The impact of AIDS on people and societies
Women: more vulnerable to HIV than men

The impact of AIDS on women is severe, particularly in areas of the world where heterosexual sex is the dominant mode of HIV transmission. In sub-Saharan Africa, women are 30% more likely to be HIV-positive than men. The difference in infection levels between women and men is even more pronounced among young people. Population-based studies say that 15–24-year-old African women, on average, are 3.4 times more likely to be infected than their male counterparts.

Risk from husbands and lovers

Marriage and other long-term, monogamous relationships do not protect women from HIV. In Cambodia, recent studies found 13% of urban and 10% of rural men reported having sex with both a sex worker and their wife or steady girlfriend. Meanwhile, the country’s 2000 Demographic and Health Survey found only 1% of married women used condoms during their last sexual intercourse with their husbands (Cambodian National Institute of Statistics/Orc International, 2000).

The risk of this behaviour to wives and girlfriends is clear. In Thailand, a 1999 study found 75% of HIV-infected women were likely infected by their husbands. Nearly half of these women reported heterosexual sex with their husbands as their only HIV-risk factor (Xu et al., 2000). In some settings, it appears marriage actually increases women’s HIV risk. In some African countries, adolescent, married 15–19-year-old females have higher HIV-infection levels than non-married sexually active females of the same age (Glynn et al., 2001).

Violence and the virus

HIV-transmission risk increases during violent or forced-sex situations. The abrasions caused by forced vaginal or anal penetration facilitate entry of the virus—a fact that is especially true for adolescent girls. Moreover, condoms are rarely used in such situations. In some countries, one in five women report sexual violence by an intimate partner, and up to 33% of girls report forced sexual initiation (WHO, 2001).

Impact of HIV on women and girls in the community and at home

Women may hesitate to seek HIV testing or fail to return for their results because they are afraid that disclosing their HIV-positive status may result in physical violence, expulsion from their home or social ostracism. Studies from many countries, especially in sub-Saharan Africa, have found these are well-founded fears (Human Rights Watch, 2003). In Tanzania, a study of voluntary counselling and testing services in the capital found, after disclosure, only 57% of women who tested HIV-positive reported receiving support and understanding from partners (Maman et al., 2002).

Young girls may drop out of school to tend to ailing parents, look after household duties or care for younger siblings. After a spouse’s death, a mother is more likely than a father to continue caring for his/her children, and a woman is more willing to take in orphans. Older women often shoulder the burden of care when their adult children fall ill. Later they may have to become surrogate parents to their bereaved grandchildren (HelpAge, 2003). AIDS-related stigma and discrimination often lead to the social isolation of older women caring for orphans and ill children, and deny them psychosocial and economic support.

When their partners or fathers die of AIDS, women may be left without land, housing or other assets. For example, in a Ugandan survey, one in four widows reported their property was seized after their partner died (UNICEF, 2003). A woman may also be prevented from using her property or inheritance for her family’s benefit, which in turn hurts her ability to qualify for loans or agricultural grants. The denial of these basic human rights increases women’s and girls’ vulnerability to sexual exploitation, abuse and HIV.
The impact of **AIDS** on people and societies

"Human development is about creating an environment in which people can develop their full potential and lead productive, creative lives in accord with their needs and interests... The most basic capabilities for human development are to lead long and healthy lives, to be knowledgeable, to have access to the resources needed for a decent standard of living and to be able to participate in the life of the community. Without these, many choices are simply not available, and many opportunities in life remain inaccessible" (UNDP, 2001).

In both low- and high-prevalence settings, HIV and AIDS hinder human development. Consequently, the epidemic’s dynamics need to be explored in human development terms. This focuses analysis and policy recommendations on people rather than the virus.

Globally, the epidemic continues to exact a devastating toll on individuals and families. In the hardest-hit countries, it is erasing decades of health, economic and social progress, reducing life expectancy by decades, slowing economic growth, deepening poverty, and contributing to and exacerbating chronic food shortages.

In high-prevalence countries in sub-Saharan Africa, the epidemic has a serious impact on households and communities. Most studies indicate a seemingly modest macroeconomic impact, with these countries losing on average between 1% and 2% of their annual economic growth. But the resulting effects on government revenue and expenditure will significantly weaken their capacity to mount an effective response, or indeed make progress towards the Millennium Development Goals.

Southern African countries are facing a growing human-capacity crisis. They are already losing skilled staff essential for governments to deliver vital public services, and AIDS is exacerbating this crisis. Increasingly, countries cannot meet existing social service commitments, let alone mobilize the necessary staff and resources to respond effectively.

In some Southern African countries, HIV prevalence continues to rise beyond levels previously thought possible. This means extraordinary multisectoral responses in affected countries are needed more urgently than ever. To visualize the future, UNAIDS and partners have undertaken ‘AIDS in Africa: Scenarios for the Future’—an innovative project that draws on the expertise in scenario building offered by the Global Business Environment Division of Shell International Limited, and involves 50 Africans from all walks of life. Alternative scenarios for the year 2025 are being developed considering the underlying dynamics of AIDS that shape economies and societies. The project aims to help policy-makers test their current assumptions and actions, and adjust their course to more positively shape the future.
Progress update on the global response to the AIDS epidemic, 2004

Impact on countries to get worse before it improves

- More than 40% of countries with generalized epidemics have yet to evaluate the socioeconomic impact of AIDS. This hinders essential efforts to mitigate the epidemic’s consequences for families, communities and society in general, as well as for human development.

- Of countries with generalized HIV epidemics, 39% have no national policy in place to provide essential support to children orphaned or made vulnerable by AIDS. In low- and middle-income countries, less than 3% of all orphans and vulnerable children receive publicly supported services.

- In sub-Saharan Africa’s worst-affected countries, the epidemic’s demographic impact on population structure means that if current infection rates continue and there is no large-scale treatment programme, up to 60% of today’s 15-year-olds will not reach their 60th birthday.


The impact on population and population structure

Sub-Saharan Africa has the world’s highest HIV prevalence and faces the greatest demographic impact. In the worst-affected countries of Eastern and Southern Africa, the probability of a 15-year-old dying before reaching age 60 has risen dramatically. In some countries, up to 60% of today’s 15-year-olds will not reach their 60th birthday (Timaeus and Jassen, 2003).

HIV’s impact on adult mortality is greatest on people in their twenties and thirties, and is proportionately larger for women than men. In low- and middle-income countries, mortality rates for 15–49-year-olds living with HIV are now up to 20 times greater than death rates for people living with HIV in industrialized countries. This reflects the stark differences in access to antiretroviral therapy. In low- and middle-income countries, mortality generally varies between two and five deaths per 1000 person years (PY) for people in their teens and twenties. However, HIV-infected individuals in these age groups experience death rates of 25–120 per 1000 PY, rising to 90–200 per 1000 PY for people in their forties (Porter and Zaba, 2004).

Until recently, low- and middle-income countries had extended life expectancy significantly. However, since 1999, primarily as a result of AIDS, average life expectancy has declined in 38 countries. In seven African countries where HIV prevalence exceeds 20%, the average life expectancy of a person born between 1995 and 2000 is now 49 years—13 years less than in the absence of AIDS. In Swaziland, Zambia and Zimbabwe, the average life expectancy of people born over the next decade is projected to drop below 35 years in the absence of antiretroviral treatment (UN Population Division, 2003).

*Figure 12*

**Life expectancy at birth in selected most-affected countries, 1980–1985 to 2005–2010**

Source: UN Population Division, World Population Prospects: the 2002 Revision
Unless the AIDS response is dramatically strengthened, by 2025, 38 African countries will have populations which will be 14% smaller than predicted in the absence of AIDS. In the seven countries where prevalence exceeds 20%, the population is projected to be more than one-third smaller due to the epidemic (UN Population Division, 2003).

HIV is not evenly distributed throughout national populations. Instead it primarily affects young adults, particularly women. This means the epidemic is dramatically altering heavily affected countries’ demographic and household structures. Normally, national populations can be graphically depicted as pyramids. As epidemics mature in high-prevalence countries, new patterns emerge. For example, if South Africa’s epidemic remains the same, its population structure will distort; there will be far fewer people in mid-adult years, and fewer women than men aged 30–50.

**Women affected more than men**

The epidemic’s impact on women and girls is especially marked. Most women in the hardest-hit countries face heavy economic, legal, cultural and social disadvantages which increase their vulnerability to the epidemic’s impact. (see boxes on gender beginning each chapter).

In many countries, women are the carers, producers and guardians of family life. This means they bear the largest AIDS burden. Families may withdraw young girls from school to care for ill family members with HIV. Older women often shoulder the burden of care when their adult children fall ill. Later they may become surrogate parents to their bereaved grandchildren. Young women widowed by AIDS may lose their land and property after their husbands die—whether or not inheritance laws are designed to protect them. Widows are often responsible for producing their families’ food and may be unable to manage alone. As a result, some are driven to transactional sex in exchange for food and other commodities.

When the male head of a household becomes ill, women invariably take on the additional care duties. Providing care to an AIDS patient is arduous and time-consuming; even more so when it is done on top of other household...
duties. A caregiver’s burden is especially heavy when water must be fetched from a distance, and sanitation and washing chores cannot be carried out in or near the home. South Africa aptly illustrates this. It is one of the most developed countries on the continent. Yet, a 2002 survey of AIDS-affected households found fewer than half had running water in the dwelling and almost a quarter of rural households had no toilet (Steinberg et al., 2002).

Stigma has concrete repercussions for people living with HIV. Family support and solidarity cannot be assumed. A woman who discloses her HIV status may be stigmatized and rejected by her family. In most cases, women are the first in the family to be diagnosed with HIV and may be accused of being the source of it in the family.

**The impact of AIDS on poverty and hunger**

At the national level, the epidemic’s economic and demographic effects have received substantial media and academic attention. However, the epidemic’s often-catastrophic impact on HIV-affected households deserves greater analysis and policy effort. In some of the worst-affected countries, before the AIDS epidemic even started having an impact, the living standards of the poor were already deteriorating markedly. The epidemic drives these households to destitution.

For example, in Zambia’s foundering economy, per capita Gross Domestic Product shrank by more than 20% between 1980 and 1999 (from US$ 505 to US$ 370). Over the same period, average daily calorie intake per person fell from 2273 to 1934 (UNCTAD, 2002). Amid such steady impoverishment, a poor household has limited abilities to overcome new adversities. It also has no resources to help others. Many of these households break up. After the death of one or both parents, children are parcelled out to relatives or community members.

The nature and severity of HIV on a household depends on the surrounding epidemic’s extent and intensity. At the moment, sub-Saharan African households are most heavily affected by AIDS. But the epidemic does not discriminate. It devastates households and communities everywhere, even in countries with comparatively low national prevalence. For example, a study conducted for China’s UN Theme Group on HIV/AIDS found significant economic and emotional impacts on AIDS-affected households. It also indicated the need for rapid increases in health-sector spending (Yuan et al., 2002).

Over the past 10–15 years, many of the worst-affected countries’ social services have withered or become less affordable, incomes and formal employment levels have plunged and wars and large-scale population migration have disrupted social stability. Throughout sub-Saharan Africa, life-threatening diseases other than AIDS, such as tuberculosis and malaria, are on the rise. In this deteriorating context, poor households and communities are struggling to cope with the epidemic (Mutangadura, 2000).

**How do households feel the impact of AIDS?**

In recent years, many Southern African countries’ prevalence levels have increased. Furthermore, the impact of East Africa’s long-term, high-prevalence level is also now becoming visible, often representing an extreme shock for affected households dealing with these crises.

- AIDS causes the loss of income and production of a household member. If the
infected individual is the sole breadwinner, the impact is especially severe.

- AIDS creates extraordinary care needs that must be met (usually by withdrawing other household members from school or work to care for the sick).
- AIDS causes household expenditures to rise as a result of medical and related costs, as well as funeral and memorial costs (Food and Agricultural Organization, 2003a).

Poor households are particularly in danger of losing their economic and social viability, and of eventually being forced to dissolve, with the children migrating elsewhere (Rugalema, 2000; Akintola and Quinlan, 2003). AIDS-affected households also appear more likely to suffer severe poverty than non-affected households, and older parents who lose adult children to AIDS are exceptionally prone to destitution (Rugalema, 1998).

(UN Population Division, 2003). In South Africa and Zambia, studies of AIDS-affected households—most of them already poor—found monthly income fell by 66%–80% due to coping with AIDS-related illness (Steinberg et al., 2002; Barnett and Whiteside, 2002). In Thailand, a 1997 study showed when a person with steady employment died of AIDS, the household's lifetime income loss was more than 20% greater than a household with non-AIDS-related deaths (Pitayanon et al., 1997).

**Food insecurity**

Between 1999 and 2001, 842 million people worldwide were undernourished—95% of them in low- and middle-income countries. Sub-Saharan Africa accounts for 11% of the world's population. It is also home to 24% of the world's undernourished people. This means the epidemic is unfolding in a setting dominated by chronic malnutrition and food insecurity.

Increasing needs in the ‘care economy’

The ‘care economy’ is the term used to describe unpaid work in the home, usually done by women. As the epidemic becomes ever more severe, women’s unpaid care workload increases dramatically. In sub-Saharan Africa, an estimated 90% of AIDS care occurs in the home, placing extraordinary strains on women who must take care of the children and produce an income or food crops. To help them cope, carers need support programmes, as well as national and macroeconomic policies designed to mitigate these impacts. The care burden should also be redistributed between men and women (Ogden and Esim, 2003) (see ‘Finance’ chapter).

Lost income

In the 1990s, a comparative study tracked 300 AIDS-affected households in Burundi, Côte d’Ivoire and Haiti. It found a steady decline in the number of economically active members per household. This was usually followed by a drop in per capita household consumption (UN Population Division, 2003). In fact, AIDS is intensifying chronic food shortages. It causes farm labour losses and depletes family income that would normally purchase food. In Zambia, research shows the poorest economically active households rely heavily on cash income for food (Food Economy Group, 2001). When the price of food increases, poor families are hit hardest.
In high-prevalence countries, a vicious cycle exists between food shortages, malnutrition and AIDS (Food and Agriculture Organization, 2001). In Zimbabwe, adult HIV prevalence is around 25%. By 2000, AIDS had robbed the country of between 5%–10% of its agricultural workforce. By 2020, FAO projects farm labour losses will approach 25%. In Malawi, households that lost females under age 60 were twice as likely to experience a food deficit as households in which men in the same age bracket had died (SADC, 2003). In Uganda, 1990s research demonstrated food insecurity and malnutrition were the most serious problems for many female-headed AIDS-affected households.

Food insecurity is especially damaging for people living with HIV because they need more calories than uninfected individuals. Furthermore, malnourished HIV-infected people progress more quickly to AIDS (Harvey, 2003). HIV prevention, nutritional care, and AIDS mitigation measures need to be incorporated into general food security and nutrition programmes (Food and Agriculture Organization, 2003c).

Southern Africa’s food crisis

Southern Africa’s 2002–2003 food crises illustrated the epidemic’s potential future impact on heavily affected countries. In six of the 10 highest-prevalence countries—Lesotho, Malawi, Mozambique, Swaziland, Zambia and Zimbabwe—more than 15 million people required emergency food aid due to widespread chronic and acute food shortages. In essence, Southern Africa’s epidemic provided a vivid example of the magnifying effect of AIDS on poverty, gender inequities and weak national institutions.

Initially, the food shortages were triggered by aberrant weather conditions and a series of policy- and governance-related failures that seriously affected food production in advance of the food crisis (Harvey, 2003; Wiggins, 2003). AIDS made the situation worse. In Malawi, Zambia and Zimbabwe, households with chronically ill adults, recent deaths and orphans suffered marked reductions in agricultural production and income generation (SADC, 2003).

“Throughout the region people are walking a thin tightrope between life and death. The combination of widespread hunger, chronic poverty and the HIV/AIDS pandemic is devastating and may soon lead to a catastrophe. Policy failures and mismanagement have only exacerbated an already serious situation.”

– James Morris, World Food Programme’s Executive Director, July 2002.

How households respond

Households cope with the epidemic’s devastation in various ways. In Kagera, Tanzania, households that experienced a death added at least one member, perhaps because extended family members stepped in to help out (World Bank, 1999). Elsewhere, in Rakai, Uganda, households became considerably smaller, possibly because children were sent to relatives, or adults left to search for employment (World Bank, 1999).

The household impact of AIDS can be especially severe when the infected individual is an adult woman. In all low- and middle-income countries, women and girls perform the lion’s share of social reproduction work. They raise and nurture children, perform domestic labour and take care of the sick. In societies defined by extensive labour migration systems—including
many of those hardest hit by the AIDS epidemic in Southern Africa—women head the majority of households, especially in rural areas. In South Africa, one survey has found almost three-quarters of AIDS-affected households were female-headed. A significant proportion of these women were battling AIDS-related illnesses themselves (Steinberg et al., 2002).

In Manicaland, Zimbabwe, when a woman died from AIDS, in two out of three cases households dissolved (Mutangadura, 2000). Much of the burden generated when an adult woman dies shifts to other, usually older, women who step in to foster the children. Often, the new foster mother has limited employment options and depends on low-paying, informal activities to generate income for the newly expanded household (Mutangadura, 2000).

In Cambodia, a recent study by the Khmer HIV/AIDS NGO Alliance and Family Health International found that an estimated one in five children in AIDS-affected families reported they were forced to start working in the previous six months to support their family. One in three had to provide care and take on major household work. Many had to leave school, forego necessities such as food and clothes, or were sent away from their home. Furthermore, all the children were exposed to high levels of stigma and psychosocial stress. Girls were more vulnerable to this than boys.

An AIDS-affected household’s response depends on the resources it can gather together. When possible, families liquidate savings, borrow money or seek extended-family support (Food and Agriculture Organization, 2003a). Often, though, these households have limited savings and a lack of credit or insurance options. This means they must rely solely on their labour power to make up their lost income (Beegle, 2003).

Food crisis exacerbated by AIDS: a different kind of shock

Famine or food shortages are felt differently by AIDS-affected households and families. Normally there is ample forewarning before an impending food shortage. Within the limits of their resources and opportunities, most families can draw on past experiences and knowledge handed down from previous generations to safeguard their future viability.

By contrast, AIDS-affected households have reduced coping capacity. For instance, AIDS tends to cluster in households, generally striking individuals in their working and nurturing prime. Then, partners and children become infected, and are unable to compensate for the illness of the prime breadwinner or caregivers (Baylies, 2002). Due to a family’s illness, less labour-intensive, non-cash crops may be planted and therefore cash may be less available than normally to purchase food. Stored food may be less nutritious. Caring for sick household members may further reduce the capacity to seek other food sources.

“AIDS undercuts the resilience which households and communities draw upon to cope during periods of difficulty. In the face of an external shock, poor households respond with a variety of strategies, including altering income-generating activities and consumption patterns as well as calling upon family and community support. AIDS strikes at productive adults, the asset most likely to help during a crisis.”

(UNAIDS, 2003)
Household responses can also differ between urban and rural settings. In urban settings, households often resort to informal borrowing and using their savings. Rural households tend to sell assets, migrate or rely on child labour (Mutangadura, 2000).

During planting and harvesting seasons, economic considerations often force poor families to suspend or postpone care-giving to earn income or grow food for the household. When such short-term economic considerations take precedence over continuing health concerns, it can compromise a household’s long-term viability (Sauerborn et al., 1996).

Some studies indicate families may partially recover their earlier consumption levels. This suggests households can gradually develop coping mechanisms. Nevertheless, such coping occurs within a broader context of household impoverishment and social exclusion (Barnett and Whiteside, 2002).

Frequently, AIDS-affected households shuffle tasks and duties among surviving members (Barnett and Whiteside, 2002). In Tanzania, women with sick husbands spend up to 45% less time doing agricultural or income-earning work than they did before illness struck (UN Population Division, 2003).

**Increased spending needs**

To cover increased AIDS-related medical costs, households often reduce spending on food, housing, clothing and toiletries (World Bank, 1999). On average, AIDS care-related expenses can absorb one-third of a household’s monthly household income (Steinberg et al., 2002). A South African study found more than 5% of AIDS-affected households were forced to spend less on food to cover these increased costs. This finding is even more distressing because almost 50% of the households had already reported experiencing food shortages (Steinberg et al., 2002). In South Africa’s Free State province, a long-term study reported AIDS-affected households maintain food, health and rent expenses by reducing spending on clothing and education (Bachmann and Booyzen, 2003). Furthermore, families often spend more on funerals and memorials than on medical care (World Bank, 1999).

To make matters worse, many households sell assets to cover the costs associated with AIDS. Asset liquidation usually begins with the sale of non-essential items, but can quickly progress to selling key productive assets. In Chiang Mai, Thailand, 41% of households affected by AIDS reported having sold land, and 24% were in debt. Among rural households in Burkina Faso, selling livestock and reorganizing household labour were the usual responses to serious illness (Sauerborn et al., 1996). Once rid of productive assets, the chances diminish that households can recover and rebuild their livelihoods. This leads to the threat of a terminal slide toward destitution and collapse.

**Community support**

AIDS-affected households rely heavily on relatives and community support systems to weather the epidemic’s economic impact. These networks lend money, provide food and assist with labour and child care. When rural families confront the twin challenges of AIDS and food shortages, urban household members often send money or food. Conversely, rural relatives provide food to urban counterparts or invite them to rejoin the rural household.

Community support structures include savings clubs, burial societies, grain-saving schemes, loan clubs and labour-exchanging schemes (Mutangadura, 2000). But relatives and community support systems are sometimes not
available to poor households that lack the means and time to invest sufficiently in reciprocal arrangements (Adams, 1993). In particular, poor female-headed households lack access to these networks.

In general, wealthier households have greater access to reciprocal networks than their poorer counterparts (Baylies, 2002). But, even when they function well, relatives and community networks seldom have the capacity to meet a vulnerable, AIDS-affected household’s needs. For example, in Zimbabwe’s Manicaland, poorer households report receiving help with food, clothing and labour, but no assistance with paying school and health-care fees, or rent (Mutangadura, 2000).

**Taking action**

A combination of initiatives is needed to strengthen the coping capacity of AIDS-affected households to address the complex and interrelated challenges they face (Nalugoda et al., 1997; Lundberg et al., 2000). Development experts have long debated the relative merits of targeted versus broad-based poverty reduction measures. The epidemic affects both aspects: many household emergency conditions require targeted action, while impoverishment results in long-term development challenges.

The 2003 report to the UN Chief Executives Board (UNAIDS CEB, 2003) recommended eleven programmatic actions for UN agencies in Eastern and Southern Africa. These were:

- Action 1: Implement community safety-net programmes;
- Action 2: Improve data collection on community impact and dynamics;
- Action 3: Strengthen livelihoods in highly affected communities and for key groups;
- Action 4: Undertake dedicated programmes for women’s empowerment;
- Action 5: Undertake dedicated programmes to assist the growing orphan population;
- Action 6: Undertake urgent capacity building to fight AIDS, especially in the health sector;
- Action 7: Undertake urgent capacity building to deal with the impacts of AIDS;
- Action 8: Mainstream AIDS into development planning;
- Action 9: Build leadership to lead participatory programme reviews;
- Action 10: Advocate and support partnership forums;
- Action 11: Invest in monitoring, tracking and evaluation systems.

Welfare programmes can help, and should be specially targeted towards the most deprived and vulnerable households and communities. Local institutions, such as health clinics, could identify and obtain help for impoverished households struggling with serious illness. Special care could include home visits, food and nutritional support, and waiving school user fees, etc. (Sauerborn et al., 1996). Other necessary targeted initiatives include community-based programmes to provide families with direct financial assistance so they do not have to sell productive assets to cope with AIDS costs.

Reducing stigma and discrimination goes hand-in-hand with providing help to HIV-affected households. Stigma sometimes causes shame or fear of ostracism, and deters household members from seeking and receiving community-based assistance. In South Africa, one survey found that only one-third of respondents who had revealed their HIV-positive status received a supportive response in
their communities. One in ten said they met with outright hostility and rejection (Steinberg et al., 2002).

Programmes are necessary to build and strengthen basic infrastructure, especially water and sanitation; reduce caregivers’ day-to-day burdens; and increase households’ abilities to cope with AIDS burdens. Other broad-based strategies include programmes providing child support payments or school lunches. Furthermore, social welfare support programmes for the elderly are needed, especially for those raising their grandchildren.

Income-generating initiatives that address women’s particular economic vulnerability are integral to the AIDS response. First, women’s circumstances within impoverished AIDS-affected households require readily available emergency relief. Then, microfinance programmes that offer reasonable interest rates need to be expanded. Other strategies that benefit women include: death insurance to cover funeral costs for terminally-ill patients; flexible saving arrangements and emergency loans. These initiatives support the entire household, a necessity since research indicates women in low- and middle-income countries devote any additional income to meeting their children’s needs (Hunter and Williamson, 1997).

The epidemic’s deep and multifaceted impact on households and communities makes it crucially important to address AIDS within a poverty-reduction context. To date, few countries have incorporated meaningful AIDS components into their poverty-reduction plans (see ‘Finance’ chapter).

Impact on agriculture and rural development

A healthy agricultural sector is central to the well-being and self-sufficiency of low- and middle-income countries. Agriculture affects food security, the fate of national economies and the sustainability of environmental assets. It accounts for 24% of Africa’s gross domestic product, 40% of its foreign exchange earnings and 70% of its employment. In 2000, about 56% of Africans (more than 430 million people) were engaged in agriculture.

Unfortunately, especially in the hardest-hit countries, the epidemic attacks the agricultural base—it infects and then kills many agricultural workers prematurely. This causes a loss of labour, reduced farming income and household assets and lowered household-level food security (Topouzis, 2003). The UN’s Food and Agriculture Organization estimates AIDS will have claimed one-fifth or more of agricultural workers in most countries in Southern Africa by 2020 (Villareal, 2003; Food and Agriculture Organization, 2003b).

This loss of workers is critical. When one or two key crops must be planted and harvested at specific times, losing even a few workers during these periods can scuttle production (Bollinger and Stover, 1999). Households try to adapt by farming smaller plots of land, cutting back on weeding, repairing fences and tending irrigation channels, or livestock husbandry. Often land must be left fallow, becoming affected by erosion and degradation, while livestock that can’t be tended become more vulnerable to disease, predators and thieves (Barnett and Whiteside, 2002). In a Ugandan study, almost half the respondents said AIDS-related labour shortages forced them to reduce the variety of crops they farmed (Asingwire, 1996).

In rural communities, gender inequality also increases the epidemic’s agricultural impact. In Tanzania, women with seriously ill husbands spend up to 50% less time doing farm work (Rugalema, 1998). Following the male adult’s
death, households frequently turn to subsistence crops, avoiding the high-value crops usually managed by men (Yamano and Jayne, 2002). In many societies, women lack legal or even customary title to land, livestock and other key assets, and widows may lose what they helped develop and maintain.

**Taking action**

In heavily-affected countries, the causes of food insecurity are multiple, complex and interrelated. Critical factors include: agricultural, trade and macroeconomic policies; land tenure and inheritance systems; climate patterns; and the state’s capacity to provide rural areas with vital support services (Barnett and Whiteside, 2002). As the epidemic progresses, chronic food insecurity will likely grow worse. Any response must derive from an understanding of how households obtain their livelihoods, targeting as many aggravating factors as possible and integrating AIDS into policies and programmes to achieve food security and rural development. These will create a long-term defence against both famine and AIDS.

Urgent priorities include initiatives that enable people living with HIV to stay healthy for as long as possible—such as antiretroviral therapy, tuberculosis treatment, and nutritional assistance. Such initiatives help AIDS-affected households preserve or recover their livelihoods (Baylies, 2002). Other valuable responses would encourage planting less labour-intensive crops that still provide nutritious food, strengthening school food programmes, and securing women’s and children’s rights to retain land and assets, thereby improving the security of land tenure. Accordingly, laws should be reformed to recognize women’s rights to inherit land. Also, effective local-level enforcement mechanisms need to ensure adherence to these laws (Food and Agriculture Organization, 2003a).

**Impact on the supply, demand and quality of education**

The epidemic’s impact on education has far-reaching implications for long-term development. Globally, AIDS is a significant obstacle to children achieving universal access to primary education by 2015—a key target of both the Education for All Initiative (UNESCO, 2000) and the Millennium Development Goals (United Nations, 2001). UNESCO estimates 55 nations are unlikely to reach universal primary enrolment by 2015; 28 of these are among the 45 most AIDS-affected countries (UNESCO, 2002). An estimated US$1 billion per year is the net additional cost to offset the results of AIDS (i.e. the loss and absenteeism of teachers and incentives to keep orphans and vulnerable children in school).

The epidemic weakens the quality of training and education, which means fewer people benefit from good standard school and university education. It also accelerates the impact of a pre-existing professional ‘brain drain’. However, responses to these issues are piecemeal; overstretched ministries with limited resources are overwhelmed by the need. Many education ministries are adding HIV prevention to their curricula—a valuable part of a successful AIDS response. However, too few are examining the epidemic’s impact on the education system itself and taking appropriate action.

**Supply of teachers**

Teachers and lecturers belong to the most HIV-affected age group, although vulnerability patterns differ between countries. For example, in Botswana, Malawi and Uganda, teacher mortality rates were broadly compatible with general population rates, although they were higher among both primary school and male teachers (Bennell et al., 2002). In Zimbabwe, male and
female teachers have infection rates similar to those of the general population—about 19% for males and 28% for females (Gregson et al., 2001). In South Africa’s KwaZulu-Natal, teacher mortality varied significantly by age group (Badcock-Walters et al., 2003).

In Kenya, Uganda, Swaziland, Zambia and Zimbabwe, the epidemic is expected to significantly contribute to future shortages of primary teachers (Goliber, 2000; Malaney, 2000; Swaziland Ministry of Education, 1999). Without forward long-term planning, these countries will have great difficulty meeting their school enrolment targets. For example, if Namibia continues to train teachers at its current rate of 1000 per year and maintains a desired pupil-to-teacher ratio of one teacher for every 34 primary students, the teacher shortfall will increase from 1000 in 2001 to more than 7000 by 2010 (Malaney, 2000).

This has important implications for planners and reinforces the need for educational systems to collect precise data on the epidemic’s impact on personnel. These data are needed to plan training and recruitment strategies, and create staff health-care budgets when treatment options and funding sources increase.

But AIDS is not the sole cause of teacher losses. One recent study noted that low pay and morale—already a serious problem in Malawi, Namibia, South Africa and Uganda—are contributing to overall teacher attrition (Bennell et al., 2002). Clearly, multifaceted strategies need to address the impact of the epidemic, as well as other factors depriving school systems of the teachers needed to maintain and ultimately increase school enrolment.

**School attendance**

Many AIDS-affected families may withdraw children from school to compensate for labour losses, increased care activities and competing expenses. If the mother is dying or has died, children, particularly girls, are needed for household duties. If the father dies, children may be less likely to stop their schooling. In three South African provinces, a survey of 771 AIDS-affected households reported that more than 40% of primary caregivers took time off work or school to care for an ill HIV-infected family member. Almost 10% of households removed a girl from school (compared with 5% for boys) (Steinberg et al., 2002). In these ways, AIDS reinforces gender inequities, deepens household poverty and threatens future generations.

**Student enrolment**

The epidemic may negatively affect student enrolment in other ways. Some of this is caused by reduced fertility and young adults dying from AIDS, meaning there are fewer school-

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**The negative impact of school fees**

School fees also pose significant problems for AIDS-affected households; families simply cannot afford them. It is the primary reason children are withdrawn from school (Mutangadura, 2000; Badcock-Walters, 2001). At a societal level, these fees also negatively affect development and poverty alleviation. Yet, low- and middle-income countries’ school systems often rely on these fees to cover teacher salaries and other critical expenses. Some countries are now acting to reduce the negative effect. For example, Uganda and Kenya have removed education user fees. Another approach provides families with subsidies for travel to and from school, school meals and learning materials. Several studies point to a need for assistance with secondary school fees (Mutangadura, 2000).
age children, thus decreasing social demand for education in some hard-hit areas.

Children orphaned or otherwise made vulnerable by AIDS may not attend school because they have to look after the household, care for younger siblings, or simply because they cannot afford the fees. In high-prevalence countries, the number of these children is still growing. It is crucial they have locally appropriate, affordable, non-stigmatizing, innovative educational options, such as home-based learning and distance education.

To date, in high-prevalence countries, too few governments have created policies or funding to enable children from AIDS-affected households and communities to go to school. However, Zambia’s Ministry of Education has completed extensive policy and planning to meet these children’s educational needs. It now actively works with the Ministry of Community Development to identify children who need subsidies to gain and keep access to education. Countries such as Kenya, which have adopted free and compulsory primary education, provide children—who would not otherwise be able to attend school—with an invaluable opportunity.

Moreover, skilled teachers are not easily replaced. In hard-hit countries, more teachers need to be trained, but this is currently beyond the capacity of many countries’ university or college systems. Other possible strategies include reducing the teacher training period, enticing former teachers to return to the education system, and allowing teachers to work after retirement age.

Extraordinary actions are required to prevent the epidemic from doing permanent damage to education systems and students. However, in sub-Saharan Africa, little is being done to deal with current or future teacher shortages.

**Taking action**

The Fast Track Initiative on Education for All grew out of the Monterrey consensus in 2002 (see ‘Finance’ chapter). This initiative seeks to ensure that no country with a credible education-sector plan embedded within a poverty reduction strategy fails to achieve the Millennium Development Goal of Universal Primary Completion by 2015 due to unpredictable long-term finance.

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**Impact on quality**

Education quality may also suffer as more teachers succumb to the disease. This is because more inexperienced and under-qualified teachers and increased class sizes reduce quality student-teacher contact. In rural areas, where schools are dependent on only one or two teachers, a teacher’s illness or death is especially devastating. However, there are subtler reasons why education may suffer, including the lack of motivation or ability to teach and learn because of ‘AIDS in the family’ or among colleagues (Harris and Schubert, 2001).

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appropriate domestic financing, improve aid effectiveness, and mobilize increased aid for primary education.

Impact on the health sector

Effective strategies to address AIDS need robust, flexible health systems. However, the epidemic hit just when many countries were reducing public-service spending to repay debt and conform to international finance institutions’ requirements. On top of this, the epidemic itself has contributed to rapid health-sector deterioration by increasing burdens on already-strapped systems and steadily depriving countries of essential health-care workers. Staff losses and absenteeism caused by sickness and death mean health-care sectors must recruit and train more staff. At the same time, large numbers of uninfected workers are suffering from burnout and emotional exhaustion.

In African countries, studies estimate AIDS causes between 19% and 53% of all government health employee deaths (Tawfik and Kinoti, 2001). For example, Malawi and Zambia have experienced five- to sixfold increases in health-worker illness and death rates (UNDP, 2001). In fact, the epidemic is quickly outstripping growth in the supply of health-sector workers (Liese et al., 2003). This comes when the need for health-care services is increasing rapidly in heavily-affected countries.

Health-care workers need to be sensitized to the effects of AIDS, so they can provide non-stigmatizing care. But AIDS also adversely affects uninfected patients’ quality of care, as overburdened health-care sectors adopt a triage approach that de-emphasizes patient care for conditions less severe than AIDS (USAID, 2002).

Taking action

In most low- and middle-income countries, action is urgently required to strengthen chronically weak health systems and protect the health and safety of personnel. Opinions remain varied on possible strategies, but consensus emerged at a high-level forum on the health Millenium Development Goals on the following key actions:

- Policy initiatives to address push-pull factors that encourage health-sector personnel to migrate to other regions or countries, which leads to chronic understaffing. Other widely promoted actions include: targeting HIV-positive health workers for antiretroviral treatment; improving salaries and benefits to retain and attract back highly trained staff; and reducing rigid application of professional rules so health and non-health professionals can take on additional functions.

- A ‘system-wide approach’ that harmonizes multiple-donor support, as well as giving low-and middle-income countries a greater role in setting priorities and deploying resources.

- Strengthening countries’ health-management information systems and establishing structures to monitor progress towards the health-related Millennium Development Goals.

- Expanding pre-service and in-service training.

- Ensuring workers’ occupational safety and health by providing information, protective clothing, and adequate equipment.

- Expanding the service-provision roles of NGOs and private providers.
Impact on public-sector capacity

An effective and functioning public sector is vital for delivering essential goods and services, and developing successful national AIDS responses. Before the epidemic, several worst-affected countries were already struggling with daunting development challenges, excessive debt burdens, and declining trade. In many low- and middle-income countries, adjustment programmes involved deep public-spending cuts, and governments currently struggle to provide basic social services, support and infrastructure. In the worst-affected countries, AIDS has additionally undermined the public sector’s functional effectiveness (Cohen, 2002). When essential services falter, the poor and most vulnerable endure the worst consequences.

UNDP’s comprehensive study, *The impact of HIV/AIDS on human resources in the Malawian public sector* showed the country’s annual loss of governmental staff rose almost sixfold between 1990 and 2000, primarily due to premature AIDS deaths (UNDP, 2002). During the study period, public-service mortality increased by a factor of 10. Deaths were disproportionately high among young adults of both sexes—a strong indication AIDS was primarily responsible. In 2000, more than half of the country’s established posts in the education and water departments stood vacant (Malawi Institute of Management/UNDP, 2002). Furthermore, other Southern African countries’ key ministries report half or more of their posts are unfilled (Cohen, 2002).

Few studies have comprehensively analysed the epidemic’s impact on public-sector productivity. However, it is reasonable to conclude that such high vacancy rates inevitably lead to poorer coverage and quality of government services.

Impact on workers and the workplace

AIDS threatens economic security and development because it primarily strikes the working-age population. This has implications for survival of communities and enterprises, as well as long-term maintenance of productive capacity. The epidemic erodes economic growth through its impact on labour supply and productivity, savings rates, and the delivery of essential services. Individuals living with HIV lose jobs, incomes and savings. As a result, they consume and invest less. The workplace—farms, factories, market stalls or government offices—becomes less productive or sometimes fails, reducing output, profits, tax revenue and investment.

In hard-hit countries, AIDS is likely to reduce the labour force’s growth rate. The International Labour Organization (ILO) projects that the labour force in 38 countries (all but four in Africa) will be between 5% and

Ministries of agriculture staff and HIV

In Eastern and Southern Africa, a recent report examining AIDS and agriculture concluded illness and death among government agricultural employees undermined governmental capacity to respond adequately to the epidemic. In Kenya’s Ministry of Agriculture, AIDS caused 58% of all staff deaths in the past five years. Meanwhile, some 16% of staff in Malawi’s Ministry of Agriculture and Irrigation are HIV-positive (Topouzis, 2003).
35% smaller by 2020 because of AIDS. The epidemic also affects workforce quality, since AIDS-affected workers are replaced by younger, less-experienced men and women. At the same time, the loss of teachers and trainers results in future generations with lower skill levels (Lisk, 2002). South Africa’s Labour Department says an estimated 3% of the country’s workforce (or roughly 500 000 workers) could be in the terminal stages of AIDS by 2010—a threefold increase over the 2001 estimate.

**Increasing the cost of doing business**

AIDS reduces output by squeezing productivity, diverting productive resources, depleting skills and distorting the labour market. For employers, employee health expenses and funeral costs are rising as productivity and profits decline. The epidemic increases absenteeism, organizational disruption, and the loss of skills and ‘organizational memory’. The loss of supervisory workers can have an especially harsh impact, since their acquired knowledge and skills are seldom replaced simply by hiring others. In hard-hit areas, the general shortage of skilled workers and management-level staff can mean positions stay vacant for months or even years—at a significant cost to productivity.

The effects can be even harsher for small businesses and the informal economy—both sources of work for most women and men in low- and middle-income countries. Almost invariably, workers in the informal economy lack health insurance or access to medical facilities at their workplaces, and their livelihoods are heavily reliant on their labour and skills. Workers in the informal economy also have little access to AIDS workplace programmes.

**Reducing workplace impact**

Supporting workplace prevention programmes for employees and management makes good economic and developmental sense. So, too, does providing health care in workplace settings, and endorsing policies of non-discrimination against employees living with HIV. A major South African insurance company’s 2003 health-care survey found more than two-thirds of 26 major companies questioned said they had developed an AIDS strategy. Thailand’s American International Insurance has an evaluation and accreditation programme to test and acknowledge when companies have appropriate AIDS-prevention policies. Companies that secure accreditation and continue to pass prevention policy audits are given discounted group-life insurance premiums.

A Pan-African Employers’ Confederation survey found all national employers’ organizations had an AIDS policy and had encouraged their members to implement workplace programmes and collaborate with National AIDS Councils. Increasingly, companies advocate voluntary, confidential counselling and testing, and provide antiretroviral treatment to workers. At the same time, they assure them that testing HIV-positive will not cause them to lose their employment.

The ILO encourages a comprehensive approach to workplace policies and programmes, based on protecting infected and affected workers’ rights, and offering prevention and care services. Its Code of Practice on HIV/AIDS and the world of work is a framework for action that establishes policy development principles, and provides practical programming guidance on prevention and behaviour change; protect-
In partnership with the Global Fund to Fight AIDS, Tuberculosis and Malaria, and the Global Business Coalition on HIV/AIDS, the ILO works to extend care and treatment access through occupational health services, and supports community outreach. But many HIV-positive workers are reluctant to participate in such programmes because they fear losing their jobs or being ostracized. Developing a climate that encourages workers’ participation can be facilitated by involving trade unions or workers’ representatives in planning and implementing workplace programmes.

Trade unions, and confederations of trade unions, are playing an increasingly important role in strengthening national AIDS responses. For example, the South African Clothing and Textile Workers’ Union provided HIV and AIDS training to 1100 shop stewards between 2002 and 2004. The union also actively supports voluntary, confidential counselling and testing, and develops union-based support groups for HIV-positive workers. Furthermore, the South African Clothing and Textile Workers’ Union and other unions are dynamic participants in the Treatment Action Campaign, which helped persuade the South African Government to provide antiretroviral therapy through the public sector (see ‘Treatment’ chapter and ‘People living with AIDS’ focus).

**Macroeconomic impact**

In high-prevalence countries, the combined negative effects of AIDS on finances—of households, employers and key sectors—are likely to have tangible macroeconomic impact; however, most estimates of this impact appear to be relatively modest (see Figure 14).

These estimates apply to the highest prevalence countries. Lower prevalence countries, such as those in Latin America and the Caribbean, Eastern Europe, and South and South-East Asia, are likely to have smaller macroeconomic impacts. For the most part, available estimates apply to short- or medium-term projections (10–25 years). Over this period, the models estimate that the effect of AIDS on Gross Domestic Product growth is approximately matched by the impact on total population over the same period. That is, negative effects on production are counterbalanced by similar reductions in resource consumption. As a result, the epidemic’s impact on per-capita Gross Domestic Product is relatively small—and even positive in some of the scenarios considered.

This results from the implicit assumption that most low- and middle-income countries have a surplus of unskilled labour in the formal sector, so that the short-term effect of excess mortality will include a reduction in the unemployment rate and a rise in skilled wages. In addition, lower population growth reduces the pressure on land and physical capital, so that production becomes more capital-intensive, and labour productivity increases. Available models used assume that the economies of affected countries have sufficient flexibility for these adjustments to occur.

These modelling exercises may underestimate the longer-term impact on economic growth in heavily affected countries, should the number of people affected and infected continue to grow rapidly. Few models can capture the economic costs of institutional dysfunction, for example, or the costs of a severe distortion in the supply and distribution of labour power, intergenerational transmission of knowledge and skills, or of the disruption of lifetime capital acquisition and inheritance.
Pessimistic estimates of macroeconomic impact in the long run were reported in a recent joint study by Heidelberg University and the World Bank (Bell et al., 2003), using South Africa as a test case. The long-term economic costs of AIDS could be ‘devastating’ because of the cumulative weakening from generation to generation of human capital. To avoid such an outcome, the study advised greater spending to contain the epidemic, more funds to provide treatment and care for those infected, increased aid for orphans via income support or subsidies that are linked to school attendance, and taxes to finance these expenditures.

Perhaps the most significant impact of the epidemic will be on government budgets. Governments will witness reduced growth in tax revenues as economic growth slows, while budgetary demands for health care and social welfare will increase. Governments will face the same increased AIDS-related employment costs as those faced by the private sector, including increased training and recruitment costs and changes to the structure of health insurance and pensions. These combined effects are likely to complicate efforts to balance government budgets for many years to come, and will significantly inhibit the capacity of governments in high-prevalence countries to mount an adequate response without external assistance.

**Challenges of the ‘Next Agenda’**

The impacts of AIDS on the development capacity of poor countries will significantly undermine their ability to make substantive progress towards the Millennium Development Goals, particularly in regard to poverty reduction, education and health targets and the care of orphans. The epidemic has placed multiple challenges before the international community, cutting across every sector. These challenges include:

- Embedding the message that AIDS is both a global emergency and a long-term development crisis that requires an exceptional and sustained response, far beyond the scale of what we have seen to date.
- Ensuring there is universal recognition that AIDS is reversing decades of development progress in the most-affected countries. Therefore, strengthening the response to
AIDS must be a central part of development programming and practice.

- Reorienting situation assessment and early warning systems to a ‘people focus’ with greater attention to household impacts.

- Developing new strategies to deal with the disproportionate impact of the epidemic on women, girls and orphans, including microcredit, school support and food assistance programmes.

- Developing strategies for radical and innovative approaches to restoring human capacity in the worst-affected countries; for example, massive antiretroviral therapy programmes, a complete re-thinking of how skills will be built, retained and sustained, salary support, stopping the drain of health and administrative workers, etc.

- Developing long-term strategies to replace the short-term ‘Band-Aid’ approaches which have dominated the response up until now. The epidemic is not going to be resolved in the short-term; strategists need to be looking 10–20, even 30, years ahead.