

BUILDING CAPACITY FOR THE AGRICULTURE SECTOR'S RESPONSE TO AIDS

A TRAINING MANUAL FOR AGRICULTURE SECTOR WORKERS

3

MODULE

**Linking HIV to Agriculture, Rural Livelihoods
and Food Security**



Building Capacity for the Agriculture Sector's Response to AIDS
Module 3: Linking HIV to Agriculture, Rural Livelihoods and Food Security

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AIMS

The aims of this module are the following:

1. To differentiate agricultural from health sector views of, and responses to, the epidemic while recognizing their complementarities.
2. To understand how HIV and AIDS impact agriculture, rural livelihoods and food security.

OBJECTIVES

Upon completing the module, the learner should:

1. Understand how the AIDS epidemic has affected population structure, and particularly young adults in the labour force.
2. Understand the concepts of household and community vulnerability and resilience to HIV.
3. Be able to describe the major impacts of HIV and AIDS on household and community social, financial and natural capital.
4. Understand how agriculture can strengthen food security, household and community resilience in an AIDS context.

QUESTIONS FOR REFLECTION

1. How do you think the AIDS epidemic has affected the population structure of the country where you work? How does it manifest in the agriculture sector?
2. What factors contribute to uneven distribution of the AIDS epidemic in rural areas (e.g. areas of high and areas of low HIV prevalence)?
3. Can you describe any specific interventions that have contributed to household or community resilience to HIV?
4. Working in the agriculture sector, have you ever sat in an AIDS meeting and wondered what you were doing there? Can you analyze why you had difficulties relating agriculture sector work and concerns to the topics discussed about AIDS? What would you have needed to participate effectively?
5. What do you know about AIDS and agriculture issues in the country where you work? Describe, if possible, how the FAO office, the Ministry of Agriculture, NGOs and other partners have been involved.
6. What development policies have had an unintended impact (positively or negatively) on HIV in the agriculture sector?
7. Cite any ongoing activities in the country where you work in the area of AIDS and Agriculture. How did they come about? Do you see opportunities for other activities? If so, which ones and what would be needed to make them happen? What partners could be involved?

INTRODUCTORY REMARKS

This module, on linking HIV to agriculture, rural livelihoods and food security, looks at how the epidemic affects the agriculture sector, with a specific focus on community and household level. It addresses both impacts and vulnerability to the epidemic and how this sector can contribute to national efforts in response to the epidemic. The importance of involving the agriculture sector is supported by the demographic impact of the epidemic on the age groups in the labour force and its tendency to worsen dependency ratios. The module also illustrates how household and community vulnerability and resilience to the epidemic need to be the focus of agriculture-sector interventions to strengthen resilience. The module also discusses the concepts of social, financial and natural capital as they relate to household and community vulnerability and resilience.

Learning activities are provided to explore how the use of farming system analysis and spatial mapping of HIV prevalence can be used to formulate appropriate strategies to ensure food security and support rural livelihoods.

READINGS: AN OVERVIEW OF HIV ISSUES IN AGRICULTURE, RURAL LIVELIHOODS AND FOOD SECURITY

1. The importance of developing AIDS responses in the agriculture sector

Evidence from research has shown that AIDS is an agricultural issue because:

- AIDS¹ can have a significant impact at community and household levels, affecting livelihoods and food security.
- Coping responses by affected rural populations can contribute to the aggravation of social and economic vulnerability.
- Although at present insufficiently recognized, the agriculture sector has a unique and crucial role in both prevention and mitigation.

The readings and the learning activities in this module are designed to provide general guidance about these issues and to build skills in analyzing strategies to deal with them.

Among the challenges facing organizations working in the agriculture sector is the lack of understanding among many development organizations of how agriculture is affected by and can influence responses to HIV. Due to the shorthand terminology of “agriculture”, the issues concerning rural populations in other sub-sectors (e.g. forestry, fisheries, pastoralism, etc.) tend to be overlooked. People in fishing areas have received some attention and it is known that they are highly vulnerable to HIV. Very little is known, however, about HIV prevalence among people living and working in forest areas. Pastoralists are numerically very important in many countries, but again, little is known about them in relation to the AIDS epidemic.

This module explores how the AIDS epidemic poses a threat to agricultural production (mainly through loss or weakening of the labour force), leading to food insecurity and loss of livelihoods at the household and community levels. The agriculture sector needs to develop responses to these impacts among farmers, pastoralists, and people in fishing and forest areas.

2. Impacts of HIV and AIDS on the population structure

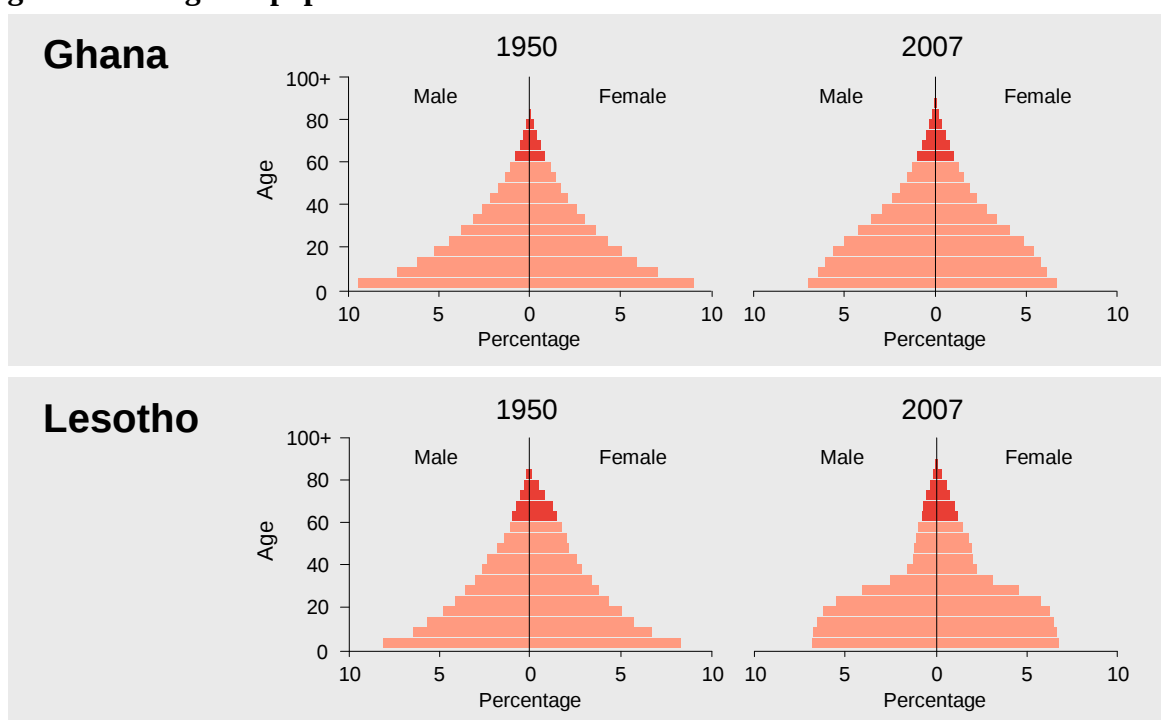
At the macro level, the AIDS epidemic can have an important impact on agriculture by affecting the age and the sex structure of the population.

2.1 Changing age structure

As illustrated in figure 1, deaths from AIDS-related illnesses affect the age structure of the population or accelerate the rate of change in the age structure of a given population. The figure compares the population pyramid of Ghana (with low HIV prevalence), with that of Lesotho (with very high HIV prevalence). Comparing changes in the population pyramids from 1950 to 2007, significant differences can be noted between a country with low prevalence and a country with high prevalence. The implication for the agriculture sector of such a change in population structure would mean a serious shortage of adults (particularly men) in the 20 to 40 age groups and thus reduced agricultural labour.

¹ To get an overview of the impacts of HIV and AIDS on agriculture and rural populations, as well as responses, visit the FAO HIV/AIDS and Food Security website (<http://www.fao.org/hivaids/>).

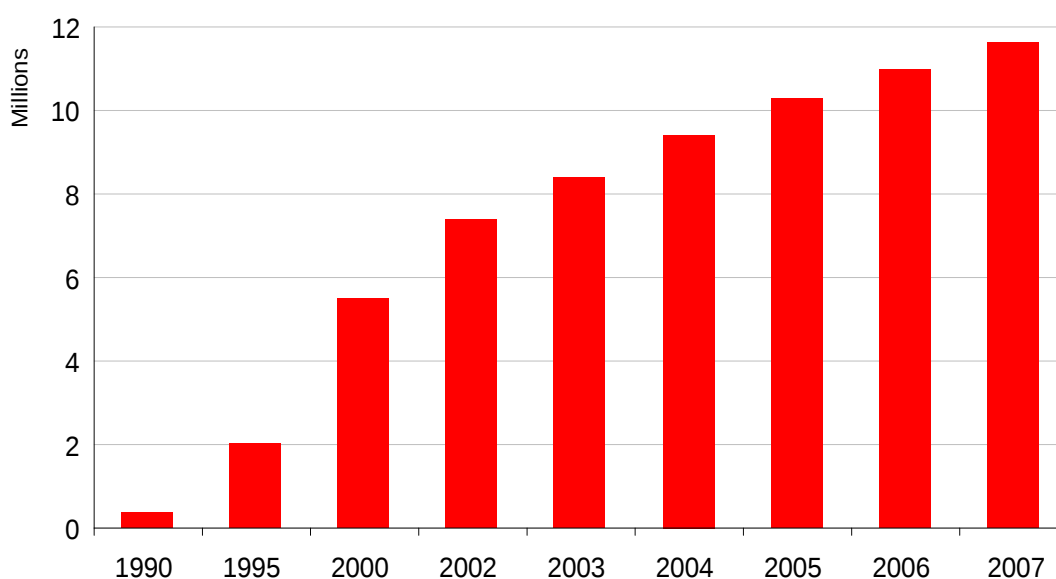
Figure 1. Changes in population structure – Ghana and Lesotho



(Source: UNAIDS, 2008)

AIDS has the potential to change the dependency ratio simply because the death of adult parents results in high numbers of orphans (see Figure 2). Orphaned children may be pulled out of school to reduce costs and compensate for labour losses. There is also a possibility that the elderly may have to contribute to the agriculture labour force. A related impact is the loss of inter-generational transfer of skills from older to younger generations.

Figure 2. Estimated numbers of children orphaned by AIDS (sub-Saharan Africa)



(Source: UNAIDS, 2008)

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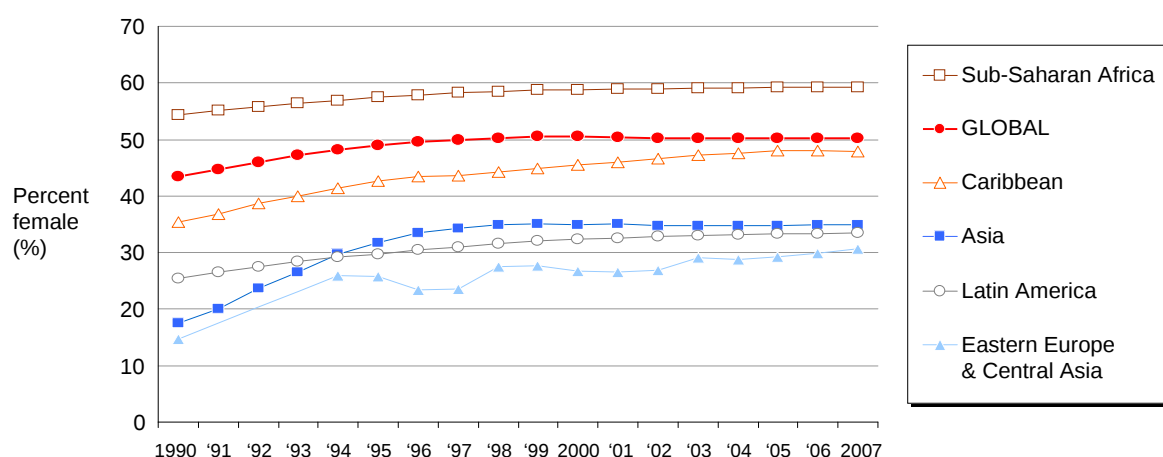
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The agriculture sector has to consider strategies to protect children while ensuring that they become productive agents for the future of the agriculture sector. The lack of adequate strategies will produce masses of unskilled children growing into unskilled adults, with negative consequences for both rural and urban areas as well as national development.

2.2 Differences in HIV prevalence between women and men

As seen in the graph in figure 3, globally speaking about 50 percent of adults living with HIV are women. However, in sub-Saharan Africa the figure is up to about 60 percent. In other regions (the Caribbean, Asia, Latin America and Eastern Europe and Central Asia), men account for the majority of people living with HIV.

Figure 3. Proportion of adults with HIV who are women



(Source: UNAIDS, 2008)

In view of the importance of gender roles in agriculture, these percentages have profound implications for the distribution of burden of work, coping strategies, crops grown, household food security status, as well as social capital in communities.

The differences in HIV prevalence between women and men challenges the agriculture sector to rethink gender and agriculture issues, ranging from land tenure to crops and home gardens. For example, there could be more openness to women growing cash crops, while men could be more involved in tending home gardens and growing nutritious plants, in addition to more equitable sharing of domestic chores such as fuel wood collecting.

3. Impacts of HIV and AIDS on farming communities and households

The reader is certainly familiar with many of the identified impacts of HIV and AIDS on agriculture and food security (e.g. decrease in areas cultivated, changing crops cultivated, etc.). Table 1 summarizes the wide range of impacts, going well beyond 'agriculture' as understood in a narrow sense of production. In a broad sense, an understanding of the impacts has grown significantly over the years².

² This can be explained by the fact that during the first years of research on 'AIDS and Agriculture', the key issue was to verify whether AIDS had an impact on agriculture. Once this was done, more effort was placed on ordering and explaining the impacts and linkages. The perception of 'impacts' has thus evolved over time. It is an on-going process as shown in this module.

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Table 1. Impacts of HIV and AIDS on food security and implications for households and communities

Impacts of HIV on food security	Implications
Changes in the population structure	Increase in orphaned children Proportional increase in the elderly Increase in widows and female-headed households
Decrease in the agricultural labour force	Decrease in the area cultivated, in weeding, pruning and mulching resulting in a decline in crop variety, yields and ultimately soil fertility Increase in fallow land returning to bush Less labour intensive cropping patterns and animal production Decrease in women's productive activities due to their role as care providers Missed planting seasons
Chronic illness or death of a household member	Increase in health expenditure Funeral costs
Change in household composition	Changes in the age or sex of the household head Increase in the household dependency ratio Out-migration of young adults
Increase in the number of orphaned children	Increase in the fostering of orphaned children Child-headed households resulting in reduced attendance or withdrawal of children from school
Change in household nutritional status	Increase in the malnutrition of people living with HIV and other household members due to the increasing impoverishment of the household
Decline in household income	Decrease in farm income sources and the proportion of farm output marketed Sale of land Liquidation of savings and slaughtering of livestock to provide income for health care and funerals Decrease in women's contributions to household income Decline in purchased items including food Increased need for cash income sometimes resulting in sex work Increase in the need for off-farm income sources
Decrease in credit availability and use	Increase in interest rates and more frequent loan defaults
Decrease in aggregate community income and assets	Reduction in investment Increase in community expenditure for formal and informal health care
Loss of agricultural knowledge, practices and skills and their transmission from one generation to the next	Decrease in the availability of skilled labour and essential agricultural knowledge for orphan-headed households Loss of gender-specific agricultural knowledge
Decrease in access to natural resources, especially land	Depletion of resource in close proximity to households, especially water and forest assets Decrease in biodiversity and the pool of genetic resources
Exacerbation of gender-based difference in access to resources	Increase in gender inequality, resulting in a decrease in access to land, credit and knowledge, for women in general, but particularly for widows
Changes in social resources	Less time available to participate in community-based organizations, associations and other support networks

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Increase in social exclusion	Increased stigma associated with HIV, thus increasing the difficulty of maintaining social and kin groups
Decrease in tangible household assets	Poor household maintenance Increase in sale of household goods, equipment and tools
Degradation of public services	Reduction in the quality and quantity of public service provision Less maintenance of communal irrigation systems, terraces, roads

(Source: FAO, 2003)

It is important to look beyond the listed impact because each has knock-on effects. For example, a decline in the labour force can have the following consequences:

- A decrease in the area cultivated is likely to occur, especially if there are no labour saving technologies available. This, however, could also be modified if the land could be cultivated through renting or forms of community solidarity. In some cases where the land is marginal and overexploited, it might not always be bad if it is left fallow for a limited time.
- Weeding is a task that is typically done by women and requires both time and energy. When women have to divert time and energy to caring for the sick, weeding is typically one of the first tasks sacrificed, with subsequent impacts on yields. The issue here is the tradeoffs that have to be made when a sick household member reduces the available household labour.
- The implications of a decline in available labour depend largely on the sex and age of the person who falls ill. Illness and death of a child or an elderly member traditionally have little agricultural impact because their labour contribution is marginal or nil. In contrast, a long drawn-out illness and death of an economically active adult at the core of the farm household capacity in agriculture has a considerable impact. Furthermore, depending on the sex of the adult and due to the gender division of agriculture labour, the impact of the illness and death of man or woman is different. In the case of male illness, the cash crops may be neglected or abandoned, whereas for a woman the impact would be more on the home garden and consequently on household food security and nutrition.

It is important to note that the extent of such impacts and implications depends on several factors, such as the socio-economic condition of the household. For example, wealthier households are likely more resilient and better positioned to mitigate impacts, whereas the most severely impacted households are generally the poorest. Over the long run this could lead to a concentration of wealth and land in fewer households as poorer households may sell their assets for income and survival. This could also lead to, among others, an increase in the number of wage labourers and rural to urban migrants (see row 7 of table 1). This may not necessarily decrease overall food production, however, it increases food and livelihood insecurity for several households.

Table 2 summarizes the known immediate impacts confirmed by studies (in the early days of research on AIDS and Agriculture, there was a certain amount of educated guessing due to a shortage of field studies). As already mentioned, the impacts of the epidemic change over time and it is important to distinguish shorter and longer term impacts. It should also be noted that household responses general focus on the immediate impacts and one of the important roles of agriculture interventions is to assist in responses that have desirable short as well as long term effects. For example, in relation to the sale of assets, micro credit systems in the

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community could be an alternative so that households do not have to sell assets, which could lead to future food insecurity.

Table 2. Immediate and longer-term impacts of HIV and AIDS on rural households

Immediate impacts	Noted* agriculture-related responses by households	Assumed longer-term consequences for agriculture and related activities
Loss of labour—due to illness and death and caring	Decreases in area cultivated and changes in crop mix; less attention to care of livestock and soil or water	Potential decreases in overall food production (food availability, access and stability)
Cutbacks in food availability and consumption	Decreased energy for farm or market tasks	Increased child and adult malnutrition (food utilization and access)
Loss of income and increased medical and funeral expenses	Disinvestment of assets, including sale of livestock and equipment; renting of land; piece work on other farms	Increased socioeconomic inequalities and new or deeper impoverishment for some
Increased dependency, with women and older adults assuming greater household responsibilities	Less time spent on farm production or marketing	Growing gender and age inequalities
Loss of knowledge and skills essential for agriculture	None known	Loss of efficiency; greater stress on natural resource base; increased food insecurity
Loss of access to land and equipment/livestock by widows and children	Female and child-headed households become dependent on non-farm employment and/or begging	Deepening impoverishment for affected household members
* Noted means cited in at least one study of a localized impact. Source: Adapted from Slater and Wiggins, 2005; from Rau, 2006.		

(Source: Rau et al., 2008)

The table distinguishes between immediate and longer-term impacts. The agriculture sector needs to be aware of these different time frames and respond accordingly. Agricultural interventions should thus focus on immediate mitigation, but also on preventing or at least mitigating longer term consequences. The table also differentiates between impacts and responses, a distinction that has often been overlooked. This is not just an issue of semantics, but more perception. What has often been described as an ‘impact’ is in fact a farm-household ‘response’ to a decline in human and financial capital. The ‘impact’ depends on how the household responds and the choices made by the household between options and priorities result in different or varying impacts on agricultural production and food security. The implication is that depending on the household, an AIDS-related death can produce different outcomes and interventions with an agricultural objective need to take into account household situations and contexts.

3.1 Household-level knock-on-effects of HIV

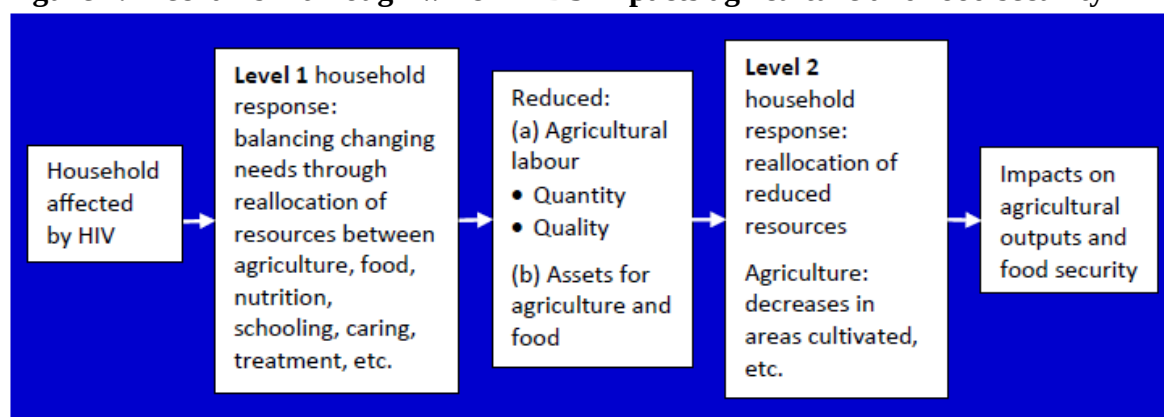
Tables 1 and 2 highlight the range of household and community-level impacts of HIV and AIDS on agriculture and food security. The other very important dimension is to understand the mechanism through which these impacts occur (illustrated in figure 4). Strictly speaking, because HIV is a human disease, its direct impact is on people. However, since people have specific functions within a farm-household, and these individual functions together make up

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the production and reproduction unit, illness and death of any one household member will have consequences for agriculture and food security.

Figure 4. Mechanism through which AIDS impacts agriculture and food security



Following the diagram in figure 4, several agriculture and food security impacts can be noted when a household is affected by HIV:

- When a household member falls sick or dies from an HIV-related illness, that household has to adjust to the new situation. This represents level 1 of the household responses. Often the household will have fewer resources at its disposal and increased needs, and therefore has to reallocate resources. This generally results in a reduction in the labour available for agriculture, fewer assets, and in particular less cash for agricultural inputs and food. The poorer the household is, the more likely it is to be affected by diminishing resources. If a household is wealthy, it will likely be in a better position to hire labour to compensate for reductions, whereas if it is poor it may instead pull children out of school to fill labour gaps or to reduce expenses.
- When there is reduced availability of agriculture inputs then households are faced with reallocating resources and prioritizing agricultural tasks, such as weeding or watering, etc. This is the second level of household responses and it is this level that is often highlighted in the literature as an “impact”. In fact this is an intermediary impact.
- The final agricultural impact is the outcome in production in terms of volume, value, yield and household food security.

Table 3 focuses only on the possible impacts that can occur in a household in which a member is sick with HIV. Households that are not affected by HIV might take advantage of the plight of affected households by buying assets or hiring labour cheaply, a situation that increases inequalities in wealth and food security in communities.

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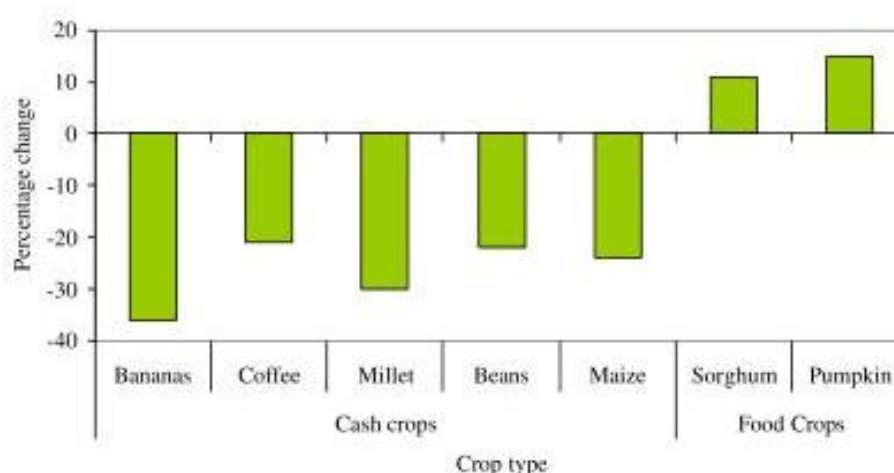
Table 3. Revised schema of HIV and AIDS impacts on affected households

HIV and AIDS consequences	HH responses in agriculture	Agriculture output		Food security
		Immediate	Longer term	
Reduction in labour	Reduction in: • Area cultivated (but increase in fallow land) • Number of crops cultivated (especially cash crops) • Attention to crops, livestock, soil and water	Decrease in production: • Volume • Diversity • Value	Drops in: • Yields • Soil fertility • Quantity and quality of water	Increasing malnutrition
Reduction in assets and cash	• Sale of assets, livestock, equipment and renting out of land • Working outside the farm: non-farm employment, piece work on other farms • Begging, transactional sex	Decrease in percentage of production marketed	Less attention to management of natural resources	Increasing inequality between HH members in nutrition (long-term impacts on children) Less home production and/or capacity to buy food

Case study: Impact of HIV on food and cash crops in Uganda

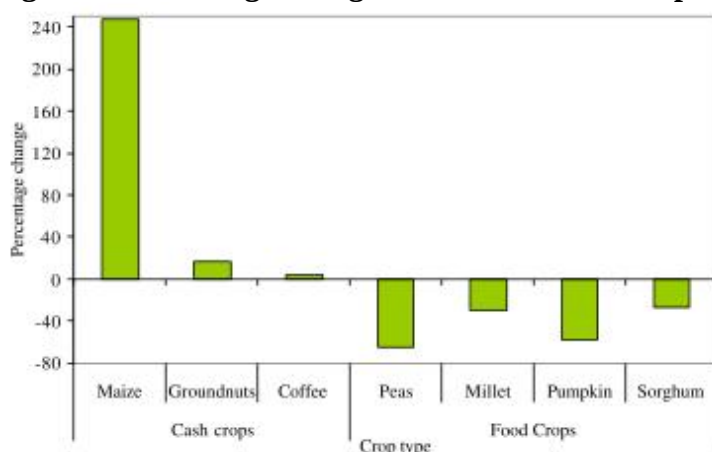
The changes in growing of food and cash crops in affected and non-affected households are illustrated in figures 5 and 6 (taken from a baseline study of the Ugandan National Agricultural Advisory Services³). The changes are reported over a five year period and show a dramatic divergence in the cropping patterns of HIV-affected and non-affected households: shifting from cash crops to food crops in the former and the opposite in the latter.

Figure 5. Percentage changes in food and cash crops grown in affected households



³ The National Agricultural Advisory Services (NAADS). 2003. The impact of HIV/AIDS on the agricultural sector and rural livelihoods in Uganda – Baseline Report. Uganda, FAO.
<http://naads.or.ug/manage/publications/48docHIVAIDStudyReport.pdf>

Figure 6. Percentage changes in food and cash crops grown in non-affected households



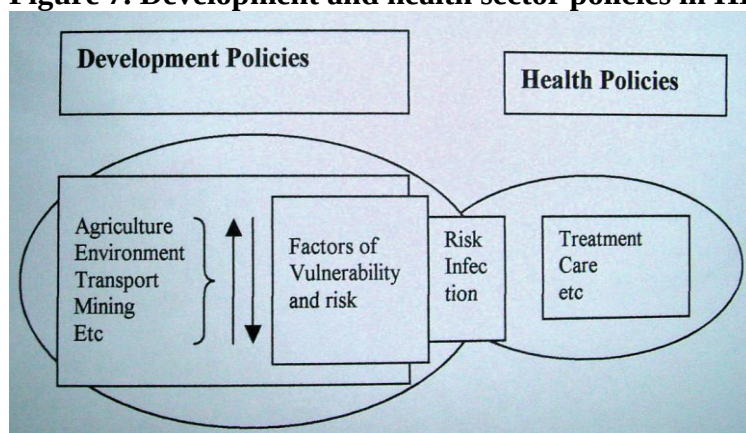
4. Factors of vulnerability and resilience to HIV

4.1 *Vulnerability and resilience*

There are two main dimensions of vulnerability: (1) vulnerability to HIV infection and (2) vulnerability to the impacts of HIV and AIDS. Resilience⁴ on the other hand is essentially the capacity to cope with, or recover from the impacts of AIDS-related illness or death. The socio-economic position of the household, in addition to social capital and support networks, largely determine vulnerability and resilience to HIV.

Many factors affect vulnerability to and risk of HIV infection. These risks can be modified intentionally or inadvertently by development policies in the relevant sectors as shown in Figure 7. Likewise, agriculture policies and programmes are not HIV neutral, and thus in achieving agriculture objectives, the sector needs to take into consideration the expected impact of activities and how they can reduce vulnerabilities and increase resilience to HIV. As can be seen in the diagram, agriculture is but one of the development sectors with a possible role in exacerbating of HIV vulnerability and therefore collaboration with other sectors is important.,

Figure 7. Development and health sector policies in HIV vulnerability and resilience



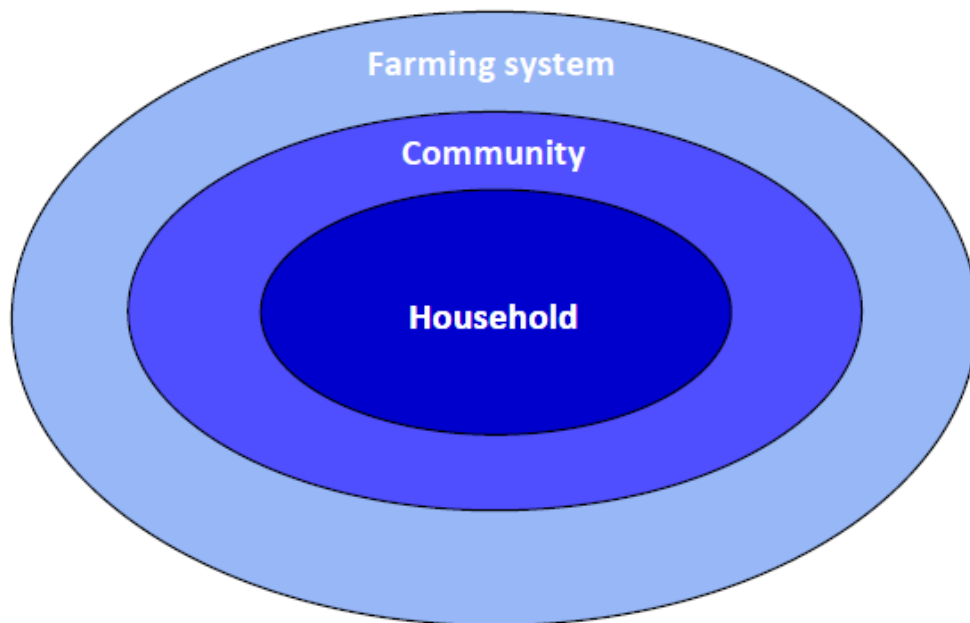
(Source: Du Guerny and Hsu, 2008)

⁴ The etymology literally means to jump back to the initial state.

4.2 Household vulnerability

One specific characteristic of the agriculture sector is that households and communities are embedded in farming systems, as illustrated in Figure 8.

Figure 8. Households, communities and farming systems



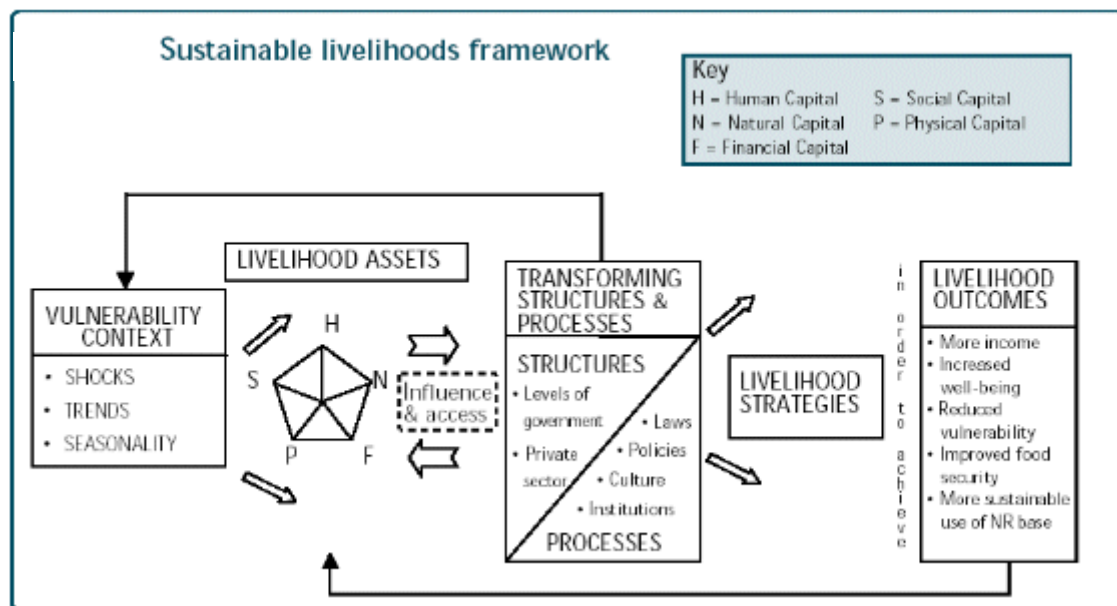
The focus of most studies on AIDS and agriculture has been at the household level, much less so at community level and even less so at farming system level. The following paragraphs explain why this imbalance should be addressed.

According to the sustainable livelihood approach⁵, rural households possess five sets of livelihood assets essential to their livelihood strategies: human capital, financial capital, natural capital, physical capital and social capital. Using these assets and capabilities, households develop livelihood strategies to cope with their physical, social, economic and political environments. The environments in which households operate contain a number of factors and events that render them vulnerable to negative livelihood outcomes: for example droughts, floods, pest infestations, crop and livestock shocks, economic shocks and the illness and death of household members, among others. The sustainability of a household depends on its ability to adjust to these situations without compromising their future ability to survive shocks. HIV represents a potential shock to farm households. The agriculture sector can intervene in different areas to alleviate the impact of shocks and stressors that affect rural households.

⁵ Shannon Stokes, C. 2003. Measuring impacts of HIV/AIDS on rural livelihoods and food security. Rome, FAO. (http://www.fao.org/sd/2003/PE0102a_en.htm)

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Figure 9. Household vulnerability to HIV through the sustainable livelihoods approach



(Source: DFID, 1999)

For agriculture-based livelihoods, several assets are particularly important:

- Human capital: the members of the household both adults (young and elderly, including relatives and resident farm workers) and children (very young or adolescent, in school or not in school); knowledge and skills related to land clearing, planting, weeding, fertilizer use, irrigation, harvesting, crop storage and marketing.
- Natural capital: ownership and access to land and water resources; farm animals and livestock; access to forage and wood resources.
- Financial capital: income from agricultural and off-farm employment; access to credit; personal and group savings; access to markets and agricultural supports.
- Social capital: relationships with extended family and clan members; membership in cooperatives; access to extension services, seed banks, etc.
- Physical capital: homestead, barns, storage bins, animal pens, fencing, farm and irrigation equipment and tools, vehicles (including carts), personal possessions (including furniture and jewellery).

It is important to look at and understand the processes through which HIV operates and has an impact on a household and its sustainability. The epidemic impacts on the human capital in the household as well as on social capital in the community, including extension services. By reducing the ability of these two forms of capital to function optimally, there are ensuing reductions of the other forms of capital.

4.3 Community vulnerability

Community vulnerabilities to the impacts of AIDS have been summarized in an FAO publication⁶ as including the following:

- Weak social cohesion and an absence of social networks and labour exchange between Households to provide support to each other in times of crisis;
- Limited opportunities to substitute between labour intensive livelihood activities and activities requiring fewer labour inputs;
- Limited opportunities to diversify livelihood activities into non-farm employment;
- Regular experiences of food insecurity;
- Insecure land tenure and weak system of property rights;
- Widespread poverty;
- Limited access to external support such as information, home-based care, food for work, school feeding programmes;
- Weak infrastructure, which makes many aspects of rural living very labour intensive – e.g. requiring household members to travel considerable distances (often on foot) to collect water, seek health treatment, etc;
- Advanced state of the epidemic, which has exhausted any tradition of welfare assistance within the community.

The capital-depleting effects of the epidemic on households tend to aggregate at community level. In looking at community vulnerabilities, it is important to address specific impacts on certain types of community capital – namely community-level financial and natural capital.

Community-level financial capital effects: Depending upon the prevalence of HIV in a region or community, the aggregate impacts on community financial capital could vary from modest effects to significant changes in the aggregate savings rate, credit markets, and reduced expenditure in the community. Some community-level financial capital effects include:

- Decrease in aggregate community income;
- Reduction in expenditures in community businesses;
- Reduction in aggregate community savings;
- Increase in demand for loans and credit from formal and informal sources;
- Decrease in demand for productive credit;
- Increase in price of credit;
- Increase in default rate in credit markets;
- Increased spending on traditional and modern health care.

Community-level natural capital effects: The epidemic may influence the natural capital of a community through reductions in the available human resources (labour and knowledge) to invest in preservation and conservation of land. Moreover, the presence and frequency of illness and death may make individuals and communities reluctant or unable to invest in conservation and preservation of natural capital such as biodiversity, community water and land resources that require long investment.

⁶ FAO. 2004. *Addressing HIV and AIDS through agriculture and natural resource sectors: a guide for extension workers*, by C. Bishop-Sambrook. Rome.

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Some community-level natural capital effects include:

- Reduction in quality of community land resources;
- Decline in conservation of land and water resources;
- Decrease in biodiversity;
- Increase in fallow land;
- Change in land use patterns;
- Change in the land market;
- Environmental deterioration, decline in maintenance of infrastructure (e.g. terraces, irrigation equipment).

This brings to light the complexity and inter-related nature of various forms of capital and resources of individuals, households and communities. In an AIDS context, the pivotal forms of capital are the human and social forms, as they are the ones directly affected by HIV. The agriculture sector and its policies have a unique role to play in strengthening the resilience of households and communities and in mitigating their vulnerability to HIV infection and impacts through measures to ensure food security and rural livelihoods.

5. The context for developing responses to AIDS in the agriculture sector

In order to develop appropriate responses, it is crucial to first understand the dynamics of the epidemic: an epidemic can flare up, spread, subside and be controlled through its drivers. These drivers can increase vulnerability to HIV infection and can make people and households more vulnerable to the impacts of the epidemic. Drivers can be short-term or they can work through long-term processes.

Short-term drivers include:

- Seasonal migration patterns;
- Fluctuations in the prices of agricultural products and food items;
- Scarcities of wood and other resources.

Long-term drivers include:

- Loss of skills when adults no longer train children in the skills of farming, herding, fishing or forestry, thus leading to future livelihood insecurity;
- Loss of arable land or pastures due to climate change, abusive practices like over-grazing, abandoned land; dwindling fish catches due to competition from industrial fishing practices, etc., leading to future food and livelihood insecurity.

5.1 Agriculture sector responses to AIDS

The agriculture sector can influence these drivers through interventions. Some examples of interventions include:

- Youth training programmes such as Junior Farm and Field Life Schools that teach orphans basic agriculture skills suited to the local environment;
- Strengthening legislation and mobilizing communities to protect widows and their children from land grabbing or ensuring security of tenure;

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- Promotion of practices such as home gardens for improved nutrition and household food security.

The agriculture sector cannot consider only the short-time framework, but has to consider and balance the effects of the short, medium and long term.

Box 1. Responding to medium and long-term needs of women in agriculture

An interesting example of how the agriculture sector can respond to the medium to long-term needs of women is illustrated by the Tahoua Rural Development Project, GTZ. Although not designed to respond specifically to HIV, the project provides resources and guidance for women to achieve food self-sufficiency on reclaimed land, an important response also within the AIDS context in rural areas. In the late 1980s about 250 widows and divorced women received the rights to abandoned, degraded land in Kolloma Baba, a village where farm productivity had declined by up to 90 percent. In return, the women pledged to restore the land by investing their labor in soil and water conservation techniques. After clearing the land of rock, each woman received a plot of about 60 square metres. In addition to sowing traditional millet and sorghum, many of the women also planted cow peas, groundnuts and okra.

In the early years, the female farmers worked through the Kolloma Baba Women's Association, established by the project, with members helping each other to develop their land. More recently, they have hired male labor, proof of their considerable economic capacity. By 2006, they had restored 2000 ha of degraded land and were selling excess crops, lifting themselves out of poverty and raising their social status. The women are self-sufficient in food and have money to buy clothes for their children. A village committee, principally made up of women, deals with protecting regenerated trees across the community.

5.2 Sensitivity to spatial variations in HIV prevalence

Spatial variations in HIV prevalence challenges the agriculture sector to analyze the role played by farming systems in conjunction with markets and transport in order to tailor policies and programmes to the specific situations on the one hand while taking into consideration the interconnections on the other. This increases complexity in policy and strategy choices in the agriculture sector, which also need to consider institutional aspects, as well as strategic thinking and vision. The following table illustrates the phenomenon of spatial variation in prevalence, using the example of the Eastern Province of Zambia, which borders Malawi and Mozambique.

Table 4. HIV Prevalence in the Eastern Province of Zambia and its districts, 2004

Province/ District	HIV Prevalence (%)	HIV+		
		Male	Female	Total
Eastern Province	13.2	34,976	46,809	81,785
Chipata	26.3	15,565	20,320	35,884
Chadiza	9.8	1,216	1,675	2,891
Chama	9.8	1,049	1,417	2,466
Katete	18.1	7,178	9,509	16,687
Lundazi	18.1	5,642	7,446	13,089
Mambwe	9.8	653	856	1,509
Nyimba	9.3	974	1,291	2,266
Petauke	9.3	2,698	4,295	6,993

(Source: Eastern Province District AIDS Commission, 2006)

HIV prevalence varies considerably from one district to another within the province. The highest prevalence (26.3 percent) was registered in Chipata District while the lowest (9.3 percent) was in Nymba and Petauke Districts. The table also shows the numbers of HIV-positive men and women aged 15 to 49 in each district, which ranges from nearly one in four to one in ten adults is living with HIV. These findings suggest that labour productivity in Eastern Province is badly affected; however, the severity varies from district to district. The agriculture sector needs to be conscious of these variations and responses targeted accordingly to the specific situation faced by different districts.

6. The role of gender in AIDS and agriculture

HIV is not gender neutral – it affects women and men in different ways. It is well known that gender inequality is one of the factors fuelling the spread of HIV. Women represent nearly half the people living with HIV globally, and account for about 60 percent in sub-Saharan Africa.⁷ In terms of both vulnerability and impacts, women and men experience HIV differently. This has implications for agricultural production and food security, and the agriculture sector has a role to play in addressing these issues.

6.1 *Understanding gender in the context of AIDS and agriculture*

In order to fully understand how gender issues interact with HIV and agriculture, it is useful to first refresh on what is meant by gender, how gender dimensions relate to HIV and finally how this fits into the agriculture sector. It is through this understanding that one is better positioned to address the role of the agriculture sector in responding to HIV with a gender lens.

(A) *What is meant by gender?*

The terms “sex” and “gender” do not refer to the same thing. As defined by the World Health Organization⁸:

- “Sex” – refers to the biological and physiological characteristics that define men and women.
- “Gender” – refers to the socially constructed roles, behaviours, activities and attributes that a given society considers appropriate for men and women.

Aspects of sex remain rather consistent between different societies, whereas those of gender may differ significantly. FAO has developed a definition of gender, within the context of agriculture and as it relates to rural livelihoods. It is defined as “the relations between men and women, both perceptual and material... [It] is not determined biologically... but socially... Gender issues focus on women and on the relationship between men and women, their roles, access to and control over resources, division of labour, interests and needs”⁹. The definition of gender may be extended to include “the economic, social, political and cultural attributes and opportunities associated with being a man or woman”¹⁰. Related to the meaning of

⁷ UNAIDS. 2008. Report on the global AIDS epidemic 2008. Geneva.

⁸ WHO. 2010. What do we mean by “sex” and “gender”? via Internet. In *Gender, Women and Health* (available at <http://www.who.int/gender/whatisgender/en/index.html>).

⁹ FAO. 2004. What is gender. In *Building on gender, agrobiodiversity and local knowledge*. Rome.

¹⁰ World Bank, FAO and IFAD. 2009. *Gender in Agriculture Sourcebook*. Washington, The World Bank.

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gender, are “gender roles” and “gender relations”. The former refers to “behaviours, tasks and responsibilities that a society considers appropriate for men, women, boys and girls”, whereas the latter concerns “the ways in which a society defines rights, responsibilities and the identities of men and women in relation to one another”¹¹.

Gender inequalities are an important concern both in the development sector and in particular with regard to the AIDS epidemic. Gender inequalities refer to “[un]equal access to the opportunities that allow people to pursue a life of their own, choosing to avoid extreme deprivation in outcomes”. Addressing such inequalities is a goal in its own right, but the implications for the agriculture sector, and in particular in light of the implications for the AIDS epidemic, means that the agriculture sector response to AIDS cannot ignore gender dimensions.

Whichever way the reader may prefer to qualify gender, its importance should not be underestimated:

- Gender is given high priority globally – notably through the internationally agreed upon Millennium Development Goal 3 to promote gender equality and empower women¹² - and represents a common denominator around which partnerships can be built.
- Gender (and gender inequality) is relevant and important to the dynamics of the AIDS epidemic and in relation to agricultural production and food security, in terms of vulnerability, impacts and response.
- In the area of AIDS and agriculture, the impacts of socio-economic factors are often mediated through gender, which has important implications for policies and programmes.

(B) Gender and HIV

One needs to be careful to understand that both sex and gender play a role in differing HIV prevalence in men and women. From a biological perspective, women are more vulnerable than men to HIV infection. This is due to a range of factors, including the larger exposed surface area of the female genital tract, which increases risk of infection with every exposure, in addition to the health of the uterus and maturity of tissue.

Biological factors, however, are only part of the picture. Cultural factors play a significant role in prevalence and increased vulnerability for women. Such factors may include norms related to men being more dominant and women more passive in sexual relations, older men having sex with younger women, as well social pressures inhibiting women from expressing sexual choices and negotiating safe sex (e.g. insisting on the use of condoms or refuse unprotected sex).

Gender inequalities also play a role and can make women more vulnerable to HIV infection and its impacts. This may be associated with illiteracy and lack of knowledge about HIV, lack of access to information and services, lack of access to and control over resources, limited mobility or decision-making power.

¹¹ FAO. *Why gender*. Accessed 20 April 2010 (<http://www.fao.org/gender/gender-home/gender-why/why-gender/en/>).

¹² Millennium Development Goals website: <http://www.un.org/millenniumgoals/gender.shtml>

(C) Gender and agriculture

Rural men and women play different and complementary roles in agriculture. Moreover, as AIDS affects rural demographics¹³ in several countries, more and more women are becoming key actors in the sector. It is important to recognize these differences and changes as they are integral to agricultural production, rural development and food security.

Inequalities between men and women, however, prevail and women and girls continue to face limited access to, and control over, resources and have fewer opportunities to improve their knowledge and skills. These inequalities undermine agricultural productivity. By not recognizing these different roles of men and women, agricultural responses may be ill-advised, with negative repercussions for agricultural production and food and nutrition insecurity.

The roles, responsibilities and situation of men and women differ between and within countries, however, some generalizations can be made:

- Agricultural Production and Food Security: Men are mainly involved in land preparation, and ploughing, while women are usually engaged in watering, planting, fertilising, weeding, harvesting and marketing. Men are usually responsible for cash crops, whereas women for crops for household for food consumption.
- Household Work: Women are generally responsible for domestic tasks, including collecting water and firewood, food processing and preparation, cooking, etc.
- Access to Land and Water: The majority of women in patrilineal customary system have access to land only through their husbands or fathers. Even when statutory provisions exist, in many rural areas customary practices that generally favour men may supersede.
- Access to Credit and Income: Women generally have little access to credit as they may lack collateral, male consent, security against the loan, etc. Access to land, credit and education deny women exposure to and control of new technologies that could support their livelihoods.

Agricultural responses need to take into account these gender dimensions and need to consider the distinct roles, priorities, knowledge, constraints and opportunities of both women and men. "Failure to recognize the roles, differences, and inequalities poses a serious threat to the effectiveness of the agricultural development agenda."¹⁴

6.2 Men's and women's vulnerability to HIV

Cultural norms can reinforce inequalities between men and women and increase HIV vulnerability. In some contexts, cultural norms may limit women's and girls' ability to negotiate safe sex or access to health services. On the other hand, social norms may condone multiple sexual partners for men and boys. Both situations increase risk of HIV infection.

¹³ For example, due to death and migration.

¹⁴ World Bank, FAO and IFAD. 2009. Gender in Agriculture Sourcebook. Washington, The World Bank.

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Gender inequalities in access and ownership of resources can increase vulnerability to HIV. Property grabbing¹⁵ can lead to loss of shelter, loss of livelihood and can further drive poverty and food insecurity. This type of insecurity can lead women to engage in risky sexual behaviour (e.g. commercial and transactional sex), which significantly increases risk of HIV infection. This also contributes to the further spread of HIV among sex workers and their clients.

Men who migrate in search of employment and to earn income may engage in risky sexual behaviour, which can lead to increased risk of infection for them and for their partners at home.

6.3 How rural men and women are effected differently by the epidemic

As already discussed, HIV largely impacts the agriculture sector through declines in labour, and thus can aggravate gender-based differences in labour burdens. It can also negatively effect access to resources – namely land, credit, education, agriculture service, etc. Some specific impacts of the epidemic include:

- Increasing inequalities: Poor rural households, women, orphans, the elderly and mobile groups tend to disproportionately face the impacts of HIV due to preexisting inequalities in accessing resources and opportunities.
- Access to productive resources: AIDS worsens inequalities in access to and ownership of productive resources, including land, credit, training and technology. Access to these resources tends to favour men and as a household's asset base shrinks in the face of AIDS¹⁶, women's access may be reduced further. Women who are widowed by AIDS may also face challenges in claiming access and rights to their husbands' property as relatives of the deceased spouse may take these assets upon his death.
- Increased workload: AIDS increases men's and women's workloads. Since men and women carry out different agricultural tasks, different aspects of production are affected as men's and women's labour is reduced or re-allocated as a result of HIV-related illness and death. For example, rural women's domestic workloads tend to increase as they are often the provide care for sick family members, which can take them away from other income earning and food production tasks.
- Livelihood insecurity: Poverty and the absence of livelihood options stemming from the epidemic may result in men migrating in search of employment and alternative livelihood options. This generally involves long absences away from home and general insecurity, which may lead to migrants engaging in casual sex and greater vulnerability to HIV. Women (in particular if widowed and left destitute as a result of the epidemic) on the other hand may resort to risky behaviour (e.g. engaging in commercial or transactional sex) in order to support their livelihoods.

¹⁵ This not only creates vulnerability to HIV, but is also an impact of the epidemic.

¹⁶ For example, household assets may be sold to cover medical expenses, funeral costs, and to compensate for lost income.

6.4 Addressing gender issues in AIDS and agriculture

Gender plays an important role in AIDS and agriculture:

- Gender influences sexual relations and the transmission of HIV.
- Gender influences the functioning of human capital and thus the impacts of AIDS.

As such, responses from the agriculture sector need to take into account gender dimensions in agriculture as well as those related to the epidemic itself. Also, the participation of both women and men is essential for agriculture responses to be effective.

Interventions should focus on improving agricultural production, in light of labour declines stemming from the epidemic. This may include the promotion of labour-saving technologies and practices to address the implications of the epidemic on agricultural labour. The promotion of such technologies and practices, however, must take into consideration the different kind of work undertaken by men, women, youth and the elderly.

Responses also need to focus on promoting food and livelihood security of households. This can have the effect of reducing the need for men and women to engage in risky behaviours. Such interventions could include, for example, the promotion of home gardens for household food security. Responses could also focus on promoting alternative livelihood options for men and women whose livelihoods have been affected by the epidemic. For example, agro-processing technologies and agribusinesses, alternative income-generating activities, as well as equitable access to credit could provide livelihood options so that people do not have to resort to riskier alternatives that increase vulnerability to HIV.

LEARNING REINFORCEMENT ACTIVITIES

Activity 1: Identification of farming system responses to HIV and poverty

We have learned that HIV has an impact on the population structure, particularly the 20 to 45 age groups, in high-prevalence areas. People living with HIV may have less strength and more frequent illnesses. Without ARVs, PLHIV die prematurely, leaving mainly very young and older people to carry out agricultural work. In planning strategies to support the resilience of farming communities, Ministries of Agriculture, FAO, NGOs and other partners working in the sector need to look at options that promote the sustainability of communities and households in situations where labour-intensive crops can no longer be grown and where alternative sources of income might be needed.

The following table presents a variety of farming systems and five strategies that can be adopted to mitigate household poverty resulting from the loss of productivity caused by illness and death. For example, in the cereal-root system there are opportunities through intensification and through increasing farm size, but these strategies require labour or replacement by technology. In the pastoral system, two strategies have some promise, increased off-farm income and exit of agriculture; however, both have strong links with increased risk of HIV infection.

Table 5. Some examples of potential and relative importance of household strategies for poverty reduction in sub-Saharan Africa and in East Asia

Region	Farming system	Strategies for poverty reduction					Agricultural population (millions)
		Intensification	Diversification	Increased farm size	Increased off-farm income	Exit from Agriculture	
Sub-Saharan Africa	Tree crop	4	1.5	1.5	2	1	25
	Cereal –root crop mixed	3.5	2	3	1	1.5	59
	Pastoral	1	1	1	2	5	27
	Sparse agriculture (arid)	0	1	0	3	6	6
East Asia	Lowland rice	1.5	3.5	1	3	1	474
	Tree crop mixed	2	3	1	3	1	30
	Upland intensive mixed	1	3	0.5	3.5	2	314
	Highland intensive mixed	0	2	0	3	5	47

Source: Extracts of Tables 2.4 and 6.4. Dixon et al. Based on Expert judgement.

Note: Adding the numbers horizontally for each line (not including 'agricultural population'), the total score for each farming system equals 10. The number given to each strategy represents the relative importance of that strategy. Expert assessments refer to poor farmers only.

(Source: Du Guerny, 2002)

Questions for analysis:

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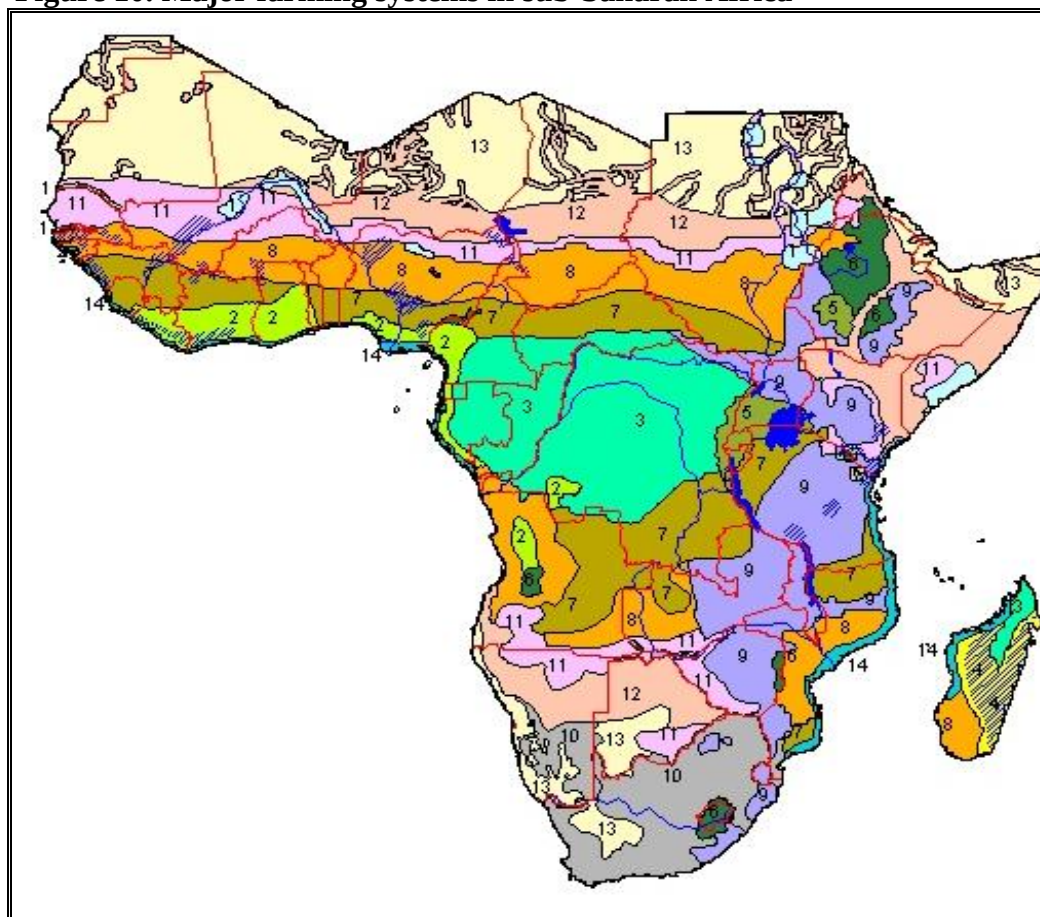
If a score of 3 or better can be chosen as an indication of a realistic strategy option to increase household resilience to HIV and poverty:

1. Which farming systems have the greatest potential for *intensification*?
2. Which farming systems have the greatest potential for *diversification*?
3. Which farming systems have the greatest potential for *increased farm size*?
4. Which farming systems have the greatest potential for *increased off-farm income*?
5. Which farming systems have the greatest potential for *exiting from agriculture*?

Activity 2: Comparing farming systems and HIV prevalence

Looking at Figure 10, one can note that the farming systems form parallel bands running from the West African Atlantic coast to Sudan. This makes it possible to analyze and compare many situations within the same farming system or between them. Many of the same farming systems are also found south of the equator.

Figure 10. Major farming systems in sub-Saharan Africa



Legend: Farming Systems

1. Irrigated Area (Sq Km) 45685	8. Cereal-root crop mixed Area (Sq Km) 300128
2. Tree crop Area (Sq Km) 221554	9. Maize mixed Area (Sq Km) 1571734
3. Forest based Area (Sq Km) 2537016	10. Large commercial & smallholder Area (Sq Km) 1010746
4. Rice-tree crop Area (Sq Km) 308489	11. Agro-pastoral millet/sorghum Area (Sq Km) 78410

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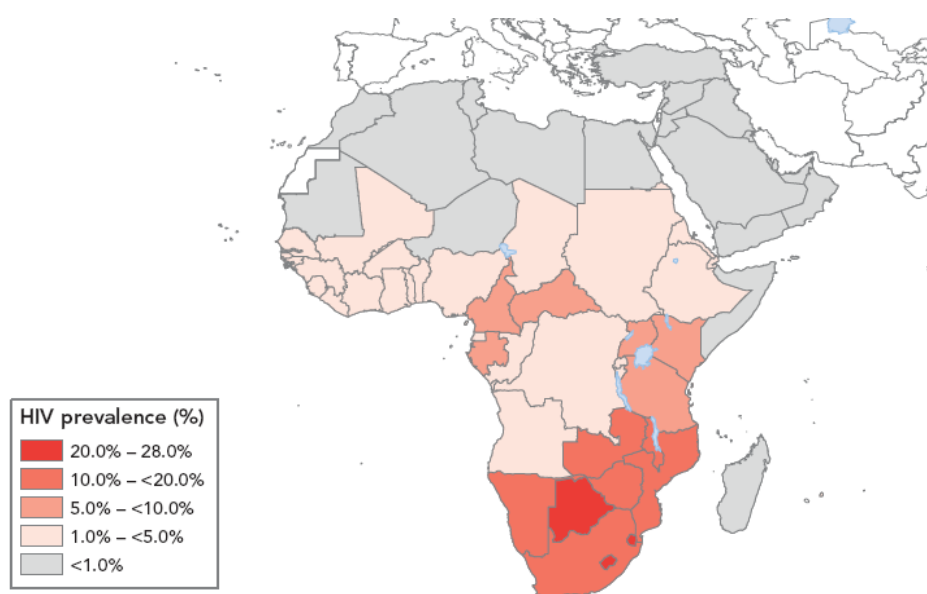
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5. Highland perennial Area (Sq Km) 66562	12. Agro-pastoral millet/sorghum Area (Sq Km) 78410
6. Highland temperate mixed (Sq Km) 270672	13. Sparse (arid) Area (Sq Km) 155114
7. Root crop Area (Sq Km) 1262547	14. Coastal artisanal fishing Area (Sq Km) 171942

(Source: FAO, 2010)

One can also note that some of the higher HIV prevalence levels correspond roughly with the following types of farming systems: root crops (7), maize mixed (9), large commercial and smallholder (10).

Figure 11. Adult HIV prevalence in Africa, 2007



(Source: UNAIDS, 2008)

In comparing the map of HIV prevalence in 2007 (Figure 11) with that of major farming systems (Figure 10), answer the following questions:

1. Comparing areas north and south of the equator, which farming systems are the most impacted by HIV and therefore the most vulnerable to:
 - i) A decline in labour availability and productivity?
 - ii) Increasing poverty?

Northern Hemisphere		Southern Hemisphere	
Number	Type of farming system	Number	Type of farming system

2. In the country where you work, which farming systems are the most affected by HIV and household poverty? Describe the results of the impact on productivity and household

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income. What measures have been taken (or could be taken) to mitigate the impacts of HIV and AIDS in these farming systems?

Number	Type of farming system

Write your answers in the tables provided. If possible, discuss them in a group.

Activity 3: Policy responses to AIDS impacts on the agriculture sector

1. Examine some recent activities or projects in the agriculture sector of the country where you work:
 - i) Do they have an AIDS component?
 - ii) If not, would they have been designed differently if they were to be HIV-sensitive?
 - iii) Would they be more sustainable or effective with a concern for HIV issues?
2. Think of a district or community you know well. How have agriculture and health policies and practices had an impact on the following forms of capital (in relation to the AIDS epidemic):
 - i) Human capital (health, nutrition, education, knowledge and skills, capacity to work, etc.);
 - ii) Social capital (networks, formal and informal groups, rural institutions, protection of widows and orphans from asset “grabbling”, etc.);
 - iii) Physical capital (infrastructure, houses, land, productive assets, etc.);
 - iv) Natural capital (land, water, forests and forest products, etc.)
 - v) Financial capital (credit, remittances, etc.).

If there has been no impact or organized activities to address capital depletion stemming from HIV at household and community level, what measures would you recommend?

Write down your answers on paper. If in a group, prepare a flip-chart page to present your observations to the group.

Activity 4: Developing resilience to AIDS impacts at household and community levels – scenario building

Read the following description of the process of depletion of various forms of rural capital (Shannon Stokes, 2003):

“[There is a hypothetical household where] the male head has been HIV-positive for eight years and has had a series of opportunistic infections and illnesses over the past two years.

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This has reduced his contribution to on-farm production by 50 percent. In addition, the man has had to forego three months of off-farm work that has traditionally supplemented household income. During the past year his disease has progressed to clinical AIDS and he is no longer able to contribute to productive work either on- or off-farm. His wife now devotes 50 percent of her time to caring for her husband and she has had to reduce her agriculturally productive labour by a comparable amount. The couple's four children range in age from 4 to 13 years of age. The oldest child has been withdrawn from school to assist with agricultural production and with child care.

A survey of this household employing human capital indicators should identify a number of impacts on the household's human capital. First is identification of a household member with a chronic illness that limits his productive activities. Secondly, the reduction in labour available to the household suggests a number of likely additional impacts on other dimensions of human capital, as well as other livelihood assets. The withdrawal of the eldest child from school, the reallocation of the wife's time away from productive labour, the loss of off-farm employment, the decline in on-farm labour that is likely to reduce the area cultivated and shift cropping patterns to less labour-intensive practices should all be measured by these indicators. These impacts on the human capital of the household can be expected to directly affect its financial capital. Income from both farm and non-farm sources would be expected to decline. The household will undoubtedly draw upon whatever savings it has and likely call upon remittances from the extended family to help pay for medical care. Depending upon the length of the husband's illness before he dies, the household may also need to liquidate some of its stores of value by selling jewellery, household goods, or other items. Given the total loss of on-farm labour by the husband and the reduction in productive labour by the wife, any surplus agricultural production is likely to be lost and the household becomes oriented toward subsistence and no longer is tied to the market. The household will likely become food insecure in the near future, if it is not already experiencing difficulties.”

Think of a district or community that you know:

1. Identify the type of farming system that predominates and what other kinds of rural activities also go on (e.g. charcoal making, fishing, livestock raising, weaving and handicraft production, palm oil production, etc.).
2. What are the risk factors associated with HIV infection (e.g. the presence of a transportation hub, migrant labour, risky cultural practices such as “widow cleansing”, etc.)?
3. Assume that adult HIV prevalence is over 5 percent (i.e. that there is a generalized epidemic in the community).
 - i) Draw up a scenario to respond to the depletion of the various forms of rural capital at the household or community level that the agriculture sector could support.
 - ii) In order to have a holistic response, what other sectors (e.g. health and education) might be included in the process of developing resilience to HIV and its impacts?

SUMMARY REMARKS AND LESSONS LEARNED

AIDS has been clearly shown to have an impact on agriculture, both in terms of its impact at macro level, as well as at community and household level. These impacts, however, are not widely known in the development community. It is important to note that AIDS-related population changes, including the depletion of adults in their productive years, negatively affect production, whether it is in farming, herding, fishing or forestry. This has resultant implications for household and community food security. The module reveals how the epidemic impacts several kinds of capital (human, social, physical, financial and natural) at the household and community levels. For example, human capital is affected as agricultural skills and knowledge are not transmitted to children and youth because of the death of parents – with serious long-term implications for food security.

Developing responses to AIDS in the agriculture sector means coordination with other sectors, particularly the health sector, which is responsible for providing prevention and treatment services. The response of the agriculture sector should focus on, for example, land-tenure issues for widows and orphans, support to less labour-intensive methods of cultivation and harvesting, emphasis on encouraging nutrition-rich crops and supporting women in all phases of agricultural production and marketing. Organizations working in the agriculture sector should identify “good practices” and promote them in areas with high HIV prevalence.

Lessons learned

1. Failure to recognize AIDS as an issue in the agriculture sector can lead to greater food insecurity and rural poverty.
2. A multi-sector response is needed to counter the impacts of the epidemic while strengthening household and community resilience. Transportation, public works, health, education and justice are among key partner sectors.
3. Analysis of how rural households and communities experience depletion of capital resulting from impacts of HIV and AIDS can enable the agriculture sector to devise strategies to mitigate or prevent such depletion.
4. Analysis of farming systems can be a tool in designing AIDS responses in the agriculture sector.
5. The agriculture sector has already developed a variety of strategies, such as less labor-intensive crops, which could be used in AIDS responses in rural areas.

ACRONYMS AND ABBREVIATIONS

AIDS	Acquired immunodeficiency syndrome
ART	Antiretroviral therapy
ARV	Anti-Retroviral (medicines)
BCC	Behaviour change communication
CD4	Cluster of differentiation 4 ¹⁷
CDC	Centers for Disease Control and Prevention
FAO	Food and Agriculture Organization of the United Nations
GTZ	Gesellschaft für Technische Zusammenarbeit
HH	Household
HIV	Human immunodeficiency virus
IDU	Injecting drug user
MoA	Ministry of Agriculture
MTCT	Mother-to-child-transmission
NGO	Non-governmental organization
PLHIV	Person Living with HIV
PMTCT	Prevention of mother-to-child transmission
STI	Sexually transmitted infection
UNAIDS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organization

¹⁷ A CD4 count indicates how good the immune system of a person is. It is particularly important in the case of HIV as the virus destroys the very immune system that is supposed to fight it. So a higher CD4 count reflects a strong immune system and hence its ability to fight the virus. A person infected with HIV is provided ART only when his/her CD4 count comes below 200.

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ANNEX 1 – AIDS and agriculture issues in the 2008 Report on the Global AIDS Epidemic¹⁸

The epidemic's impact on the agricultural sector

As agriculture is a primary livelihood base for many people living with, or affected by HIV, the epidemic has had major effects on food security in high-prevalence countries. The weight of the limited but growing body of evidence indicates that HIV-affected households experience a loss of agricultural production, although some of the radical HIV-related effects feared earlier in the epidemic, such as a widespread shift toward subsistence crops, have not been documented in the few rigorous studies that have been undertaken in rural African settings (Jayne et al., 2004). Average bean production in death-affected households in Rwanda, for example, is 18 per cent lower than the national average (Donovan, 2004). The tendency of urban-dwelling, underemployed household members to return to rural communities when the household becomes affected by HIV sometimes compensates for productivity losses. However, it is unclear how long the surplus of workers in the informal sector will persist if the epidemic's burden continues to mount (Jayne et al., 2004).

Mitigating the impact on agriculture

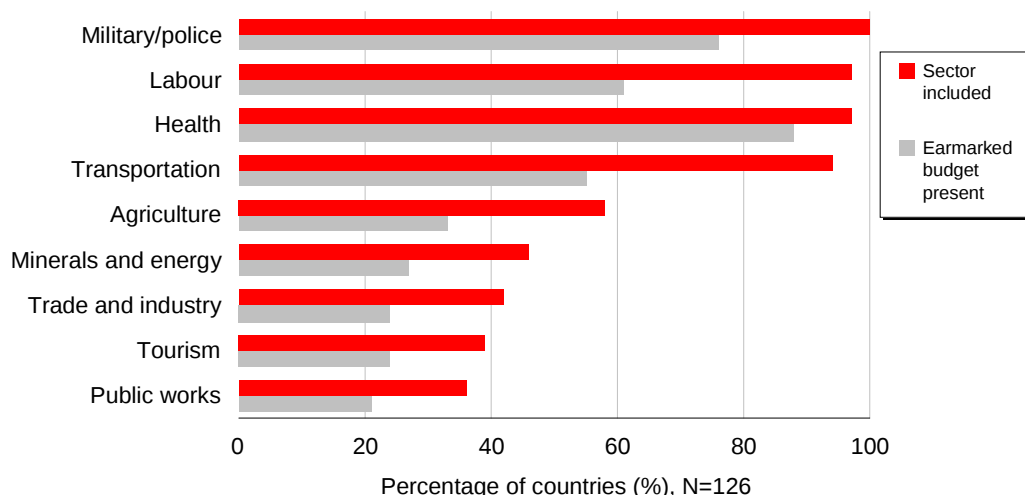
Few scaled-up interventions have been implemented, much less evaluated, to mitigate the epidemic's impact on agricultural sectors and food security (Barnett, 2004). A four-pronged approach is recommended to mitigate the epidemic's effects on agriculture and food security. The approach consists of: initiatives to protect and improve the livelihoods of rural households (through both farm and non-farm avenues); social protection policies to provide financial and nutritional assistance where appropriate; focused nutrition programmes for key populations at higher risk (e.g. girls and women); and improvements in the development, implementation, and accountability of policy-making in the agricultural sector (Gillespie & Kadiyala, 2005).

Of the 33 countries with generalized epidemics reporting these data, 58 per cent report including the agricultural sector in national HIV strategies, although one in three (33 per cent) governments report that there is no earmarked budget to address HIV in the agricultural sector (UNGASS Country Progress Reports 2008).

The 33 countries with generalized epidemics reporting these data generally include labour (97 per cent), military and police (100 per cent), and transport (94 per cent) in their national HIV strategies. Other areas are included less frequently in national HIV strategies; agriculture is addressed in 58 per cent of strategic plans in countries with generalized epidemics, trade and industry in 42 per cent, minerals and energy in 46 per cent, tourism in 39 per cent, and public works in 36 per cent. Even when they are included in national HIV strategies, many non-health sectors do not receive budget support to address the epidemic's sectoral impact, according to government reports (UNGASS Country Progress Reports 2008) (Figure 6.7) page 172.

¹⁸ The sections are quoted in full from p.174 of the report. UNAIDS. 2008. 2008 Report on the global AIDS epidemic. Geneva.

Figure 12. Percentage of countries with sectors included in the national AIDS strategy and earmarked budgets



Food distribution and agriculture support by donors

International donors should devote increased financial and technical resources to efforts to mitigate the epidemic's impact. In addition to project-specific activities, such as food distribution or psychosocial support to HIV-affected families, donors should deliver the budgetary support required to implement strong social cash transfer regimes. Governments, donors and nongovernmental organizations should pay increased attention to strategies focused on supporting kinship and community networks that are struggling to care for the large and growing number of children orphaned or made vulnerable by HIV.

Strong national capacity for data collection and analysis, and multidisciplinary policy development is required to ensure the soundness of national approaches to impact mitigation. As noted, many of the policy reforms proposed to alleviate the epidemic's effects may inadvertently exacerbate other problems, such as HIV risk and vulnerability, economic inequality, and HIV stigma. The traditional "silo" approach to decision-making—whereby decision-making jurisdiction for individual ministries is sharply delineated and ministerial 'turf' is carefully guarded—does not promote the long-term effectiveness and sustainability of impact mitigation strategies. Agriculture ministries, for example, may have impressive expertise on crop distribution, agricultural productivity and the like, but they may lack an understanding of the ramifications of particular policies on rural wages, population migration, or subgroups of HIV-affected households. Similarly, finance ministries, while rightly focused on balancing budgets in the short term, may be poorly equipped to assess the long-term financial wisdom of immediate investments in impact mitigation. Page 177.