

HIV/AIDS: A Risk to the Social and Economic Sustainability of Forestry in Sub-Saharan Africa?

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COMMENTS

HIV/AIDS: a risk to the social and economic sustainability of forestry in sub-Saharan Africa?

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SUMMARY

The purpose of this paper is to analyse what we know about the impacts of HIV/AIDS on the forest sector in sub-Saharan Africa and summarise the implications for policy and programming. A review of the evidence base on the effects of the epidemic and an analysis of the interface between HIV/AIDS and forestry indicate that forestry has an important role to play in preventing the spread of HIV, in mitigating epidemic impacts and in addressing treatment issues. Four areas of response are proposed: a) mainstreaming HIV/AIDS issues in forest policy and programming; b) prioritising the sustainability and access of forest benefits (particularly fuelwood, food and medicine) for vulnerable individuals, households and communities; c) setting up HIV/AIDS workplace programmes for forestry institutions and industries; and d) building the capacity of forestry institutions to address HIV/AIDS through specialised training courses, curriculum revision, new technologies, improved practices and scenario-building exercises.

Keywords: HIV/AIDS, HIV/AIDS impact, forest policy, programming, HIV/AIDS response

SIDA/séropositivité: un risque pour la durabilité économique et sociale de la foresterie dans l'Afrique au sud du Sahara?

D. N. TOPOUZIS

Le but de cet article est d'analyser ce que nous connaissons de l'impact du SIDA/ séropositivité dans le secteur forestier de l'Afrique au sud du Sahara, et d'en résumer les implications pour la politique et la programmation. L' examination d'une base de faits sur les effets de l'épidémie et une analyse des points de jonction entre le SIDA/ séropositivisme et la foresterie indiquent que cette dernière a un rôle important à jouer dans la prévention de l'épidémie du SIDA, en atténuant l'impact de cette épidémie et en faisant face aux questions de son traitement. Quatre secteurs de réponse sont proposés: a) être ouvert sur la question SIDA/séropositivité dans la politique de foresterie et sa programmation, b) rendre prioritaire la durabilité et l'accès aux bénéfices de la forêt (bois de chauffage, alimentation et médecine en particulier) pour les communautés, ménages et individus vulnérables, c) créer des programmes SIDA/ séropositivité dans les lieux de travail des industries et des institutions de foresterie, et, d) fortifier la capacité des institutions de foresterie à faire face au SIDA/séropositivité à travers des programmes de formation spécialisés, une révision du curriculum, de nouvelles technologies, et des exercices visant à construire des pratiques et scénarios améliorés.

VIH/SIDA: un riesgo para la sostenibilidad social y económica de la silvicultura en la África subsahariana?

D N. TOPOUZIS

El objetivo de este artículo consiste en examinar lo que se sabe sobre los impactos del VIH/SIDA sobre el sector forestal en la África subsahariana y resumir las implicaciones para la formulación de políticas y programas. Un análisis de los datos sobre el efecto de la epidemia y de la interrelación entre el VIH/SIDA y la silvicultura indican que ésta puede desempeñar un papel importante en impedir la propagación del VIH, mediante el alivio del impacto de la epidemia y su uso para el tratamiento del síndrome. Se proponen cuatro vías de acción: a) dar mayor relieve al VIH/SIDA en políticas y programas forestales; b) dar prioridad a individuos, hogares y comunidades vulnerables a la hora de planear la sostenibilidad y el acceso a los recursos forestales (sobre todo leña, alimentos y medicinas); c) establecer programas en el lugar del trabajo para insituciones e industrias forestales; y d) fortalecer la capacidad de las instituciones forestales para enfrentarse al VIH mediante cursos especializados de formación, la revisión de programas de estudio, nuevas tecnologías, prácticas mejoradas y ejercicios de juego de roles.

INTRODUCTION

"HIV/AIDS probably poses the greatest risk to the social and economic sustainability of forestry in South Africa," argued a recent paper published under the aegis of the *Yale School of Forestry and Environmental Studies* (Ham 2006). Being at the epicentre of the HIV epidemic, South Africa is among the most severely affected countries in the world. Nevertheless, evidence from other countries south of the Sahara, such as Mozambique and Malawi, indicates that HIV/AIDS is contributing to deforestation and to forest degradation (Holding-Anyonge *et al.* 2006).

In hard hit countries, each and every forest stakeholder can be affected, from farm forest households to forestry and agro-forestry enterprises (including farm labourers, contractors, and professional, managerial and support staff), forestry institution employees and forestry academics and students.

For farm forest households, the loss of young adult labour, income and know-how due to HIV/AIDS-related morbidity and mortality, coupled with spiralling health expenditures, may lead to: a reduced capacity to produce and to buy food, the sale of productive assets, the loss of livelihood knowledge, skills and practices, and the withdrawal of children from school. These systemic effects can undermine rural livelihoods that rely on forest resources and, in some cases, unravel the social fabric that enables communities to overcome crises.

At enterprise level, high rates of absenteeism, medical care for sick employees, loss of skilled and semi-skilled workers, and a need to train new workers can reduce productivity and profitability and even undermine the economic viability of some forest industries. At institutional level, the absence and eventual loss of professional forestry staff and their specialised knowledge and expertise can compromise the management and development of forest resources at a time when this is needed most to address the challenges posed by the HIV epidemic.

Yet, the impacts of HIV/AIDS are not uniform throughout sub-Saharan Africa. Instead, they are uneven, not only from country to country but also within countries. The epidemic's spatial and temporal specificity is such that not all countries, eco-systems, communities and households are equally affected at a given point in time. Similarly, the ability to cope with the epidemic differs considerably among households, enterprises and institutions (Topouzis 2001).

What is the Evidence on the Impacts of HIV/AIDS on Forestry?

Research on the impacts of HIV/AIDS on the forest sector has been rather limited to date and thus the findings from the few studies and surveys summarised below cannot be generalised across the continent. They do, however, provide important insights into the dynamics of epidemic impact on the forest sector and into the implications for policy and programming in terms of preventing the spread of HIV, mitigating the impacts of the epidemic and supporting treatment efforts.

In South Africa, a survey conducted by the Forest Industries Education and Training Authority (Steenkamp 2006) found that in the forestry contracting sub-sector, which employs about 32 600 people, the HIV infection rate

for 2003 was just under 35%. In other words, more than one-third of workers employed in the forestry contracting sub-sector were HIV positive. A 2002-2003 survey conducted by the South African Foresters' Contractors Association found that the HIV infection rate in certain areas, such as northern KwaZulu-Natal, especially among migrant forest workers, was as high as 40% (Engineering News 2003). HIV infection levels were significantly higher for women (38.34%) than for men (31.48%) and among skilled and semi-skilled males (Steenkamp 2006).

HIV/AIDS was recently identified as one of the constraints to forest certification in South Africa, as young adult morbidity and mortality are projected to undermine the future sustainability of forestry operations (Ham 2006). Even though certification promotes better living and working conditions for forest labour, procedures to address HIV/AIDS are not yet part of Forestry Stewardship Council checklists. Nevertheless, the role of certification in addressing the potential threat posed by HIV/AIDS on the social and economic sustainability of forestry in South Africa is emerging as a topical issue among forestry practitioners.

A study of the impact of HIV/AIDS on the utilisation of woodland resources in five communities in the Miombo woodlands of Malawi and Mozambique, commissioned by the Food and Agriculture Organisation (FAO) in 2003 (FAO 2005, Holding-Anyonge *et al.* 2006) found that these were depleted much faster in areas where HIV prevalence was high, as community dependence on these resources increased. Further, for households affected by HIV/AIDS, the ability to cope was undermined by the unsustainability of forest resources, and in particular by woodland degradation and the decline in the availability of fuelwood and medicinal plants. An important finding of the study was that where forests are mismanaged, coping strategies against HIV/AIDS were less effective.

In more detail, the FAO study (FAO 2004) identified the following household coping mechanisms to young adult morbidity:

- 17% of the households studied increased forest product collection to cover health expenses and basic needs.
- 54% of households reduced collection of forest products during illness.
- 36% of households decreased their collection of firewood during to labour shortages.
- 60% of the households relied on indigenous medicinal plants for treatment of opportunistic infections and conditions

The study also found that as a result of young adult mortality,

- Households were twice as likely to have made a major forest product collection trip in the last month
- 23% of households stated that forest product collection had increased after death (firewood, thatch grass, fruit, mushrooms, baskets, etc.)
- Households were five times more likely to have increased fuelwood collection (to generate cash) than non-affected households in the last 5 years.

It is important to bear in mind that HIV/AIDS is not the only factor, or even the only disease, adversely affecting African forest resources. The magnitude of the HIV

epidemic, however, and its long-wave structural impacts can intensify other existing pressures to a point where the sustainability of the sector may be undermined. For example, over-dependence on forest resources has left Malawi with the highest deforestation rate in Southern Africa. In such a context, the added impacts of HIV/AIDS may exacerbate this trend further with far-reaching consequences.

The Interface between HIV/AIDS and the forest sector

On the basis of the above findings, FAO underscores four key aspects of the interface between HIV/AIDS and the forestry sector:

1. AIDS-related morbidity and mortality can have adverse impacts on access to forest and tree resources as well as their use, management and governance.
2. HIV/AIDS can result in the loss of labour and expertise on the sustainable use of forests and non-wood forest products among farm families, forest workers and professionals.
3. HIV/AIDS can affect forest product supply and demand in local, national, and regional markets.
4. Trees, natural woodlands, forests and agro-forestry can reduce vulnerability to the impacts of the epidemic and help affected households cope more effectively (for example, agro-forestry products can improve nutrition and strengthen immune response to HIV infection).

A fifth cross-cutting aspect that has received little attention to date is the gender dimension of epidemic impact. The FAO study shows that scarcity of forest resources for subsistence can increase vulnerability to HIV infection, as some women may exchange sex for fuelwood in areas where fuelwood is scarce. However, there is no empirical data and analysis on the differential effects of HIV/AIDS on young widows, orphan girls, and elderly women. We also do not know how coping strategies of forest farm households differ by gender and how the loss of male versus female human capital affects the ability of households to meet forest-based subsistence needs. Nevertheless, we do know that more women than men are infected with HIV in sub-Saharan Africa and that women are generally less able to cope with the impacts of HIV/AIDS than men, due to socio-economic and other reasons. We also know that women play a key role in woodland activities, and particularly in fuelwood collection. Investigating and factoring the gender dynamics of AIDS impact on forestry resources and livelihoods into forestry policy and programming is at present one of the key challenges facing both HIV/AIDS and forest sector policy-makers and planners.

Forests as Safety Nets

In times of crisis, forests have traditionally served as safety nets, particularly when harvests fail, providing much-needed

economic and social protection. Forests help generate emergency income (from non-wood forest products), food (from wild food plants, bush meat, nuts, leaves and roots) and medicine for the treatment of opportunistic infections (mostly roots, leaves of plants and barks, which help fight infections such as oral thrush, herpes and shingles, and relieve appetite loss, nausea, fever and diarrhoea) (Barany *et al.* 2005). Forest and non-timber forest products thus become an important component in the coping strategies of households affected by young adult morbidity and mortality. They provide alternative sources of income and food security at low cost as well as improved nutrition and strengthened immune responses to AIDS-related infections.

For these reasons, the sustainable management of forest resources can serve to mitigate the adverse effects of HIV/AIDS. In particular, enhancing the natural asset base of vulnerable households and communities can improve their capacity to alleviate epidemic impact. For example, replacing products (such as roots, tubers, fruits and vegetables) that otherwise would be purchased at a high price can increase household resilience while generating income with limited inputs of labour and time through improved practices and technologies can reduce vulnerability.

The Role of Forestry in the Response to HIV/AIDS

Drawing from the work of FAO, ICRAF and this author,¹ the following policy and programming responses are proposed:

1. *Mainstream HIV/AIDS in forest policies and programmes, with a view to reducing vulnerability to HIV infection and AIDS impact among farm forest men, women and children*

This will entail a review of forest policies and programmes to assess the dynamics between forest policy and the co-determinants of HIV vulnerability (such as gender inequalities and migration). Further, there is a need to review the working conditions of labourers and forestry staff that may be increasing their vulnerability to HIV infection (such as lack of housing for families, prolonged separation from families, and seasonal migration).

At the programming level, mainstreaming HIV/AIDS will entail:

- a) the adoption of multi-sectoral responses for National Forest Programmes that encompass sectoral as well as cross-sectoral strategies for HIV prevention, treatment/care and mitigation (Holding-Anyonge 2004);
- b) the alignment of HIV/AIDS forestry interventions with Poverty Reduction Strategies (PRS) and with National AIDS Strategies, given the central role that PRS processes play in development planning and financing, and the equally important role that national AIDS strategies play in setting national priorities; and
- c) the integration of HIV/AIDS concerns in State of the Forest reporting. To give but one example, in South

¹ Christine Holding-Anyonge, HIV/AIDS and National Forest Programmes, ETFRN News, No. 41-42, Autumn 2004, pp. 40-42; ICRAF, Agroforestry: An HIV/AIDS insurance policy, Workshop on agroforestry responses to HIV/AIDS in East and Southern Africa, 2003; Agroforestry responses to HIV/AIDS in East and Southern Africa, ICRAF, Transformations Quarterly, Issue No 1, April 2005; Daphne Topouzis, The impact of HIV/AIDS on Ministries of Agriculture and their work: focus on Eastern and Southern Africa, UNAIDS/FAO Joint Best Practice Paper; and Mainstreaming AIDS in development Instruments, UNAIDS/UNDP/World Bank, 2005.

Africa, in 2005, a pilot *State of the Forests Report* was released that tested the potential and appropriateness of national principles, criteria, indicators and standards in state-of-the-forest reporting. One of the criteria for sustainable forest management identified in this report was that "Forestry contributes to the reduction of HIV/AIDS and its resultant impacts". The report also identified two indicators (employee absenteeism, and the existence and implementation of an HIV/AIDS strategy) to measure this indicator.

Agencies that are taking the lead in mainstreaming HIV/AIDS in forestry policy and programming include FAO and the World Agroforestry Centre (ICRAF). FAO's Forestry Department has been supporting the development of an HIV/AIDS policy and strategic framework to strengthen the role of forestry departments in multi-sectoral responses to HIV/AIDS. FAO has also been developing HIV/AIDS forest extension information materials and facilitating on-line discussion fora on AIDS and forestry. ICRAF organized a workshop in 2003 to investigate ways in which agro-forestry can mitigate the effect of the HIV/AIDS pandemic and is using the workshop outputs to develop a strategy for integrating HIV/AIDS into future agro-forestry research.

2. Prioritise the sustainability and access of forest benefits for vulnerable individuals, households and communities in forest policies, strategies and programmes to mitigate the impacts of HIV/AIDS, and in particular:

- the provision of medicinal plants used in the management of AIDS-related illness, wild foods and commercial and subsistence harvesting of forest products (Barany *et al.* 2005);
- the identification and promotion of nutritional non-wood forest products;
- early and adequate nutrition interventions for people living with HIV/AIDS;
- the promotion of woodland activities for households affected by HIV/AIDS, with a view to reducing labour requirements for subsistence firewood collection. While improving access can reduce labour requirements for firewood in the short term, efforts to improve availability over the long term can include: enrichment and improved management of customary woodlands, agro-forestry and the creation of firewood resources within and around the community in customary woodlands (Barany *et al.* 2005). "When the HIV/AIDS impact is still low, with a limited number of deaths, communities can start to build on a base of trees producing fruits, wood lots and medicine," recently argued Brent Swallow, ICRAF organizer of a 2003 workshop on agro-forestry responses to HIV/AIDS in Eastern and Southern Africa (ICRAF 2005). "This requires a lot of work at the start but less labour than annual cropping in the long term. This helps build community resilience so that they have better ways of coping when the AIDS impact is highest."

Sustained advocacy campaigns on the public health benefits of forest resources and on improving access and sustainability of forest and non-timber products in support of people and communities affected by HIV/AIDS should

be prioritised not only in forestry policy, programming and extension but also in agricultural policy more generally.

3. Establish HIV/AIDS workplace programmes for forestry institutions and industries

HIV/AIDS workplace programmes, which have already been put in place by some forest industries and government Departments of Forestry must include the following components: HIV awareness-building campaigns, stigma and discrimination reduction, voluntary testing and counselling, the modification of working conditions of employees exposed to high risk situations and the provision of anti-retroviral therapy.

In South Africa, the HIV/AIDS policy of the Department of Water Affairs and Forestry also provides re-skilling programmes to prepare manual labour employees for the time when their physical capacity will diminish, and it provides for multi-skilling programmes to allow sick employees to be rotated through a broad range of tasks (SADC 2002). A number of forestry industries in South Africa have also developed policies to address the impacts of HIV/AIDS. Companies such as Mondi (a large producer of pulp, paper, packaging board, sawn-timber and related products) provide HIV voluntary testing and counselling and anti-retroviral therapy to employees and help them if their medical aid runs out.

It should be noted, however, that forestry companies in South Africa are at present employing fewer labourers, preferring instead to use contract workers who are usually not covered by company HIV/AIDS programmes. This is largely due to the fact that the mitigation of HIV/AIDS is costly, even without anti-retroviral therapy. According to the South African Foresters' Contractors Association (Steenkamp 2006), the cost would amount to approximately \$25 per person per month, and for the contracting sub-sector as a whole to about \$600 000 per month or \$7.25 million per year, based on the assumption that 75% of a labour force of 32 600 receives the comprehensive mitigation package (nutritional supplements and awareness/wellness services). Forestry companies maintain that they alone cannot meet the spiralling costs of mitigating the effects of HIV/AIDS and that government assistance will be essential.

4. Build the capacity of forestry institutions to address HIV/AIDS through specialised training courses/curriculum revision, new technologies/improved practices, and scenario-building exercises.

Forestry institutions are faced with the challenge of maintaining the services they provide to their clients at a time when they are facing attrition and the erosion of skills due to the HIV epidemic. Further, the need for more intensive forest management to increase productivity and access to forest resources for those made vulnerable by HIV/AIDS is growing.

Efforts are currently underway in some countries to incorporate training courses and curricula for technical and tertiary education institutions that address HIV/AIDS and its interface with the forest sector. Such training modules can be integrated into the social forestry curriculum and be introduced to extension service providers through in-service training programmes. In Zambia, the Forestry College

offers a course on HIV/AIDS, in recognition of the need to mainstream HIV/AIDS in technical forestry training curricula.

Further, improved technologies and practices are needed to help forest farm households save time and labour (FAO, 2003). For example,

- improved fallows, which are labour extensive and are a source of fodder and fuelwood in close proximity to the household, can help maintain long-term sustainability of agricultural land and resource tenure of abandoned farm lands; and
- market based agro-forestry targeting young women and orphan carers can support home gardens, commercial tree nurseries and fruit processing.

Lastly, scenario-building exercises can help forestry institutions plan for a future with HIV/AIDS and shape policy options based on alternative perspectives on where the epidemic might be heading, with a 20-year horizon.

CONCLUSION

HIV/AIDS may pose a significant risk to the social and economic sustainability of forestry in severely affected parts of sub-Saharan Africa. Yet, a growing number of forestry practitioners are underscoring the important role of agro-forestry as an 'insurance policy' against the epidemic. In this context, HIV/AIDS makes the better use and management of forests in Africa all the more urgent and imperative.

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