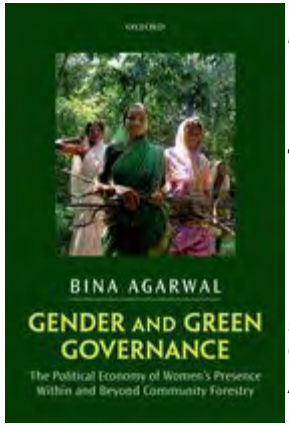

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The Political Economy of Women's Presence Within and Beyond Community Forestry

Bina Agarwal

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Bina Agarwal is Professor of Development Economics and Environment at the University of Manchester. Prior to this she was Director and Professor of Economics, Institute of Economic Growth, University of Delhi, India

"Gender and Green Governance will rightly be acknowledged as a classic not just in environmental studies, but in studies of development, governance, public action and public service delivery more broadly ... It is a rigorous, engaged and deeply serious exploration of the conditions under which the greater involvement of women in forest management committees improves the quality of environmental (or green) governance ... it is a landmark text." -**Stuart Corbridge, The Journal of Development Studies**

"[A] tour de force ... rigorous, insightful and broad-ranging ... The book is innovative at more levels than one can list." - **Pratap Bhanu Mehta, Indian Express**

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"A timely reminder of the need for broad-based "Green Governance" which is inclusive of women. While focused on the forestry sector, the book very convincingly establishes the principle of community participation in management, conservation and sustainable use of dwindling natural resources." - **Khawar Mumtaz, The Friday Times**

"Bina Agarwal has crafted a book of central importance in today's world. Both women and their connections with forests have been under-represented in the field, in academic research, and in policy. With analytical rigour and originality, Agarwal bridges these major gaps in our understanding of the difference women can make, when they are actively involved in forest governance." - **Elinor Ostrom, Nobel Laureate in Economics 2009**

"Beautifully written and soundly argued, this book makes an outstanding contribution to the fields of both environmental economics and governance. Drawing on over a decade of fieldwork in India and Nepal, and eschewing easy generalizations, Bina Agarwal offers a richly layered and insightful treatment of the effects of women's presence in local bodies governing village forests." - **Jean-Philippe Platteau, University of Namur and co-author of Halting Degradation of Natural Resources**

"A nuanced analysis that demonstrates the value of mixed-methods approaches ... an important book." - **Ruth Meinzein-Dick, Feminist Economics**

"Cutting across areas of economics, environmental studies, political economy, gender studies, local green governance and public policy, this book needs to be read by all...this is a book for the people." - **Manju Chellani, Indian Journal of Gender Studies**

ABOUT THE BOOK

Economists studying environmental collective action and green governance have paid little attention to gender. Research on gender and green governance in other disciplines has focused mainly on women's near absence from forestry institutions. This interdisciplinary book turns that focus on its head to ask: what if women were present in these institutions? What difference would that make?

Would women's inclusion in forest governance - undeniably important for equity - also affect decisions on forest use and outcomes for conservation and subsistence? Are women's interests in forests different from men's? Would women's presence lead to better forests and more equitable access? Does it matter which class of women governs? And how large a presence of women would make an impact? Answers to these questions can prove foundational for effective environmental governance. Yet they have hardly been empirically investigated.

In an analysis that is conceptually sophisticated and statistically rigorous, using primary data on community forestry institutions in India and Nepal, this book is the first major study to comprehensively address these wide-ranging issues. It traces women's history of exclusion from public institutions, the factors which constrain their effective participation, and how those constraints can be overcome. It outlines how strategic partnerships between forestry and other civil society institutions could strengthen rural women's bargaining power with community and government. And it examines the complexities of eliciting government accountability in addressing poor rural women's needs, such as for clean domestic fuel and access to the commons.

Located in the interface of environmental studies, political economy and gender analysis, the volume makes significant original contributions to current debates on gender and governance, forest conservation, clean energy policy, critical mass and social inclusion. Traversing uncharted territory with rare analytical rigor, this lucidly written book will be of interest to scholars and students as well as policy makers and practitioners.

Level the Field

A tour de force on how women can impact environmental conservation

PRATAP BHANU MEHTA

WHAT are the factors that affect women's participation in institutions of collective deliberation? What impact does their presence in these institutions have on their outcomes? How should one think of the relationship between presence, representation and power in democratic institutions? These are some of the central questions for democratic theory and the fate of democratic societies. Bina Agarwal's tour de force looks at these issues in the context of women's presence in community forestry, and argues that women's presence, in the right critical mass, makes a considerable difference to outcomes.

The empirical materials are set in the context of forestry. It draws on careful data collection in 65 community forestry institutions in Gujarat and 70 in Nepal's middle hills. It further draws on extensive focus group discussions across seven states and several other informant villages. But these sites are then brought into an astonishingly rich conversation with a broader debate on participation in democracies. The book is also a rigorous, insightful and broad-ranging engagement with wider questions of presence and voice in democracies.

GENDER AND GREEN GOVERNANCE
BINA AGARWAL
Oxford University Press
Pages: 484
Rs 625

The book is innovative at more levels than one can list. It is methodologically very sophisticated and deploys a range of qualitative and quantitative techniques, in the right kind of relationship to each other. It combines serious primary data collection with theoretical reflection. It draws on an astonishing array of literatures in history, sociology, economics and political science, and gets them to talk to each other in ways that are unprecedented. It tells you something about the theoretical ambitions of this book that it is almost a hundred pages before you enter into the empirical discussion proper. The first three chapters are wonderfully useful surveys of three large themes: the theoretical debates over presence and representation; the debates over environment and gender; and the history of debates over women's inclusion in local governance. These will become required reading even for those not particularly interested in the issue of community forestry. Agarwal fairly and patiently works through different hypotheses that have been advanced, and provides a model of how to sift through complex work in particular areas.

Unusually for a book that relies on primary data, chapter four gives a thick description of the field sites. This is enormously useful because it helps situate the data in its context and spot interesting nuances. Most work that deals with data eschews the setting. But the detailed sociological and historical profiling of the field sites is intrinsically interesting, and I hope 10 years from now someone revisits these sites and uses this chapter as a benchmark to see what social changes have taken place.

The main argument of the book is that women's presence matters a great deal, though the actual effect of presence is mediated through a large number of variables. The one thing that seems to matter is threshold effects; the more women there are, the more likely are women to participate and so forth. Women are also more likely to talk about rule-breaking than men, who, at least in this study, seem more likely to draw a veil of solidarity over acts of rule-breaking. Agarwal also takes on a very important debate. To what extent can political representation mitigate economic disadvantages and social inequalities? Her nuanced conclusion is that social and economic equality is not a prior necessary condition for women to be active political agents. Women do bring a different set of concerns to the table. But interestingly, in Agarwal's account, this has less to do with some essential attribute of being a women than the structural relationship that the women have in relation to the broader economy. Women seem to bring different concerns because they are differently situated. One of the implications of this argument, which Agarwal does not hesitate to pursue is that differently situated women will bring different concerns. So there are two layers to this story. One is that women's presence makes a difference. The other is that women's presence makes a difference within each social layer differently. This book pursues these complexities as far as can be done with the empirical materials at hand. But in the broader debate, the interaction of gender and class effects will be an interesting agenda to pursue.

The book then goes on to argue that mere presence is not enough. The book's richness comes from the fact that it is constantly mindful of the subtle operations of power embedded in the procedures in institutions, in the relationships between bureaucracies and community institutions and between communities and outsiders. The book is an extraordinarily rich mine of hypothesis and a model of careful testing. All those interested in how institutions of deliberation work will mine it for a long time to come.

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Gender and Green Governance: The Political Economy of Women's Presence Within and Beyond Community Forestry

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Gender and Green Governance: The Political Economy of Women's Presence Within and Beyond Community Forestry
Bina Agarwal
Oxford: Oxford University Press, 2010, £68.00, HB, ISBN 978 0 19956968 7

Few authors write a landmark academic text. Smaller still is the list of scholars who have written two such texts, which is what Bina Agarwal has now done. *Gender and Green Governance* deserves to take its place alongside Agarwal's classic account of gender and land rights, *A Field of One's Own* (1995). It is a rigorous, engaged and deeply serious exploration of the conditions under which the greater involvement of women in forest management committees improves the quality of environmental (or green) governance. Agarwal finds that forest regeneration in Gujarat (India) and Nepal is enhanced when significant numbers of women are party to decisions that enforce strict conservation rules, including rules that impose particular hardships on women (as, for example, in the collection of firewood). Agarwal also suggests that engagement in village management institutions can be an important precondition for the effective engagement of government officials by hitherto 'unvoiced' women. This is one means by which the 'vertical reach' of female decision-making can be enhanced.

Thus described, Agarwal's core findings might seem at first glance to be in line with some of the claims made over many years by ecofeminists like Vandana Shiva, but this is assuredly not the case. Agarwal rejects the view that women essentially and always have different strategic interests than men, or that women are natural environmental governors because they are closer to nature than their male counterparts. *Gender and Green Governance* begins with a sharp and sweeping literature review which critiques these dualisms and which establishes a debt to institutionalists like Baland, Ostrom, Platteau and Wade. Instead of focusing on the absence of women from forest governance institutions, however, Agarwal's overriding aim is to establish whether, how and in what ways the presence of women in green governance makes a difference. Are environmental outcomes enhanced by the greater presence of women in forest management executive committees? Are women able to impose effective penalties for rule violations? And so on.

At the core of Agarwal's book is a group of linked chapters that uses both qualitative and quantitative (mainly regression) analysis to test some rarely specified questions about gender and green governance. Data from field-sites in Gujarat and Nepal were collected both by Agarwal herself and by teams of NGO researchers working under her direction. Data are reported for a robust sample of field sites over a period of about a decade, something which no other single study that I am aware of has been able to achieve. Agarwal's major findings, all of which come with responsible caveats and suitably nuanced explanation, are as follows.

First, largely in line with government policies for 'affirmative action' in India, Agarwal finds that women's attendance rates and effective presence in the Executive Committees (ECs) of Community Forestry Institutions (CFIs) improves significantly once more than a quarter of the EC consists of women. Where social norms are more pliable (Nepal as compared to Gujarat), the chance of women becoming office holders in an EC is again increased significantly when more than a quarter of EC members are female.

Second, and counter-intuitively, where women are actively involved in rule setting in CFIs they favour strict surveillance regimes and penalties. This was the case in all bar one of Agarwal's research sites: Panchmahals in Gujarat, where landless women predominated. Notwithstanding pressures on village women to collect firewood and fodder, the time preferences of women in CFIs were consistently more oriented to the long run than broadly comparable groups of male CFI members.

Third, Agarwal finds that, in Nepal, 'all-women CFIs have significantly fewer overall [forest use] violations compared with other groups' (p. 282). Interestingly, too, Agarwal finds that in both Gujarat and Nepal women are commonly perceived as the most likely forest rule-breakers (sneaking in for firewood given half a chance: ibid), when in fact it is men who are overwhelmingly to blame for major cases of timber theft.

Finally, Agarwal suggests that the greater active involvement of women in CFIs is good not only in and of itself, for reasons of social justice and as a spur to wider empowerment, but also instrumentally as a precondition for more effective forest regeneration. Women help forest protection initiatives not because they are at one with nature, but because they effectively police transgressors, spread information about forest closure rules (including to landless women), think long term, and instil a conservation ethic in local children.

Agarwal's fourth major conclusion – in some respects the pay-off conclusion – is based both on villager recall surveys and satellite data. Inevitably, even in a study as rigorous and data rich as this one, verdicts about forest coverage and regeneration have to be handled cautiously. Ten or more years on from the time of Agarwal's fieldwork it will be interesting to see how effective local CFIs remain (does involvement remain active over many years, and if so how and why?) and what has happened to forest canopy levels and other measures of forest health. (A research council should fund someone to take on this task, if Bina Agarwal and her co-workers are unable to do it themselves). Ideally, of course, one would hope to measure these changes through strictly laid out and repeatedly measured sample plots: comparing forests managed by effective CFIs and other local forests not so managed. Oddly, however, in what is a very comprehensive bibliography to *Gender and Green Governance*, Agarwal does not cite the one path-breaking paper I am familiar with that does just this: an essay in *World Development* (2002) by Sanjay Kumar – one of a number of first rate pieces of work by a loosely defined group of workers at Cambridge University in the 1990s and early 2000s, including Pari Baumann and Sarah Jewitt (both cited here), and also Cathy Nesmith, Manish Tiwary and Bhaskar Vira.

All this is simply to say that Agarwal's wonderful book should not be the last word on *Gender and Green Governance*, but must act as a spur to further and more effective work that will seek to build upon and challenge her key public policy findings. *Gender and Green Governance* will rightly be acknowledged as a classic not just in environmental studies, but in studies of development, governance, public action and public service delivery more broadly. As I said at the top of my review, it is a landmark text.

Stuart Corbridge © 2012
London School of Economics and Political Science

Bina Agarwal, *Gender and Green Governance*. Delhi: Oxford University Press. 2010. 488 pages. ₹ 625.
DOI: 10.1177/2321023013482799

Bina Agarwal's *Gender and Green Governance* is a magisterial work of astounding erudition. The book starts with a deceptively simple question: what difference does it make when more women are on local forest protection councils? This is the same question raised by numerous studies of gender quotas in local government. But, distinguished from the more straightforward studies, Agarwal mercilessly probes the analytical depths of this question as though she were digging into the roots of a tree and following them out to their farthest extensions. In the course of this exploration she unearths connections to a wide range of literatures: local government, governance of the commons, women in politics, the politics of representation and accountability, women and development, the politics of poverty, civil society and forest management. The work is thoroughly inter-disciplinary, not only drawing on these many bodies of literature, but also on methodology from sociology (sample surveys) and econometrics (multiple regressions) to address questions at the centre of political science. While resplendent with field interviews and statistical tables, its ultimate significance is as a thought-provoking examination of political institutions—what makes them legitimate, efficient, inclusive, representative and stable over time.

The book begins with an analytic discussion of the different stakes men and women have in forest preservation and what that might mean for forest governance. Men are more interested in timber while women are more concerned with firewood and fodder. Their interests have different time trajectories, men's more occasional and long-term, women's interests more everyday. Women's interests are cross-cut by class, for landed women have both money and alternative private sources of firewood that landless women do not. Agarwal asks how does one ensure that women's interests are represented? Is membership on councils adequate? What will ensure that they attend meetings? What will enable them to speak up? Will landless women's interests be represented if they are not on the councils? How disabling is inequality? How important is office-holding? What sorts of women are chosen as office-holders? These questions compel a distinction between presence and representation. Agarwal's careful analysis of all the steps that constitute effective representation provides a model for research on this key question.

Her other major concern is governance: what difference do women's voices make in decision-making? In this realm as well, Agarwal breaks down the issue into many steps: promulgating rules, enforcing rules, serving women's interests and reaching the goals of forest preservation. Her detailed knowledge of forest use and the wide variety of local methods and rules used to govern it provide a model for studies of policy implementation. Underlying the details she poses a key question of governance: to what extent are people with a direct interest in the outcomes able to make decisions that serve a larger or long-term goal at the cost of their own interests?

The empirical core of the book reports the results of her field research on forest councils in Gujarat and Nepal. This included two years of conducting focus groups throughout India that yielded many insightful observations, and a rigorous survey of 135 community forest institutions (CFIs) selected by scientific sampling techniques that yielded data for econometric analysis. She also consulted records of meetings and violations, and asked villagers to draw maps of their forests. Different readers will find each of these techniques more or less accessible and compelling, but in combination they construct a uniquely authoritative picture. It should be noted that not only does this represent a great amount of work, but also some of it was conducted at considerable risk during the insurgency in Nepal.

What do we learn? For those interested in representation and in local government, Agarwal's finding that having more women in councils increases their participation—and that a critical mass of 25–33

per cent is necessary for effective participation—is not surprising, but it adds a strong underpinning to this widely accepted, but little tested, position. More noteworthy, particularly to theorists of the commons concerned about the effect of heterogeneity, is her finding that prior equality among women is not essential for women to assert themselves. Indeed, women from disadvantaged households, if present in sufficient numbers, can be more outspoken in public forums for they are less constrained by social norms and have more at stake in forest access. Overall, she finds that the gender composition of the executive committee of the CFI is a good proxy for women's effective participation.

For those interested in forest management or in accountability, the most significant finding is women's capacity to make these institutions effective. Despite their lack of experience with public institutions, by all accounts (Agarwal imposed strict objective measures) the councils run entirely by women or with more women proved to be better guardians of the forest. Despite their more urgent needs for forest produce, councils with more women supported stricter rules for forest use, harsher penalties and more consistent implementation. Where landless women participated in decision-making, the rules allowed somewhat more collection but well below what the forests could sustain.

However, of importance for those concerned with energy poverty, the larger context of gender inequalities within which women operate restricts their capacity to address their needs for clean cooking energy. Women's opinions are often dismissed because they are illiterate (even where the men are also), women disproportionately bear the costs of forest closure by having to walk further to locate firewood, they are more often blamed for violating access rules (despite a higher proportion of men among reported violators), and their need for firewood is dismissed as a mere women's issue. On the other hand, since men require fodder for animals, this is accepted as a household concern.

For the politically minded, Agarwal provides an extended analysis of strategies for making CFIs more effectively serve women's interests. She examines the value of forums for women to formulate a collective interest apart from the CFI, of alliances between women on CFIs and federations of Self Help Groups, of more systematic linkages between government and village women's representatives, and of gender-progressive civil society organizations. But she notes that the problem of household energy cannot be solved at the local level. Therefore, her ultimate concern is to empower women for full participation in policies that will bring about the needed shift away from dependence on limited forest resources to alternative sources of fuels, building materials and livelihoods for long-term environmental sustainability.

In the course of this extremely important analysis, the book offers many memorable observations: the burdens of household energy poverty include undercooking food and in winter, heating only enough water for the husband to bathe. Men intent on stealing timber often take women along because they can threaten forest guards with the threat of reporting molestation if they are apprehended. Older women are more protective of the forest on behalf of their grandchildren than younger women needing fuel. Of critical significance to field researchers, villagers' reports on CFI issues are generally the same as focus group discussions, but quite different from records. And for those of us who are amateurs concerning forests, the book provides rich details about the products of forests, the people dependent on them and the complexities of managing them.

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A Forest for Ourselves

JOAN MARTINEZ-ALIER

BOOK REVIEW

Gender and Green Governance: The Political Economy of Women's Presence within and beyond Community Forestry by Bina Agarwal *(New Delhi: Oxford University Press), 2010; pp 488, Rs 625.*

Access to food, firewood and fodder for domestic animals is certainly not a small matter for the economy and the ecology of humans. Bina Agarwal's previous major work, *A Field of One's Own* (1994) was praised for its pioneering analysis that opened up many research and policy lines globally. Among other things, it demonstrated that women in south Asia, in all their diverse circumstances, were not on the whole barred in law from holding landed property, but this did not translate into effective rights in practice, or into full control over the land or its fruits. The risk that women face with regard to poverty and economic disempowerment was closely linked to a lack of entitlement to land and other property. Given the book's critical acclaim and substantial policy influence, Bina Agarwal became a major world figure in development economics and in economics in general, as well as in feminist scholarship. *A Field of One's Own* echoed Virginia Woolf's *A Room of One's Own*.

Community Forests in South Asia

Her current book, although on a different topic, is comparable to the previous one in its path-breaking quality, intellectual and interdisciplinary range, and depth. The author studies village forests managed by local communities in India and Nepal, with special reference to the difference that women's presence in the managing committees makes to the rules for protection, rule compliance, and the impact on conservation of these small forests (the average forest size in her Nepal sample is 34 hectares and in her Gujarat sample is over 100 hectares). These would appear to be rather small forests to Canadian, Russian and Brazilian readers, but in south Asia they are essential to the welfare of the local populations, and particularly to the women who depend on them for their daily needs of firewood and fodder, and who often know more about plant species than men. The lower the economic class of the women, the more their dependence on and their knowledge of the local forest.

Unlike *A Field of One's Own*, however, in her current book, Bina Agarwal narrows her empirical focus to only one type of property, namely, community forests in south Asia, but she also broadens her conceptual scope, not for the first time, to issues of natural resource management. We might now consider her a major world figure on the institutional economy of forests. In fact, her concern with the availability of cooking energy for hundreds of millions of rural women started early in her career, with her 1986 book, *Cold Hearths and Barren Slopes: The Woodfuel Crisis in the Third World*. This book was part of the 1980s debate on whether it was the government or the communities that could best protect India's forests. From the 1970s there were also many conflicts between local forest users and the commercial appropriation favoured by the forest department. Of such conflicts, the Chipko movement in Uttarakhand became the most famous. The debate on forest management went in favour of those supporting community management, including Bina Agarwal, Anil Agarwal, and many others. And it culminated in the launch of the Joint Forest Management in India around 1990.

The Ecological-Economic Woman

Bina Agarwal had earlier commented on women's involvement in forest conflicts including the Chipko movement, which she put in the category of "agitational collective action", as opposed to "cooperative collective action" required in the daily management of community forests. Her critique of "eco-feminism" in an article titled "The Gender and Environment Debate: Lessons from India" (1992) is well known and much quoted. The current book reiterates the argument in this article. When rural women complain about the lack of firewood, or water pollution by mining or oil extraction, or mangrove uprooting by the shrimp industry, such complaints do not arise because of a biologically-based empathy of women with nature (compared to men). Rather they arise from the fact that women depend more on non-market access to environmental products and services because they have less access to private property resources, such as land, and because of the gender division of labour which makes firewood or water women's work. Against the "chrematistic" man, we find here the ecological-economic woman.

This calls to mind Pavan Sukhdev's, Haripriya Gundimeda's and Pushpam Kumar's notion of "the GDP of the poor" introduced in the United Nations Environment Programme (UNEP) reports on *The Economics of Ecosystems and Biodiversity*. These reports favour giving monetary values to ecosystems services, parallel to the calculations of net present value of forests mandated in India where forests disappear because of dams or open cast mining or road building. It is argued that such valuation increases the social visibility of the destroyed resources. But, as shown in the case of the Niyamgiri hills in Orissa and elsewhere in India and other countries, the presence of indigenous populations, powerful social or political groups, and the recognition of the intrinsic ecological values can, even without monetisation, bring the issue of conservation to public attention. Forests provide essential livelihood services, not just firewood but fodder, tubers and medicinal plants. These benefits are not captured by the gross domestic product accounting but they constitute the "GDP of the poor", and especially of poor women. Forest management committees are institutions that allow the expression of many non-monetary values.

The book focuses on the difference that the presence of women brings about in the governance of forests, an issue which surprisingly had not been analysed or empirically examined by the school of researchers on the management of common pool resources. The book carries an enthusiastic endorsement by Nobel Laureate Elinor Ostrom, the doyenne of this school. Bina Agarwal works with primary data she has collected, using statistical samples of village forest committees, some of which have no women, others have one or two, yet others have more than two, and some have only women. Moving beyond her earlier work on women's "participatory exclusion" (a term she coined) in forestry institutions, she uses her data to rigorously test the impact of women's presence in the forest committees on their decisions and outcomes for forest conservation and equity. What proportion of women is needed in a committee (the "critical mass") for them to feel empowered enough to attend meetings, speak up, and become office-bearers? Does the presence of landless women bring more intensive use of the forest but also a stronger ban on large timber extraction? Can forest committees in south Asia help us verify the assertion (found in research on parliaments or municipal councils in other countries) that there is a threshold ratio (one-third) which allows women to be assertive and take up new issues? Agarwal's analysis statistically shows that having a 25%-33% representation of women is indeed important for them to participate effectively in the committees.

The data Agarwal uses (from three tribal districts of eastern Gujarat and three districts from Nepal's middle hills) was obtained with great care and difficulty (the Maoist insurgency was on in Nepal). But the author's knowledge comes also from extensive fieldwork over many years in other areas in the 1990s where she travelled alone with support from ubiquitous non-governmental organisations. This earlier fieldwork alerted her to many issues which she then pursued in the more detailed fieldwork undertaken through two field teams and many personal visits to the sites. Questionnaires used for focus group discussions and interviews with key individuals, including foresters, formed the basis of the analysis. The condition of forests was assessed using four measures for Gujarat and two for Nepal, including assessments by villagers, foresters, researchers and satellite data calibrated for individual forests to examine change over time. In addition to the quantitative analysis, some 40 pages of qualitative excerpts from the interviews and focus groups are distributed in the chapters, making the book accessible even to the general reader. Rich in empirical material and extremely well written, the book also contains some poetry and poignant descriptions.

Energy Security for the Poor

The book has no agent-based modelling, but a large number of heterogeneous agents are among the cast of actors, divided not only by gender but also by age, class and caste, whose impact is examined through regression analysis to answer many questions. For instance, does the presence of older women and men in the forest committees make for stricter rules of protection? Does the presence of women favour leniency for those who infringe the rules? Which punishments are more effective and for which offences? Does the presence of brahmins affect rules and conservation in Nepal?

The author rigorously scrutinises preferences for different forest uses held by different agents (as the economists call them), placing this within the more general question of the role of rural communities across the world in halting the degradation of natural resources. New institutions evolve to cope with resource crunches, but many social divisions (gender, class, caste) are ancient. Institutions are products of history, random to some extent, and shape economic behaviour and outcomes. Today, on several counts (as with women's exclusion or token presence in many forest committees) it is necessary to change such institutions towards equality, both for justice and for effectiveness. This seems to be Bina Agarwal's position in the *Methodenstreit* – between the new and the old institutional economics.

The last section of the book (which is divided into three sections) examines at some length the implications of the author's findings for policy, both in strengthening women's voice locally and for making it audible to government policymakers. Here Agarwal also discusses how policies can achieve cooking energy security for rural poor women, by moving to cleaner biogas plants while recognising the reality of India and Nepal's continued dependence on firewood but also focusing on the importance of moving to alternative fuels which are cleaner and less health damaging. The rapid pace of India's economic growth will change the energy scenario in due course but for the time being firewood will remain a basic source, while biogas could become an alternative. Although kerosene and liquefied petroleum gas (LPG) are increasingly available, and their use would alleviate the task of cooking, they are too expensive, while technologies of solar energy are making slow progress. The cost of 12.5 kg bottle of LPG is about €12 in Spain, which is equivalent to the wages of a rural worker for two hours of work. At India's present growth rate, it will still be 20 or 30 years before LPG becomes affordable in the countryside for everyday use. We might also ask what impact the effects of population increase over the last 60 years has had (an aspect the author does not discuss), or the effect of depopulation of the countryside in the decades to come.

As can be seen, this book is an immense contribution not only to ecological economics but also to political science, rural sociology, and energy studies. Not surprisingly, Bina Agarwal was voted in 2010 the president-elect of the transdisciplinary International Society for Ecological Economics. Overall, *Gender and Green Governance*, like Agarwal's earlier book *A Field of One's Own,* is a landmark contribution with depth and insight. In moving from field to forest, and from private property resources to the democratic governance of common property resources, she fills, as she also argues, two critical gaps in women's economic empowerment, one relating to command over private property and the other relating to command over public resources and institutions.

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