

# The Impact of Women in Nepal's Community Forestry Management

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Existing research on gender and local forest governance has focused predominantly on women's relative absence from governance institutions and the gender equity implications. These studies provide important insights on the factors constraining women's participation.

What if we asked a different set of questions, such as what difference would women's presence make in

these institutions? How would that affect institutional functioning and outcomes for conservation and subsistence? And, how much presence would make a real difference?

This article takes these questions as its central focus. It outlines conceptually why we would expect women's presence to make a difference, statistically tests a range of hypotheses, and traces the policy implications

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of the results. The data relates to a primary survey of community forestry institutions (CFIs) that I undertook mainly during 2000 and 2001, in hill districts of Nepal in particular, to examine what impact the gender composition of the group has on a range of aspects, in particular women's participation, rule making, rule violations, forest conservation, and firewood and fodder shortages.

Godawari, Nepal



Both quantitative and qualitative information was collected. Some initial results of this analysis have appeared in several papers (Agarwal 2009a, 2009b, 2010) and the entire range of issues is examined comprehensively in a forthcoming book (Agarwal, in press). Here I briefly present highlights of the Nepal results relating to three aspects: (1) women's effective participation in the process of decision-making; (2) the formulation of forest use rules; and (3) the effect on forest conservation.

The Nepal survey included 70 CFIs (or forest user groups) in the hill districts of Baglung, Parbat, Gorkha, and Dhading. The sampled CFIs varied in the gender composition of their executive committee (EC) – the principal decision-making body – ranging from no women to all-women, with a range of mixed-gender ECs in between. The analysis of women's participation is based on CFIs with a mixed-gender composition. The impact on forest use rules and forest conservation is based on a comparison between all-women groups and other groups. The regression analysis controls for variations in the characteristics of the EC, the institution (CFI), the resource (forest), and the location (district).

## Women's participation in decision-making

The study found that the more women there are on the EC, the greater is the likelihood of women attending EC meetings, speaking at them, and being office bearers (i.e. chairperson, vice-chairperson, secretary, or treasurer). Increasing the number of EC women ensures that there is at least some female presence in most meetings. Women's attendance rate also improves and there is evidence of a critical mass effect. Their attendance rate is significantly higher where 25 to 33 percent of the EC consists of women, compared with ECs with less than 25 per cent women, although the positive effect tends to taper off after one-third.

The likelihood of at least some women speaking up is also greater among ECs with a third or more women members. This provides empirical support for the popular view that having one-third women makes an important difference and strengthens the policy argument for promoting at least these proportions of women in decision-making bodies.

Enhancing women's numbers on the EC also improves the chances of women becoming office bearers, but not in a linear way. There is a threshold effect around 25 percent women, which is the minimum percentage

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needed to make a difference, but the likelihood increases further as we move towards 50 percent women. Notably, though, while the EC's gender composition significantly affects the chances of a woman holding office, it has no effect on men holding office.

A person's individual characteristics matter as well. Women who are literate and currently single (widowed, separated, etc.) are more likely to become office bearers, as are men who are literate and landowners. Another factor that is likely to have influenced the induction of women as office bearers in Nepal's CFIs, although not uniformly, is the gender-inclusive nature of the constitution framed by FECOFUN (Federation of Community Forestry Users Nepal). This would have sent a strong message that women's presence as decision-makers is desirable and important.

## Forest use rule making

The gender composition of CFIs also affects the nature of the forest use rules that the groups make. It is well recognised that a key element in the sustainability of CFIs is the forest use rules and the process by which they are formulated and adapted to user needs. In Nepal, these rules show considerable diversity; and their extent of strictness (e.g. what can be extracted from the forest and how frequently) varies by forest product, the characteristics of the forest and the CFI, the CFI's location, and the composition of the EC.

Notably, although a greater presence of women in CFI decision-making does influence the extraction rules significantly, the difference women make is not always in the expected direction. Given the pressures on women, especially for firewood and fodder collection, we would have expected them to favour early rather than deferred extraction and push for lenient rules. I found, however, that all-women CFIs in Nepal, compared to other CFIs, made stricter rules. An important reason for this is that all-women groups have less freedom to make lenient rules due to serious resource constraints (smaller and more degraded forests). Age is another factor. Older EC members, including older women, tend to make stricter rules, most likely because they have lower time

preferences and fewer personal costs from forest closure, since daughters-in-law can take over some of the burden of firewood and fodder collection.

In other words, the impact of women's presence is tempered both by the characteristics of the group managing the forest and other factors, such as the condition of the forest protected. At the same time, the finding that all-women ECs make stricter rules, despite their personal hardship, indicates that their governance practices are informed by a notable concern for conservation.

## Forest conservation

Finally, what impact does the presence of women on the EC have on conservation? Measuring the impact of protection on the condition of a forest is complex. I have used two indicators for Nepal. One is based on the villagers' assessment in 2000/01 of forest regeneration since protection began. The EC members categorised regeneration as poor, good, or very good. The second indicator is based on a comparison of the forest department's written records of forest condition at the time of handover, and a forest officer's assessment of the condition at the time of my survey. By both indicators, most CFIs registered an improvement.

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However, a comparison of all-women groups with other groups gives a mixed picture. On average, Nepal's all-women CFIs began with poorer forests than the other groups. Today, by the villagers' assessment, although a somewhat larger percentage of the all-women groups relative to other groups report 'poor' regeneration, a substantially larger percentage of them also report 'very good' forest regeneration. In addition, the forest department's assessment shows that a substantially larger percentage of all-women groups relative to other groups have improved canopy cover.

## "All-women ECs make stricter rules, despite their personal hardship"

The regression analysis supports these observations. Despite receiving much smaller and more degraded forests, all-women groups outperform other groups and show better forest regeneration and improvement in canopy cover, after controlling for other factors. This could be due to many reasons. Involving women in the EC's decisions:

- enlarges the pool of people who are committed to resource conservation,
- improves the flow of information about forest closure rules among a wider cross-section of users,
- increases the number of people keeping a lookout for intruders,
- creates conditions under which women can better use their knowledge of plants and species and forest conservation practices, and
- raises children's awareness about the need for conservation, thus increasing the chances of long-term sustainability of the institution.

Older EC members, including older women, make a particular difference, as does employing a guard to supplement village patrolling. Technical support from the forest department (including training in pruning and clearing operations) can also enhance the effectiveness of a community's forest management, although gender barriers in access to training need to be overcome. At present, such training is provided mostly to male office bearers. Finally, it is important to give women's groups larger sized forests and in a condition that allows regeneration and sustainable use, rather than the small and degraded plots often handed over to them.

## Conclusion

In conclusion, women's greater presence in Nepal's community forestry institutions has many statistically demonstrable benefits. It enhances women's effective participation in decision-making; influences the nature of decisions made, especially the rules of forest use and their implementation; and improves forest conservation outcomes.

In addition, although not measurable empirically in all facets, many gender-empowering effects follow when women are present in sufficient proportions. Speaking up at meetings, influencing decisions, participating in patrolling, holding office, and, in some cases, even asking forest officials for a forest plot, are all aspects of empowerment. Measures that help increase the presence of women in the governance institutions would thus be beneficial both because their participation is important in itself, as a constituent element of successful institutional functioning, and to better fulfil the conservation and subsistence objectives of such institutions.

Where the institutions have done less well, however, is in addressing women's domestic energy needs. Firewood shortages persist and in many cases, are becoming even more acute despite the regeneration of forests and greater availability of biomass. This has negative welfare implications in terms of the time and effort women expend in firewood collection and the health ill effects that they and the children suffer from using smokier fuels as substitutes. Notably, CFI funds are seldom used to address women's problem of cooking energy shortages. This suggests the limits of what can be achieved simply by increasing women's presence in local institutions, and to the need for support from institutions beyond the local, to address such subsistence needs. Here Nepal's major representative network of forest users, FECOFUN, could play an important facilitating role.

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