



## Understanding Alternatives to Forest Use in Malawi

Poverty and environmental degradation are significant problems in Malawi. Floods and droughts are common in this part of southern Africa and approximately 14 percent of the adult population is infected with HIV/AIDS. These barriers to economic stability are especially problematic for low-income households who are already limited in their opportunities to generate income. Lack of education, equipment, and money has forced many families to harvest local forest resources to survive. Open access forest resources are an appealing source of income because they are convenient for those with few other livelihood alternatives. This dependence on forest resources has left Malawi with the highest deforestation rate in southern Africa and has trapped low-income families in a cycle of increasing poverty and environmental degradation.

While forest use seems like a viable alternative to farming and other endeavors, it actually provides low returns compared with the time and labor it requires. There is an increasing concern that low-income families may increase their poverty by devoting their time and labor to the exploitation of forest resources. To understand the impact of reliance on forest resources for income, SANREM CRSP researchers conducted surveys in three villages to characterize household reliance on forest resources for income. Based on an understanding of these families and their economic situations, researchers suggest alternatives that provide both economic and environmental benefits to low-income households and Malawi as a whole.

### Characterizing household forest use

Using data from surveys conducted between 1999 and 2000, SANREM CRSP researchers identified the characteristics of households who were most likely to use forest resources to generate income. They found that forest use was most likely in households where the head of the house was an older (over 45), less educated male. These households had fewer skills required for non-forest employment so their income alternatives were limited. These households relied on a range of products and opportunities for income generation because they did not have the capital to invest in other endeavors, nor did they have any



Photo courtesy of Monica Fisher

**Low-income households on the edge of forests often rely on forest resources for income.**

other alternatives for generating income.

In contrast, residents who attended secondary school derived a greater share of their income from non-forest employment opportunities. Access to education allowed these households to devote less labor to forest employment compared to households with less education. They had more time to participate in off-farm employment opportunities. Land ownership also determined a household's use of forest resources; the more land they owned, the less they relied on forest resources to generate income.

### Policy needs and limitations

Demand for forest products has been stimulated by recent elimination of agricultural subsidies, increases in tariffs on certain products, and urban population growth. This increased demand has highlighted the need to establish and improve consistent forest regulations between villages. Currently, each village in Malawi is responsible for its own forest management and access regulations. As a result, regulations are fragmented and inconsistent, with some villages having no regulations at all. These inconsistencies create confusion among forest users and lead to over-exploitation of forests.

Policy makers are limited in their options for alternatives

that both protect forest resources and the villagers they represent. Because low-income households use forest resources as a last resort, simply restricting access to the forests will only hurt these families. To be effective, new policies will need to account for the driving forces behind increased forest use.

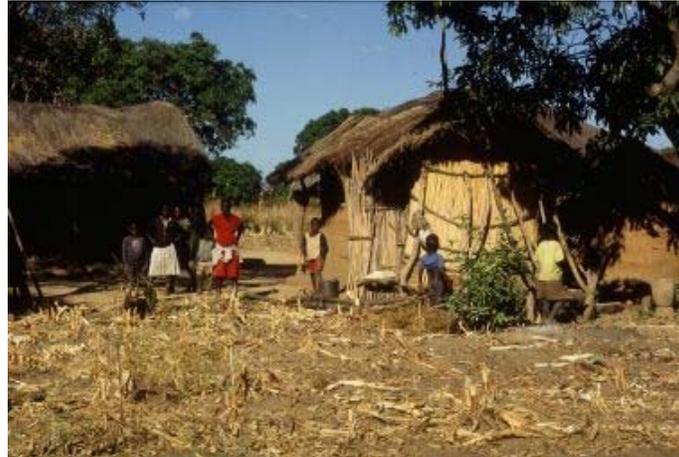
### Investigating economic solutions

To shift income dependence away from forest resources, policy makers need to develop alternatives to stabilize and increase rural household income. One such alternative may be a free-inputs program such as Malawi's Starter Pack Scheme (SPS), which supplies households with a package consisting of hybrid maize seeds and chemical fertilizer. This program has been run twice in Malawi in 1998-99 and 1999-2000. The results of the SPS led researchers to hypothesize that households

do tend to rely on forest resources for income when they have no other alternatives; however, outside factors, such as the SPS provide a positive alternative to harvesting forest resources.

To test this hypothesis and better understand how low-income households respond to unanticipated income alternatives, SANREM CRSP researchers developed a model that applied the conditions of the SPS to the survey data. This application illustrated how households in the surveyed region would respond to similar measures if they were enacted by policy makers. Model conditions revealed that the SPS did reduce forest exploitation in rural areas and led to more sustainable forest use

practices. It also restored forest resources so that they would be more reliable during future periods of crop failure. The model confirmed that measures like SPS are important because they take into account both the short-and long-term economic stability of low-income households, which is crucial to stabilizing and increasing income.



**Reliance on forest resources for income can trap smallholder households in a cycle of economic poverty.**

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**Using forest resources to stabilize income can negatively impact the long-term economic stability of low-income households.**

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Facing challenges to economic and environmental stability, policy makers should consider other economic stabilization measures that include:

- expanded access to credit to enable the poor to build up a stock of liquid assets or borrow in difficult times
- safety-net transfer programs
- increased investment in education and profitable, non-forest employment opportunities

### Looking ahead

Over-dependence on forest resources is a characteristic of low-income households with few other economic alternatives. This economic instability makes it hard for low-income households to cope with health problems such as HIV/AIDS and environmental limitations because they are already burdened by poverty. While increased forest restrictions have been proposed as a possible solution to forest degradation and the resulting poverty cycle, simply placing protective restrictions on forest use is not the answer to this problem.

A long-term solution to the alarming rates of forest degradation in Malawi must account for the cycle of poverty that has trapped many low-income households. This cycle is the driving force behind forest use and degradation. By recognizing

and understanding the correlation between poverty and use of forest resources, policy makers can devote their attention to programs that establish sources of sustainable income, as well as protections against other significant challenges to stability. ■

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### For more information, see:

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