The HIV pandemic is deeply entrenched in the countries of southern Africa and has had dramatic effects on rural livelihoods. This article examines the role of forest resources in the response to HIV and AIDS, particularly in terms of herbal medicines, energy and food. It is based on the findings of studies commissioned by FAO and carried out in 2003 to examine the impact of the pandemic on the utilization of woodland resources in the miombo woodland zones of Malawi (Kayambazinthu et al., 2005) and Mozambique (Sitoe, 2005). Data collection methods included a household questionnaire survey, focus group discussions, transect walks, and key informant interviews. The results show that HIV and AIDS increase the dependence of communities in woodland zones on forest resources and that the pandemic has environmental and natural resource management implications. The article highlights some forest policy and programme interventions that might help lessen the impact of the pandemic on natural resources and the role the forest sector can play in the multisectoral response to HIV and AIDS.

KEY FINDINGS
While it is not easy to pin down a causal relationship between HIV and forest degradation, it is clear that in times of livelihood crisis, poor rural communities tend to increase their dependence on forest resources as a key part of their coping strategies. The HIV pandemic has intensified the crisis of livelihoods (Bryceson, 2006), placing an excessive burden on woodland resources. Thus it is not surprising that in the studies in Malawi and Mozambique, woodland degradation, as evidenced by decreasing resource availability (e.g. scarcity of both fuelwood and medicinal plants), was observed in communities where HIV prevalence is high.

The combination of the high incidence of HIV-related illnesses and the scarcity of health services near the communities...
studied has led to a greater dependence on medicinal plants to alleviate some of the symptoms and conditions associated with HIV (see Box). At current prices, the treatment of HIV using antiretroviral therapy can be as high as US$200 per person per year. In poor rural communities only a few people have access to this therapy because of the high price, poor health infrastructure and distance from the nearest health centre. Medicinal plants, however, are easily accessible products for most people. Thus it is no wonder that their collection and use has increased, as has their price.

This dependence on herbal remedies has led to overharvesting of medicinal trees and shrubs. Respondents indicated that, in comparison with the years before HIV and AIDS, they could now find few such trees within reasonable walking distance. Thus medicinal plant resources are becoming scarce at a time when their use is increasing, in urban as well as rural areas.

The survey found that the higher mortality rate of adults has increased the demand for fuelwood, in part to prepare food for increasingly frequent funerals. People now have to trek long distances to collect enough wood for fuel. Similarly, HIV has complicated existing livelihood crises resulting primarily from droughts, lack of fertilizer and poor marketing services. Communities surveyed indicated that the impact of HIV and AIDS on household labour has intensified dependence on forest food products (fruits, roots and tubers, vegetables).

Taken together, these findings show that HIV is contributing to deforestation and forest degradation. This process has negative implications for communities in general and for HIV-affected households in particular, as such households are likely to experience greater distress from loss of woodland resources. They have to increase the time and amount of labour spent collecting forest products or spend an inordinate amount of cash to buy them.

The relationships between HIV and household woodland activities (specifically collection of fuelwood, medicinal plants and other non-wood forest products) appears to correspond closely with the stage of the disease. Labour constraints brought on by illness and care-giving may prohibit household participation in collection of woodland products during the symptomatic stages of the disease. However, as the epidemic advances and mortality rates increase, the collection of woodland products in affected communities appears to increase, as the immediate economic impact of adult illness (e.g. health expenses) makes some households more dependent on commercial woodland activities to provide income. The extent to which HIV affects woodland livelihood activities also depends on other factors such as gender, household

Weak health infrastructure and pervasive poverty continue to pose problems for the unprecedented challenge of providing and administering antiretroviral therapy in southern African countries. In such resource-constrained settings, local communities are obliged to rely on traditional remedies for the management of HIV and AIDS, and traditional medicine is being institutionalized in the response to the pandemic. The World Health Organization (WHO) has advocated the inclusion of traditional healers in national AIDS programmes since 1991, and national ministries of health are recruiting traditional healers in collaborative efforts to combat the disease.

Herbal remedies have been observed to improve the quality of life for people living with HIV. They slow the progression of the disease by helping to control infections such as candidiasis (thrush), herpes simplex (which was also recently recognized as a key factor in transmission of HIV in Africa) and herpes zoster (shingles), and they provide relief of appetite loss, nausea, fever, diarrhoea and cough. Recent research suggests, however, that some herbal remedies may inhibit antiretroviral therapy if used in combination with it, and further research is needed on their efficacy.

Herbal treatments are frequently derived from woodland resources; they typically include roots, barks and leaves of plants. In some areas, mushrooms are heavily used. Honey and beeswax are commonly used in the application of traditional treatments. Local uses of these remedies and current institutional efforts to scale up support for their use need to be managed to avoid compromising the sustainability of the woodland resources.
composition, household wealth, social safety nets, labour requirements, access to markets and of course access to forest resources (FAO, 2005).

When a crisis such as an illness or death occurs, affected households are more likely to obtain quick cash for medical expenses by selling domestic animals such as chickens and goats or by working within the community for wages than by collecting non-wood forest products such as mushrooms or honey. However, these products provide food supplements for households and/or an opportunity to increase income, which can also be used to cover unexpected expenses in times of crisis. Woodland activities are important in diversifying livelihoods and provide a buffer against shock for households in general, not only those affected by HIV.

Female-headed households are the most vulnerable because of their reduced participation in income-generating activities and often enter a spiral of deepening poverty (Bryceson and Fonseca, 2006). Given the disproportionate impact of the epidemic on women (in terms of HIV infection and socio-economic impacts) and their traditional roles in woodland activities (e.g. collection of fuelwood), enhanced understanding of gender issues needs to be a priority in future efforts.

The studies reported here were exploratory. Their findings regarding the impact of HIV on woodland resources are instructive; however, they tell only a part of the story. Questions remain, notably about how HIV is affecting forest management as a result of the death of forest rangers and extension officers. Furthermore, in an environment already characterized by severe livelihood insecurities, it is difficult to distinguish to what extent the impact of HIV is peculiar to the disease and to what extent it is part of the wider context of societal crises including other epidemics such as tuberculosis and malaria. In short, it is impossible to overemphasize the need for further research into the linkages and interactions between management and use of forest resources and social crises including contemporary epidemics.

WAY FORWARD: HOW SHOULD THE FOREST SECTOR RESPOND TO HIV/AIDS IN SOUTHERN AFRICA?
The forest sector undoubtedly has a role to play in the prevention, care and treatment of HIV and AIDS and the mitigation of their impact. Forestry institutions and their human resources, particularly forest managers working at the local level, can and should play an active role in the response to HIV. Forest products can play a part not only in the care and treatment of HIV-related illness, but also in income generation and other livelihood activities that can help alleviate the impact of the disease on households.

To mitigate the impact of HIV and AIDS, one component of interventions in the forest and natural resources sector should be directed towards supporting the sustainability of those forest benefits on which households and communities affected by HIV rely. Such interventions should also aim to alleviate those interactions that aggravate the impacts of HIV and AIDS on households (e.g. household labour reductions and scarcity of forest products to meet subsistence needs, in particular fuelwood).

More intensive forest management to increase productivity and accessibility of forest resources is in itself a mitigation strategy (FAO, 2004). Within communities, there is a need to improve the management of natural woodlands for multiple purposes. However, it is also necessary to lighten excessive pressure on forest resources, either through an increase in the supply of wood and non-wood forest products (through forest planting, cultivation of medicinal plants and transport of wood from greater distances) or a decrease in the demand (through the use of more efficient wood stoves, possibly the switch to other fuel types and alternative income-generating activities that may not be woodland based).

Increasingly, ministries responsible for forestry and natural resources are showing an inclination to formulate sectoral strategies to address AIDS-related issues. The Government of Malawi has recently embarked on such an exercise. This is a step in the right direction given that it allows the entire sector to assess its vulnerability to HIV and AIDS and to plan and implement mitigating activities based on the sector’s comparative advantages.

CONCLUSION
HIV and AIDS have dramatically changed rural life in sub-Saharan Africa, where close to 70 percent of the popula-
tion is rural. Most households remain poor, with limited resources to fight the pandemic. Rural areas are also absorbing a significant part of the burden of urban AIDS cases as those who fall ill in urban areas return to rural areas to seek family care.

Persistent shocks such as HIV and AIDS have long-term structural impacts for key facets of the livelihood system – availability of labour and expertise, accumulation and distribution of capital, flow of remittances, people’s sense of long-term security and outlook for the future, use of natural resources (e.g. forest products for medicinal purposes) – with negative system-wide consequences that resonate far beyond the period of the shock.

The advent of HIV and AIDS found rural southern Africa already in a precarious state of declining small-scale agriculture and increasing utilization of natural resources, particularly forests and woodlands. The pandemic has intensified these pressures. It is clear that affected communities cannot overcome this conundrum without clear strategies and support from their governments. The studies discussed here have highlighted some policy proposals for addressing the impact of HIV and AIDS and helping households to diversify their livelihood base.

Bibliography


