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**Group Functioning and
Community Forestry in South Asia:**

**A Gender Analysis and
Conceptual Framework**

Bina Agarwal

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LIST OF ABBREVIATIONS

CFG	Community Forestry Group
EC	Executive Committee
FUG	Forest User Group
JFM	Joint Forest Management
NGO	Non-Governmental Organization
UP	Uttar Pradesh

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ABSTRACT

This paper examines group functioning in the management of common pool resources, such as forests. In recent years community forestry groups have mushroomed in South Asia. But how participative, equitable and efficient are they? Many have done well in the short run in terms of regenerating previously degraded lands. But are they reaping the full potential benefit of their efforts, and will they sustain? Equally, are the benefits and costs being shared equitably between rich and poor households and between women and men? The paper demonstrates that seemingly participative, equitable, and successful groups can reveal significant inequities and inefficiencies when viewed from a gender perspective.

The paper also examines the factors that constrain women's (especially but not only poor women's) participation, and those that lead to gender inequitable outcomes. It argues that participation and distributional equity (and associated fallouts for efficiency) depend especially on rules, norms, perceptions, personal endowments and attributes, and household endowments and attributes. Reducing the gender bias embedded in these factors would depend on women's bargaining power with the State, the community and the family. The paper outlines the likely determinants of women's bargaining power in these arenas, and analyses ground experience in terms of progress made and dilemmas encountered.

I INTRODUCTION

Rural community forestry groups, managing State or community owned forest resources, represent one of the most rapidly growing forms of collective action initiatives in large parts of the developing world. They thus provide an especially useful study in how groups function. This paper will focus on South Asian experience to illuminate some critical aspects of collective action and institutional functioning in relation to common pool resources. Among other things, it will analyse how groups, which are seemingly participative, equitable and efficient can cloak significant gender inequities and inefficiencies. It will also examine what underlies unfavourable outcomes and how outcomes can be improved.

For rural households in South Asia, forests and village commons have always been important sources of basic necessities and supplementary livelihoods, providing firewood, fodder, small timber, and various non-timber products. Especially for the poor and women who own little private land, they have been critical sources. In the 1980s, for instance, in semi-arid regions, the landless and landpoor obtained over 90 per cent of their firewood and satisfied 69-89 per cent of their grazing needs from communal resources (Jodha, 1986). In that period, firewood alone provided 65-67 per cent of total domestic energy in the hills and desert areas of India and over 90 per cent in Nepal as a whole (Agarwal, 1987). Today, firewood remains the single most important source (and for many the only source) of rural domestic energy in most of South Asia, and is still largely gathered, not bought.¹

However, over the decades, people's ability to fulfil such needs has been eroding with the decline in communal resources, due both to degradation and to shifts in property rights away from community hands to State and individual hands. The formation of community forest management groups in recent years represents a small but notable reversal in these processes of statization and privatization, toward a re-establishment of greater community control over forests and village commons.

These groups have a range of origins: some are State-initiated, others self-initiated by villagers, and yet others catalysed interactively by non-governmental organizations (NGOs), communities, and local state officials. But unlike the old systems of communal property management, which typically recognized the usufruct rights of all village residents, the new ones

¹ For India, see Natrajan (1995).

represent a more formalized system of rights. Typically these rights are based either on membership (as in the State-initiated groups), or on rules specified by selected (often self selected) community members (as in the self-initiated groups). In other words, membership, or some other formal system, is replacing village citizenship as the defining criterion for establishing rights in the commons.

This raises some critical questions, such as: how are the community forestry groups performing in terms of participation, equity and efficiency from the perspective of women, especially the poor? Are the benefits and costs being shared equitably, or are they creating a system of property rights in communal land which, like existing rights in privatized land, are strongly elite and/or male centred? What determines their performance on these fronts? How can the outcomes be made more participative, equitable and efficient?

While focusing on these questions, the interactive effect of one outcome on another is also examined. For instance, excluding women (often the principal users of community forests) from participation in the group's decision-making bodies could have a range of negative efficiency fallouts, such as the framing of inappropriate and inequitable rules which might tend to be broken. These issues are analysed here mainly from a gender perspective, since they typically cut across class/caste divisions, but where relevant, the interplay of class/caste with gender, in defining differences in outcomes for different categories of women, is also focused on.

Conceptually, it is argued here that the outcomes of group functioning are determined especially by rules, norms, and perceptions, in addition to the personal and household endowments and attributes of those affected. All of these factors can disadvantage women, both separately and interactively. To what extent these can be changed in women's favour will depend on women's bargaining power vis-à-vis the State, the community, and the family. The paper spells out the factors that are likely to affect women's bargaining power in these three arenas. Among the factors discussed is the role of gender-progressive groups and coalitions as distinct interest groups, within or outside the larger groups, in all three arenas. While these aspects are discussed in the context of community forestry, the overall conceptual framework would be relevant to understanding gendered dimensions of group functioning in a number of other contexts as well.

Part II of the paper gives a background to the field data used here; Part III provides a brief description of community forestry groups in India and Nepal. Part IV examines the nature of outcomes in terms of participation, equity and

efficiency, and Part V traces the factors underlying particular outcomes. Parts VI and VII analyse, the former conceptually (in terms of the bargaining framework), the latter drawing on ground experience, how the outcomes might be made more favourable for women. Part VIII contains brief concluding comments.

II SOME DETAILS OF FIELDWORK

The paper is based largely on my field visits and interviews undertaken during 1998-9, supplemented by existing case studies. My fieldwork covered 87 community forestry sites across five states of India (Gujarat, Karnataka, Madhya Pradesh, Orissa, and the Uttar Pradesh hills) and two districts (Kaski and Dang) of Nepal.² The Indian sites were chosen in order to cover: (1) the most important types of community forestry institutions to be found in the country, namely JFM groups, self-initiated groups, and *van panchayats* (village councils), with varying degrees of NGO presence in each type; (2) the culturally and ecologically diverse context within which such initiatives are located; and (3) varied experiences of women's participation. I had also done fieldwork in some sites earlier: in Gujarat in 1995, in the Uttar Pradesh (UP) hills in 1993 and 1995, and in West Bengal in 1993. In the case of Nepal, although it was not possible to cover the ecological spread of community forestry in that country, the two districts I visited provided an interesting range of illustrative case studies.

My visits were facilitated by a diverse set of institutions and individuals: NGOs involved in community forestry work in a region; the forest department officials responsible for JFM; and local researchers. Since my purpose was to get an overview rather than to pursue any single village experience in depth, my trips involved short visits to the selected villages. In all cases, I was accompanied by at least one person who had some prior knowledge of the area and people. In locales where I did not speak the language, such a person also served as an interpreter.

Information was obtained mostly through relatively unstructured interviews with groups of women and men involved in community forestry. This often

² In India, the term 'state' relates to the biggest administrative divisions within the country and is not to be confused with 'State', used throughout the paper in the political economy sense of the word. In Nepal the biggest administrative divisions are 'districts'. In India, districts are smaller divisions within states.

included those who had played leadership roles in community forest management. Sometimes I met with women and men in separate groups, at other times jointly. I sought to interview a range of individuals in each group. In addition, in some cases, individual interviews were also conducted with key informants. These were typically women or men who were office bearers in the CFG executive committees, and sometimes in other village-based institutions, such as a women's association or the village council. The material gathered here provides answers on some counts and pointers on others, which I hope to explore further in a follow-up survey.

III BACKGROUND ON COMMUNITY FORESTRY GROUPS

By the mid 1970s, the degradation of forests and village commons had reached crisis proportions in large parts of India and Nepal. The initial response of the government and donor agencies was to undertake 'social forestry' programmes which typically took the form of plantations of commercial species, promoted and managed in a top-down manner. This brought little success, and raised serious doubts about the ability of the State to develop what was a communal resource, without some significant involvement of the resource-using communities (Agarwal, 1986). In contrast, there were emerging stories of successful forest protection and management by a number of communities, some in the context of forest movements such as Chipko in the UP hills (northwest India) initiated in 1973, others taking the form of spontaneous initiatives by villagers, and some few encouraged by forest officials (as in West Bengal, eastern India). The lessons so learnt, as well as inputs from environmental activists, academics, and others, led in the early 1990s to a notable shift in government policies in both countries, toward more community-oriented forest management.

In recent years, we thus see a mushrooming of community forestry groups (henceforth called CFGs) in South Asia.³ Some CFGs have been State-initiated. These include: (a) the Joint Forest Management (JFM) programme launched in India in 1990, involving a co-management deal in which village communities and the government share the responsibilities and benefits of regenerating degraded local forests; and (b) the community forestry programme launched in Nepal 1993 in which the State transfers even good forest land to a set of identified users who form a forest user group (FUG) and

³ I will be using CFG as a general term to cover all types of community forestry groups in India and Nepal.

who are entitled to all of the benefits.⁴ In both India and Nepal, NGOs can act as intermediaries and catalysts.⁵ Other CFGs have been initiated autonomously by a village council, youth club or village elder. Yet others have a mixed history, such as the *van panchayats* or forest councils in India's UP hills, which date to the 1930s.

JFM groups alone constitute some 21,000 community forestry groups in India today, covering 2.5 million hectares (m ha) or 3.9 per cent of the country's forest land (SPWD, 1998). In addition, there would be a few thousand groups of other types (mentioned above), apart from the protection efforts spearheaded by environmental movements such as Chipko. So far, such forestry initiatives are largely located among communities which are highly forest dependent and facing considerable scarcities due to acute degradation of the resource base, or which fear facing degradation and scarcity. Most also involve tribal or hill populations that are relatively less socially and economically differentiated.

Similarly, in Nepal there were 5,356 FUGs in 1996 covering an area of 0.36 m ha or 6.7 per cent of Nepal's total forest land (Joshi, 1996). I understand that by 1998 about 15 per cent of forestland had been handed over to FUGs, out of a targeted transfer of 61 per cent of Nepal's forests. To date, most FUGs are located in Nepal's hill districts. In addition to these formally recognized FUGs there are a scattering of self-initiated groups and indigenous protection efforts going back several decades. Some further details of the major types of CFGs are given below.

3.1 India

Today 63 m ha or 19.4 per cent of India's geographic area is under forest. Much of this is degraded and the remaining good forests are concentrated in pockets of central, eastern and northeastern India. Most of India's forest land falls under government jurisdiction and has until recently been policed and managed largely by the forest department, with selected and highly restricted rights being granted to local users. Policing by the State involves high transactions costs and is often ineffective (Agarwal, 1986). The recent changes in State policy (as embodied in the JFM programme) represent a notable shift toward recognizing the importance of involving local communities for more effective forest management.

⁴ The government, however, retains the right to reclaim any forests seen to be mismanaged by the FUGs.

⁵ In Nepal, however, the involvement of expatriates employed by international donors has been more direct than in India.

Of the three types of CFGs described below, JFM groups are the most widespread, both geographically and in forest area covered, and, over time, the programme is expected to cover all states of India. Self-initiated autonomous groups are concentrated mainly in eastern India, and *van panchayats* in the UP hills.

3.1.1 The joint forest management programme

The basic idea behind this programme is to establish a partnership between the state forest department and village communities, with a sharing of responsibilities and benefits. Although the earliest such initiatives are noted to have been catalysed by two district forest officers in West Bengal in the early 1970s, these remained isolated cases until the late 1980s when there was rapid informal expansion. In 1989 a formal policy was approved by the West Bengal government following the proven success of forest protection by villagers in the noted districts (Poffenberger, 1990). Subsequently, on June 1, 1990, a central government circular spelt out the new national policy for involving village communities across the country to revive degraded forest lands.

To date, 19 states have passed JFM resolutions. The resolutions allow the participating villagers free access to most non-timber forest products and to 25-50 per cent (varying by state) of the mature timber when finally harvested. The resolutions broadly prescribe a two-tier organizational structure, consisting of a general body with members drawn from the whole village and an executive (or management) committee (henceforth called EC) of some 9-15 persons. Also prescribed are the eligibility rules for membership in the general body and EC. These rules vary by state. Some states allow general body membership to only one person per household, others to one man and one woman per household, a few to all village residents, and so on. The prescribed composition of the EC similarly varies: apart from a certain number of elected/selected village representatives, some states specify the inclusion of specific categories of persons, such as a panchayat representative and a forest department representative. In addition, most states now specify a minimum number of female members and some also require the inclusion of a low-caste or landless member. These membership rules for both the general body and the EC have also been changing over time, with important gender implications that are traced later.

Typically the general body meets once or twice a year and the EC meets about once a month. Both bodies, interactively, define the rules for forest use and

benefit sharing, the structure of fines for rule violation, the method of protection (e.g., guards, patrol groups, etc.), and so on.

3.1.2 *Self-initiated autonomous CFGs*

Parallel to and often prior to the JFM initiatives, numerous self-initiated CFGs have emerged especially in eastern India, catalysed by local leaders and sometimes supported by NGOs. Enormously diverse in form and structure, these CFGs are found mainly in areas where people are still strongly dependent on forests and have some tradition of community resource management. They are present in largest numbers in Bihar and Orissa and to a lesser extent in some other states, and are run variously by village councils, youth clubs, village elders, and so on. Over time, some of these groups have formally registered with the forest department, but most remain autonomous, without official standing but with tacit village approval to manage the forest, make rules, and punish offenders.

3.1.3 *Van panchayats*

Van panchayats or forest councils were established in the UP hills by the colonial government in the 1930s, in response to a long period of agitation by local communities against the government's curtailment of their rights to forest use. On the recommendation of a committee set up in 1921 to examine people's grievances, the forests were reclassified into two categories. Class I forests were those judged as having little commercial value but important as watersheds and as sources of fuel and fodder to local communities. These were placed under the revenue department. Class II forests were those containing commercially valuable timber species; these were placed under the forest department. In addition there were the 'civil forests'—forests that fell within village boundaries—which were informally managed by villagers but formally under the revenue department's control. *Van panchayats* were formed essentially from Class I and civil forests. In 1995 there were an estimated 4805 *van panchayats* covering about 0.24 m ha of forest area in eight districts of the UP hills (Saxena, 1995: 63).

Typically consisting of 5-9 members elected from the village (or villages) falling in their jurisdiction, the *van panchayats* are responsible for preventing encroachments and devising rules for forest use. They are also authorized to collect fees from users and levy fines on offenders (Ballabh and Singh, 1988). Most hire watchmen for protection. This management structure is subject to the administrative and technical control of the revenue and forest departments. Over the years, some *van panchayats* have continued functioning while others have become relatively inactive or ineffective. In

recent years a number of them have also been revived by local NGOs. In addition, some of the villages involved in the Chipko movement are doing regular protection work, including through the revival of *van panchayats* (Raju, 1997).

3.2 Nepal

Today Nepal has 5.5 m ha of forestland, constituting 38 per cent of the country's geo-area. In some interesting parallels with India, in Nepal too the 1990s marked a shift from an essentially topdown form of management to the devolution of control to village communities. The Forest Act of 1993, operationalized in 1995, allows the District Forest Officer to hand over forest management directly to those identified as forest users and constituted into a forest user group. Unlike India's JFM programme, the forest handed over in this way is not confined to degraded land nor does the FUG have to share benefits with the State. FUGs are meant to be self-governing institutions, legally allowed to use or sell the forest products (but timber exports are banned). The income generated from such sales, the fines collected, etc., is put into a community fund which can be used both for forest development and other community development needs (WATCH, 1997; Hobley, 1996).

As with JFM, structurally FUGs are general bodies which elect/select an executive committee of some 11-15 members. Membership is defined on a household basis, rather than on an individual basis (Seeley, 1996). The rules for forest use and punishments for abuse, the methods of protection and conflict resolution, etc., are all formulated interactively by the EC and the general body, as is also the case under JFM.

In both India and Nepal, therefore, which set of persons has a voice in the general body and the EC has a critical bearing on how well these organizations function, and who gains or loses from them.

IV OUTCOMES: PARTICIPATION, EQUITY AND EFFICIENCY

Many of the CFG initiatives have led to successful forest regeneration. Often all that is involved is restriction of entry and protection. In some cases, though, replanting is also undertaken in parts, usually with government support. Under JFM, for instance, the Indian government typically provides wages for nursery raising, pit digging and planting, and a forest guard's pay for three years. In many sites, however, simple protection has produced good

results. Natural revival is often rapid if the rootstock is intact. Many forest areas that I visited in the semi-arid parts of Gujarat and Madhya Pradesh had been so severely degraded by the late 1980s that they provided little other than twigs and monsoon grass. Within five to seven years of protection, following the JFM programme or efforts by NGO-catalysed CFGs, these tracts were covered with young trees. Many other areas where there was still some vegetation, but notably declining, also show encouraging signs of regeneration. In fact in most ecological zones, as a result of the CFG initiatives, beneficial results are noted, and in a number of cases incomes and employment are reported to have increased,⁶ seasonal outmigration fallen,⁷ and biodiversity enhanced.⁸

Some villages also report an improvement in the land's carrying capacity reflected in a notable rise in milch cattle numbers since protection began (Arul and Poffenberger, 1990). A number of JFM villages have even received awards for conservation (Shah and Shah, 1995; my field visits during 1998-9). Many *van panchayats* similarly report successful protection through community cooperation (Mansingh, 1991; Sharma and Sinha, 1993).

Viewed from a gender perspective (and especially the perspective of poor women), however, these results look less impressive on several important counts: effective participation; equity in the sharing of costs and benefits; and efficiency in functioning.

4.1 Participation

Women's effective participation in CFG decision-making would mean:

- being a member of the group: the general body, the EC, etc.;
- attending the general body or EC meetings (as relevant);
- speaking up in meetings;
- being able to influence decisions in their own interest (at least some of the time).

In addition, we need to take account of participation in specific activities that result from these decisions, e.g. in methods of forest protection, visits to other CFG sites, micro-planning and silvicultural training, and so on.

⁶ See Raju *et al.* (1993), Kant *et al.* (1991), and SPWD (1994) for documentation on the returns from community forest protection, in various regions.

⁷ See e.g. Viegas and Menon (1993) and Chopra and Gulati (1997).

⁸ Raju, *et al.* (1993); Arul and Poffenberger (1990); also my visits in 1995, and 1998-9.

Women's effective participation can be seen as important both in itself, as an indicator of citizenship and democratic institutional functioning, and for its effect on benefit sharing and efficiency. How far are women in general, and poor women in particular, involved in CFG functioning?

4.1.1 Participation in management

The typical pattern is of very low women's participation in the CFGs at all levels. Women usually constitute less than 10 per cent of the general bodies in most JFM groups;⁹ they are usually absent in the autonomous groups;¹⁰ and there are few or none in the *van panchayats*.¹¹ In a recent study of 50 *van panchayats*, only 9 had any women (Tata Energy Research Institute, 1995). In the FUGs of Nepal, again, women's presence in the general body is sparse. A study of seven FUGs in eastern Nepal found that only 3.5 per cent of those recorded as users in the FUGs were women (Dahal, 1994: 78).

TABLE 1 JFM RULES FOR GENERAL BODY MEMBERSHIP: INDIA¹

Membership conditions	States
One person per household	Arunachal Pradesh, ² Bihar, Jammu and Kashmir, Karnataka, Maharashtra, Rajasthan, Tripura, ³ Uttar Pradesh
One male and one female per household	Andhra Pradesh, Himachal Pradesh, Madhya Pradesh, Orissa, Tamil Nadu, West Bengal, ⁴ Kerala
All village adults	Haryana
Anyone interested	Gujarat
No clear representation of households	Punjab, Nagaland ⁵

Source: SPWD (1998), and personal communication in 1996 from Sushil Saigal (then on SPWD Staff) on Uttar Pradesh.

Notes: (1) In some states, the CFGs also take the form of cooperative societies. (2) Here the rule is one adult per family; and at least 30% of total registered members will need to be women. See discussion in text on the anomalous nature of this clause. (3) Only families which have at least one wage earner are eligible. (4) In West Bengal, if the husband is a member the wife automatically becomes a member. (5) Only land-owning households are eligible.

In India's JFM programme, 8 out of the 19 states allow membership to only one person per household (see Table 1). This is inevitably the male household

⁹ Roy *et al.* (1992), Guhathakurta and Bhatia (1992), Narain (1994), and my field interviews in 1998-9.

¹⁰ Kant *et al.* (1991), Singh and Kumar (1993), and my field interviews in 1998-9.

¹¹ Also, Ballabh and Singh (1988), Sharma and Sinha (1993), Tata Energy Research Institute (1995), and my field interviews in 1998-9.

head. In 7 other states, as a result of amendments in the initial orders, both spouses, or one man and one woman, can now be members, but this still excludes other household adults. Only two states allow general body membership to all village adults. In India's self-initiated autonomous groups, the customary exclusion of women from village decision-making bodies has been replicated in the CFGs. In Nepal's FUGs, again, the household is the unit of membership, and in male-headed households it is the man's name that is entered in the membership list (Seeley, 1996).

Without being general body members, women usually hear little about what transpires at the meetings. In fact this remains women's constant complaint:

Typically men don't tell their wives what happens in meetings. Even if there is a dispute about something, they don't tell us; nor do they volunteer information about other matters (women to author, Kheripada village, Gujarat, 1999).

The men seldom inform us of discussions in meetings. When we ask them they say: 'why do you want to know?' If we were members we would be better informed (women to author, Jamai village, Madhya Pradesh, 1999).

Earlier only men came to the general body, so women received no information about the meetings or what was being planned in them (women to author, Malwadi village, Karnataka, 1998).

Women's representation in ECs is also typically low, although there is some variation by context. A recent study of 20 CFGs in West Bengal (east India) found that 60 per cent had no women, and only 8 per cent out of the 180 EC members were women. Also landless families, while present in most general bodies, were barely represented in the ECs (Sarin, 1998: 49).

In most states, recent JFM resolutions require at least some female presence in the EC, varying from a minimum of 2 or 3 women to one-third women (Table 2), but in my field visits I found that many of the women so included do not play an active role. They are rarely chosen by other village women as their representatives. In fact, sometimes, male EC members choose the women in their absence and without consulting them.¹² Such women are seldom motivated to play an active role or able to make effective interventions.

¹² See also Raju (1997), who found that in a West Bengal village none of the 3 women nominated to the EC had been consulted. In one case a brother and in another the husband were attending meetings on the women's behalf and without their knowledge.

TABLE 2 JFM RULES FOR WOMEN'S REPRESENTATION
IN EXECUTIVE COMMITTEES: INDIA

Rules ¹	States
Minimum 1 woman	Punjab
Minimum 2 Women	Gujarat, ² Haryana, Himachal Pradesh, ³ Jammu and Kashmir, Karnataka, Madhya Pradesh, Maharashtra
Minimum 3 women	Kerala, Orissa
Minimum 3 women, maximum 5 women	Bihar, Tamil Nadu
One-third women	Andhra Pradesh, Uttar Pradesh ⁴
Unspecified	Arunachal Pradesh, Nagaland, Rajasthan, Tripura, West Bengal

Sources: Adapted from Sarin (1998: 73) and SPWD (1998).

Notes: (1) Total specified EC members vary: typical number 11-15 members.

(2) Specification is for minimum 2 women in the "working committee" for managing the JFM micro-plan, but effectively it is interpreted as minimum 2 women in the EC. (3) Out of a total of 9-12 EC members, 5 are village representatives, of whom 50% should be women. This works out to a minimum of 2-3 women in the whole EC. (4) One-third of elected members in the EC. In addition the EC will have nominated members.

In Nepal again, women have only a nominal presence in the ECs. For instance, more women get inducted where there are international donors (in the seven districts of the Nepal-UK project, most FUGs have 2 to 3 women out of 11-12 EC members),¹³ but many of these women are 'completely unaware of their FUG's activities' (Upadhyay and Jeddere-Fisher, 1998: 23); or 'have no idea that they were supposed to be participating as members of the executive committees' (Moffatt, 1998: 42). There is also an upper-caste domination in many FUGs (Dahal, 1994).

Whether from lack of awareness or due to the other reasons discussed in Section V, usually only a small percentage of the women who are members of the general body or the EC attend the meetings. If they do attend they rarely speak up, and if they speak they find their opinions are given little weight.

What is the point of going to meetings. We would only sit silently (women to author, Panasa Diha village, Orissa, 1998).

Men don't listen, expect perhaps one or two. Men feel they should be the spokespersons (woman to author, Garbe Kuna village, Kaski district, Nepal, 1998).

¹³ Upadhyay and Jeddere-Fisher (1998) and Upadhyay, *et al.* (1998).

I attend *van panchayat* meetings, but I only sign, I don't say much. Or I say I agree (woman *van panchayat* member to author, Sallarautela village, UP hills).

When we open our mouths, men shout us down (women in Harimari village, West Bengal, cited in Raju, 1997).

Having a voice in the EC is important since this is the site for discussions and decisions regarding many critical aspects of CFG functioning. The EC has considerable authority, even if some decisions have to be ratified later in the general body. Women's absence or lack of voice means that they are not party to many crucial decisions. In an analysis of JFM decision-making in 5 Gujarat villages at a workshop of 31 village representatives, it was found that all major decisions concerning forest protection, use, distribution of wood and grass, and future planning were taken by men. The only joint decisions with women were those concerning tree nurseries (Joshi, 1998). Women are also often left out of the CFG teams that are sent on 'exposure' visits to other sites, or that receive technical training in new silviculture practices.

Within this rather stark scenario, there are some contrasting examples of CFGs with a high proportion of women, but these are not typical. They include (i) an all-women CFG as the sole CFG in the village; (ii) an all-women CFG coexisting with an all-men one in the same village; and (iii) mixed CFGs with a high female presence.

All-women CFGs are found especially in the UP hills and parts of Nepal where there is high male outmigration, but a scattering of them have also emerged in regions where they have either been the first to stake a claim to the commons, or have been catalysed by a local NGO, a forest official, or an international donor.¹⁴ Cases where women have formed their own CFG, even while an all-male group exists, are rarer, although I came across a few in Orissa and Nepal. There are no consolidated figures for India, but Nepal is estimated to have 150 all-women FUGs (Moffat, 1998: 37). These constitute less than 3 per cent of all FUGs, and they typically receive very small plots of largely barren land needing tree planting, while the mixed (male-controlled) FUGs receive the natural forest. The all-women FUGs I met during my field visits, usually controlled 10 ha or less (and seldom over 50 ha) of forest land, while mixed FUGs commonly controlled a few hundred hectares (see Table 3 and Moffatt, 1998).

¹⁴ Mukerjee and Roy (1993), Correa (1997), Adhikari *et al.* (1991), Mansingh (1991), Regmi (1989), Singh and Burra, 1993), and Raju (1997); also my field visits in 1998-9.

Mixed groups with a high female presence can again be found in selected pockets. In parts of Gujarat, for instance, 30 per cent of the members in the general body are women, and their presence in the JFM ECs ranges between 14 per cent and 50 per cent (Narain, 1994). In some villages of West Bengal's Bankura district, women's presence in the general bodies is as much as 50-63 per cent (Viegas and Menon, 1993). Such examples, however, while providing important insights on what can be achieved (as analysed in Section VII of the paper), are as yet few and far between.

Of course, despite their limited presence as formal members in most CFGs, many women, in one way or another, still play an active role in the protection efforts.

4.1.2 Participation in protection

In formal terms, protection of the bounded forest area is usually done either by employing a guard, with the CFG members contributing toward the wage, or by forming a patrol group from among the members. Under JFM, if tree planting is undertaken, the forest department employs a guard for the first three years of the plantation's life, after which protection is the CFG's responsibility.

In terms of gender composition, the typical pattern is to keep a male guard and/or have an all-male patrol group. These two methods characterized 45 per cent and 18 per cent respectively of the 87 sites I visited, but occasionally, there were some interesting deviations. In Madhya Pradesh and Gujarat, for instance, I found several patrol groups constituted of both men and women. In the UP hills all-women patrols were not uncommon and some villages had even appointed female guards. Occasionally there have been shifts from an all-women patrolling effort to an all-male one, and vice versa. In one Gujarat village I visited, initial patrolling for many months was done by an all-women group. This could not be sustained, however, since women ended up with the triple burden of patrolling, housework and farm work, with men unwilling to take on any part of women's domestic workload. Finally the women handed over patrolling to the men.

More commonly, women patrol informally even while men are formally responsible. In some villages of Gujarat and the UP hills, women have formed separate informal protection groups parallel to men's because they feel male patrolling is ineffective. Elsewhere, they are the ones who have initiated protection.

Women's informal vigilance improves protection in important ways. In almost all the villages I visited women recounted cases where they had apprehended intruders, both from other villages and from their own. They also commonly state that if they catch women intruders they try and persuade them not to break the rules.

In fire fighting, likewise, women join the men. In several instances, women's alertness alone saved the forest, as in a village in Almora district (UP hills). Here the male chair of the EC had caused the fire either by accident (as he claims) or deliberately (as the women claim), and a vigilant woman leader almost single-handedly saved the protected area from substantial damage. In many fire-prone parts of Madhya Pradesh, Karnataka and the UP hills I was told both by the villagers and the forest department that the incidence of fires had declined due to greater vigilance by CFG members. The latter also have more incentive now to fight fires since they have legitimate access to the forest produce so saved.

On the one hand, therefore, most women are excluded from CFG membership and management. On the other hand, many women are contributing substantially to protection efforts, indicating their stake in forest regeneration. However, women's limited participation in decision-making, in turn, has implications for both equity and efficiency.

4.2 Equity

How equitable are the CFGs in the sharing of costs and benefits?

4.2.1 In cost bearing

The costs of forest protection are broadly of two types: those associated with protection and management and those associated with forgoing forest use due to closure. The former would include costs such as membership fees, the forest guard's pay, or the opportunity cost of patrolling time. The latter would include the opportunity cost of time spent in finding alternative sites for essential items such as firewood and fodder, other costs (identified below) associated with firewood shortages, the loss of certain forest-product-dependent livelihood sources, and so on. While the former costs are often borne by men, the substantial costs of searching for or dealing with shortages of items of daily use, or the loss of livelihoods dependent on the sale of non-timber forest products which women collect, fall largely on women.

Consider the effect on time taken and distance travelled for firewood collection. In many villages, women have been barred from collecting even

dry twigs. Where the land was barren anyway this caused no extra hardship. But where earlier they could fulfil at least a part of their needs from the protected area, they are now forced to travel to neighbouring sites, involving additional time, energy, and the risk of being treated as intruders.¹⁵

In the early years of JFM, Sarin (1995) had noted that in some protected sites in Gujarat and West Bengal, women's collection time for a headload of firewood had increased from 1-2 hours to 4-5 hours, and journeys of half a kilometre had lengthened to 8-9 (see Table 3). During my field visit to Gujarat's Sabarkantha district in 1995, several women said that they were not even allowed to walk through the protected area to the neighbouring one for fuelwood collection, on the grounds that they might break the rules. They were thus forced to skirt the area and spend several additional hours on their journeys. In Pingot village (Gujarat), Shah and Shah (1995) found that when protection began women were compelled to take their daughters along to help with collection, spending over six hours a day to walk five times farther, for the same quantity of fuelwood. Over time this could negatively affect the girls' education. Pingot women, when asked about the award for environmental conservation conferred on the village, expressed only resentment: 'What forest? We used to go [there] to pick fuelwood, but ever since the men have started protecting it they don't even allow us to look at it!' (Shah and Shah, 1995: 80).

The picture has not changed substantially since. In the 87 sites I visited in 1998-9, 45 (52 per cent) had banned firewood collection, of which 21 did not open the forest at all and 24 opened it for a few days per year for drywood collection and/or cutback and cleaning operating. The other sites allowed some drywood collection, usually only of fallen twigs and branches. However, even after years of protection, women reported a persistence of firewood shortages in most villages in Gujarat, the UP hills, Karnataka, parts of Madhya Pradesh bordering Gujarat, and in the Kaski and Dang districts of Nepal (Table 3 gives information for Gujarat and Nepal). The exceptions were some parts of Orissa, Karnataka and Madhya Pradesh with thicker forests, where protection had increased the firewood supply.

Women try to deal with this problem in various ways. Some seek out unprotected forests at the cost of greater time and distance travelled. Others, faced with the spread of CFG initiatives and the decline in unprotected forests

¹⁵ Sarin (1995), Agarwal (1997a), and Sundar (1997); also my field visits in 1998-9.

TABLE 3 IMPACT OF FOREST PROTECTION ON WOMEN'S EFFORTS TO PROCURE COOKING FUEL: INDIA & NEPAL

Situation in early 1990's: field visits by Madhu Sarin

State and village	Time/distance for gathering one headload of firewood		Frequency of Collection	Other impact
	Before protection	After protection		
West Bengal (Bankura South Division)				
1. Kamardanga	1.5 to 2 hrs	4 to 5 hrs	5 days/wk except monsoons	Partial switch to lantana, painful to collect.
2. Bhadli	0.5 km	4 to 5 km	N.A.	Have to 'steal' from other's forest, hefty fines if caught.
3. Barapaccha	1 to 2 hrs	3 to 4 hrs	Daily except Monsoons	
4. Karapara	0.5 km	8 to 9 kms	N.A.	Partial switch to leaves, dung, husk, weeds.
Gujarat (Panchmahals district)				
1. Vena	0.5 hrs	3 to 4 hrs	1 week/month	Harassment and abuse by FD staff and residents of other villages when women go to unprotected forest further away.
2. Chari	1 hr	4 to 5 hrs	Daily for one month/year	Abuse by residents of other villages; fear of being beaten by own men.
3. Malekpur ⁺ (Sabarkantha District)	1 to 2 hrs	Whole day	N.A.	Abuse by residents of other villages from whose forest women collect firewood.
South Bihar				
1. Saraiya (Palamau district)	N.A.	N.A.	N.A.	Switching to leaves, dung, lantana, arhar sticks, some purchasing firewood.
2. Ramua (Hazaribagh district)	N.A.	N.A.	N.A.	Switched to leaves, lantana, dung, thorny bushes, some buying coal.
3. Banaso (Hazaribagh district)	N.A.	N.A.	N.A.	Switched to dung, weeds.

table continues...

Situation in 1998-99: field visits by Bina Agarwal

State and Village	Protected Area (ha)	Firewood Availability and Women's Responses
Gujarat (Sabarkantha, Bharuch, Surat, and Panchmahals Districts)		
V1	190	Women report severe firewood shortage; switch to bushes, tur sticks, other agricultural waste. Many in the village have changed their cropping pattern in favour of tur and castor to get more agricultural waste for fuel
V2	141	Women report firewood shortage; partial switch to tur sticks, biogas and kerosene
V3	253	Women report firewood shortage; partial switch to tur sticks, kerosene, dung cakes
V4	304	Women report firewood shortage; partial switch to kerosene, dung cakes
V5	n.i.	Women report firewood shortage; steal from another forest
V6	5*	Women report firewood shortage.; many steal from another forest and report paying fines when caught by the guard
V7	47	Women report firewood shortage. Many steal from another forest, sometimes lose their axe and pay fine if caught by the guard
V8	115	No information
V9	35	Women report firewood shortage; partial switch to agricultural waste and dung cakes
V10	60	Women report firewood shortage; partial switch to agricultural waste and dung cakes
V11	40	Women report firewood shortage; partial switch to dung cakes
V12	300	Women report firewood shortage; partial switch to agricultural waste and biogas
V13	172	Women report firewood shortage, especially among the poor
V14	1500	Women report firewood shortage; partial switch to dung cakes and agricultural waste. Also distance travelled for a headload of firewood reported to have increased from 1 km before protection to 5.7 km after protection. Landless face acute shortage
V15	n.i.	Women report firewood shortage. Some have switched to biogas and kerosene, but most also use agricultural waste. Distance travelled reported to have increased from 1 km to 5 km daily after protection started
V16	n.i.	Women report serious firewood shortage for at least 4-5 months; partial switch to agricultural waste and kerosene

table continues...

V17	179.27	Women report firewood shortage. There has been an increase in the time taken for firewood collection since protection started. Partial switch to tur sticks and dung cakes
V18	30*	Women report serious firewood shortage; partial switch to tur sticks and dung cakes
V19	n.i.	Prior to protection there was a severe shortages.; women report there is no shortage now
Nepal (Kaski and Dang Districts)		
CF1	2.5*	No information
CF2	24.8	Women report acute firewood shortage. They do not light a fire for space heating in winter; spend more time in cooking to save wood; steal firewood.
CF3	156.4	Women report firewood shortage, especially among the poor. Poor women steal at night
CF4	19	Women report acute firewood shortage. Stealing is common
CF5	n.i.	The better-off have switched to biogas plants and stoves. The poor face acute shortage, use small twigs
CF6	75	No information
CF7	5.62*	Women report firewood shortage; partial switch to gas, some buy firewood
CF8	5.5*	Women report severe firewood shortage. Switch to twigs, dung cakes. No longer heat bath water or animal feed in winter
CF9	257	Women report acute firewood shortage. Switch to dry straw and dung cakes. No longer heat bath water or animal feed in winter
CF10	1.75	No information
CF11	10.8	No information
CF12	28.4	The very poor who were dependent on firewood for sale now steal at night. They do not have enough even for food
CF13	n.i.	Women report firewood shortage. Stealing firewood is common.
CF14	n.i.	Women report firewood shortage. The poor steal, even though they are often caught and have to pay a heavy fine.

Sources: Adapted from Sarin (1995), Bina Agarwal fieldwork, 1998-1999.

+ Situation in the first two years of protection; some subsequent improvement due to cutback operations and distribution of firewood among villages, after women and the local NGO brought this to the CFGs attention. * All-women CFGs.

in their neighbourhood, feel compelled to enter protected tracts in nearby villages, or go to the government reserve forest (if there is one within walking distance), facing the risk of being caught and fined by a patrol group or guard. Some common responses are given below:

We go in the morning and only return in the evening. Since the end of the rainy season, we have been going every day. I go myself and so does my daughter. Earlier too there was a shortage but not as acute (woman EC member to author, Kangod village, Karnataka, 1998).

It is women who need the forest, they need firewood to cook. ... Men preach to women about not cutting trees, but what can women do? They cannot cook food without firewood and they cannot collect firewood from other places (group discussion with women in Kabhre Palanchok, Nepal, cited in Hobley, 1996: 147).

Where possible women try and find substitute fuels. If the household can afford biogas this shift is a desirable one, but I found only a few villages (mostly in the UP hills) where small-sized biogas plants promoted by a local NGO were functioning well. In most regions women have been forced to use twigs, dung cakes, agricultural waste, even dry leaves. Fire from these fuels needs careful tending which increases cooking time and prevents women from simultaneously attending to other work. In a number of villages women report having to economize on fuel by forgoing a winter fire for space heating (even in the subzero temperatures of the Nepal hills), not heating winter bath water or heating it only for husbands, giving the animals cold feed, and so on. Moreover, dung used as fuel means its loss as manure.

Usually women from both middle and poor peasant households report such domestic energy problems, since even in better-off households firewood is gathered and not purchased, and most do not have many trees on their private lands. Women of landless or landpoor households are, however, the worst off, since without any private land they also have no crop waste or trees of their own, and few cattle for dung.¹⁶ In fact, forest closure has necessitated most to

¹⁶ Jodha's (1986) study of 12 semi-arid districts in seven Indian states in the early 1980s is indicative of these class differences, even though he did not do a gender analysis. He found that village commons accounted for 9-26 per cent of total income among poor rural households but only 1-4 per cent among the non-poor. The landless and landpoor, as noted earlier, also satisfied most of their firewood and grazing needs from communal resources, compared with the greater self-sufficiency (from private land) of landed households.

sell off much of their animal stock. Women voice the problem they face in various ways:

We don't know in the morning if we will be able to cook at night (low-caste women to the author, Khut village, UP hills, 1998).

Our bahu (daughters-in-law) have to undertake a full day's journey to get a basket of grass and some firewood from the Reserve Forest (woman to author, Khut village, UP hills, 1998).

But even in the reserve forest you can be caught by the forest guard. I paid Rs 20 as fine to retrieve my axe, and all I was doing was cutting a fallen log (women to author, Khut village, UP hills, 1998).

Poor women, in particular, have a firewood problem due to forest closure. Lohars (blacksmiths) have a problem getting wood for charcoal. The poor find it difficult to even pay a fine. They steal clandestinely at night (woman to author, Paundur village, Kaski district, Nepal).

Where there is a total ban, the women (be they from better-off or poor households) all want their forest opened for at least a few days. Where it is already opened for 1-2 days, they want an increase in the number of days. Most also want the village to deliberate on the issue and find a solution, rather than treat it as only women's concern.

Similarly, grazing is usually banned. Fodder therefore has to be procured in other ways and animals have to be stallfed. Again since cattlerearing is usually women's responsibility, if the household cannot afford to purchase fodder women have to spend additional time in finding other sites as well as in feeding the animals. In parts of Gujarat, women report an extra workload of 2-3 hours due to stallfeeding. And where some of the better-off households have replaced their goats with stallfed milch cattle, it has further increased women's work burden. At the same time, many poor households have lost the bulk of their animals, including the goats that were often the only assets the women possessed.

As the forest regenerates, these hardships get alleviated at best, they do not disappear. Firewood shortages, for instance, continue to be reported even 8-10 years after protection in many regions. In every Gujarat village I visited except one, women reported shortages, even when the area being protected was large (Table 3). In nine of these Gujarat sites the protected area exceeds a hundred hectares. One seven-village cluster protects 1500 ha of relatively

thick forest. By one estimate, some Gujarat villages have several times the per capita forest land needed for self-sufficiency in fuel and some other basic needs (Shah, 1997). Even allowing for overestimation, it appears likely that more can be extracted sustainably than is currently being allowed. In many places, therefore, the scarcities that women are experiencing appear to have less to do with aggregate availability than with a lack of systematic assessment of extractable potential and women's limited bargaining power in the community (as discussed in Section VI).

4.2.2 *In benefit sharing*

Gender inequities also lie in the sharing of benefits. First, in some cases the benefits are not distributed at all. Among the self-initiated autonomous groups in Orissa, for example, a number of all-male youth clubs have banned entry into the local forest and have been selling the wood obtained from thinning and cleaning operations, as well as selling other forest produce from the protected sites. The quite substantial funds so obtained have often been spent on a clubhouse or club functions (Singh and Kumar, 1993), or for the annual religious festival (my field interviews, 1998). Many women respond to this male control with resentment: 'Earlier it was the forest department which controlled the forest, now it is the youth clubs' (Singh and Kumar, 1993: 23).

In other types of CFGs also, normally the money is put in a collective fund to be used as the group deems fit. Women typically have little say in how it is used:

The community forest belongs to the men. We own nothing. Even the grass is auctioned off (woman to author, Ghusra village, Dang district, Nepal, 1998).

The money obtained from grass and firewood is kept by them in their fund. We have not seen one penny of it. We buy grass, which is auctioned by bundles (women to author, Ghusra village, Dang district, Nepal, 1998).

Second, where the CFGs distribute the benefits, say in the form of firewood or grass, as in some of the JFM groups, women of non-member households usually receive none, since entitlements are typically linked to membership. Often these are poor households whose members have to migrate out for work, or are out all day on wage labour and cannot easily contribute toward patrolling or the guard's wages.

Third, even in member households usually men alone receive the benefits directly, either because only they are members, or because entitlements are on a household basis, so that even if both spouses are members they get only one share, which the man receives. Of course women could benefit indirectly in some degree, say if the benefits are in kind (such as firewood); or where degradation is not acute and member households continue to enjoy the right to collect drywood or leaves from the protected area.¹⁷ But where the CFGs distribute cash benefits, money given to men does not guarantee equal sharing, or even any sharing, within the family. In fact, outside the context of forest management there is substantial evidence of men in poor households spending a significant percentage of their incomes on personal items (tobacco, liquor, etc.), with women spending almost all their incomes on basic household needs.¹⁸ Not surprisingly, this pattern is repeated in the context of CFGs. In many cases, the men have spent the money on gambling, liquor, or personal items.¹⁹ Both women and men readily admit this:

When women go to the market, they save at least some of the money and bring it back. When men go, they drink up whatever is left. Women are more concerned with home needs, children's needs (wife of EC chairperson to author, Devjhuri village, Madhya Pradesh, 1999).

That is true, women do manage to save a little. We men drink, smoke and spend (EC chairman to author, Devjhuri village, Madhya Pradesh, 1999).

If a man gets money he uses it up. Men can't keep money in hand, they tend to drink it away (man to author at a group meeting of several villages at the Society for Environmental Education and Rural Development, UP hills, 1998).

Women themselves are usually well aware that they could be excluded from the benefits unless they receive a share directly (rather than mediated through male members). When asked about benefit sharing in a meeting of three JFM villages of West Bengal in which both women and men were present, all the women wanted equal and separate shares for husbands and wives (Sarin, 1995). Being members in their own right could be one way by which women

¹⁷ For Orissa, see Pati *et al.* (1993), Kant *et al.* (1991) and ISO/Swedforest (1993); for Gujarat see Arul and Poffenberger (1990); also observed on my field visits in 1998-9.

¹⁸ See, e.g., Mencher (1988) and Noponen (1991) for India. See also, Blumberg (1991) for some other countries.

¹⁹ Guhathakurta and Bhatia (1992), and my field visits in 1998-9.

could get such benefits directly, provided that the individual and not the household is the unit of benefit sharing.

Direct membership to a CFG is also sometimes linked to additional financial benefits. For instance, in some Gujarat villages, a part of the daily wage earnings from tree planting go into a savings fund. Where women are not members, the savings go into a family account (which the men effectively control). In contrast, in a few initiatives where female membership is high, savings go into separate accounts for women and men, and women can make their own decisions on how to spend this money.²⁰

Fourth, inequities arise because people differ in their needs, or in their ability to contribute or to pay. Broadly, three types of principles/norms can underlie the distribution of forest products: market-determined, contribution, and need. While seemingly neutral, these distributive principles have notable gender and class implications. The market principle (or willingness to pay), embodied in practices such as the auctioning of grass to the highest bidder, tends to be both unequal *and* inequitable, since those that cannot afford to pay have to do without, even if they have contributed to protection either directly (say by joint patrolling), or indirectly by deferring forest use. Since rural women, even of rich households, tend to have less access to financial resources than men, market-determined distribution through auctions tends to be both anti-poor and anti-women. Distribution according to contribution, say, by giving each household that contributes to protection an equal number of grass bundles, would be equal but inequitable for those more dependent on the commons for grass, such as the poorer households and women in general. Moreover, women's ability to contribute could be circumscribed, since even if they want to join patrol duty, norms of seclusion may prevent them. Where distribution embodies some concept of economic need, such as where poor women are given exclusive use rights to a special grass patch, in addition to the grass bundles as above, the distribution is unequal but relatively more equitable, in that those most in need get more.

In my field interviews I found that contribution was the most common criteria underlying distribution. In most villages, all those who were CFG members and had contributed toward protection had equal claims to the fuelwood or grass cut during the forest opening days. There were, however, occasional cases of auctioning in some villages, such as the auctioning of grass in the UP hills and Nepal, and of other forest produce among some of the self-initiated groups in Orissa. Seldom was distribution guided by a person's economic

²⁰ Personal communication, NGO project officer in Gujarat, March 1995.

need. Hence for poor women, in particular, even with an equal distribution of grass or firewood, the outcome tended to prove inequitable.

In recent collective action literature, questions of equity have been raised largely in terms of whether existing economic and social equality (or its lack) affects the possibility of collective action and efficient institutional functioning.²¹ There has been a relative neglect of whether or not the *outcomes* of collective action (in terms of, say, cost and benefit sharing) are equitable, and how those outcomes impinge on the sustainability of collective action. As argued above, equitable outcomes need to be seen as important in themselves, for evaluating institutions governing the commons, quite apart from the links between equity and efficiency (as between participation and efficiency) that are elaborated below.

4.3 Efficiency

Women's lack of participation in CFG decision-making, and gender inequities in the sharing of costs and benefits from protection, can have a range of inefficiency implications. As a result, some initiatives may fail to take off at all. Others may not sustain in the long run, or there may be a gap between the gains in efficiency realized and those realizable (in terms of resource productivity and diversity, satisfying household needs, enhancing incomes, etc.). These inefficiencies could arise from one or more of the following problems (see also, Agarwal, forthcoming).

First, there are rule violations. In almost all the villages I visited there were at least some cases of violation. Violations by men are usually for timber for self-use or for sale (the latter in areas with commercially valuable trees). Violations by women (especially but not only by the poorer ones) are typically for firewood. In a detailed examination of rule violations in Bargatola village (UP hills), where the forest is used essentially for village needs, Agrawal (1999) found that women constituted 81 per cent, 83 per cent and 73 per cent of the reported offenders in 1951, 1971 and 1991 respectively. Although he does not cross-classify offenders by gender and caste, his separate table of offenders by caste allows us to infer that the majority of offenders were low-caste women who also tend to be among the poorest. Agrawal suggests that this may be not only because the poor are more

²¹ See, e.g., Ostrom (1990), Bardhan (1993), Seabright (1997), and Baland and Platteau's (1996) review of diverse empirical evidence on this.

dependent on the forests, but also because the high-caste-dominated forest council applies the rules more strictly to poor, low-caste women.

Of course, such rule violations by women can be from both within a village and outside it, but in either case, it indicates that CFGs in the area have paid inadequate attention to domestic fuel shortages. In addition, within-village violations reflect problems arising from women's non-involvement in rule making. In particular, where an EC totally bans collection without consulting the women or addressing the difficulties they face, they are often compelled to break the rules, given their daily need for firewood. Sometimes the need is acute enough for the women to enter into altercations with the guard. In one Gujarat village, due to daily fights with women, the guard threatened to resign. Only then did the EC call a meeting of the whole village to address the issue and agree to open up the forest for a few days annually. In parts of Orissa, women found the rule of total closure so strict, and the all-male CFG so inflexible, that they finally took up a separate patch to protect and manage. In other regions, with greater scarcity of common land, women lack this option. In general, they express deep resentment at the unfairness of the existing rules.²²

If consulted or given a chance to frame alternative rules, women often suggest rules which are less stringent and more egalitarian. For instance, I found that women were consistently against auctioning of forest products such as grass and firewood and favoured equal distribution among member households.

As the women in the UP hills reasoned:

The male members of the forest committee have difficulties implementing the rules. Women could discuss these problems with the men. Perhaps more 'mid-way' rules would be, in the long run, more effective... more viable (women, UP hills, cited in Britt, 1993: 148).

A second and related source of inefficiency lies in the absence of adequate information sharing with women. Information about the rules (especially membership rules), or about other aspects of forest management, does not always reach the women. Similarly, male forest officials seldom consult the women or seek their feedback when preparing micro-plans for forest development. Some women hear about the plans through their husbands, others not at all (Guhathakurta and Bhatia, 1992). These communication

²² Shah and Shah (1995), Singh and Kumar (1993), and Agarwal (1997a); also my field interviews during 1998-9.

problems can prove particularly acute in regions of high male outmigration. In some cases, men admit that women's presence in meetings would help them better understand the problems women face, but in practice they do little to encourage their participation.

Third, inefficiencies can arise if the male guard or patrol group fails to accurately notice resource depletion. For example, men and women can differ in their abilities to assess the state of the forest. According to women interviewed by Britt (1993: 143) in the *van panchayat* areas (UP hills): 'The men don't seem to realize where fodder and fuelwood come from'. During my 1995 field visit to Gujarat, women's informal forest patrol group in Machipada village took me to their patrol site, and pointing out the illegal cuttings which the men had missed, noted: 'Men don't check carefully for illegal cuttings. Women keep a more careful lookout'. Part of this gender difference arises from the fact that women, as the main and most frequent collectors of forest products, have a greater familiarity with the forest than do men.

Fourth, and relatedly, there are inefficiencies due to problems in catching transgressors. Where protection is only through 'informal lookout', women, given their frequency of daytime contact with the forest, are more likely than men to spot transgressors from their village or intruders from neighbouring ones. But even where there are formal patrol groups I found that in virtually all the regions I visited, patrols constituted of only men as well as those constituted of only women faced problems. For instance, all-male patrols are unable to deal effectively with women intruders, because the men risk being charged with sexual harassment or molestation. In fact threats to this effect are not uncommon, when non-member women or women from other villages are caught by a male patrol or male guards. In some of these incidents, women and their families have even registered false police cases against the patrol members, or beaten them up.

Equally, however, women on their own find it difficult to do night patrolling, or to confront aggressive male intruders, or to assert authority over them, especially those from other villages. In one Madhya Pradesh village, some members of an all-women patrol were badly beaten up by a male intruder. Also, adding sole responsibility for patrolling to their other domestic duties places excessive burdens on them.

By all accounts, the most efficient solution appears to be a patrol team constituted of both men and women. Recognizing this, in some regions male

patrollers have inducted their village women into the patrol, but this is not a typical response.

When women voluntarily take up patrolling by setting up informal groups, even where there is a male guard or a formal male patrol, the efficiency of protection can improve notably. In their study of twelve *van panchayats*, Sharma and Sinha (1993) found that all the four which could be deemed 'robust' and successful had active women's associations. However, in so far as such women's groups are typically informal, they lack the authority to punish offenders who still have to be reported to the formal (typically all-male) committees. Indeed women are often used by men's groups as mere informers (Chen, 1993), and are seldom party to discussions or decisions on appropriate sanctions. This separation of authority and responsibility introduces inefficiencies in functioning. For instance, sometimes, the culprits women catch go unpunished because the male EC members fail to take the case up, causing the discouraged women to abandon their efforts. I found several such cases in Karnataka, Gujarat and the UP hills.

Fifth, and relatedly, efficient functioning requires effective methods of conflict resolution. This can prove difficult with women's virtual exclusion from the formal committees, especially when the conflict involves women, as is not infrequently the case in firewood related intrusions.

A sixth form of inefficiency stems from taking little account of women's knowledge of plants and species when preparing plans for forest regeneration. Women and men are often privy to different types of knowledge due to differences in the tasks they perform, and in their spatial domains. For instance, women as the main fuel and fodder collectors can often better explain the attributes of trees than men (Pandey, 1990); or can identify a large number of trees, shrubs and grasses in the vicinity of fields and pastures (Chen, 1993). Men are often better informed about species found in distant areas, women about the local environment where they gather and collect (Gaul, 1994). The systematic exclusion of women from decision-making and management of new planting programmes is thus likely to have negative efficiency implications, by failing to tap women's knowledge of diverse species for enhancing biodiversity, or their understanding of traditional silvicultural practices when planting species they are better informed about.

A seventh form of inefficiency can arise from ignoring possible gender differences in preferences, say regarding when grass should be cut or which trees should be planted. I found that in the rare cases when women were consulted, they often came up with alternative, more suitable, suggestions on

when the forest should be opened for grass collection. Women are also known to usually prefer trees which have more domestic use value (such as for fuel and fodder), while men more typically opt for trees that bring in cash.²³ This might be less of an issue where fuel and fodder are not in short supply, in which case women too might prefer commercial species (Chen, 1993), but where there are shortages, women tend to prefer use-related species. Their greater involvement in forest planning could thus better fulfil household needs and increase commitment to the initiative.

Basically, the above analysis indicates that in ignoring gender concerns the CFGs are violating many of the conditions deemed by several scholars as necessary for building enduring institutions for managing common pool resources. This includes conditions such as: ensuring that those affected by the rules participate in framing and modifying the rules; that the rules are simple and fair; that there are graduated and appropriate sanctions against offenders; that there are effective mechanisms for monitoring the resource and resolving conflicts; and so on.²⁴

Despite women's low involvement, forest regeneration might take place, but some of the initiatives might not sustain, and others might reap less than the full potential benefits of the effort.

V WHAT DETERMINES OUTCOMES?

The gender-related efficiency effects discussed above are in large part *secondary* outcomes, stemming from women's little participation in the CFGs and from inequities in the rules of forest use, benefit sharing, etc. Efficiency outcomes will not therefore be discussed separately below. Rather, I will focus on what underlies women's low participation and the inequities in cost and benefit sharing.

In broad terms, CFG outcomes in relation to participation and the distribution of costs and benefits can be seen to depend especially on the following factors: rules, norms, perceptions, the person's household endowments and attributes (class/caste), and the person's individual endowments and attributes. However, the types of rules, norms and perceptions that affect participation

²³ See, e.g. Agarwal (1992), Brara (1987), Sundar (1997), and Hobley (1996).

²⁴ For a discussion on these conditions, see especially in Ostrom (1990), Baland and Platteau (1996), and McKean (1992). See also, Agarwal (forthcoming).

are not identical to those that affect equity of distribution, and therefore need to be spelt out separately.

More specifically we would expect women's participation in the CFG decision-making process to be a function of:

- Rules of entry: the criteria defining membership in the general body and the EC.
- Social norms that define who should attend meetings, speak up in meetings, patrol the protected area; how men and women should behave in public, and so on.
- Social perceptions regarding women's ability to contribute to meetings, or to CFG activities such as patrolling; women's knowledge about plants and species; and so on.
- Entrenched territorial claims.
- Personal endowments and attributes (such as, educational levels, property status, marital status, age, etc.).
- Household endowments and attributes (such as, the class and caste of women's households).

Gender equity in cost sharing is likely to be a function especially of social norms governing the gender division of labour which determines who does what (e.g. who is responsible for patrolling or for firewood and fodder collection, and so on).

Gender equity in benefit sharing is likely to depend on:

- Rules regarding entitlements to benefits (e.g. members vs. non-members; joint vs. individual shares for male and female members, etc.).
- Social norms and values that govern the principle of resource distribution (e.g. market determined, contribution, or need).
- Social norms that determine the gender division of resources within the home.
- Social perceptions about women's deservedness.
- Personal endowments and attributes.
- Household endowments and attributes.

Let me elaborate.

5.1 Factors affecting women's participation

5.1.1 Formal rules and conventions regarding CFG entry

In the case of State-initiated CFGs, such as the JFM groups in India or the FUGs in Nepal, formal rules determine entry into the CFG's general body or EC. As noted earlier, where the rule allows general body membership to only one person per household, it is typically the male household head that joins. Rules that allow one man and one woman per household to join are more conducive to women's participation, but they still leave out other household adults. Only where all village adults can join is the rule truly inclusive. Similarly, the composition of the EC is usually specified, as outlined earlier.

The specific of rules apart, a lack of awareness about rules, or about changes therein, can also constrain women's participation. In West Bengal, for instance, a random sample of 19 CFGs showed that even four years after the state order was amended, such that if a man is a member his wife is automatically a member, barely 2/5ths of the members were aware that women could be so included (Sarin, 1998; Raju, 1997). In Nepal again, women in male-headed households were often found to be unaware of their FUG eligibility (Seeley, 1996).

Where the CFG does not have formal membership rules, as is the case with self-initiated groups, long-standing conventions, which traditionally excluded women from public decision-making forums, also deny women entry to the CFGs.

5.1.2 Social norms

Even when the rules of entry are not restrictive, women seldom attend meetings or speak up at them, due to a range of restrictive social norms, such as those described below.

Gender segregation of public space: social norms often dictate a gender segregation of public space. In general, village spaces in which men congregate (such as tea stalls and the market place) are spaces that women of 'good character' are expected to avoid (as elaborated in Agarwal, 1994). The restriction is somewhat less for older women, but never entirely absent. These notions are often carried over to formal village meetings. A fear of losing their reputation, or being reprimanded by their families, or because they have internalized these norms, make many women uncomfortable attending CFG meetings, unless explicitly invited by the men:

They don't call us, so we don't go (women to author, Roopakheda village, Madhya Pradesh, 1999).

The meetings are considered for men only. Women are never called. The men attend and their opinions or consent are taken as representative of the whole family—it's understood (woman in a *van panchayat* village, UP hills, cited in Britt, 1993: 148).

Rural women and men can't sit together. But we convey our decisions to them (man to author, Chattipur village, Orissa, 1998).

The gender division of labour: social norms also define the gender division of labour. The fact that women bear the main responsibility of childcare and housework, in addition to the load of agricultural work, cattle care, etc., makes for high double work burdens and logistical constraints. This seriously restricts women's ability to attend lengthy meetings held at inconvenient times:

There are problems in attending meetings since we need to cook and serve the evening meal. The meeting is long. We also have to feed the cattle (woman to author, Barde village, Karnataka, 1998).

Women have a lot of problems. They can cut grass quickly, but who will give grass to the buffaloes if we come to a meeting? Women's work is a constraint (Arti Shrestha, grassroots organizer, to author, Kaski district, Nepal, 1998).²⁵

I do try and come sometimes, but I have small children (woman to author, Amapur Kaw village, Dang district, Nepal, 1998).

Men are reluctant to share responsibility not just for domestic tasks and childcare, but even for cattle care. Most women in the *van panchayat* villages she studied told Mansingh (1991) that they did not have time to 'sit around for [the] four hours that it took to have a meeting in the middle of the day'. As a result women's attendance tended to thin out over time. In Katuual village (UP hills), Britt (1993) found that the only woman member had yet to attend a meeting, even several months after being elected to the *van panchayat*.

²⁵ She is also the chairperson, at the district-level, of HIMAWANTI (Himalayan Grassroots Women's Natural Resources Management Association)—a regional women's network for natural resource management headquartered in Kathmandu, Nepal.

However, she was interested in going and had requested that meetings be held on Sundays when other family members were home, leaving her free to go.

Male behavioural norms: women also hesitate to come to CFG meetings because they fear aggressive male behaviour:

If men drink and say something to us, we don't like it. They fight with us, so we don't go to the meetings (women to author, Khabji village, Gujarat, 1999).

Men drink a great deal here... they drink and start abusing us... If one woman is abused, ten men stand up and agree with the abuser saying, yes, she deserves this (women to author, Deolikhal village, UP hills, 1998).

Female behavioural norms: the social strictures on women's visibility, mobility, and behaviour, whether internalized by women or imposed on them by threat of gossip, reprimand, even violence, impinge directly on their autonomy and ability to participate effectively in CFGs dominated by men.²⁶

Female seclusion norms are the most restricting. Although a large majority of the CFGs involve tribal or hill communities where female seclusion is not dominant and women's participation in economic activities is visibly high, some tribal groups have adopted upper-caste Hindu norms and are practising partial veiling, as I found in parts of Gujarat and Madhya Pradesh.

Even more pervasive, however, is the subtle gendering of social behaviour. Vatuk (1982:7) provides a graphic description of acceptable feminine behaviour in northern India, some aspects of which are still adhered to by women in the villages I visited:

'Shyness' of demeanor, avoidance of eye-contact with men, avoidance of loud speech and laughter (particularly in the presence or within earshot of males)... gestures such as rising (or crouching on the floor) in the presence of male visitors or family members...

Indeed 'shyness' was a common reason given by both men and women for women not attending meetings or speaking up.

²⁶ See also Stewart's (1996) more general discussion on the function of norms in hierarchical contexts.

Gendered behavioural norms also restrict women by creating subtle hierarchies, such as requiring women to sit on the floor while husbands and older village men sit at a higher level on cots or chairs. Even where everyone sits on a level, typically women (including EC members) sit on one side or at the back of the meeting space where they are less visible. This makes them less effective in raising a point, while the points raised by male members who sit in front receive priority. Moreover, when senior male family members are present, women hesitate to come to meetings, or to speak up at them, or to oppose the men publicly. The hierarchy that marks 'respectful' behaviour in the family gets carried over into community spaces as well.²⁷

The collective action literature has typically emphasized the enabling and positive side of social norms; but from women's viewpoint, these examples reflect the disabling 'dark side' of many social norms.²⁸

5.1.3 Gendered perceptions

Men often view women's involvement in CFGs as serving no useful purpose and tend to downplay their potential contributions and abilities. This is reflected in both unspoken and spoken responses. For instance, during my field interviews I often found, when talking to a mixed group of women and men, that while men were answering questions, women would listen attentively and keep the children quiet. But when I asked women some questions, the men (especially the younger ones) would start to smile, implying: 'Why ask her, what does she know'. When I persisted, they would show their lack of interest by chatting among themselves, constantly interrupting the women who spoke up, answering the questions on women's behalf, or just getting up and leaving.

Some of men's direct responses to questions are equally indicative of their perceptions:

There is no advantage in having women in the EC. We have been told by the forest officials that we must have two women in the committee, that is why we have included them (male to author, Pathari village, Karnataka).

Women can't make any helpful suggestions. Also it would mean 'beizzati' [dishonour] for us men, since men from respectable [upper-caste]

²⁷ See also, Raju (1997), and Hobley (1990).

²⁸ Also see Putzel (1997) for an interesting discussion on the 'dark side' of social capital.

families don't allow their women to go to meetings (man to author, Arjunpur village, Orissa, 1998).

Women are illiterate. If they come to meetings, we men might as well stay at home (EC chairman to author, Ghusra village, Dang district, Nepal, 1998).

In one case I asked the man who decried my paying attention to the women, whether he himself was literate. It turned out that he wasn't.

5.1.4 Entrenched territorial claims

Where CFGs have initially started out with only male members, or where men feel they have a prior claim to the land, they resist sharing their existing benefits with new claimants.

We men go [to meetings]. Why do women need to go? Women don't need to go (men to author, Garbhe Kuna village, Kaski district, Nepal).

Women have DWARCA,²⁹ they have a savings groups, why don't you leave the CFGs to us men? (man to author, Banasur village, Karnataka, 1998).

In an Orissa village, when I asked the women who wanted to take up their own separate patch for protection why they needed to do so, they responded:

If we have our own forest, we would not need to ask the men each time for a bit of wood (women to author, Kudamunda village, Orissa, 1998).

They are not willing to give us even a patch to protect. Why would they be willing to give us a whole tree if we asked? (women to author, Kudamunda village, Orissa, 1998).

Elsewhere, in the UP hills, women from Bitholi village told me that when they closed off a patch of land which earlier had open grazing, the men said: 'What right do you have to take over men's work,' and insisted on getting the grazing reopened.³⁰

²⁹ DWACRA: Development of Women and Children in Rural Areas. This is an anti-poverty programme of the Indian government under which, among other things, women's groups are given subsidized loans for income-generating activities.

³⁰ Communication by the women at a meeting organized by the Society for Environmental Education and Rural Development, UP hills, 1998.

5.1.5 Personal endowments and attributes

Women's effectiveness in public forums is also undermined by illiteracy and limited experience in public interaction (my field observation, 1998-9). While many male members too are illiterate, on average women's literacy levels are significantly lower, and (as noted) this is often used by the men as an excuse to exclude women or to discount their views. The fact that women typically lack personal property can also affect the weight their opinions carry.

In addition, women's personal attributes, such as age and marital status, leadership qualities, self-confidence and ability to speak effectively in public, etc., affects their participation. In many of West Bengal's CFGs, Narain (1994) found that the few women members were mostly widows. Sharma *et al.* (1987) made the same observation regarding many of the women who took an active part in the Chipko movement on a sustained basis. Likewise, district-level women representatives of FECOFUN (the Federation of Community Forest Users in Nepal), are mostly older married women living in their parental homes (Britt, 1997). Such women, as also single women, can speak more freely in public and usually carry a lower burden of domestic work than do young married women.

5.1.6 Household endowments and attributes

Finally, the class and caste position of a woman's household is likely to matter, where the village is multi-caste with a dominance of the upper-caste, or where the CFG contains several villages which might be caste/class homogeneous in themselves, but which hierarchically differ in this respect from other villages in the CFG.³¹

The caste factor, however, need not work in a linear fashion. On the one hand, being low-caste and poor can adversely affect a person's ability to bargain for a better deal within a predominantly upper-caste community. On the other hand, low-caste women are less subject than upper-caste ones to norms of seclusion, restricted mobility, and soft speech.

5.2 Factors affecting distributional equity

Gender inequitable distributional outcomes are again a result of a range of factors that were listed earlier. In terms of cost sharing, the principal one appears to be social norms governing the gender division of labour. As

³¹ My field visits in 1998-9. See also, Sarin (1998) and Hopley (1996), the latter for her discussion of the caste factor in the Nepalese context.

already discussed, women's primary responsibility for firewood and fodder means that the bulk of the costs of forgoing forest use, following closure, fall on women.

In terms of gender equity in benefit sharing, broadly five types of factors are seen to impinge on outcomes.

5.2.1 Rules regarding entitlements to benefits

Here both State-instituted rules of entry, and rules made by the CFG, matter. As noted earlier, access to some types of benefits is linked to CFG membership. However, for women, membership alone need not guarantee a share if the CFG has decided that the unit of distribution is the household rather than the individual. Hence even if both spouses are members, the woman may not get a separate or additional share. In recent years, this has in fact proved to be a bottleneck in inducting women members in some regions. In Gujarat, for instance, those who first became CFG members paid a nominal membership fee. On the one person per household rule, many men paid and joined. Now anyone interested can join, but new entrants have to pay substantially more than the first entrants, while the share remains the same per household. In a number of villages, women have told their executive committees that they are not interested in joining at the new rates unless individual membership is the basis of benefit sharing. Hence while women's low participation in CFG decision-making affects equity of outcome through the distribution rules, inequitable distribution rules can, in turn, constrain women's participation.

5.2.2 Norms/principles underlying the distribution rules

Broadly (as noted in Section IV), three types of principles/norms are implicit in the distribution rules formulated by CFGs: market-determined, contribution, and need. Each principle implies a different equity outcome. At present, 'contribution' (in terms of membership, protection efforts, labour inputs, etc.) is the dominant criterion underlying distribution rules in most CFGs, which allow equal access to the forest, or distribute equal amounts of, say, firewood or fodder to those contributing. Auctions are undertaken in a few cases, and distribution by need is rare.

A move from the principle of contribution to that of need would require a shift in societal values where the better-off are willing to give up some of their claims in favour of those who need it more. Here NGOs, village leaders, etc. directing the programme, could play an enabling role.

However, even if there were a shift from contribution to need as the defining principle, whether or not women get a better deal can still depend on whether they are *perceived* as deserving more.

5.2.3 *Perceptions about deservedness*

There can be and often is a divergence between what a person actually contributes, needs, or is able to do, and perceptions about her/his contributions, needs and abilities. Hence, for instance, women's contribution to household income in terms of the numerous tasks they perform within the home is often undervalued, not just by family members but also by policy makers and bureaucrats implementing development programmes. An important reason for this is the 'invisible' nature of many tasks that rural women do. These are often economically invisible in that they do not always bring cash returns, say, where women are working on family farms, or collecting firewood, fodder, etc. And the tasks are rendered physically invisible when they are done within the home compound (such as cattle care, stall feeding animals, grain storage and processing, etc.). Similarly women's needs are often underplayed and assumed to be subordinate to men's needs. Systematic undervaluation of women's contributions or needs would make for a notable gender bias in the distribution of resources both within the household and outside it.³²

Part of the feminist concern with assigning a monetary value to housework has been to make such work more 'visible'. In the present context, women *seen* to be participating in forest management would thus be in a better position to claim equal benefits with men, in that their contributions would be better recognized.

5.2.4 *Personal endowments and attributes*

Given that women as a gender (even if not all women as individuals) have fewer personal endowments, CFG shares given only to male members will typically result in inequitable outcomes for women in both rich and poor households. Again, women's personal attributes such as age and marital status can affect intra-household distribution by influencing perceptions about deservedness.

³² For elaboration see Agarwal (1997b); see also Sen (1990).

5.2.5 Households endowments and attributes

While the above factors affect all women in some degree, there are also *intra*-gender aspects that can affect equity of outcomes, although in a complex way. Women in economically better-off households are, on the one hand, faced with a less acute crises from forest closure than poor women. On the other hand they face greater strictures on their mobility, which limits their options for alternative collection sites. Similarly, poor women on the one hand face acute shortages and are less in a position to negotiate favourable CFG rules. On the other hand, they are more mobile and may be more willing, socially, to risk being caught stealing from the forest.

These differences are important to keep in mind while assessing CFGs. At the same time, it needs emphasis that for fuelwood, except those able to afford cooking gas, the class difference may not be dramatic, since many women even of middle peasant households have to depend mostly on what they themselves gather.

VI IMPROVING OUTCOMES: THE BARGAINING FRAMEWORK

How can the factors identified above as affecting participation and equity (with associated fallouts for efficiency) be acted upon to reduce the gender bias?

Broadly rules are made at two levels: at the level of the State and that of the community. For instance, which category of persons can constitute the general body or the EC under JFM is determined at the State level. But what membership fee (if any) is to be charged, or whether there should be total or partial closure of the protected area, or how different non-timber forest products are to be distributed, is usually determined by the community. Social norms, social perceptions, and endowments, are, however, constituted and contested at all levels—within the State, the community, the family, and various institutions of civil governance (including NGOs).

A promising analytical framework for examining the possibilities and potential for change on all these counts is that of bargaining.³³ Women's

³³ For elaboration, see Agarwal (1997b). In that paper, I also distinguish between bargaining *models* and the bargaining *approach*. The latter is unconstrained by the

ability to change rules, norms, perceptions and endowments in a gender-progressive direction would depend on their bargaining power—with the State, the community and the family, as the case may be. The critical question then is: what would determine women's ability to bargain effectively in these three arenas?

6.1 Levels of bargaining

6.1.1 The State

Before outlining the likely determinants of women's bargaining power with the State, we need some conceptualization of the State itself. To begin with, the State too can be seen as an arena of bargaining at multiple levels. For instance, the State may pass gender-progressive laws at the highest level, but it could face resistance from the local bureaucracy in the implementation of these measures. Or some departments or ministries may pursue gender-progressive policies within an overall gender-retrogressive State structure: women's bureaus or ministries are cases in point. Likewise, there are often some gender-progressive individuals within particular State departments who play key positive roles, typically but not only in response to demands by interest groups.³⁴ In other words, the State would be an arena of contestation between parties with varying understandings of and commitment to reducing gender hierarchies.

Such a conceptualization implies that the State is being seen here not as a monolithic structure but as a differentiated structure within which gender relations get constituted, through a process of contestation and bargaining.³⁵ This does not deny the gender-retrogressive nature of State-functioning in many countries or contexts, but it does mean recognizing that the State can be and has been subject to challenge and change in this respect.

The State might respond positively to demands by gender-progressive groups/NGOs for several reasons. One, such a group could build up political pressure, perhaps with the support of opposition parties and/or the media, with implications for voting patterns. Two, there could be implicit or explicit

structure that formal modelling imposes, and allows us the flexibility of exploring how social perceptions, and a range of complex social norms (not all of which can be measured) can both affect bargaining power and be bargained over. It also allows us to analytically trace the interlinks between different arenas, and how bargaining outcomes in one arena can affect bargaining power in another arena.

³⁴ See also, Sanyal (1991) and Agarwal (1994).

³⁵ See also, Connell (1987) and Agarwal (1994).

pressure from international aid agencies (White, 1992). Three, the State might recognize the inefficacy both of market mechanisms and of its own machinery in implementing essential development programmes. In India, the State's attempts since the mid 1980s to enlist NGO support for various developmental projects, including community forestry, reflects this recognition.

We would expect women's bargaining strength with the State to depend on factors, such as:

- Whether women function as a group or as individuals.
- The size and cohesiveness of village women's group.
- Support from gender-progressive NGOs and international donors.
- Support from gender-progressive elements in the State apparatus.
- Structural parameters: caste/class composition of the women's group, women's independent command over economic resources, etc.
- Social norms (as adhered to by State officials).
- Social perceptions (to the extent that State officials themselves have gendered perceptions).

The bargaining power of such a group would be higher the larger and more unified the group; the more the political weight carried by the castes of which the group is composed,³⁶ the greater the group's command over economic resources; the more the support from NGOs, the media, academics, and individuals and departments within the State apparatus; the greater the support from international donors with the power to influence State policies in women's favour; and so on.

6.1.2 The community

Within the community, implicit or explicit bargaining can occur between an individual (or a subset of individuals) and the community over the rules and norms governing economic resource use, political positions, and social behaviour, and over the enforcement of those rules and norms. Non-compliance with community rules on CFGs could be seen as a form of implicit bargaining. But sanctions for some forms of non-compliance could be severe.

³⁶ Low-caste communities need not always be the most disadvantaged in this respect. For instance, they may have good connections with key political figures, or the mistreatment of low-caste groups may be a politically sensitive issue.

As with the State, women's bargaining power within the community would be enhanced if they had support from external agents such as NGOs. In addition the State itself could be a potential source of support. Group strength would again be important in bargaining with a community. For instance, an individual woman breaking seclusion norms could easily be penalized, say by casting aspersions on her character. Such reprisals are less possible if a group of women decide to transgress the norms. Similarly, it would be much more difficult for a woman acting alone to have a voice in public bodies, than if she were part of a group or was supported by such a group. In other words, within a socially homogenous community, a woman's bargaining power with the community would stem only partly from her individual economic and social position, and more particularly from gender-progressive coalitions within the community.³⁷

In a multi-caste/class-heterogeneous village, women's bargaining power would also depend on the socioeconomic composition of their group and their ability to command economic resources. In the sharing of communal resources, for instance, the negotiating strength of low-caste or poor peasant women, even if they formed a group, is likely to be weaker than that of high-caste or rich peasant women whose caste or class as a whole might command greater power in the village.

To summarize, the broad factors affecting women's bargaining power with the community over, say, rules governing the distribution of forest products, or some other aspects of decision-making, are likely to be similar (but not identical) to those outlined in relation to the State. They would include:

- The size and cohesiveness of the village women's group.
- Support from gender-progressive NGOs, donors, and elements of the State apparatus.
- Structural parameters: the caste/class composition of the village women's group, the group's independent command over economic resources, etc.
- Social norms.
- Social perceptions.

At the same time, the defining features of these factors, or their relative importance, are not identical to those that affect women's bargaining power with the State. For instance, we would expect female seclusion norms to be

³⁷ For elaboration and illustrative examples, see Agarwal (1994).

much more important and restrictive at the level of the community than that of the State.

6.1.3 The family

Bargaining within the family for a more equitable sharing of benefits or tasks, or for greater freedom to participate publicly is perhaps the most complex aspect of bargaining. This complexity is spelt out in Agarwal (1994, 1997b), but broadly four types of factors are likely to impinge on a woman's intrafamily bargaining power:

- Her personal endowments and attributes (ownership of property, whether or not she earns an income, educational level, age, marital status, etc.).
- Her ability to draw upon extra-household support from friends, relatives, women's groups in the village, gender-progressive NGOs outside the village, donors, and the State.
- Social norms (which might define who gets what, or who does what within the household).
- Social perceptions (say about deservedness).

Some of the common determinants of bargaining power in all three arenas are: support from external agents (NGOs, etc.), social norms and perceptions, and group strength. Norms and perceptions and group strength require some elaboration.

6.2 Bargaining over social norms and perceptions

6.2.1 Social norms

Social norms, as noted, have an overarching character. One, they can affect bargaining power both directly and indirectly. For instance, norms that restrict women's presence in public spaces directly reduce women's ability to bargain for rule changes within CFGs. In addition, they can do so indirectly, by reducing women's ability to build contacts with NGOs or State officials.

Two, social norms can influence how bargaining is conducted: e.g. covertly or overtly; aggressively or quietly. In most societies, behaviour which is assertive and loud is much more tolerated in boys and men, than in girls and women. And among women in South Asia, assertiveness is more accepted from older women than younger ones, from mothers-in-law than young daughters-in-law, and from daughters than daughters-in-law. In cultures or contexts where social norms stifle explicit bargaining or voice, women may

be pushed to using covert forms of contestation within the family, such as persistent complaining or withdrawing into silence (Agarwal, 1994).

Three, attempts to change social norms would itself constitute a bargaining process. As will be illustrated in the next section, the following factors appear to make a particular difference to women's ability to bargain over social norms: the external context (especially economic) which necessitates challenging a norm or which makes a norm dysfunctional; the group strength of those challenging the norm; support from external agents; and the ability to influence the institutions (the media, educational and religious bodies, etc.) that shape gender ideology.

6.2.2 Social perceptions

Social perceptions can affect women's bargaining power in so far as women's contributions and abilities diverge from perceptions about their contributions and abilities. As noted earlier, a good deal of what women do is rendered invisible and therefore undervalued by both families and communities. To the extent that women internalize these perceptions, they can self-restrict their options, or what they seek to bargain over and change.

To enhance women's bargaining power within the community or the family, a necessary step would thus be to change both women's own perceptions about their options and abilities, and the perceptions of their families, the community and the State regarding women's abilities and the legitimacy of their claims. Just as they affect social norms, so institutions that create gender ideology influence social perceptions. In addition, at least two types of factors could affect gendered perceptions: information on the value of women's work, such as the time and income contribution of domestic and non-domestic labour; and demonstrations of women's ability to do something by their actually doing it.

6.3 Group strength

Group strength can prove to be a critical factor at all levels of bargaining—the State, the community and the family—and in all forms of bargaining (including over social norms and perceptions). Here village women's group strength would derive not merely from the number of women who would like, say, a change in rules and norms, but from their ability and willingness to act as a group in their common interest, an interest predicated on gender. In other words, it would depend on whether gender is a basis of group identity, over and above the possible divisiveness of caste or class. The creation of such a

group identity would need to be part of the process of improving outcomes for women.

Gender-progressive groups working outside the immediate local context (even if unrelated to community forestry) can also increase women's bargaining power by adding to gender-awareness in the larger social environment within which CFGs function, thus creating a more favourable climate for challenging gender-regressive norms.

Let us now consider the ground experience of attempts to improve women's participation and gender equity. These experiences do not illustrate all elements of the bargaining framework spelt out above, but they do reveal some key elements.

VII IMPROVING OUTCOMES: GROUND EXPERIENCE

7.1 Bargaining with the State

JFM experience indicates that changing the initial rules of entry formulated by the State is not so difficult to bring about. Pressure from external agents such as gender-progressive NGOs and key individuals, for instance, has led a number of Indian states to change JFM membership rules in a more women-inclusive direction. Here village women did not have to explicitly bargain for changes, but the women's movement in South Asia has brought about a sufficient awareness about gender inequalities to make such issues easier to resolve with the State, through outside intervention. On this count, therefore, village women start from a position of some bargaining strength.

Changing rules at the *community-level*, ensuring that more women-inclusive membership rules are implemented, and increasing women's effective voice in these forums have, however, proved much more difficult, as discussed below.

7.2 Bargaining with the community

7.2.1 Using external agent bargaining power

As with the State, so with the community, some gender-progressive NGOs, forest officials and donors have used their bargaining power to bring about changes in women's favour, sometimes at their own initiative, at other times when village women approached them.

For instance, some Indian NGOs have sought high female membership in mixed groups as a condition for forming the group. In Gujarat, one NGO uses its bargaining strength to insist on 50 per cent women's membership when starting new CFGs. It also pushes for higher female membership when the CFG is seeking formal recognition from the forest department.

Similarly, in West Bengal's Bankura district, the District Forest Officer issued a circular stipulating that there should be a minimum of 30 per cent women in the general body. This raised female membership in several villages to that level (Viegas and Menon, 1993: 187). Again, in Haryana, the forest department instructed its field staff to ensure the participation of a maximum of both men and women in JFM discussions. The field staff would simply refuse to start meetings unless the men also called the women. No excuses were accepted from the men that the women were busy with domestic chores or were unlikely to come, thus compelling them to call the women who, on being so invited, often turned up in strength (Sarin, 1998).

Such use of bargaining power by an external agent appears to work best when women's participation is pushed from the beginning. Once men's 'territorial interests' get entrenched, women's entry can prove difficult, even if the formal rules are favourable, as noted earlier. Involving women from the start can also reduce subsequent gender conflict over rules.

In some cases, gender-sensitive NGO personnel have also helped increase village women's voice in mixed meetings by soliciting women's opinions and giving them weight, as I observed in Gujarat in 1995. Similarly, in relation to distributional equity, women's complaints about firewood shortages have been taken up in some instances by the local NGO staff in a CFG meeting, leading to a shift from total closure of the forest to its opening up for a few days annually.

However, unlike the occasional success of external agents in negotiating for a rule change at the State level, or in enhancing female membership and voice in CFGs at the community level, a larger and sustained impact would require an active input from women themselves. Also, not all regions have external agents committed to increasing gender participation and equity. The intensive efforts needed for successful negotiation would therefore be lacking in many regions.

7.2.2 Women's covert bargaining

Left to themselves, typically women rely on covert forms of bargaining for changing distributional rules, such as simply ignoring the closure rules, or challenging the authority of (and even counter-accusing) the patrol or the guard who catches them. Several such cases were noted earlier. In some instances, this caused the village committee to finally open up the forest for a few days.

Persistent complaining is another way by which women seek to negotiate a rule change:

After our complaints women and men had a joint meeting and decided to open the forest for a few days for firewood collection, since everyone has to cook (women to author, Asundari village, Gujarat, 1999).

The seven day opening was inadequate. So women users complained. Now they open the forest for eleven days (women to author, Laxmi Deurali village, Kaski, Nepal, 1998).

However, complaining or breaking rules (with the risk of being caught and fined) are seldom the most effective ways of changing the rules. For effective change, women are likely to need more formal involvement in the process of rule formulation and to have the bargaining power to ensure changes in their favour. The same appears necessary to get communities to focus on problems like firewood shortages as problems of community importance that need collective solutions, such as allowing greater extraction from the forest where this is sustainable, allotting plots specifically for firewood plantations, systematically promoting low cost biogas plants, and so on.

7.2.3 Enhancing women's bargaining power

Ground experience suggests that, for a start, a critical mass of vocal women is necessary to give women effective voice in mixed community forums, and to help them challenge restrictive social norms and perceptions. As some women interviewed by Britt (1993: 146) in the UP hills emphasized: 'without a good majority of women present it is impossible to express opinions (see also Agarwal, 1997a).

There is a growing consensus among gender-progressive NGOs and elements of the State apparatus that to build a critical mass of vocal women within CFGs will need, as a first step, forming separate women's groups. Although

not articulated in terms of bargaining power, effectively that is what is being sought. Maya Devi (President of HIMAWANTI with long experience in group organising) puts it emphatically:

In mixed groups when women speak men make fun of them, so women need to learn to deal with this... When women join a [separate] group they gradually lose their fear of making fools of themselves when speaking up... Women need their own small groups. This is what I know from my 22 years of experience working with the government and NGOs.

Other women leaders argue similarly (Guhathakurta and Bhatia, 1992), as do many village women: 'We have no experience. If we have separate meetings we will speak up' (women to author, Gajargoda village, Gujarat, 1998).

There is less consensus, however, on what type of group this should be. In some cases all-women CFGs have been formed. As noted earlier, in both Nepal and India a number of such groups have been catalysed by NGOs, forest officials, or donors. In some villages, women have themselves approached the forest department for a plot of forest land and formed such a group (Agarwal, 1997a). Many of these groups have done well in terms of protection. They have also increased women's self-confidence. Pratibha Mundergee's observed from her 16 years of experience with a rural development NGO in Karnataka:

Yes, all women's CFGs have changed women's lives. Women now go to government offices themselves, including the Block Development Office, they talk to the forest department officials, they meet the range officers and the forester. Earlier they did not have the confidence to do so (personal communication, 1998).

All-women CFGs also demonstrate to the community women's ability to manage such groups on their own. In addition, in many contexts, all-women CFGs may be more cohesive and sustainable than men's because of rural women's greater dependence on communal resources, their informal support networks for coping with crises, their prior experience of cooperation within agricultural labour exchange groups (in certain regions), and their greater social distance from divisive local power nexuses (for details, see Agarwal, forthcoming).

However, so far all-women CFGs (as noted earlier), have usually arisen in special circumstances, such as in areas of high male outmigration, or where women themselves staked a claim, or where the men were uninterested, or NGOs or donors thought this could simultaneously promote community forestry and women's participation. In terms of numbers and forest area protected, such groups are still marginal. Also, all-women CFGs cannot solve the problem of women's low presence and lack of effective voice in the many all-male or mixed CFGs already operating, and which are the more typical CFGs. For this, other kinds of efforts would be needed.

Toward this end, a number of rural NGOs have formed all-women savings-and-credit groups, which, unlike CFGs, do not involve a resource over which there is generalized community claim. In some regions, more multi-functional women's groups, such as mahila mangal dals in the UP hills, or amma samuhs in Nepal, are also doing well. Such separate women's groups (be it around savings or some other issue) have helped on several counts: building women's self-confidence and experience in collective functioning, promoting a sense of collective identity, enabling women to learn from other groups through 'exposure visits' organized by the local NGO, and so on. There have also been indirect fallouts, such as an increase in women's ability to deal with government agencies, a change in male perceptions regarding women's capabilities, and some change in social norms which earlier defined only the domestic as legitimate female space. Consider some illustrations of what women said to me (1998-9):

Men used to shut us up and say we shouldn't speak. Women learned to speak up in a sangathan (group). Earlier we couldn't speak up even at home. Now we can be more assertive and also go out. I am able to help other women gain confidence as well (woman leader to author, Vejpur village, Gujarat, 1999).

Initially I was shy because I did not know much. Now I have more experience (woman to author, Tallo Goungonda village, Kaski district, Nepal, 1998).

Initially men objected to our going to meetings. But our amma samuh helped men understand better. We women became united in the amma samuh, then men saw we were going good work. That also helped (women to author in Tallo Goundonda village, Kaski district, Nepal, 1998).

NGO workers reiterate these observations: 'Women used to hide from us initially, but now they have so much confidence they feel they can even teach the new workers in our organization' (male NGO worker to author, UP hills, 1998).

In fact, these experiences are not dissimilar to those of many other rural women's groups across South Asia. For instance, take women members of the NGO, BRAC (the Bangladesh Rural Advancement Committee), which works with the rural poor through group schemes for income-generation. The women, forced by poverty to break purdah norms and seek work outside the home, have been able to gain some acceptance of their public roles, over time:

Before the village elders and union-council members abused and threatened us for joining the group, now they are silent... Before we did not go outside our homes, but now we work in the fields and go to the town (cited in Chen, 1983: 165).

Now nobody talks ill of us. They say: 'They have formed a group and now they earn money. It is good' (cited in Chen, 1983: 177).

All these experiences support the view that group strength, external agency support, and activities that enable women to make a visible contribution (especially in monetary terms) can alter some social norms and perceptions.

But are separate women's groups adequate for enhancing the average woman's participation in the mixed CFGs? Not necessarily or automatically.

7.2.4 Difficulties of integration

In many villages, the formation of separate women's groups has sharpened gender segregation in collective functioning. Women's savings groups are seen as 'women's groups' and the CFGs as 'men's groups'. This is so even when some women's groups have taken up forest protection activities parallel to those of men, or in the absence of male involvement. Basically, working in separate groups does not adequately challenge unequal gender relations or the dynamics of *mixed* group functioning. Some women learn to speak up and serve as leaders, but this does not make for a critical mass of vocal women in the CFG. In other words, forming separate women's groups may be a necessary condition for increasing women's CFG participation in many circumstances, but it is not a sufficient condition.

For effective integration, more concerted efforts appear necessary. In some cases, all-women groups which are part of a multi-village women's organization, have been able to negotiate women's enhanced membership in mixed CFGs. In West Bengal's Midnapore district, for instance, only 2 per cent of the 8158 members in the 72 CFGs studied in the early 1990s were women, while in Bankura district female presence was marked (Roy, 1992; Viegas and Menon, 1993). In the latter district, almost all the women CFG members were also members of a local women's organization which had a substantial reach in the district. In Korapara village, the CFG shifted from zero to 63 per cent women members, due to the active encouragement of this organization (Viegas and Menon, 1993: 187).

In a few other cases, NGOs working with both women and men have sought to integrate all-women groups with the mixed CFG. A Karnataka NGO, for instance, seeks to directly link women's savings groups with CFG participation. As a result, in several of its villages, some 80-90 per cent of the women are now in the general body. They discuss CFG functioning and even collect CFG membership dues in their savings groups. In some cases, savings group members have gone from house to house to persuade women to join the CFG. As a result, several women who were not even members of the savings group joined.³⁸ The women I met in some of the villages where this NGO is working, were quite vocal in the mixed group. To bring them to this degree of outspokenness, however, has taken many years of persistent effort and trust building between the NGO, the women, and the villagers.

7.3 Bargaining with the family

The family is the third major arena of bargaining for women. Most rural NGOs do not directly tackle the issue of intra-household gender relations. Forming all-women groups can however have indirect positive fallouts. For instance, I met a number of women's groups that had helped individual women negotiate with their husbands, or where being a group member had improved women's situation at home.

There are one or two men who objected to their wives attending our meetings, and said you can't go. But when our women's association came to their aid, the men let their wives go (women to author in Almavadi village, Gujarat, 1998).

³⁸ Personal communication in 1998 from Pratibha Mundergee, former worker in this NGO.

My husband feels I contribute financially, take up employment, obtain credit for the home. This increases his respect for me (woman to author, Almavadi village, Gujarat, 1998).

In other words, there has been a loosening of restrictive social norms both within the home and outside it. In addition, women's public participation and contribution may change a man's view of his wife's deservedness, and this could make a difference to intra-family sharing of resources.

Of course some norms would be easier to change than others. A particularly inflexible one would be the gender division of labour, from which stem many of the noted inequities in the sharing of CFG costs and benefits.

7.4 Domains beyond CFGs

Any local group, including a CFG, is likely to be affected not only by its immediate locale, but also by the wider context of structural and cultural inequalities within which it is located.

For instance, both participation and distributional equity are affected by the pre-existing structural inequalities predicated on the caste and class of the households to which women belong, as well as on gender. These inequalities are unlikely to decline substantially within the parameters of CFG functioning, although an improvement in women's bargaining power could indirectly alter some of these parameters.

Moreover, equity of distribution depends, as noted, not just on the rules that determine benefit sharing, and the initial economic inequalities between and within households, but also on what principle of distribution is favoured by the community. A shift from distribution according to contribution or willingness to pay, to distribution according to need, could require a significant change in social values.

Similarly, norms and perceptions are constituted and contested not only at the village level, but also at several meso- and micro- levels. Some of the principal institutions that shape ideology, such as educational and religious establishments and the media, can influence social norms and perceptions in either gender-progressive or gender-retrogressive directions. The media can also change women's perceptions about their options. In five different villages in Nepal, women told me that an important factor that encouraged them to form a group was hearing about such groups on the radio. Media messages emphasizing more egalitarian gender relations could similarly have an impact.

Finally, a significant NGO initiative, which impinges on domains beyond the local, is the 'scaling up' of CFGs cross-regionally, by forming federations.³⁹ These, among other things, enhance the bargaining power of local groups vis-à-vis the State. However, their gender impact is unclear so far, since women's representation is not automatically assured. In Nepal's Federation of community forest users—FECOFUN (initiated in 1996 and so far covering 1000 user groups in 42 districts)—the Constitution requires a 50 per cent representation of women at all levels, from district committees to national steering committees, but it is not achieved in practice (Britt, 1997). Making such participation effective could again be seen as a bargaining process. In some cases, a two-pronged approach is being followed, by simultaneously building women's strength outside the Federation through a separate all-women network. The earlier-mentioned regional network of women's groups working on natural resources, HIMAWANTI, for instance, aims at promoting women's interests both within CFGs and within FECOFUN. As with other all-women groups, it remains to be seen how successful HIMAWANTI will be in enhancing women's participation in the national federation.

VIII IN CONCLUSION

South Asia's CFGs are a significant example of group functioning. While many have done reasonably well in regenerating the environment (at least in an immediate sense), they have been less than successful in bringing about women's participation in decision-making, or in ensuring gender equity in the sharing of costs and benefits from forest protection. As a result, they have also failed to tap the full efficiency potential of the collective effort. This cautions against ungendered evaluations that would deem such groups success stories. It also indicates that improving gender participation and distributional equity are important both in themselves, and for their complementarity with efficiency. Equity and efficiency could thus be promoted simultaneously. It is necessary, however, to identify the underlying constraints.

It has been argued here that among the main factors impinging on women's participation in CFGs and the sharing of costs and benefits, are rules, norms, perceptions, and the pre-existing inequalities in endowments and attributes

³⁹ For India, see Underwood (1997), and Raju (1997). Also personal observation in Gujarat, the UP hills and Orissa, during field visits in 1998-9.

both of women themselves and of their households. In the long run, changes on all these counts appear necessary for bringing about more participative, equitable, and efficient outcomes.

The paper suggests that it is useful to conceptualize such change within a bargaining framework of analysis, and to act on the factors that will strengthen women's bargaining power with the State, the community and the family. Among such factors is the support provided by external agents (NGOs, forest officials, donors, etc.) both directly, and indirectly through the formation of separate women's groups (such as savings groups) at the village level. The analysis indicates that while such separate groups can play (and have played) an important role in enhancing women's group strength and self confidence, in themselves they may be ineffective in changing women's position within mixed groups. For achieving this, more directed efforts are likely to be needed. Separate women's groups can thus serve, at best, as only one measure among the many that are needed for shaping mixed CFGs into more gender egalitarian institutions.

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