Mitigation activities aim to repair or reduce the damage done by the AIDS epidemic to individuals, their families and communities, institutions, and in some cases to economies and social systems.

Like the wider response to AIDS, efforts to mitigate its impact must reinforce other health and development initiatives, notably the Millennium Development Goals of eradicating extreme poverty, reducing the burden of disease, achieving universal primary education, ensuring gender equality, protecting the environment, and developing a global partnership for development. The links between ill-health and poverty are well known and provide a powerful argument for placing responses to AIDS at the centre of the international development agenda (WHO, 2001).

The growing focus on AIDS by development agencies and national governments represents an opportunity to reinforce or build health, educational and social services systems in places where these are neglected or under-resourced. Improvements in these areas—for example, better coverage by basic reproductive health services, water and sanitation projects or poverty reduction measures—will in turn help to reduce the impact of AIDS, even though that is not their primary objective. In countries that are beset by a variety of challenges in addition to AIDS, such indirect approaches are a necessary complement to the direct provision of HIV-focused prevention, care and treatment programmes (Sengwana and Quinlan, 2004). An important component of mitigation in countries with generalized epidemics is the protection and strengthening of human capacity, as illness removes skilled personnel from the workforce, and deprives both the state and private sector of their knowledge and experience (UNDP, 2005).

Like prevention and care initiatives, AIDS mitigation programming should be ‘mainstreamed’ into development processes at a variety of levels (see ‘National responses’ chapter). This includes international and national development instruments, such as the United Nations Development Assistance Framework and Poverty Reduction Strategy Papers, but also the civil society work of nongovernmental organizations and
community or faith-based groups at field level.

Since the social and economic impacts of adult deaths from AIDS-related illnesses fall most heavily on poorer households, many of which are headed by women, development programming should include a strong pro-poor and gender-sensitive component (Mather et al., 2004). Civil society has a key role to play in this respect, not least in helping to ensure, through advocacy and political pressure, that efforts are sustainable in the long term and are not disrupted by political cycles.

It is important to stress that AIDS mitigation cannot be seen as an alternative to HIV prevention: it is a vital part of a comprehensive global response to AIDS. In cost-benefit terms, any success in preventing infection today represents huge savings in money and effort in the future.

It is essential that all such efforts be based on human rights. As well as achieving the desired outcomes—stable income and food security, support for orphans and other children made vulnerable by AIDS, gender equality, etc.—AIDS mitigation programming needs to be built on rights-based processes. That means programming must be participatory, transparent and inclusive of the people affected by the epidemic.

Support for HIV-positive people and their families

The people most directly affected by AIDS are, of course, those living with HIV and their families. Therefore, the first priority in mitigation is to enable the HIV-positive person to stay healthy as long as possible through interventions such as antiretroviral therapy, nutritional assistance and treatment for opportunistic infections. In most low- and middle-income countries, this requires the expansion of health services to increase access to counselling and HIV testing facilities (since most of the world’s HIV-positive people are unaware of their status) and to increase access to care and treatment. It should also be remembered that the health of large numbers of HIV-positive people in low- or middle-income countries is undermined by tuberculosis, malaria, sexually transmitted infections.
Countries such as Botswana, Namibia, Malawi, Rwanda and Zimbabwe have created comprehensive national policies for orphans and other children made vulnerable by AIDS while others such as Cambodia, Haiti and Kenya deal with them specifically within their national AIDS strategies.

and a variety of parasitic conditions such as schistosomiasis (also known as bilharziasis). The impact of AIDS can thus be reduced by dealing with these diseases through relatively inexpensive public health interventions such as tuberculosis and malaria control programmes, diagnosis and treatment of sexually transmitted infections and deworming (Stillwaggon, 2005).

Antiretroviral therapy can have a rapid impact not only on the health of someone living with AIDS, but on their social and economic life. A recent study attempted to estimate the economic impact of this treatment in sub-Saharan Africa, focusing on the labour participation of AIDS patients (i.e. people receiving medical care) and of the children and adults living in the patients’ homes. The study found that within six months of beginning treatment, the likelihood of the patient participating in the labour force increased by 20% and weekly hours worked increased by 35%. The researchers commented, “Since patient health would continue to decline without treatment, these labour supply responses are underestimates of the impact of treatment on the treated” (Thirumurthy et al., 2005).

Access to antiretroviral therapy can also provide substantial economic and social benefits for those caring for people living with HIV and their families. Older carers in particular benefit as the health of the person they are caring for improves. Physical care demands may be reduced or eliminated altogether, the carer’s emotional stress reduced and their economic well-being improved (HelpAge International, 2005).

Comprehensive programming that includes psychosocial and financial support as well as medical attention is likely to provide the best results in mitigating the impact of AIDS on individuals. In China, a national policy termed the “Four Frees and One Care” takes this into account, offering the following to people living with HIV:

- free antiretroviral drugs to AIDS patients who are rural residents or people with financial difficulties living in urban areas;
- free voluntary counselling and testing;
WFP and FAO have initiated an innovative approach to securing the future livelihoods and long-term food security of orphans and children affected by AIDS. Using a combination of traditional and modern agricultural techniques, the Junior Farmer Field and Life Schools (JFFLS) train children from 12–17 years of age (equal numbers of boys and girls) for 12 months, focusing primarily on agricultural practices such as field preparation, harvesting, storage, nutrition and marketing skills. HIV prevention education is woven into the curriculum. Children attend the field schools three times a week and are provided with two meals each day (FAO, 2006). This model has shown such potential that the Ministry of Agriculture in Mozambique has incorporated the approach into their national agriculture plan.

- free drugs to HIV-infected pregnant women to prevent mother-to-child transmission, and free HIV testing of newborn babies;
- free schooling for children orphaned by AIDS; and
- care and economic assistance to the households of people living with HIV and AIDS.

The policy is particularly appropriate in the high-prevalence prefectures of China, where approximately one-third of AIDS patients have late-stage illness and tend to seek treatment only when the symptoms of opportunistic infections become life-threatening. The “Four Frees and One Care” ensure that many can return to a normal life, without the heavy financial burden that HIV-positive people bear in many parts of the world (UNAIDS, 2006).

Protecting income and living standards

Many AIDS-affected families face an urgent need to preserve or recover a means of livelihood, particularly in areas where social ‘safety nets’ are few and widespread poverty prevents extended families or neighbours from providing sufficient support.

Social protection approaches

Expanding social protection and welfare systems has received increasing priority among policy options for mitigating AIDS’ impact, particularly in sub-Saharan Africa (Wilton Park and UNICEF, 2005). Social protection options include a wide range of measures including welfare programmes, child and orphan support, public works to provide employment, state pension systems, destitution allowances and microfinancing. Since people most affected by AIDS are those who are least able to pay for services, specifically pro-poor payment strategies such as payment exemptions and vouchers for people below a certain income threshold may need to be instituted in places where medical services involve user fees (Onwujeke and Uzochukwu, 2005). Although it is likely that donor resources will be necessary for years to come in the hardest-hit countries, tax-supported or insurance-based financing systems will eventually need to be implemented or expanded in order to make social protection sustainable (Russell, 2004).
Recently, UNICEF commissioned a massive study of social protection interventions aimed at reaching orphans and other children made vulnerable by AIDS in 15 countries of eastern and southern Africa (UNICEF, 2005a). Grouping interventions under the three categories of education, public works and cash transfer systems, the study showed that there are many approaches at work across the region ranging from food subsidy programming in Mozambique to Zambia’s cash transfer pilot programme for the poorest 10% of households (the Kalomo District Pilot Social Cash Transfer Scheme). However, their scale is limited and many interventions could be more effective if planned or coordinated with each other.

For example, cash transfer schemes (e.g. foster-care grants, food subsidies and non-contributory pensions) are becoming more widespread as a response to chronic poverty, food insecurity and AIDS in high HIV-prevalence countries of eastern and southern Africa. A variety of schemes have been implemented or piloted, often but not always with support from international donors and nongovernmental organizations. The study found that although relatively few were specifically child-oriented, children did benefit from the spending, both directly and indirectly. Cash transfers were found to bolster other social protection measures relevant to AIDS-affected children including access to health and education, legal protection and psychosocial support (Save the Children, HelpAge International and Institute of Development Studies, 2005).

Similarly, pensions for older people are useful because so many orphans and other children made vulnerable by AIDS are cared for by their grandparents (see ‘Impact’ chapter). A recent study by the International Labour Organization on the cost of social protection in low-income countries in Africa estimates that a universal, non-contributory pension paid at US$ 15 per month to individuals over 65 years of age or who have a disability would cost less than 1% of gross domestic product in all seven countries studied (Pal et al, 2005).

MICROFINANCING
Microfinancing arrangements are being used to help protect the income and assets of AIDS-affected households. Many are donor-driven, though some have emerged from local initiatives such as cooperatives. Products and services offered to AIDS-affected households in various countries include specialized financial advice, concessionary or emergency loans, incentives to accumulate savings, burial insurance and education trusts for children (Mathison, 2005; CGAP, 2003). Microfinance is generally most useful to households before the impact of AIDS becomes severe, while people are still well enough to save money and to use loans for productive activities. They are also useful later on for supporting productive activities by family members who remain healthy (Murray, 2005). In Thailand, since 2002, an innovative approach called the Positive Partner Project, which receives funding and technical support from the country’s Community Development Association, has successfully paired HIV-positive and HIV-negative people in income-producing partnerships. The partnerships can obtain loans of up to US$ 600, which have been used to provide income and employment in activities such as livestock raising, laundry services and other low-cost, rapid-return enterprises (PDA, 2005).
In Mozambique, the Provincial Union of Small Farmers and the nongovernmental organization HelpAge International have been helping older people caring for HIV-positive family members establish Conselhos dos Idosos (older people’s committees), with the twin aim of reducing the cost of care and increasing income. The need is clear: while an older person’s average monthly income in rural Mozambique is US$ 12, the monthly cost of looking after an orphan is about US$ 21, while caring for someone living with AIDS costs US$ 30. Using profits from small businesses financed by a community credit arrangement (itself a way of increasing earning opportunities), a social fund run by the committees pays for transport to HIV testing centres and clinics where antiretroviral therapy is available. There are currently 44 older people’s committees in four rural districts (HelpAge International, 2005).

**Orphans and other children made vulnerable by AIDS**

Millions of children have been orphaned by AIDS or heavily affected by the multiple impacts of AIDS on their families and communities (see ‘Impact’ chapter). As the epidemic continues to result in rising mortality and a heavy burden of illness among adults, the challenge for governments and communities is to provide safe and healthy childhoods for these young people, and to do so for increasing numbers over (at least) the next decade.

Gathering together the experience of international agencies, governments, nongovernmental organizations and child protection experts, UNICEF and UNAIDS published the *Framework for the Protection, Care and Support of Orphans and Vulnerable Children in a World with HIV and AIDS* (UNICEF/UNAIDS, 2004). By the end of 2005, the framework had been endorsed by nearly 30 diverse organizations, signalling wide acceptance of its strategies to shape effective responses to the growing problem. Recognizing that no single model is appropriate in all communities or countries, the framework sets out five key strategies that can be applied from local to national level:

- strengthen the capacity of families to protect and care for orphans and vulnerable children by prolonging the lives of parents and providing...
economic, psychosocial and other support; 
- mobilize and support community-based responses; 
- ensure access for orphans and vulnerable children to essential services, including education, health care, birth registration and others; 
- ensure that governments protect the most vulnerable children through improved policy and legislation and by channelling resources to families and communities; and 
- raise awareness at all levels through advocacy and social mobilization to create a supportive environment for children and families affected by HIV.

The importance of national governments coming to grips with the problem in a comprehensive way was recognized by the 2001 United Nations General Assembly Special Session in its Declaration of Commitment on HIV/AIDS. Governments agreed that they would “by 2003, develop and by 2005 implement national policies and strategies to build and strengthen governmental, family and community capacities to provide a supportive environment for orphans and girls and boys infected and affected by HIV/AIDS.” Encouragingly, many governments have made progress in this respect since the Declaration. For example, countries such as Botswana, Namibia, Malawi, Rwanda and Zimbabwe have all created comprehensive national policies for orphans and other children made vulnerable by AIDS while others such as Cambodia, Haiti and Kenya deal with them specifically within their national AIDS strategies (FHI, 2005).

CARING ENVIRONMENTS
Whenever possible, community-based care is preferable to long-term placement of children in institutions such as orphanages (although these may be necessary as short-term solutions for children in immediate need of care). Community-based care arrangements include supporting the child’s AIDS-affected family, adoption or placement with extended or foster families, and direct assistance to children made vulnerable by AIDS. Such care is not always easy to implement or manage and the quality of care can vary widely, but research suggests that it is considerably more cost effective than institutional care and involves a more equitable use of scarce resources. For example, a World Bank study of recent projects for orphans...
ADVOCACY FOR CHILDREN AT THE LOCAL LEVEL

Governments may provide direction and policy guidelines, but local-level organizations are doing much of the work that needs to be done for children affected by AIDS. For example, community-based organizations all over sub-Saharan Africa are providing support such as meals and school uniforms for AIDS-affected children. However, these organizations also have an important advocacy role. For example, they strongly defend the right to education of orphans and other children made vulnerable by AIDS, a constant task because of the school systems’ limited capacity to assist children in greatest need. A recent report by Human Rights Watch cites a number of examples. In Soweto, a local organization caring for children orphaned by AIDS negotiated with school officials to waive school fees for these children—in fact, a right the children already have legally but which many schools refuse to grant. In Uganda, a number of local nongovernmental organizations subsidize the school expenses of AIDS-affected children and conduct workshops in schools to counter AIDS-related stigma (Human Rights Watch, 2005).

Even more fundamentally, as is clear in the UNICEF/UNAIDS 2004 framework, singling out children orphaned by AIDS for special help is stigmatizing and in many settings impractical. In terms of social security options, this means that rather than providing grants to particular categories of children (such as orphans), the aim of government programming should be to draw more impoverished children—irrespective of their parental circumstances—into the social security ‘safety net’ (Meintjes et al., 2003).

ACCESS TO EDUCATION

Helping children stay in school and ensuring that girls are not disadvantaged in their access to education are among the most important activities in the field of human development. This is recognized in the Education For All Initiative and in Millennium Development Goal 2 (universal primary education by 2015) and Goal 3 (eliminating gender disparity in primary and secondary education by 2015 as part of promoting gender equality and empowering women). Progress has been made towards both goals (UNESCO, 2005a): for example, while only 82% of the world’s school-age children were enrolled in primary school in 2001, by 2005 this had risen to an estimated 85% (UNICEF, 2005b). Nonetheless, an estimated 113 million school-age children are currently not in school and of these, 54% are girls (UN Population Division, 2005). These children are most likely to be engaged in some sort of child labour, which, in some instances, can increase their vulnerability to HIV infection.

The costs involved are one of the main obstacles to many children attending school. This has been amply proven by the rapid increases in enrolment that followed the abolition of fees in Kenya, Malawi, Uganda and the United Republic of Tanzania. For example, when
Kenya eliminated primary school tuition fees in 2003, it took only a few months for enrolment to rise from about 6 million to 7.2 million. Yet, even where tuition fees have been abolished, children’s access to school may still be blocked by levies of parent–teacher associations, compulsory uniforms, books and materials, and other costs. Thus, abolishing fees is only part of comprehensive commitment to universal primary education. It must be accompanied by other measures, particularly in education systems hard-hit by AIDS (see below under Strengthening the education sector). The World Bank and UNICEF are currently working on strategies for countries to not only abolish school fees, but also to manage the policy, financial and management issues that must accompany such initiatives (Global Partners Forum, 2006).

“Abolition of fees opens the doors to marginalized and excluded children. Given the importance of schooling for every child in a world with HIV and AIDS, the abolition of school fees is clearly of the highest priority for all children affected by the pandemic.”


AIDS AND CHILD LABOUR
The International Labour Organization’s International Programme for the Elimination of Child Labour has carried out rapid assessments in several sub-Saharan countries (South Africa, United Republic of Tanzania, Zambia and Zimbabwe) to investigate the links between AIDS, orphanhood and child labour. In the United Republic of Tanzania, for example, orphans accounted for about 70% of surveyed children involved in the self-employed sector, 60% of those in domestic work and 55% of those in the sex trade—the majority of their parents having died of AIDS-related illness. Most of the children had either dropped out of or never attended school. AIDS particularly curtails educational and employment opportunities for girls since they are more likely to be withdrawn from school to reduce household costs and help at home (ILO/IPEC, 2003).

Mitigation efforts need to address the root causes of child labour, including poverty, illiteracy and food shortages. An example is the Together Ensuring Children’s Security project in Malawi. The project, which is largely funded by the tobacco industry, aims to reduce child labour in the agricultural sector, particularly the tobacco sector where much child labour occurs. By improving local families’ food security and income levels as well as farm productivity, the project helps ensure that children are not forced into paid labour to help support their families. The project has an educational component aimed at encouraging children to attend primary school by raising community awareness of the importance of education and by constructing school facilities (Sibale and Kachale, 2004).

Service delivery and administration
Public services are affected so severely in some countries that old methods of administration are no longer sustainable and they need to be reconstructed—i.e. adopting new ways of working and managing human resources—to account for AIDS’ impacts on their own staff. Special efforts will be needed if they are to maintain their organizational integrity, protect and add to existing knowledge and expertise, and meet the rising
A well-functioning health sector is an essential element of any national response to AIDS and is crucial to meeting three of the eight Millennium Development Goals.

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demands on service delivery (Sengwana and Quinlan, 2004).

In 2005, a report entitled Hoping and Coping: A Call for Action—The Capacity Challenge of HIV/AIDS in Least Developed Countries was jointly published by UNDP and the Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UNDP, 2005). In assessing the capacity challenges facing countries hard-hit by the epidemic, the report provides a number of recommendations aimed at mitigating AIDS’ direct impact on the effectiveness of government institutions. The most urgent is, of course, workplace-based treatment and care to prolong the productive life of HIV-positive staff. But the report also offers more innovative suggestions such as requiring all service-providing institutions to dedicate a percentage of overall budgets to building supplementary capacity. Other measures include examining how existing state structures impede or facilitate service delivery in order to use human resources most efficiently and improving human resource planning and development.

Another approach is to improve public administration practices, assuming that this can increase efficiency and improve services even in the absence of new resources. Yet by themselves, these are unlikely to meet the extraordinary challenges facing public authorities at all levels, particularly in key sectors such as health and education, and those responsible for expanding vital infrastructure. Sadly, resource allocation decisions do not always take this into account and are often restricted by macroeconomic realities and agreements with international lending institutions. For example, Zambia recently became eligible for the Highly Indebted Country Initiative after agreeing to maintain its public-sector wage bill at a maximum of 8% of gross domestic product (UNDP, 2005). While the measure is aimed at reducing deficits and controlling inflation, which also hurt entire populations, it severely limits the country’s ability to hire more public-sector workers.

Such constraints on national budgets and policy options are faced by many countries with precarious economies and donor dependence. They make it
REGIONAL COOPERATION IN AFRICA’S GREAT LAKES REGION

In the Great Lakes region of Africa, it is estimated that more than six million people are currently living with HIV. In 1999, ministers of health from six countries (Burundi, Democratic Republic of Congo, Kenya, Rwanda, Uganda and the United Republic of Tanzania) acknowledged that they could not adequately respond to HIV without addressing the role that migration and displacement play in its spread. They agreed to cooperate in the Great Lakes Initiative on AIDS with funding from the World Bank’s Multi-Country HIV/AIDS Programme. The initiative requires national governments to learn new ways of working, addressing the needs of populations who normally receive little attention and few services.

A large part of the initiative’s work is focused on HIV-related prevention and care for refugees, surrounding communities, internally displaced people and returnees. Under a recent agreement, responsibilities for different population groups have been assigned as follows. Programming for individuals in refugee-affected areas is the responsibility of the participating countries and should be provided for under the terms of their national HIV and AIDS frameworks. UNHCR retains its mandated responsibility for all refugees, while responsibility for internally displaced individuals is decided on a case-by-case basis. Finally, programmes for returnees are the shared responsibility of UNHCR and each country’s National AIDS Commission.

In March 2005, the World Bank approved a US$ 20 million grant to finance the initiative over the next four years. Joint HIV programme planning has been undertaken and plans of action completed for the first year of implementation in all six countries. To provide a solid basis for evaluating the initiative, behavioural and antenatal sentinel surveillance among the refugee and surrounding host communities are planned in all six countries during the first and fourth years of the project (UNAIDS/UNHCR, 2005).

extremely difficult for public health and education services to expand, at a time when the ability of millions to pay for services is so low that the private sector cannot be expected to bridge the gap. It is also a time when efforts to improve labour productivity in Africa—including an urgent requirement for development—need to address public-sector priorities such as recruitment of teachers and health workers, and reorienting health-delivery systems “so that they focus less on curative facilities in relatively well off areas and more on rural, preventative facilities staffed by community nurses and other auxiliary health workers” (Centre for Development Policy Research, 2005).

Preserving health-sector capacity

A well-functioning health sector is an essential element of any national response to AIDS and is crucial to meeting three of the eight Millennium Development Goals. However, in many countries the health sector is threatened not only by AIDS but by many other major forces, notably accelerating labour migration (the so-called “brain drain” of doctors and nurses to industrialized countries) and
chronic underinvestment in human resources. In addition to shortages of skilled professionals—sub-Saharan Africa has less than one-tenth of the health professionals per capita that Europe has—skills are often badly distributed, with too great a dependency on city-based medical specialists and too few public-health staff in rural areas (Joint Learning Initiative, 2004).

Low- and middle-income countries in general, and those with high- and medium-prevalence epidemics in particular, need to train many more doctors, nurses and administrators to fill the shortages and remedy the imbalance in the current distribution of services. This is a massive task. WHO has estimated that scaling up to meet Millennium Development Goals 4 and 5 (reducing child mortality and improving maternal health) will require the equivalent of 100 000 more full-time health professionals in the 75 countries where the bulk of child mortality occurs (WHO, 2005a). Yet the massive training effort required will be largely wasted if countries cannot retain these precious professionals. One of the most important ways to do this is to ensure that salary levels are fair, sufficient and live up to the expectations of health professionals.

Many nurses and doctors in low-income countries are attracted to industrialized countries not only by higher wages but by facilities that enable them to use their training and skills to better advantage. In addition to those ‘pull’ factors, ‘push’ factors include the increased pressure of work as the epidemic grows, fear of infection and the fact that the stigmatization of people living with HIV often extends to those caring for them. The effects are plain and growing. In 1999, Ghana certified 320 new nursing graduates and lost 320 nurses through emigration. The following year, it lost twice as many. Today, more than half of its nursing positions are unfilled, a pattern that prevails throughout much of sub-Saharan Africa.

The pull factors are equally clear. In 2001, the National Health Service in the United Kingdom promised to stop the direct recruitment of nurses in countries suffering from their own nursing shortages but, since then, large private-sector institutions in the United Kingdom have lured more than 7000 nurses from Africa. In the United States, Congress approved an Emergency Supplemental

Many nurses and doctors in low-income countries are attracted to industrialized countries not only by higher wages but by facilities that enable them to use their training and skills to better advantage.
Appropriations bill in 2005 which made 50,000 new visas available for nurses and their families. This measure was designed to address a shortage of 126,000 nurses, a shortage exacerbated daily. The country’s own nursing schools are not keeping up with demand, while its population is growing and ageing and in need of ever more nurses (Chaguturu and Vallabhaneni, 2005).

A variety of approaches to the problem have been suggested, including increased exchange programmes and the creation of a global educational reinvestment fund to help improve and expand training opportunities in low- and middle-income countries (Joint Learning Initiative, 2004). In addition to actions at the national and international level, innovative approaches that reach out to the many private-sector health providers in low- and middle-income countries may also be helpful. An example of this can be seen in Uganda, where a microfinance programme was piloted to provide private-sector midwives with business-skills training, improve the quality of service offered (client–provider interaction, hygiene and sanitation, confidentiality, etc.) and provide revolving loans that could be used for purposes such as improving their working environment or buying medical supplies. Funding was provided by the Summa Foundation and administered through the Uganda Micro-Finance Union. Piloted in 15 district and urban clinics (with an additional 5 as controls) over 13 months, the results indicate the programme has good potential: the midwives themselves were enthusiastic about the project and had a high loan-repayment rate, while patients reported that the quality of care improved at the participating clinics. These findings suggest that such small-scale interventions could strengthen the private sector in its vital role in health care. (Agha, Balal and Ogojo-Okello, 2004).

**Strengthening the education sector**

AIDS is having a serious impact on education systems in many of the hardest-hit countries (see ‘Impact’ chapter), limiting their ability to meet the Education For All goals agreed in 2000 (UNESCO, 2005a). Evidence from Uganda shows that a child who drops out of school is three times more likely to be HIV positive in his or her twenties than a child who completes basic education. Community analyses show consistently higher HIV prevalence in children who do not attend school versus those that complete an education. A recent World Bank analysis of Demographic and Health Survey data from five countries in Africa shows that education is a strong predictor of some important preventive behaviours, and there is considerable agreement in educational research that effective girls’ education is associated with protective behaviours (World Bank, 2006).

Mitigating AIDS’ impact on the education sector entails a number of priority actions. These include ensuring HIV is addressed across the whole education sector and that capacity is built to achieve the Education For All goals (IATT, 2003). A number of responses have been created by the international community, such as the Education for All–Fast Track Initiative launched in 2002—a global partnership created to accelerate progress towards quality primary education for all children by 2015. This initiative can facilitate financial support to all low-income
countries facing funding gaps as they pursue the goal of universal primary school completion. In 2004, external aid for the 12 countries participating in the initiative increased from about US$ 300 million to US$ 350 million, closing the financing gap between funds needed and funds available in five of the countries. Two other countries will close their gap through additional financing from bilateral donors in 2005–2006. The initiative has disbursed US$ 45 million to date through its own Catalytic Fund, one of two trust funds that can provide short-term financing to close funding gaps and help develop sound educational strategies.

The UNAIDS Inter Agency Task Team on Education, with its secretariat at UNESCO, was established to enhance coordination and harmonization among UN agencies, multilateral and bilateral donors, and civil society organizations. In 2002, a working group was established to support the education sector in countries across Africa under its ‘Accelerate the Education Sector Response to HIV/AIDS in Africa’ effort. Among other activities, this effort has provided subregional and national workshops that bring together education, health and AIDS teams to share good practices and develop strategies to ensure that they are implemented within schools. Since 2002, 33 countries in sub-Saharan Africa have participated in this effort and 19 of these are currently engaged in accelerated national programmes. Leadership is increasingly based within subregional entities: the Economic Community of West African States’ network of 15 countries, an eastern Africa network of 9 countries, a lusophone (Portuguese-speaking) network of 5 countries, as well as Central African and Southern African Customs Union networks in the process of being developed. UNAIDS Cosponsors are now supporting the development of this approach outside Africa, with the Caribbean Community and Common Market leading a regional effort involving 15 countries, the development of a Greater Mekong subregional programme with 6 countries in East Asia, a Central Asia effort with 5 countries and an emerging programme in South Asia involving 5 countries.

Another multi-country initiative called EDUCAIDS (the Global Initiative on Education and HIV/AIDS) was launched in 2004 under the leadership of
Cooperation between education systems and social protection initiatives provides opportunities for improving the effectiveness of both.

UNESCO. This initiative has so far begun work in a number of countries, including Cambodia, Jamaica, Lesotho, Nambia, Swaziland and Zimbabwe, with the objective of strengthening education systems. It is one of three core Education For All initiatives, complementing those focused on literacy and on teacher education (UNESCO, 2005a). For its part, the global union Education International, with a membership of over 29 million teachers and education workers, has an HIV training programme with WHO and other partners. To date, this has reached 133 000 teachers in almost 25 000 schools in 17 countries (ILO et al., 2006).

The task of strengthening school systems to meet the pressures posed by AIDS and other problems needs to be based on sound evidence of the actual conditions in the educational sector, in order to know how best to apply scarce resources. Recently, a study was undertaken of how ready the education sectors in various parts of the world were to respond to the impact of AIDS (Boler and Jellema, 2005). The study used two approaches. The first used a self-assessment questionnaire sent by post to ministries of education in 117 countries, from which 71 replies were received. The second sought input from civil society organizations (see ‘Civil society’ chapter) through workshops that brought together representatives from nongovernmental education networks, teachers’ unions and ministries of education in 18 countries heavily burdened by AIDS. A summary report unifying the two approaches revealed mixed results (IATT, 2006). For example, three quarters of the responding countries—and all of the high-prevalence countries—reported having established dedicated management structures to coordinate the response of ministries of education to the epidemic. Less promisingly, only 59% of these structures in all countries and 70% in high-prevalence countries—had a dedicated budget, calling into question the actual powers and effectiveness of these structures.

Cooperation between education systems and social protection initiatives provides opportunities for improving the effectiveness of both. An example can be seen in the relationship between two projects in Namibia—one to enhance the involvement of school board members in
improving schools and the other aimed at creating “circles of support” for orphans and other children made vulnerable by AIDS. The above-mentioned study of social protection measures found that in working together, the two initiatives avoided working at cross purposes and helped participating schools assist children made vulnerable by AIDS to stay in school ((UNICEF, 2005a). Emphasizing the intersecting interest of education-sector policy, AIDS responses and programming for orphans and other children made vulnerable by AIDS, the study concluded with a message for governments:

“Finally, given that the scale of the EMC [educationally marginalised children] and OVC [orphans and other children made vulnerable by AIDS] crisis in Africa is only beginning to emerge .. governments and partners are faced with a stark choice: embrace and mainstream social protection as an integral function of education’s mandate, or abandon any real prospect of achieving those national and international goals to which the sector is committed.”

World of work

Employers have a significant stake in successful AIDS mitigation measures, as do workers and their representatives and ministries of labour. The underlying and most important factor is that the provision of care and treatment in the workplace saves lives, maintains enterprise production and complements public-health services. The guiding document for workplace responses is The ILO Code

PRESERVING AN EDUCATION SYSTEM UNDER STRESS

In South Africa, AIDS-related deaths are contributing to an overall reduction in the number of teachers, along with other factors such as emigration and insufficient supply of new staff graduating from teacher training. In 2004 alone, an estimated 8% of HIV-positive teachers died. Mitigating this situation will require a variety of actions. Following a detailed situation assessment, the Human Sciences Research Council of South Africa made a number of recommendations for the country’s ministry of education, universities and education trade unions. In addition to HIV prevention programmes, the Council recommended urgent implementation of a targeted programme of antiretroviral therapy and treatment of opportunistic infections for teachers, estimating that about 3% of them (approximately 10 000 individuals) currently need antiretroviral therapy.

At the same time, recognizing that medical approaches to preserving capacity will not be enough to meet the rising demand for education in South Africa’s young population, the Council also recommends measures such as improving pay and career paths for teachers in order to attract (or retain) more of them into the profession. To cope with losing teachers to Commonwealth and other countries, the Council suggests that some form of community service be required of newly qualified teachers, as is the practice with other scarce professions in the country. Other measures are recommended to encourage teachers to work in rural areas, such as loans for student teachers and supported field experience for urban teachers (Peltzer et al., 2005).
Although not sufficient on its own to change social attitudes, progressive legislation is an important avenue for tackling acts of discrimination against people living with HIV or affected by AIDS.

of Practice on HIV/AIDS and the World of Work, published in 2001 (ILO, 2001). It provides guidelines that can be used to develop policies and interventions at enterprise, community and national levels, based on consensus between employers, employees and government.

Employers clearly have a significant stake in successful mitigation measures when AIDS threatens their staff. In a recent study of the impact of AIDS on the financial performance of companies, the international bank UBS and the investment management firm FandC Asset Management concluded that there was a strong business case for companies to take their own action against AIDS (UBS and FandC Asset Management, 2005). The study modelled the calculations a major firm might make about setting up a business venture in a high-prevalence setting. Factoring in the cost of the epidemic to the venture and the costs and benefits of a treatment programme for employees (the cost of treatment amounting to 17% of wages), the net present value of the venture after 5 years was more than 5% higher with treatment than without it. The study also discussed practical considerations for businesses undertaking treatment programmes, including whether to extend treatment to dependents as well as employees and whether to provide treatment in-house or in collaboration with local medical services.

In the area of public investment, some international donors are supporting the efforts of local and national governments to mainstream AIDS mitigation efforts into infrastructure projects such as those aimed at improving urban transport or water systems. In this context, mainstreaming does not mean turning such projects into HIV-specific projects. Rather, it aims to integrate particular activities that can mitigate AIDS’ short- and long-term impacts on project workers and administrators, as well as the surrounding communities.

For example, the World Bank’s Urban Unit reviewed mainstreaming project experiences in 13 countries in sub-Saharan Africa, including Burundi and the Congo. In the latter, a massive project for Emergency Reconstruction, Rehabilitation and Living Conditions Improvement benefited, from the early stages of the project, from close cooperation between the Ministry of Health and
the project management. In addition to awareness efforts and condom distribution at work sites, funding is given to local nongovernmental organizations to provide services such as voluntary counselling and HIV testing, treatment of sexually transmitted infections for construction workers and sex workers in the area, and care and support. The project is considering extending some activities to benefit local government authorities in the project cities. In Senegal, a major initiative that is improving public transportation in Dakar and other cities has included HIV-related programming since the design stages of the initiative (Schuler et al., 2005).

AGRICULTURE
Agriculture is the economic mainstay of many low- and middle-income countries, both in its subsistence role and its contribution to the formal economy. Many AIDS mitigation programmes aim to directly or indirectly support AIDS-affected rural households whose main source of livelihood is growing crops or raising livestock. Experience suggests that indirect programmes—e.g. agricultural training, credit and access to seeds or machinery—open to all rural families in a given area need careful planning if they are to help AIDS-affected families, since such families are often less able to take advantage of the services offered (Jayne et al., 2004).

In Zambia, where the agricultural sector accounts for 67% of the workforce and generates between 18% and 20% of gross domestic product, the Ministry of Agriculture and Cooperatives has been exploring a variety of AIDS mitigation activities with various international partners. A particular focus is on improving access of HIV and AIDS-affected families to existing training and credit programmes, since their participation in such schemes is low, particularly in the case of families headed by women. Efforts to increase the income of such families may include promoting income-generating activities that are low-input, low in labour intensity, close to the family home and have a quick financial turnover: these include bee-keeping, mushroom cultivation, seed gardens (growing seeds during the dry season for planting during the rainy season), market

BUSINESS REACHES OUT
In conjunction with Kenya’s Ministry of Health, the Federation of Kenya Employers issued its first guidelines on HIV in the workplace in 1988 and now promotes compliance with The ILO Code of Practice on HIV/AIDS and the World of Work. In 2000, the National AIDS Council designated the federation as a focal point in the response to AIDS. Since then, the federation has established a broadly representative HIV/AIDS Advisory Committee which oversees the integration of HIV prevention and management components into its broader training programmes for business managers and also trains specialized animators and peer educators to promote and support workplace programmes. In addition, the federation encourages corporate social responsibility whereby businesses reach out to their communities by donating resources to the AIDS response, social marketing of condoms and working with the government and others in attending to the health, education and general welfare of children orphaned by AIDS (GBC, 2006).
Confronting stigma and discrimination and mitigating their impacts are important elements of any response to AIDS, and many HIV prevention and care projects include efforts to reduce stigma.

A great deal of attention has been paid to reducing the demands of agricultural activity on AIDS-affected farming households by helping them change from labour-intensive crops such as sugar cane or tea to crops such as sweet potato that require less strength or fewer people to tend and harvest. However, some of the most effective labour-saving solutions for these households are closer to home, namely those which reduce the time women spend on three tasks: fetching water, collecting firewood and preparing food. Research into time-use in Zambia indicates that labour-saving technologies for such domestic tasks (e.g. food-processing technologies for household staple foods, such as maize and cassava) are likely to save considerably more hours for the family than labour-saving technologies used for agricultural activities (Mather et al., 2004).

The agricultural sectors in many countries and regions are currently undergoing rapid change because of factors such as climate change and rural-to-urban migration of young people, in addition to AIDS. As a result, farming is becoming less sustainable and less of a food ‘safety-net’ for many rural peoples. Some commentators suggest that a policy debate is due on questions such as “whether it is feasible to revitalise African agriculture or whether to allow the transformation of this sector through market forces with the inevitable danger of benefit to a minority of commercial entrepreneurs and widespread food insecurity in the absence of formal sector employment opportunities” (Sengwana and Quinlan, 2004). This debate has profound implications for AIDS mitigation activities in the agricultural sector.

Action against stigma and discrimination

Confronting stigma and discrimination and mitigating their impacts are important elements of any response to AIDS, and many HIV prevention and care projects include efforts to reduce stigma (UNAIDS, 2005). However, little is known to date about the relative effectiveness of specific interventions. A recent review by the International Center for Research on Women found that very few
interventions specifically against stigma have yet been evaluated in any systematic way, and that, as previous reviews have shown (Brown et al., 2001), most have been implemented in industrialized rather than low- or middle-income countries.

**LEGAL AND HUMAN RIGHTS PROTECTION**

Although not sufficient on its own to change social attitudes, progressive legislation is an important avenue for tackling acts of discrimination against people living with HIV or affected by AIDS. However, legislation tends to change only as a result of advocacy.

This lesson is being put into practice in Central America and the Caribbean, where trade unions have launched a major project to deal with workplace discrimination against people with HIV. The partners are ORIT (the regional organization of the International Confederation of Free Trade Unions) and the Latin American and Caribbean Council of AIDS Services Organizations, an umbrella nongovernmental organization representing AIDS service organizations. The project has begun with a comprehensive survey of legislation and practices in eight countries, the first stage towards legislative reform (ILO et al., 2006).

Legal action can be an important avenue in counteracting discriminatory practices. This has been particularly true in protecting the property of AIDS-affected families, particularly those headed by women. Such families are more likely to lose land (in rural areas) and other assets than unaffected families. Women’s groups are generally the most important advocates for turning this situation around and a variety of such groups have done excellent work in various parts of the world. However, other parts of society must play their part, particularly police forces and justice systems.

An example of cooperation between women’s groups and the police can be seen in Zambia, where the Justice for Widows and Orphans Project is contending with the problem of two legal codes existing side by side in the country. Both customary law and statutory law are set in the framework of a constitution that recognizes personal law and the right to discriminate in matters such as succession and inheritance. At the same time, the

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*One of the most keenly felt forms of stigma and discrimination experienced by people living with HIV is that from health-care workers.*
FINANCING LEGAL SERVICES FOR THE POOR

In Zimbabwe, where asset protection and guardianship of children have become major issues resulting from the high rates of AIDS mortality, an innovative programme piloted by the United States Agency for International Development provides vouchers for legal services to poor, AIDS-affected households. The vouchers are issued by local nongovernmental organizations and service organizations already involved in AIDS-related activities and can be used to purchase services from law firms participating in the project. As of 2004, over 80% of the vouchers have been distributed to women, many of whom care for children orphaned by AIDS as well as their own children. Staff noticed that lawyers in the project areas now see AIDS-affected households as desirable clients and compete to provide their services. An important lesson learnt in the project is that partnerships with organizations already working in the community provide more effective coverage than static walk-in centres (Foan and Irwin, 2004).

government has ratified international conventions that outlaw such discrimination. The project brings together government bodies and international and national civil society organizations to help widows and orphans negotiate their way through this legal tangle. (Death of a husband from AIDS-related illness is the most common cause of widowhood in Zambia.)

As part of the project, the Zambian chapter of the Women and Law in Southern Africa Trust and the National Legal Aid Clinic for Women participate in Police Victim Support Units to intervene in situations where women and children orphaned by AIDS are being denied rights protected by international conventions. They also hold legal aid clinics (some of them mobile) and produce simple pamphlets and run programmes in schools informing women and children about their rights. In addition, they train women and orphans in paralegal and personal counselling, preparing them to establish community support groups and participate in radio broadcasts (Russell, 2005). The Police Victim Support Unit now provides counselling, including explanation of people’s rights. The police have also begun to respond vigorously to property-grabbing against widows and orphans, which is often perpetrated by the deceased spouse’s family (WHO, 2002, 2005b). This has resulted in greatly increased conviction rates in such cases, which rose from 6% (of 909 reported cases) in 2001 to 31% (of 734 reported cases) in 2003. However, the police are conscious that many cases are not reported for a variety of reasons, from ignorance of the law to widows’ reluctance to speak out against their relatives (FAO, 2004).

CHANGING HEALTH-CARE WORKER ATTITUDES

One of the most keenly felt forms of stigma and discrimination experienced by people living with HIV is that from health-care workers (e.g. open disrespect, ignoring confidentiality of HIV test results and serostatus and refusing services). Discrimination can have a variety of causes, but surveys conducted by Public Services International, the global union representing health-care workers,
found that discrimination by health-care workers towards patients stemmed in particular from lack of information and training, and from poor working conditions including health and safety concerns (ILO/WHO, 2005).

Efforts to change health-care workers’ attitudes and practices have been proven to be effective and can make a big difference to HIV-positive people’s lives. In India, the National AIDS Control Organisation, three New Delhi hospitals, the nongovernmental organization SHARAN and the Population Council’s Horizons project designed a training and awareness programme to reduce hospital-based stigma and discrimination (Mahendra and Gilborn, 2006). A number of challenges had to be overcome, including hospital managers’ initial hesitation to acknowledge stigma and discrimination, fear of being overwhelmed by a large number of HIV-positive people and losing HIV-negative patients, distrust between the health-care staff and the nongovernmental organization, and the very size and bureaucratic complexity of the hospitals. In the end, however, progress was made, with health workers expressing greater respect for the rights of patients and people living with HIV, and practising improved procedures. For example, physicians were more likely to state that informed consent must be received before HIV tests (37% at baseline versus 67% at follow-up), were more likely to arrange pretest counselling (56% versus 80%) and were less likely to inform ward staff of the status of HIV-positive patients admitted to the hospital (51% versus 29%).

Sometimes the benefit of training can be multiplied beyond the immediate target group, as was found by a study in China. In Fuyang Prefecture, Anhui Province, a training programme to improve attitudes among health providers not only reduced stigmatizing attitudes by providers, but also improved the attitudes of other community members who received AIDS information from the trained health providers (Wu et al., 2002).

CHANGING ATTITUDES OF THE GENERAL PUBLIC

To date, the number of interventions aimed at health-care providers is not matched by those aimed at the general public, and the review carried out by the

In the end, efforts to improve access to antiretroviral therapy and other HIV-related treatment may prove to be one of the most powerful anti-stigma interventions.
International Center for Research on Women found little quantifiable evidence of success among the few that exist. While understanding of HIV stigma itself has grown substantially in recent years (see ‘At risk’ chapter), large gaps remain in understanding how best to reduce stigma, what tools are most useful and the best way for these to be scaled up to the national level. Efforts to create robust stigma indicators by projects such as the Tanzania Stigma-Indicators Field Test Group should partly address the lack of evaluated programmes, but clearly more interventions are needed (USAID et al., 2005).

Nevertheless, some hopeful signs are visible, including those in some regions with low HIV prevalence. In 2005, Algeria’s Ministry of Religious Affairs announced a programme of training for the imams of the country’s 150,000 mosques. The programme will take advantage of the imams’ moral authority to encourage not just support but also solidarity with HIV-positive people. The announcement was made at a regional conference on HIV care and support in 15 countries of the Middle East and northern Africa, which recognized the serious problem posed by stigma and discrimination against people living with HIV in these regions (Kourta, 2005).

In the end, efforts to improve access to antiretroviral therapy and other HIV-related treatment may prove to be one of the most powerful anti-stigma interventions. A study of stigma and the experiences of a group of HIV-positive children in Sao Paulo concluded that universal access to antiretroviral therapy in Brazil can indeed have an effect on stigma and discrimination in the wider community. The study found that treatment had this effect because it “transforms AIDS from a debilitating and fatal disease to a chronic and manageable one, belongs to a broader effort to assure citizens’ rights, and reduces social inequalities in access to health care” (Abadia-Barrero and Castro, 2005). Such findings provide yet further impetus to regard the rolling out of universal access to treatment as an urgent priority.