

Dynamics of the HIV/AIDS epidemic in value chain development in rural Ethiopia and responses through market-led agricultural initiatives



HIV/AIDS undermines a household's livelihood and welfare



This working paper series has been established to share knowledge generated through Improving Productivity and Market Success (IPMS) of Ethiopian Farmers project with members of the research and development community in Ethiopia and beyond.

IPMS is a five-year project funded by the Canadian International Development Agency (CIDA) and implemented by the International Livestock Research Institute (ILRI) on behalf of the Ethiopian Ministry of Agriculture and Rural Development (MoARD).

Following the Government of Ethiopia's rural development and food security strategy, the IPMS project aims at contributing to market-oriented agricultural progress, as a means for achieving improved and sustainable livelihoods for the rural population. The project will contribute to this long-term goal by strengthening the effectiveness of the Government's efforts to transform agricultural production and productivity, and rural development in Ethiopia.

IPMS employs an innovation system approach (ISA) as a guiding principle in its research and development activities. Within the context of a market-oriented agricultural development, this means bringing together the various public and private actors in the agricultural sector including producers, research, extension, education, agri-businesses, and service providers such as input suppliers and credit institutions. The objective is to increase access to relevant knowledge from multiple sources and use it for socio-economic progress. To enable this, the project is building innovative capacity of public and private partners in the process of planning, implementing and monitoring commodity-based research and development programs.

Most of the project's activities are taking place in selected Pilot Learning *Woredas* (PLWs). The smallholder farmers and pastoralists in the PLWs are expected to increase market-oriented production and productivity through the project's interventions during the project life. The project staff and partners will study this process through action research and learning. Some complementary focused studies are also undertaken by the project and its partners, which help to understand the context and determine key factors influencing the adoption and impact of the interventions. The results of all these studies and some important concepts, tools, methods and approaches developed will be published in the working paper series and will also be disseminated through other appropriate channels.

Intended users of the research outputs are government, non-governmental and private sector and donor organizations that are involved in market-oriented development. They may use these learnings in their efforts to scale out this development process to other *woredas* in the country. Some lessons learned are also expected to be relevant for possible use in market-orientated agricultural development efforts in similar contexts outside Ethiopia.

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Clare Bishop-Sambrook (Gender and HIV/AIDS Adviser)*

* Corresponding author: clarebishopsambrook@gmail.com

Improving Productivity and Market Success (IPMS) of Ethiopian Farmers Project,
International Livestock Research Institute (ILRI), Addis Ababa, Ethiopia

Cover page: Posters developed by IPMS illustrating the potential risks and consequences of using
market earnings from dairying and coffee enterprises unwisely.

Author's affiliation

Clare Bishop-Sambook, Gender and HIV/AIDS Adviser, Improving Productivity and Market Success (IPMS) of Ethiopian Farmers Project, International Livestock Research Institute (ILRI), Addis Ababa, Ethiopia.

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Abbreviations

| | |
|--------|---|
| ART | Anti-retroviral Treatment |
| CIDA | Canadian International Development Agency |
| DA | Development Agent |
| DHS | Demographic Health Survey |
| EDHS | Ethiopian Demographic Health Survey |
| FHAPCO | Federal HIV/AIDS Prevention and Control Office |
| FTC | Farmers' Training Centre |
| GoE | Government of Ethiopia |
| HAPCO | HIV/AIDS Prevention and Control Office |
| HTP | Harmful Traditional Practice |
| IPMS | Improving Productivity and Market Successes |
| MOH | Ministry of Health |
| NGO | Non-governmental Organization |
| OoARD | Office of Agriculture and Rural Development |
| PEPFAR | President's Emergency Plan for AIDS Relief |
| PLW | Pilot Learning <i>Woreda</i> |
| PLWHA | People Living with HIV/AIDS |
| RDA | Research and Development Assistant |
| RDO | Research and Development Officer |
| SNNPR | Southern Nations, Nationalities and People's Region |
| TVET | Technical and Vocational Education and Training |
| UNAIDS | United Nations Joint Programme on HIV/AIDS |
| UNDP | United Nations Development Programme |
| VCT | Voluntary Counselling and Testing |
| WALC | <i>Woreda</i> Advisory and Learning Committee |
| WAO | Women's Affairs Office |

Executive summary

The HIV epidemic in Ethiopia has stabilized in recent years, with a national prevalence rate of 2.2% among adults. Although Ethiopia is recognized as one of the countries that has registered encouraging results in the prevention of HIV/AIDS, its continued expansion into rural areas represents one of the major challenges in addressing the epidemic. The potential impact of the rural epidemic on undermining efforts to improve agricultural productivity and to achieve market-led development requires an urgent response.

Despite the crucial role of the agricultural sector in the Ethiopian economy, studies on the rural HIV epidemic are relatively scarce. The main purpose of this paper is to contribute to the knowledge base about HIV/AIDS in the agricultural sector. This paper discusses the rural epidemic in the context of the Improving Productivity and Market Successes (IPMS) of Ethiopian Farmers' Project being implemented by the International Livestock Research Institute and the Ministry of Agriculture and Rural Development. The findings are based on qualitative studies undertaken by IPMS Research and Development Officers in 10 pilot learning *woredas* (PLWs) located in four regions of the country and examined three questions: what are the sources of risk of HIV infection and who is at risk; to what extent does AIDS already impact rural communities and their livelihood systems; and what might a production and market-oriented project, such as the IPMS, offer to address the epidemic?

Risks of HIV infection through value chain development

There are three principal sources of risk of infection in rural communities: potentially HIV-risky environments in and around each *woreda*, bridging populations comprising people who are at higher risk that provide substantial links with other subpopulations who have lower risk behaviour, and cultural traditions and practices which may hasten the spread of the disease once it is present in rural communities.

In the context of the IPMS project, it is also relevant to identify risks of infection specifically associated with agricultural production and marketing. Six principal commodity value chains (cereals, oilseeds, vegetables, spices, coffee and livestock) are examined in terms of the risk they pose to increasing exposure to HIV infection through unprotected sex. From the findings, it is evident that certain aspects of market-led agricultural growth may present additional risks of exposure to HIV infection to rural communities. The dominant factor is the huge seasonal movement of people throughout rural Ethiopia. As an agrarian economy with labour-intensive farming methods, the timely availability of labour is crucial for the successful cultivation of crops. In addition to

inflows of casual labourers, family members, such as students and migrant workers, also return to assist at the busiest times of the year.

Some movements are associated with specific farming systems, such as cattle keepers in search of fodder, or irrigation pump-owners who lease or share crop irrigated land. Mono-cropping exaggerates labour peaks and troughs; the peaks draw in labour and the troughs force family members to seek work elsewhere. In contrast, activities that extend the cropping season, such as the use of irrigation, may reduce the need for family members to migrate.

Marketing involves a significant movement of sellers and buyers, both into and out of rural areas, as well as between rural communities, on journeys that may be completed within a day or over several days. Commodities with intensive periods of sale, such as coffee and grain, result in many of the key players in the marketing chain (such as middlemen, buyers, wholesalers, traders, exporters and transporters) staying in the marketing centres for periods of up to three months. Poor pricing arrangements (when prices are determined at the end of the day or midnight) and delays in payment require farmers to wait and incur additional expenses in overnight accommodation and socializing.

Increased market orientation among farmers is likely to result in more frequent visits to markets or urban centres, to buy farm inputs, to repair machinery and to sell produce. Greater price sensitivity encourages farmers to travel further afield in search of better prices. Although this increase in mobility is a sign of economic empowerment, it is also a potential risk of exposure to HIV.

Weekly rural markets in the *woreda* are a major social gathering, drawing people together, typically from a 10–15 km radius. Market days are often a source of recreation, even if there is no business to conduct, and are acknowledged as an opportunity to meet secret lovers. Drinking on market days is a common and long-established practice and may lead to casual unprotected sex; in some parts of the country it is also associated with chewing chat. Recreational activities are heightened during the harvesting season, when money is available and commercial sex workers from all parts of the country move into market centres. Larger rural markets attract people from a wider catchment and may result in overnight stays.

Engagement with the market, and hence the market-related risk of HIV infection, is strongly influenced by gender roles since women and men usually occupy distinct niches in the marketing chain. Women sell small volumes of the main cash crops, vegetables from their home gardens, small livestock and their products, and honey; the amount sold

is determined by household needs and the sales usually take place in the local market on a regular basis. Men tend to sell the majority of the cash crops, fattened cattle and other livestock; when selling in bulk, they often travel to major markets to get better prices. Women and girls are potentially at risk from unwanted sexual advances whilst they travel to and from markets, and many travel in groups to improve their security. They may also encounter pressure to have sex when they stay away from home whilst trading and, culturally, they are in a weak position to refuse.

Evidence of AIDS-impacts and vulnerability to future impacts

One of the greatest challenges of working in many rural communities is that HIV/AIDS data are relatively scarce, coupled with the heterogeneous nature of the rural epidemic with marked inter- and intra-regional variations. Identification of the stage of the epidemic is made more difficult when some of the classic indicators of heavily-impacted communities are not relevant due to the characteristics of the local farming and livelihood systems. The picture may be further confused by the community's response to the epidemic if they do not know the symptoms of the disease or are in a state of denial about its presence. Although the level of awareness about the disease is high, there is often a reluctance to admit that people from their community are infected or dying from AIDS, although it may be a disease that is affecting neighbouring *woredas*. In addition, as a result of high levels of stigmatization and misconceptions about the modes of transmission, people who are displaying symptoms of AIDS are often not seen in the community due to self-exclusion or marginalization by others.

In the absence of hard data on AIDS-related illnesses and deaths in the community, it is necessary to look for proxies to provide insights regarding the extent to which communities have already been impacted by AIDS, including reported behaviour change, changes in composition of households in community, changes in community response to coping with epidemic and the impact of AIDS on livelihoods.

On the basis of the qualitative information gathered during the surveys, it is possible to place the 10 PLWs into one of three separate groups representing different stages of the epidemic, in ascending order of severity of impact:

- *Limited impact to date*: The impact of the disease is largely confined to urban areas (such as small towns and market centres), with rural communities in Miesso and remote rural communities in Atsbi still at the initiating stage;

- *Moderate impact:* Urban communities are impacted and the disease has also progressed to the impending stage among rural communities in Ada’a Liben, Alaba, Alamata, Dale and Metema; and
- *Impacted stage:* Both urban and the more accessible rural communities are already impacted by AIDS, leaving only the remote rural areas at the impending stage in Bure, Fogera and Goma.

Opportunities and IPMS responses for addressing HIV/AIDS through market-led growth strategies

The stage of HIV/AIDS epidemic in a community influences the principal focus of the response activities. In communities where few members of the community are infected, most of the emphasis is on increasing awareness and understanding about the disease with a view to reducing the risk of infection. In communities where a significant proportion of the population are already infected but not yet sick with the disease (AIDS-impending), priority is given to preparing households to reduce the impacts of AIDS. Finally, in AIDS-impacted communities, attention is focused on providing care and support to people living with HIV/AIDS (PLWHA) and their families and adjusting to the impacts of the disease. However, in any community, it is likely that all stages of the disease are present in different households, so all activities are relevant, to a lesser or greater extent.

Activities for raising awareness and understanding about HIV/AIDS

- Conducting TOT training of DAs and other key stakeholders in the *woreda* to become HIV/AIDS competent and able to train others.
- Using farmers’ associations, cooperatives, marketing groups and trade associations as entry points for behaviour change communication activities, particularly targeting men and the youth.
- Targeting groups associated with agricultural production and marketing who are often overlooked by HIV/AIDS awareness and outreach activities because they do not usually belong to formal associations.
- Using occasions when people are gathered together, such as market days and farmers’ meetings, to educate people about HIV/AIDS, including testimonies by PLWHA.
- Holding intensive awareness campaigns during seasons of high risk, such as harvesting and holidays.
- Identifying innovative ways for reaching rural communities with HIV/AIDS messages.
- Integrating HIV/AIDS awareness raising into all training courses, workshops and field visits.
- Facilitating access to relevant HIV/AIDS materials and posters in *woreda* knowledge centres and farmer training centres (and translating materials into local languages).

- Identifying opportunities to reduce the stigma associated with the disease.
- Promoting HIV/AIDS workplace programs among IPMS partner institutions.

Activities for reducing the risk of exposure to HIV infection

- Bringing the input supply and marketing chain closer to farmers in order to reduce the need to travel and spend nights away from home.
- Improving the capacity or throughput of the plant and improving the efficiency of handling procedures in order to reducing bottlenecks and delays at processing plants and distribution points.
- Modifying ways in which markets are organized in order to reduce unnecessary delays.
- Educating farmers and seasonal labourers to manage their earnings for the benefit of their families by saving, broadening their horizons and investing in their future.
- Strengthening women's position through economic empowerment through income-generating activities and gender training, and by making the marketing chain more women-friendly and safe.
- Minimizing the risk associated with capacity building by reducing the number and duration of training courses held away from home, training couples, and reducing the need for overnight stays away from home.
- Reducing the wish to migrate from rural areas, particularly among the youth, by increasing livelihood options and extending the growing season by developing small-scale irrigation, product diversification, agro-processing and value addition, and strengthening existing and creating new market linkages.
- Improving living conditions in rural areas and minimizing the need for development agents to live away from their families.

Activities for reducing vulnerability to the impacts of AIDS

- Overcoming barriers to production and marketing faced by AIDS-infected and affected households.
- Developing market opportunities for crops and livestock suited to the resource base of infected and affected households.
- Promoting new non-farm livelihood opportunities with modest capital and labour requirements for impacted households with the capacity to participate.
- Using cooperatives and farmers' associations as an entry point for AIDS care and support for members.
- Promoting crops and livestock that contribute to balanced diets for PLWHA, especially those on ART with special nutritional requirements.
- Developing the farming skills of a wide group of farming households and labourers in order to minimize the impact of the loss of key adults on household livelihoods.
- Involving share cropping partners in market development initiatives.
- Working with microfinance institutions to provide access to emergency loans, and promoting the formation of voluntary savings and loans groups.

Working in partnership

The IPMS project works with a range of partners for implementing HIV/AIDS initiatives at the *woreda* level. The IPMS *woreda* advisory and learning committee has been used as an appropriate forum in which stakeholders can foster partnerships, alliances and networks in order to develop a mutual understanding and acquire knowledge about HIV/AIDS epidemic from appropriate sources. Not only does the partnership approach demonstrate the complementary roles required in addressing the epidemic and enables a range of complementary resources to be mobilized, but it also strengthens relationships, develops synergies and creates mutual respect between the various players.

Final thought

Initiatives to strengthen the market orientation of agricultural production present both an opportunity and a threat to the rural HIV/AIDS epidemic. Whilst any contributions towards reducing poverty and the need to migrate may reduce susceptibility to HIV/AIDS, there are very real risks that the additional cash and the stimulus to travel further afield to market produce could increase the risk of exposure to HIV. Hence activities associated with promoting the commercialization of agriculture need to be designed with care to ensure that they play a role in arresting, rather than hastening, the spread of the disease in rural communities.

The experience of the IPMS project in various *woredas* illustrates how HIV/AIDS mainstreaming initiatives, both to raise awareness about the disease and to reduce the risk of infection, can be achieved while undertaking commodity development. The remaining years of the project will be used to further develop and field test other opportunities for addressing the market-related dimension of the rural HIV epidemic.

1 Introduction

1.1 Urgent need to address the rural HIV epidemic

The HIV epidemic in Ethiopia has stabilized in recent years, with a national prevalence rate of 2.2% among adults. Nevertheless, an additional 125,000 people become infected with the disease every year and almost 60,000 people die annually from AIDS-related illnesses.¹ The stage of the epidemic is generalized² and the absolute number of people living with the virus is very high (estimated at around one million). Although Ethiopia is recognized as one of the countries that has registered encouraging results in the prevention of HIV/AIDS,³ its continued expansion into rural areas represents one of the major challenges in addressing the epidemic (UNAIDS 2007). Thus the focus of the national effort is on scaling up HIV prevention, treatment, care and support services, particularly in rural areas.

The agricultural sector plays a central role in the Ethiopian economy, accounting for 50% of the GDP and 80% of foreign exchange earnings, and lies at the heart of government initiatives to accelerate nationwide economic growth. Of the total population of 77 million, 84% live in rural areas and 80% are engaged in agriculture. Even though rural HIV prevalence rates are markedly lower than urban rates (0.9% and 7.7%, respectively), the potential impact of the rural epidemic on undermining efforts to improve agricultural productivity and to achieve market-led development requires an urgent response.

At the household level, the impact of the disease diverts attention and resources from productive activities to caring for the sick and surviving the aftermath of the death of key household members. If left unchecked, the disease changes the composition of rural communities and the priorities of farming households, thereby making many of the traditional production-oriented extension messages irrelevant. The experience of rural communities in several countries in East and Southern Africa, which have experienced prevalence rates of over 10% (Box 1) provides a salutary reminder of the seriousness of addressing the rural epidemic now while the prevalence rates remain relatively modest. Moreover, the recent Ugandan experience of witnessing a reversal in the previous falling prevalence rates demonstrates the need for continued vigilance.

1. Ministry of Health (2007) Single Point HIV Prevalence Estimate. This document presents the reconciliation of HIV estimates between two studies conducted in 2005 (Demographic and Health Survey and sentinel surveillance based on ante-natal care for pregnant women). These data are being used provisionally in all planning exercises at present.

2. An epidemic is considered 'concentrated' when less than one per cent of the general population but more than five per cent of any 'high risk' group are HIV-positive whereas an epidemic is considered 'generalized' when more than one per cent of the population is HIV-positive (that is when HIV has spread beyond initial subpopulations engaged in high-risk sexual behaviour to the general population).

3. Statement by Dr Betru Tekle, HAPCO Director General in Mekelle, 6 May 2008.

Box 1: Impacts of HIV/AIDS

At the household level:

- loss of young adult labour, leading to a decline in production
- decline in household income, leading to decreased food consumption, increased school drop-out rates and poorer health status
- erosion of household asset base, through the depletion of savings, forced disposal of productive assets and property grabbing
- dramatic rise in expenditure (on health care, transport and funerals)
- increase in household dependency ratio
- loss of agricultural knowledge, practices and skills
- disruption of traditional social security mechanisms.

At the sectoral level:

- decimation of skilled and unskilled agricultural labour
- reduced smallholder crop and livestock production
- adverse effects on commercial agriculture
- loss of indigenous farming methods, inter-generational knowledge transfer and specialized skills and practices erosion of capacity and disruption in service delivery in rural organizations

1.2 Rationale for integrating an HIV/AIDS perspective into IPMS project

This paper discusses the rural HIV epidemic in the context of the Improving Productivity and Market Successes (IPMS) of Ethiopian Farmers' Project being implemented by the International Livestock Research Institute and the Ministry of Agriculture and Rural Development. IPMS, a five-year project funded by the Canadian International Development Agency (CIDA), works at the federal, regional and *woreda* (administrative districts) levels on institutional strengthening, capacity building and knowledge management. The project conducts action research at the *woreda* level through 10 pilot learning *woredas* (PLWs) located in four regions of the country (Tigray, Amhara, Oromia and Southern Nations, Nationalities and People's Region (SNNPR)) (Table 1). PLW activities focus on promoting priority marketable commodities (crops and livestock) in support of a market-led integrated agricultural strategy through: promoting innovation in commodity value chains; improving service delivery systems; increasing participation by input suppliers, rural finance and farmer organizations; and strengthening market linkages.

Table 1. *Characteristics of IPMS woredas*

| Region | Woreda | Location | Priority farming/livelihood systems identified by IPMS | |
|--------|----------------|---|--|------------------------------------|
| | | | Farming system 1 | Farming system 2 |
| Tigray | Alamata | South of Mekelle | Teff–sorghum–maize–livestock | Cotton–rice–livestock |
| | Atsbi-Wemberta | Highlands in northeast of Tigray | Pulse–livestock | Apiculture–livestock |
| Amhara | Bure | West of Gojam | Cereals–pepper–live-stock | Cereals–potato–faba bean–livestock |
| | Fogera | South of Gondar adjacent to Lake Tana | Rice–livestock | Cereal–livestock |
| | Metema | West of Gondar bordering Sudan | Cotton–rice–livestock | Sesame–cotton- sorghum–livestock |
| Oromia | Ada’a Liben | Central highlands to east of Addis Ababa | Teff–dairy | Teff–livestock |
| | Goma | Trading centre of coffee in the West of Jimma | Shaded coffee–livestock | Cereal–livestock |
| | Miesso | East of Adama | Crop–livestock | Pastoral |
| SNNPR | Alaba | In Rift Valley to northwest of Awassa | Teff–haricot bean–livestock | Pepper–livestock |
| | Dale | South of Awassa | Coffee–livestock | Beans–livestock |

There are two reasons for a market-oriented project such as IPMS to consider HIV/AIDS. On the one hand, the epidemic is already established in the rural areas of Ethiopia and the agricultural sector has a unique role to contribute to addressing the HIV/AIDS epidemic in rural communities. Even if IPMS and other agriculturally related development projects choose to do nothing about HIV/AIDS, the disease will inevitably have an impact on rural communities and their ability to participate in project initiatives. AIDS-affected households will experience a loss of labour and skills, a reduction in their asset base and changes in household priorities to meet short-term food needs rather than engage in potentially risky medium-term investments. IPMS partner institutions may also suffer if attrition rates rise among their workforce, thereby undermining IPMS investments in capacity building and institutional strengthening.

On the other hand, if the IPMS project is successful in increasing productivity and farmers’ engagement with the market, and thereby raising farm incomes, its actions may actually hasten the spread of the disease (since movement and the ready availability of money, both associated with marketing, are often cited as driving factors of the epidemic). Similarly, capacity building initiatives, such as training, study tours and farmer exchange programs, may also increase the risk of exposure, if they involve overnight stays

away from home. Thus it is essential to ensure that the IPMS project does no harm with respect to hastening the spread of the disease or increasing vulnerability to the impacts of AIDS by identifying any increases in the risk of HIV infection associated with its activities and introduces remedial measures as necessary.

Consequently, IPMS has paid attention to mainstreaming HIV/AIDS issues into project implementation and the HIV/AIDS strategy,⁴ prepared in 2004, sets out IPMS's commitment to reduce the rural population's risk of HIV infection and vulnerability to the impacts of AIDS.

1.3 Purpose of the paper

Despite the crucial role of the agricultural sector in the Ethiopian economy, studies on the rural HIV epidemic are relatively scarce (Box 2). Thus the main purpose of this paper is to contribute to the knowledge base about HIV/AIDS in the agricultural sector by, firstly, increasing understanding about the HIV/AIDS in the context of rural communities and, secondly, identifying opportunities to minimize the risk of HIV infection and mitigate the impacts of AIDS in rural communities through market-led agricultural initiatives.

Box 2: Recent studies on HIV/AIDS in rural communities in Ethiopia

- 2006: Drimie S, Tafesse G and Frayne B. *RENEWAL Ethiopia Background Paper: HIV/AIDS, Food and Nutrition Security*, Regional Network on HIV/AIDS, Rural Livelihoods and Food Security (RENEWAL) and IFPRI
- 2005: Waters-Bayer A, Birmeji B and Mengistu G. *Ethiopian pastoralists and HIV/AIDS: Few facts, many fears and a glimmer of hope*. Workshop on linkages between HIV/AIDS and the livestock sector in eastern and southern Africa. ILRI Research Centre, Addis Ababa, 8–10 March 2005.
- 2004: Pankhurst A. *Conceptions of and responses to HIV/AIDS: Views from twenty Ethiopian rural villages*. Paper presented at Second International Conference on the Ethiopian Economy organized by Ethiopian Economic Association at United Nations Conference Centre, June 3–5, 2004, Addis Ababa, Ethiopia.
- 2004: Bishop-Sambrook C. *The challenges of the HIV/AIDS epidemic in rural Ethiopia: Averting the crisis in low AIDS-impacted communities. Findings from field work in Kersa woreda, Eastern Hararghe Zone, Oromia Region*. FAO HIV/AIDS Programme, Rome, Italy.
- 2002: Tesfaye N, Mamo G, Assegid Y and Bielman J. *HIV/AIDS and agriculture in Ethiopia, A profile*. Paper presented at Africa–Asia agricultures against AIDS, December 2002, Bangkok, Thailand, and Ministry of Agriculture, Addis Ababa, Ethiopia.

4. Available at IPMS Ethiopia website (<http://www.ipms-ethiopia.org/Focus-Area/HIVAIDS.asp>).

1.4 Methodology for examining the rural epidemic

Fieldwork was conducted to examine three questions:

- What are the sources of risk of HIV infection and who is at risk?
- To what extent does AIDS already impact rural communities and their livelihood systems?
- What might a production and market-oriented project, such as IPMS, offer to address the epidemic?

The findings presented in this paper are based on qualitative studies undertaken by IPMS Research and Development Officers (RDOs) in the 10 PLWs (see Figure 1). Information was gathered from interviews with key informants, such as staff from governmental and non-governmental organizations (NGOs), and group discussions with women and men farmers and traders, and rural youth. Groups typically comprised 10–25 people, of whom one-third to half were women. The fieldwork was conducted between 2004 and 2007, using a range of participatory methods including mapping, timelines, matrices and semi-structured interviews (for more details about the survey methodology see Bishop-Sambrook 2007). Attempts have been made to strengthen the validity of this qualitative data by conducting the survey in three or four communities in each *woreda*, with a total of 34 communities in all (for the full list see Annex 1).

The findings from the study have provided the basis for conducting a national level workshop on integrating HIV/AIDS considerations into the IPMS project, organizing stakeholder workshops at the *woreda* level to develop HIV/AIDS-sensitive PLW action plans, undertaking HIV/AIDS-focused research, and identifying HIV/AIDS-sensitive indicators for project monitoring.

1.5 Structure of the paper

Section 2 examines three sources of risk of infection associated with the urban hinterland, the movement of people into and from rural communities, and cultural traditions and practices within rural communities, and concludes with a summary of risk by person. Section 3 draws on field experience from the PLWs to demonstrate the potential effect of market-led agricultural growth on hastening the spread of HIV by examining six principal commodity value chains, namely cereals, oilseeds, spices, vegetables, coffee and livestock. The extent to which AIDS has already impacted the rural communities in the 10 PLWs is examined in Section 4 and sources of vulnerability to future impacts of AIDS are identified.

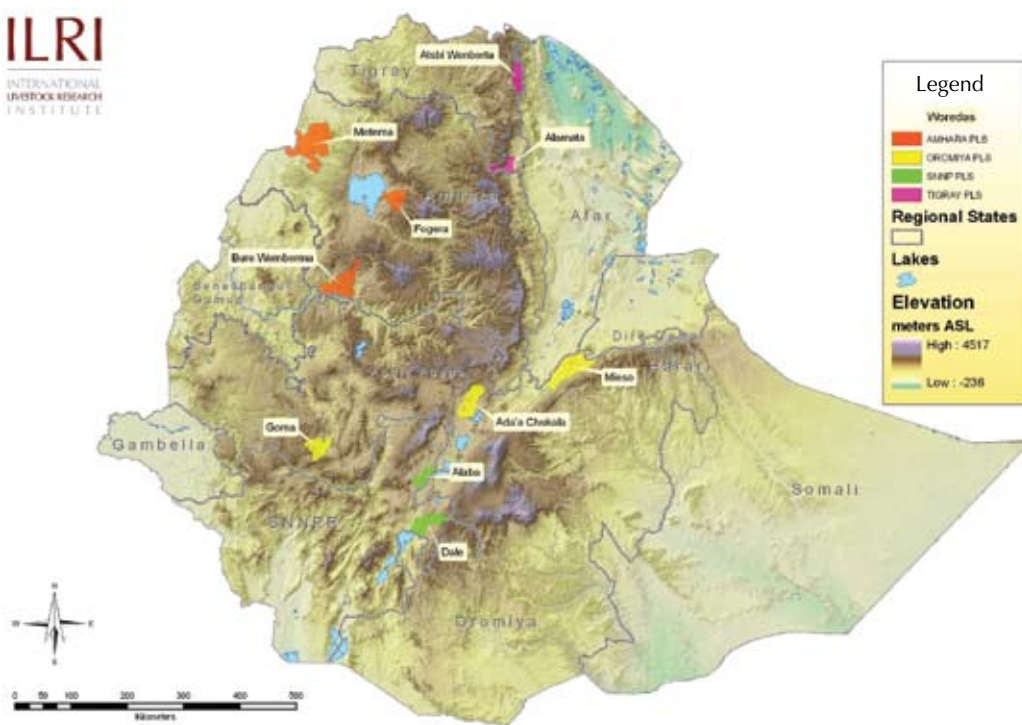


Figure 1. IPMS pilot learning woredas.

The final section summarizes the main implications of the disease for IPMS and discusses a range of opportunities for reducing the risk of HIV infection and mitigating the impacts of AIDS by improving agricultural productivity and market linkages. They are illustrated with examples of innovative approaches that have been developed, field-tested and implemented by IPMS in several *woredas*, often in partnership with other organizations.

2 Sources of risk of HIV infection in rural communities

Before exploring the risk of infection in rural communities, it is necessary to understand the main means of transmission of the virus in Ethiopia. The Ministry of Health estimates that 87% of infection is transmitted through unprotected sex, 10% from mother to child and 3% from other sources (FHAPCO 2006). Hence when examining sources of HIV infection in rural Ethiopia, essentially one is identifying places and occasions when people may have unprotected sex with an infected person.

This section examines three sources of risk of infection in rural communities: potentially HIV-risky environments in and around each *woreda*, bridging populations comprising people who are at higher risk and that provide substantial links with other subpopulations who have lower risk behaviour, and cultural traditions and practices which may hasten the spread of the disease once it is present in rural communities. The inter-relationships between these three components and the rural community are presented in Figure 2. In the context of the IPMS project, it is also important to identify risks of infection specifically associated with agricultural production and marketing, and these are discussed in detail in Section 3. The section concludes with a summary of risk by person in the community.

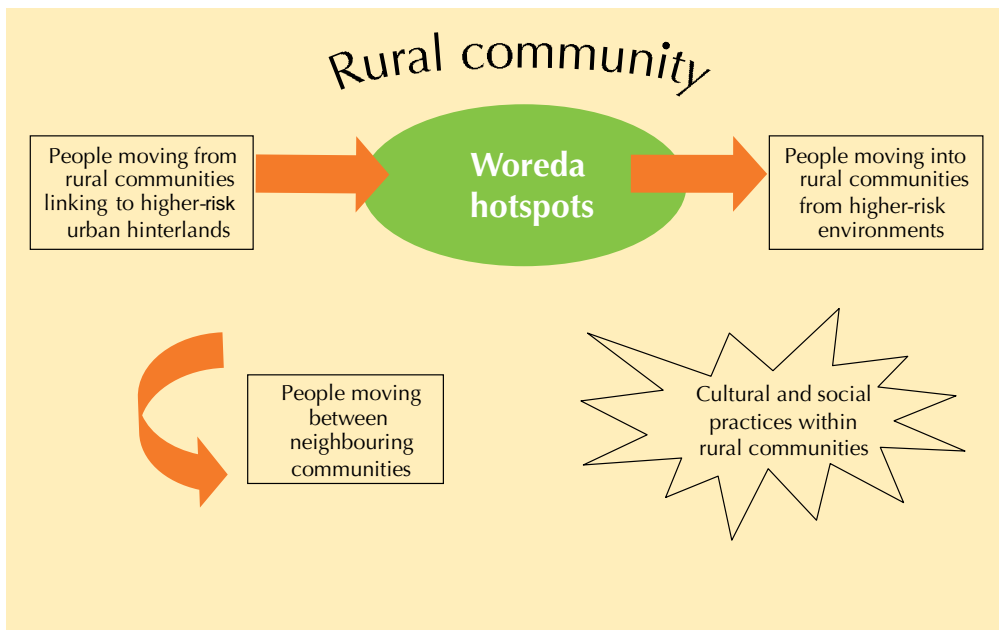


Figure 2. Inter- and intra-linkages between rural communities and urban hinterland.

2.1 Urban hinterland and *woreda* hotspots

In order to examine the dynamics of HIV/AIDS in rural areas, it is essential to place rural communities in the context of their urban hinterland (Box 3).

Box 3: Urban–rural dynamics

A recent study synthesizing the findings from several Ethiopian surveys found that the rural epidemic appears to be relatively widespread but heterogeneous with marked regional variations, with most regions having a relatively low prevalence of HIV, but a few demonstrating prevalence rates above 5%.

‘Contrary to expectations, the small towns involved in the DHS survey exhibited a higher-than-expected prevalence of HIV as compared to the bigger towns. These small towns may be HIV hot-spots that have been neglected in HIV prevention efforts to date. Huge urban–rural differentials have been noted since the beginning of the epidemic in the country (with urban areas disproportionately more affected than rural areas). However, as the communication and transport infrastructure improves, there is likely to be a further mixing of urban and rural populations, with the possibility of further spread of HIV into the rural populations.’

The authors call for a shift in focus of the national response, which has been located mainly in the larger urban centres. More programs need to be placed in smaller towns and market centres that have higher-than-expected HIV prevalence levels. Surveillance in rural areas needs to be increased, to provide better estimates of the true HIV prevalence in the country, since Ethiopia’s population remains overwhelmingly rural.

Source: Berhane et al. (2008).

There is a marked difference in prevalence rates between urban and rural areas throughout the country. The disease is well established in many of the principal regional towns throughout the country, where prevalence rates typically range from 10–20% (MOH/FHAPCO 2006). The extent to which the farming community interacts with this high-risk environment (and engages in risky sexual behaviour) will have a major bearing on the development of the rural epidemic. This relationship would appear to be borne out by the evidence from the four regions participating in IPMS (Table 2). The high urban HIV prevalence rate in Amhara (10.1% in 2005) is mirrored in the high rural prevalence rate of 1.6%; whereas the more moderate urban rate of 6.3% in Oromia is reflected in a lower rural rate of 0.7%. By 2008 it is estimated that the urban HIV prevalence rate in Tigray (10.7%) will exceed that of Amhara (9.9%) although Amhara will continue to have the highest rate of rural infection (1.5%) and the highest rate of adult incidence, with 0.36% of the adult rural population becoming infected each year. Prevalence rates in SNNPR are below the national average but the incidence of adult infection in rural areas is relatively high (0.27%).

Table 2. *Adult HIV prevalence and incidence rates by region*

| | Adult prevalence | | | | | | Adult incidence 2008* | | |
|------------------|------------------|-------|------------------|-------|------------------|-------|-----------------------|-------|-------|
| | Total population | | Urban population | | Rural population | | Total | Urban | Rural |
| | 2005 | 2008* | 2005 | 2008* | 2005 | 2008* | | | |
| National average | 2.1 | 2.2 | 7.8 | 7.7 | 1.0 | 0.9 | 0.27 | 1.78 | 0.19 |
| Tigray | 2.5 | 2.8 | 9.9 | 10.7 | 1.0 | 0.9 | 0.35 | 2.81 | 0.14 |
| Amhara | 2.7 | 2.7 | 10.1 | 9.9 | 1.6 | 1.5 | 0.32 | 2.79 | 0.36 |
| Oromia | 1.5 | 1.5 | 6.3 | 6.1 | 0.7 | 0.6 | 0.16 | 1.70 | 0.11 |
| SNNPR | 1.4 | 1.5 | 7.6 | 7.2 | 0.8 | 0.8 | 0.20 | 1.78 | 0.27 |

Source: Ministry of Health (2007).

* Estimate

Adult HIV prevalence: the percentage of adults (aged 15–49) who are infected with HIV.

Adult HIV incidence: the percentage of uninfected adults who become infected in each year.

HIV-risky environments are not only urban phenomena but also exist within rural communities, drawing people together from a wide hinterland and often requiring them to spend time unaccompanied away from home. Some hotspots are present in all PLWs, such as administrative centres, trading and market centres, secondary schools and colleges, and centres of employment. Other risky environments tend to be site specific, such as major road and rail routes, sizeable construction works, commercial farms, large grain storage depots, military camps, food distribution points, refugee camps and resettlement areas. Details of the main hotspots for the 10 PLWs are presented in Annex 2.

2.2 Bridging populations

There are three types of bridging population who may link low prevalence rural areas with higher prevalence communities (see Figure 2). The first are adults and the youth who link their rural communities to higher-risk urban hinterlands for employment, education or social reasons. Since these activities take place away from home and the confines of community norms, the lack of social cohesion and anonymity may be a contributory factor, which encourages them to engage in activities outside their social norm. The group includes seasonal migrants who seek alternative employment during the quiet months in farming, for example, working as casual labourers in the construction industry in Bahir Dar, on major road construction in Amhara, in the industrial zone on the outskirts of Addis Ababa, on commercial sesame farms in western Tigray or on private and state farms in Metema, Wellega in Oromia and Bir-Shelleko in Amhara. Other seasonal migrants include pastoralists in Dale, with herds in both the lowlands and the highlands. Women from Goma work near Gibe hydroelectric power station as cooks and commercial sex workers. In Atsbi some men have dual livelihoods, farming for part of the year and working in town as skilled carpenters or

masons during the summer months. Long-term migrants include students attending further education, workers from Atsbi, Goma and Miesso migrating to Saudi Arabia, Middle East and beyond, and women working in town as housemaids. Weekly migrants include adolescents attending senior secondary schools usually located in the *woreda* town. *Ad hoc* movements include local traders; visits to relatives; school dropouts and military returnees moving between small towns and their rural community; administrators and government employees attending meetings or training outside the *woreda*; and farmers staying in town if there are bottlenecks in registering, screening and disbursing seeds and credit by the Bureau of Agriculture. People usually stay with relatives or friends, in rented accommodation or the home of the employer. Many men leave their wives in the villages and take on a new 'wife' in their new residence. They may also stay in local drinking houses.

The second bridging population are those who may carry the virus from outside into rural communities. This includes professionals working and residing in rural communities such as development agents (DAs), teachers, and health and NGO workers who are often unaccompanied by their families; politicians visiting rural areas for sensitization and mobilization purposes for extended periods; the military posted to rural camps; commercial sex workers who follow the seasonal migration of people, seasonal income flows and the military; construction workers; long distance truck drivers and their assistants on overnight stops; traders; seasonal migrants assisting with crop harvests; permanent employees working in commercial agriculture and local industry; agro-pastoralists, livestock herders, vets and veterinary technicians in Metema and Miesso; long distance salt traders stopping for one or two nights in Alamata and Atsbi *en route* while selling salt in local markets; relatives and visitors for special festivals (such as Asebot monastery in Miesso); refugees, displaced people and resettlement farmers; and distributors of food relief.

The third group relates to those moving within and between neighbouring rural communities. Such movement is associated with daily living (such as fetching wood, water, milling, public meetings and community development works), attending to administrative matters (for example, rural administrators visiting the main *woreda* town or elders mediating in conflicts) and social affairs (visiting relatives, attending wedding and burial ceremonies, special church meetings or holidays). With the exception of social events and overnight stays in administrative centres, the risk of sex associated with daily aspects of rural living is considered to be very small.

2.3 Cultural and social practices

Once the virus is present within a rural community, cultural and social practices may contribute to its spread between people. Such practices, potentially placing people at risk from HIV infection, differ widely between communities and between regions. Many are now reported to be on the decline, partly as a result of efforts spurred on by the epidemic.

Some of the more common practices that pose a risk to HIV infection include:

- *Marriage*: Various forms exist, such as early marriage (girls may be as young as 10 to 12 years old, particularly in Amhara), marriage by abduction, polygamy and widow inheritance. In Ada'a Liben, for example, the latter is known as *warsa* (referring to a widow who has married her brother-in-law following the death of her husband and he is supposed to administer the family of his deceased brother as well as his own family). Many of the marriage arrangements disadvantage women and place them at risk of infection through their husbands. The Demographic and Health Survey (DHS) of 2000 found that whilst it was quite common for young rural men to have premarital sex, it was rare for young rural women to do so (13% compared to 1%) (CSO and ORC Macro 2001).
- *Multiple sex partners*: The practice of multiple sexual partnerships varies between regions, sex and marital status. Recent Ethiopian DHS (EDHS) 2005 data (CSA and ORC Macro 2006) indicated that this practice is more common among men than women: whereas very few women (0.2%) had more than one partner in the 12 months preceding the survey, 4% of rural men and 3% of urban men had done so. However, fieldwork discussions suggest that extramarital affairs have been relatively common in the PLWs but many are now reported to be on the decline. For example, in Ada'a Liben there are special terms for this type of relationship: *kimite* (referring to married men and women who have a regular partner in addition to their spouse who they meet on market days, but most of the time it is men who have such relationships). As noted in Goma, women may establish sexual relationships with traders and others may engage in transactional sex (in exchange for clothes). Interestingly, it has been found that communities tend not to associate their customary sexual practices with the risk of HIV infection since they are conducted within community norms, including inherent elements of trust (Miz-Hasab Research Centre 2004).
- *Use of condoms*: The EDHS 2005 found that only one-third of rural women were aware that the risk of HIV infection may be reduced by using condoms every time one has sexual intercourse; many more knew about the importance of one-to-one relationships and abstinence (almost 60%). Rural men were better informed: 60% knew about condom use and almost 80% knew about one-to-one relationships and abstinence. The EDHS data indicate that although urban men were much more likely to engage in higher-risk sexual intercourse (with a non-marital, non-cohabiting partner) than rural men (30% compared to 5%), they were much more likely to use a

condom on such occasions (80% compared to 29%). A similar pattern was observed among women but on a much more modest scale: 14% of urban women and 1% of rural women having higher-risk sex but, of those, only 40% of urban women and 3% of rural women used a condom. Limited condom use would appear mainly to be due to a general reluctance to use them (reflecting a lack of familiarity or cultural taboos of adultery associated with their use) rather than their availability (they are sold in shops in rural market centres or are often available free of charge through social marketing programs in administrative offices, health centres, restaurants and bars).

- *Alcohol consumption and chat chewing*: Drinking alcohol, especially in bars and drinking houses, is often closely related to casual sex. Men do not usually pay for sex in the village but rather pay in kind by establishing friendships with young women working in drinking houses (who are often recent divorcees from early marriages) and supporting their business. Excess alcohol consumption is often more acute among the landless and unemployed young people. Although chewing chat is not usually linked to increased sexual activity, when it is followed by alcohol consumption to break the mood (known as *chebsi*), this is often associated with increased sexual desire (Mitike et al. 2002).
- *Wedding parties, dances, religious occasions and holidays*: These events are celebrated by young men and women dancing and singing during the night and possibly having a sexual relationship with a new partner. The holiday of Epiphany is traditionally taken as an opportunity to be introduced to someone and start a relationship. Regional festivities include: *fitche chanbalala* for the Sidama New Year, the annual *faro* dance and the *hano* dance following the circumcision of men (*berchemiro*) in Dale, Mewlid ceremony in Alaba, and the traditional *shegoye* dance in Miesso. Participating in late night prayer meetings and choir practices have also been noted as a source of risk in Dale.
- *Harmful traditional practices*: Several harmful traditional practices (HTPs) are very common in the project regions including uvulectomy and milk tooth extraction (Jeppsson et al. 2003). Although on the decline, female genital cutting is still widespread with 80% of women aged 15–49 years being circumcised (CSO and ORC Macro 2001). Almost all Ethiopian males are circumcised.⁵ Other practices are regionally-specific, such as incision of the eyelid in Tigray, vein punctures in Amhara and Tigray, and tattooing of women in Amhara and Tigray. Ethiopian health officials fear that the use of unsterilized instruments to perform these practices aggravate the HIV/AIDS epidemic (GoE 1998) however, the few data available have not found an association between HTP and HIV infection (Garbus 2003). There is increasing action to deter people from practising HTPs, for example, through the work of the National Committee on Traditional Practices in Ethiopia, and there have been some successes.
- *Suckling young babies*: In some communities, women suckle another's young baby if the mother is out of the village for a day or more, possibly leading to the risk of HIV infection through breast milk.

5. It is important to note that, once circumcised there is clear evidence that circumcision reduces the risk of HIV infection.

- *Gender imbalances*: Not only are women and girls more vulnerable biologically to HIV infection but also socially due to discriminatory social and cultural practices, including early marriage, rape, abduction and female genital cutting (International Planned Parenthood Federation et al. 2006). They generally have low rates of literacy, leave school earlier than boys, and have little opportunity to participate in decision making. They are also disadvantaged with regard to using and controlling economic resources in the household. Young unmarried women who are sexually-active face the greatest risk of HIV infection in the country, with prevalence rates much higher than the average for both urban and rural areas as well as all women of reproductive age; this is associated with an early age of sexual debut and sexual mixing with high-risk older men (Berhane et al. 2008). As a result of their weak social position and the dominance of men, rural women in particular are either unaware or less able to insist on condom use and negotiate for safe sex. The EDHS found that 95% of urban women surveyed believed that a wife who thought her husband had a sexually transmitted infection was justified in either refusing sexual relations or asking to use a condom, whereas only 82% of rural women felt likewise. Rural women found it especially difficult to ask their husband to use a condom. Gender inequalities also affects women's ability to utilize treatment and care services, to disclose their HIV status, to discuss issues of sexuality and safe reproductive behaviour with their families, and to receive support for adherence to anti-retroviral therapy (ART) in the family and community (CCM 2004).
- *Awareness and understanding about HIV/AIDS*: The Behavioural Surveillance Survey of 2002 found farmers to be the least well informed about preventative methods and had the highest levels of misconceptions about how it could be transmitted. This picture has persisted despite the change in the level of intensity of awareness-raising activities during the last five years in rural communities. Whenever people gather together, government officials, religious leaders and village leaders spend some time talking about HIV/AIDS. Development agents, health workers, teachers, peer educators and serial radio dramas are also important sources of information. Village HIV/AIDS clubs and students perform drama on market days and at school events. Some *woredas* have found that the first hand experiences by local people living with HIV/AIDS (PLWHA) are proving very effective in stimulating behaviour change. In contrast, when messages about HIV/AIDS are closely intertwined with religious beliefs, it can sometimes result in confusion regarding appropriate preventative action and effective care. Nevertheless, the EDHS 2005 found that only 10% of rural women have comprehensive knowledge about AIDS and only 20% understood that a healthy-looking person may have AIDS and rejected the two most common local misconceptions about how the disease may be transmitted.⁶ Rural men were similarly poorly informed (25% and 36%, respectively). In contrast, over 50% of urban men and over 40% of urban women had comprehensive knowledge about the disease. Lack of knowledge about preventative methods among rural women in particular, places them at risk both during sex and as carers of PLWHA.

6. Common misconceptions include AIDS can be transmitted through mosquito bites and by sharing food.

- *Stigmatizing attitudes*: Levels of stigmatization and discrimination towards PLWHA tend to run high in rural communities. Although more than half of rural women and men are willing to care for a family member with AIDS in their own home, only 11% of women and 19% of men would buy fresh vegetables from a shopkeeper who has the virus and only 32% of women and 46% of men felt that a teacher with the virus and is not yet sick should be allowed to continue to teach (CSA and ORC Macro 2006). *Infrastructure*: Although the number of voluntary counselling and testing centres based in rural areas has increased significantly over the last few years, services are still relatively limited. Even when they are available, the fear of stigma and the potential breach of confidentiality encourage some people to travel to major towns for HIV tests, ART facilities and CD4 counts, rather than using their local centre.

It is also important to recognize that some traditions and practices within communities may reduce the likelihood of unprotected sex. They include: polygamous marriages where all members remain faithful to each other; strong taboos on sex outside marriage which, if discovered, would result in being rejected by the community; chat chewing rather than alcohol consumption; and, in Muslim communities, adherence to Sharia law to avoid adultery and extramarital relations.

2.4 Agricultural production and marketing

Several aspects of increased production and marketing would appear to be closely associated with increasing the risk of HIV infection. Market days are widely recognized as a social occasion and, even if farmers have nothing to sell, they travel to market to socialize and often engage in extramarital affairs. In several PLWs, there is a seasonal influx of casual labourers to help with key agricultural activities, particularly weeding and harvesting. At harvest time, there are also inflows of traders, transporters and commercial sex workers. Some of the inherent inefficiencies of the produce processing and marketing system require people to spend a long time waiting at grain mills and coffee hulleries, or at the market place to deliver their produce and receive payment. Traders and transporters are also delayed waiting for buyers and lorries to be loaded. Another aspect of marketing which makes it a potentially high-risk activity is the presence of money which is often spent on alcohol and women. An overview of market-related movements of people to and from the PLWs is presented in Annex 3, while a more detailed examination of the risks associated with the development of specific value chains is undertaken in Section 3.

The development of the commercial agricultural sector, usually requiring a large pool of unskilled labour, poses its own risks for the spread of the virus (Box 4).

Box 4: Commercial agricultural development

Coffee, Ethiopia's largest export earner is largely produced on huge government farms. Farming populations gravitate towards these coffee farms from miles around in search of work. Workers live in camps for months, often leaving their wives and families behind and taking on another wife or girlfriend in the camps. More than 100,000 people are accommodated on the farms, where entertainment is scarce and sex is one of the few available recreational activities. Poor AIDS education, testing and treatment have seen HIV/AIDS become an increasing problem in the coffee industry. The Ministry of Labour has made the coffee industry a priority area in the fight against HIV/AIDS, and work is underway to raise levels of awareness and promote condom use.

It is feared that the flower industry is heading the same way as the coffee sector, unless immediate action is taken. At present, Ethiopia exports 70 tonnes of flowers daily and employs an estimated 30,000 people. Horticulture is not new to Ethiopia, but private-sector interest in the industry is. In early 2000, investors began arriving in the Horn of Africa country to take advantage of the 'floriculture-friendly climate'. There is growing concern that little is being done to address the AIDS pandemic in an industry notorious for attracting a transient, uneducated workforce vulnerable to the virus. At present, the majority of workers come from nearby villages, but in the future there could be a crisis, as people are lured from around the country to work on the farms and to live together in camp-like settings, making conditions ripe for the spread of the virus. Large international companies offer usually-scarce rural jobs but are reticent to take on the responsibility of providing AIDS education and awareness, and activists say it is up to the government to make them toe the line.

Sources: Extracts from INRI PlusNews, Yirgacheffe, 16 May 2007 and Debre Zeit, 17 May 2007.

2.5 Summary of risks by person

From the above analysis of bridging populations and cultural norms, it is evident that the source of HIV infection differs between household members and is strongly influenced by age and sex. Those at highest risk are married men and the youth, at moderate risk married women and women heading households, and at relatively low risk, the elderly, children and babies.

- *Babies and children* under the age of five are most at risk of infection from their mothers during pregnancy, birth and breast feeding (occasionally by other women) and possible infection through contact with infected blood and other body fluids (through circumcision or HTPs such as tonsillectomy).
- *Children* from five years to the age at which they become sexually active, are at risk from infected blood and other body fluids (for example, through HTPs including milk tooth extraction).
- *Adolescents*, once sexually active, are at risk through unprotected sex (at dances, weddings, casual labouring, urban migration and secondary school) and from infected

blood and other body fluids (through HTPs). Young men are particularly at risk from visiting town for work, trade, recreation and drink. Young women face additional risks through abduction, rape, early marriage and female genital cutting.

- *Married men* are the highest risk group: they have more opportunities for casual sexual relationships due to their greater mobility, propensity to migrate seasonally and access to cash; and if they have extramarital affairs they are likely to have several different partners.
- *Married women* are generally a much lower risk group than men in terms of their behaviour although they are at risk of infection through their husbands: they migrate less, tend not to travel unaccompanied and tend not to stay away from home overnight; however, in some cultures it has been common for them to have extramarital affairs within the community; they may also be at risk through caring for PLWHA (especially if the latter have either not disclosed their status or are not aware of their status).
- *Female heads of household* are at moderate risk of infection: they may form relationships with men in order to gain assistance with farm work; and if they migrate to town, they may end up working in bars and having sex with customers.
- *Elderly men* are a low risk group: they do not usually stay away from home overnight but if they do have extramarital affairs when they go to town to market or attend court cases, they are most likely to have a stable relationship. In Fogera, there has been a tradition for elderly men to form relationships with widows but this is on the decline.
- *Elderly women* are at minimal risk of HIV from sexual encounters but as carers of people living with AIDS, they are at risk if they do not understand how the disease is transmitted .

3 Risks of HIV infection through value chain development

This section draws on field experience from the PLWs to demonstrate the potential effect of market-led agricultural growth on hastening the spread of HIV. The characteristics of six principal commodity value chains are examined in terms of the risk they pose to increasing exposure to HIV infection through unprotected sex. Opportunities identified by IPMS to reduce the risks of HIV infection and to mitigate some of the impacts of AIDS through agricultural sector initiatives are discussed in Section 5.

3.1 Cereals value chain

(i) Ada'a Liben *woreda*, Oromia⁷

Teff and wheat are among the principal cash crops grown in Ada'a Liben, accounting for 53% of the cultivated area and are grown by all smallholder farmers. The movement of persons associated with grain production and marketing creates an environment that is potentially conducive to the spread of HIV.

Seasonal labourers

Casual labourers (men and youth) come to Ada'a Liben from Amhara and Oromia (north and west Shoa) to harvest cereals and pulses from October to the end of December (then returning home to harvest their own crops). They are employed by individual farmers and stay at the home of their employer. There is no record of these people being involved in casual sex while working as migrant labourers.

Traders and transporters

Major grain sales take place during the harvesting period, from December to February. Grain is sold through Erer Farmers' Union, private traders and directly to consumers. Traders buy grain at towns, satellite village centres and in villages, either directly or through brokers. Most traders hire trucks to transport the produce and this requires drivers and their assistants to travel deep into rural areas and to stay in small centres where overnight accommodation is available.

Grain traders come from Addis Ababa, Adama, Meki and Zeway to buy from Ada'a Liben markets; they may stay away from home for a few nights. Indeed, some have a regular

7. This section was contributed by Nigatu Alemayehu, RDO and Hailu Gudeta, RDA.

sex partner in these towns, known as *kimite* (meaning men or women who have a regular partner in addition to their spouse, who they meet on market days). Grain traders from the community also have to stay away from home but it is difficult for women traders to do so.

Farmers and family members

In addition to the main sales of grain during the harvest season, farmers also sell grain in small quantities at local markets throughout the year. Market destinations and frequency of travel varies between women and men, and between the youth and others. Men travel to Debre Zeit and Dukem on market days (three times per week) and to Mojo on Saturdays to sell cereals, pulses, hay, straw and stovers. After completing their sales, many visit small drinking houses in the market to drink local brew; sex workers may be present. Sometimes they stay overnight if they are unable to get transport home and may meet a secret lover (*kimite*). Men also travel to town to buy inputs for cereal production such as fertilizer, herbicides, pesticides and seed.

Women go to the market once a week and sell small quantities of grain to enable them to buy household items like salt, fuel, soap, oil, sugar etc. Although women do not stay away overnight on market days,⁸ they may meet a lover (*kimite*).

Boys visit the market two or three times per week to sell agricultural products and girls visit the market less frequently to sell hay, straw, dung and firewood. Many male teenagers have their sexual debut during the summer months after selling the *teff* harvest (in December) when money is readily available.

(ii) Bure *woreda*, Amhara⁹

In recent years, bread wheat production has gradually displaced indigenous cereal crops, such as teff, barley and finger millet in Bure *woreda*. By 2007/08 cropping season, 21% of the arable land was under bread wheat production, and all of this area was planted with one improved variety, Kubsa (HAR1685). This switch to mono-cropping has had a significant impact on labour flows into and out of the *woreda*.

Seasonal labour requirements for bread wheat production

The traditional mixed farming system enabled families to spread their workloads by growing different crops, with different planting and harvesting times, throughout the

8. If women are going for medication or attending wedding or burial ceremonies which require an overnight stay away from home, they are accompanied by their husband, close relatives or friends.

9. This section was contributed by Yigzaw Dessalegn, RDO and Yohannese Mehari, RDA.

year. In contrast, the present cropping system, growing only one variety on almost all of the land, has created seasonal labour peaks and troughs. Almost all activities associated with bread wheat production, such as planting, weeding, harvesting, threshing and winnowing, are done manually; only land preparation is done using oxen. Consequently, labour requirements are highly seasonal, peaking for land preparation and planting (from May to July), and during harvesting and threshing (November to January) (Figure 3).

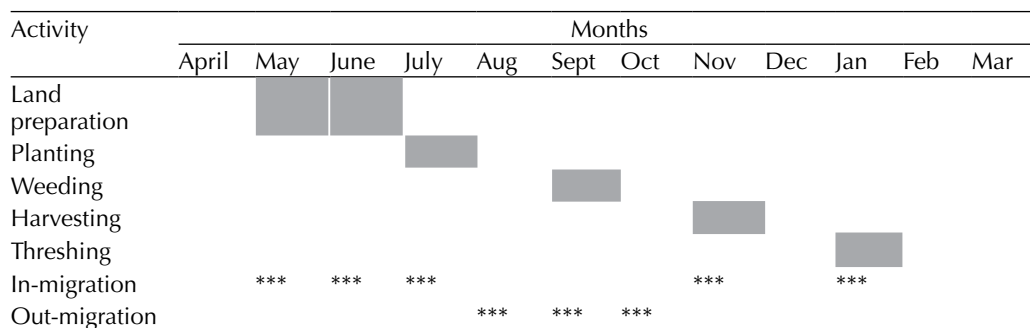


Figure 3. Seasonal calendar for bread wheat production and migratory labour flows in Bure woreda.

During the busiest months, labourers are drawn into Bure from neighbouring *woredas* (Figure 2). They stay for at least one month and some may remain until the end of the harvesting season. Conversely, in the quieter months (August to October) the younger adult members of farming families (usually men) migrate to nearby towns and other areas to work as casual labourers; they also travel to neighbouring districts to work on private commercial farms growing maize and other crops. As a result of this exodus of family labour, weed control in the wheat fields is now usually done using herbicides.

Both in- and out-migrants are potential HIV-AIDS bridging populations. The shift to mono-cropping has exacerbated their mobility. Most migrant labourers are landless, unmarried youths with limited employment opportunities in their locality. They travel the breadth and length of the country (to Wollega, Metema etc.) during different seasons according to the availability of work; men tend to travel further afield than women. While staying in a community, the men (both married and unmarried) may engage in unprotected sex with community members and also with commercial sex workers. In rural areas, the availability of condoms is very limited and the practice of using them is very low.

Input supply-related HIV risks

Farmers purchase improved varieties of bread wheat seed from the Ethiopian Seed Enterprise through the Office of Agriculture and Rural Development (OoARD). However, the supplies available are usually insufficient and, as a result, farmers have to travel

to Bure town repeatedly in order to request and purchase seed. Sometimes they stay overnight in town, which may result in unsafe sex with commercial sex workers.

Marketing-related HIV risks

Bure is one of the major grain producing districts of Amhara region as well as the whole country. During the harvesting season, traders travel to Bure from different parts of the country (from Gondar, Wello and Tigray in the north, Addis Ababa in the centre, Wollega in the west, and Nazareth and Dire Dawa in the east). These traders (men) stay in small towns, like Bure and Kuchie, and rent hotel rooms for periods of up to three months, during which time they coordinate grain purchases from local markets and arrange the onward transportation of grain. Commercial sex workers or poor women from the local community are attracted to have sex with traders because they have more money to spend on relaxation than local men and they are newcomers to the area.

During the harvesting season, many heavy trucks go to Bure and other small towns in the *woreda* to transport the grain bought by private traders, Damot Multi-purpose Cooperative Union and Ethiopian Grain Trade Enterprise. The truck drivers are a high HIV-risk group because they travel throughout the year, traversing the country, and spend most nights away from home.

Farmers in Bure do not traditionally sell all their produce all at once but sell in different towns and at different times. Men sell more grain than women. Most members of a rural community travel to their nearby town on market day to sell produce and buy items required for the home. Relatives and friends meet up and may socialize together in hotels or bars. Young farmers often consume an excess of local alcohol and, if drunk, spend the night in town and may engage in unsafe sex with commercial sex workers. Through this practice, they may act as a bridging population for HIV infection in rural areas.

3.2 Oilseeds value chain

(i) Metema *woreda*, Amhara¹⁰

In recent years, the price for sesame has drastically increased and many farmers have switched from cotton and sorghum to sesame production. The area under sesame now accounts for 54% of the total arable land in the *woreda*.

10. This section was contributed by Worku Teka, RDO.

Seasonal labour requirements for sesame production

Sesame production system is tedious and labour intensive. Annually, more than 130,000 seasonal workers move into the area to assist with the ploughing, weeding and harvesting of sesame. They travel long distances over several days to reach Metema and, during their journey, pass through HIV/AIDS high-risk areas including Gondar and other small towns.

Labourers usually stay in Metema from the time of land preparation until harvesting is completed. The wage rate of casual labourers harvesting sesame is higher than for other crops because it is necessary to harvest the crop quickly before it starts shattering, in order to avoid high crop losses. This enables sesame labourers to enjoy themselves better than others and, on paydays, they interact with members of the rural community. They relax by drinking local alcohol and enjoying time with women from the community. It has been observed that there is limited access to condoms in areas where sesame is produced extensively, which suggests that unprotected sexual intercourse is the common practice.

Input supply related HIV/AIDS risks

Farm inputs, including tools, seeds and agrochemicals, are sold in the main towns of the *woreda* (Metema Yohans, Genda Wuha, Shinfa and Kokit). In most cases, the male household head is responsible for purchasing inputs and, since the towns are far from the farmland, farmers may be required to spend one or two days in town. The towns are crowded with small restaurants that sell food and drinks; they also frequently house three or four young seasonally migrating commercial sex workers. These restaurants are also visited by various bridging populations, including drivers, traders and civil servants. Thus a farmer who goes to town to purchase inputs, may also visit such HIV-risky places in search of food, accommodation and alcoholic drinks, and may engage in unprotected sex.

Sesame marketing-related HIV risks

After harvest, a large number of heavy and small duty truck drivers, together with their assistants and primary sesame collectors, visit rural areas to transport the sesame to market places. Most of the drivers are youngsters and commonly relax by chewing chat, drinking alcohol and visiting commercial sex workers in rural areas. These bridging populations can infect members of the rural community during their stay.

The responsibility for marketing lies with the male household head. The selection of market outlet is largely determined by the volume of sesame for sale. Farmers with small

quantities sell their produce to primary collectors in nearby markets while farmers with larger volumes often travel long distances in search of better prices.

At harvest time (October and November) the main towns in the *woreda* are congested with traders, transporters, input suppliers, brokers and farmers. In addition to the sale of food and alcoholic drinks, restaurants are used as a venue for farmers, traders and brokers to negotiate prices. They also serve as meeting places for friends and relatives to come together from different parts of the *woreda*. The number of young migrant commercial sex workers rises during the immediate post-harvest season.

3.3 Vegetable value chain

(i) Alamata *woreda*, Tigray¹¹

Much of the *woreda* lies in the lowlands (up to 1500 metres above sea level) and is suitable for growing vegetables (onions, tomatoes and peppers). The number of farmers growing onions and the area under production has increased in the *woreda* from 87 ha in 2005 to over 700 ha in 2007 as a result of irrigation, the reclamation of swampy areas for vegetable production, study tours and farmer training promoted by IPMS. Output has also grown dramatically because the crop is grown twice per year and productivity has increased.

Men usually travel to Alamata town and neighbouring towns to purchase inputs, such as onion seed and pesticides. In such cases sometimes they spend the night in town, possibly engaging in unsafe sex with bar ladies.

The OoARD Cooperative Desk and IPMS have worked together to strengthen market linkages and have communicated both with local traders (Mekelle, Shire and Adigrat) and those from further afield (Addis Ababa and Adama) about the growth in production. As a result, brokers, traders and Isuzu truck drivers come from various parts of the country to the *woreda* to buy and transport onions and usually spend the night at Alamata town. Farmers also stay overnight in town. Thus, because there is money to spend, some of these men could interact with women in the town and have unsafe sex.

Many farmers have increased their incomes through the commercialization of onion production and stronger market linkages that have resulted in improved market prices. There might be a risk of polygamy among some farmers as the result of their increased income.

11. This section was contributed by Gebreyohannes Berhane, RDO and Abraham Gebrehiwot, RDA.

(ii) Atsbi-Wemberta *woreda*, Tigray¹²

During the last decade, the development of water potential through soil and water conservation efforts in Atsbi-Wemberta *woreda* has triggered an expansion in irrigated vegetable production destined for market. For example, in 1999, the area under irrigated vegetables was 56 ha and the produce was mostly used for personal consumption but, by the 2006/7 cropping season, OoARD estimates that there were over 1000 ha under vegetables, grown by 9800 households (20% of them headed by women, which is less than their representation among the total population at 30%).

The market-led approach to vegetable production and marketing and the encouragement of farmers to innovate and apply new knowledge, has increased the frequency with which they visit market places and contact service providers and traders. These interactions may increase the risk of HIV infection. However, this increase in risk may be offset by the effect of reduced out-migration as a result of extending the vegetable cropping season by using irrigation.

Input supply

With the increase in vegetable production, the number of water lifting devices (mainly motor and treadle pumps) has increased substantially. There are now more than 400 motor pumps in the *woreda*. Pump owners have to travel to nearby towns in order to maintain and repair their pumps and may have to spend a few days or a week there, depending on the seriousness of the problem. Similarly, farmers usually buy certified vegetable seeds from nearby towns, such as Wukro, Mekelle or Adigrat, because there is no dependable supply of seeds in the *woreda*. In either case, there is a possibility of spending a night in town, having a drink with friends and engaging in unsafe sex with unknown partners. Other farm inputs, such as hand tools, may be purchased at the weekly markets held in the *woreda*.

Seedling production

Vegetable growers raise the seedlings near watering points before transplanting them to their fields. Vegetable seedling production is labour intensive and household members, including women, spend much of their time in the field. This could expose them unnecessarily to having contact with other people or neighbours, compared to the time they usually spend at home, which might be associated with minor risks of unsafe sex.

12. This section was contributed by Gebremedhin Woldewahid, RDO and Dawit Weldemariam, RDA.

Women sell seedlings surplus to a household's requirements in nearby markets. The buyers are mostly men, who are considered to be more knowledgeable in selecting the best quality seedlings. While bargaining for seedlings, there is a possibility for women and men to be introduced to each other and this may be associated with a low but real risk of HIV infection, compared to the usual situation where women are largely home-based.

Vegetable production

Vegetable production under irrigation is labour intensive. Some farmers (particularly the elderly or female-headed households) either lease or share crop their irrigated land or encourage their migrant family members (such as their husband, son or daughter) to stay at home for some time to help with the vegetables. The lease or share partners (men) are often landless youth or people with motor pumps and some money available for initial investments, living in the nearby towns. During the season they stay close to the irrigated vegetable farms. This could enhance relationships with the local residents, with the possibility of introducing HIV infection to the rural community.

However, irrigated vegetable production extends the cropping season and thereby may reduce the risk of infection by reducing the need for family members to migrate during the dry season when there would traditionally be little to do on the farm.

Vegetable marketing

Vegetables are highly perishable. In the absence of suitable storage facilities in the rural community, they need to be harvested regularly and the produce taken to market immediately. This means that vegetable growers travel to the three main weekly markets in the *woreda* (Haiki-Meshal, Atsbi-Wemberta and Dera) regularly and have frequent contact with traders. After selling their produce, farmers may drink locally-made alcohol and may spend nights in these HIV-risky spots and have unprotected sex with secret lovers, unknown partners or commercial sex workers.

(iii) Fogera *woreda*, Amhara¹³

Tomato and onion production has increased as a result of an expansion in the area under irrigation in Fogera *woreda*. The peak production time is from February to June; from October to January, production is minimal and from July to September there is no production at all. Following the variation in supply, both the farm gate prices and the

13. This section was contributed by Tilahun Gebey, RDO.

market prices in Woreta, Gumara and Bahir Dar are highly variable during these different seasons.

Influx of traders for marketing

Until four or five years ago, Fogera was one of the major suppliers of onions and tomatoes to Mekelle, Adigrat and Bahir Dar during the peak production season. Many traders and truck drivers came from the north in order to buy and transport large volumes of onions and tomatoes directly from the fields through brokers. The traders stayed in Woreta town from April to mid-June, where there are many bars and hotels, and interacted with the local community. At the same time, farmers sold their produce at reasonable prices and, with the cash available, were encouraged to drink and to socialize with commercial sex workers or other women in the town.

Movements of farmers for marketing

Following the increase in production in Fogera, farmers have been faced with more challenges to sell their produce. This problem has been made more acute as other *woredas* in Amhara and Tigray regions have become involved in onion and tomato production (see the preceding two case studies). As a result, the number of traders from Tigray reduced significantly in 2007, while in 2008, there were no large traders from Mekelle and Adigrat. One benefit is the reduction in movement of the potential bridging population for introducing HIV into the *woreda*. However, this may be offset by the increase in movement of the farming community. To cope with the problem of market failure, farmers have started travelling to town and dealing directly with wholesalers and some have become brokers. For example, in 2008 when prices were low, a significant number of farmers visited Woreta, Bahir Dar and other towns on a regular basis to sell their produce. Many stayed in town overnight, with opportunities for consuming alcohol and engaging in unprotected sex with commercial sex workers.

3.4 Spice value chain

(i) Alaba Special *woreda*, SNNPR¹⁴

Alaba special *woreda* is well known for the production of red pepper, which is transported as far as Desse in the north, Addis Ababa in the centre and Dire Dawa in the east. The recent rise in the market price of pepper has increased the crop's economic value and has made it the most important cash crop in the *woreda*. The associated

14. This section was contributed by Abebe Shiferaw, RDO.

increase in labour flows and income from pepper production poses a potential risk to the community in terms of HIV infection.

Movements of labour associated with different stages of production

There are five stages of pepper production and marketing, and each presents a different level of risk of HIV infection reflecting the movement of labour. As one moves from the first stage of production to the final stage of marketing, the distance travelled by farmers from their home increases, and the number and different types of people from all parts of the country interacting together also increases.

The first stage involves the least movement of people: the activities of seed selection, seed planting and seedling management take place close to home and are performed by household members. The second stage, transplanting and managing the seedlings in the field, is labour intensive and is often addressed by local collective action. The traditional ways of working together, *Debbo or Mahiber* (known locally as Geza) mobilizes labour both within and between villages, in return for the number of equal labour days received.

Pepper production demands careful manual weeding and timely harvesting. Thousands of casual labourers migrate to the *woreda* (from May to June for sowing and from November to December for harvesting) to assist with these very labour intensive tasks during the third and fourth stages of production. The labourers are followed by commercial sex workers and by women who accompany the men to assist them and co-habit with them for the season in return for cash. This is very risky in terms of exposure to HIV infection, with potential bridging populations staying in the farming community for up to three months.

Marketing-related risks

However, marketing is the most risky stage in terms of possible exposure to HIV infection, because of the huge movement of people, the ready availability of cash and the celebrations at the end of the harvest.

The Thursday Kulito market is the largest of all markets in the *woreda* and is the central market for pepper sales. The latter take place intensively throughout the year. There are over 450 middlemen involved in negotiating prices and quantities between farmers and traders. There are between 20 and 40 traders who, in turn, sell on to seven main wholesalers who arrange for the transportation of peppers to other parts of the country. Buyers, retailers, transporters and consumers from the surrounding areas are also present. Merchants, wholesalers, some retailers and most of the traders stay for a couple of days at the market each week throughout the year.

From the farmers' perspective, selling pepper usually takes at least two days. They (predominantly men) travel to the market, the day before, or on market day if they live close by. On market day, they are engaged in price negotiations with local traders or middlemen until midnight, when the price per kg is finally determined. This late finalization of the pepper price not only requires farmers to incur additional expenses for meals and accommodation (if they are not able to stay with relatives) but also exacerbates the risk of HIV infection among the farming community. Chat chewing, followed by excessive alcoholic consumption, and traditional dancing and singing ceremonies are common phenomena after selling pepper (on the same evening or the following day).

The roads leading from villages to the main markets in the *woreda* (Kulito, Besheno, Kobbo and Guba) are also risky, particularly for women, in terms of risk from robbery and possible exposure to unsafe sex. Women travelling with men who have been drinking at the market place may be pressurized into having sex.

3.5 Coffee value chain

(i) Dale *woreda*, SNNPR¹⁵

Some 70% of smallholders in Dale *woreda* depend on coffee for their livelihood. The crop accounts for 38% of all arable land, grown mainly on smallholder plots of less than 1 ha and in backyard gardens. Sidama coffee is now certified as organic coffee and consequently fetches a high price along the entire value chain.

Coffee is usually harvested from September to November. All household members are involved in picking the cherries and marketing. The red cherry is collected daily and taken directly to the nearest dehuller or cooperative mill, or sold to their agents by the roadside. Buying starts late in the afternoon and continues into the night. This is a source of risk for women travelling home alone at night. The buyers from Addis Ababa and elsewhere stay for three months at the coffee hulleries during the harvest.

Traditionally there is much entertainment and merrymaking during the harvesting season, although this has decreased in some years because of depressed market prices and poor profitability. In recent years, however, prices have increased thus improving the earning and disposable income of farmers. During the harvesting season, men and women farmers visit the nearest towns and small marketplaces to spend their earnings and entertain themselves in bars. At this time, sex workers from every corner of the country travel to the major towns of Yirgalem, Dilla and Awassa as well as other small towns to share in the bounty. Farmers, using the proceeds from coffee sales to trade in basic

15. This section was contributed by Kettema Yilma, RDO.

necessities, and merchants travel to large towns (including Shashemene and Addis Ababa) for periods of up to one week for business and recreational purposes and return home with goods (such as grain flour, salt and oil) to sell.

High school students living away from home for their education return to assist their families with the coffee harvest. They are also a potential source of risk of HIV infection: when living away from home, out of sight of their parents' observation, they may misuse their freedom and engage in unprotected sex. Once home, they may form new sexual liaisons with friends during the harvesting season.

(ii) Goma *woreda*, Oromia¹⁶

Goma *woreda* is the largest coffee-producing *woreda* in Jimma zone and in Oromia region. It is the major cash crop cultivated in the *woreda*, accounting for 30% of the cultivated area. The movement of people into the *woreda* to buy the harvest, as well as the inflow of labourers for coffee planting and harvesting, coupled with the strong cash economy at these times, represent considerable sources of risk for HIV infection.

Production-related risks

When households have a large area under coffee (1 ha and above per household), it is not possible to complete all the operations from family resources alone. The demand for casual labourers is met mostly by people from outside the zone. In addition, two state coffee farms in Chochie (Goma 1 and Goma 2), with 2700 ha of an intensive coffee, hire a large number of casual and permanent labourers from all parts of the country.

Migrant labourers stay up to three months, particularly during the harvest (from September to November and sometimes extending up to December). They either rent accommodation or stay with individual farmers; the latter event increases their possibility of assimilation and forming relationships within the community.

Marketing-related risks

People associated with coffee trading (such as brokers, traders and drivers) come from every corner of the country to Agaro, the principal town in the *woreda*, during the coffee harvest. There is also a high influx of commercial sex workers to the *woreda*, even from as far as Addis Ababa, at this time.

16. This section was contributed by Yishak Baredo, RDO and Lemlem Aregu, IPMS Gender Specialist.

Men's purchasing power increases during this season. They sell coffee in bulk either to merchants in the market (for sun-dried) and hulleries (for red cherry beans) and control the lion's share of the income. As a result, the bars, grocery shops, hotels and chat shops become very busy, in sharp contrast to their level of activity during the rest of the year. This is true not only in Agaro but also in small towns like Ginbi, Chochie, Limushay and Bulbullo, where coffee is also the main cash crop. Farmers are often tempted to spend a couple of days and nights away from home and to enjoy some of their earnings with the sex workers who are readily available in small bars around the market place in town.

In contrast, women sell small amounts of coffee cherry on their frequent visits to the market throughout the harvest season from October to March and sometimes even sell without their husband's knowledge. Because they get such a small share of the income of coffee, women and girls are tempted to commit unprotected sex for money, food, drink and clothes.

3.6 Livestock and livestock products value chain

(i) *Metema woreda*, Amhara¹⁷

Farmers in *Metema woreda* cultivate sesame, cotton and sorghum and rear livestock including cattle, goats and sheep. The area has extensive grazing land and produces a large amount of animal feed including grass during the rainy season. Consequently, the transhumance cattle production system is a common phenomenon in the rainy season (June to November), attracting cattle keepers from the highlands to move with their animals to *Metema* in search of fodder leaving their wives behind. During their extended long trips away from home, cattle keepers pass through many villages and towns that are risky for HIV/AIDS infection.

In the recent past, there has been repeated conflict between the local communities and cattle keepers practising transhumance. The rainy season is the busiest time of year for local communities. Men are busy preparing the land, planting and weeding in the fields, either returning home in the late afternoon on a daily basis or, if their land is far away, staying away from home for many weeks and leaving their wives and daughters to care for their livestock around the village. This enables cattle keepers to interact freely with these women and to engage in voluntary or forced sexual contact. This may contribute to the quick spread of HIV/AIDS in rural areas of *Metema*.

The movement of cattle keepers is not limited to moving from the highlands to the rural lowlands but also to urban centres (such as *Gendewuha*, *Tumate*, and *Metema Yohans*)

17. This section was contributed by Worku Teka, RDO.

to buy veterinary drugs and food items and to sell their produce (milk and butter) on a regular basis during their stay in the *woreda*. When they are in town, they meet their friends or relatives who have travelled to town for the same purpose from neighbouring communities and relax together in small bars, congested with commercial sex workers. Such events increase their risk of exposure to HIV infection.

(ii) Miesso *woreda*, Oromia¹⁸

Drawing on its extensive livestock resource base, and coupled with its strategic location in relation to several highland *woredas*, Miesso is now one of the major livestock market centres in eastern Oromia. As a result, many actors in the livestock production chain, including input suppliers, livestock producers, market agents, middlemen, transporters, travelling traders, exporters, and buyers from abattoirs move in and out of the *woreda* on a regular basis. This mobility is not confined to the marketing activities associated with small and large ruminants but also encompasses poultry business operators and liquid milk sellers.

With the growth in income, some men are tempted to marry additional women, in line with their religion and customs. Similarly, some community members attempt to get their daughters married to wealthier men, regardless of the level of the HIV infection that he may have been exposed to.

Sheep, goats and cattle

The developing livestock marketing business requires a range of services in terms of employment as herdsmen or herdswomen, supplying supplementary feeds and drugs, or weighing the animals. Livestock collectors and suppliers travel extensively, establishing linkages and networking together. The need for a constant supply of livestock at Miesso market requires a large number of trucks to transport the animals to major cities and towns like Metehara, Modjo, Nazareth and Addis Ababa, as well as to the port in Djibouti.

Operators who have either been dissatisfied with the prices they have received in Miesso or have become conscious of price trends in livestock marketing, now explore distant markets in search of better prices and travel to large cities like Addis Ababa, Nazareth, Mojo, Debre Zeit and Dukem. Some dealers sell directly to abattoirs to gain better prices or diversify their business by investing in a truck to transport livestock.

18. This section was contributed by Zewdu Ayele, RDO.

As the livestock business grows, the length of stay and frequency of movement by various market players in Miesso intensifies (such as travelling livestock collectors and truck drivers moving within and outside the *woreda*, and the better-off livestock suppliers travelling to the abattoirs). Moreover, the web of relationships between them (through strengthened friendships, drinking late into the night or attending *chat* ceremonies together) could also trigger various unexpected behavioural changes that may hasten the spread of HIV, including unsafe sex, additional marriages, or neglect of the ABC norms.¹⁹ Travel patterns may also contribute to the intensity of contact, with people moving late at night to avoid the heat of the day (which is considered to be safer for transporting animals in arid and semi-arid areas) or collecting animals from distant locations in the *woreda*. Vets and veterinary technicians may be a group at risk as they travel round pastoralist communities.

The youth factor, coupled with cash incomes, may aggravate the incidence of HIV/AIDS in the livestock value chain. As most of the small ruminant local suppliers and dealers are young, they might establish multiple sexual relationships with various girls and/or women as a gesture of adventure and boastful character. Moreover, the majority of small ruminants are transported by Isuzu trucks that are driven by very young, uneducated and characteristically irresponsible men, often addicted to *chat* and alcohol. Such behaviour could enhance further the level of HIV infection.

Egg and poultry dealers

As the egg and poultry business develops, dealers go to Awash and Nazareth in search of better prices, once or twice a week. They also travel regularly to nearby markets to buy inputs. Both men and women take part in such business and some of the journeys may take place at night, which could put them at risk (from unwelcome advances from other passengers or if the vehicle breaks down and they have to stay in an open field overnight).

Milk sellers

There are times when liquid milk fetches better prices in some markets rather than others and at certain times of the year. January to March is the time in which fluid milk fetches the best price in Miesso whereas the milk prices are depressed for about five months (June to October). During this time, more entrepreneurial women take milk as far as Awash town daily (about 100 km, travelling by vehicle) while others go to nearby zonal towns like Chiro or Asebeteferi (30–50 km, undertaking the return journey on foot

19. ABC norms refer to: Abstinence, Be faithful, or Condom use.

after selling their milk in order to save money). Conversely, buyers from Awash or Chiro towns come to Mieso to buy liquid milk directly and take it home to sell. However, the marketing of liquid milk may pose few risks in terms of HIV infection because the women selling the milk only spend a short time at the marketing point, all sales are paid immediately in cash (there are no checks for quality which could result in delays), and they do not stay away overnight.

3.7 Summary of market-related risks of exposure to HIV infection

From the above discussion, it is evident that certain aspects of market-led agricultural growth may present additional risks of exposure to HIV infection to rural communities. The dominant factor is the huge seasonal movement of people throughout rural Ethiopia. As an agrarian economy with labour-intensive farming methods and limited use of labour saving technologies, the timely availability of labour is crucial for the successful cultivation of crops. In addition to inflows of casual labourers, family members, such as students and migrant workers, also return to assist at the busiest times of the year.

Some movements are associated with specific farming systems, such as cattle keepers in search of fodder or irrigation pump-owners who lease or share crop irrigated land. Mono-cropping exaggerates labour peaks and troughs; the peaks draw in labour and the troughs force family members to seek work elsewhere. In contrast, activities that extend the cropping season, such as the use of irrigation, may reduce the need for family members to migrate.

Marketing involves a significant movement of sellers and buyers, both into and out of rural areas, as well as between rural communities, on journeys that may be completed within a day or over several days. Commodities with intensive periods of sale, such as coffee and grain, result in many of the key players in the marketing chain (such as middlemen, buyers, wholesalers, traders, exporters and transporters) staying in the marketing centres for periods of up to three months. Poor pricing arrangements (when prices are determined at the end of the day or midnight) and delays in payment, require farmers to wait and incur additional expenses in overnight accommodation and socializing.

Increased market orientation among farmers is likely to result in more frequent visits to markets or urban centres, to buy farm inputs, to repair machinery and to sell produce. Greater price sensitivity encourages farmers to travel further afield in search of better

prices. Although this increase in mobility is a sign of economic empowerment, it is also a potential risk of exposure to HIV.

Weekly rural markets in the *woreda* are a major social gathering, drawing people together, typically from a 10–15 km radius. Market days are often a source of recreation, even if there is no business to conduct, and are acknowledged as an opportunity to meet secret lovers. Drinking on market days is a common and long-established practice and may lead to casual unprotected sex; in some parts of the country it is also associated with chewing chat. Recreational activities are heightened during the harvesting season, when money is available and commercial sex workers from all parts of the country move into market centres. Larger rural markets attract people from a wider catchment and may result in overnight stays.

Engagement with the market, and hence the market-related risk of HIV infection, is strongly influenced by gender roles since women and men usually occupy distinct niches in the marketing chain. Women sell small volumes of the main cash crops, vegetables from their home gardens, small livestock and their products, and honey; the amount sold is determined by household needs and the sales usually take place in the local market on a regular basis. Men tend to sell the majority of the cash crops, fattened cattle and other livestock; when selling in bulk, they often travel to major markets to get better prices. Women and girls are potentially at risk from unwanted sexual advances whilst they travel to and from markets, and many travel in groups to improve their security. They may also encounter pressure to have sex when they stay away from home whilst trading (possibly as part of the negotiating process) and, culturally, they are in a weak position to refuse.

4 Evidence of AIDS-impacts and vulnerability to future impacts

The preceding sections clearly demonstrate that all rural communities are at risk from HIV infection because of their close linkages with the external world and practices within the community that facilitate the spread of the disease; moreover, it is also evident that risk may be accentuated by market-related developments. This section examines the extent to which AIDS has already impacted the rural communities in the 10 PLWs and identifies sources of vulnerability to future impacts.

4.1 Stages of the epidemic

There are three principal stages of the epidemic (Barnett and Topouzis 2003) that a community may pass through:

- AIDS initiating: the HIV prevalence rate is low at present but is expected to rise in the near future due to the presence of HIV-risky environments and bridging populations, and norms and traditions within the community;
- AIDS impending: the HIV prevalence rate is already high (based on data and observed behaviour) but the community is not yet heavily impacted by AIDS-related illnesses and deaths; and
- AIDS impacted: the HIV prevalence rate is high and households and the community are already impacted by AIDS-related illnesses and deaths.

These stages may be represented diagrammatically (Figure 4). The gap between the HIV infections curve and the AIDS-related deaths curve represents the seven to nine year lag that generally exists, in the absence of widespread access to ART, between infection and death.

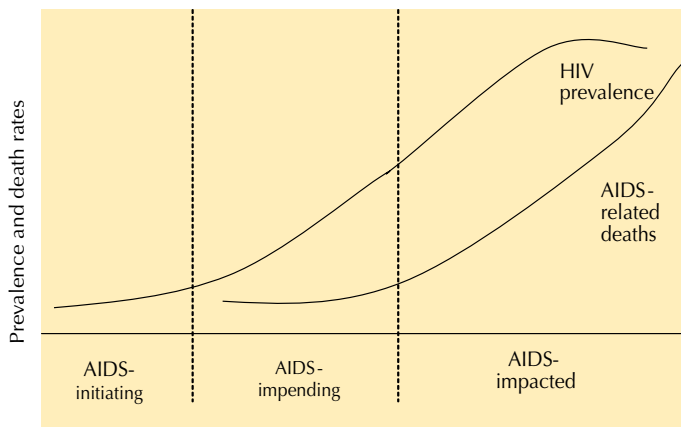


Figure 4. *Stages of epidemic in community.*

4.2 Indicators of AIDS impacts

One of the greatest challenges of working in many rural communities is that HIV/AIDS data are relatively scarce (even though the number of sentinel surveillance sites in rural communities has increased substantially in recent years), coupled with the heterogeneous nature of the rural epidemic with marked inter- and intra-regional variations.

Identification of the stage of the epidemic is made more difficult when some of the classic indicators of heavily-impacted communities (Box 5) are not relevant due to the characteristics of the local farming and livelihood systems. For example, the impact of the loss of labour on the area cultivated, fallow land and switch to less labour-intensive crops is not relevant in communities with large-sized families, small areas cultivated per family or a tradition of supporting bereaved households by providing labour. Other indicators may be culturally specific, such as the incidence of grabbing property from widows. It may not always be possible to detect changes in household composition if households dissolve (with any remaining members being absorbed into new households) or move away. Changes in food insecurity and malnutrition specifically attributable to the impacts of HIV/AIDS are also often difficult to identify.

Box 5: Potential indicators of the presence of the HIV/AIDS epidemic

- Increase in prolonged and recurrent bouts of sickness among adults aged 18–59
- Increase in death among adults aged 18–59
- Increase in number of young widows or widowers
- Increase in number of orphans
- Increase in number of households fostering orphans
- Increase in dissolution of households
- Increase in number of sick people returning from urban areas to stay at home
- Reduction in the area cultivated per household
- Increase in fallow land
- Change to less-labour intensive livelihood activities (e.g. less labour-intensive crops or livestock)
- Change in division of labour between household members, use of reciprocal labour groups and labour sharing
- Reduction in household assets
- Loss of property to relatives
- Reduction in number of meals, change in composition of diet
- Nutrition-related (underweight, stunting, wasting, adult Body Mass Index, low birth weight)
- Community response: denial, despair, acknowledgement, pro-active coping.

Source: Bishop-Sambook (2004).

The picture may be further confused by the community's response to the epidemic if they do not know the symptoms of the disease or are in a state of denial about its presence.

Although levels of awareness about the disease are high, there is often a reluctance to admit that people from their community are infected or dying from AIDS, although it may be a disease that is affecting neighbouring *woredas*. In addition, as a result of high levels of stigmatization and misconceptions about the modes of transmission, PLWHA who are displaying symptoms of AIDS are often not seen in the community due to self-exclusion or marginalization by others.

4.3 Evidence of impacts of AIDS

In the absence of hard data on AIDS-related illnesses and deaths in the community, it is necessary to look for proxies to provide insights regarding the extent to which communities have already been impacted by AIDS.

Reported behaviour change

Despite the propensity to deny the presence of HIV/AIDS in a community, recent changes in behaviour suggest that many people recognize the threat the disease poses. The most common change has been towards reducing the number of multiple sex partners by decreasing extramarital affairs, the use of prostitutes and the incidence of polygamous marriages. However it was noted that this change is also because of economic reasons (for example, limited resources to support more than one wife) and not just as a result of HIV/AIDS awareness. People are also taking steps to reduce their risk of exposure by ceasing to remarry divorcees, widows or widowers; avoiding unnecessary overnight stays away from home, and ceasing to share razor blades (e.g. for circumcision). Women travel in groups to reduce the risk of rape when collecting firewood or going to market. The youth would appear to be among the more committed to change, expressing an interest in abstaining from sex before marriage, establishing one-to-one partnerships, taking pre-marriage HIV/AIDS tests and reducing extramarital sex. Nevertheless, the use of condoms continues to be extremely low, despite their availability in rural communities.

Changes in composition of households in community

Another indication of the reality of the rural epidemic is reflected in the changing composition of communities. It was noted that during the last five to ten years, there have been fewer polygamous marriages (now accounting for 5–15% of total households in the study communities), a growth in monogamous households (40–60%) and fewer remarriages among widows and widowers. Female-headed households (15–25%) have experienced the highest rate of growth while households headed by single men, orphans and grandparents have also increased (each typically accounts for 5–10%) (Figure 5). Not

all these changes can be attributed to the impact of AIDS since there are other reasons which also account for: (i) the growth in single adult headed households, such as the migration of husbands in search of work, an increase in divorce, war (in Atsbi-Wemberta), land shortage (Bure and Fogera) and spouse death due to other causes (malaria); and (ii) the reduction in polygamy because of the influence of Christianity (Dale) or the recognition of the benefits of family planning (Alaba).

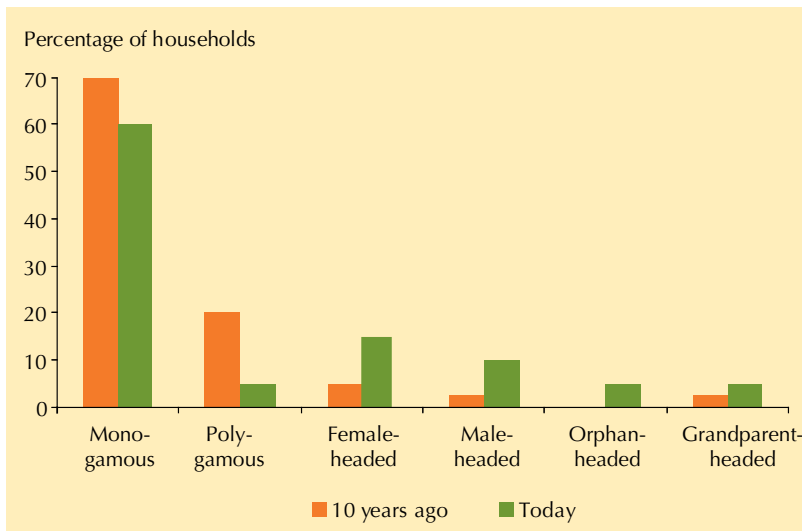


Figure 5. Changes in composition of households, Fogera woreda, Amhara.

Changes in community response to coping with epidemic

All communities are engaged in some form of HIV/AIDS awareness raising activities. A wide range of public sector staff (including health workers, teachers, DAs, police and administrators), religious leaders and anti-AIDS clubs participate in disseminating information on market days and in schools, churches, mosques and other social gatherings. Several PLWAs have adopted the community conversation methodology which is proving very effective in achieving significant changes in behaviour which may be associated with reducing the spread of HIV (Box 6).

The community care offered to PLWHA ranges from offering pro-active support to doing nothing, particularly in communities where there is a high level of stigma and discrimination, including the fear of infection, and leaving the responsibility to family and close relatives, who may also assist with key farming activities or lend money. In Metema, community members provide cash to PLWHA, wash their clothes, feed and treat bedridden members of Fana anti-AIDS club who disclose their HIV status while in

Alaba individuals contribute 25 cents to a joint community fund to assist PLWHA. Many communities have traditional treatments for HIV/AIDS including drinking holy water, prayer services and religious baptism.²⁰

Box 6: Community conversations

The community conversation methodology was pioneered in Alaba special *woreda* by KMG and is now being used nationally and internationally, particularly by UNDP. The approach creates the space and opportunity for community members, firstly, to gain a deep understanding of the epidemic and, secondly, to generate and sustain locally appropriate and effective responses to control the epidemic. Participants find the process empowering and the results resonate throughout the wider community.

Community conversations start with training the trainers (for example, development agents) over a period of 8 to 10 days. In turn, they train facilitators from the community (such as school teachers or high school leavers) for a period of seven days. Two to three facilitators usually serve one community conversation group of up to 70 people. The latter represent a broad cross section of the community with a gender balance. The group meets regularly to discuss HIV/AIDS; to identify customs and norms which may pose a risk to HIV infection or are detrimental to other aspects of community life; and, through conversation, to identify acceptable ways of overcoming these practices. A conversation may continue for 12 to 18 months or longer.

One indication that AIDS is taking its toll on the local population is when communities modify their traditional burial activities because of the high number of deaths. The duration of funerals is often reduced, which not only saves the time of mourners but also reduces the burden on the remaining family members. In Goma, for example, the *sedeqa* (a traditional practice in Muslim communities to slaughter livestock to feed guests at a burial ceremony) has stopped and the resources are now saved for the family.

Impact of AIDS on livelihoods

Within communities, the impact of AIDS differs between occupational and wealth groups. Those who depend on their physical well-being or appearances for their livelihood are particularly vulnerable. Farmers and transporters of produce may lack the physical energy to do their work. Customers shy away from buying from retailers or sellers who look ill as a result of stigma and misunderstanding regarding the transmission of the disease. Once the signs of the disease become evident, infected individuals often withdraw from public space, including visits to the market.

20. The combination of ART and drinking holy water has long been a source of controversy in the Ethiopian Orthodox Church, where many local leaders believe patients should not take both. In 2007 the Archbishop clarified the position of the church by urging patients who were seeking a holy water cure for AIDS to keep taking their anti-retroviral medication (INRI PlusNews, Entoto, 25 May 2007).

The disease makes many poor livelihoods untenable whilst the opportunities for recovery are much stronger in resource-rich households with the options of remarrying, hiring home help and hiring labour to assist with farm activities during illness and after the death of a key adult household member. Richer households are also able to raise money for medication and food for PLWHA, using their own savings, selling their harvest, livestock or other assets, or borrowing from savings and credit associations. They may also hire out their oxen in return for labour. They are more likely to receive assistance from neighbours and relatives than poorer households, and their children continue to attend school. Poorer households have few resources to fall back on; they are unable to afford medical treatment and have to treat the patient at home. They may rent out their land or hire out their children; some are able to mobilize support from other family members. The *Idir* (community-based funeral association) may provide assistance. The poor are less likely to remarry and households may disintegrate as children are sent to live with relatives or are sent away to beg for their livelihood, and other family members move to town.

Households headed by women are especially disadvantaged. In some communities they are not allowed culturally to cultivate their own land, and are forced to turn to share cropping. Coping or survival strategies include petty labouring, such as fetching water or cooking in return for payment, casual farm labouring, begging or receiving relief assistance. Poor widows are very unlikely to remarry.

4.4 Status of epidemic in PLWs

On the basis of the qualitative information gathered during the surveys, it is possible to place the 10 PLWs into one of three separate groups representing different stages of the epidemic, in ascending order of severity of impact:

- *Limited impact to date*: the impact of the disease is largely confined to urban areas (such as small towns and market centres), with rural communities in Miesso and remote rural communities in Atsbi-Wemberta still at the initiating stage;
- *Moderate impact*: urban communities are impacted and the disease has also progressed to the impending stage among rural communities in Ada'a Liben, Alaba, Alamata, Dale and Metema; and
- *Impacted stage*: Both urban and the more accessible rural communities are already impacted by AIDS, leaving only the remote rural areas at the impending stage in Bure, Fogera and Goma.

This information may be presented diagrammatically (Figure 6). Examples of each category are discussed below. This classification is useful because it provides the context in which relevant interventions may be identified to address the epidemic, ranging from raising awareness and understanding about HIV/AIDS to preparing for, and coping with, the effects of AIDS. These options are discussed in more detail in section 5.

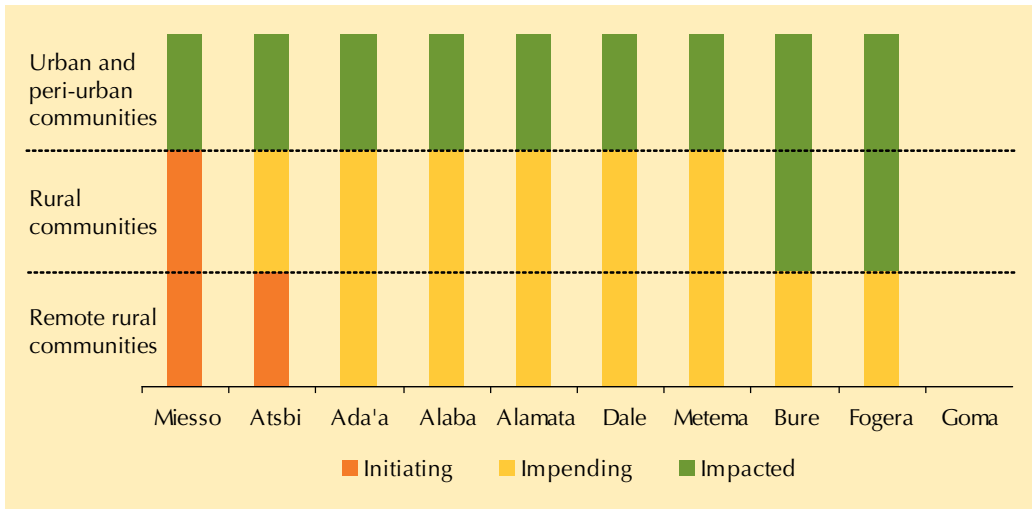


Figure 6. Stage of epidemic in PLWs by geographic location.

AIDS initiating/AIDS impending

In Atsbi-Wemberta, the agricultural sector is characterized by farmers adopting improved crop and livestock breeds during the last five years and increasing land under small-scale irrigation. Changes in the pattern of production, which are often associated with the impacts of AIDS, tend not to reflect the status of the disease in this *woreda*. Thus the area under fallow has reduced as a result of population pressure and there has been a shift from cattle to smaller livestock because of pressure on grazing land. The practices of reciprocal labour and share cropping are decreasing because farmers find it more productive to work their own land. All households are increasing their non-farm activities (such as trading, brewing, selling food, and construction works) except those headed by women and grandparents. The highest level of denial about AIDS was expressed by men and youth in Atsbi-Wemberta.

In Mieso, it was noted that it is difficult to identify any impacts of AIDS on rural livelihoods because communities experience many problems associated with drought and food insecurity. There is little open discussion about HIV/AIDS and, if people are ill, they hide away from public view.

AIDS impending

Livelihoods would appear to be reasonably buoyant in Ada'a Liben which may mask, possibly only temporarily, the impacts of AIDS. Ada'a Liben benefits from proximity to centres of economic activity, including the industrial zone of Addis Ababa, offering

non-farm employment opportunities and access to major agricultural markets. Poorer households with very small holdings or no land are increasing their non-farm activities (brewing, distilling, pottery, weaving, silver smithing and grain trading) or migrating to town. More children are attending school and, as a result, parents are taking over their farming and household activities. However, it is likely that Ada'a Liben is AIDS-impending, since the community is potentially at high risk due to its location (with the major urban centre of Debre Zeit and the Addis Ababa–Djibouti highway) coupled with a strong tradition of extramarital affairs and high levels of alcohol consumption. An indication of possible times to come is reflected in one busy market centre where it was noted that less time is now spent attending funerals because of the high number of deaths.

Generally, the rural community in Dale is in a state of denial regarding the presence of the disease. Discrimination is shown towards PLWHA and infected persons tend to practice self-exclusion. Any impacts of AIDS to date on rural livelihoods are masked by the land shortage in the *woreda*, high population pressure and the effects of drought. The picture in Alamata is similar, with the community in a state of denial and land resources under pressure from a large population and an increase in the use of irrigation. In Alaba, many communities report that family health is deteriorating, particularly seasonally as a result of malaria. Again, high population pressure masks any possible impacts of AIDS on creating labour shortages, and the area under cultivation is increasing at the expense of fallow land and tree crops.

AIDS impacted

In contrast, Fogera is already AIDS-impacted, with the more accessible rural communities characterized by a high incidence of AIDS-related illnesses, deaths and sexually-transmitted infections. The presence of the disease is acknowledged in some rural communities, resulting in significant behaviour change (Box 7). There are indications that only relatives and close friends attend funeral ceremonies.

The disease is taking its toll on rural livelihoods in Fogera, leaving poor and female-headed households struggling to survive the loss of key adults and asset depletion (particularly the sale of livestock) during illness. They resort to share cropping, hiring out their children for farm work, brewing local drinks, collecting and selling fuel wood or migrating to town and receiving alms. In some communities, relatives, close friends and neighbours assist with farming activities; they may also lend money or contribute to supplement food shortages. Some widows weed other people's land in exchange for assistance with ploughing but reciprocal labour groups are becoming less popular

because of the labour shortage. Women have rejected treadle pumps because their husbands are sick with malaria and they are concerned that they might not have enough energy to treadle.

Box 7: Behaviour change among members of a rural women’s group, Aboukokit *kebele*, Fogera

Some of our members have lost their husbands and friends to AIDS. Our men used to go to Woreta town after harvest to sell their produce and would stay for a week enjoying themselves before coming home empty-handed.

The Women’s Affairs Office and the health extension worker have informed us about the disease and we now understand how it is transmitted. And, as a result, our behaviour has changed.

We go for an HIV test every three months at the local health centre and our husbands go as well. We no longer share needles to remove thorns from our feet. We carry condoms with us in case we are attacked but the risk of attack has also reduced. Our men no longer stay away from home after selling their produce but return with the money. Early marriage used to be common but we have imposed a minimum age limit of 18 years for girls and 20 years for boys; and we are prepared to go to the police if these guidelines are not followed.

Source: Tilahun Gebey, RDO, Fogera *woreda*.

Similarly, rural communities in Bure are also AIDS-impacted, with many AIDS-related illnesses and deaths, and a high incidence of tuberculosis. The community is mainly in a state of denial about the presence of HIV/AIDS, claiming it is only infecting those who have lived outside the community, and there is no open disclosure of HIV status. Religious leaders, in particular, are active in raising awareness in order to encourage a change in risky behaviour, and have reduced the burden of burial traditions in order to save resources for remaining family members.

In Goma, although rural communities are in a state of denial about the disease, church and mosque attendance has increased, which discourages alcohol consumption and the use of sex workers. Alcohol has been banned in some *kebeles*²¹ and this has had a knock-on effect on the livelihoods of women in particular because many of them used to brew alcohol.

4.5 Sources of vulnerability to future impacts

The most vulnerable households to the impacts of AIDS are the poor, especially women who lose their husband, are unlikely to remarry, and find it difficult to cultivate land without male labour. Other vulnerable groups include those without recourse to an

21. *Kebele* is a neighbourhood association, formerly known as a peasant association.

extended family or labour groups to call on in times of crisis. Such groups will inevitably miss out on opportunities to participate in market-led growth initiatives because they have limited time, they are unable to spend time away from home because they are caring for the sick, they have less money, and they are less able to take risks.

Certain characteristics of farming systems may also influence vulnerability, including labour intensiveness, sensitivity to the timeliness of farm operations (such as planting, weeding, harvesting), the inability to mechanize by using draught animals, a shortage of farm power, a lack of tradition of hiring in labour to cope with labour peaks, highly perishable commodities, and the need for specialist knowledge and skills. The use of purchased inputs may require seasonal credit, which may make a livelihood more vulnerable in the event of the death of the borrower, depending on the loan recovery system (Box 8).

Box 8: Micro finance loan recovery systems after death of borrower

- Of the principal, 1% is required as insurance against the death of borrower but the family are not required to repay loan (for example, Sidama Micro Finance Institution, Dale *woreda*).
- No insurance requirement but family members are responsible for loan repayment in event of death of borrower (for example, Omo Micro Finance Institution, Dale *woreda*; Dedebit Credit and Saving Institution, Alamata *woreda*).

Hence, initiatives to promote market-led development, such as greater attention to detail, more timeliness, better management, a more skilled production system and an increased use of farm power inputs, including labour, may struggle to take off in heavily AIDS-impacted communities. The presence of the disease will also have implications for labour-intensive activities, including the construction and maintenance of water harvesting structures (such as *in situ* harvesting, well development, pond construction, river diversion and dam construction) and soil conservation works (such as stone terraces, soil bunds, micro basins, gully treatments and tree planting).

5 Opportunities and IPMS responses for addressing HIV/AIDS through market-led growth strategies

This section summarizes the main implications of the disease for IPMS and discusses a range of opportunities for reducing the risk of HIV infection and mitigating the impacts of AIDS by improving agricultural productivity and market linkages. They are illustrated with examples of innovative approaches that have been developed, field-tested and implemented by IPMS in several *woredas*, often in partnership with other organizations.

5.1 Summary of implications for IPMS

Four principal conclusions may be drawn from the evidence collected from the 10 PLWs: firstly, rural communities are inherently at risk from HIV infection as a result of the presence of risky urban environments and bridging populations, and norms and traditions within the community; secondly, even though HIV prevalence rates are low at present in rural communities, there is always the risk that they may rise if HIV prevention, treatment, care and support services are not scaled up effectively in rural areas; thirdly, the risk of exposure to HIV-risky environments varies according to sex, age and livelihood; and finally, improvements in productivity and the strengthening of market linkages are likely to increase the risk of exposure.

As individuals become sick with AIDS-related illnesses and eventually die, this will have a range of implications for the IPMS project. Households will experience reduced labour productivity and availability during sickness and eventual death, the loss of skills, the loss of social capital with the collapse of informal networks and linkages, and a smaller asset base. Household priorities may possibly change, placing more attention on achieving food self-sufficiency than market-based enterprises, and an unwillingness to expose themselves to unnecessary risks. These impacts of AIDS at the household level and their implications for market-led initiatives are described in more detail in Annex 4. If staff from partner institutions become sick and die, this will not only result in a loss of institutional capacity but will undermine the sustainability of IPMS initiatives over the longer term.

Similarly, the presence of the disease in the rural community requires the IPMS project to identify and minimize any risks of HIV infection associated with initiatives to stimulate market-led agricultural growth. For example, farmer training, exchange visits and study tours often require farmers to spend nights away from home. As productivity increases, development agents may spend more time in rural communities, the influx of seasonal labourers may increase, and farmers will spend more time engaging with the market. Potential responses to reduce these risks of infection are detailed in Annex 5 and are discussed below.

5.2 Responding to the epidemic

The stage of HIV/AIDS epidemic in a community influences the principal focus of the response activities. In communities where few members are infected, greater emphasis is on increasing awareness and understanding about the disease with a view to reducing the risk of infection (Box 9). In communities where a significant proportion of the population are already infected but not yet sick with the disease (AIDS-impending), priority is given to preparing households to reduce the impacts of AIDS. Finally, in AIDS-impacted communities, attention is focused on providing care and support to PLWHA²² and their families and adjusting to the impacts of the disease. However, in any community, it is likely that all stages of the disease are present in different households, so all activities are relevant, to a lesser or greater extent. These options are summarized in Table 3.

Table 3. *Principal focus of HIV/AIDS activities according to stage of epidemic*

| Stage of epidemic | Focus | Objectives |
|-------------------|---|--|
| All stages | Reducing the risk of HIV infection | <ul style="list-style-type: none"> Increase awareness and understanding of HIV/AIDS Change behaviour and attitudes at individual and community levels Reduce risky behaviour, lifestyles and environment Encourage people to know their HIV status through voluntary counselling and testing (VCT) |
| AIDS-impending | Preparations to reduce vulnerability to impacts of AIDS | <ul style="list-style-type: none"> Maintain and improve health and nutritional status, including access to anti-retrovirals when necessary Secure asset base Secure and diversify livelihoods Record, store and share local knowledge |
| AIDS-impacted | <ul style="list-style-type: none"> Providing care and support for PLWHA and their families Adapting to overcome impacts of AIDS | <ul style="list-style-type: none"> Maintain and improve health and nutritional status Promote timely access and adherence to ART Psycho-social support and safe home-based care Prevent infection of others Adapt livelihoods to new resource base with less labour, fewer assets, fewer skills, lower income Care for orphans Provide economic and social support for severely affected households |

22. In Ethiopia, out of approximately one million people living with the disease, it is estimated that 300,000 are in need of ART. With support from the Global Fund to Fight AIDS, Tuberculosis and Malaria and the President's Emergency Plan for AIDS Relief (PEPFAR), the country embarked on a massive scale-up of free ART services; by September 2007, 90,000 patients were on ART.

Box 9: Priority focus in generalized epidemic

‘Generalized epidemics need fundamental community change and safer sexual environments by reducing concurrent sexual partners, intergenerational sex, sexual coercion, cultures of alcohol abuse and the vulnerability of couples.’

Source: Wilson (2007).

5.3 Raising awareness and understanding about HIV/AIDS

The focus of awareness raising messages varies between AIDS-initiating and AIDS-impending communities and AIDS-impacted communities. Activities include:

- Conducting TOT training of DAs and other key stakeholders in the *woreda* to become HIV/AIDS competent and able to train others.
- Using farmers’ associations, cooperatives, marketing groups and trade associations as entry points for behaviour change communication activities, particularly targeting men and the youth (Box 10).

Box 10: Integrating HIV/AIDS messages into commodity platform meetings

IPMS Alaba special *woreda*, working with OoARD, has organized farmers into a seed multiplication group in order to produce quality teff (*Eragrostis teff*) seeds. Teff seeds attract a 15% premium from the Ethiopian Seed Enterprise above the normal market price for teff grain. With the encouragement of the *woreda* Women’s Affair Office, the group has linked up with a local anti HIV/AIDS club to minimize the misuse of this additional income. The linkage was initiated and facilitated by the IPMS project.

The Alaba Fere Anti-HIV/AIDS club members regularly participate in the commodity group meetings, organizing drama and music sessions and distributing leaflets to show the dangers of possible HIV infection if household incomes are misused. The club is well equipped with musical equipment and a sound system. Club members narrate stories about HIV/AIDS issues to the farming community in the local language and in line with their religion. They also emphasize the importance of HIV testing and demonstrate how farmers can protect their family while benefiting from increased income from teff seed multiplication.

When the meetings are held in villages, they are well attended by boys, girls, women and men. The amount of information that is conveyed through poems, jokes, dramas and leaflets is considerable. This experience demonstrates how cross cutting issues like HIV/AIDS can be mainstreamed into commodity development initiatives of the IPMS project, with the involvement of key partners.

Source: Abebe Shiferaw, RDO, Alaba Special *woreda*.

- Targeting groups associated with agricultural production and marketing who are often overlooked by HIV/AIDS awareness and outreach activities because they do not usually belong to formal associations (e.g. traders, store owners, transporters, middlemen, petty traders, owners of hotels and drinking houses).
- Using occasions when people are gathered together, such as market days and farmers' meetings, to educate people about HIV/AIDS, including testimonies by PLWHA.
- Holding intensive awareness-raising campaigns during seasons of high risk, such as harvesting and holidays.
- Identifying innovative ways for reaching rural communities with HIV/AIDS messages (e.g. distributing HIV/AIDS leaflets to members of cooperatives and farmer groups or including short films about HIV/AIDS in the regular program at local cinemas).
- Integrating HIV/AIDS awareness-raising into all training courses, workshops, field visits etc. (Box 11).

Box 11: Experience of discussing gender and HIV/AIDS issues with pastoralist farmers

As part of IPMS's awareness creation on gender and HIV/AIDS issues in Dale *Woreda*, a short discussion is included in training meetings and field visits, using a checklist of open-ended questions.

A group of 20 pastoralists travelled some 55–75 km to Yirgalem town to attend a three-day training and consultative meeting for establishing sustainable veterinary services in remote areas of Dale. These pastoralists, living by Lake Abaya, are isolated and live far from their farming community. They have relationships and business associations mainly with livestock traders from the adjacent *woredas* of Wollaita (a different ethnic group) and their kin in the coffee belt of Dale. The following checklist was used to know their level of awareness about HIV/AIDS:

1. What do you know about HIV/AIDS?
2. What is HIV/AIDS?
3. How is HIV/AIDS spread among people?
4. What are the predisposing factors for your community?
5. Who among your community is vulnerable and why?
6. Why are more women affected than men?
7. Have any of you had an HIV test? If no, why not?
8. Why do you think women are more vulnerable than men to HIV infection?
9. How can we help stop the spread of HIV and how can we help the PLWHA?

The summary of responses is as follows. The pastoralists know HIV/AIDS as a disease of white blood cells. They have heard it is a virus (although they do not know what a virus is) that affects humans, it is communicable but it does not yet have a cure. The majority agreed (17 out of 20) that malaria accounts for more deaths in their community and has a stronger negative impact than HIV/AIDS.

Box 11. Cont'd

Apart from hearsay, all insisted that there is no HIV/AIDS in their community. No one has seen a sick person in their household, among their relatives or in their community. They nearly all argued that they do not see any reason to do an HIV test at the moment. The HAPCO workers noted that this high level of denial explains, or contributes to, the low rate of infection that is reported.

Given the group's isolation from the majority of highland farmers and towns, they might have believed themselves to be relatively safe from the risk of HIV infection. However, most have relatives in the highlands and some of the highlanders also keep animals in the pastoralists' area. The herders also travel to town to trade in livestock. This movement may result in the establishment of new families, either by the pastoralists in the highlands or by the highlanders forming new families in the lowlands. The group also includes returnees from the army, which is believed to be one of the most at risk groups in the country.

The group generally agreed that safe sex or abstinence are ways of avoiding the transmission of the disease. The group also accepted that they have to be compassionate and understanding of vulnerable groups and cater for their needs. In conclusion, it was explained that nobody knows that they are safe from the virus unless they have an HIV test.

Overall, the discussion revealed that pastoralist groups have to be handled sensitively and require professional assistance to improve their understanding of HIV/AIDS and its strong gender dimension.

Source: Ketteema Yilma, RDO, Dale *Woreda*.

- Facilitating access to relevant HIV/AIDS materials and posters in *woreda* knowledge centres and farmer training centres (FTCs) (and translating materials into local languages).
- Ensuring that the HIV/AIDS messages are gender-sensitive and are disseminated in a manner that will reach women, as well men.
- Identifying opportunities to reduce the stigma associated with the disease.
- Promoting HIV/AIDS workplace programs among IPMS partner institutions.

Box 12: IPMS awareness raising initiatives

- Developing awareness through personal testimonies by PLWHA: By establishing a good working relationship with a local association of PLWHA, IPMS Goma *woreda* has arranged for personal testimonies to be given at large IPMS training events. The PLWHA explain to trainees how they were exposed to the virus, how they have dealt with the diagnosis and their current condition. Women trainees in particular are very impressed by the witness given by PLWHA and ask very pertinent questions.
- Disseminating HIV/AIDS information among the market trading community: HIV/AIDS and gender information is disseminated by staff from the *Woreda* Marketing Office through public broadcasting speakers in the Kultio market site, Alaba special *woreda* on market days.

Box 12. Con'd

- Integrating opportunities for HIV testing into field visits: IPMS Metema *woreda*, in collaboration with the *woreda* HAPCO and Women's Affairs Office (WAO), has mobilized communities to participate in commodity development field visits and technology demonstrations; and VCT information and HIV tests have been integrated with these events.
- Integrating opportunities for VCT into annual local livestock fair: Miesso *woreda* HAPCO, in close collaboration with the agricultural extension office, kebele administration and health extension staff arranged for the VCT program to start on the same day as the livestock fair which attracted farmers from many different localities. IPMS supported the process through providing resources, including facilitation for *woreda* administration staff who implemented the VCT.
- Integrating HIV/AIDS considerations into FTC annual work plan: DAs in Metema have integrated HIV/AIDS considerations into their work plan. In any training, meeting or consultation with farmers, the DAs regularly provide information about HIV/AIDS tuned to the needs of the community.
- HAPCO collaboration with the agricultural extension system: Undertaking VCT at the grassroots level at the FTCs and DA posts in Miesso *woreda*.
- Raising awareness and increasing understanding about HIV/AIDS among community members by working with HAPCO and PLWHA of Bure *woreda* during training and commodity platform meetings.
- Integrating HIV/AIDS messages into rural film shows: Short films about HIV/AIDS have been supplied to local film clubs by IPMS Miesso to show as part of their regular program (e.g. during the interval).
- Hiring local film club resources: In communities where it is difficult to travel to the FTCs that have been equipped by IPMS with TV and DVD, IPMS Miesso hires the facilities of local film clubs to show HIV/AIDS educational materials to various community groups, such as the youth and women, and public staff in various sector offices.
- Reducing conflict among cattle-keeping communities: IPMS Metema is undertaking a study of the transhumance cattle production system in order to identify improved cattle keeping practices and thereby resolve the conflicts created between transhumance and the local communities, including sexual encounters. Various legal measures are being undertaken by local leaders, including courts, to resolve issues associated with forced sex.
- Community conversations: Relevant government agencies and most NGOs in Alaba special *woreda* are involved in community conversation programs which have proved very effective in achieving significant changes in behaviour that may be associated with increasing the spread of HIV by creating the space and opportunity for community members to: firstly, gain a deep understanding of the epidemic; and secondly, generate and sustain locally appropriate and effective responses to control the epidemic.
- Marketing-related posters: IPMS has developed two posters illustrating the risk of HIV infection through unwise use of income from milk and coffee sales, and its adverse impact on the well-being of family members and the productive status of their farm resources (presented on the cover of this paper).

5.4 Reducing the risk of exposure to HIV infection

These activities are relevant for all communities regardless of the stage of the epidemic; the main emphasis is to reduce the risk of activities leading to unprotected sex with infected people. Activities include:

- Bringing the input supply and marketing chain closer to farmers in order to reduce the need to travel and spend nights away from home (for example, encouraging farmers to purchase in bulk, developing the rural network of agro-input suppliers, ensuring market information that is readily available in rural communities, establishing new modes of market engagement such as forward contracts and improving the modes of transport) (Box 13).

Box 13: IPMS initiatives to reduce the need to travel

Reducing farmers' need to travel to town to purchase farm inputs and access services

- In collaboration with OoARD and the rural community, IPMS Bure *woreda* has improved seed multiplication on farmers' fields. The project has also encouraged multipurpose cooperatives to supply seed to farmers in their kebeles.
- To overcome the immediate shortage of onion seeds, IPMS Alamata *woreda*, in collaboration with OoARD, has linked the *woreda's* Farmers' Union to Fogera onion seed producers; in the long run it is planned to enable farmers to produce the seeds themselves. IPMS is also planning for farm inputs to be supplied either through the Union or private input suppliers in the town (at the moment they are sourced from outside the *woreda*).
- In Goma *woreda* farmers have to travel outside their locality in order to acquire quality farm tools and, in many cases, this requires an overnight stay away from home. IPMS has developed a strategy for establishing alternative farm tools shops in five strategic locations in the *woreda*, thereby significantly reducing travel time and the need to stay away overnight.
- The establishment of input supply shops by Menchoneon Alaba Farmers' Union in the vicinity of farmers' residence would reduce farmers' need to travel away from home.
- Water pump maintenance and repairs have been introduced near to the vegetable growers in Atsbi-Wemberta *woreda*. Maintenance tools have been placed in the nearby FTCs and vegetable growers are now equipped with better knowledge about the maintenance and operation of their pumps. Furthermore, six motor pumps experts were trained in Mekelle and have been positioned in the *woreda* close to the accessible sites.

Reducing farmers' need to travel to market their produce

- In collaboration with Damot Multi-purpose Union, IPMS Bure *woreda* is trying to channel grain marketing through multi-purpose cooperatives and the Union. IPMS has advised the Union to establish a bread wheat flour factory in the *woreda*. Even if cooperatives are motivated to do this mainly to maximize profits for their members, these activities will reduce the risk of HIV infection from outside sources. The IPMS project has also linked farmers with bread wheat flour factories in Bahir Dar through contracts for bread wheat production.
- Efforts have been under way to link vegetable growers in Atsbi-Wemberta *woreda* with nearby traders by using the existing telephone facilities in the kebeles. As a result, traders have started collecting vegetable products directly from the farm gate, rather than farmers having to transport them to market. This means that the money is safely delivered to the home and this can reduce risks of HIV infection enormously. epidemic; and secondly, generate and sustain locally appropriate and effective responses to control the epidemic.

Box 13. Con'd

- To tackle the problem of spreading the disease in rural communities, IPMS Alamata *woreda*, in collaboration with the OoARD and USAID, has constructed several temporary stores/ collection points in the *woreda* where farmers put their onions until the trader comes to buy them. The collection centres not only reduce farmers' need to travel to the main centre but also increase the shelf life of onions.

Reducing the need to travel for training

- Traditionally farmers in Goma *woreda* are called to Agaro for training and workshops, and this requires them to stay away from home for a number of nights in the HIV hotspot in the *woreda*. The equipping of FTCs in four kebeles by IPMS (with furniture, computer, printer, TV, DVD, power line etc.) has enabled training to be taken to the farmers. Trainees are now able to go home for lunch and this has been particularly popular among women who are very uncomfortable attending training and workshops that are held far away from their home
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- Improving the capacity or throughput of the plant and improving the efficiency of handling procedures in order to reducing bottlenecks and delays at processing plants and distribution points.
- Modifying ways in which markets are organized in order to reduce unnecessary delays (for example, timely price information and modes of payment) (Box 14).

Box 14: IPMS initiatives to improve market efficiencies

A consultation session was arranged in Alaba special *woreda* by IPMS and the *woreda* marketing office in the presence of traders, wholesalers, farmers' representatives and brokers to discuss the time at which pepper prices are determined, with a view to shifting it from midnight to daylight hours. Once this initiative is implemented, it will help reduce the risk of exposure to HIV by the farming community.

Source: Abebe Shiferaw, RDO, Alaba Special *woreda*.

- Educating farmers and seasonal labourers to manage their earnings for the benefit of their families by saving, broadening their horizons and investing in their future, rather than wasting their market earnings on alcohol consumption and extramarital affairs (Box 15).

Box 15: Productive use of earnings

Farmers have been encouraged to strengthen their savings in Atsbi-Wemberta *woreda*. The results are encouraging and many vegetable growers are now saving their money in banks and some even invest in towns, including constructing houses to be used by their children when attending school or shops to sell their produce. The next target at the household level is to educate the youth in saving; in fact educating the youth can often significantly influence the behaviour of fathers or other household members.

Source: Gebremedhin Woldewahid, RDO and Dawit Weldemariam, RDA, Atsbi-Wemberta *woreda*.

- Strengthening women's position through economic empowerment (Box 16) through income-generating activities and gender training, and by making the marketing chain more women-friendly and safe.²³ There are strong links between increasing women's production and income, their contributions to decision-making, and their reduced vulnerability to risk of HIV infection.

Box 16: IPMS initiatives to support the economic empowerment of women

Accessing information and knowledge sources

- Creating awareness among the community, kebele leaders, DAs and other front line development workers to ensure that women (from women-headed households and women from male-headed households) are encouraged to participate in formal knowledge and information networks. For example, in Ada'a Liben 10 volunteers have established a women's vegetable producers' credit and saving association; they hold regular meetings to discuss issues related to vegetable production, sourcing of inputs and marketing. A women's dairy saving and credit association also holds regular meetings to exchange information and to access markets and new technologies.
- Arranging the timing of training to fit in with women's full work schedules and organized to address their needs rather than those of the subject matter specialists and men in the community (Dale).
- Ensuring that women participate in identifying problems and interventions as well as implementing the activities (Dale).
- Facilitating the introduction of technologies which reduce women's workload (such as fruit grafting, transitional beehives and modern milk churners) so that women have time to participate in knowledge and information networks (Ada'a Liben).

23. For additional information about IPMS experience in empowering women through market-led agricultural development initiatives, see Bishop-Sambrook et al. (2009).

Box 16. Con'd

Economic empowerment of women

- Women's economic empowerment through increasing production and generating income through dairy cows, fruit and vegetable production in Alamata could reduce their vulnerability to risk of infection. For example, one woman used her earnings from the sale of milk and cow dung to buy a TV which increased the whole family's access to information about HIV/AIDS.
 - Although the proportion of women involved in IPMS initiatives to improve sun-dried coffee is low in Goma *woreda*, it is recognized that the financial benefits to be gained from their participation in coffee processing will empower these women economically and socially to demand their share of public services and to liberate them from being submissive to men, to the extent of being able to say no to anything including unacceptable sex which could lead to HIV/AIDS.
 - Tropical fruit is one of the strategies for crop diversification in the coffee belt in Dale. Women were given equal opportunity to participate in training and nursery management, including grafting. The latter used to be considered to be the prerogative of men alone. Now husbands and wives are working as a team in their nursery and generate more income for their household.
 - Women's groups in Dale have been targeted to participate in rearing day-old chicks (4000 per group) for selling on to those who raise chicken for egg production (Dale).
- Minimizing the risk associated with capacity building (by reducing the number and duration of training courses held away from home, training couples (husband and wife), and reducing the need for overnight stays away from home) (Box 17).

Box 17: Couples' training to reduce the risk of HIV infection and mitigate impacts of AIDS

- When male farmers attend training courses, there is the risk of HIV infection during the entertainment at the end of the day when trainees go out for alcohol drinks and, as a consequence, may be tempted by unprotected sex. Training husbands together with their wives reduces such risk.
- Another advantage of couple training is that if one of the couple passes away, possibly as a result of AIDS, the knowledge acquired by the remaining spouse helps to sustain the family business. In rural areas, women are usually more adversely affected than men by the death of their spouse because they have not been equipped with the agricultural knowledge necessary to continue with the business as before. The traditional extension approach tends to target only male farmers, on the assumption that they will pass on the knowledge acquired to their wife and other family members but this is not the reality on the ground.

Source: Nigatu Alemayehu, RDO and Hailu Gudeta, RDA, Ada'a Liben *Woreda*.

- Reducing the wish to migrate from rural areas (Box 18), particularly among the youth, by increasing livelihood options and extending the growing season by developing

small-scale irrigation, product diversification, agro-processing and value addition, and strengthening existing and creating new market linkages.

- Improving living conditions in rural areas and minimizing the need for development agents to live away from their families.

Box 18: Reducing the movement of labour

Reducing the demand for seasonal labour

- IPMS Bure *woreda* is introducing and demonstrating less labour demanding bread wheat production technologies such as conservation tillage and threshing with a machine.
- In an attempt to reduce high labour requirement of sesame production, IPMS Metema is demonstrating conservation tillage with applications of Roundup, a non-selective herbicide, before planting. When it is correctly applied, there is no need to plough the field prior to planting sesame and the frequency of sesame weeding is also reduced.

Reducing the need to migrate

- In collaboration with OoARD, IPMS Bure *woreda* is creating year-round employment opportunities through cattle and small ruminant fattening, poultry, dairy, apiculture and irrigated vegetable and fruit crops production.

5.5 Reducing vulnerability to the impacts of AIDS

These activities, relevant for AIDS-impacts communities, include:

- Overcoming barriers to production and marketing faced by AIDS-infected and affected households (e.g. reducing the burden of rural living through labour saving technologies and practices, forming groups to assist in transporting produce to market or processing, and forming retailing groups among petty traders).
- Developing market opportunities for crops and livestock suited to the resource base of infected and affected households (including the need to be near home to care for the sick, loss of key skills and their inability to undertake risks) (Box 19).

Box 19: Working with PLWHA

In partnership with the *woreda* HAPCO, IPMS Metema is targeting PLWHA who are participating in cattle fattening activities by providing technical back up and advising members about improved animal housing and improved feeding practices. Through this intervention they can run their fattening activities successfully for income generation.

IPMS Fogera is supporting the income generating activities of a PLWHA association by training women members in business management, in particular record keeping and marketing skills, and in value addition for rice production. IPMS is also assisting the association in securing credit to buy a rice packing machine.

- Promoting new non-farm livelihood opportunities with modest capital and labour requirements for impacted households with the capacity to participate (targeting female-headed households, single male-headed households, orphans).
- Using cooperatives and farmers' associations as an entry point for AIDS care and support for members (e.g. health insurance or establishing a social fund for orphans).
- Promoting crops and livestock that contribute to balanced diets for PLWHA, especially those on ART with special nutritional requirements.
- Developing the farming skills of a wide group of farming households and labourers in order to minimize the impact of the loss of key adults on household livelihoods.
- Involving share cropping partners in market development initiatives.
- Working with microfinance institutions to provide access to emergency loans, and promoting the formation of voluntary savings and loans groups.
- Ensuring that all the above activities are implemented in a gender-sensitive manner, reflecting women's increased vulnerability either living with AIDS or as the carers of other household members living with AIDS. Activities promoting the economic empowerment of women (noted above) are essential.

5.6 Working in partnership

The IPMS project works with a range of partners for implementing HIV/AIDS initiatives at the *woreda* level, including *woreda* HAPCOs, health extension workers and health centres, WAO, OoARD-Rural Women Development desk, DAs and FTCs, religious leaders, local associations of PLWHA and anti-AIDS clubs. The *woreda* advisory and learning committee (WALC) has been used in many IPMS *woredas* as an appropriate forum in which stakeholders can foster partnerships, alliances and networks in order to develop a mutual understanding and acquire knowledge about HIV/AIDS epidemic from appropriate sources. Not only does the partnership approach demonstrate the complementary roles required in addressing the epidemic and enables a range of complementary resources to be mobilized, but it also strengthens relationships, develops synergies and creates mutual respect between the various players (Box 20).

Box 20: Details of IPMS partnership approach

| | |
|---------------|--|
| Purpose | <p>To have synergetic effects in the fight against the epidemic, relevant sector offices must:</p> <ul style="list-style-type: none">• promote collaborative action between the health extension and agricultural extension systems in the broad effort to integrate HIV/AIDS issues into rural development• forge strong partnerships and alliances among each other and with the diverse community members in which they work• capitalize on the existing social networks to generate large-scale mobilization to implement the short- to medium-term plan |
| Fora used | <ul style="list-style-type: none">• Bring all <i>woreda</i> level stakeholders relevant to the livestock value chain together including HAPCO, WAO and Anti-HIV/AIDS clubs• Farmer training, farmers/pastoralists days, seminars, study tours, exchange visits• DA training• Special livestock promotional activities like the livestock fair• Regular contributions about HIV/AIDS at WALC and regional advisory and learning committee meetings• HIV/AIDS awareness raising efforts are effectively incorporated in periodic market information provision on some specific commodities through mass media like Oromia and national radio and TV programs in both in Amharic and Oromiffa languages• Printed materials and information sheets available in English and Oromiffa (shared between partners and disseminated in community) |
| Core messages | <ul style="list-style-type: none">• Brief account on the nature of HIV/AIDS epidemic• Increased mobility and linkages associated with the promotion of market-oriented livestock commodities• More market activities leads the generation of more income that could perhaps be accompanied by some unexpected behavioural changes• Risk of exposure to HIV hotspots through increased mobility and staying away from home• Benefits of enhanced HIV/AIDS awareness and competency among the community helps tackle the disease strategically• The importance of public sector organizations mainstreaming HIV/AIDS in order to devise effective mitigation measures |

Box 20. Cont'd

- Outcomes of partnerships and alliances established among partners
- Involvement of HAPCO and WAO during the IPMS plan review meetings that take place once or twice per year increased participants' understanding of risks of HIV/AIDS in *woreda* and appreciation of the need for HIV/AIDS mainstreaming throughout various *woreda*-level sector offices, and enabled them to identify specific areas of collaboration among all the partners
 - Fostered alliances among sector offices and other partners in *woreda*, thereby promoting a culture of experience sharing, talking and interacting
 - Facilitated HAPCO and WAO to get fora partners to play concrete roles in awareness raising on HIV/AIDS
 - Enabled strong collaborative efforts to be established between HAPCO, WAO and extension service to integrate HIV/AIDS issues in rural development initiatives
 - Repeated awareness raising efforts and pertinent information provision at regular WALC meetings and other fora contributed to bringing about behavioural change by the partners and created a feeling of joint responsibility and mutual trust in the fight against the HIV/AIDS epidemic
 - Partners realized their potential to influence the process, internalized HIV/AIDS issues and became motivated to commit something positive toward HIV/AIDS mitigation measures
 - Enabling environment created by both extension office and HAPCO to handle VCT at FTCs and DA posts
 - Regular meetings facilitated flow and exchange of up-to-date information and feedback mechanisms about accomplishments of HIV/AIDS awareness campaign and related activities by IPMS and other partners
 - All parties are committed to rendering complementary services in the fight against HIV/AIDS epidemic in the rural setting of Mieso more strongly and consistently than ever before.

Source: Zewdu Ayele, RDO, Mieso *woreda*.

5.7 Final thought

Initiatives to strengthen the market orientation of agricultural production present both an opportunity and a threat to the rural HIV/AIDS epidemic. Whilst any contributions towards reducing poverty and the need to migrate may reduce susceptibility to HIV/AIDS, there are very real risks that the additional cash and the stimulus to travel further afield to market produce could result in increasing the risk of exposure to HIV. Hence activities associated with promoting the commercialization of agriculture need to be designed with care to ensure they play a role in arresting, rather than hastening, the spread of the disease in rural communities.

The experience of the IPMS project in various *woredas* illustrates how HIV/AIDS mainstreaming initiatives, both to raise awareness about the disease and to reduce the risk of infection, can be achieved while undertaking commodity development. The remaining

years of the project will be used to further develop and field test other opportunities for addressing the market-related dimension of the rural HIV epidemic.

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Annex 1: List of study communities in 10 PLWs

| Region | Woreda | Number of fieldwork sites | Kebeles |
|--------|----------------|---------------------------|---|
| Tigray | Alamata | 4 | Gerjelle, Kulugize Lemlem, Limat, Tumuga |
| | Atsbi-Wemberta | 4 | Gebrekidan, Golgol Naele, Hayelom, Kelsha Emini |
| Amhara | Bure | 4 | Arbisi, Fetam Semtom, Windigi, Zalema |
| | Fogera | 4 | Alem Ber, Gub Tsion, Kehar Michael, Kodste Hana |
| | Metema | 2 | Throughout the <i>woreda</i> |
| Oromia | Ada'a Liben | 3 | Dire, Gobe Say, Ude |
| | Goma | 3 | Bulbulo, Genji Elbu, Limu Sapa |
| | Miesso | 4 | Harkoncha, Odabella, Odaqeneni |
| SNNPR | Alaba | 4 | Alem Tenna, Andegna Teffo, Holegeba, Uletegna Teffo |
| | Dale | 2 | Hantete, Shefina |

Annex 2: HIV-risky hotspots in 10 PLWs

| PLW | Hotspots |
|------------------------|--|
| Alamata, Tigray | <p>Alamata, Waja-Tumuga, Gerjelle, Merewa: major towns, markets/trading centres, hospital/health centres, schools/colleges, administrative centres, employment centres; in addition Alamata is a transport stop on main road Mekelle–Addis Ababa, and centre for school dropouts and military returnees.</p> <p>Tumuga, Kulugize Lemien: centres of movement for salt traders, military, sex workers.</p> |
| Atsbi-Wemberta, Tigray | <p>Endasselassie: administrative town, trade/market centre, health centre, employment, centre for people passing through <i>woreda</i>, secondary school, centre for high school dropouts and military returnees.</p> <p>Haike Meshal, Dera and Kelesha-Emini: trade/market centres, employment, centres for people passing through <i>woreda</i>, military camps (excluding Haike Meshal).</p> |
| Bure, Amhara | <p>Bure: main town, market, meeting centre, bus terminal, bars, hotels, agricultural technical and vocational education and training (TVET) college, schools.</p> <p>Kutch: major bulk grain market, livestock market, small bars, local drinking houses.</p> <p>Alefa: major bulk grain market, small bars, local drinking houses.</p> <p>Derequa, Mankussa, Semtom, Zalema: local markets, small bars, local drinking houses.</p> <p>Tilili: livestock market, small bars, local drinking houses.</p> |
| Fogera, Amhara | <p>Woreta: major grain store, road and college construction sites, overnight truck stop, market and trading centre, administrative centre, agricultural TVET college.</p> <p>Amed Ber: market, occasional military camps, local breweries and bars run by people migrating from rural areas, salt lick for livestock.</p> <p>Hod Gebeya: marketing, rice processing, local breweries.</p> <p>Wagatera and Nabega <i>kebeles</i>: dry season fishing sites on Lake Tana.</p> |
| Metema, Amhara | <p>Metema Yohannes: border town with Sudan, Ethio-Sudan highway, safe overnight truck stop, market and trading centre, red light district and drinking houses, bus station where porters, drivers, food and tea sellers, most unemployed teen age boys and girls interact.</p> <p>Tumate: bordering Sudan, people pass through.</p> <p>Genda Wuha (Shehed): highest population density in <i>woreda</i>, market and trading centre, safe overnight truck stop.</p> <p>Commercial farms: 50–500 ha with on-site camps for hired migrant labourers.</p> |
| Ada'a Liben, Oromia | <p>Debre Zeit: major town, administrative centre, employment centre, schools/colleges, training institutes, research institutes, military camps, Addis Ababa–Dire Dawa highway, market centre, drinking houses, sex workers, Babogaya and Hora lake side resorts, road side chat chewing under trees and pensions along the highway.</p> <p>Dukem: busy town, major overnight truck stop on Addis Ababa–Dire Dawa highway, market centre, drinking houses, sex workers.</p> <p>Mojo: road junction to south.</p> <p>Adulala, Dire, Hidi, Godino, Ude: small market places, drinking houses selling tella and araki, sex workers.</p> |

| PLW | Hotspots |
|----------------|---|
| Goma, Oromia | <p>Agaro: centre for coffee harvest, elementary school, high school, agricultural TVET college, vocational centres.</p> <p>Genbei: highly populated, coffee production area, many bars, local drinking houses (tej), elementary school.</p> <p>Chochie: state farm: Goma 1 and 2 coffee plantations.</p> <p>Limu Shay: many bars, market, pornographic film shows.</p> <p>Bulbulo: bars, market, elementary school.</p> |
| Miesso, Oromia | <p>Miesso town: major trade/market centre especially for livestock, major highway (Addis Ababa–Dire Dawa) and transport stop, railway, secondary schools/higher education, military camp, refugee camp, food relief distribution point, commercial sex workers.</p> <p>Asebot: major market centre for livestock and chat, railway, secondary schools.</p> <p>Bordeda and Kora: small centres, railway, away from road (Kora)—overall less risky.</p> |
| Alaba, SNPPR | <p>Alaba Kulito: major town, central market/trading centre, administrative centre, health services, schools/colleges, employment, many hotels/bars; located on main road from southwest to Awassa, Shashemene and Addis Ababa.</p> <p>Guba, Besheno, Kobo: market sites.</p> <p>Roadsides leading from villages to Alaba: centres of movement for people returning from market late at night.</p> <p>Cultural dance and song sites, wedding ceremony sites.</p> |
| Dale, SNPPR | <p>Yirgalem, Dilla, Hantete: market centres (especially Dilla), busy towns, Fura training centre (Yirgalem).</p> <p>Other locations in <i>woreda</i>: small rural markets, coffee hulleries, grain mills, night open markets, night mass praying homes.</p> <p>Outside <i>woreda</i>: Awassa (administrative centre), Shashemene (trading), Moyale (livestock, trading on Kenyan border), Shakiso (gold, coffee, livestock).</p> |

Annex 3: Market-related movements of people to and from the PLW

| PLW | People from rural community moving to external environment | People from external environment moving into rural community |
|------------------------|--|--|
| Alamata, Tigray | <p>Livestock traders in community: some buy animals from Afar.</p> <p>Private traders (Alamata, Mekelle): grain, goats, hides and skins, honey, horticulture.</p> | <p>Migrant labourers: during dry and harvest season.</p> <p>Salt traders: from Afar.</p> <p>Livestock and camel traders: from Afar pass through Alamata to western Ethiopia and Sudan.</p> <p>Casual labourers: from Amhara and Afar to work on harvest.</p> |
| Aisbi-Wemberta, Tigray | <p>Salt traders: travel from Afar to Mekelle and beyond.</p> <p>Women trading in flour, butter, spices: sell in neighbouring markets, travel in groups.</p> <p>Traders: in agricultural produce.</p> | <p>Labourers: youth to work with the harvest.</p> <p>Salt traders: from Afar.</p> <p>Traders: in agricultural produce.</p> |
| Bure, Amhara | <p>Traders: sell grain.</p> <p>Farmers: sell produce at local markets, often socialize on market days.</p> <p>Livestock farmers: long distance to market (stay overnight).</p> <p>Women farmers: usually make day visits to market but butter traders travel far to collect and sell butter and stay away overnight.</p> | <p>Grain traders: stay overnight on transit from Addis Ababa to Bahir Dar, Wellega and Tigray; others stay for up to 3 months during harvest.</p> <p>Traders: day visit to buy charcoal and timber.</p> <p>Grain truck drivers.</p> |
| Fogera, Amhara | <p>Honey traders: sell honey in Addis Ababa.</p> <p>Traders (Woreta town, Alem Ber, surrounding areas): buy grain, livestock and sell in Bahir Dar and other regions.</p> <p>Fish traders: sell dried fish in Sudan.</p> | <p>Traders: visit during harvest and stay a few days.</p> <p>Grain truck drivers.</p> |

| PLW | People from rural community moving to external environment | People from external environment moving into rural community |
|---------------------|---|--|
| Metema, Amhara | Traders smuggling to Sudan: cattle, honey, hides and skins. | <p>Male seasonal farm labourers (from highlands, north Gondar, Gojam, Tigray and Sudan): work on commercial farms growing cotton, sesame (particularly for planting, weeding and harvesting), leave wives at home, receive payment every two weeks and spend in town.</p> <p>Casual labourers: help with incense and gum collection.</p> <p>Transporters: take cotton, sesame to Gondar, Gojam, Addis Ababa.</p> <p>Long distance cattle traders (from north and south Gondar, Gojam, Wollo): sell in Sudan illegally.</p> <p>Traders: garlic traders from Gojam wait at border town to sell to Sudanese; oranges and bananas from Addis Ababa to sell in Metema, onions smuggled in from Sudan.</p> |
| Ada'a Liben, Oromia | <p>Traders from community: grain, vegetables.</p> <p>Livestock traders: to Adama, Meki, Zeway to buy livestock and sell in Ada'a markets (may stay away for a few nights, some have regular sex partner (kimate)).</p> <p>Farmers (men): to Debre Zeit and Dukem on market days (3 times per week) to sell cereals, pulses, hay, straw, stovers; sometimes stay overnight; may meet lover (warsa).</p> <p>Women: market once a week, may meet lover (warsa).</p> <p>Boys: visit market 2-3 times per week to sell agricultural products.</p> <p>Girls: visit market (less frequently than others) to sell hay, straw, dung, firewood.</p> | <p>Casual labourers: to harvest cereals and pulses: men and youth (from Amhara, N and W Shoa) October–December.</p> <p>Grain traders: from Addis Ababa, Debre Zeit, Adama, Dukem visit grain market (teff, wheat, chickpeas) but do not stay overnight.</p> <p>Women/girls: to grinding mills.</p> |
| Goma, Oromia | <p>Traders: sell grain, honey.</p> <p>Farmers: sell produce at local markets, often socialise on market days.</p> <p>Drivers: transporting produce and people to market.</p> | <p>Coffee traders, brokers, merchants: visit during harvest and stay a few days.</p> <p>Coffee truck drivers.</p> |

| PLW | People from rural community moving to external environment | People from external environment moving into rural community |
|----------------|--|--|
| Miesso, Oromia | <p>Traders from community staying away for a few nights or so: cereals and chat: to Afar (Asaita, Semera, Gewane, Logia) (men).</p> <p>cereals and vegetables: to Dire Dawa (men and women).</p> <p>oil crops (sesame): to oil extractors in Adama and Addis Ababa.</p> <p>fattened cattle: to Adama, Debre Zeit, Dukem, Addis Ababa (men).</p> | <p>Traders: export abattoirs based in Mojo, Metehara and Addis Ababa purchase goats and sheep from Miesso (from assemblers and middlemen) on weekly basis. Camels assembled in Miesso and exported to Egypt.</p> |
| Alaba, SNPPR | <p>Large merchants/private traders: peppers, wheat, other commodities to Addis Ababa (may stay away for a week).</p> <p>Women: to buy and sell grain.</p> <p>General markets: often for socializing (not necessarily trading), return home in dark (may meet lovers but also risk for women).</p> | <p>Migrant labourers: from Hadiya, Kembata, Siliti, Seraro <i>woreda</i>, and Oromia region during agricultural season (mainly harvesting).</p> <p>Traders: from Shashemene, Awassa, Addis Ababa, Wollo, Harar.</p> <p>Commercial sex workers: during pepper harvest.</p> <p>Women: to sell grain, livestock and products.</p> |
| Dale, SNPPR | <p>Night markets: often for socializing (not necessarily trading), return home in dark (may meet lovers but also risk for women).</p> <p>Queues at crop processing sites (women and men): at grain mills, coffee hulleries, travel home at night.</p> <p>Traders/merchants (men from community): stay in big towns (Chuko, Dilla, Aleta Wondo, Shashemene, Addis Ababa) in coffee season for 5–7 days for recreation, return with goods to sell.</p> <p>Petty traders (women): in grains, poultry, dairy products.</p> | <p>Casual labourers (from region): to work on large farms, at hulleries.</p> <p>Buyers: stay for three months at coffee hulleries during harvest.</p> <p>Traders (mostly men): stay overnight when buying coffee.</p> <p>Commercial sex workers: stay in Yirgalem during coffee harvest.</p> |

Annex 4: Implications of AIDS-impacted households for market-led initiatives and potential responses

| Impacts of AIDS at household level | Implications for market-led initiatives | Potential response to reduce impacts |
|--|--|---|
| Reduced labour productivity/energy during sickness (farmer, family members, skilled hired labour, casual labour, labour group members) and loss of labour (time) during sickness, death, caring for sick | <p>Less energy for farm work</p> <p>Less attention to detail to produce quality product</p> <p>Less attention to enterprise management</p> <p>Delays in key activities</p> <p>More difficult to do tasks where there is a gender division of labour</p> <p>Less energy to travel to market</p> <p>More use of hired labour/casual labour</p> <p>More land cultivated under share cropping arrangements</p> <p>Less chance to participate in labour groups</p> <p>Reduced labour force in household</p> <p>Abandon labour intensive activities</p> <p>Switch cropping pattern to spread labour peaks, minimize labour inputs, more fallow</p> | <p>Review labour requirements and likely future labour availability of priority commodities before promoting them in AIDS impacted communities</p> <p>Identify opportunities to reduce labour burden of rural living</p> <p>Develop market opportunities suited to labour availability of impacted households (and need to be near home)</p> <p>Identify forms of market engagement which minimize need to travel</p> <p>Assist in transporting produce to market or processing (through groups)</p> <p>Identify income generating activities suitable for PLWHA</p> <p>Involve share cropping partners in market development initiatives</p> <p>Include hired labourers in skills development activities</p> |
| Self exclusion when sick (farmer, family members, skilled hired labour, casual labour, labour group members) | <p>Withdraw from attending meetings, training sessions</p> <p>Farmers and petty market traders (usually women) avoid going to market</p> <p>Unable to perform skilled tasks</p> | <p>Reduce stigma associated with disease</p> <p>Create small marketing groups for petty traders (to help them work together)</p> |
| Loss of skills (farmer, family members, skilled hired labour, casual labour, labour group members) | | <p>Train a wider pool of people with skills (including husband and wife teams)</p> |

| Impacts of AIDS at household level | Implications for market-led initiatives | Potential response to reduce impacts |
|--|--|--|
| Loss of social capital | Collapse of informal networks and linkages Reduced capacity to negotiate with traders | Encourage wider family involvement with marketing activities to establish sustainable network |
| Reduced financial resources (sale of assets to raise money for medication, funeral; less income) | Sale of productive assets (equipment, livestock) Default on credit Less money available to purchase inputs Less collateral to take out loan | Work with microfinance institutions to meet short-term credit needs, unsecured credit Develop market opportunities suited to resource base of impacted households |
| Insecure asset base (for female-headed households) | Uncertainty over legal ownership of assets Reluctance to invest in maintaining/developing asset base (e.g. soil conservation) | Review inheritance laws |
| Changed household priorities | Household more interested in food self-sufficiency than market-based enterprises Changed pattern of expenditure Reluctance to innovate Risk averse Wish to migrate to town | Ensure proposed enterprise mix is sustainable even with depleted resources Promote income generating activities with modest capital and labour requirements for impacted households (target female-headed households, single male-headed households, orphans) with capability to participate in new non-farm livelihood opportunities |
| Loss of institutional capacity (e.g. extension staff) | Staff illness and death among trained <i>woreda</i> staff and partners | Integrate HIV/AIDS awareness training into all IPMS training courses |

Note: Impact of AIDS illnesses and death on market-led initiatives varies according to who is sick/dies; household wealth; farming systems; labour and skills requirements; and local support systems.

Annex 5: Potential responses to reduce risk of HIV infection associated with market-led agricultural growth

| IPMS activity | Potential HIV risk | Potential response to reduce risk |
|---|--|---|
| Farmer training/ exchange visits/ study tours and capacity building with partners | Risk if stay away from home overnight, particularly if receive allowances | Minimize training which requires time spent away from home Take couples on training courses Integrate HIV/AIDS awareness training into all IPMS training courses (behaviour change communication) |
| Extension services have more contact with farmers | DAs at risk if spend nights away from home | Minimize need for DAs to live away from families Improve living conditions in rural areas Increase their understanding about HIV/AIDS and become HIV/AIDS competent |
| Influx of seasonal labourers to work on farms to assist with labour peaks | Stay away from home for extended periods | Hold intensive campaign during peak labour season to increase understanding about HIV/AIDS (behaviour change communication) |
| Increase in productivity | More regular travel to trading centres and markets to purchase or acquire inputs (may require overnight stays away from home) | Bring input supply chain closer to farming community Arrange new ways of bulk purchase to minimize individual need to travel |
| Increase in market engagement | Travel to market on more regular basis (risk of attacks) Travel further a field (new destinations) Stay away from home overnight Delays in receiving payment for produce require overnight stays Increase interest in migrating from rural areas | Create stronger market linkages (forward contracts, market information) which reduce need for individual travel Increase understanding about HIV/AIDS (behaviour change communication (BCC)) among farmers |

| IPMS activity | Potential HIV risk | Potential response to reduce risk |
|---|---|--|
| Increase in visits to processing plants (mills, hulleries, pol- ishers) by farmers | Extensive queues and delays May result in overnight stays | New modes of market engagement Reduce need for individual to travel on regular basis Improve mode of transport Reduce queues by improving capacity/throughput of plant Improve efficiency of handling procedure at processing plant |
| Increased trading and transport of produce out of rural community | Traders stay in town during harvest season (up to 3 months) More vehicles moving around transporting produce Truck drivers and assistants wait whilst trucks loaded (several days) | Target traders, store owners, transporters, drivers, middlemen for HIV/AIDS awareness and understanding (behaviour change communication) Minimize nights people spend time away from home |
| Increase in income, seasonal income flows | Commercial sex workers follow harvest income round country Money spent in town and little returns home; inability/ reluctance to save for future Cultural norms associated with post-harvest period (additional wives, sexual debut, promiscuity) | Hold intensive awareness and BCC campaigns during seasons of high risk (harvest) Educate farmers/seasonal workers on how to use market proceeds/incomes for benefit of family (productive use of earnings, savings, investment), broaden their horizons Create a culture of saving and planning for medium term Establish more outlets to deposit savings |
| More trading in local market | Petty traders, retailers, ambulant traders, hotel and bar owners do not belong to associations, overlooked in HIV/AIDS awareness initiatives | Target this group for HIV/AIDS awareness training and BCC Use market days for awareness campaigns, including testimonies by PLWHA |
| Status of women in marketing | Vulnerable to attack on route to market | Empower women and educate men Make marketing chain more women-friendly and secure |

| IPMS activity | Potential HIV risk | Potential response to reduce risk |
|---------------|---|---|
| Other | Members of farmers' organizations, cooperatives and marketing groups; members of trade associations | Use as entry point for HIV/AIDS awareness training and becoming HIV/AIDS competent Target youth in awareness campaigns and opportunities to improve their livelihoods Develop care and support activities for members (social fund for orphans) |

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