



## **Review of the existing linkage between HIV/AIDS and Natural Resources Management in Uganda**

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This study was part of a larger project, *Making the Linkages – Conservation as a Core Asset for Livelihood Security in Eastern Africa*, funded by the International Development Research Centre (IDRC). The project aims to improve the understanding of the importance of sustainable natural resource management for livelihood security and economic growth in Eastern Africa. The project focuses on the following poverty-environment linkages: HIV/AIDS and the environment, drylands and marine natural resources and livelihoods.

The major activities of the project are: 1) conducting community workshops and producing community lessons learned brochures to improve the understanding and awareness of the linkages at the community level; 2) carrying out more in-depth studies on the linkages; 3) initiating community-policy dialogues and interactions to improve understanding at the policy level and 4) influencing policy at the IGAD level through studies and conferences of directors of conservation and health and economic planners to facilitate the dialogue between the different sectoral senior decision-makers.

## Executive Summary

In sub-Saharan Africa, AIDS is not only a health crisis, but a challenge to development, since AIDS affects nearly every dimension of social and economic life, especially in the worst affected countries. In Uganda, more than 1,000,000 people (850,000 - 1,200,000) are living with AIDS. 6.3% of the adult population currently live with HIV/AIDS and AIDS-related illnesses such as malaria, TB and pneumonia which are now the primary cause of illness and death among adults. The HIV-prevalence rate varies significantly between age groups. Adults aged 15 - 49 years living with HIV are estimated at 6.7% (5.7 - 7.6%) and adults aged 15 years and over living with HIV are estimated to be 900,000 (780,000 - 1,000,000) while women aged 15 years and above living with HIV are estimated at 520,000 (450,000 - 590,000). Death due to AIDS is estimated to be 91,000 (540,000 - 130,000) and for children aged 0 - 14 years living with HIV, it is estimated at 110,000 (39,000-200,000) while orphans due to AIDS aged 0 to 17 years are estimated to be 1,000,000 (870,000 - 1,300,000) (UNAIDS, 2006).

Poverty and inequality between women and men are both strongly connected to the spread of HIV, where poverty can drive women and girls to engage in unprotected sex in return for money or food, and women's lower status can make it difficult or impossible for them to negotiate for the use of condoms. Women are doubly hit, as more females than males are infected every day, and women are also the primary caregivers when other household members become ill (Jackson Tumwine, 2006).

The impact of HIV/AIDS on the management and conservation of natural resources is a field that has not been well explored. Much attention and research has focused on agriculture, rural livelihoods and the economy. However, a review of the available literature suggests that there is a growing body of knowledge and evidence on the linkages between HIV/AIDS and the management and conservation of natural resources. Studies conducted in Uganda have shown that HIV/AIDS impacts on natural resource management and conservation in the following ways: decreased availability of productive labour, loss of human capacity and labour, loss of traditional knowledge and indigenous skills, overuse of natural resources such as fuel wood, wild foods, medicinal plants, and fish, limited access to resources, increased vulnerability of community-based natural resources management to HIV infection. Increased poaching and gathering of wild foods can also increase, as affected people cannot perform heavy labour for agriculture.

The impact of HIV/AIDS on the management and conservation of natural resources is serious in Uganda and there is a great need to approach HIV/AIDS from all fronts at community and organizational levels ranging from awareness, prevention, treatment, training, working with local communities involved in community-based natural resources management (CBNRM) in addressing HIV/AIDS issues, integrating HIV/AIDS issues in the management and conservation of natural resources programmes and activities, and land policy initiatives to protect widows and orphans who lose land to the extended family members. The study recommended that management and natural resources conservation organizations would need to: design an HIV/AIDS policy, introduce HIV/AIDS awareness and prevention education, provide voluntary HIV counselling and testing services (VCT), introduce social welfare programmes such as medical insurance schemes, develop flexible human resource policies that would allow sick members to be allocated less labour-demanding tasks, support communities to communicate experiences and promote best practices in preventing the spread of HIV, and support community-based natural resources conservation organizations with health education.

## 1.0 Introduction

### 1.1 Global HIV/AIDS Estimates

AIDS (Acquired Immuno-Deficiency Syndrome) is the late stage of infection caused by HIV or the Human Immuno-deficiency Virus. Approximately 39.5 million people around the world were living with HIV/AIDS in 2006. Of these, almost two thirds were in sub-Saharan Africa. The same year, 2.5- 3.5 million AIDS-related deaths occurred globally. The numbers of people living with HIV continue to rise in many countries, especially in Africa, parts of Eastern Europe, South, South-east, Central and East Asia, and the Caribbean. Economically active adults are the most affected (UNAIDS 2006). The epidemic has devastating and tragic impacts on families and communities. It is affecting local and national economies, social structures and institutions. It is also affecting the environment through impacts on human capacity, natural resource management, and land use, rural livelihoods, human capacity and conservation. However this impact continues and we do not yet understand its full extent, nor do we know how to respond to it.

### 1.2 Country Data

Uganda is one of the poorest countries in the world with an estimated population of 28,816,000 million with a population growth rate of 3.4%. Life expectancy at birth for women is estimated at 51 years and for men, 48 years with a human development index of 144 and a human poverty index of 66 with the value of 36.0. A majority of the population live on less than \$2 dollars a day (HDI, 2006). Uganda HIV/AIDS estimates show that 1,000,000 (850,000 - 1,200,000) people are living with HIV. Adults aged 15 - 49 years living with HIV are estimated at 6.7% (5.7 - 7.6%) and adults aged 15 years and over living with HIV are estimated to be 900,000 (780,000 - 1,000,000) and women aged 15 years and above living with HIV are estimated at 520,000 (450,000 - 590,000). Death due to AIDS is estimated to be 91,000 (540,000 - 130,000) and for children aged 0 - 14 years living with HIV, it is estimated at 110,000 (39,000 - 200,000) while orphans due to AIDS aged 0 to 17 years are estimated to be 1,000,000 (870,000 - 1,300,000) (UNAIDS, 2006).

Uganda's economy is largely based on natural resources, with over 80% of the population living in rural areas and engaged in agriculture for food and income (NEMA, 2001). With a GDP growth rate of about 6% and a population growth rate of 3.4%, natural resource exploitation will continue to form the basis for livelihoods of the majority of rural and urban Ugandans in the foreseeable future. The land under crops in Uganda is being cultivated primarily by small-scale farmers, with an average farm size of 2.5 ha (Zake et al. 1999). However, through past years, agriculture (particularly at household level) has registered substantial declines in productivity. The decline of agricultural production, mainly caused by degradation of natural resources, has been found to be one of the root causes of poverty and food insecurity in the rural farming communities in Uganda (Jackson Tumwine, 2006). In these communities, the process of achieving sustainable livelihood requires attention to the peculiarities of the local ecosystem. The process includes people and their institutional structure as well as landscape and natural resource management (NRM) (Ibid, 2006). Central to improving livelihoods are the capabilities of the local institutions to respond to the challenges within the ecosystem. The effectiveness of institutional response has been found to be linked to the roles of both men and women within the local community (Ibid, 2006). This study reviews the impact of HIV/AIDS on natural resources management in Uganda, explores some institutional responses in place and indicates points of entry for new interventions in mitigating the effects of HIV/ AIDS on the environment.

### **1.3 The Impact of HIV/AIDS on the Ugandan Economy**

The impact of HIV/AIDS on Uganda's economy and Africa's economy in general is a field that is well explored. Evidence from past studies conducted in Africa in general and Uganda in particular shows that AIDS affects rural livelihoods and food security (Barnett and Blaikie 1992; Gillespie 1989; Barnett and Haslwimmer 1995; Topouzis and du Guerny 1999; Mutangadura, Mukurazita and Jackson 1999; Mutangadura and Webb 1999; Rugalema 1999; Rugalema, Weigang and Mbwika 1999; Topouzis 1988; Kwaramba 1997; White and Robinson 2000; Jackson Tumwine 2003; Astrid 2003). In agreement with the above studies, there is no question of the extent and nature of the impact of the HIV/AIDS epidemic on the rural sector in Africa in general and Uganda in particular, especially in terms of rural livelihoods and agriculture. However, this impact continues and we do not yet understand its full extent, nor do we know how to respond effectively to it.

A review of available studies on the impact of HIV/AIDS in Uganda shows that there is little empirical information about the impact of HIV/AIDS on natural resources management in Uganda. This is partly because for a long time the epidemic has been perceived as a health problem and past studies and interventions paid more attention to rural agricultural production systems and the economy while less attention was given to natural resources conservation.

### **1.4 The Impact of HIV/AIDS on the Management and Conservation of Natural Resources**

The growing linkages between the effects of HIV/AIDS, food insecurity, poverty and natural resource degradation constitute a formidable challenge to development policies and practices in Uganda. This is because the causes and consequences of the HIV epidemic are widely associated with wider challenges to rural development, such as poverty, food and livelihood insecurity, and gender inequality (Jackson Tumwine, 2006). In effect, HIV/AIDS exacerbates existing development problems through its catalytic effects and systemic impacts. In areas severely affected by HIV/AIDS, the catalytic effects and systemic impact of the epidemic on rural development may amplify existing development problems to an extent of triggering structural changes (such as in adult and infant mortality) and/or create new problems and challenges for rural development (child-headed households, the breakdown of informal rural institutions and thus of certain vital social safety-net mechanisms) (Ibid, 2006). A review of studies conducted in Uganda on *"The impact of HIV/AIDS on community based natural resources management practices in the highlands of Kabale in South Western Uganda"*, and a study on *"Understanding the relationship of Gender, Poverty, and Livelihood Strategies, HIV/AIDS and their impact on Natural Resource Management in the Highlands of South Western Uganda"* and related studies on the impact of HIV/AIDS on agriculture, rural livelihoods in Uganda all suggest that HIV/AIDS has a serious impact on the management and conservation of natural resources in Uganda in the form of: decreased availability of productive labour; loss of human capacity and labour; loss of traditional knowledge and indigenous skills; overuse of natural resources such as fuel wood, wild foods, medicinal plants, and fish; limited access to resources; increased vulnerability of community based natural resources management; and diversion of community conservation funds to meet HIV/AIDS-related costs among others.

#### **1.4.1 Decreased Availability of Productive Labour**

Studies conducted in Uganda by (Tony Barnet; P. Blakie 1992; Asingwire N 2001; FAO 2002; NAADS 2003; Astrid 2003; Jackson Tumwine, 2003, 2005, 2006) all suggest that HIV/AIDS primarily affects adults between the ages of 25 and 45 years, the very people who work to support families and are usually the most productive

economically. The loss of adult labour and, in particular, the capacity for heavy labour, often lead to changes in affected households' use of land, water resources and agricultural practices. The above studies conducted in Uganda have found evidence that AIDS has disrupted agricultural production because farmers suffering from AIDS could not dedicate as much time to field labour as could household members who were healthy (Tony Barnet, Blackie 1992). Since rural families combine farming and fisheries as their primary livelihoods, the loss of adults in the prime of life results in serious labour shortages and a significant reduction in a household's income. The study on *"The impact of HIV/AIDS on community based natural resources management practices in the highlands of Kabale in South Western Uganda"* has also confirmed the above findings that the negative impact AIDS can have on the management and conservation of natural resources stems from an increase in mortality and the consequent reduction in labour capacity and increased vulnerability of community based natural resources management communities to HIV/AIDS effects. It was found out that in the Mt Elgon ecosystem, HIV/AIDS, malaria, TB, and pneumonia are the leading causes of death among the age group 15 - 49 years (*key interviews with Mt Elgon Conservation Management staff, August, 2007*). In Mbarara District, it was reported that there has been a decline in productive labour as a result of increased mortality and morbidity due to HIV/AIDS and related illness (*key interviews with community based services, Nacola District Chairperson August, 2007*).

#### **1.4.2 Loss of Human Capacity and Labour**

The above studies have also found that the agricultural and natural resource management workforce is declining greatly due to HIV/AIDS. The most affected are the age group between 15 - 49 years and this includes many well-trained and experienced people. At the global level, AIDS has killed seven million agricultural or natural resource management workers since 1985. In addition, it was estimated that it could kill 16 million more within the next 20 years (FAO, 2000). Studies on the impact of HIV/AIDS on community based natural resources management in Uganda have shown that HIV/AIDS has resulted in the loss of trained and experienced people within the conservation communities (*key interviews with Mt Elgon Conservation Management staff, August, 2007*). It was reported that extension conservation workers are often located in remote areas and may be away from their families for long stretches of time. This makes them especially vulnerable to HIV infection because they are more likely to take new, possibly multiple, sexual partners. In turn, there is a risk that HIV -positive conservation workers will bring the virus into remote communities with hitherto low prevalence rates. A study conducted on *"The effects of HIV/AIDS on agricultural production and the livelihoods, a comparative study of Rakai and Masaka Districts"* found that extension agents were at higher risk of contracting HIV/AIDS since they were always away from their homes for a long time and therefore at risk of involving themselves in multiple sex.

#### **1.4.3 Reduced Management Capacity**

Available literature on the impact of HIV/AIDS in Uganda on human resource capacity, i.e. agricultural and natural resource managers or educational personnel who work in remote areas, attend training courses, or frequently travel to meetings and who are often away from their families for a large proportion of time, shows that they are especially vulnerable to HIV/AIDS. They may not have access to HIV/AIDS awareness information or condoms. When staff is lost, the institutional experience and memory of the organization suffers (NAADS, 2003). Many natural resource management institutions have already been crippled by the loss of leadership and staff as a result of HIV/AIDS (*key interviews with Mt Elgon Conservation*

*Management staff, August, 2007*). Studies have also indicated that when staff members working for natural resource management organizations pass away, those organizations lose valuable institutional experience and memory. For example, loss of extension officers, senior officials, and other personnel can have detrimental impacts on natural resource conservation. For example, when a staff member dies, organizations may have to divert some of their conservation funds to pay for death benefits and costs associated with caring for sick employees and funerals, while also suffering from increased employee absenteeism (Ibid 2007). Biodiversity conservation studies have shown that enforcement of protected area management rules and regulations may also suffer if an adequate staff size is not maintained. For example, if a protected area loses some of its rangers to AIDS and they are not replaced by other trained staff, villagers may be more inclined to poach or break other resource use rules, because the risk of getting caught is lower. This situation might be exacerbated if, knowing that they will die within a few years, villagers lose a long-term view of stewardship. People may then become less willing to engage in the management and conservation of natural resources. Studies on CBNRM in the highlands of Kabale in South-western Uganda have recommended the need to maintain institutional memory by documenting important management decisions, meeting minutes, management systems, research studies results etc. and to ensure that more than one staff member has a good working knowledge of plans, programmes, projects, systems and donor relations to reduce the impact if a key member of staff is lost.

#### **1.4.4 Loss of Traditional Knowledge and Indigenous Skills**

Traditional knowledge of the management and conservation of natural resources that had passed from one generation to another is also being lost due to the HIV/AIDS increased mortality. A study carried by NAADS, 2003, on *“The Impact of HIV/AIDS on Agriculture and Rural Sector in Uganda”* in Luwero, Iganga and Masaka Districts in Uganda, has shown that traditional knowledge, skills and practices are being lost as a result of the HIV/AIDS-related death of older, experienced community members. In the Lambu fishing community in Masaka District, important traditional knowledge related to safety, the prediction of seasons, and the movements and availability of fish is disappearing in this way. The problem is compounded by the shunning of sick fishers which has resulted in increased accidents on the lake and the further loss of knowledgeable fishers (NAADS, 2003). In the pastoral community, the death of specialists in indigenous practices has led to the loss of knowledge about using medicinal herbs to treat animal diseases and abandoning indigenous skills for handling difficult animal births (dystocia). Mechanisms that help the transfer of traditional knowledge from one generation to the next should be encouraged and facilitated.

The above national study revealed that affected persons' irregular, reduced or non-attendance at agricultural and natural resources management seminars means that they will not benefit from the new knowledge that is disseminated through extension services. This implies that they will continue to use poor management practices, resulting in land degradation and poor quality crops and livestock. Given the constraints of travelling to the learning centres, it may be necessary to assess how all stakeholders (government, NGOs and development partners) can help affected households to acquire such knowledge through appropriate methods of extension.

Loss of morale about the future was another reason for affected households not to seek information about new, modern techniques. Several households in the study area of Luwero, Masaka and Iganga Districts reported focusing their planning horizons on the very short term. In all communities, orphan household heads and



members, who have already suffered a significant loss of knowledge owing to the death of parents – their main source of farming and natural resources management knowledge – are also hampered by the belief that they are too young to participate in community sensitization programmes. Other households were unable to do so because of the high fees charged, or because of their own heavy workloads. Sources of information about new techniques are also being lost when extension staff die.

A related study on *“The impact of HIV/AIDS on the Community Based Natural Resources Management Practices in the Highlands of Kabale in South Western Uganda”* in agreement with previous studies, also found that communities are losing the knowledge of medicinal plants, wild foods, soil conservation and agricultural practices as people die of HIV/AIDS at an early age without passing this knowledge on to the younger generation. This is eroding the whole knowledge base of traditional methods of natural resource management and conservation and other potential uses. The study concluded that loss of traditional knowledge has an impact on natural resources conservation and effective environmental management. In many communities in Uganda, children have not acquired the necessary skills from their parents and grandparents to perform key agricultural, natural resource conservation, fishing or other economic activities resulting in increased livelihood insecurity. Loss of knowledge about sustainable land and resource management practices, which are traditionally passed on between generations, has caused natural resources degradation and a decline in productivity in several farming communities in Uganda (Jackson Tumwine, 2006). A study on *“The impact of HIV/AIDS on agricultural production and the livelihoods based on it: a comparative study of Rakai and Kabale Districts in Uganda”* found that unsustainable fishing methods are used in Kasheshero fishing site in Rakai District because of the effect of HIV/AIDS. This was because many men in the productive age group had died due to AIDS in the early 1990s and young and unskilled youth went into fishing in order to earn some income without sustainable fishing equipment, methods and techniques (Jackson Tumwine, 2004).

#### **1.4.5 Overuse of Natural Resources**

A critical analysis of the studies conducted in Uganda (by Tony Barnet, P. Blackie 1992, Asingwire, N. 2002, Astrid 2003, Jackson Tumwine, 2003, 2004, 2006/7, Robert Kabumburi, 2007) on the impact of HIV/AIDS on people’s livelihoods all confirm the fact that AIDS impacts include accelerated and unsustainable use of natural resources. A study carried out on *“The impact of HIV/AIDS on agriculture production and the livelihoods based on it: A comparative study of Kabale and Rakai districts in Uganda”* showed that there was overuse of resources as a result of HIV/AIDS. Some people exploited their resources in an unsustainable manner because they were not sure of tomorrow. In the Kasheshero fishing site in Rakai district, some fishermen had turned to the production and selling of charcoal to supplement their small incomes in order to support their AIDS-affected households, further stressing local forests in the Sango Bay ecosystem. A related study on *“The effects of HIV/AIDS on community based natural resources management in the highlands areas of Kabale in south western Uganda”* found that households affected by HIV/AIDS had developed short term economic and environmental survival strategies while long term soil conservation measures have been ignored. Related studies have shown that AIDS-affected communities or households may not observe conservation rules and sustainable practices in agriculture, fishing, and other resource-dependent activities, such as harvesting of wood or medicinal plants, because they do not see the benefits of stewardship accruing to them personally, especially if the benefits take longer to accrue than the affected household members expect.

A study carried out on the “*Impact of HIV/AIDS on Women’s agricultural based livelihoods in Kanungu district*” found that men had withdrawn from agriculture to rely more on the forest resources in Bwindi and Queen Elisabeth National Parks. There were increased cases of poaching of wildlife in Queen Elisabeth National Park. It was revealed that some people had resorted to poaching because they were too weak to engage in farming, needed quick money to take care of their sick household members or to get meat for the family. The same study found that several witch doctors had started claiming to heal AIDS using traditional medicine and they were encroaching on the protected forests while harvesting traditional herbs for herbal medicine and this resulted in conflicts with the park wardens. It was found that this problem was being addressed by issuing licenses to traditional healers and training them on how to harvest medicinal plants in a sustainable manner and encouraging them to plant such herbs in their gardens. It is not known whether this has been successful or not. The study reported overexploitation of timber resources in the area and this was attributed to several factors including: increased mortality that resulted in increased demand for timber to manufacture coffins; growth and development of small towns and the expansion of Kampala City which resulted in increased demand for timber for construction, growing demand for charcoal in urban areas, and institutional failures to effect sustainable timber harvesting. The study also showed that there was increased worry about the impact on species of special concern, such as endangered wildlife species in Queen Elisabeth National Park, and unsustainable collection of medicinal plants to treat AIDS symptoms by traditional healers.

The study on “*Effects of HIV/AIDS on community based natural resources management in the highlands areas of Kabale in south western Uganda*” found that HIV/AIDS, malaria and TB related illnesses are seriously affecting community natural resource management initiatives. The same study observed that some of these factors have aggravated the problem. There were also other factors that affected community based natural resource conservation and it was concluded that exogenous poverty is responsible for overuse of natural resources and causes natural resource or environmental degradation; power, wealth, and greed causes overuse of natural resources and environmental degradation; and institutional failures are a primary cause of overuse of natural resources and environmental degradation. The study concluded that overuse of natural resources and the environment results in poverty while endogenous poverty causes environmental degradation and poor natural resource management and conservation. The growing linkage between the effects of HIV/AIDS, poverty, natural resource degradation and food insecurity in the rural farming communities of Uganda currently constitutes a challenge to development policy and practice. In some communities bordering the lake shores of Lake Victoria, it was reported that HIV/AIDS has resulted in overuse of bamboo as many women and men have resorted to the handicraft industry as a means of survival which has an effect on the natural forests in the region.

#### **1.4.6 Limited Access to Resources and Land Use**

The above studies on “*The impact of HIV/AIDS on agricultural production and the livelihoods based on it: a comparative study of Kabale and Rakai districts in Uganda*” and “*The Impact of HIV/AIDS on Women’s Agricultural based Livelihoods in Kanungu District in Uganda*, (by Jackson Tumwine 2004, 2005) in agreement with the previous studies by Tonny Barnett and P. Blackies (1992) and the ongoing study by RENEWAL supported by International Food Policy Research Institute (IFPRI) and implemented by Makerere University, (2005-2008) by Robert Kabumbuli (2007) on “*Land ownership and Food Security in Uganda: A Study of the Use and Control of Land among Households of Women Affected by HIV/AIDS in Four Districts of*

*Mbarara, Lira, Luwero and Busia*”, all confirm that as male heads of households die due to HIV/AIDS, many orphans and widows are dispossessed of their land in some of the affected households and serious land grabbing occurs. This affects access to land, land management and use, often resulting in loss of good land management practices due to lack of security over land. As a result, affected households do not use land in a sustainable manner because they fear that at any time it will be taken by the male relatives. It has been found out that in some affected households and communities in Kabale, the priorities have changed and long term soil conservation has declined in favour of short term livelihood options (Jackson Tumwine 2006).

A related study on *“The effects of HIV/AIDS on community based natural resources management in the highland areas of Kabale in south western Uganda”* has shown that women are resource users and yet they lack control over resources and that the gender related factors limiting women’s access to resources and land use in the highlands region of south western Uganda are worsened by the effects of HIV/AIDS. The study also noted that gender-based land inheritance and land tenure systems, which exclude women from having direct control over land, leave many widows and orphans with no land to farm. In Uganda, a combination of statutory and customary laws favours male ownership of property and disadvantage women’s rights to own land (Women’s Action 2000). Women make up over 80% of the agricultural labour force yet only 7% of all women own land. In customary law, women’s right to land is usually “access-based”. This means that women can cultivate land, but not own it. Access is usually given through a male relative. Therefore women are placed in a position where they are fully dependent on a husband or male relative in order to maintain access to land, and they have no security of tenure when abandoned, widowed or chased away from the home. They risk having their husband’s land confiscated when the husband dies. Legally a wife (or wives) can claim 15% of the husband’s estate, but most women are not aware of their legal rights. The study concluded that lack of access to and security over resources affects sustainable utilisation and management of natural resources in Uganda. The above study in agreement with the study on *“Land ownership and Food Security in Uganda: A Study of the Use and Control of Land among Households of Women Affected by HIV/AIDS in Four Districts of Mbarara, Lira, Luwero and Busia”*, recommended educating communities on the importance of making a will which would enable surviving family members to inherit property more easily and to allocate any pension to the right beneficiaries.

In conclusion, HIV/AIDS has the following serious effects on the management and conservation of natural resources: loss of natural resources conservation capacity as a result of the high death rate of natural resource conservation staff, loss of community champions and social structures for resource management, less time for community based natural resources management activities, and financial costs to take care of sick members. HIV/AIDS results in increased natural resource use since natural resources constitute alternative livelihood strategies in terms of income and food security i.e. medicinal plants, wildlife, food plants, and fuel wood. The above studies have revealed that medicinal plants, wildlife, food plants and fuel wood have been over-utilized. HIV/AIDS has affected land use changes as a result of extensive farming which damages biodiversity; loss of indigenous knowledge concerning land management and natural resource use, and it has affected land inheritance patterns as widows and orphans often lose inheritance rights. In the long run, HIV/AIDS causes resource and environmental degradation, increased poverty and livelihood insecurity. This poses a serious challenge to development policy and practice.

## **2.0 Institutional and Community Responses**

### **2.1 Institutional Responses to HIV/AIDS**

Uganda is one of the countries in sub-Saharan Africa that is constantly hailed as an African success story in combating HIV/AIDS. The reason behind this success is political commitment and support accompanied by good leadership decisions in the campaign against the epidemic. Since the identification of HIV/AIDS in Uganda, the national government has adopted a number of interventions particularly since 1986. The interventions started firstly with an open policy towards the AIDS pandemic supported by international and bilateral donors in order to enable people to come out boldly and face this serious threat to health. This resulted in the formation of the AIDS Control Programme (ACP) under the Ministry of Health. A lot of activities were carried out under this programme and substantial progress made in the areas of epidemiology, surveillance, health education and blood transfusion services. These achievements were made possible by international and national non-governmental organisations that responded with both financial resources and actual activities. The levels of AIDS intervention were at the national, district, institutional and community levels. At the national level, the first efforts were through the ACP in the Ministry of Health and later other AIDS control programmes in sectoral ministries co-ordinated by the Uganda AIDS Commission Secretariat. Funding was provided to support AIDS control activities implemented at the district levels. Institutions like the AIDS Information Centre (AIC), the AIDS Support Organisation (TASO) and the Joint Clinical Research Centre (JCRC) were very instrumental.

At the community level, AIDS control activities were implemented through various groups and institutions like the post-test clubs, religion-based groups like Church of Uganda Human Development Services (CHUSA), Islamic Medical Association of Uganda (IMAU), etc. Finally, at the individual level, people's open declaration of their HIV status through the Philly Lutaaya Initiative (PLI) and the others that followed was a major breakthrough especially in the fight against stigmatisation of people living with HIV/AIDS. The immediate response is at the family level, the community level and finally, the national level. Mitigation at the family and community levels involves provision of care and support to people living with AIDS and the affected families, treatment of opportunistic infections and support for orphans and widows. The general experience with care is that individuals and communities extend care and support to people living with AIDS and their families through provision of physical needs, financial support as well as spiritual counselling. Community members are sensitized by the various actors to show love and kindness to HIV/AIDS patients. As such PHAs are now acceptable members of society, they are no longer depicted as a cursed group of people as in the past. Family support, encouragement, compassion, and counselling bring about psycho-social stability, calmness, spiritual healing, and determination of affected people and renewed sense of responsibility among PHAs and affected persons. It is the immediate families that give care and support to feed people living with AIDS.

### **2.2 Specific Case Studies of Natural Resource Management Institutions**

#### **2.2.1 Eastern Region**

##### *Mt Elgon Conservation Programme/National Park*

This ecosystem is made up of three national parks: Mathiako, Painupe and Mt Elgon national parks. It employs over 200 people and the organization has lost some of its workers due to AIDS. The organization has responded to the problem by

sensitisation, medical intervention, and the promotion of the IEC/BCC approach. Some members of management staff attend HIV/AIDS workshops organized by the trade unions, TASO, and other organizations focusing on HIV/AIDS at the work place and the community at large. After the workshops, the management passes on the information to other staff members during regular sensitisation at the work place. Members are sensitized about HIV/AIDS, on the modes of transmission and how it can be prevented.

The second approach is medical intervention. Here the organization has arranged with some medical services organizations to provide medical care to staff including HIV/AIDS counselling and voluntary testing services provided by TASO, Mbale office. The third approach is the promotion of information education and behaviour change and communication. The organization gets condoms from UPDF, TASO and the Ministry of Health to distribute to its staff especially in the outposts for rangers and other visitors to the sites. This intervention has been seen as successful as evidenced by increased demand and supply of condoms to the organization workers, increased number of people requesting voluntary testing and counselling, and demand for more awareness programmes in relation to HIV/AIDS by the members of staff and the decreased mortality rate of members of staff in the last three years compared to the previous five to six years.

However, from the discussion I had with the organization management staff, much needs to be done in order to reduce the problem of HIV/AIDS. There is a need for a programme established specifically to address, not only AIDS but also other diseases such as malaria, syphilis and tuberculosis. It was reported that more sensitization is needed as there are still reported cases of syphilis and this is an indication that people are still having unprotected sex and extra marital affairs. Other issues to be addressed include gay and lesbianism as the ground is very fertile for such practices.

There is a need for continued research on approaches to control AIDS and sexually transmitted diseases in the area and a need to venture into alternative medicine (herbal medicine) and to train communities on sustainable harvesting of traditional herbs and or encouraging communities to plant such species in their gardens. Other issues that were raised during the discussion that need quick interventions included poverty alleviation programmes to put in place income generating activities to enable households to earn income and reduce overdependence on natural resources. There is also a need to strengthen staff welfare programmes, build strong partnerships and synergies with organizations in the area such as TASO, NAADS and district community based services. For example, NAADS needs to do more work with management and natural resource conservation organizations where they are working in the same community. NAADS need to promote soil conservation measures before giving seeds to people or farming groups and TASO should target the same groups for VCT services and UWAR would work with the same organizations and groups in their conservation education programmes. There is a need to identify appropriate channels of communication regarding HIV/AIDS, i.e. radio stations, TV, church leaders, opinion leaders, and peer education campaigns and to incorporate the local communities and production of IEC and BBC materials. *(More will come from the workshop participants targeted from this organization on issues of natural resources management and conservation, including what has been done at different levels, i.e. management and community, to address HIV/AIDS in the districts above.)*

### Manafa District Administration

During a discussion with the Manafa District Environment Officer, it was revealed that attempts to integrate HIV/AIDS in environmental programmes and projects are ongoing. The district is still capturing issues of environment and HIV/AIDS to integrate into the District Development Plan. The district's Environment Department has reached some CBOs, trained them and worked with them in environment and HIV/AIDS issues. One of the CBOs is Nambale Widows Association in Buyuza Parish in Butinu Sub-County. This group has been sensitized by the District Environment Office, Community-based Services Department and by the CHAI officer on the issues of HIV/AIDS. Within the association, there are community facilitators who have been trained by TASO to pass on the HIV/ADS message. The district has been developing a plan through a participatory process. The district is planning to integrate in its development plan the following issues: fire wood, erosion, degradation, streams and water sources, stream banks as a result of population pressure and health and sanitation. The organization (Nambale Widows Association) is already addressing the issues of degradation by engaging in reforestation, income generating activities such as bee keeping and crop farming i.e. improved bananas. The district has a plan of supporting CBOs on fuel saving stoves, and in the long run a campaign on home hygiene and sanitation with assistance from District and Sub County health inspectors.

According to the District Environment Officer, the CBOs have proved successful and efficient in their work such as starting banana plantations. They have succeeded in recovering soil fertility and the banana harvest is good. Bee keeping is ongoing and the fuel wood project has just started.

At the district level, the District HIV/AIDS focal person (District Community Development Officer) is responsible for HIV/AIDS issues. He has been trained by CHAI programme and Uganda AIDS information Centre. Other CBOs that have addressed the issues of HIV/AIDS and environment in the district include: Kifango Association in Sibanga Sub-County, BUDA (Buwaya Development Association) Bwagogo Sub-County, and Bugobero Orphans of Hope in Bugobero Sub-County. *(More will come from the workshop participants targeted from this region on issues of natural resources management and conservation, including what has been done at different levels, i.e. management and community, to address HIV/AIDS in the districts above. This will include contributions by the District Environment Officer and the Chairperson of Nambale Widows Association.)*

### Mbale District Administration

The district is already implementing HIV/AIDS awareness programmes in its activities and these activities are already incorporated in the District Development Plan. They include energy saving stoves as an alternative source of energy and backyard kitchen gardening targeting HIV/AIDS affected households. On natural resources management, the district has plans of raising awareness on land ownership and legal provisions in the communities as a result of increased cases of widows and orphans losing land to the extended family members. There are a few CBOs and NGOs addressing NRM issues and HIV/AIDS in the district. Some of the CBOs include: Busoba Tuban Farmers Association (BUTFA) in Busoba Sub-County (involved in agriculture and environment), Lwasowe Women Group Association in Wanal Sub-County (involved in tree farming/nursery beds), and Bubyangu Farmers Association in Bufubo Sub-County (involved in fuel saving stoves, agro-forestry and nursery bed management). At the district level, there is a big project "Integrated Family Development Initiative" (IFDI) involved in construction of fuel saving stoves which is

funded by DFID. There is also the Green Belt Environment and Health Initiatives. This has been operating in Palisa and has now moved to Mbale District. Its main activities include tree planting, malaria and HIV/AIDS. Other concerns in the district which need support include integrating HIV/AIDS and environment guidelines into local government development planning developed by NEMA and SNV. *(More will come from the workshop participants targeted from this region on issues of natural resources management and conservation including what has been done at different levels i.e. management and community, to address HIV/AIDS in the districts above.)*

#### Sironko District

HIV/AIDS integration is still at the conceptual level. There are a few CBOs and NGOs involved in environment and community development programmes. Some of the CBOs include: Sironko Valley Project (involved in tree planting and nursery bed management), Mt Elgon Bee Keeping Association (involved in bee keeping, tree planting and nursery bed management) and BUSDEF (involved in water harvesting).

These CBOs already have funding and what is missing is building the linkages i.e. integrating HIV/AIDS, malaria and TB messages. There is also Sironko Farmers Association which brings together several CBOs involved in agriculture and natural resources management including HIV/AIDS. *(More will come from the workshop participants targeted for this district. i.e. the District Environment Officer and chairpersons of BUSDEF and Mt Elgon Bee Keeping Association.)*

#### Busia District

There are several CBOs and NGOs operating in Busia District such as FOC-REV (Friends of Christ, Revival Ministries) involved in advocacy for the rights of children and women, provision of counselling services for people living with HIV/AIDS, providing new technologies and inputs, and early childhood development. Christian Children's Fund (CCF) is also involved in advocacy for women and children's rights. The Red Cross also does advocacy and women rights' awareness creation. Happy Childhood Foundation and FOC-REV benefited from The HIV/AIDS Global Fund and they are addressing HIV/AIDS issues. *(More will come from the workshop participants targeted from this district on issues of natural resources management and conservation, including what has been done at different levels, i.e. management and community interventions, to address HIV/AIDS in the district.)*

### **2.2.2 South Western Region**

#### Kabale, Kanungu, Kisoro, Ntungamo, Mbarara and Bushenyi Districts

Africare implemented a natural resource management programme funded by USAID with a component of HIV/AIDS and food security which covered more than 100 villages in Kabale District. It also had a child survival programme that focused on the integrated management of child illness, while incorporating water resource development, vegetable gardening, and HIV/AIDS prevention. These programmes addressed issues ranging from maternal pre- and postnatal care to early childhood immunizations, nutrition, water and sanitation, and control of diseases (malaria, diarrhoea, acute respiratory infection and HIV/AIDS) that commonly claim the lives of many children in the area. The majority of Africare's HIV/AIDS programmes during 2003 were devoted to community-based prevention, in most places using "the ABC approach" (Abstinence, Being faithful, and correct and consistent Condom use), with an emphasis on behavioural change. Special groups reached by prevention programmes included adolescents and young adults, women, migrant workers,

residents of refugee camps in Kisoro District, members of especially isolated or poor communities, and many more. Additional programmes in the area ranged from AIDS orphans assistance to natural resources management. In Ntungamo District Africare implemented radio transmitted HIV prevention education, orphan care, protection and empowerment and water programme information. In Kanungu and Kisoro Districts a food security project was implemented. *(More will come from the workshop participants targeted from Kabale District on issues of natural resources management and conservation, including what has been done at different levels, i.e. management and community, to address HIV/AIDS in the districts above.)*

#### International Centre for Research in Agro-Forestry (ICRAF)

The International Centre for Research in Agro-forestry (ICRAF) implemented in 2003 a gender and HIV/AIDS strategy to effectively integrate these issues and actively mainstream them in their programme. The broader purpose of the strategy is to promote gender equity in market-led agricultural development opportunities and use opportunities of market success to play a role in arresting, rather than hastening, the spread of HIV/AIDS in rural communities in their programme sites. The pivotal aspect of the strategy was to develop skills of IPMS research in development officers, staff in technical vocational education training colleges, district level agricultural officers and development agents so they can identify and address these issues in agriculture. Critical data on gender and HIV/AIDS were collected and analyzed in order to understand the impact of gender issues and the HIV/AIDS epidemic on IPMS project activities and vice-versa. The output of this analysis was discussed in a three-day workshop entitled "Integrating Gender and HIV/AIDS issues into the IPMS Project" that was held in the ILRI Ethiopia campus from October 3rd to 5th, 2005. Based on the findings, action plans that envisage both prevention (raising awareness and understanding and reducing risks of HIV infection) and supportive activities (reducing vulnerability to AIDS impacts) were developed and integrated in the research programme in benchmark sites in several places including Kabale District.

At the local government level, Kabale, Ntungamo, Rukungiri Bushenyi, Mbarara Districts, like other major districts in Central, Northern and Eastern Regions have been implementing an integrated district HIV/AIDS management programme and the issue of HIV/AIDS was fully integrated. At the district level, the Community Services Department hosted the programme and was charged with the responsibility of integrating it into other departments supported by the AIM Uganda country programme. However, not much is documented on how successful the programme was, under what conditions it was successful or not and what needs to be scaled up. *(More will come from the workshop participants targeted from the above districts on issues of natural resources management, including what has been done at different levels to address HIV/AIDS in the districts above.)*

#### **2.2.3 Central Region (Kampala, Wakiso, Mukono, Mpigi, Luwero Districts)**

Luwero District was visited where there are several organizations like Nacwola and TASO that have helped some affected families by sensitizing them and helping them to access drugs and food supplies. FIDA has also played a big role in the area by helping widows and orphans and other members of the post clubs to access justice in cases of land and property grabbing by the extended family members after the death of the male spouse. Other organizations include: The Integrated Community Efforts against Aids (ICEA) which has carried out community initiatives on keeping memory books; Association François Xavier Bagnoud (AFXB) which is also providing sensitization to the community; and Plan International which provides assistance in form of education for orphans. *(More will come from the workshop participants*



*targeted from the above districts and any conservation organizations on issues of natural resources management and conservation, including what has been done at different levels, i.e. management and community, to address HIV/AIDS.)*

#### **2.2.4 Northern region (Lira, Guru, Kitgum, Padar districts) Lira**

Only a few organizations are involved in management and conservation of natural resources due to insecurity and more attention has been focused on providing social services in camps. Organizations like UNICEF, ACORD and Youth Alike assist orphans and other vulnerable children with income generating activities like piggy, goats and with scholastic materials. Religious organizations have also given assistance while CBOs have tried to empower vulnerable people and advocate for community empowerment and betterment of people. *(More will come from the workshop participants targeted from this region on issues on management and conservation of natural resources including what has been done at different levels i.e. management and community, to address HIV/AIDS in the districts above.)*

The above specific cases reveal that not much has been done in the field of management and conservation of natural resources and more needs to be done to integrate HIV/AIDS issues in conservation of natural resources.

### **3.0 What can be done by conservation organizations**

From the management point of view, there is need for conservation organizations to develop institutional HIV/AIDS policies, to introduce HIV/AIDS awareness, promote education in their programmes, provide voluntary HIV counselling and testing services (VCT) for their staff members and introduce medical insurance schemes to cater for the welfare of their workers and above all, introduce flexible human resource policies to help transfer sick members to less labour-demanding tasks.

There is also need for management and conservation organizations to mainstream HIV/AIDS and gender into all organizational programmes and activities and promote the benefits of sustainable natural resource management to alleviate impacts of HIV/AIDS on conservation communities. There is a need to support community based natural resources management groups and associations to share their experiences, to promote best practices within the entire conservation community and to support community based natural resources management groups with health education.

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