

3. Conceptual Framework: HIV and AIDS and Food Security¹

This section reviews the impact of HIV and AIDS on people's livelihoods, looking particularly at the effects of the pandemic on households and communities over time. It is now well recognised that household food insecurity and vulnerability in rural and urban Southern Africa cannot be properly understood if HIV and AIDS is not factored into the analysis. Carolyn Baylies notes that HIV and AIDS can, on one hand, be treated in its own right as a shock to household food security, but on the other, it has such distinct effects that it is a shock like none other (2002). However, before an analysis of the relationship between vulnerability, food security, and HIV and AIDS can be made, some conceptual definitions are necessary.

In the context of this publication, definitions of vulnerability and food insecurity have been drawn from a background document informing the establishment of a Food Insecurity and Vulnerability Information and Mapping System in South Africa, which makes the following definitions:

- Vulnerability is a *forward-looking* concept, relating to exposure and sensitivity to shocks and stresses and to the ability to recover from them. It can be used to describe the general characteristics of complex systems (thus an economy, an ecology or a system can be said to be vulnerable) but it is also often used to describe the individuals or groups that depend on those systems (Du Toit & Ziervogel, 2004).
- Food insecurity is understood to be a *sub-set*, or a *particular kind* of vulnerability. It describes the characteristics of the systems and strategies on which individuals, households and larger groups rely in order to secure sufficient physical and economic access to nutritious food. When these systems become subject to shocks and stresses, or less resilient for whatever reason, such people can be said to be food-insecure. Food

Household food insecurity and vulnerability in rural and urban Southern Africa cannot be properly understood if HIV and AIDS is not factored into the analysis.

insecurity is the vulnerability to food deprivation. People can be food-insecure even if *at a particular point of time* they have access to sufficient food, but where that access is prone to failure, or when people have reason to fear hunger in the future (Du Toit & Ziervogel, 2004).

It is now broadly accepted that food security refers not only to the global and national level of food availability ('Malthusian'² food security) but also to the *access* and *entitlement* of individuals and households to that food (Sen, 1981); and that this has in turn been recognised as dependent on the resilience or vulnerability of people's livelihoods. All dimensions of food security – availability, stability, access and use of food – are affected where the prevalence of HIV and AIDS is high. As the current crisis in Southern Africa has shown, those living with, or affected by, chronic illness have less labour available, spend more time caring for others, and have decreasing experience and skills. They may have to sell off productive assets, or leave them under-utilised, and probably have to adapt their livelihood strategies, which are sometimes risky in nature, in order to cope. Therefore the possibility of substantially increased vulnerability to other shocks is higher, such as drought or conflict, the emergence of new types of vulnerability, the erosion of some capacities and skills for coping with shocks and adaptation, and emergence of new capacities in response to these threats (Harvey, 2003).

¹ This section draws on a report prepared by Scott Drimie for Oxfam-GB entitled "The underlying causes of the food crisis in the southern African region – Malawi, Mozambique, Zambia and Zimbabwe", March, Pretoria, South Africa, March 2004, www.sarpn.org.za.

² British economist Thomas Malthus contributed to the theory that population growth will inevitably outstrip agricultural production, leading to cyclical food scarcity, decreased wages, and deteriorating labor conditions. Malthus believed that the poorer socioeconomic classes would always suffer the worst consequences. Author Donald Winch examines the first published version of An Essay on the Principle of Population (1798) and places Malthusian thought in historical context. A revised version of Malthus's essay was published in 1830.

Livelihoods-based analysis of linkages between food security and HIV and AIDS show that the impact is systemic, affecting all aspects of rural livelihoods (Haddad & Gillespie, 2001); and that effective analysis of the causes and outcomes of HIV and AIDS requires a contextual understanding of livelihoods unique to a given area and/or social groups (SADC FANR VAC, 2003). The claim that the current Southern African humanitarian crisis is inextricably linked to the widespread HIV epidemic, which has deepened the crisis, is supported in much of the food security literature and current thinking (see Harvey, 2003). This claim is underpinned by the fact that the region has the highest prevalence rate in the world (Lesotho 31 per cent; Malawi 16 per cent; Mozambique 13 per cent; Swaziland 38 per cent; Zambia 22 per cent and Zimbabwe 34 per cent), with infection levels around 25 per cent of the population, 58 per cent of those affected being women (UNAIDS, 2002).

Vulnerable people are forced to make decisions, often involving trade-offs between basic needs. For example, a family with insecure livelihoods, but with a fair amount of food on hand, may have to sell stocks of food now in order to raise cash for school fees or medical care – even though they know they will have to buy back food later at a higher cost. In this environment, insecure livelihoods exacerbate the risks and vulnerabilities of HIV and AIDS. Lack of options can push some people into activities or situations that put them and others at high risk of HIV, such as sex work. Lack of food, money and health care are key factors in rapid progression from HIV infection to the onset of AIDS. People with insufficient resources find it harder to properly take medications, including anti-retrovirals. Finally, those with weak livelihoods are more vulnerable to the social and economic impacts of illness and death in their families and communities.

Relatively poor households appear to suffer the most after incurring an AIDS-related death, being less able to cope with the economic and social shocks

3.1 Measuring HIV and AIDS Impacts

Available analysis does not provide a clear picture of how the epidemic is affecting food security and vulnerability. Despite the fact that the epidemic is now in its third decade in Africa, available analysis to date provides little insight into how HIV and AIDS affects the agricultural sector – its structure, cropping systems, relative costs of inputs and factors of production, technological and institutional changes, and levels of production and marketed surplus (Jayne *et al*, 2004). Much of the current “knowledge” on HIV and AIDS and food security is based upon a few empirical studies and a range of material that embodies “anecdotal recycling” (Gillespie, 2003). Most rigorous household-level studies have measured the effects of death *in their households* on household-level outcomes, typically over a two- to five-year time-frame. Given the lack of longitudinal household data over a long time period, as well as methodological limitations, the longer-term effects of AIDS, and particularly the community-level effects, have yet to be rigorously measured. This is especially the case when considering inter-generational effects such as the inability of deceased adults to pass along accumulated knowledge to future generations, and the less tangible benefits that children receive from their parents (Jayne *et al*, 2004). A greater number of empirical datasets and quantitative impact studies are necessary in order to have a clearer and more accurate understanding of what is happening in different countries. It is with these caveats in mind that available empirical studies on the effects of HIV and AIDS on food security, the agricultural sector and the rural economy in general should be assessed.

However, this is not to understate the multiple impacts of HIV and AIDS on food security and the rural economy. This raises a wider and important point that the HIV and AIDS pandemic in Southern Africa is taking place in a context of already fragile economies. Disentangling the relative impact of HIV and AIDS on food security in Zimbabwe from the current economic collapse, for instance, would be difficult. Perhaps the more important point is that these issues are mutually reinforcing. The challenge for analysts, policy-makers and donors is to understand with greater precision how the rural socio-economy is being affected by the



epidemic, and consequently how rural development policy should be modified to better achieve food security objectives. As emphasised above, because of the long-wave nature of the AIDS epidemic, the full impact of the disease will not manifest until the next several decades (Barnett & Whiteside, 2002). For this reason, assessments of what is happening now do not provide a reliable picture of what will be happening in the future.

Indeed, the few available empirical studies on the impacts of prime-age adult mortality on agricultural production and incomes indicate that the effects are more severe on households that were relatively poor to begin with. Such relatively poor households appear to suffer the most after incurring an AIDS-related death because they are less able to cope with the economic and social shocks that it generates. These results carry obvious implications for household food security, and nutrition for the poor in particular.

Following from the theoretical review informing the conceptual framework in the previous section, the HIV and AIDS epidemic will have an impact at the level of individuals, on households in the rural areas, on the villages and communities living there, and thus will also be felt at the national level. Intuitively one would expect that data collected on the topic will confirm these impacts, given the burden of illness of a relatively large number of persons as a result of accompanying infections, as well as shocks induced by the loss of household members. Yet the expected significant relationship between households infected and/or affected by HIV and AIDS being worse off than households not affected has not been overwhelmingly apparent in surveys conducted by, for example, the Vulnerability Assessment Committees (VACs) operating in the SADC region during the ongoing livelihoods crisis (see Mdladla *et al*, 2003).

One important conclusion that can be made in the current VAC assessments is that it was extremely difficult to draw out the specific impact of HIV and AIDS as the single most important cause of the food insecurity facing the six SADC countries undergoing assessments. The adverse effects of HIV and AIDS on food security and the agricultural sector in general can be largely invisible or subtle enough so as to be undetectable from other causes of food insecurity. It would appear, particularly in Zambia and Zimbabwe,

that climatic conditions, food pricing policies, the lack of agricultural support and extension services, environmental degradation, and a lack of infrastructure and poverty play a larger role in creating inadequate harvests than HIV and AIDS. However, the epidemic may compound matters during an environmentally induced food shortage, such as what happened the previous season.

The impact of HIV and AIDS on agriculture, both commercial and subsistence, are often difficult to distinguish from factors such as drought, civil war, and other shocks

The adverse effects of HIV and AIDS on the agricultural sector can be largely invisible, since what distinguishes the impact from that on other sectors is that it can be subtle enough so as to be undetectable (Topouzis, 2000). In the words of Rugalema, "even if [rural] families are selling cows to pay hospital bills, [one] will hardly see tens of thousands of cows being auctioned at the market... Unlike famine situations, buying and selling of assets in the case of AIDS is very subtle, done within villages or even among relatives, and the volume is small" (cited in Topouzis, 2000). This clearly has implications for analysis. Furthermore, the impact of HIV and AIDS on agriculture, both commercial and subsistence, are often difficult to distinguish from factors such as drought, civil war, and other shocks and crises. It is thus important to remember that HIV and AIDS is only one of a complex web of factors that impact on rural people's livelihoods and that it is often difficult to disentangle the effects of AIDS from other environmental, political and economic events and trends.

3.2 The Effects of HIV and AIDS on Household Livelihood Strategies

The HIV and AIDS epidemic is eroding the socio-economic well-being of households and threatens the social cohesion of communities (See Lamptey *et al*, 2002). Gillespie argues that there is a two-way relationship between HIV and AIDS and livelihoods; firstly, livelihoods differ with regard to the degree that they expose individuals and households to the virus; and secondly through stripping households and community assets and eroding institutional capacity (2003). For households, the impact is different from that of other diseases. Those infected are most likely to be at the peak of their productive and income-earning years. Households feel the impact as soon as a member falls ill. This is associated with a decline in income as the member's ability to work decreases, while living costs, such as medical and funeral expenses, increase.

The literature on the impact of adult illness and death on household livelihood or coping strategies suggests that individuals and households go through processes of experimentation and adaptation as they attempt to cope with immediate and long-term demographic change (see SADC FANR VAC, 2003). It is believed that households under stress from hunger, poverty or disease will adopt a range of strategies to mitigate their impact through complex multiple livelihood strategies. These entail choices that are essentially "erosive" (unsustainable, undermining resilience) and "non-erosive" (easily reversible) (see SADC FANR VAC, 2003). The distinction

Sales of chickens, goats or cattle are classic coping strategies that households all over sub-Saharan Africa employ, but when livestock holdings are extensively reduced because of HIV and AIDS, there is cause for concern.

between erosive and non-erosive strategies crucially depends on a household's assets (for example, natural capital, physical capital, financial capital, social capital and economic capital), which a household can draw upon to make a livelihood. As an example of the distinction between erosive and non-erosive strategies, the example of livestock sales is revealing (SADC FANR VAC, 2003). Sales of chickens, goats or cattle are classic coping strategies that households all over sub-Saharan Africa employ. Some level of livestock sales is normal and does not result in increased poverty. At a certain point, however, household livestock holdings reduce to the level where they are no longer sustainable. At this point, livestock sales become erosive.

Consumption reducing and switching strategies are generally the first line of defence against food shortage. Households may, for example, switch to "wild foods" or go for entire days without eating. Another option for households under stress is the removal of children from school in order to release them for household strategies requiring labour or to reduce costs associated with school attendance (fees, uniforms, stationery). The "erosive" nature of such a strategy is the diminishing stock of human capital for future livelihood options. Another "negative" for food security is that these children may be removed from school feeding schemes and denied opportunities for nutritional support.

By killing productive adults who are key family providers, HIV and AIDS destroys the social networks that provide households with community help and support and thus underpin their livelihoods (Barnett & Rugalema, 2001; United Nations, 2003). Particularly in rural areas, where public services may be absent, traditional community support systems are crucial to impoverished households (United Nations, 2003). HIV and AIDS may contribute towards weakening this critical social and economic capital, with traditional knowledge gradually being lost as working age adults die and leave children orphaned. Survivors are left with few relatives upon whom to depend, with gender and age as critical determinants of social exclusion in the face of HIV and AIDS. Households and communities with fewer adults have less surplus adult-time to help others, undermining community resilience. In rural areas, increasingly impoverished communities may receive fewer visits from traders, or suffer a

reduced availability of services and consumer products (United Nations, 2003). Just as HIV and AIDS-affected households might ultimately disintegrate, so too might HIV and AIDS-affected communities through the loss of significant numbers of their members, economic collapse and social breakdown.

3.3 HIV and AIDS and Agriculture

As one dimension of food security and of the diverse multiple livelihood strategies discussed above, it is important to reflect on the impact of HIV and AIDS on agricultural production. Between 60 and 80 per cent of the population in the SADC countries depend on small-scale or subsistence agriculture for their livelihoods, so the impact of the epidemic on this sector is crucially important. While agriculture is central to many African countries, not least of all for household survival, there are marked differences among countries with regard to current economic conditions and agricultural and economic potential. Generally, however, this sector is facing increasing pressure from heightened levels of poverty, dwindling inputs and a lack of support services, amongst other issues. The additional impact of HIV and AIDS on these agricultural systems is thus even more severe, and may include:

- A decrease in the area of land under cultivation at the household level (due to a lack of labour stemming from illness and death among household members)
- A decline in crop yields, due to delays in carrying out certain agricultural interventions such as weeding and other inter-cultivation measures, as well as cropping patterns
- Declining yields may also result from the insufficient inputs, such as fertiliser and seeds
- A reduction in the range of crops produced at the household level
- A loss of agricultural knowledge and farm management skills, as a result of losing key household members to AIDS
- The resultant psychosocial impact of AIDS death/s (partly through stigma) and the long-term implications for agricultural production

- Decline in livestock production as the need for cash and the loss of knowledge and skills may force families to sell their animals.

Between 60 and 80 per cent of the population in the SADC countries depend on small-scale or subsistence agriculture for their livelihoods, so the impact of HIV and AIDS on this sector is significant.

In largely agrarian societies, the HIV and AIDS epidemic is intensifying existing labour bottlenecks, proving a barrier to traditional mechanisms of support during disasters, adding to the problems of rural women, especially female-headed farm households that result from gender division of labour and land rights, and deepening macroeconomic crises by reducing agricultural exports.

3.4 The Gender Dimension

There are a number of interlinked reasons why women are more vulnerable than men to HIV and AIDS; this includes female physiology, women's lack of power to negotiate sexual relationships with male partners, especially in marriage, and the gendered nature of poverty, with poor women particularly vulnerable (Walker, 2002). Inequities in gender run parallel to inequities in income and assets. Thus women are vulnerable not only to HIV and AIDS infection but also to the economic impact of HIV and AIDS, often as a result of the gendered power relations evident in rural households (Waterhouse & Vifjhuizen, 2001), which can leave women particularly susceptible to HIV infection. With increasing economic insecurity, women become vulnerable to sexual harassment and exploitation at and beyond the workplace, and to trading in sexual activities to secure income for household needs (Loewenson & Whiteside, 1997). As a result, women have experienced the greatest losses, and bear the greatest

burdens associated with economic and political crises and shocks (Collins & Rau, 2001), the following being some examples:

Inequities in gender run parallel to inequities in income and assets; thus women are vulnerable not only to HIV and AIDS infection but also to the economic impact of HIV and AIDS.

- *Breakdown of household regimes and attendant forms of security:* decades of changes in economic activity and gender relations have placed many women in increasingly difficult situations, which includes greater household responsibilities. For example, more active care-giving for sick and dying relatives has been added to the existing workload. Children have been withdrawn from school, usually girl-children first, to save both on costs and to add to labour in the household. In this way, HIV and AIDS facilitate a further and fairly rapid differentiation along gender lines.
- *Loss of livelihood:* whether women receive remittances from men working away from home, are given “allowances”, or earn income themselves, HIV and AIDS has made the availability of cash more problematic. This has been discussed in the livelihoods section above.
- *Loss of assets:* although poorly documented, fairly substantial investments in medical care occur in many households affected by HIV and AIDS. These costs may be met by disinvestments in assets. Household food security is often affected in negative ways. Furthermore, in many parts of Africa, women lose all or most household assets after the death of a husband.

- *Survival sex:* low incomes, disinvestments, constrained cash flow – all place economic pressures on women. Anecdotal evidence and some studies indicate that these pressures push a number of women into situations where sex is coerced in exchange for small cash or in-kind payments.

In rural areas, women tend to be even more disadvantaged because of reduced access to productive resources and support services. A number of studies have shown that women who are widowed due to HIV and AIDS sometimes lose rights to land, adding to an already precarious situation (see Drimie, 2002). These problems of land tenure overlap with the issues of gender disparity. Some research has documented that widows and their dependents in patrilineal societies are in a more tenuous position with regard to maintaining control over land (Barnett & Blaikie, 1992). When combined with evidence that female-headed households tend to be poorer in general than their male-headed household neighbours, governments and donors face a serious challenge to devise means to protect the rights of poor households (and particularly poor female-headed households) to land within future poverty alleviation and rural development strategies (Jayne *et al*, 2004).

3.5 The Impact on Institutions

The main effects of HIV and AIDS at community level are seen in the health of community members, effects on demographic composition and structure of community, educational attainment, labour force and the quantity and quality of service providers, including those of organisations such as ActionAid (Mullins, 2001). As has been emphasised by Wiggins, some of the more damaging impacts for farm households and communities may be those arising from wider processes, including the likely reduction in public services to support agriculture resulting from loss of key staff and pressure on budgets (2003).

In service-oriented sectors such as ministries of agriculture, which generally comprise the largest staff components of governments, AIDS deaths reduce the quality and quantity of services. In addition to the direct loss of skills and institutional memory, there are increased financial costs for training new staff,



The impoverishing effect of AIDS on households significantly heightens the services demanded of the state and its partners.

increased demand for health care, funeral payouts and pensions. This weakened government capacity impacts on its ability to not only meet its mandate, such as the provision of extension services and other agricultural support, but also to meet the new demands emanating from AIDS-affected communities. Critical examples include the growing numbers of orphans and vulnerable children who require a whole range of services; changing demographic patterns in communities that place more burdens on the elderly and children; and an increased disease burden. Finally, the impoverishing effect of AIDS on households significantly heightens the services demanded of the state and its partners (United Nations, 2003).

3.6 'New' Responses to HIV and AIDS

HIV and AIDS is a "creeping emergency" that progressively erodes the lives and livelihoods of those affected by the epidemic. Barnett and Whiteside describe it as a 'long wave event' the impact of which takes place over many decades, and see HIV and AIDS impoverishment lasting as long as a century (2002). They point out that 'by the time the wave of HIV infections is felt in the form of AIDS illnesses in individuals, the torrent of the epidemic is about to overwhelm medical services, households, communities'. For these reasons, the developmental effect of HIV and AIDS on agriculture continues to be absent from the policy and

programme agendas of many African countries. Many studies on HIV and AIDS focused on specific sectors of the economy such as agriculture have been limited to showing the wide variety of impacts and their intensity on issues such as cropping patterns, yields, nutrition, or on specific populations.

It is vital that agencies such as ActionAid develop an understanding of how the impact of the epidemic interacts with other factors, and reinforces the need for humanitarian systems to co-operate more effectively with long-term development assistance, particularly with development actors engaged in responses to food insecurity and HIV and AIDS. Agencies responding to crises have a responsibility to understand the ways in which HIV and AIDS is impacting upon livelihoods and to address these issues in their response. Thus issues relating to HIV and AIDS should be considered in all sectors and across the programme cycle.

By the time the wave of HIV infections is felt in the form of AIDS illnesses in individuals, the torrent of the epidemic is about to overwhelm medical services, households, communities.'
