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PJW-35
Women and Cookstoves: An Update

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Dear Peter,

When I first went to Africa five years ago, forestry development projects hardly ever considered women's participation. The major forestry activity related to women was fuel-efficient cookstoves. These were intended to decrease consumption of firewood and charcoal, and thus decrease rates of deforestation. Cookstoves were the only link that many people could envision between women and forestry (PJW-6).

Since then, forestry, agroforestry, and other natural resource management development activities have been increasingly recognizing the importance of women's participation and the wide range of roles that women play in forest use and management. Some projects actively promote women's participation in forestry development activities. The number of African women working professionally in forestry development is growing, albeit slowly.

Nonetheless, improved cookstoves remain an important area of women's participation. Throughout the Sahel, the Interstate Committee for the Campaign Against Drought in the Sahel (CILSS) has helped national governments to establish improved cookstove programs and coordinate activities between different projects.

In Mali, the national cookstove program is considered by some observers to be a big success. According to estimates of the National Direction of Waters and Forests, an estimated 300,000 improved cookstoves had been diffused throughout the country between 1985 and early 1988 (Dicko and Hart 1988). It is difficult to know, however, what proportion of these stoves are still in use, or the frequency of use.

Of these stoves, most (94 percent) are constructed of banco (a mixture of manure, clay, and straw), whereas only 6 percent are constructed from metal. The banco stoves are popular in the countryside, as they can be constructed from locally-available materials and cost little or nothing. The metal stoves are more popular among urban dwellers, as they are portable and last longer.

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Why have improved cookstoves become so widespread in Mali? Three major reasons are often cited. First, in 1986, a national law was enacted that requires that all households to have improved cookstoves. This law went into effect in February 1987. Failure to comply with the law is punishable by a fine, varying from 2000 francs CFA (US$ 6.67) to 5000 francs CFA (US$ 16.67). This law is enforced by forestry agents, who can levy the fines. As with other forestry fines, the forestry agents keep a proportion of the fine collected -- which gives the agents direct incentive to fine people.

As one might expect, the law is enforced unevenly -- and more so in the countryside than in the city. This law only requires that households possess an improved cookstove -- not that it be an energy-efficient stove (many are not built to standards). Some people just acquired their improved cookstoves to escape possible fines, but never use them. (On the other hand, some people have discovered that their improved stoves -- which they originally obtained just to comply with the law -- do actually save wood: some of these people now are enthusiastic users.)

Second, due to a wide experience with different types of improved cookstoves over the past ten years, projects have determined what sorts of stoves seem to work best and are most acceptable to the Malian people. The stoves promoted now -- whether made of banco or of metal -- are designed for one pot, and sized to fit a particular size of pot. (Two-pot stoves with chimneys are now no longer promoted, as they often consume more, rather than less, wood than a traditional fire. Some people still prefer this two-pot model, however, because of its smoke control.)

Third, numerous organizations and development projects in Mali promote improved cookstoves. A National Consultative Committee on Improved Cookstoves oversees and coordinates all cookstove-related activities. Under the jurisdiction of the National Direction of Waters and Forests, this committee is comprised of representatives from several government ministries and other organizations.

The National Union of Malian Women (UNFM), a political organization that is linked to the national political party, has been endorsing the use of improved cookstoves, and publicizing the cookstove law. A metal stove developed by the Solar Energy Laboratory (LESO), in conjunction with a Volunteers in Technical Assistance (VITA) project, has been publicized and sold by UNFM.

With chapters all over the country, UNFM can mobilize women for meetings. These meetings are used to contact women about improved cookstoves. UNFM also has a rural women's training center located in Ouellessesbougou, 75 kilometers south of Bamako. At this center, rural women are trained in various development activities, including the construction, maintenance, and use of banco stoves. These women then return to their villages, where they train other village women. In this region of the country, reportedly a high proportion of rural households have and routinely use improved banco stoves.

In the past, some Peace Corps volunteers worked on disseminating appropriate technology, primarily improved cookstoves. Although Peace Corps-Mali is now phasing out appropriate technology positions for volunteers, all Peace Corps volunteers in Mali still learn how to build banco stoves. These volunteers can then build stoves as a "secondary activity" -- either for their own use, wherever they end up living, or teaching their Malian neighbors and colleagues how to build stoves.

Numerous bilateral and multi-lateral forestry projects have an improved cookstove component. The United Nations Sudano-Sahelian Office (UNSO) project around Kayes, the Dutch-funded Village Woodlot project in Segou, the FAO project in Koutiala, and the Swiss forestry project in Sikasso all have stove components. Other projects combining reforestation efforts and improved cookstoves are being undertaken by non-governmental organizations (NGOs), such as Groupe Action Nord-Sud (GANS) [Group Action North-South], which works in the Koutiala region, and CARE International, which is working in Koro, Djenne, and Timbouctou.

Many forestry project personnel freely admit, however, that the current law requiring cookstoves -- and risk of fines -- makes it somewhat difficult to promote these stoves. These projects generally help farmers and other rural residents grow trees to meet their needs. As such, the projects are trying to reorient Malien forestry agents, away from acting as rural police more towards serving as extension agents.

Some project personnel consider the law to be detrimental, as many people resent the forestry agents for being able to walk into their homes and fine them if they lack stoves. Apparently the National Committee for Cookstoves is aware of this negative impact of the law, and is seeking ways to mitigate its harmful impacts. In addition, some foresters believe that forestry projects are not suitable for promoting cookstoves, as the forest project personnel generally have no training or expertise in this area of appropriate technology.

German bilateral assistance, Gesellschaft fur Technische Zusammenarbeit (GTZ), is supporting a large energy sector project and an improved stove project. The improved cookstove project, which works in conjunction with the Ministry of Social Affairs, promotes primarily improved metal stoves made from recycled metal. These stoves are cheaper than the UNFM/VITA stoves made from new metal. The project is selling an average of 1000 stoves per month. The project staff will also teach interested people how to build a banco stove. The GTZ project is focusing its extension efforts on three urban areas -- Bamako, Segou, and Mopti, and plans to undertake pilot efforts in one rural zone around Djenne.

The GTZ project employs women extension agents to work with women. Usually meetings of women who live in a particular neighborhood are organized by the local UNFM chapter. The staff extension agents will have a discussion meeting in the evening. This is followed, the next morning, by a cooking

demonstration using a traditional stove, an improved metal stove, and an improved banco stove. The amount of wood used in each stove is measured and compared. The improved metal stoves are then available for women to purchase. Commercial stove outlets have also been set up, but most stoves are purchased at the demonstration sessions.

The project extension agents have also done some follow-up surveys, to find out how the stoves are being used, and what problems have been encountered. A large campaign has also been launched, using the national theater troupe, television and radio spots, billboards, and other means of publicity. The GTZ stoves all have a special sticker -- like a "Good Housekeeping Seal of Approval" -- indicating that they are more fuel-efficient than traditional stoves. Due to the GTZ project's advertising and the lower prices of their stoves made from recycled metal, interest in buying the stoves made from new metal, which UNFM was promoting, has dropped off.

In driving around Bamako, many billboards advertising improved cookstoves. One, for example, shows a distressed woman cooking over a traditional fire, with smoke blowing in her face, whereas another woman and her husband stand smiling next to an apparently smoke-free improved cookstove. In some markets merchants have signs announcing the availability of improved stoves, next to which are stacks of the stoves in varying sizes.

Despite all the work that has been done in Mali over the past few years on improved cookstove use, much is still not known. Which sorts of social groups are more likely to buy or build which types of stoves? To what extent do women make decisions on stoves and to what extent are such decisions made by men? How much do people use their stoves? How do cooking practices, such as use of pot lids, influence fuel consumption? What are the impacts of the growing urban population's use of firewood on the rural areas?

As part of the Energy Sector Management Assistance Program (ESMAP) of the United Nations Development Programme and the World Bank, an Energy Sector Strategy is to be developed for Mali. A team of consultants, both Malien and expatriates, will be undertaking a series of background studies over the next six months. They will conduct a series of surveys on urban household energy consumption, energy consumption in the informal sector, and fuelwood provision from the rural areas. They also plan to examine the social and technical acceptability and feasibility of alternative fuels, stoves, and lamps. The ESMAP studies will also examine the economic and financial aspects of different energy alternatives.

Many people feel that the only long-term answer to current trends of fuelwood use is a switch to alternative fuels. Among urban residents in Mali, a significant minority already use bottled gas for cooking, and use of kerosene lamps is widespread. Billboards and depots for bottled gas are also quite widespread in the city. Wider use of these alternatives is constrained by the high purchase price of the lamps and stoves that use substitute fuels.

Furthermore, the price of fuelwood is very cheap -- only 14 francs CFA (US $0.05) per kilogram. After sixteen years of drought, many rural areas of Mali have a lot of dead standing trees. Fuelwood also seems to be cheap in

Mali as many rural people have learned that collecting, cutting, and selling wood is a good way to earn money. Unlike some other African countries, thus, the fuelwood supply is not dominated by a few large merchants who can control the prices. In Mali, rather, lots of small suppliers compete with one another and keep the prices down.

While a decrease in the urban consumption of fuelwood would have environmentally beneficial impacts in the countryside, many rural residents rely upon their sales of firewood and charcoal as sources of cash income. In some regions, for example, women now collect and sell firewood -- as years of drought have decreased the abundance of shea-nuts, nere seeds, and other forest resources that were formerly important sources of women's income. Correze and Sow (1989) report that a census in Kita found that of 250 commercial cart-loads of firewood and charcoal, 60 percent belonged to women.

The impact of cookstove programs on women remains an issue that has not yet been well-explored. Women's participation and gender issues in energy use and supply will be specifically examined in the upcoming ESMAP studies. Efforts will also be made to ensure that women participate actively in the development of the national energy strategy.

For the series of case studies on women's participation in forestry-related activities in Africa (see PJW-30), a case study will be prepared of women's participation in the GTZ improved cookstove program in Mali. This case study should provide an interesting comparison with others in the series, as it will have more of an urban, rather than rural, focus.

A provocative review of the impacts of environmental degradation and desertification on Sahelian women has been recently compiled (Monimart 1988). The author suggests that issues of deforestation, fuelwood scarcities, and improved cookstoves are interrelated in many ways that are not commonly considered. As areas become environmentally degraded, due to a loss of trees, agricultural productivity declines, and the men tend to migrate in search of work. Social cohesion in the rural areas begins to break down. Women work more now than formerly. Women find it more difficult to get firewood, water, and other resources. With agricultural yields declining, more work is required to produce the same amount of food. As the men are leaving the rural areas, the workload on women is intensified.

Some of these wider interconnections warrant more careful examination. As Monimart (1988: 134) argues, the first domestic energy that should be economized is that of women. Not only are rural women's lives affected by these changes, but also those of urban women -- and the two are intertwined.

Monimart's paper was prepared as a background issues paper for an upcoming conference, Recontre pour un Nouvel Equilibre Socio-Economique en Milieu Rural Sahelian (Meeting for a New Socio-Economic Equilibrium in the Rural Sahelian Setting). This conference will bring together donors, government officials, and grassroots organization representatives from Sahelian countries. This conference is being sponsored by the donor group, the Club de Sahel, and will be held in Segou, Mali.

Calculations have suggested that fuel savings can pay for the cost of a stove within a few months. This fact suggests a wide variety of questions. If urban women save fuel, and therefore money, using improved cookstoves, how do they spend that saved income? Do they spend more money on food, perhaps improving family nutrition? If cookstoves or alternative fuels are able to dramatically reduce the demand for fuelwood, will that reduce the drudgery that rural women face in their daily lives, by decreasing competition for their fuel supplies? Could a greater abundance of trees in the Malian landscape reverse current trends of environmental degradation, improve agricultural productivity, and diminish migration out of the rural areas?

Are these improved cookstove programs worth their cost? The cost of producing and disseminating cookstoves has been relatively expensive to date. But high initial start-up costs are inherent to many development activities and introduction of new technologies. The economic trade-offs, furthermore, depend upon one's perspective. What value, for example, can one put on improved health, due to reduced smoke?

If one considers the long-term ecological and social alternatives in the Sahel, improved cookstoves look more attractive. Jean Gorse, a French forester with 39 years' experience in Africa, believes that cookstoves may be more cost-effective than fuelwood plantations or village woodlot programs. Many village woodlots are so small that they might only meet the annual fuelwood consumption of one single villager.

Three big research issues yet remain. What difference does improved cookstove activities make on forests and the fuelwood supply? What are the impacts of these programs on the lives of individual women? How are they related to larger issues of environmental management and sustainable development? I hope that the upcoming studies in Mali will shed some light on these important questions.

Sincerely,

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