

# THE OTHER FUEL CRISIS

## An Interview with Bina Agarwal

**BINA AGARWAL IS A PROFESSOR OF ECONOMICS AND DIRECTOR OF THE INSTITUTE OF ECONOMIC GROWTH AT DELHI UNIVERSITY IN INDIA. SHE HAS TAUGHT AT HARVARD AND PRINCETON, AND HER BOOK *A FIELD OF ONE'S OWN* PUT WOMEN'S LAND RIGHTS AT THE CENTER OF DEBATES ABOUT ECONOMIC DEVELOPMENT. SHE DISCUSSED HER NEW BOOK *GENDER AND GREEN GOVERNANCE* DURING A VISIT TO HOUSTON IN OCTOBER 2010 TO DELIVER THE GRAY/WAWRO LECTURE ON GENDER, HEALTH, AND WELL-BEING AT RICE UNIVERSITY. AFTER HER TALK, SHE SPOKE WITH EDITOR RAJ MANKAD.**

**RAJ MANKAD:** At the beginning of your new book, you quote a near landless woman in the Uttarakhand area of India who implicates herself in the country's deforestation. She says, "Of course it pains me to cut a green branch, but it also pains me when my children's stomachs hurt if there is no firewood to cook them a meal." Tell me about that predicament.

**BINA AGARWAL:** In most of South Asia and sub-Saharan Africa, rural households still use firewood as their main source of domestic fuel in addition to crop waste and cattle dung. What this means is that they depend on local forests and commons. Women recognize the negative effect on the local forest, but at the same time they have a responsibility toward their children and their family for cooking the meals.

**RM:** Can you talk about the birth of forestry practices in India in the 1970s and 1980s?

**BA:** In the 1970s, there was the oil crisis. At that time, there was also another energy crisis, the quiet firewood crisis. It was quiet because it happened within homes, and newspapers didn't carry large stories about it. At that point satellite imagery began showing areas, which were supposed to be forested, that had rather little canopy cover.

In the 1980s, governments across the world in developing countries launched what were called social forestry programs. The idea was that you planted more trees on government land, private land, or community land. In South Asia, eucalyptus trees were often planted without any discussion

with communities, and you found that often these trees didn't survive because people didn't take responsibility for them. I wrote a book called *Cold Hearths and Barren Slopes* in the mid-1980s in which I argued that social forestry programs were neither social nor forestry, because forests are much more bio-diverse and not just single species.

Toward the end of the 1980s, there was a gradual realization in many parts of the world that communities could protect forests better than government departments if they were given responsibility for reviving degraded forestland. In 1990, the government of India launched the Joint Forest Management Program, where it gave over degraded forestland to local communities. You found the same thing happening in Nepal.

I traveled and looked at many of these community forestry groups in the late 1990s and early 2000s. I found that in most cases forests protected by communities were reviving. Brown patches were becoming green. That was the positive side of the story.

The negative side was that if you close off a forest in this way, women in poor households who are dependent on degraded forests for their daily firewood needs got blocked out. Instead of two meals a day, you might end up cooking only one, or eat uncooked food, which can be toxic in a tropical context.

**RM:** What is the solution?

**BA:** The long-term answer is to move away from firewood. In several regions already in India and also in China, you now find biomass plants. If you're an agricultural family, you've got corn stalks and leaves. You allow them to ferment in an enclosed environment with some water, and what is produced is methane, carbon dioxide, and a slurry which is very rich manure. [The methane replaces the fuel once provided by firewood.]

**RM:** And change to the way forests are managed is a solution in the short term?

**BA:** One of the paradoxes I noticed when I was traveling through India and Nepal looking at all these community forestry efforts was that women were often not part of the decision-making process. Communities would set up a two-tier structure—a general body where all village households could become members, and an executive committee of nine to 15 members who made most of the decisions about how to protect the forests, what to extract, and what rules to make. Who becomes a member of the executive committee is a key factor.

**RM:** As an economist, you analyzed the empirical evidence.

**BA:** Yes, I collected

primary data in India and Nepal, because such information didn't exist. I couldn't just copy it out of books.

**RM:** What did that collection of data involve?

**BA:** I traveled to many, many villages initially. Remember that India has 22 official languages, so I also had to have somebody who could translate.

**RM:** Your empirical results indicate that forestry groups with higher numbers of women on the executive committee do perform better.

**BA:** And my results show that if you include landless women in management, then you have different rules that are more women friendly. You allow some extraction of firewood, fodder, and other items, which is sustainable. Also you find that such a group has good conservation outcomes. So one of the lessons is that allowing some degree of extraction from the forest doesn't necessarily lead to poorer conservation. Of course, the reasons for that are also partly the need to remove incendiary matter from the floor of the forest.

**RM:** Could you describe one of these forests?

**BA:** In Gujarat, teak is a very important tree. They also have mahua trees which flower seasonally during parts of the year when there is rather little available in the agricultural fields. People use the flowers to cook as vegetables. They also use the mahua's seeds and pods. The flowers can be used to ferment and extract liquor as well.

**RM:** One of my favorite descriptions of the forest experience comes at the end of your book: "If you took a satellite view of the South Asian landscape, we would see millions of scattered settlements and forest segments, some dense with trees, others with barely a tree standing. If, however, we lay on our backs on the forest floor and looked up, we might see pools of silver shimmer, a spider weaving its gossamer threads across spreading branches, bridging them." You use that spider web as a powerful metaphor.

**BA:** In order for village communities to have more say in the government, they need to also have links, just as a spider's web has. You find that federations of forest user groups have been forming, where each group in each village links up, and they become like a web moving upwards at the district level and then at the state level. So, for instance, if you're a poor woman seeking firewood, you can draw only so much from your local forest. If you want to move toward clean cooking fuel and alternatives, then you want to have a voice at a higher level. I do believe it is possible. In Nepal and in some parts of India, it is already happening.

IT WAS QUIET BECAUSE IT HAPPENED WITHIN HOMES...