



**Establishing the Link between HIV/AIDS and the
Environment
Review done in Ethiopia**

Final Report

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Acronyms and Abbreviations

ABCG	African Biodiversity Collaborative Group
AIDS	Acquired Immunodeficiency syndrome
ART	Anti Retroviral Therapy
BCC	Behavioural Change Communication
CBO	Community Based organizations
CRDA	Christian Rehabilitation and development Association
EDHS	Ethiopian Demographic Health Survey
ERA	Ethiopian Road Authority
ENDA	Environmental and Development Action
FBO	Faith Based Organizations
FGAE	Family Guidance Association Ethiopia
HAPCO	HIV/AIDS Prevention and Control Office
HBC	Home Based Care
HCBC	Home and Community Based Care
HIV	Human Immunodeficiency virus
IDRC	International Development Research Centre
IPPF	International Planned Parenthood Federation
IUCN	International Union for Conservation of Nature
NGO	Non Governmental Organization
PICDO	Progress Integrated Community Development Organization
PLWHA/PLHIV/PLHA	People living with HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission of HIV
SIDA	Swedish International Development Cooperation Agency
VCT	Voluntary Counselling and Testing

Acknowledgements

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 understanding at the (policy levels and 4) influencing policy at the) Tj 363.75 0 TD -0.1930 Tc 0.0982 Tw (

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Executive Summary

The rural communities in Ethiopia, representing about 85% of the country, are utterly dependent on agriculture as a source of livelihood using meagre land based resources while most rural areas are overpopulated, often with a ver1

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the same time are replenishing the degraded resources. There is actually the understanding and the commitment of different actors to work on environmental protection along with HIV prevention, by promoting the transfer and implementation of indigenous knowledge to the young generation and meaningfully involving people living with or affected by HIV/AIDS. HIV prevention efforts should also be integrated into such activities with focus on interrupting urban-to-rural transmission and containing the rural epidemic at its current low levels through social mobilization.

Generally, there is a preliminary understanding of the association between HIV/AIDS and the environment among different development actors and community groups, and also a perception that the major strategy to tackle the link should be based on promoting protection and sustainable use of the environment.

Yet there is a lack of clear understanding and little attention given to research on this link by concerned bodies and there was no concrete evidence or practice noticed that addresses the linkage between HIV/AIDS and the environment in a deliberate or proactive manner. Some of the initiatives still require strengthening and scaling up to achieve tangible results.

1. Background

Ethiopia has a projected population of 77 million for 2007 with about 84% living in rural areas (see Ref. no. 1). Economically, Ethiopia is a low-income country with a per capita gross national income of \$110 in 2005 (World Development Report 2006).

Its economy is largely dependent on the agricultural sector, which also provides about 85% of employment. Recurrent famines and civil wars, as well as high population growth have contributed to this low socio-economic status. The population growth is putting pressure on cultivable lands and contributing to environmental degradation, which is worsening the level of poverty (see Ref. no. 2).

The overall health status of the Ethiopian people is poor. Life expectancy at birth stands at 54 years (53 years for men and 55 years for women). The infant mortality rate is estimated to be about 77 per 1,000 births, and under-five mortality is about 123 per 1,000. Poor nutritional status, infectious diseases and a high fertility rate, together with low levels of access to reproductive health and emergency obstetric services, contribute to one of the highest maternal mortality rates in the world. Maternal mortality is estimated to be 673 per 1,000 births (see Ref. no. 3).

The major health problems of the country are communicable diseases resulting from poor personal hygiene, improper garbage and waste disposal practices, and lack of an adequate and safe water supply. Significant proportions of other health problems are due to inappropriate nutritional practices, lack of health awareness, and improper cultural taboos. Most of these communicable diseases are vaccine preventable and affect mothers and children under five years of age (see Ref. no. 4)

HIV/AIDS in Ethiopia

HIV was first detected in Ethiopia in stored sera collected in 1984 and the first two AIDS cases were reported in 1986. The national HIV prevalence in 2005 was reported to be 3.5%: 3% among males and 4% among females (AIDS in Ethiopia 6th report).

According to the AIDS in Ethiopia 6th report, the estimated prevalence in urban areas was 10.5% and 1.9% in rural areas. In 2005, it was estimated that a total of 1,320,000 people were living with HIV/AIDS. Of this total, 634,000 were living in rural

areas and 686,000 in urban areas. Prevalence appears to have levelled off in urban areas but continues to rise in rural areas, where 85% of the population lives.

The urban epidemic is at an unacceptably high prevalence level of 10.5%; prevalence of behavioural indicators such as condom use are not at optimal levels; counselling and testing coverage is still low with only 5% of the general population 15-49 years of age ever being tested; ART has been accessed by only 13% of those who need it; and only 0.8% of HIV infections among births to HIV positive mothers was averted in 2005/6 through PMTCT programmes.

There are many factors that promote the spread of the disease including the presence of sexually transmitted infections, gender inequality, multiple sexual partners, prostitution, men with disposable income, alcohol, unsafe blood transfusion, and transmission from infected mothers to the foetus or child during pregnancy or breast-feeding.

The poor national economy of the country is a result, among other things, of failure to fully use the resources of the country. Despite its vast water resources, the country is able to harness only 1% of its potential for irrigated agriculture and hydropower generation (see Ref. no. 28). The energy sector has also failed to develop and to relieve the population from absolute dependence on biomass fuels (including wood, charcoal and animal dung).

Since the link between HIV/AIDS and the environment has not yet been well established, there are no programmatic approaches designed so far but an appreciation of the link between the two exists, according to an official from CRDA, an umbrella organization of over 320 registered NGOs and FBOs. There is also a progressive understanding of the need for integrating HIV/AIDS into developmental programmes by donors; it is becoming common for donor organizations to request for HIV/AIDS activities to be integrated into other projects, as is the case with the World Bank projects with the Ethiopian Road Authority.

HIV/AIDS and environmental development issues are deep and pervasive requiring long-term support and commitment (see Ref. no. 28).

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2. Objectives

The general objective of the study is to establish existing information and knowledge about the link between environment and HIV/AIDS.

Specific objectives:

- To generate information and assess the existing information on the influence and the linkage between HIV/AIDS and the environment;
- To assess existing policy and legislative instruments on the linkages or any references in the country and what has been the progress to date of the government;
- To assess what knowledge of environmental and natural resources assets communities have and use in the management of HIV/AIDS.

3. Methodology

The methods used include a literature review; assessment of existing policies; focus group discussions with grassroots implementers; key informant interviews and field visits to project sites and discussion with beneficiary groups. In addition, analysis of

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To better understand issues of **HIV/AIDS**, it usually helps to consider the HIV/AIDS time line which illustrates the different stages of the disease in a continuum; and therefore the different needs of those affected and infected as well as the different interventions required at the different stages of the disease progression.

- The fact that HIV/AIDS is not only a health problem but also a development problem is recognized.
- The need for a concerted multi-sectoral effort in controlling the HIV/AIDS epidemic is noted, given the magnitude of the problem as well as the considerable resource

a similarly troubling perpetuation of environmental degradation. Taken together, the trends of rising adult mortality and continuing environmental degradation pose severe threats to rural sub-Saharan African livelihoods, yet despite increasing HIV/AIDS prevalence and the fact that natural resources represent a central component of rural African livelihoods; the environmental dimensions of the African HIV/AIDS pandemic have received little scholarly attention (see Ref. no. 9).

Natural resources are the foundation of the Ethiopian economy. As a result of rapid population growth, climate change and other factors, the quality of renewable natural resources such as land, water and forests has deteriorated. This in turn has affected agricultural productivity (see Ref, no 10). There are very close linkages between HIV/AIDS, rural livelihoods, human capacity and the environment (see Ref, no. 11).

4.2. The Environment and its impact on HIV/AIDS

i. Environmental degradation/depletion and HIV/AIDS

Local natural resources are an important means of sustenance and income

environment can also shape individual vulnerability to HIV/AIDS in at least two ways.

First, resource scarcity often deepens poverty in natural resource-dependent regions, as in much of rural sub-Saharan Africa. Second, natural resource scarcity may lead to food insecurity and inadequate diet, which can further undermine the immune system of HIV-infected people (see Ref.0 rg -0.1123uc 0.75 0s1 446.25 TD4y of renewable nent and its im

sites, which leads to a progressive deterioration of farmers' standard of living (see Ref. no. 18).

Depletion of natural resource leads those dependent on these resources to migrate to other areas looking for other means of livelihoods which usually ends up putting them at a greater risk of HIV infection.

“Environmental degradation is decreasing the

Accordingly, ERA conducted a baseline survey for HIV/AIDS prevention and control intervention in 2004. Based on the findings and its recommendations, it developed a HIV/AIDS policy, allocates a separate budget to address HIV/AIDS issues in all its projects and contracts out the HIV/AIDS related tasks to relevant organizations to work along with construction companies in addressing workers and the surrounding community in the programme. Donors like the World Bank have also stipulated that addressing HIV/AIDS issues be part of the contractual obligations for funding.

Currently, the Authority has established an HIV/AIDS unit which coordinates the HIV/AIDS activities both within the organization and externally in outreach programmes at construction sites addressing construction workers (both full time and daily labourers) and the surrounding community. Currently reminders on HIV/AIDS are posted everywhere and condom promotion and distribution is done wherever workers are, be it at the office or out on a field assignment. The interventions are meeting their objectives with HIV/AIDS issues and challenges being addressed from different angles, according to the officials.

Other activities which require people to move from their home, even for a short time, involve associated risks; as was stated by one participant of a focus group discussion with actors of environmental protection. *“Improved seed and fertilizer disbursement in the rural areas requires farmers to travel for more than six hours to the nearby towns where they spend the night, mostly in local liquor houses usually accompanied by commercial sex workers. And this has been one of the ways the virus gets its way back to the rural areas,”* a staff member from Agri-service Ethiopia stated.

These examples indicate how other development organizations with requirements of mobilizing workers, communities and beneficiaries to areas away from their home, should consider issues of HIV/AIDS along with their routine tasks. As was indicated by the African Biodiversity Collaborative Group, coping strategies for identified HIV/AIDS-environment linkages should include development of institutional HIV/AIDS policies and strategies; adapting conservation training programmes by including a special HIV/AIDS module; working with local communities to find alternatives to unsustainable resource use and to develop natural resource-based micro-enterprises; and promoting HIV prevention and awareness in community partners by mainstreaming HIV/AIDS into environmental awareness programmes.

families. Progressively the need for simple HBC revolved around the question of how to support those in a relatively healthier condition to engage in viable livelihoods.

Urban agriculture is found to be one of the promising practices to help the urban poor residents infected or affected by HIV/AIDS as the practice primarily focuses on availing food to the household, creating opportunities for income generation and organizing beneficiaries into saving and loan groups; all of which are important to support these groups to help themselves.

Other emerging practices identified in urban agriculture include poultry keeping, animal fattening, bee keeping and growing ornamental plants (flowers and shade trees). It was also noticed that innovative approaches have been designed to overcome the problem of space in urban settings. People practice gardening using grow bags and other used items, an example from one local organization, called Progress Integrated Community Development Organization.

The other promising practice noticed was integration of solid waste management with urban agriculture in Environmental Development Action (ENDA) which is working on urban agriculture of bio-intensive gardening and small scale dairy production. Its other main programme area is integrated solid waste management which is urban based. It is trying to link the two programme areas through producing compost out of solid waste that can be used as fertilizer for the agriculture programme. Compost preparation has been made part of urban agriculture training; participants are using compost for their gardens and also sell it to others which supports their income generation as well. Having a clean environment benefits all through disease prevention, and agricultural products improve nutrition; both areas specifically benefiting those infected and affected by the HIV epidemic.

Interviews with beneficiaries involved in urban agriculture indicate that it has changed theirs and their families' lives significantly. It enables them to send children to school, their family eats well and some PLHA participants said their involvement in this activity has been satisfying and helps them as a form of 'psychotherapy'.

'Whenever I am working in my garden, it gives me the feeling of worth and takes my mind away from negative thinking. It means a lot for me to be able to send my daughter to school and pay my house rent; it is a miracle for me to

special needs over and above those of unaffected consumers of water, sanitation and hygiene (WSH) services. Improved WSH services can and do have a crucial role to play in slowing the progression of HIV and in reducing the number of AIDS-related deaths. AIDS kills by drastically reducing the sufferer's immunity to common diseases. Death comes when the patient succumbs to one or other of these "opportunistic" diseases. Among the most common opportunistic diseases are d

contribution of this indigenous knowledge and resource to the enhancement of the health care needs of the Ethiopian population cannot be underestimated (see Ref. no. 21). Traditional health practitioners in Ethiopia command great respect in the community. They are most often the first line of care, and are more widely distributed than modern health workers (see Ref. no. 21).

The prevalence of the use of herbal drugs in Addis Ababa, the capital city of Ethiopia, was found to be 37%. The main reasons given for choosing herbal medicine as the first option of medication were: dissatisfaction with the services of modern health institutions due to their time consuming nature, cost considerations and perceived efficacy (see Ref. no. 22). Many local and traditional communities in Ethiopia conserve rare medicinal plants in home gardens.

“The stock of medicinal plants continues to decrease at an alarming rate due to environmental degradation and human activity. And the knowledge passed down from one generation to the next is disappearing as fast as the precious plant varieties,” points out Dr. Davy, a biologist. Deforestation to meet agricultural and domestic energy needs, the increased use of these plants in traditional medicine, inappropriate harvesting methods, commercialization and a growing demand on the market are all factors that threaten the sustainability of this biodiversity. *“And we know to what extent Africa needs these resources to meet its numerous health care challenges – malaria and AIDS to name only two,”* he pointed out (see Ref. no. 23).

Cultural preference and the high cost and unavailability of anti-HIV drugs for PLWHAs in the developing world lead many to turn to traditional medicine to manage HIV-related illnesses. Traditional health practitioners can play an important role in delivering an AIDS prevention message and some may be able to offer treatment for opportunistic infections (see Ref. no. 24).

In addition to patient safety issues, there is the risk that a growing herbal market and its great commercial benefit might pose a threat to biodiversity through the over harvesting of the raw material for herbal medicines and other natural health care products. These practices, if not controlled, may lead to the extinction of endangered species and the destruction of natural habitats and resources (see Ref. no. 25).

4.3 Impacts of the HIV/AIDS epidemic on the Environment

HIV/AIDS is a growing threat to efforts made for economic growth and poverty reduction (see Ref. no. 7). HIV/AIDS is only one of a complex web of factors that impact on rural people's livelihoods and it is often difficult to disentangle the effects of AIDS from other environmental, political and economic events and trends (see Ref. no. 6).

Although clearly an important association, only limited empirical research has been published in academic outlets demonstrating the impacts of HIV/AIDS on household resource and livelihood strategies. Additionally, important questions remain as to the unique impacts resulting from AIDS morbidity and mortality, as opposed to the loss of an adult household member from other causes of mortality. With regard to HIV/AIDS, it is logical to consider that household experience with protracted adult illness may exacerbate the impacts of eventual mortality, while the stigma associated with AIDS might also lessen assistance in times of household crisis (see Ref. no. 9).

The HIV/AIDS pandemic is having unprecedented and tragic impacts on all sectors of society in sub-Saharan Africa, causing untold human suffering, serious economic

effects, and social disruption. It is also affecting the environment: there are very close linkages between HIV/AIDS, rural livelihoods, human capacity and conservation (see Ref. no. 11).

i. Loss of crucial human capital - knowledge and labour are lost due to AIDS

The commercial and subsistence agricultural sectors in Ethiopia are non-mechanized and intensive labour requirements demand a strong, healthy labour force (see Ref. no. 5). However, given that the epidemic affects the most economically productive segment of the population, it impacts negatively on productivity. Work time is lost through frequent absenteeism and decreased capacity to do normal work as the disease advances (see Ref. no. 6).

“We used to bury up to four people every day when we start working as HBC volunteers before the advent of the drugs for HIV/AIDS,” a Home Based Care (HBC) volunteer coordinator in Adama, Nazareth, working with FGAE stated.

When agricultural labour is lost and household incomes decline, households often farm more extensively with fewer inputs. This can result in more environmentally damaging techniques including the increased use of fire (see Ref. no. 26).

As labour supply decreases due to AIDS illness and deaths, commercial farmers commonly shift from labour intensive cash crops to subsistence farming. On a national level, this adaptation reduces national agricultural production (and consequently GDP) and depletes Ethiopia's ability to trade commodities internationally. Less labour-intensive crops also tend to have lower nutritional value, contributing to malnutrition (see Ref. no. 5).

There is also the issue of loss of traditional knowledge related to conservation as well as the loss of productive forces due to AIDS, which creates a knowledge gap for the surviving generation who will be challenged to sustain biodiversity. Analyzing the extent of this gap and associated problems, two national NGOs have started to address the concern by designing programmes. One of the NGOs, Melca Mahber, has a program called 'Segni' ("seed" in one of the local languages) which attempts to create responsible and purpose-oriented youth who can live a balanced life without irreversibly damaging the surrounding ecosystem. This is done by organizing retreats with participation of elders, HIV/AIDS club leaders and students identified to have bad behaviour and irresponsible attitudes, in isolated parks. There information is provided about biodiversity in the park and also traditional knowledge related to conservation and herbal medicines. Melca Mahber strongly believes in reviving culture to combat both HIV/AIDS and environmental degradation.

Likewise, another local NGO, the t Tc 3.517 18 0 TD -0 Tj -17eversibllc Tc7t a.75 u1t TcoaD -0.1156e

ii. Overuse of natural resources – increased dependence on natural resources for livelihood

It is believed that households under stress from hunger, poverty or disease will adopt a range of strategies to mitigate their impact through complex multiple livelihood strategies. These entail choices that are essentially 'erosive' (unsustainable, undermining resilience) and 'non-erosive', easily reversible (see Ref. no.6).

As related to mortality, the Africa Biodiversity Collaborative Group reports that throughout sub-Saharan Africa changes in the natural resource collection strategies frequently involve unsustainable collection practices and the de-emphasizing of stewardship in general (Dwasi 2002). Unfortunately, the death of a prime-aged adult also often represents the loss of a skilled and knowledgeable natural resource collector. In contrast, children and inexperienced natural resource collectors are more likely to employ unsustainable collection practices due to a lack of traditional knowledge (Dwasi 2002) (see Ref. no. 9).

Lack of transfer of indigenous knowledge, as a result of high morbidity and mortality brought about by AIDS, is also another aggravating factor in unsustainable use of resources. In the World Bank Bulletin, 1998, indigenous knowledge is defined as the local knowledge that is unique to a given culture or society. It is the basis for local-level decision making in agriculture, health care, food preparation, education, natural resource management, and a host of other activities in rural communities (Warren 1991).

When the local population is subjected to limitation in its traditional use of land, or when people are forced to move from national parks, nature reserves or forest reserves, it is most often difficult to create understanding among the people concerned of the importance of measures of this type. Conflicts can be expected to increase when the effects of the AIDS epidemic increases people's needs for access to easily exploited natural resources (see Ref. no. 12).

iii. i

280,000 Ethiopians between the ages of 15 and 49 will die every year due to HIV/AIDS; this indicates that the impact is still to continue.

When the middle aged adults die leaving the young, usually without properly transferring their knowledge of living harmoniously with nature, a big knowledge and value gap is created among the young generation. The situation leads to failure to adopt sustainable farming practices and disruption of the culture of maintaining healthy and diverse environmental assets which have been kept intact for a long time.

It was also reported during the interviews that when the adult of the household dies, extended family members or guardians claim the land and usually divide the plot among themselves. These plots usually end up being too small an area for proper cultivation, resulting in further deterioration of the land and lack of proper use.

The survivors of the household (elders and children) have to make ends meet to feed themselves and therefore engage in different activities to meet their immediate needs for food; primarily collecting fire wood for sale without understanding its implication.

v. Diversion of conservation funds

Those working on environmental protection are equally vulnerable, if not more vulnerable, as other people and if a deliberate effort to integrate and address issues of HIV/AIDS, protect staff from infection, promote safe practices and positive living is not made, this could lead to grave consequences for both the organizations and the workers.

Fulfilling different needs is required in the event of HIV/AIDS, including medical expenses of staff, sick leave, terminal benefits and funeral costs and training of replacement staff. These expenses reduce the budget available for conservation work, and often have to be covered by scarce core funds (see Ref. no 26). A proactive effort, whenever possible, to integrate issues of HIV/AIDS into environment sector programmes would be more effective and less costly than managing its devastating impacts (see Ref. no. 27).

5. Conclusion

This brief review of the linkages between the environment and HIV/AIDS has tried to look at the association between the two from different angles. The association can easily be detected by taking into consideration the issue of *poverty* which is a strong intermediary between the two.

Environment *Poverty* **HIV/AIDS**

As depicted in the diagram above, the association or impact of e

in alleviating the pressure on people to adopt behaviour putting them at risk of HIV to overcome their destitution, even with adequate awareness about the pandemic.

Achieving environmentally sustainable development requires, among other things, cross sector-linked approaches that mirror the livelihood strategies of poor households and communities (see Ref. no. 27). In sub-Saharan Africa, household coping strategies following HIV/AIDS are mainly aimed at improving food security; raising, supplementing and diversifying income in order to maintain household expenditure and to alleviate loss of labour (White and Robinson 2000).

The role of public and poverty reduction policies and interventions should also include consideration of the importance of protecting environmental resources and making sustainable use of the resources to fight against poverty. As such, environmental conservation and bolstered efforts at sustainable resource management should be central components of policy measures designed to mitigate the impacts of AIDS (see Ref. no. 9).

Mobilizing existing resources, including natural resources, culture and indigenous knowledge, to overcome poverty could actually be the way forward towards a promising future for the country in general and the poor and marginalized groups in particular, as they represent the majority in the country. As indicated in this review, there are also emerging practices piloted by some organizations which are showing promising results and which are worth replicating and or scaling-up by concerned stakeholders in order to get tangible outcomes at a national level.

Recognizing the association between HIV/AIDS and the natural environment can contribute to the well-being of both human populations and the local environment, particularly in regions characterized by high prevalence of HIV/AIDS and natural resource dependence and scarcity. Although research on HIV/AIDS and environment intersection is in its infancy, the early evidence suggests that the public health, HIV/AIDS, and environmental policy and advocacy communities would gain strength by recognizing the overlaps in their agendas (see Ref. no. 14).

6. Recommendations

The following actions are recommended:

1. Bringing relevant stakeholders together to plan for designing well integrated strategies and approaches to address the link between the environment and HIV/AIDS.
2. Considering incorporating the linkage into the strategic plan and designing appropriate approaches that fit the specific context of the target group and area one works in.
3. Reviewing current practices to identify approaches that have the potential to aggravate the pandemic; and adopting healthy practices to avert these risks.
4. Designing appropriate alternative livelihood strategies for those affected by the pandemic to prevent further exploitation of the environment and to reduce their vulnerability of being exposed to HIV infection.
5. Designing a training module on how to address the integration based on current and indigenous knowledge and cascading capacity building of potential partners.
6. Targeting the youth: working with schools to raise an environmentally conscious generation, scaling up existing practices like environmental clubs.

7. Promoting intergenerational transfer of indigenous knowledge and culture to prevent HIV and protecting the environment through designing programmes involving the young and the elderly.
8. Promoting Environmental Impact Assessment (EIA) in different developmental endeavours and promoting the implementation of assessment recommendations to protect the environment.
9. Closely working with communities, addressing their felt needs using the rights based approach, promoting ownership of natural resources and the environment in general.
10. Designing separate strategies for urban and rural interventions, with focus on marginalized groups who are more dependent on natural resources.
11. Allocating sufficient resources for addressing issues identified in the link between HIV/AIDS and the environment.
12. Working towards having a National strategy on the integration of HIV/AIDS and the Environment.

Annex 1 - References

1. Central Statistical Authority. The 1994 Population and Housing Census of Ethiopia: Results at Country Level (Volume 1: Statistical Report). 1998. Addis Ababa, Ethiopia.)
2. The World Bank. Ethiopia: a country status report on health and poverty. (2004)
3. Ethiopia Demographic and Health Survey 2005, Central Statistical Agency, Addis Ababa, Ethiopia, September 2006.
4. Ministry of Health. Health and health related indicators. 2005/2006. Planning and Programming Department, Addis Ababa, Ethiopia)
5. <http://www.etharc.org/infokit/sectorbr.htm> HIV/AIDS in Ethiopia
6. The Regional Network on HIV/AIDS, Rural Livelihood and Food Security, RENEWAL Ethiopia Background Paper: HIV/AIDS, Food and Nutrition security, Drimie, Taffesse and Frayne, January 2006.
7. Health Sector Development Plan (HSDP), III 2005/6-2009/10: FMoH, planning and programming department 2005
8. Report on the rapid assessment on CRDA/SIDA supported projects, Part I, Development Studies Associates, DSA, May 2007, Addis Ababa
9. HIV/AIDS, Mortality, and Household Use of Natural Resources: Critical Linkages and Remaining Questions, Panel Contribution to the Population Environment Research Network's Cyberseminar on Household Micro-Demographics, Livelihoods and the Environment, April 2006.
10. <http://www.acdi-cida.gc.ca/CIDAWEB/acdicida.nsf/En/JUD>
11. HIV/AIDS and natural resources management linkage, Africa Biodiversity Collaborative Group, September 2002.

11. HIVhoodTD

24. Gerard Bodeker, George Carter, Gemma Burford, Mark Dvorak-Little. The Journal of Alternative and Complementary Medicine. July 1, 2006, 12(6): 563-576.
25. WHO fact sheet no.134, traditional medicine, revised May 2003.
26. HIV/AIDS and the environment: impacts of AIDS and ways to reduce them, fact sheet for the conservation community, WWF
27. Zerihun Woldu, The Population, Health and Environmental Nexus, AAU, May 2008.
28. Federal Democratic Republic of Ethiopia (FDRE), Environment Policy of Ethiopia, 1997

Annex 2: Interview Guides

I. Guiding questions for organization visited

1. What are the major program areas in your organizations?

2. Which geographical areas do you work at?

3. Has HIV/AIDS affected your work, performance in any way? How? Please elaborate.

4. Do your staff members travel frequently for work related tasks away from their home and families?

5. Can you tell us the relationship between your mandate and HIV/AIDS?

6. How do you involve PLHAs and those affected by the epidemic in your area of work?

7. What is your opinion on the linkages of HIV/AIDS and the environment?

8. Any recommendation you have towards an integrated approach to address issues of HIV/AIDS and the Environment?

II. Interview guides for project beneficiaries

1. Name: _____
2. Residence:
 - 2.1 Region: _____
 - 2.2 Zone: _____
 - 2.3 Woreda (district): _____
3. What activities are you engaged in currently?

4. What were you doing (your occupation) before starting your current job?

5. Have you ever tested for HIV?

6. (IF PLWHA) How do you cope to survive after you were told you are HIV positive?

7. (If non PLWHA) how are you managing to protect yourself from HIV virus?

8. Are you engaged in any HIV/AIDS related work? If so what?

9. How did you become part of this program?

10. What is your participation/ role on the following issues?
 - 10.1 Land use _____
 - 10.2 Forestry resource _____
 - 10.3 Soil Conservation _____
 - 10.4 Area protection _____
11. What do you think of your participation in natural resources conservation?
 - a) Nursery establishment _____
 - b) Seedling raising _____
 - c) Hillside terraces. _____

III. Interview guide questioners for CBOs

1. Name: _____
2. Location
 - 2.1 Region _____
 - 2.2 Zone _____
 - 2.3 Woreda (district) _____
3. Year of establishment (organized) _____
4. Number of executive committee members _____
5. Are HIV positive members represented in the leadership?
If Yes, how? _____
If No, why not? _____
6. What are your duties and responsibilities in the CBO? Particularly in association with HIV/AIDS related work?

7. Do you have any working relationship with NGOs Can you describe it?

8. Any working relationship with governmental organizations? _____
9. What are the strategies/ activities you have on HIV/AIDS?
 - 9.1 Existing strategy _____
 - 9.2 Tc 0 Tw (9.) Tj 8.25 0 TD 0 Tc 0.068 Tw () Tj 25.5 ael. D -8.75 TD968 tureng strategy _____