to women who lose access to forests where they collect products to meet household needs (e.g. Agarwal, 2015a; Cormier-Salem, 2017; McElwee, 2009). Forest closure might result in a longer walk for the collection forest products (Agarwal, 2001, 2009; Buchy and Rai, 2008; Saigal, 2000). In some cases, it also leads to the use of low-quality firewood, which can have health implications (Agarwal, 2001, 2009). Additionally, participatory policies, including those related to community forest management, can be a burden for women in terms of time and labour with little benefits for them (Gupte, 2003). Not rarely women and female-headed households benefit less than men as gender inequities in cost and benefit sharing still exist, particularly when women are underrepresented in decision-making bodies (Adhikari, 2005; Agarwal, 2015a; Mehta and Kellert, 1998; Poudel et al., 2015).

3.3. *Relevant governance considerations on gender in small-scale and community forestry*

Governance refers to systems, institutions, and processes to organise and rule. It encompasses decision making and the tools that enable stakeholders to make informed decisions (Mansourian, 2017). Forest governance cuts across different levels of social, political, and institutional structures. Multistakeholder platforms that integrate groups of stakeholders vertically and horizontally (i.e., across levels of governance from local to broader, and across stakeholders at same level of governance) can be effective increasing the participation of local communities in governance processes (Tiwari and Joshi, 2015). Besides these integrative bodies, governance decisions can be impacted by dynamics at the community and the household level. Intrahousehold dynamics are important with respect to how small-scale and community forestry might benefit women and families more broadly. Decision making within a household is not necessarily shared equally among members or democratically and to the exclusive benefit of the family unit (Kevane, 2012). The nature of household decision making is influenced by household structure, budgetary units within, social norms, inheritance structures, and external economic environment including public social security (Deschênes et al., 2020). In Vietnam, gender equity at the household level has been suggested to be related to the egalitarianism in the context of the socialist regime of the country (Villamor et al., 2017). In Papua New Guinea, women and men were found to be involved in decision-making at the family level under two different arrangements: in the first arrangement decision-making was shared on crop management, while in the second arrangement each party was involved in making decisions on crops they are responsible for (Wiset et al., 2022). Nevertheless, cultural norms can result in women having no voice on the use of household resources. In some countries men often hold land tenure or land-use decision making, and women need to seek permission from

their husbands to access land or plant trees (Kakuru et al., 2014; Poole et al., 2016).

Community forestry groups are heterogeneous and, although social inclusiveness is key to effective community forestry (Pandit and Bevilacqua, 2011), governance systems in community forestry often reflect household practices. While in some communities men and women have equal rights to vote and participate in the administration of forest groups (e.g. Gobeze et al., 2009), the low participation of women in decision making at the community level is still the norm in many cases (e.g., Adhikari, 2005; Benjamin, 2010; Buffum et al., 2010; McDougall et al., 2013a). Simply having different social groups represented in a community group does not necessarily result in equity in the governance process. Agarwal (2001) proposed a spectrum of participation: 1) Nominal: membership in the group; 2) Passive: being informed of decisions and attending decision-making meetings without speaking up; 3) Consultative: being asked an opinion but with no guarantee of influencing decisions; 4) Activity-specific: undertaking specific tasks; 5) Active: expressing opinions and taking initiatives; and 6) Interactive: Having a voice and influencing decisions.

The domination of local elites and males over other groups in the society can prevent active or interactive participation of other social groups. This compromises the implementation of community forestry, which is rooted in collective decision making and involves stakeholders with different relationships to forest resources (Gauli and Rishi, 2004; Pandit and Bevilacqua, 2011). The exclusion of marginalised people in decision making can result in their livelihood needs being neglected or even harmed, marginalising them even further (Agarwal, 2001; Gauli and Rishi, 2004; McDougall et al., 2013a).

Patriarchal cultures limit female activities mostly to domestic tasks (Giri et al., 2008) and limits access to land and forest resources by women (Nhem and Lee, 2019). Political instability and violence against women can also be limiting factors (Tieguhong et al., 2012), as well as lower literacy among women than men in some rural areas (Lama et al., 2017). When in low numbers, women have limited bargaining power to speak up for the issues that matter to them (Agarwal, 2015a; Nhem and Lee, 2019). Examples of factors that can increase the participation of women in the public sphere are education (Coleman and Mwangi, 2013), increased self-confidence as a result of previous experiences or participating in other groups, and male support (Giri et al., 2008).

The presence of women in community bodies has an impact in management decisions, values, and beliefs of the organisations (Giri and Darnhofer, 2010a). In some cases, having higher numbers of women can actually change group dynamics even if the women are not organised collectively (Agarwal, 2010, 2015b). A higher number of women in a committee encourages them to speak up and advocate for their agendas (Pokharel and Tiwari, 2013), elevating them from a nominal, passive, consultative or activity-specific to an active or interactive participation. However, even when women are not excluded, social traditions – such as ones in which women should not speak up in public – may limit their ability to participate in policy-making (Gupte, 2003), and in some circumstances, women-only spaces are needed to balance the weight of patriarchal institutions and enable effective participation of women in the public arena (Buchy and Rai, 2012). The encouragement for greater involvement and representation of women in decision-making bodies, in an interactive participation process, can also come from laws, regulations, and certification (Lewark et al., 2011; McDougall et al., 2013b; Pokharel and Suvedi, 2007; Pokharel and Tiwari, 2013). In sum, there is the need to ensure representation of men and women in management structures, so benefits are planned for all groups. As power imbalances exist, genuine decision-making representation must be ensured. Attention must also be paid so women-only groups are not disadvantaged in terms of access to resources in comparison to mixed-gender managed groups (Buchy and Rai, 2008).

Despite efforts to increase gender equity through community forestry, in some circumstances, the factors preventing empowered participation of women are beyond the scope of community forestry, and related to other power structures (Buchy and Subba, 2003), cultural norms, and economic factors. Shortcomings in participatory development can also result from the assumption that communities share a commonality of interests, neglecting social stratifications and the different perceptions on community forestry held by different social groups (Gupte, 2003). And, although gender is an important factor, social stratification goes beyond gender. Ethnicity, caste, age, position within the family, migration patterns, and wealth also play a large role in governance, management choices and the distribution and use of benefits (Buchy and Rai, 2008; Buchy and Subba, 2003; Giri and Darnhofer, 2010b). Although elite men often dominate social groups and decision making, in women-only groups, the dominance by higher caste and social status also exist (Buchy and Rai, 2008).

3.4. Gender and development in small-scale and community forestry

Gender equality and empowering women and girls is one of the Sustainable Development Goals, which is guiding much of the forest restoration and rural development initiatives (Senadheera et al., 2019). Moser (1993) distinguished *Women in Development* from *Gender and Development*. In *Women in Development*, women are perceived in terms of their sex and seen as an 'untapped resource who can provide economic contribution to development'. G*ender and Development*, on the other hand, is focused on social relationships between men and women and on developing measures to help women in development efforts. Here, we briefly discuss how gender issues have been incorporated into development actions and how development efforts can promote gender equity.

In order to have gender and development there must be consideration for the importance of governance. Decreasing inequalities (including gender inequalities) in community forestry groups reduces conflicts and improves cohesion, increasing the likelihood of success of communal activities (Baynes et al., 2015). Depending on the level of exclusion of women in governance bodies, certain measures can increase the decision-making power of women. As discussed previously, women-only meetings, ensuring increased female representation, and having female field staff can facilitate participation by women (Gupte, 2003). Measures like these can be easily adapted to local circumstances at low marginal costs. Positive livelihood impacts from development efforts can be strengthened by adoption of gender-transformative approaches that examine and influence gender norms and power imbalances to enhance the status of women and their access to resources (Kantor et al., 2015; Kristjanson et al., 2017).

Despite existing means to address gender imbalances, gender equity in development is an ongoing dynamic process of social reshaping and not a predefined outcome (Giri and Darnhofer, 2010a). Global social change is affecting gender relations, which will in turn affect how small-scale and community forestry are carried out. In this process of change, power relations are renegotiated and restructured (Buchy and Subba, 2003). These societal changes take a long time to occur and are the biggest challenge for development and equity. As economies move from a subsistence to a cash base, traditional forms of labour exchange also change. It is possible that the relative level of importance given to productive, reproductive and community work will change and the opportunity cost of female labour in small-scale and community forestry will increase. On the other hand, small-scale and community forestry might benefit from the expansion of green market opportunities, which often requires gender-equitable practices. Adding to that, human out-migration from rural areas is likely to lead to considerable loss of ecological knowledge among the community (Punch and Sugden, 2013). Capturing this knowledge and applying it to small-scale and community forestry is a way to enable the transmission and preservation of this resource.

Gender roles are not only a factor affecting the use and management of forests, but also structures the broader field in which small-scale and community forestry can take place. Local contexts define the achievable

steps to gender equity within a cultural, political, and socioeconomic context.

4. Conclusions and implications for policy and practice based on review

This article reviewed the literature on small-scale and community forestry to investigate how gender roles, dynamics, and identities were analysed and represented. Findings demonstrate that small-scale and community forestry, as well as other components of rural livelihoods, are highly gendered but infrequently analysed as such. The gendered division of labour, experiences, knowledge, and opportunities influence the dynamics and prospects of small-scale and community forestry, including initiatives related to forest and landscape restoration. For example, women have been progressively more engaged in adding value to forest products to reach more formal markets and have been gaining voice in community groups. Nevertheless, the literature is limited. There is significant scope to expand the knowledge and understanding of the work of men and women to develop an initial basis for understanding gendered spaces, practice, structures, and relations that intersect with and shape forest restoration initiatives. While there is extensive research that links gender roles, relations and performance to agricultural practices, there remains a challenge to adequately incorporate gender mainstreaming into agricultural policy other than economic participation (Collins, 2018).

This review draws attention to the importance of prioritising a more thorough and reflective conception of gendered roles situated within specific contexts and moves beyond static representations and understandings of gender in general and women more specifically. Gender relations should therefore be understood both as a priority factor and social dynamic that influences small-scale and community forestry, and at the same time can be shaped and constitutive of the conception and practice of forestry. The situated nature of gender relations and forestry highlights the challenge of making broad conclusions about addressing gender issues because of the variability of socio-political influences at various scales. The unequal geographical distribution of research, outlined in Table 1, also adds to this challenge. The systematic selection of the literature might have introduced a bias as in Europe and North America the terms *Non-Industrial Private Forestry* or *Family forestry* might be more prominent than the terms used in the search.

Despite the challenges in drawing generalised conclusions on the relationships between small-scale and community forestry and gender issues, the themes extracted from the literature offer valuable considerations for policy, as discussed in Section 3. The evolving nature of gender relations in land use and land use governance indicates there will likely be changes in the ways small-scale and community forestry is perceived, prioritised, and implemented. Population trends, market forces, and shifts in the status of women and men are likely to lead to new objectives guiding decision-making at the household and community levels. In this context, small-scale and community forestry can promote gender equity if efforts are not constrained by simplistic views of society. Policy must target not only participation and land-use rights of men and women, but also the integration of gendered objectives and knowledge, the preservation of traditional ecological knowledge, the changing dynamics of gender issues, and the opportunities for engagement with non-binary genders depending on the challenges faced and the available resources. Small-scale and community forestry must also be coordinated with other sectors that impact on the availability and accessibility of resources. Increasing gains to women in forestry can also lead to further benefits to communities, as women often reinvest benefits back into the community and the household. Hence, increased gender equity in small-scale and community forestry can indirectly benefit other sectors, such as education and health. Because gender plays such a large role in the opportunities, expectations, and objectives of people and groups, when deficiencies are identified in development processes or projects, analysing gender relations can serve as a useful lens to identify issues and means to mitigate them. By addressing issues identified in this analytical review, small-scale and community forestry – when economic, political and other social factors allow – can contribute to the increase in gender equity, one of the global priorities defined in the Sustainable Development Goals.

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Declaration of competing interest

Declaration of generative AI in scientific writing: AI was not used in the preparation of this manuscript.

Data availability

Data will be made available on request.

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