



Ministry of Forests & Environment
Government of Nepal



Gender Equity in Forest Management: Literature Review for Identifying Research Priorities in Nepal's Changing Context



Volume 2020-05

ISSN 2208-0392

RESEARCH PAPER SERIES on
Agroforestry and Community Forestry in Nepal

The *Research Paper Series on Agroforestry and Community Forestry in Nepal* is published by “Enhancing livelihoods from improved forest management in Nepal” or the EnLiFT2 Project (<http://enliftnepal.org/>). EnLiFT2 Project (ACIAR FST/2017/037) is the second phase of the EnLiFT (ACIAR Project FST/2011/076) and is funded by the Australian Centre of International Agricultural Research. EnLiFT2 commenced on 2018 and is a collaboration between: University of Adelaide, University of New South Wales, Department of Forests and Soil Conservation, Forest Research and Training Center (Government of Nepal), ForestAction Nepal, Nepal Agroforestry Foundation, RECOFTC Nepal.

This is a peer-reviewed publication. The publication is based on the research project funded by Australian Centre for International Agricultural Research (ACIAR). Manuscripts are reviewed typically by two or three reviewers. Manuscripts are sometimes subject to an additional review process from a national advisory group of the project. The editors make a decision based on the reviewers' advice, which often involves the invitation to authors to revise the manuscript to address specific concern before final publication.

For further information, contact EnLiFT:

In Nepal

ForestAction Nepal
Dr Naya Sharma Paudel
Phone: +9779851015388
Email: naya@forestaction.org

In Australia

University of Adelaide
Dr Ian Nuberg
Phone: +61421144671
Email: ian.nuberg@adelaide.edu.au

ISSN: 2208-0392

Disclaimer and Copyright

The EnLiFT2 Project (ACIAR FST/2017/037) holds the copyright to its publications but encourages duplication, without alteration, of these materials for non-commercial purposes. Proper citation is required in all instances. Information owned by others that requires permission is marked as such. The information provided is, to the best of our knowledge, accurate although we do not guarantee the information nor are we liable for any damages arising from use of the information.

Suggested Manuscript Citation

Tamang, S., Karki, R., Paudel, N.S., Timsina, S., Banjade, M.R. and Shrestha, K.K. (2020). Gender Equity in Forest Management: Literature Review for Identifying Research Priorities in Nepal's Changing Context, *Research Paper Series on Agroforestry and Community Forestry in Nepal*, 2020-05: 1-12.

Our Cover

Male and female members of Kalopani community forest user group gathered for the General Assembly on 3 January 2015. Photo by Rahul Karki

Editorial Team

Editor-in-Chief: Edwin Cedamon

Managing Editor: Rahul Karki

Editors: Ian Nuberg, Naya S Paudel, Krishna K Shrestha, Hemant Ojha



Ministry of Forests &
Environment Government of Nepal

Gender Equity in Forest Management: Literature Review for Identifying Research Priorities in Nepal's Changing Context

**Sujata Tamang | Rahul Karki | Naya Sharma Paudel |
Shrabya Timsina | Mani Ran Banjade**
ForestAction Nepal, Kathmandu, Nepal

Krishna K. Shrestha
University of New South Wales, Australia

Table of Contents

Executive Summary	iv
Introduction	1
Gender in Nepal's community forestry	2
Existing policies	2
Women's stake in natural resource management in Nepal.....	3
Major issues on gender in community forest	4
Gender norms in forest use and management	4
Participation of women in decision-making institutions.....	5
Inequitable access and benefit sharing.....	6
Causes and consequences of excluding women	7
Changing contexts and emerging challenges.....	8
Rural outmigration and changing gender roles	8
Market-oriented development and governance programs	8
Research gaps and silences	9
References.....	11

Executive Summary

This document explores gender in forest management with the focus on women's participation in the management and decision making. Despite varying roles of men and women engaging and contributing and several efforts on gender and social equity, women are still experiencing participatory exclusion in community forestry management and decision making. Existing social structures favors mainly males in all the sectors including forestry governance.

Additionally, legal and administrative requirements cause women to lack behind in abilities to effectively influence forest management decisions. These are visible in the decision making process of the community forestry users' groups. Likewise, existing CF institutions are including women in the governance body due to minimum requirements but are mainly limited within numbers and physical presence. Moreover, it is still evident that women are largely left out from equitable access to and benefit sharing of the resources.

Shifting roles of women due to outmigration of males, influence of the market and the interface with local government are some of the important influences of the changing context. It is important to explore whether and how migration of males have supported or hindered women and on livelihoods of the family. Similarly, how gender is considered in community forestry and local government front are included or excluded is another area to explore.

Introduction

Gender is an important aspect of how and why forest resources are managed or mismanaged at the local level. Involvement of women in particular to manage natural resources has been proven to be important, especially in the Global South (Agarwal 2010a; Colfer 2013; FAO 2007; Mai et al. 2011; Sewell Jr, 1992). Community forestry in Nepal offers a good example of gender relations in the management of forest, wherein women's role in managing resources has had positive outcomes (Agarwal 2010b). In the early 1990s, women were champions of the environmental protection movement in India and elsewhere (Agarwal 1992). However, they were victims of environmental degradation due to dependence on environmental resources (Shiva 1989; Agarwal 2014; Bieri 2014). Historically, women in Nepal are responsible for domestic work such as cooking, cleaning and feeding and caring for domestic animals (Upadhyay 2005). This requires the extraction of resources from forests, primarily community forests, to fulfill the responsibilities (Wright et al. 2015). Moreover, women coming from poor and marginalized families gather and sell firewood, medicinal herbs and wild fruits to generate income (Agarwal 2010c; Upadhyay 2005). In contrast to their dependence on forest resources, women's representation in local forestry institutions is low and less effective (Buchy and Rai 2008; Giri and Dranhofner 2010). Though participation of women and the marginalized groups in community forests has been prioritized, its implications on the overall decision making and sustainable management of resources is less explored (Nightingale 2002). Nevertheless, the increasing conceptualization of women and nature relationships has helped usher women's participation in environmental movements by challenging the notion of male as the agents of environmental change (Nightingale 2006).

Scholars argue that Nepal's community forestry (CF) has experienced tokenistic participation of women in decision-making bodies, despite having increased participation in terms of number of attendance in meetings (Agarwal 2001; Nightingale 2002; Agarwal 2006; 2010a). Likewise, the existing body of literature does not tell us precisely the difference that women's participation in forestry institutions could make in the overall decisions made (Agarwal 2008 – Ecological Economics). Unprecedented rates of outmigration of men in search for employment, in recent decades, has brought about changes in the gender roles in forestry (Giri and Darnhofer 2010). Yet, little is known about the effectiveness of forest management upon the absence or return of those migrated. Studies have shown that women with migrant men have greater autonomy and decision-making authority at the household level due to their husbands' absence (Kaspar 2006; Yabiku et al. 2010).

Gender roles in community forestry in Nepal have been redefined, which can be attributed to the policies being introduced, following the advent of multiparty democracy in the early 1990s and ongoing political change in the country. Nepal's community forestry sector is regarded as being at the forefront in terms of laying the foundations for facilitating gender-inclusive strategies and policies (RECOFTC 2015). Gender mainstreaming has been fostered by civil society organizations like Federation of Community Forestry Users, Nepal (FECOFUN)

supported by Government's strategies and policies in line with gender inclusion¹. For instance, the Community Forestry User Groups (CFUGs) mandate 50 per cent representation of women in the key decision-making positions. Likewise, the Community Forestry Operational Guideline (1995) and the subsequent amendments in 2009, brought along positive discrimination for women in CFUGs. Nevertheless, women are still under-represented in planning and decision-making process in addition to having 31 per cent female quota in the CFUG executive committee for example, which is less than the government's prescribed target of 50 per cent (RECOFTC 2015).

This review report aims to explore gender in community forestry with an emphasis on women's participation in the management and decision making in Nepal's CF context with a view to identify research gaps and priorities. This report is divided into six sections. The section following the introduction highlights the state of art of Gender in Nepal's community forestry. The third section underlines the major issues on gender in community forestry context in Nepal. Fourth section highlights the causes and consequences of excluding women in community forestry. The fifth section emphasizes the changing context and emerging challenges in Nepal. Finally, the paper concludes with the research gaps in research on gender in community forestry in Nepal.

Gender in Nepal's community forestry

Existing policies

In the early 1990's, the Government of Nepal introduced policies that promoted gender and social inclusion in forest management policies particularly in community forestry. The introduction of Forest Act 1993 and Forest Regulation 1995 can be considered as the major policy documents institutionalizing community forestry in Nepal. The Act and the Regulation provided legal foundations for community forestry to include both male and female members of a household as members of the CFUG (Buchy and Rai 2008). Subsequently, the Ministry of Forests and Soil Conservation (MoFSC) enacted 'Gender Equality and Social Inclusion' (GESI) guideline (2008) to address gender and other social discrimination and mandated affirmative action. This guideline has also endorsed gender responsive budgeting which governs the allocation of resources based on the needs of women.

Adhering to the GESI provisions, the recent community forestry guidelines (MoFSC 2015) have specified that apart from allocating 50 percent seat for women in the executive body, one of the two most decisive positions (chairperson or secretary) must be allocated to women. Additionally, it also mentions that both husband and wife need to be considered as household heads in the constitution of the forest user group, as opposed to the prior arrangement where only men's name used to be listed (Giri and Darnhofer 2010). There is also a provision to allocate 35 percent of CFUG's fund to the benefit of poor and excluded (HURDEC Nepal et al. 2012). Such initiatives have encouraged and enabled women to be represented in one-

¹ The MoFSC's GESI strategy and Gender, Poverty and Social Equity (GPSE) monitoring framework.

third of decision-making bodies of CFUGs (Bhattarai 2020). Likewise, community forestry recognizes the roles of the women in forest tenure while in other participatory models, such as leasehold forestry and collaborative forestry, that is not the case and women lack access to and control over in decisions (Wagle et al. 2017).

Compared to men, women are socially and often legally excluded of the ownership of land, which is the major source of agriculture-based livelihood and provides financial and social security against poverty and also improves bargaining power in the household (Agarwal 2014; Mishra and Sam 2016). Therefore, the majority of the women work and/or depend on the land owned by male relatives in South Asia, including Nepal (Agarwal 1994; Kabeer 1999; Allendorf 2007; Agarwal 2014).

Women's stake in natural resource management in Nepal

The gendered rights, roles and responsibilities of men and women in Nepal's economy and society have important bearings in shaping the forest management regime in Nepal. A global comparative study published by the World Economic Forum (2013) ranked Nepal on the global gender gap index as 121th among 136 countries, based on economic participation and opportunity, education attainment, health and survival and political empowerment (WEF 2013). This shows a considerable disparity among men and women except as a workforce where women and men contribute almost the same. Based on employment activities, about 64.9% of the total work force in Nepal is predominantly engaged in subsistence agriculture which is mostly a rural affair (69%) (NFLS, 2009). About 77.9% of rural women are engaged in agriculture, where they spent 16.8 hours on agricultural activities, 0.8 hours on fetching water and 1.8 hours on collecting fuelwood per week as compared to men who spend 14, 0.4 and 0.8 hours on agriculture, fetching water and collecting fuelwood per week respectively (NFLS, 2009). Moreover, lack of economic opportunity and prolonged socio-political conflict has prompted many of the men of rural households to migrate in recent years (Giri and Darnhofer 2010; Khadka and Verma 2012). The result is feminization of agriculture and landscape, which has substantially increased workloads of women (Gartaula et al 2010; Tamang et al 2014, Maharjan, Bauer and Knerr 2017).

In Nepal, rural women are still highly reliant on natural resources and often play a lynchpin role in the management of forest resources (Byers and Sainju 1994). Women are the primary users of forest resources for subsistence and generate income through the sale of forest products to help cover their household expenses. The heavy dependence on forests also means that women have a stronger stake in forest management. It is even more crucial for poor women for whom the forest remains the only means of livelihood and food security. Given their responsibility for meeting household needs by forest products, depletion of forest resources increases the burden on women. Yet the needs and concerns of women are often neglected, and the ownership of forests and the sale of valuable forest products are largely under the control of men. However, recently there have been some changes. Due to opportunities available and economic benefits in other sectors than forest/community forestry, less women and youth are interested and likely to prioritize to be involved in the management of forests, if the existing system of planning and management continues.

Representation and participation of women has increased noticeably especially in community forestry, its networks and federations (Agrawal and Ostrom, 2001). Over 1,000 out of 18,000 CFUGs in Nepal are now managed solely by women and close to 30 percent of the total number of executive members across 18,000 CFUGs are women. While community forestry can be seen as conveying an example of inclusive approach, participation of women in critical decision making position such as chairperson or secretary are rare. Even when they occupy these crucial positions, social and cultural norms often prevent them to make the nature of decisions they would otherwise make. Their access to resources and equitable sharing of the benefits is affected by the long existing patriarchal social relationships, male dominated power structure in the society and religious, cultural norms, practices and beliefs. Although the number of female members of the executive committees of the CFUGs has gradually increased over the years, it has not reached the target of 50 percent as envisioned by the CFUG Guidelines (2009). Likewise, women representation in academic and administrative institutions responsible for facilitating forest management is negligible. The persistent gender inequality and the social, cultural and economic heterogeneity have sidelined their important role in management of forest resources. They have neither been rewarded for their hard works nor been motivated by equal benefit sharing in terms of economic values. Inadequate appreciation of women's knowledge and their contribution in forest management has promoted deforestation and forest degradation (Adhikari and Lovett, 2006; Baland et al., 2007).

Major issues on gender in community forest

The literature on the status of gender in community forests in Nepal reveals differences in the way men and women engage with forests, their participation in local forestry institutions as well as the impacts of externally organized development and governance schemes. We detail and analyze this body of knowledge below, in order to identify research gaps in the next section.

Gender norms in forest use and management

Community forests supply essential resources and means of livelihood for both men and women in rural Nepali households. However, academic research reveals that, even within a household, men and women may engage with the forest commons in different ways (Agrawal 2001). This often results in a difference in knowledge of forest species as well as divergent preferences in how such resources are managed. Generally, women extract fodder and fuelwood from the forests for household-use and livestock-rearing. Therefore, they tend to be more knowledgeable than men about the ecology of local species from which such uses can be derived. Men are more interested in timber extraction for construction and sale. They are more skilled in timber species management and better informed about non-local species.

Gender differences are also apparent in the protection of community forest resources. Females are rarely deployed as permanent forest guards by user groups (Agarwal 2001). Similarly, temporary assignments like patrol teams are also predominantly male. However, mixed-gender patrols are more common in community forests of Nepal than those of central and western India (Agarwal 2001). Furthermore, women may form their own informal unpaid patrol teams when they perceive the men's' patrolling to be ineffective. For example, informal female patrols often discover illegal activities that go undetected by male patrols due to differences in forest resource use. Women also contribute, mostly informally, to fire-fighting efforts alongside officially deployed male teams.

Following the differences in engagement with community forests between men and women, they are also liable to be caught with violations of different rules (Agarwal 2001). While men may be charged for illegal removal of timber, women are typically charged for unduly extracting firewood. Women are more likely to be caught with violations when regulations are enacted without their consultation by male-dominated executive committees. Poor women are under additional pressure due to heavy reliance on forest products for subsistence, resulting in regularly altercations with forest guards. All-male patrols or guards are usually ineffective in dealing with female intruders, especially women from outside the village, due to the fear of facing false allegations of harassment.

Participation of women in decision-making institutions

The design of the formation of governing bodies of CFUGs, such as executive committees, has been often shaped by male leaders in Nepal. Groups that feature a large percentage of women have mostly been established with the support of NGOs, forest government officials and international donors (Agarwal 2001). Parts of Nepal with high rates of male emigration even feature all-women CFUGs (Buchy and Rai 2008), though the forest plots they manage may be barren, degraded and small (Agarwal 2001). Despite having presence of women members in executive committee due to a minimum requirement, its mainly limited within number. Women tend not hold influential decision-making position or power. The major decisions are made by mainly chairs and most of the time by the chair.

The physical presence of women in community forest governing bodies is problematic for a number of reasons. Even mere nominal membership does not usually translate to decision-making capacity (Agarwal 2001, Lama and Buchy 2002, Adhikari et al 2014). Agarwal (2001) presents a typology of participation in order of increasing effectiveness: nominal, passive, consultative, activity-specific, active and interactive (empowering) participation, with only the last form actually resulting in an influence in group decisions. Women in community forestry groups are generally limited to the lower two levels of participation. They receive news regarding the forest from their husbands because male group members and forest officials seldom consult them while planning management modalities and framing forest-use rules. Even among women, those from marginalized castes have been found participating the least in decision-making process (Khanal Chettri et al. 2013). Adhikari et al. (2014) suggest that incentives such as guaranteed access to resources and benefits and the enforcement of legal

property rights to disadvantaged groups secures effective participation of all users in resource governance (Adhikari et al 2014). However, Agarwal (2001) cautions that even interactive participation is not a panacea because pre-existing socioeconomic inequalities and relationships of power still limit the degree to which women empowerment in governing committees results in social equity and efficiency. Indices to measure actual empowerment in community forestry are lacking, such as the Women Empowerment in Agriculture Index (WEAI) used to evaluate gender equity in agrarian communities.

Inequitable access and benefit sharing

Each CFUG is legally required to adopt various models of providing equitable access to forest resources and equitably distributing economic benefits derived from the forest, including special provisions for poor and marginalized groups (MoFSC 2008; MoLJ 1993, 1995). Such mechanisms may include periodic harvesting windows, auctions of forest products to CFUG members, distribution of cash following product sales. In general Nepal's community forest program has had a positive impact in terms of equalizing income distributions and promoting equitable benefit sharing among different groups of poor, marginalized and women-headed households (Khanal Chettri et al. 2013; Luintel et al. 2017). However, glaring inequities are still evident in practice.

Benefit entitlements are often determined for a household basis, although women might prefer to have individual shares separate from their spouses (Agarwal 2001). Distribution of cash benefits is very rare from most CFUGs. Instead, funds are generally spent on community infrastructure and tools, mostly controlled and used by men, or on travel and stipends for predominantly male EC members (Agarwal 2001). When small amount of money is distributed, men do not necessarily share it within their families and may spend it on spurious activities like gambling and liquor. Distribution of forest resources through market mechanisms like auctions adversely affects women in rural areas having limited financial means (Agarwal 2000). When such mechanisms are the only way to obtain forest resources, those unable to pay are simply deprived of the access to the village commons, even if they have contributed to its protection. Women tend to derive the most benefits when governance structures allow benefits in kind, such as fuel and fodder, or guarantee routine access to forest resources. However, if access to the forest is based on a limited number of short harvesting windows, it can also lead to inequitable outcomes (Chaudhary et al. 2018). For example, among women in the CFUGs, those belonging to larger households, located closer to forests and markets, utilize forest resources more frequently, since women with smaller families may have a smaller workforce or can devote less time to collect forest products (Buchy and Rai 2008; Khanal Chettri et al. 2013). In order to avoid community conflict, CFUG committees seem to opt for equal distribution among all members, rather than choosing equitable mechanism such as such as the allocation of a bigger share of fodder to poor households (Buchy and Rai 2008).

Causes and consequences of excluding women

Various socioeconomic and legal factors impede the ability of women to effectively influence forest management decisions. Largely patrilineal social structures in rural Nepali villages favour males in the legal inheritance of ancestral property and in becoming the head of their households, as well in obtaining access to education and commanding greater social power and autonomy (Buchy 2012). The community context generated by these inequalities is often reflected in the failure to include women in community resource governance. Traditional gender-based norms as well as the relative lack of female literacy, education and social networking still limit women's confidence in publicly voicing their concerns and participating effectively (Shrestha 1999, Chhetri 2001, Lama and Buchy 2002). Furthermore, in households where male members are absent due to migration, an increase in women's workload household duties also limits their engagement in community forest governance (Lama et al 2017). Among women, socioeconomic inequalities arising from factors such as ethnicity, caste and class, further influence an individual's capacity to influence decision-making in forest management (Agarwal 2001). Buchy and Subba (2003) contend that the community forest programme's focus on biophysical aspects affects its ability to effectively ensure women's inclusion.

One of the most direct and crippling consequences of the exclusion of women in community forest governance is their inability to influence rules, regarding forest-use resulting in financial hardships and legal transgressions. For example, regulations involving forest closures, impacts women trying to address basic subsistence fuel and fodder needs (Agarwal 2001). They are forced to devote financial resource to meet their needs through the market or compelled to travel to distant sites for collection, often illegally, risking being caught and fined. Landless poor women are affected the most, having no private cropland and trees and few livestock to supply dung for fuel.

The exclusion of women, who are often more knowledgeable of local firewood and fodder species, also results in poor management and financial community decisions leading to regular resource shortages (Agarwal 2000). Women are deprived of an opportunity to influence the allocations of funds to intervention activities that would improve forest resource productivity, health and protection, or to support forest-dependent enterprises and obtain alternative fuels. Besides lacking an ability to steer forest regulation and management decisions, the failure to include women in community resource governance can also result in an inequitable distribution of forest products and poor forest condition (Agarwal 2009). Due to more restricted access to income generation opportunities, women, relative to men, are less able to compete in market-dependent modalities of resource access such as the auctioning of fodder grasses. This excludes financially constrained women, even when they contribute to resource protection and clearly deserve to participate in benefit sharing from the commons. This exclusion from governance can preclude the opportunity to create equitable distribution schemes, such as payment in kind in exchange for labour devoted to forest management. Moreover, women also cannot guide forest management to result in more equitable outcomes,

such as through the reservation forest stands for specific uses and products. With an increasing influence of top-down supra-national governance schemes like REDD+, arriving with a singular goal of offsetting global carbon emissions, women's ability to access forest products like firewood and fodder will be further hampered, especially when they are excluded from community discussions. When women who are acutely dependent on forest resources are restricted from access, it could create conflicts that compromise both social and ecological resilience (Bhattarai 2019).

Changing contexts and emerging challenges

Rural outmigration and changing gender roles

The feminization of rural agrarian communities driven by emigration of men to urban centers has become a global phenomenon. This is particularly evident in the global South like Nepal where neo-liberalization of largely agriculture-driven economies (Kelkar 2009; Lahiri-Dutt and Adhikari 2015) has created a population of highly mobile rural youth (Rig 2006) that are disinterested in or unable to sustain agrarian lifestyles. In Nepal too, due to the outmigration of rural youth, largely men, rural landscapes are now managed largely by young women and elderly people (Gartaula et al 2010; Tamang et al 2014, Hecht et al. 2015). This has significantly increased the autonomy and decision-making capacity of women in the household (Kaspar 2005; Adhikari and Hobley 2011; Maharjan, Bauer and Knerr 2017). Even in the community sphere, including in the protection and management of community forests, women from households, where adult males have migrated away, register increased participation in the CFUG's annual general assemblies (Giri and Darnhofer 2010; Lama et al. 2017). Women's participation in community meetings may even persist upon husband's return (Kaspar 2005). However, increased participation does not translate to meaningful contribution to decision-making discussions, especially because women are still largely excluded from CFUG executive committees where most decisions are made (Lama et al 2017).

Market-oriented development and governance programs

In recent years, state and non-state initiatives have attempted to increase the connectivity of community forest users to the market economy, along with promoting management schemes to increase the production of marketable forest products/services. The introduction of development programs for forest management and enterprises as well as supra-national environmental governance initiatives have also generally favored male members of CFGs in Nepal. For example, an overwhelming majority of women may not be aware of implemented programs, as was the case with forest-certification scheme in two CFUGs in Dolakha district (Lewark et al. 2011). Among those that are aware of the programs, most women do not report any change in their living conditions. However, they conveyed that restrictions on livestock grazing in the forest, implemented for the certification process, has increased the availability and quality of grass. The implementation of another external intervention - the globally

launched Reducing Emissions from Deforestation and Degradation (REDD+) program, has been criticized for its lack of attention to issues regarding gender equity and power dynamics (Khadka et al. 2014, Wagle 2017, Bhattarai 2019), despite its stated objectives of gender inclusion (Bhandari et al. 2018). The program which aims to minimize carbon emissions and increase sequestration, failed to reach the level of female representation in the district level, as mandated by Nepal's community forestry program (WOCAN 2012). In some cases, women were explicitly excluded in partaking in discussions around payment criteria and policy (Khadka et al. 2014). Despite its apparent efforts to target women-headed households, Poudel et al. (2015) argue that REDD+ pilots in Nepal have not adequately compensated them for the loss of access to forest resources (such as firewood and fodder) following the implementation of the programs. Luintel et al. (2017) cautions that the carbon-focused forestry of REDD+, if implemented with disregard to equity goals, may upend the positive achievements of Nepal's community forestry program. Another market-oriented initiative is the Nepal government's Scientific Forest Management (SFM), launched to establish timber production-oriented management regimes in community forests (MoFSC 2014). Though this management approach may significantly impact the availability of non-timber resources for subsistence-use, which women are more likely to seek, there have no studies explicitly analyzing its effect on gender dynamics.

Research gaps and silences

A wide body of literature on gender exists, but much remains to be explored, particularly in the changing context of community forestry in Nepal. The rural outmigration of men and changing roles of women in forestry; gendered roles in the changing market context; and increasing community forest-local government interface and gender roles are some of the key areas of research priorities. Here we outline potential avenues for research, based on our findings from the currently available literature on gender inclusion in Nepal's community forests.

- Rural migration has led to change in the gender-forest relations in the past decade or so, where women's command over the natural resources is gradually changing in the absence of their male counterparts. The role of women in managing forest resources has gradually been acknowledged where we have witnessed their participation in decision making as well as forest management activities. Yet, to what extent this change in the gender-forest relations benefited women in particular is unexplored. Furthermore, how has migration of men actually supported (or not supported) in shaping the rural livelihood needs further research.
- Even after years of state and non-state interventions, including policies and programs to improve women's inclusion in community forest management, on average their participation is nominal, at best. On the legal front, there are requirements that necessitate the appointment of at least one woman to the two major leadership positions (chairperson and secretary) in the executive committees (EC), as well as the required allocation of 50%

of the seats in the EC to women. However, these provisions have been unable to actually guarantee women's ability to get into the executive committees, let alone influence decision-making. Moreover, gendered roles in the changing market context have not been adequately explored. Development programs and supra-national governance schemes are further entrenching the exclusion of women, by not involving them in the construction of new regulations and benefit-distribution mechanisms. What steps can future state and non-state interventions/incentives involve that will foster greater enforcement of these legal requirements, and in turn, also meaningful inclusion of women in forest-based market system and forest management? Also, due to restrictions/opportunities created by development/technical/governance programs like REDD+, certification schemes, timber-oriented Scientific Forest Management. These programs are reported to be dominated by locally powerful males that collaborate with technicians and NGOs – how can future programs ensure that women have a voice in both choosing and implementing projects?

- There is now a growing body of knowledge about the effects of women's participation following major societal changes and external development/governance interventions. But what are the socio-ecological implications (risks and resilience-enhancing opportunities) associated with the local governance system in the federal setup has not been adequately explored. This is particularly important in terms of ensuring women's equitable access to these funds, especially when poor and marginalised groups are not even present. Moreover, how can an integrated local government and community forestry planning process improve women's engagement (e.g., reduced access to firewood and fodder collection, embroilment in violations of new regulations) with forests, primarily in terms of their access to forest resources, roles in decision making, and forest management is crucial.

References

- Adhikari, J. and Hobley, M. (2011). "Everyone is leaving—who will sow our fields? Himalaya, 35(1).
- Agarwal, B. (2001). Participatory exclusions, community forestry, and gender: An analysis for South Asia and a conceptual framework. *World Development*, 29, 1623-1648.
- Agarwal, B. (2009). "Gender and forest conservation: The impact of women's participation in community forest governance." *Ecological Economics* 68 (11): 2785-2799.
- Agarwal, B. (2010a). Does women's proportional strength affect their participation? Governing local forests in South Asia. *World Development*, 38(1), 98-112.
- Agarwal, B. (2010b). The impact of women in Nepal's community forestry management. Sustainable Mountain Development No. 57, International Center for Integrated Mountain Development, Nepal.
- Agarwal, B. (2010c). Gender and green governance: the political economy of women's presence within and beyond community forestry: Oxford University Press.
- Agarwal, B. 2006. Gender inequality, cooperation and environmental sustainability. In: Baland, J.-M., Bowles, S., Bardhan, P. (Eds.), *Inequality, Cooperation, and Environmental Sustainability*. Princeton University Press, Princeton.
- Agarwal, B. 2008. Does women's proportional strength affect their participation? Governing local forests in South Asia. Paper Presented at the IAFFE Annual Conference, Turin.
- Bhandari, T. et al. (2018). "Inclusion of Gender Issue in REDD+: Experiences from REDD+ Pilot Implementation in Nepal." *Journal of Forest and Livelihood* 17: 1.
- Bhattarai, B. (2020). "How do gender relations shape a community's ability to adapt to climate change? Insights from Nepal's community forestry." *Climate and Development* 12(10): 876-887.
- Buchy, M. and Rai, B. (Eds.). (2008). *Do Women-only Approaches to Natural Resource Management Help Women? The Case of Community Forestry in Nepal. UK and USA: Earthscan.*
- Chaudhary, Sunita, et al. "Environmental justice and ecosystem services: A disaggregated analysis of community access to forest benefits in Nepal." *Ecosystem Services* 29 (2018): 99-115.
- Colfer, C. (2013). The gender box: a framework for analysing gender roles in forest management. CIFOR occasional paper (82).
- FAO. (2006). Time for action: Changing the gender situation in forestry. Report of the team of specialists on gender and forestry, Food and Agriculture Organization of the United Nations.
- FAO. (2007). Gender Mainstreaming in Forestry in Africa. Forestry Policy and Institution Working Paper.
- Gartaula, HN., Anke, N. and Leontine, V. (2010). "Feminisation of Agriculture as an Effect of Male Out-migration: Unexpected Outcomes from Jhapa District, Eastern Nepal." *International Journal of Interdisciplinary Social Sciences* 5.2 (2010).
- Giri, K. and Darnhofer, I. (2010). Nepali women using community forestry as a platform for social change. *Society and Natural Resources*, 23(12), 1216-1229.
- Hecht, S., Yang, A. L., Basnett, B. S., Padoch, C. and Peluso, N. L. (2015). People in motion, forests in transition: trends in migration, urbanization, and remittances and their effects on tropical forests (Vol. 142). CIFOR, Bogor, Indonesia.

- Kaspar, H. (2006). I am the head of the household now: The impacts of outmigration for labour on gender hierarchies in Nepal. In S. Premchander, & C. Müller (Eds.), *Gender and sustainable development: Case studies from NCCR north south* (pp. 285-303). Bern: Geographica Bernensia.
- Khadka, M. et al. (2014). "Gender equality challenges to the REDD initiative in Nepal." *Mountain Research and Development* 34(3): 197-207.
- Khanal-Chhetri, B., Johnson, F.H., Konoshima, M. and Yoshimoto, A. 2013. Community forestry in the hills of Nepal: determinants of user participation in forest management. *Forest Policy and Economics*, 30: 6-13
- Lama, A.S., Kharel, S. and Ghale, T. (2017). When the Men Are Away: Migration and Women's Participation in Nepal's Community Forestry. *Mountain Research and Development*, 37(3): 263-270.
- Lewark, S., Latika G. and Marion K. (2011). "Study of gender equality in community-based forest certification programmes in Nepal." *International Forestry Review* 13(2): 195-204.
- Luintel, H., Bluffstone, R.A., Scheller, R.M. and Adhikari, B. (2017). The Effect of the Nepal Community Forestry Program on Equity in Benefit Sharing. *The Journal of Environment and Development*, 26(3): 297-321
- Maharjan, A., Bauer, S. and Knerr, B. 2012. Do Rural Women Who Stay Behind Benefit from Male Out-migration? A Case Study in the Hills of Nepal. *Gender, Technology and Development*, 16(1): 95-123.
- Mai, Y. H., Mwangi, E. and Wan, M. (2011). Gender analysis in forestry research: looking back and thinking ahead. *Int. For. Rev.*, 13(2), 245-258.
- MoFSC. (2008) *Community forestry development programme guidelines (Second Revision)*, Kathmandu, Nepal: Ministry of Forests and Soil Conservation.
- MoFSC. (2014). *Scientific Forest Management Guideline*. Ministry of Forests and Soil Conservation, Kathmandu, Nepal.
- MoLJ. (1993). *Forest Act 1993*. Kathmandu, Nepal: Ministry of Law and Justice.
- Nightingale, A. (2002). Participation or just sitting in? The dynamics of gender and caste in community forestry. *Journal of Forest and Livelihood*, 2(1): 17-24.
- Nightingale, A. (2006). The nature of gender: work, gender, and environment. *Environment and Planning*, 24: 165-185.
- Poudel, M. et al. (2015). "Social equity and livelihood implications of REDD+ in rural communities—a case study from Nepal." *International Journal of the Commons* 9.1.
- Sewell Jr, W. H. (1992). A theory of structure: Duality, agency, and transformation. *American journal of sociology*, 1-29.
- Tamang, S., Paudel, K.P. and Shrestha, K.K (2014). "Feminization of agriculture and its implications for food security in rural Nepal." *Journal of Forest and Livelihood* 12(1): 20-32.
- Upadhyay, B. (2005). *Women and natural resource management: Illustrations from India and Nepal*. Paper presented at the Natural resources forum.
- Wagle, R. et al. (2017). "Feminist institutionalist interpretation of forest tenure regimes in Nepal." *Journal of Forest and Livelihood* 15(1): 132-142.
- WOCAN. (2012). "An assessment of gender and women's exclusion in REDD+ in Nepal." *Women Organizing for Change in Agriculture & Natural Resource Management (WOCAN)*.
- Wright, W., Pillay, S. and Wagle, R. (2015). *The inclusion of Women in Nepalese Forestry Governance: Perspectives from Feminist Institutionalism*.