

Listening and watching saves energy and money

Projects to improve woodfuel security often fail because the planners know too little about the context of the problem. Illustrating this by the woodfuel economy of Gambian women, Chris Howorth urges: "listen to what people say and watch what they do" before you, as project planner, do anything.

Chris Howorth

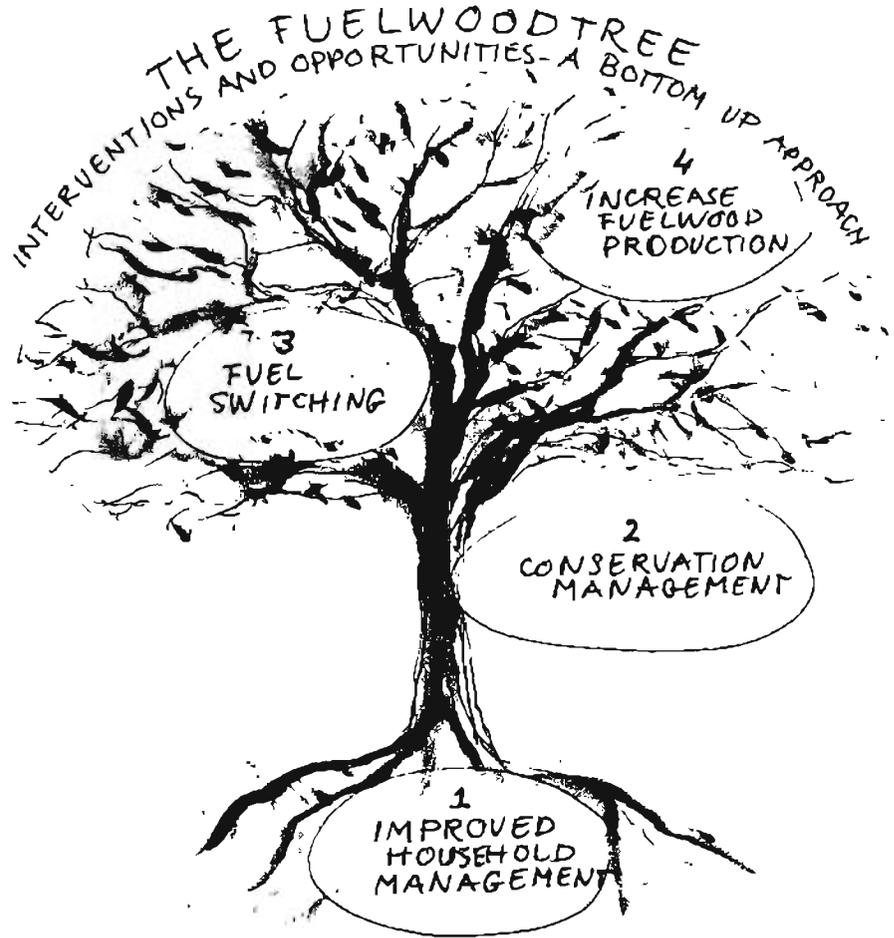
When projects are planned to improve woodfuel security, one assumes that they will benefit both the consumers and the environment. However, this is often not the case. Many woodfuel projects have not only harmed the environment (eg. large-scale monocropped plantations); they have also misinterpreted the real problems and so have limited success. The reasons why woodfuel interventions are ineffective are many, but a major reason is because the context of the problem has not been understood.

Is there a woodfuel crisis?

The woodfuel situation in The Gambia is typical for most of sub-Saharan Africa. Demand for woodfuel outstrips supply and, in some areas, fuelwood is becoming scarce and prices are increasing. There is large-scale clearing for farming with little replanting of trees. Per capita woodfuel consumption has declined markedly over the last decade. But does this mean a woodfuel crisis?

This was a question not clearly addressed in The Gambia before intervention. In 1986, there was a programme concentrated on substituting groundnut-shell briquettes for woodfuel. The briquettes created too much smoke, availability was poor, they burnt badly and were cumbersome to use. Understandably, uptake was poor, and the programme was disbanded in 1988.

A stove programme, directed by the Department of Community Development with support from Intermediate Technology Development Group, has been going on for 8 years with varying levels of success. In 1985 around 2000 portable metal Noflie stoves were sold in the Greater Banjul area (the capital city), and the number is now believed to be much higher. The stove programme in the urban areas was aided by the fact that, here, wood is relatively expensive.



In the rural areas, the stoves generally failed because wood is still a free good. The project is about to end just as it is beginning to succeed in the urban areas.

Thus, the woodfuel interventions of switching fuel and introducing more efficient technology (improved stoves) have been tried and abandoned. But, as wood consumption continues to decline, what is happening in urban households in The Gambia?



Reactions to city life

Cooking habits change when people move to town: breakfast is often omitted, the afternoon meal is cooked later in the day, and a big evening meal is given less importance. In Serekunda, the largest urban area, wood consumption is decreasing not because of a felt shortage of wood, but as a cultural reaction to city life. Here, most women who conserved fuel did so habitually, especially if they had lived in town for a long time.

Reactions to woodfuel shortage

In Brikima, the third largest urban area in The Gambia but with a semirural character, woodfuel shortages are

more apparent than in Serekunda because:

- expansion of cropping has seriously depleted the wooded area around Brikima and limited the ability to gather free wood;

- there is more emphasis on traditional extended families and habits of eating large family meals 3-4 times a day;

- incomes in Brikima are lower than in Serekunda, and wood demands a higher proportion of that income.

In Brikima, cooking habits have changed because of these shortages and not because of urban life style. However, the changes have been much the same: less meals are cooked, one is omitted or eaten cold, less wood is used, and sometimes faster-cooking foods are eaten.

Woodfuel shortages are perceived more acutely in Brikima than in Serekunda. Although women in Serekunda comment on the sharp price increases in wood, their feelings of hardship are not like those in Brikima. Women in Brikima complain about price increases, wood shortage and the inferior quality of wood, and often refer to how they used to cook - and eat - well before the shortages.

Economising on woodfuel

Whether due to city life style or woodfuel shortages, the fact remains that women are actively managing their household economies. They are responding to hardship individually and creatively, with innovative techniques and without external assistance.

Firstly, women manage to use less wood more efficiently. Because they can get less wood, they use it more carefully: they spend more time over the fire, ensuring that flames are direct and not wasted outside the cooking pot and that every scrap of wood and charcoal remaining from the fire is saved for later use.

Secondly, they do more pre-cooking of food. Often, for the midday meal, they cook a large amount so that half can be saved and eaten in the evening. In some households, only one large meal is cooked and two parts are kept, one for the evening and one for breakfast the next day.

Thirdly, some meals are omitted, generally breakfast. This is often replaced by tea and purchased bread, or a prepared food was bought from roadside sellers.

Finally, some households saved on wood by cooking communally.

The Fuelwood Tree

To illustrate what is happening in The Gambia, look at the Fuelwood Tree. When planners identify a woodfuel shortage, the first attempt to improve the situation is usually to grow trees in plantations. This level of intervention is

in the weak top branches of the Fuelwood Tree. Plantations rarely work.

In a slightly stronger position - in the upper middle branches - is the next level: switching fuel. Conditions need to be very specific and favourable for this intervention, and incomes generally need to be high. But income in towns is rarely uniformly distributed.

Further down the tree, in a much stronger position, are conservation strategies, eg. improved woodstoves. In The Gambia, they have been successful where wood is relatively expensive and stoves are cheap and available.

At the roots of the tree, in the strongest position, is improved household management. This is the first remedial measure which women take, and does not require external intervention. It is also the most effective in terms of woodsaving, and it is the no-cost option. In the words of a roadside food seller: "It is cheap and best".

Gambian women are actively managing their household economies to cope with woodfuel shortages and price increases. These indigenous strategies, which have been ignored in designing woodfuel projects, are the single most important factor in woodfuel saving.

Women excel in woodsaving

Let's do some simple calculations. There were no successful planting schemes, and the strategy of switching to briquettes failed. Perhaps 5000 improved stoves (the efficient technology option) are now used in the urban areas of Serekunda, Brikima and Banjul. Assuming each stove saved some 5 m³ of wood per year, the programme saved some 25,000 m³ per year.

But the internal coping mechanism of improved household management, with which 300,000 urban dwellers saved some 0.5 m³ per person, conserved some 150,000 m³ of wood per year. Improved household management - thus far unnoticed - was at least six times more powerful and effective than the best external project.

What does this mean for planners? Firstly, do not assume that a decrease in fuelwood consumption calls for immediate external intervention. Secondly, do not assume processes are linear: urbanisation itself causes substantial change in cooking habits and, therefore, fuel use. Most importantly, do not presume that there is no active local management in the face of resource problems. Recognising this - and building from it - can save expensive projects. ■

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How women cope with less wood

In the Third World, over half of the firewood is collected outside of forest areas - often because there is no forest nearby. Women try to collect wood on their way back home from the farm, but increasingly they have to make special trips for it. This costs much time, and the women seek fuel substitutes and change their cooking habits.

Rwanda, in the East African highlands, is one of the most densely populated areas in Africa. Here, women are now using more banana leaves, bean plant wastes and lignified elephant grass for fuel, instead of wood. Large quantities are needed to generate heat, and they produce much smoke. In most households, only one meal is cooked per day - in some cases, one big meal for several days. The other meals are usually eaten cold. The women are cooking less beans, a major source of food energy and protein in Rwanda, and using more vegetables with shorter cooking times but lower nutritional value.

In a woodfuel project, a Rwandan counterpart and I worked with women's groups. We started with a session about how the women's environmental situation today differs from earlier times. We discussed how these changes are related to their daily life: to differences in how they farm and eat, in the availability of fuel for cooking and heating, in the way they now have to spend their time because of this.

Then the group considered how they could handle as carefully as possible the amount of firewood available to them. We discussed in detail the women's existing knowledge and strategies, such as collecting wood during the dry season, if possible; drying wood before use; putting a cover on the pot; watching the fire and preparing everything needed for cooking ahead of time, so that they don't have to leave the fire unguarded.

All these methods used by the women (but of which they were not always aware) make an important contribution to saving wood. And they are much less complicated to apply than, for instance, an improved stove.

Only if the women were really interested in exploring other ways to save fuel (they decided on the content of each meeting) did we continue with sessions on such things as building a self-made mudstove.

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