International Labour Office

HIV/AIDS and work: global estimates, impact and response

The ILO Programme on HIV/AIDS and the world of work

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Preface

By the end of 2003, the number of persons living with HIV/AIDS was estimated to have reached just under 38 million, all but two million persons of working age.

HIV/AIDS is a human crisis but it is also a threat to sustainable social and economic development. The loss of life and the debilitating effects of the illness lead to a reduced capacity to sustain production and employment which, in turn, undermines efforts to reduce poverty and promote development.

The time of highest risk of HIV transmission coincides with the peak years of productive life in adult men and women. Tackling the damage HIV/AIDS causes to the productivity of the workforce and enterprise efficiency in all sectors of economic activity is a major concern for the ILO's Decent Work Agenda, and its efforts to ensure that increased and improved employment drives poverty reducing development.

The ILO has built its contribution to the multilateral effort to combat HIV/AIDS around the workplace. Talking about HIV/AIDS at the workplace, a focal point and meeting place in most people's daily lives, is a powerful way of transmitting prevention skills and delivering treatment. With this focus, employers' and workers' organizations, in partnership with government and with the support of the International Labour Office, are mobilizing to contribute to the international drive to defeat the epidemic.

Filling the gap in qualitative and quantitative information on the nature and extent of the impact of HIV/AIDS on the labour force, and consequently on production, will improve our policy response. *HIV/AIDS and work: global estimates, impact and response* offers information, analysis and policy advice to stimulate discussion and decision taking by the ILO's tripartite constituents. It takes stock of what we have achieved so far, recognizing successes and failings, and helping the ILO constituents and all those with a stake in the world of work to refocus and intensify their efforts.

The report, prepared by the ILO Programme on HIV/AIDS and the World of Work (ILO/AIDS), provides information to the key actors in the world of work, other stakeholders and policymakers concerned with HIV/AIDS. The Decent Work agenda with its four pillars of employment and enterprise development, social protection, fundamental principles and rights at work and international labour standards, and social dialogue provides a frame of reference for addressing many of the developmental challenges posed by HIV/AIDS. I trust that this volume will become a reference tool for all those engaged in halting the transmission of HIV/AIDS and the damage it is causing to the social and economic development of many countries.

Juan Somavia
Director-General

Contents

Executive summary xi

Introduction 1

Part I. Global estimates of the impact of HIV/AIDS on the world of work 3

Chapter 1. Global estimates: overview of main tables 4

Main table 1: Basic data on HIV/AIDS, the labour force, population, age groups and dependency 4

Main table 2: Estimated impact of HIV/AIDS on economic growth 5

Main tables 3A, 3B and 3C: Estimated and projected impact of HIV/AIDS on the labour force for three durations of AIDS, in 1995, 2005 and 2015 6

Main table 4: Estimated and projected cumulative mortality loses to the male, female and total labour force as a result of HIV/AIDS, and equivalent proportion of the total labour force 7

Main table 5: Estimated indirect mortality impact of HIV/AIDS on children, and direct impact on working-age persons 7

Main tables 6A, 6B and 6C: Estimated and projected increase in economic and in social burden due to deaths and to illness for three durations of HIV/AIDS, 1995, 2005 and 2015 8

Chapter 2. The macroeconomic impact of HIV/AIDS: human capital, labour and production 10

Chapter 3. The impact of HIV/AIDS on the world of work 16

i) Effects of HIV/AIDS on the private sector 16

Benefits of HIV/AIDS programmes to the enterprise 19

ii) The public sector and HIV/AIDS 19

Keeping school systems going 20

Current and future demands on the public sector health system 22

Caring for health-care workers 22

iii) The impact of HIV/AIDS on agriculture: falling production and growing food insecurity 24

iv) The informal economy 27

Chapter 4. The impact on women and children 29

i) Women and HIV/AIDS: lost contributions to the economy and to the family 29

ii) The impact of HIV/AIDS on children: out of school and into labour 31

Part II. Policy implications and the response to HIV/AIDS in the world of work 33

Chapter 5. Policy implications 34

A supportive policy environment 34

Specific policy implications 34

Chapter 6. The response to HIV/AIDS in the world of work 38

The ILO Programme on HIV/AIDS and the World of Work 38

The ILO Code of Practice on HIV/AIDS and the world of work 39

HIV/AIDS and work: changing the laws to make them work 40

The transport sector in Southern Africa: developing a national policy in Zimbabwe 41

India confronts stigma and discrimination 43

Workplace initiatives in Thailand: from migrant workers to life insurance discounts 45

Behaviour change in the informal sector: mechanics and garage owners in Ghana 47

Treatment in the workplace: the example of international business 48

Mining in Southern Africa: implementing treatment through social dialogue 50

Bibliography 53

Technical notes 65

Sources: Text 66

Sources: Main Tables 66

Definitions and derivation of variables by main table 66

Notes for HIV/AIDS and work: changing the laws to make them work 70

Main tables 73

Main table 1: Basic data on HIV/AIDS, the labour force, population, age groups and dependency, 50 countries, 2000-2005 74

Main table 2: Estimated impact of HIV/AIDS on economic growth, 47 countries, 1992-2002 76

Main table 3A: Estimated impact of HIV/AIDS on the labour force, according to 3 durations of Stages 3 and 4 of HIV/AIDS, 50 countries, 1995 78

Main table 3B: Projected impact of HIV/AIDS on the labour force, according to 3 durations of Stages 3 and 4 of HIV/AIDS, 50 countries, 2005 80

Main table 3C: Projected impact of HIV/AIDS on the labour force, according to 3 durations of Stages 3 and 4 of HIV/AIDS, 50 countries, 2015 82

Main table 4: Estimated and projected cumulative mortality losses to the male, female and total labour force as a result of HIV/AIDS, and equivalent proportion of the total labour force, 50 countries, 1995-2015 84

Main table 5: Estimated indirect mortality impact of HIV/AIDS on children, 2003, and direct impact on working-age persons, 50 countries, years 1995, 2005 and 2015 88

Main table 6A: Estimated increase in economic burden and social burden due to deaths and due to illness for durations 1, 2 and 3 of Stages 3 and 4 of HIV/AIDS, 50 countries, 1995 90

Main table 6B: Projected increase in economic burden and social burden due to deaths and due to illness for durations 1, 2 and 3 of Stages 3 and 4 of HIV/AIDS, 50 countries, 2005 94

Main table 6C: Projected increase in economic burden and social burden due to deaths and due to illness for durations 1, 2 and 3 of Stages 3 and 4 of HIV/AIDS, 50 countries, 2015 98

Boxes

Maintaining production and productivity 19

Universal precautions to prevent the transmission of HIV and other pathogens 23

Maintenance of women's position, however fragile, is key to reducing poverty, yet is seriously threatened by HIV/AIDS 30

Modelling the social policy costs and consequences of HIV/AIDS in the Russian Federation 36

The ILO Code of Practice (2001): HIV/AIDS and the world of work 39

Care and treatment at the workplace 49

Stages of HIV and AIDS and activity level 68

Figures

Figure 1.1 Projected number of working-age men and women (15-64) who are HIV-positive, 50 countries, 2005, by region 5

Figure 2.1 Male and female loss in life expectancy at birth due to HIV/AIDS in 10 heavily affected countries, 2000-2005 and 2010-2015 10

Figure 2.2 Cumulative proportion of male and female labour force loss in Haiti, Lesotho and Zimbabwe, 1990-2015 11

Figure 2.3 Loss in GDP and GDP per capita growth rates due to HIV/AIDS, 41 countries, 1992-2002 14

Figure 3.1 Percentage of companies reporting that HIV/AIDS has had identifiable impacts 18

Figure 3.2 Estimated and projected deaths of men and women of working age as a result of HIV/AIDS, 35 countries of sub-Saharan Africa, 1995, 2005 and 2015 27

Figure 4.1 Projected life expectancy differences by sex in Botswana, Swaziland and Zimbabwe, 2000-2005, 2005-2010 and 2010-2015 29

Tables

Table 2.1 Studies on the macroeconomic impact of HIV/AIDS 12

Table 3.1 HIV prevalence estimated from voluntary anonymous workplace surveys, Botswana, South Africa and Zambia, 2000-2001, by industrial sector 16

Table 3.2 HIV prevalence estimated from voluntary anonymous workplace surveys, Botswana, South Africa and Zambia, 2000-2001, by job level, all industrial sectors 17

Table 3.3 Costs to Enterprises 17

Table 3.4 Impact of AIDS on employee benefits (as a proportion of salary) 18

Table 3.5 Projected agricultural labour force loss due to HVI/AIDS in the most affected countries of Africa, 2000 and 2020 25

Technical notes, Table 1 Selected combined durations of time for which working persons who are untreated for symptomatic AIDS are partially and fully unable to work 68

Executive summary

UNAIDS has estimated that at the end of 2003, there were nearly 38 million persons who were HIV-positive globally, all but 2 million of them between 15 and 49 years. On the basis of the UNAIDS prevalence estimates, population data from the United Nations and the ILO's own estimates of the economically active population, the ILO has evaluated the global[1] population of persons who are in the labour force and are HIV-positive at 26 million. Consequently the great majority (73%) of older adolescents and adults who are HIV-positive are economically active. In most developing countries, furthermore, there are grounds to assume that many older adolescents and most adults of working age (up to 65 years) contribute to the economy in some measure, even if not in conventional economic terms. On this basis, the ILO has estimated that globally as many as 36.5 million persons who are engaged in some form of productive activity are HIV-positive, a figure that exceeds by nearly 800,000 the estimated number of 15-49-year-old persons who are HIV-positive.

Labour force participants and working-age men and women who are HIV positive eventually become ill with symptomatic HIV-related diseases, and in the absence of treatment they eventually become unable to work. The death of men and women due to HIV/AIDS deprives their families, society and the economy of many years of productive life. The cumulative loss of labour force participants worldwide is projected by the ILO to reach 28 million in 2005, 48 million in 2010 and 74 million in 2015 in the absence of increased access to treatment. Illness for a period prior to death also reduces the economic contribution of otherwise economically active men and women. The ILO estimates that, globally, by 2005 over 2 million labour force participants will be unable to work at any time as result of HIV/AIDS, and by 2015, well over 4 million.

Crucially, also, the duration of illness increases the economic burden of the global population of men and women in the labour force, and the social burden of care and support of families, which compounds the burden of losing an economically productive individual or a breadwinner as a result of death due to HIV/AIDS. The ILO estimates that, globally, the combined impact of the deaths and illness of persons with HIV/AIDS will add 1% to the economic burden and just over 1% to the social burden by 2015.

These effects of HIV/AIDS on the labour force and on all persons of working age are measurable in their overall impact on economic growth and development. By causing the illness and death of workers, the HIV/AIDS epidemic reduces the stock of skills and experience of the labour force, and this loss in human capital is a direct threat to goals for poverty eradication and sustainable development.

A model developed at the ILO to measure the impact of HIV/AIDS specifically on the rate of growth of the gross domestic product (GDP) and of the gross domestic product per capita (GDP per capita) between 1992 and 2002 in the countries studied suggests that the effect of HIV/AIDS was to lower the rate of growth of GDP for all the countries as a group by 0.2% annually, and the rate of growth of GDP per capita by 0.1% annually, equivalent to US$ (1995) 25 billion and US$ (1995) 5 per capita per year.

The impact of HIV/AIDS is manifest in its effects on the labour force and on working-age men and women in the private sector, the public sector, agriculture, the informal economy, and on the populations of women and children in the most affected countries. The enterprise is now calculating the costs of the HIV/AIDS epidemic; many firms have concluded that the direct and indirect costs of inaction are far greater than the costs of treatment. The public sector is gravely affected by the epidemic, in particular the educational and health sectors, and the human capital of knowledge and experience is being lost in some countries at a greater rate than it can be replaced. According to the Food and Agricultural Organization, in rural areas of the most affected countries, HIV/AIDS is worsening the economic situation of

[1] *The countries covered in the report include 40 countries with an estimated HIV prevalence over 2% in 2001, 5 countries with an estimated prevalence between 1.5 and 2.0 in 2001, and 5 countries with a population of persons living with HIV/AIDS of a million or more. They include 35 countries of sub-Saharan Africa, 8 countries of Latin America and the Caribbean, 5 countries of Asia, and 2 countries in the more developed regions.*

impoverished rural households, exhausting the ability of rural communities to withstand shocks, and seriously aggravating existing food insecurity. The informal economy that has long been a dynamic source of employment and income growth, absorbing most of the growing labour force in many developing countries, is especially vulnerable. Foremost problems are absenteeism, loss of experience and technical skills due to the illness and death of key workers, and depleted savings and excess expenditures to pay for health care.

In the most affected countries, more women than men are becoming HIV-positive as a result of gender-based inequalities. At the same time, the burden of caring for sick family members falls more heavily on women and girls, which not only adds to their workload but supplants the time devoted to formal work, and for other essential 'invisible' tasks such as subsistence agriculture that may be fundamental to survival. Support for caregivers may be the only means to prevent further impoverishment of women in the most affected communities. Children are made vulnerable by the HIV/AIDS epidemic in two ways: it robs them of parental care and guidance, and it often results in the move away from school and into work of young children, which has lifelong effects on the individual child and long-term effects on the skill level and quality of the next generation. Both the elimination of child labour and goals for sustainable development are threatened by the pressure for orphans and children of parents who are ill with HIV/AIDS to work.

The challenge for national policy is to address human capital issues, and develop means to sustain the supply and quality of public goods and services. Furthermore, to reach a critical mass of response to the epidemic, a supportive and enabling policy environment needs to be fostered, with specific focus on the legal framework, sustaining educational and employment capacity, integration as a goal of development strategies, and reduction of poverty.

The response to the HIV/AIDS epidemic in the world of work is manifold. The ILO established a programme in 2001, and drafted a Code of Practice the same year to guide response to the epidemic as a workplace issue. Several countries have drafted enlightened legislation in the form of revised or new laws that can play an important role in mitigating the impact of HIV/AIDS at the workplace and protecting the rights of persons who are living with HIV/AIDS. There are efforts in numerous countries in a range of response areas focussing on both prevention and treatment that include developing national sectoral policies, community efforts to reduce stigma and discrimination, private sector initiatives to promote prevention, behavioural change communications for workers, and, finally, treatment programmes in the workplace, which are increasingly seen by a range of enterprises as the least costly option to maintain profitability and ensure growth.

Introduction

This report provides estimates by the ILO of the impact of HIV/AIDS on men and women in the labour force in a set of tabulations presented at the end of the report in Main tables 1-6C. The tables of estimates are based on three types of data that were used to illustrate the impact of HIV/AIDS. A recent United Nations (UN) analysis of 53 countries affected by HIV/AIDS served as the foundation data base for the exercise (UN, 2003). First, data were selected from statistics readily available from the UN and other organizations within the UN system. Second, measures were elaborated on the basis of available data. Third, further measures were newly developed and tailored to illustrate the impact of HIV/AIDS on the world of work. The exact sources and the definitions of the statistics and measures presented in each main table are provided in the Technical notes, together with methodological explanations.

The report opens with an overview of the information conveyed by the main tables on the impact of HIV/AIDS on the male and female labour force, providing a summary of the most notable estimates (Chapter 1). Part I of the report then goes on to address three major areas of implications for the world of work: estimates of the macroeconomic fallout of the impact of HIV/AIDS on the labour force (Chapter 2); a review of the impact of HIV/AIDS on the workplace—on the private sector and the public sector, on agriculture and on the informal economy (Chapter 3); and an analysis of the impact of the epidemic on the household, on women's productive activities, and on child labour (Chapter 4). Part II addresses the policy implications of the tables and of the review and analysis of the impact of HIV/AIDS (Chapter 5). Here, also, the ILO provides snapshots of the response to HIV/AIDS in the working world—from governments, enterprises, workers' organizations and the ILO itself (Chapter 6). The ILO's goal is to highlight the crucial contribution that the world of work has already made in HIV/AIDS prevention, treatment, care and support, and to underscore the extraordinary potential of the workplace for intensified and broadened action globally.

Part I.
Global estimates of the impact of HIV/AIDS on the world of work

Chapter 1. Global estimates: overview of main tables

In the 50 countries of the world affected by HIV/AIDS and included in this report, HIV prevalence in persons aged 15 to 49 was estimated to range from under 1% to nearly 40% at the end of 2003. The HIV prevalence rate by country can be seen in alphabetical order by region in every main table, and all other data are presented in that order. Each table also shows the regional average HIV prevalence weighted for population for the regions of sub-Saharan Africa, Asia, Latin America and the Caribbean, and for the more developed regions, as well as for all 50 countries.

By far the majority of countries affected by HIV/AIDS are in Africa, where the regional average HIV prevalence (among 15–49-year-olds) is 7.7%. The impact on individuals, households, the society and the economy in Africa and elsewhere was assessed using a number of measures and indicators, several of them developed for this purpose. The various impacts are spelled out in greater detail in Chapters 2, 3 and 4.

Main table 1: Basic data on HIV/AIDS, the labour force, population, age groups and dependency

Main table 1 displays basic data on HIV/AIDS, providing estimates of the numbers of persons in the labour force who are HIV-positive, and short-term projections of the population, major age groups and the dependency ratio for each of the 50 countries for the period 2000–2005. The table is included to provide background demographic information on all the countries—in particular, the inputs and values for the dependency ratio—and also to emphasize the basic impact of HIV/AIDS on the labour force.

The term 'labour force', as used throughout the report, is defined as the sum of all persons who are economically active—a formal definition encompassing all persons of working age who are in paid employment, gainful self-employment, or unemployed, but available for and seeking work. The labour force is quantified by summing the products of economic activity rates estimated by the ILO for each age and sex group and the population weights of the same age and sex groups.

According to the estimates shown, more than 26 million labour force participants between the ages of 15 and 64 years are HIV-positive worldwide; they are either living with HIV or already living with AIDS. The vast majority of persons in the labour force who are HIV-positive (over 70%) live in Africa, and the proportion would be even higher if labour force participation rates were higher. In several African countries, there are over a million economically active persons who are HIV-positive: Kenya has 1 million, Mozambique 1.1 million, Ethiopia and Zimbabwe 1.3 million each, and the United Republic of Tanzania 1.4 million. In Nigeria, 2.4 million workers are HIV-positive and, in South Africa, nearly 3.7 million.

According to ILO estimates, nearly 36.5 million persons worldwide who are engaged in some form of productive activity are HIV-positive.

In assessing the global impact of HIV/AIDS, however, it is well to recall that it is specifically in countries most heavily affected by HIV/AIDS that labour force participation and economic activity are difficult to measure, and that there are no clear boundaries between persons defined as economically active and those who are not. Many working-age adults are engaged outside the formal economy, and although economically active, the sustenance they provide to their families is not easy to characterize or measure in conventional economic terms. This is especially true for women. Accordingly, assuming that many older adolescents and all adults work and contribute in some measure everywhere, the

ILO has gone beyond the estimate of labour force participants who are HIV-positive to make a short-term projection to 2005 of the numbers of persons who are of working age (and therefore engaged in productive activities) who are HIV-positive. The numbers of men and women for the regions are shown in Figure 1.1.

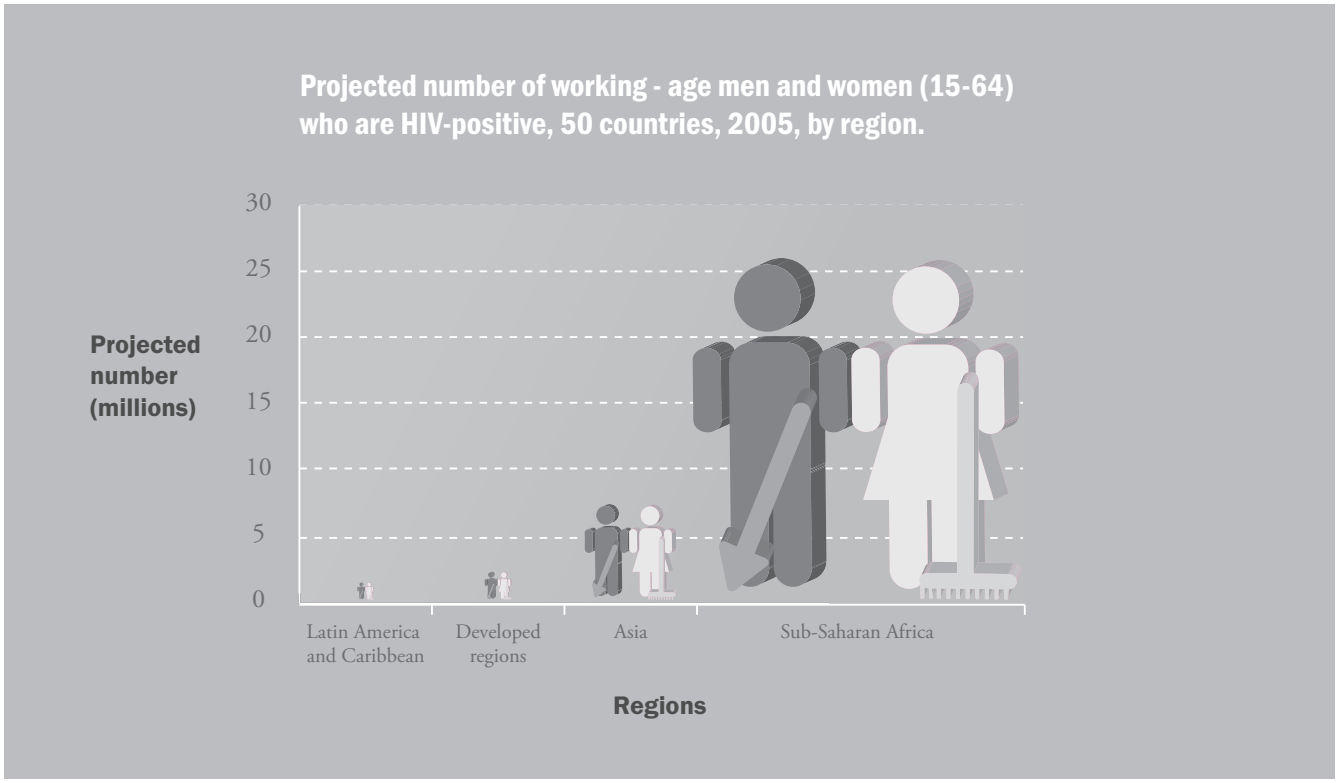

Figure 1.1

Source: UN, 2003 ; UN, 2003a

According to ILO estimates, nearly 36.5 million persons worldwide who are engaged in some form of productive activity are HIV-positive. This figure exceeds by nearly 800,000 the global estimate of 35.7 million adults aged 15 to 49 living with HIV, even though the much lower HIV prevalence in older persons of working age (those aged between 50 and 64) has been taken into account.

The global estimates of 26 million labour force participants and 36.5 million productively engaged adults being HIV-positive are the basis of this report, and have guided the search for various ways to assess the impact of HIV/AIDS on sustainable economic and social development through its detrimental effects on the labour force. The impact of HIV/AIDS on the labour force was estimated at macroeconomic level, which is discussed in Chapter 2. Consequences of HIV/AIDS for the private and public sectors, and for the informal economy, resulting from its effects on the labour force and adult working-age population are reviewed in Chapters 3 and 4.

Main table 2: Estimated impact of HIV/AIDS on economic growth

Main table 2 shows the economic impact of HIV/AIDS on the labour force and the labour force contribution to the economy, as estimated by the ILO. Specifically, the table shows the shortfall in the gross domestic product (GDP) growth rate and in the per capita GDP growth rate that is attributable to HIV/AIDS in 47 countries for which all the necessary data were available. (Of the 50 countries covered in all the other main tables, Eritrea, Liberia and Myanmar were not included here.) Information on the economic model used to identify these losses can be found in the Technical notes. In parallel to the range in HIV prevalence, the impact of HIV/AIDS varies widely. For example, the economic impact is not measurable in populous countries that have a low HIV prevalence even though they have populations of a million or more living with HIV/AIDS, and this holds true for all regions (China and India in Asia, Brazil in Latin America, and the United States of America (USA) in the more developed regions). In countries with the highest prevalence, however, the economic impact can reach extraordinary levels. ILO estimates suggest that in South Africa, which does not have the highest HIV prevalence, but does have the largest economy in the African region, the economy lost over US$7 billion annually from 1992 to 2002 because of labour

force losses. This represents a per capita loss of US$115 per year. Taken together, in the 41 countries affected by HIV/AIDS where the impact is measurable, there was a loss of more than US$17 billion per year between 1992 and 2002, and of US$15 per capita on average. Estimation of the macroeconomic impact of HIV/AIDS through its effects on the labour force due to losses in human capital, and a discussion of the findings appear in Chapter 2.

Main tables 3A, 3B and 3C: Estimated and projected impact of HIV/AIDS on the labour force for three durations of HIV/AIDS, in 1995, 2005 and 2015

Main tables 3A, 3B and 3C show the impact of HIV/AIDS on the labour force at three points: in 1995, in 2005 and in 2015. The tables illustrate the effect of illness on diminution of the capacity to work as, in the absence of treatment, persons who are HIV-positive become increasingly ill until death. From what is known about the duration of AIDS from the onset of symptoms until death, it appears that the disease runs its fatal course in a period of 18–24 months, on average. At some point in the deterioration caused by the disease, persons living with AIDS cease to be able to work—first intermittently and then increasingly until entirely unable to work. At some point, also, persons living with AIDS drop out of the labour force and are no longer economically active, eventually losing entirely their capacity to contribute to productive activities.

In seeking to document as fully as possible the impact of HIV/AIDS on the labour force, the ILO has estimated for each country affected by HIV/AIDS the number of workers who become partially and fully unable to work as a result of AIDS at the three points in time. To take account of variability in the duration of life from onset of symptomatic AIDS to death, three alternative combinations were considered: partial loss of capacity to work for 12 or 15 months followed by total loss of capacity to work for 3, 6, or 9 months, giving total durations of 18 or 24 months. The combinations of durations are presented in the Technical notes.

It is important to remember that the alternative durations are based on the assumption that no action is taken to treat persons living with AIDS. The ILO upholds the position that treatment should be provided: even without treatment, however, care and support at the workplace (through reasonable accommodation and psychosocial support, for example) can extend the working life of ill individuals.

Main table 3 A shows that, in 1995, already half a million or more persons worldwide were unable to work because of AIDS, over 300,000 of whom lived in Africa. As effective antiretroviral therapy was not yet widely available in 1995, it is likely that this estimate captures the full impact of HIV on fitness to work at the time. Main Table 3B shows that, by 2005, well over 2 million labour force participants will be unable to work, nearly 4 out of 5 of them (78%) living in Africa. It is projected that in the absence of treatment, and if UN projections based on epidemic modelling hold, 4 million or more persons in the labour force of 2015 will be unable to work because of AIDS. Although the epidemic is expected to have further advanced by 2015 in large countries such as China and India, Africa will still be home to the majority of workers (more than 6 out of every 10) who are unable to work. These projections argue loudly for action in the world of work to address HIV/AIDS. The workplace responses reviewed in Chapter 6 point to the already broad range of potential actions that can make a fundamental difference to workers in all workplace settings and, importantly, that can avert the worst outcomes projected.

The inability of persons in the labour force who are HIV-positive to continue to work when they become ill (and not only the loss of workers through death) has consequences for every aspect of the social and economic context of countries, particularly in Africa. Illness leads to increased costs in both the private and public sectors, and places enormous strains on the household capacity to earn income and to provide care. These consequences are discussed in Chapters 3 and 4. Importantly, the implications for policy are clear. It is costly to ignore prevention and to fail to provide care, support and treatment for persons who are HIV-positive and have symptomatic AIDS. Comprehensive approaches to HIV/AIDS are not cost-free, but more and more workplaces have come to realize that the cost of inaction is far greater. With respect to the informal economy, the analysis in Chapter 4 suggests that the long-term costs of ignoring the role of the family in preparing future generations for productive work, and in the creation of the human capacity for socio-economic development, has not yet been appraised at its true value. It is likely to be staggering, and it is this loss of capacity over time that constitutes the greatest threat to achieving sustainable development.

Main table 4: Estimated and projected cumulative mortality losses to the male, female and total labour force as a result of HIV/AIDS, and equivalent proportion of the total labour force

Main table 4 shows the progressive labour force losses of men and of women due to HIV/AIDS mortality at five-year intervals from 1995 to 2015. Whereas the number of persons who are too ill to work at any time is limited by the short life expectancy of persons living with HIV/AIDS, the number of persons who had been economically active and die as a result of AIDS relentlessly cumulates, and the toll is ever rising. By 1995, over 3 million working men and more than 1 million working women had died of AIDS worldwide, well over 60% of them in Africa. This represented a small proportion of the 1995 labour force for most countries, though already nearly 5% in Burundi and Uganda, and 6% in Lesotho. By 2000, both Zambia and Zimbabwe had lost more than 10% of their labour force as a result of AIDS and, worldwide, nearly 13 million labour force participants had died. It is projected that by 2005, 11 countries (all of them in Africa) will have lost more than 10% of their labour force as a result of AIDS, and Zimbabwe will have lost over 20% of its labour force. Given the short timeframe, these losses are likely to be incurred unless rapid and urgent action is taken

By 2010, assuming a continued absence of treatment, 17 countries (16 African countries plus Haiti) will have lost more than 10% of their labour force, and 5 of them—Swaziland, Botswana, Lesotho, Zimbabwe and South Africa—will have lost more than 20%: in the case of Zimbabwe, it would lose a full third. By 2015, 19 countries will have lost more than 10% of their labour force—3 of them more than 30% (Swaziland, Botswana and Lesotho) and Zimbabwe more than 40%. By 2015, also, the numbers of persons in the labour force projected to be lost in the absence of treatment will reach 50 million in Africa and 74 million worldwide. This is equivalent to the disappearance of a large African country such as Ethiopia, the Democratic Republic of Congo or South Africa, or an Asian country such as Thailand, in terms of their population sizes today. The consequences of these observations and projections are discussed in Chapter 2 with regard to the macroeconomic impact and in Chapter 3 with respect to implications for the private and public sectors, and the informal economy. As in the case of illness and its costs to society and the economy, the costs in absolute losses of large numbers of workers and of many years of productive contributions call for an urgent and wide-ranging response from the world of work and beyond. The policy implications and the types of responses that have been implemented to date are discussed in Chapters 5 and 6.

Main table 5: Estimated indirect mortality impact of HIV/AIDS on children, and direct impact on working-age persons.

The mortality of adults leaves children as orphans, but the death of breadwinners leaves orphans destitute.

Main table 5 specifies selected direct and indirect effects of adult mortality as a result of HIV/AIDS at three times: 1995, 2005 and 2015. The toll of mortality extends beyond the direct loss to the labour force. The mortality of adults leaves children as orphans, but the death of breadwinners leaves orphans destitute. Children whose parents die are orphans whether they are infants or 17 years old. Few older adolescents can care for themselves adequately when suddenly bereft of parental guidance, even if many 15-, 16- and 17-year-olds already work. In 2003, an estimated 15 million children under 18 years of age were orphans as a result of AIDS, more than 12 million of them in Africa. The number of orphans is expected to increase substantially as the HIV/AIDS epidemic advances. The consequences for children, notably in terms of increases in child labour, are discussed in Chapter 4.

Children need adults who can love, raise and guide them as much as they need parents who are economically active. Many women in Africa are not considered to be part of the labour force, but they are growing food, running homes, and caring for their children. For children, all adults count, and the death of a parent harms them whether the parent is economically active or not. The ILO has estimated and projected total deaths of persons of working age (15 to 64) to document the potential impact on children left behind. In 1995 alone, nearly half a million men of working age and a quarter of a million women of working age died, more than 200,000 of them in Africa. The ILO projects that, in 2005, more than 3 million persons of working age will die—over 1.6 million men and 1.5 million women, 78% of them in Africa. Given

the narrow timeframe, only urgent large-scale treatment can prevent this from happening. In 2015, in the continued absence of treatment, nearly 6 million men and women of working age will die, over 60% of them in Africa. The more rapid transmission of HIV to women in Africa is already evident, but will be even more entrenched by 2015; by then, 51% of the more than 3 million men who die worldwide will be in Africa, but of the nearly 3 million women who will die, 72% will be in Africa. The impact that these dramatic losses can have on the essential role of all persons of working age, particularly women in the rural informal economy, in running households and in caring for and raising children, as well as in a range of other productive activities is discussed in Chapter 4.

The more rapid transmission of HIV to women in Africa is already evident, but will be even more entrenched by 2015; by then, 51% of the more than 3 million men who die worldwide will be in Africa, but of the nearly 3 million women who will die, 72% will be in Africa.

Main tables 6A, 6B and 6C: Estimated and projected increase in economic and in social burden due to deaths and to illness for three durations of HIV/AIDS, 1995, 2005 and 2015

Main tables 6A, 6B and 6C were designed to show the increased burden due to the combination of HIV/AIDS-related deaths and illness in the economically active population (economic burden) and in the working-age population at large (social burden), at three times: 1995, 2005 and 2015. The main assumption behind the table is the continued absence of antiretroviral treatment. There is time for treatment to alter the course of the projections for 2015, and the ILO urges its social partners and all concerned in the international community to consider the meaning of these projections and to work towards national and global goals to address HIV/AIDS.

At any point in time, families and societies experience the double burden of deaths of individuals who had been economically active, and illness of adults who can no longer work. The ILO has developed two measures to capture the burden on the economy and on families that comes about from the combined impact of deaths and of illness of people who are economically active, or who are working-age adults.

The economic burden first takes account of AIDS-related deaths among labour-force participants, and the impact due to deaths alone is shown. It then takes account of the number of persons economically dependent for reasons of age (children under 15 and adults over 64 years) and of persons who have become economically dependent due to illness, relative to economically active persons who are still alive and fit to work. To address the variability in the duration of symptomatic AIDS before death, the combined economic burden due to death and due to illness was estimated for the three durations used to develop estimates of the numbers of workers partially and fully unable to work (see the Technical notes).

For most countries, the total economic burden was negligible in 1995. In Lesotho and Zimbabwe, however, it was already 3–4% greater than in the absence of HIV/AIDS due to the combined impact of deaths and illness on economically active persons. By 2005, the economic burden will be quite strongly felt in a number of countries when it will reach 10–20%, notably in Botswana, Lesotho, Swaziland and Zimbabwe. By 2015, it is projected that the economic burden will be substantially heavier in the same countries, as well as in Malawi, Namibia, South Africa and Zambia. In all these cases, the increased economic burden may exceed 10%, but it will be greater than 20% in Lesotho and Swaziland, and over 30% in Zimbabwe. This means that economically active persons will have a substantially greater burden related to the needs of young, old and ill dependants, as well as dependants who are not themselves economically active. For all 50 countries, the average effect is not great, but for the 35 countries of the African region, the average increased burden would exceed 5% in the absence of treatment for AIDS by 2015, and would reach insupportable levels in a number of the worst affected countries. As it is, there is more likelihood that the projection for the total increased burden for the countries of Africa projected for 2005, already anticipated to reach 3–4% and to exceed 18% in one country, will become reality.

The social burden takes into account the fact that most persons of working age

(15–64-year-olds) work even if they are not economically active as formally defined. Activities in and around the home constitute productive work. Moreover, in the majority of resource-poor settings in Africa, home-based working adults often provide the bulk of care that persons dying of AIDS receive. Accordingly, the social burden considers the change in dependency caused by death and illness of all persons of working age. It reflects situations where caregivers have an increased burden of care for other adults who can no longer provide support to the household. No distinction is made in this final table between working-age persons who are economically active and those who are not, because the burden is carried by all persons of working age. To measure the social burden, the dependency ratio that relates young and old dependants to working-age persons (shown in Main table 1) is adjusted to take into account all persons who are partially or fully unable to work because of AIDS (see the Technical notes).

There is time for treatment to alter the course of the projections for 2015, and the ILO urges its social partners and all concerned in the international community to consider the meaning of these projections and to work towards national and global goals to address HIV/AIDS.

Most countries had no measurable increase in the social burden in 1995, but Burundi, Lesotho, Malawi, Uganda, Zambia and Zimbabwe already showed a strain on the family care system of 2–3% relative to the social burden without HIV/AIDS, regardless of the pattern of duration of symptomatic AIDS. By 2005, the social burden is expected to have grown substantially, reaching about 10% in Botswana, Lesotho, Swaziland and Zambia, and reaching 15% in Zimbabwe. By then, also, the Central African Republic, Guyana, Kenya, Namibia, Malawi, South Africa and Uganda will be dealing with an increased family dependency of 5–10%. By 2015, in the absence of treatment, eight countries will be dealing with greatly increased family burdens, reaching 30% in Zimbabwe and 12–26% in Botswana, Lesotho, Malawi, Namibia, South Africa, Swaziland and Zambia. The average increased family dependency will be heavier by nearly 6% in the 35 African countries as a whole, and will also reach 9% in Guyana and about 5% in Haiti and in the Bahamas by 2015. Although the provision of treatment may avert this situation over the longer term, the increased social burden projected for 2005 – greater, on average, by over 3% for the African countries as a group – is unfortunately more likely to come to pass on the basis of present access to treatment. The consequences of increases in the economic and social burden due to HIV/AIDS for labour force participants and persons of working age are discussed in Chapters 2, 3 and 4; policy and practical responses to alleviate these burdens that have arisen in the workplace are discussed in Chapters 5 and 6.

This novel means of capturing the impact of HIV/AIDS on the labour force and on working-age persons serves to illustrate and clarify the macroeconomic impact of the epidemic (discussed in Chapter 2), as well as to explain its impact on the workplace and on the informal economy. Undoubtedly, the projected combined impact of deaths and of illness among labour force participants at all levels of skill and other persons of working age can spur the working world to take action to establish comprehensive HIV/AIDS programmes as widely as possible. Governments need to act in urging, promoting and supporting workplace action as an integral part of the national HIV/AIDS strategy, and all social partners must ensure that they work together to achieve control over the epidemic and its effects. These aspects and their implications are analyzed in greater detail in Chapter 5 on policy and Chapter 6 on the response to the HIV/AIDS epidemic in the world of work.

Chapter 2. The macroeconomic impact of HIV/AIDS: human capital, labour and production

The main channels through which the HIV epidemic affects social and economic development are through its impact on the labour force and its related effects. The effects flow from the key fact that the epidemic primarily affects the working-age population, where HIV-related illness and deaths are concentrated. Life expectancy is falling in many countries affected by the epidemic, reflecting increasing rates of adult mortality, and accompanying reductions in the workforce. Figure 2.1 shows the losses in life expectancy due to HIV/AIDS for the male and female populations in the the ten most affected countries at two periods:2000-2005 and 2010-2015.

Individuals with important economic and social roles (both men and women) are prevented from providing their full contribution to development. The effects are, of course, not confined to a simple calculus of labour losses (see Figure 2.2), but have much deeper implications for the structure of families, the survival of communities and enterprises, and longer-term issues of sustaining productive capacity. Similarly, the HIV epidemic erodes the savings capacity of households, of formal and informal productive enterprises, and of government, through its effects on income and on levels of expenditure. Over time, reduced rates of savings lead to diminished investment, slower growth of aggregate output, constraints on employment, and the likelihood of impoverishment.

Loss of income, impoverishment of households and failures of informal economy enterprises increase poverty, slow the growth of employment, and threaten sustainable development. In this context, we look at the evidence of microeconomic stress, assess when

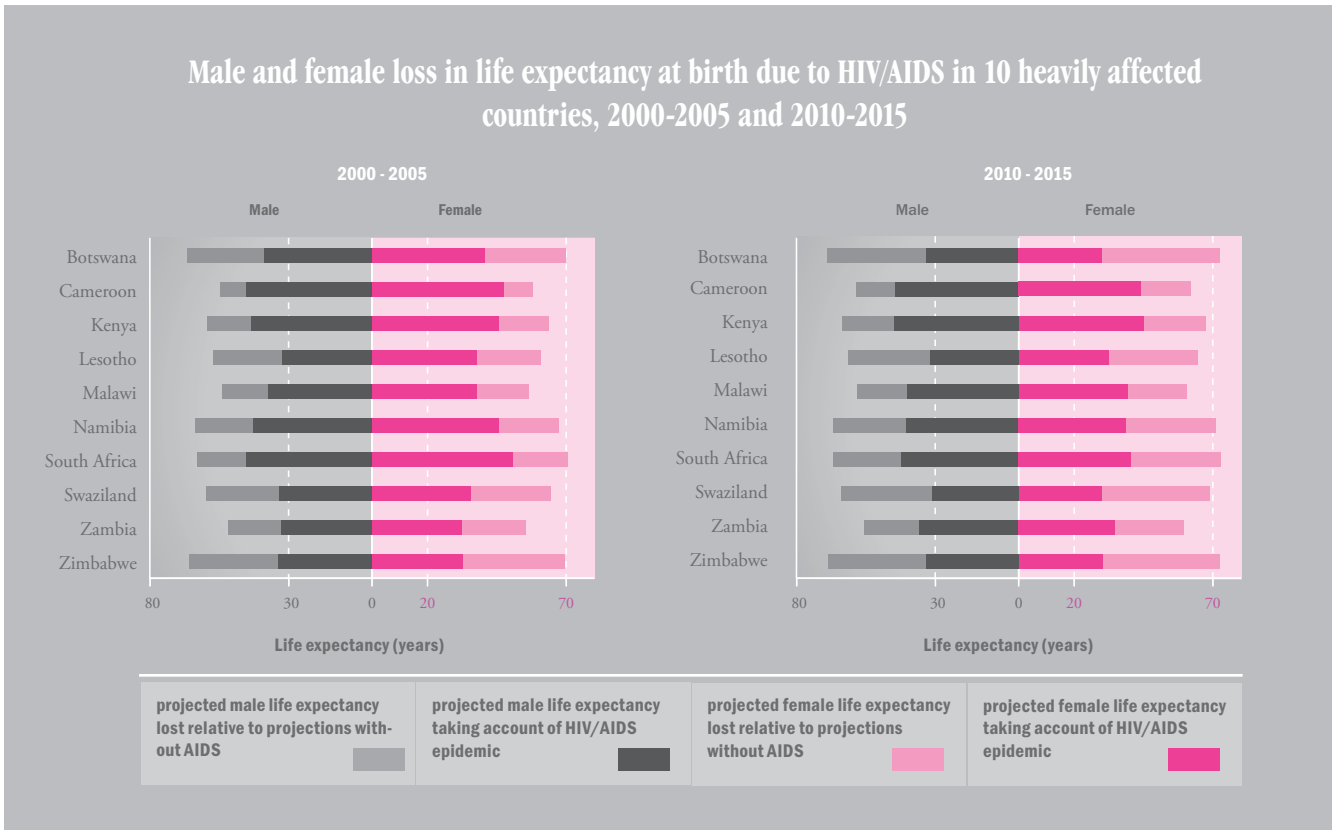

Figure 2.1

Source: UN, 2003

the system-wide collective effect was felt, and estimate the size of the impact of HIV/AIDS since the early 1990s.

The epidemic imposes heavy constraints on families. If the household member who is ill with AIDS is the breadwinner, she/he can no longer steadily work and contribute to household income. At the same time that the income of persons with symptomatic AIDS is reduced due to loss of job or livelihood, the AIDS-related medical care costs and other expenses increase. The resulting hardship in households is countered as much as possible by the remaining working-age adults, older persons and children. Other household members enter the labour force, engage in subsistence farming, or provide daily care for dependants and the home. Sometimes, the family sells its assets to cover urgent expenses, and distress sales are often at a loss. Despite these efforts, there are residual shortcomings and shortfalls. There is a noticeable aggregate reduction in production and in income, and a discernible aggregate fall in consumption.

Efforts to compensate for the loss in income have a number of labour market consequences. Other adults, often unskilled, may enter the labour force for the first time, older persons may return to work, and young household members may enter the labour force prematurely. One coping strategy that is particularly damaging involves the decision - or the inevitable action - to withdraw children from school so that they may enter the labour market. The switch from school to job compromises their future. It also reduces the potential human capital available to the economy as a whole.

The impact of the HIV/AIDS epidemic on a firm is similar to that on a household—increasing expenditures, declining productivity and diminishing revenues. The presence of HIV/AIDS affects expenditures by increasing costs for health care, insurance, death benefits (including burial fees), and for the training and recruitment of replacement labour. Productivity gradually declines because of increasing absenteeism and mortality. This decline in worker productivity as symptomatic AIDS progresses was documented over a period of three years in a tea estate in Eastern Kenya, and was noted to be especially severe in the last year before death. Increasing absenteeism is also due to an increasing need for time off to meet related obligations, such as care-giving, attending funerals or for newly recruited staff to receive training. A study of firms in Botswana and Kenya revealed that absenteeism accounted for more than 50% of overall increased labour costs due to HIV/AIDS. Finally, productivity is dampened by the loss of technical and experienced workers when staff turnover demands that less skilled workers be taken on.

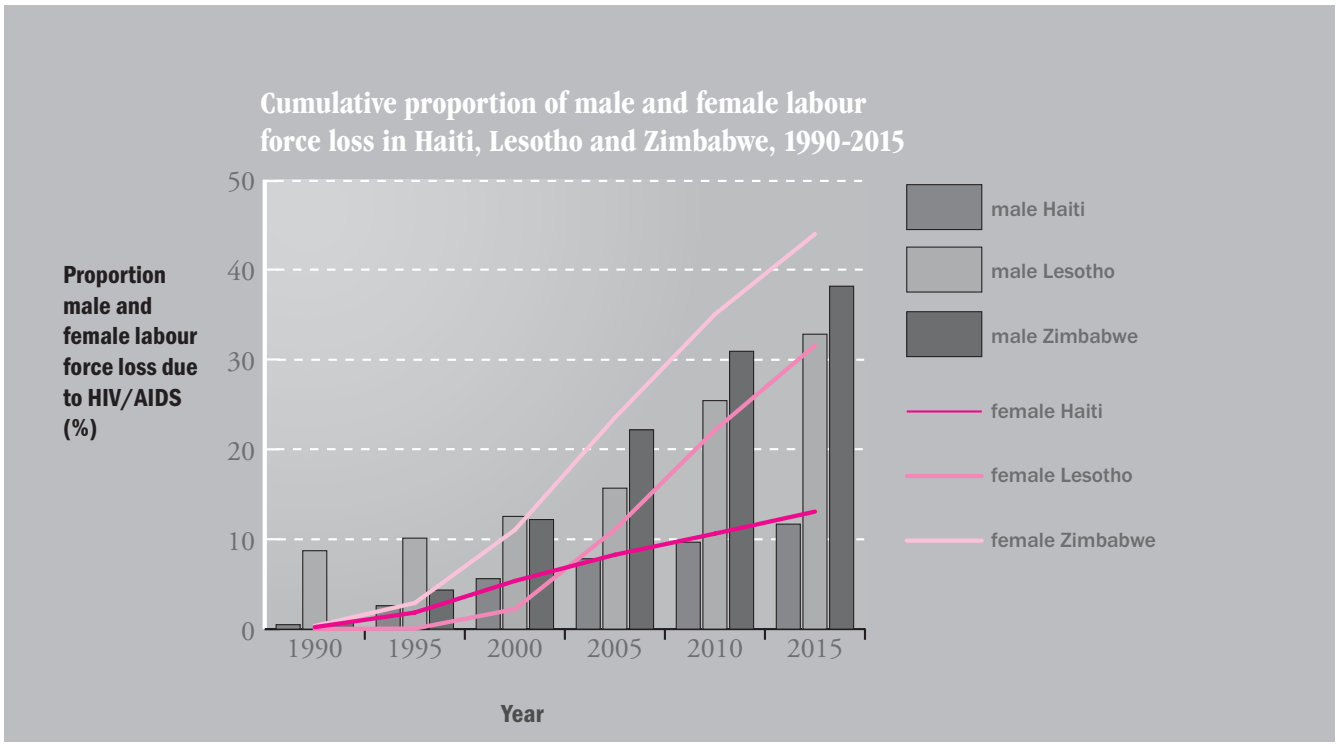

Figure 2.2

Source: Same source as for Main table 4 (see Technical notes) with breakdown by sex added

Studies on the macroeconomic impact of HIV/AIDS

Study	Countries and period covered	Period of HIV/AIDS data	Growth of GDP	Growth of GDP per capita
Over (1992)	30 African countries (1990-2025)	Early 1990s		Reduced by 0.15% (0.6% in the 10 most affected countries)
Bloom and Mahal (1995)	51 countries (1980-1992)	Early 1990s	Insignificant effect	
Bonnel (2000)	50 countries (1990-1997)	Mid 1990s		Reduced by 0.7% a year
Dixon et al. (2001)	41 countries (1960-1998)	Late 1990s	Reduced by 2-4% in relation to prevalence of HIV	
Coulibaly (2004)	41 countries (1992-2002) 33 African countries (1992-2002)	Early 2000s	Reduced annually by 0.9% on average Reduced annually by 1.1% on average	Reduced annually by 0.6% on average Reduced annually by 0.7% on average

Table 2.1

Source: Adapted from UN, 2003

The aggregate toll of illness and deaths of labour force participants on society and on the economy is already highly visible, as illustrated by the economic effects shown in Main table 2. Estimates and projections of the labour force losses due to illness and deaths are shown in Main tables 3A, 3B and 3C, and in Main table 4. The consequences for the private and public sectors, and for the informal economy are reviewed in Chapter 3.

HIV/AIDS affects businesses of all sizes. It can have an especially significant impact, however, on informal and small and medium-sized business enterprises, depending on the HIV prevalence level and the level of skills needed for the production process. For all businesses, if the most productive workers in the labour force are those who are better educated and are therefore more difficult to replace, the impact on firms can be severe. When high-level managers are HIV-positive, the strategic management of the business may eventually be affected. If key management is lost to AIDS, the competitiveness of the firm will diminish in the marketplace, which can lead to the failure of the business. In the case of small businesses, because they are often dependent on a few skilled workers and owner management, the loss of specific skills and expertise can lead to the collapse of the business.

Productivity losses and reduced production lead to a decline in profitability. In such circumstances, resorting to downsizing with consequent job losses may be compounded by falling or shifting patterns of consumption. One deleterious result is reduced tax revenues and reduced investment capital. At some point, these conditions act as powerful disincentives for foreign investment and, over the long term, developmental gains will slow, stagnate and regress. The damage in terms of impoverishment of the stock of human capital can, in turn, become a major source of economic inertia, when human resources needed to support and manage farms, businesses, public services and the government are greatly reduced.

It is a mistake to believe that labour is in unlimited supply in developing countries, or that it can be replaced without cost. There is evidence that even so-called unskilled labour has built up a capital of location- and task-specific skills that are very hard to replace. This is most obvious in the case of agricultural skills, but it is also true of other economic activities where appearances inaccurately suggest that skills can be easily replicated and replaced. Clearly, family-based producers face critical constraints in replacing labour lost to HIV/AIDS, with very important consequences: the transfer of skills and knowledge to children is jeopardized, and the gendered nature of many activities in agriculture and in household production makes labour replacement more difficult. Accordingly, the impact of HIV/AIDS is pervasive and complex in informal enterprises, not least because of the consequences of illness and deaths on the sustainability of enterprises that are highly dependent on internal generation of flows of savings for their survival. Even more important, based on what limited evidence is available, are the losses of experience and management/technical skills, of entrepreneurship and of leadership, which are so essential to survival. These and other consequences of HIV/AIDS in the informal economy are further discussed in Chapters 3 and 4.

The overall, macroeconomic impact of HIV/AIDS on national economies has been researched since the epidemic began. Economists and planners have sought to understand how the pandemic has affected, or would affect, macroeconomic aggregates. Most often, they have focused on the impact of HIV/AIDS on economic growth, and some of these studies have revealed that the epidemic

has little or no significant effect on economic growth as measured by the effects on GDP. In such studies, the decline in population growth due to the effects of HIV/AIDS has been found to counterbalance the decrease in GDP growth that leads to a net marginal impact on per capita income. Authors of these findings point out that the impact may be small if the labour supply available can adequately replace workers leaving the labour market because of HIV/AIDS, and if employee benefits are negligible.

Later macroeconomic studies, however, have in general concluded that HIV/AIDS does lead to reduced economic performance in countries with severe epidemics. These estimates of the economic impact of HIV/AIDS indicate that the pandemic would reduce the average annual GDP growth rate by 0.5–4% per annum in the most affected countries of the African region.

A summary of the main international studies on the macroeconomic impact of HIV/AIDS appears in Table 2.1. All compared the rate of GDP growth and of GDP per capita in the presence and in the absence of the epidemic. The studies differ in terms of assumptions, samples of countries, periods covered, and methodological approaches. Nevertheless, the progression in the findings of the studies conducted from 1992 to 2001 is such that the more recent the study, the stronger the observed impact of HIV/AIDS. This is likely to indicate that the macroeconomic impact has become increasingly measurable as a larger proportion of households, workers and employers are affected by the epidemic. As the transmission of HIV continues, it is becoming more and more evident that the long-term macroeconomic effects of the epidemic as measured by the impact on GDP have been increasingly destructive of growth and development.

Whether they show a measurable impact or not, however, it is important to note the shortcomings of all these types of studies with respect to the broad range of effects of HIV/AIDS on the labour force and on employment. For example, they generally ignore the significant costs involved in replacing workers, even those who are unskilled. Most also ignore the cumulative impact of HIV/AIDS on networks, organizations and institutions, which weakens the transfer of information, expertise, of institutional memory and of the 'rules of the game'. When these factors are taken into account, not only are the losses of economic growth due to HIV/AIDS seen to be more substantial, but the fact that the unmeasurable effects are likely to cumulate over time in a non-linear fashion can be better appreciated. Moreover, it is important to emphasize that the longer the epidemic continues unaddressed, the harder countries will find it to repair the damage, as well as to halt and reverse the decline, whether the range of effects is fully gauged or not.

Thus the effects of the epidemic are deeper and more serious than conventional estimates of the impact on GDP can convey, significant though these estimates are for countries more seriously affected by the epidemic. Over time, the epidemic cumulatively reduces the human and organizational resources of countries in ways that diminish the capacity to sustain productive activities. This is the main threat to sustainable socio-economic development.

Bearing in mind these limitations, the ILO deemed it useful to estimate the measurable impact with the most recent data available. Accordingly, estimates of the impact of HIV/AIDS on growth were developed for 45 of the 50 countries covered in this report. The ILO study found that, between 1992 and 2002, HIV/AIDS reduced the rate of GDP growth by 0.9% a year, on average, in the 41 countries where the economic impact of HIV/AIDS was measurable. These findings suggest that, during that period, the 41 countries would have grown by, on average, 0.9% more per year than in the absence of HIV/AIDS (see Main table 2). This loss of income growth may appear relatively small, but its cumulative effect over 15 years, for example, would reduce economic growth by about 14% compared to the level it would have been in the absence of the epidemic. A crude estimate of the financial cost indicates a loss of more than US$17 billion per year for the 41 countries as a whole. Similarly, it is estimated that a potential loss of US$270 billion could be incurred by 2020 by these same countries, if the shortfall in their growth rate continues at about 0.9% a year on average.

African countries were the hardest hit, given that their average HIV prevalence rate was higher, at 7.9% (see Main table 2). The rate of income growth in this region was reduced by 1.1% per year, on average, over 1992–2002; economic growth in these African countries would have been greater by 1.1% each year, on average, had HIV/AIDS not been a factor. If the HIV/AIDS epidemic were to persist at the same prevalence and under the same conditions, the collective economy of the

33 African countries would grow 18% less by 2020 than if HIV prevalence had not reached its current level. This represents a gap of about US$144 billion for Africa alone, which is likely to be a minimum estimate, if one considers the additional, unmeasured, effects that relate to cumulative losses of human and organizational capacity.

Latin America and the Caribbean also experienced a loss in economic growth, albeit less than in Africa. According to the ILO model, income would have grown by 0.5% more per year had there been no HIV/AIDS epidemic. The shortfall in growth is equivalent to almost US$400,000,000 per year in total production.

Whereas some regions showed an economic impact, the economies of large Asian countries (China, India), of Brazil and of the USA did not show effects of the epidemic. Their large populations and vast economies, in tandem with relatively low recorded HIV prevalence levels, largely explain the difficulty of measuring the impact, or the finding that the measured impact was very small.

The impact of HIV/AIDS on GDP is less in per capita terms, accounting for two-thirds (0.6%) of GDP growth loss in the case of the 41 remaining countries. This is because the decrease in population growth due to HIV/AIDS (the epidemic both increases deaths and reduces the numbers of potential parents) tends to offset the decline in economic growth. But there is no comfort to be derived from this observation: what changes in per capita income cannot show is that, when both productive output and the productive labour force decline, there are irrevocable losses to the economy, even if per capita income remains unchanged.

Bearing this in mind, the findings are still worth noting. The ILO model showed that, whereas HIV/AIDS lowered the rate of growth of GDP per capita by 0.6% per year, on average, in the 41 countries over the period 1992–2002 (equivalent to a shortfall of US$15), it reduced per capita GDP by 0.7% in the African countries, which is equivalent to US$11 per person per year. As the average per capita GDP growth for the African countries was 0.7% over the period, the results of the research suggest that the economies of these countries lost half of their potential growth during that period because of HIV/AIDS: in the absence of the epidemic, with all other conditions assumed to be equal, the GDP per capita of these countries would have grown twice as fast, at 1.4% per year. The loss in overall growth in Latin America and the Caribbean in per capita terms was lower, at 0.3% per year (equivalent to US$10 per capita annually), and represents a

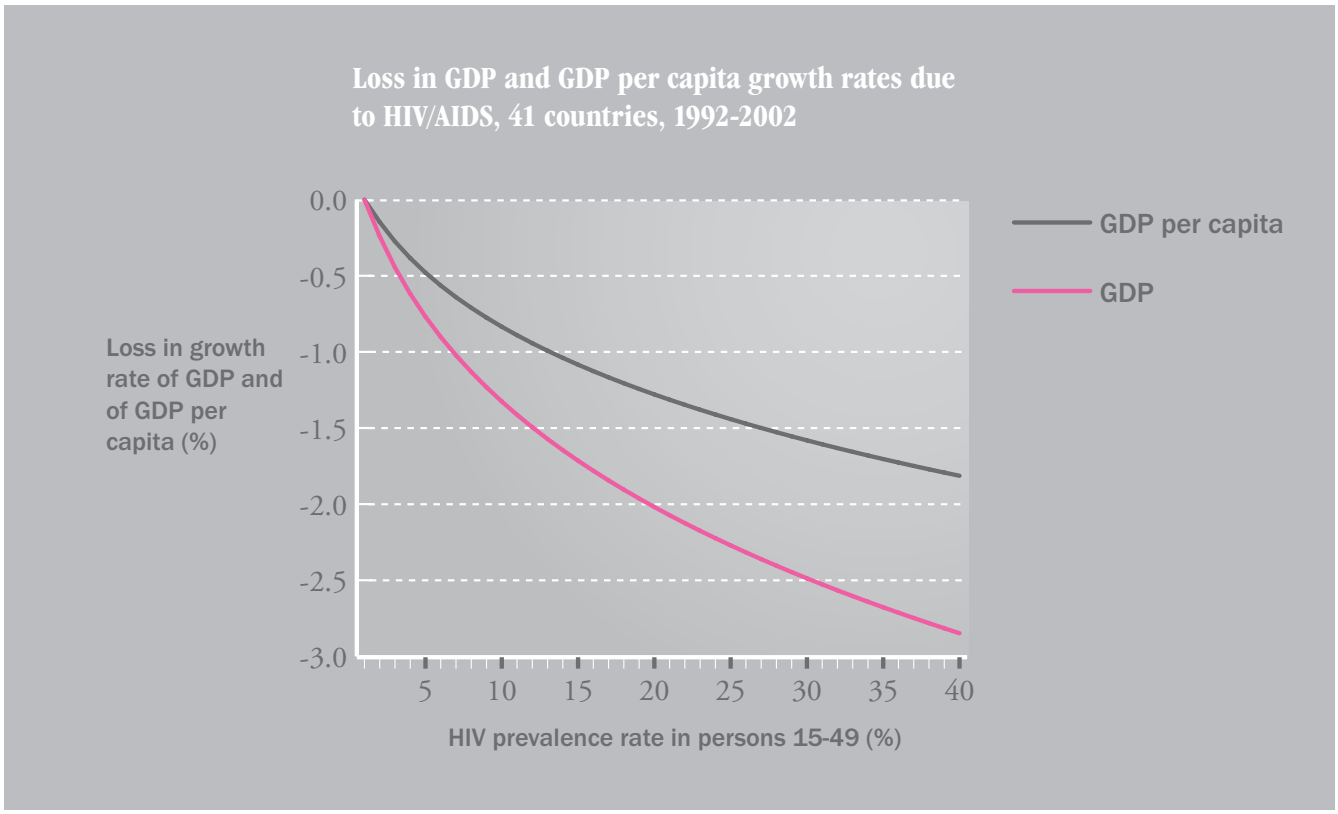

Figure 2.3

Source: Main table 2

substantially smaller proportion of the growth in per capita income than was achieved by this region over the same period.

It is important to remember also that, as an aggregate measure, per capita income does not capture the welfare of the population. It takes into account all surviving persons, including those who are already living with HIV/AIDS. In addition, it does not reveal information on how income is distributed in a population. For example, the death of people on lower incomes will increase the overall per capita GDP without there being any improvement in the well-being of the population. Despite these shortcomings, a high level of HIV prevalence is still generally associated with a higher reduction in growth of per capita income, other things being equal. Figure 2.3 illustrates this relationship and the losses to the growth rate of GDP and GDP per capita as a consequence of HIV/AIDS. The relationship between HIV/AIDS and growth suggests that the estimated impact for countries with HIV prevalence of 20% is a reduction in output of 2%, and a decrease in per capita income of roughly 1.3%.

HIV/AIDS destroys human capital built up over years and weakens the capacity of workers to produce goods and services for the economy.

The ILO research clearly suggests that the macroeconomic impact of the HIV/AIDS epidemic cannot be ignored. HIV/AIDS destroys human capital built up over years and weakens the capacity of workers to produce goods and services for the economy. This loss of skilled labour, together with the increase in care and treatment costs, tends to depress production, hamper savings and impede investment in the long run. Of particular concern is the fact that such effects would have a substantial negative impact at the microeconomic level in specific industrial and occupational sectors. In the informal sector, working people affected by HIV/AIDS suffer extraordinarily from the epidemic because they have no social protection for themselves or their families, and enterprises suffer because they are so labour-intensive. This means that the worsening socio-economic burden likely to accompany the increase in HIV/AIDS mortality and morbidity will most adversely impinge on the countries already most affected by HIV, causing further and deepening deterioration, most particularly in Africa.

The overall findings point to negative effects on economic growth and sustainable development that follow from the impact of HIV/AIDS on the labour force—a critical factor for the economy. In turn, slowed economic growth has serious implications for both job creation and employment, and for government budgets. Job creation and employment depend on both domestic and foreign investment and, whereas foreign investment may be discouraged by sluggish growth, substantial domestic investment that could come from savings is being diverted by the costs of HIV/AIDS to households and small businesses, and, more generally, throughout the informal economy. Countries where HIV/AIDS has had the most severe impact on economic performance are facing extreme pressure on budgets which affects the capacity of countries to address all areas of social and economic policy, especially in matters of employment, education and health.

HIV/AIDS erodes the capacity for economic growth and development through low savings rates and investment, slow employment growth and pressures on government revenues. These combine to constrain efforts to prevent worsening poverty, and they may seriously compromise the achievement of sustainable socio-economic development in the hardest-hit countries.

Chapter 3. The impact of HIV/AIDS on the world of work

The role of the workplace in providing prevention and care, as well as the protection of rights was recognized by the UN General Assembly in its 26th Special Session of 2001 on HIV/AIDS, which resolved in paragraph 49 of the *Declaration of Commitment on HIV/AIDS* to:

"Strengthen the response to HIV/AIDS in the world of work by establishing and implementing prevention and care programmes in public, private and informal work"

Source: United Nations, 2001

The ILO refers to 'the world of work' to denote the workplace, encompassing large and small, public and private, rural and urban workplace settings; the formal labour force and those who are informally productive; and government authorities, the legal system and other institutions (such as academic bodies) which shape the labour, employment and human resource environment. This chapter focuses particularly on the impact of HIV/AIDS in the private and the public sectors, and includes a brief review of the benefits of taking action at the workplace.

i) Effects of HIV/AIDS on the private sector

The costs of HIV/AIDS for enterprises of all sizes and in particular sectors of economic activity are becoming clearer year by year. A fuller understanding of issues common to all enterprises, as well as of challenges that differ in relationship to size, available resources and sectoral specificities, helps ensure that responses are focused, relevant and effective. The core problem for employers, as for national economies, is the loss of skilled workers with job-specific competence and organizational experience, as demonstrated in Main tables 1, 2, 3, 4 and 6 and discussed in Chapters 1 and 2.

At the same time, because of the nature of their productive activity, some workplaces may create a more or less vulnerable environment for workers in terms of HIV transmission; for example, when the workforce is mobile or migratory, the workers' risk of transmission increases. Each area of economic activity calls for solutions adapted to its characteristics and capacities. Specific sectoral data on HIV prevalence are rare, but available data clearly show differences by workplace, setting and level of skill in different and comparable economic activities. For example, Tables 3.1 and 3.2 indicate prevalence levels in selected industrial sectors, and prevalence by job level for all the sectors combined, in three Southern African countries.

HIV prevalence estimated from voluntary anonymous workplace surveys, Botswana, South Africa and Zambia, 2000-2001, by industrial sector

Country	Numbers of employees surveyed	Volunteers as a proportion of workplace employees present on the day of testing (%)	HIV prevalence (%) in industrial sector (95% confidence interval)			
			Mining	Metal processing	Manufacturing	Other
Botswana (4 firms)	6,240	80	24.6 (23.6-25.7)			
South Africa (26 firms)	28,509	67	15.5 (15.0-16.1)	17.8 (15.8-19.8)	13.00 (12.1-13.8)	11.6 (10.6-12.6)
Zambia (4 firms)	9,345	74	18.1 (17.2-18.9)	16.8 (14.9-18.8)		

Table 3.1

Source: Data drawn from Evian, 2004

HIV prevalence estimated from voluntary anonymous workplace surveys, Botswana, South Africa and Zambia, 2000–2001, by job level, all industrial sectors

Country	Numbers of employees surveyed	Volunteers as a proportion of workplace employees present on the day of testing (%)	HIV prevalence (%) by job level (95% confidence interval)						
			Contract	Unskilled	Semi-skilled	Skilled	Management	Other/ Unknown	All
Botswana (4 firms)	6,240	80	28.5 (26.5-30.5)	27.3 (24.0-30.5)	24.9 (23.1-26.7)	19.2 (16.9-21.6)	6.9 (3.5-10.3)	20.5 (7.8-33.1)	24.6 (23.6-25.7)
South Africa (26 firms)	28,509	67	20.4 (19.0-21.8)	14.8 (13.3-16.3)	17.7 (17.0-18.4)	6.7 (5.7-7.6)	4.1 (3.0-5.2)	12.2 (11.5-12.9)	14.5 (14.1-14.9)
Zambia (4 firms)	9,345	74	18.0 (14.5-21.4)	18.4 (17.5-19.4)	17.0 (15.3-18.4)	26.4 (11.6-41.3)	3.5 (0.0-10.4)	13.9 (10.8-16.9)	17.9 (17.1-18.7)

Table 3.2

Source: Data drawn from Evian, 2004

Heavy industrial sectors and transport are affected because large proportions of workers in these sectors are mobile; the industrial sector attracts migrant labourers who may live for long periods away from home, and the transport sector entails workers travelling substantial distances daily over long periods. The mining sector is hard hit in the Southern African countries where the prevalence of HIV was estimated, but data from other industrial sectors in South Africa and Zambia show that HIV prevalence is similar in metal processing, and almost as high in general manufacturing. Furthermore, although contract workers and those with lower skill levels have high levels of infection, the levels of HIV in skilled labour are also high in Botswana and Zambia, and there is significant prevalence at management level, which can result in disruption of production and losses in productivity.

The costs to enterprises result from both direct and indirect effects of the epidemic. The firm incurs direct costs in applying its policies when individual employees are living with HIV/AIDS, but it is also subjected to indirect costs that aggregate when there is a high prevalence of HIV in their workforce (see Table 3.3)

In a World Economic Forum survey of 1,620 companies across Africa, 89% reported concern at the impact of HIV/AIDS on business, and 60% envisaged significant adverse effects including reduced productivity. A survey of over 1,000 companies conducted by the South African Business Coalition on HIV/AIDS (SABCOHA) found that 9% indicated that HIV/AIDS already had a significant adverse impact on their business, and 43% envisaged a significant negative impact within the next five years (see Figure 3.1, on next page).

Direct costs arise mainly from the greater strain placed on employee benefit packages offered by companies, including financial support for dependants. Employee benefits vary substantially between firms. In South Africa, for example, benefits usually include group life insurance, pensions and medical coverage. Further costs are incurred to recruit

Costs to enterprises

	Direct costs	Indirect costs
Individual costs from one employee with HIV/AIDS	• Medical care • Benefit payments: disability, death, funeral, etc. • Recruitment and training of replacement worker	• Reduced productivity due to absenteeism/sickness • Supervisors' time in dealing with productivity losses • Turnover costs
Organizational costs from many employers with HIV/AIDS	• Insurance premiums • Accidents related to sickness or inexperience • Costs of litigation	• Senior management time • Production disruptions • Depressed morale and motivation • Loss of experienced workers • Strain on labour relations

Table 3.3

Source: Adapted from Rosen et al., 2003

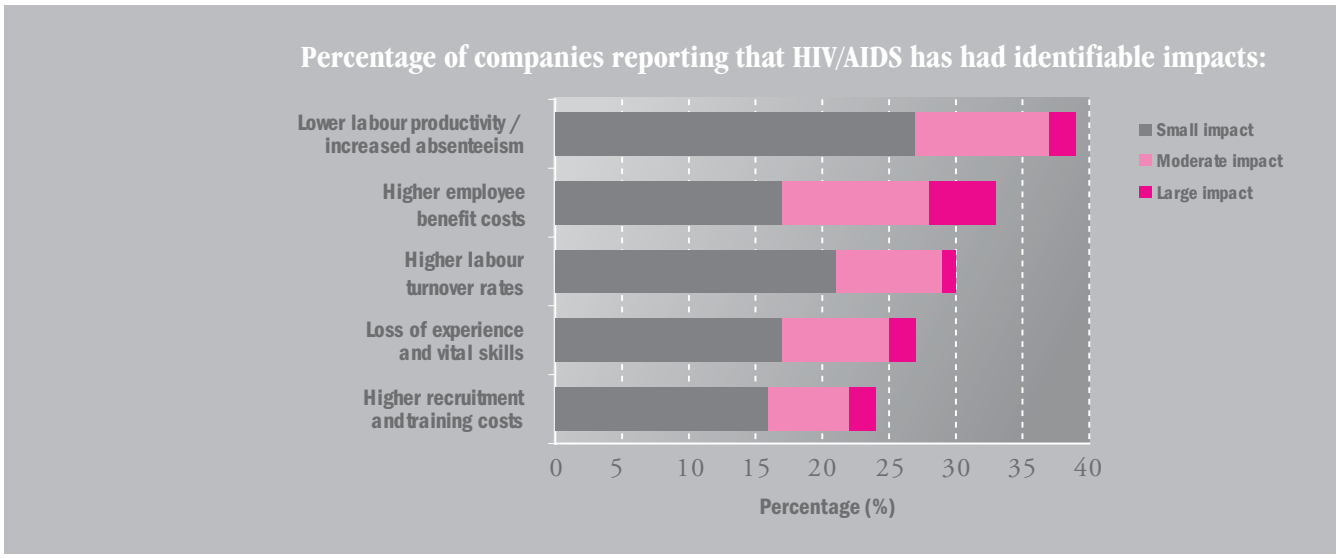

Figure 3.1

Source: SABCOHA, 2003

and train new employees to replace those who can no longer work (or who have been dismissed). Nearly one in five companies (18%) surveyed by SABCOHA indicated that they foresaw appointing extra employees to compensate for the impact of HIV/AIDS on labour productivity, absenteeism and mortality. Employees living with HIV/AIDS tend to suffer more work-related injuries when still working, particularly in heavier industrial work such as mining, but replacement does not necessarily eliminate this source of cost, at least initially, because new employees are more likely to have or to cause accidents than experienced workers. In any case, new employees cannot replace institutional memory. Further costs may be generated by litigation associated with claims for benefits or claims of unfair dismissal. The total pressure on costs can be extraordinarily high, even when offset by the lower number of employees reaching normal retirement age and collecting pensions. An early study projected a rise in total benefits from 7% to 19% of total salary costs between 1995 and 2005 (see Table 3.4). A major bank in Zambia tripled its payouts of life insurance in a single year.

Indirect costs result from the loss of productivity of employees living with AIDS, the loss of the skills and, in particular, the experience and collective acquired knowledge of workers who leave employment or die, and the increased labour turnover needed by companies to meet their demand for labour. Employees living with AIDS show higher levels of absenteeism, which generates one of the highest costs to the company. In one study of the private sector in Kenya, Malawi and Zambia, absenteeism accounted for 25–45% of all costs. An assessment of six companies in Botswana and Kenya in 1994, early in the epidemic, found costs already equivalent to between 1% and 9% of profits, largely due to increased absenteeism. Crucially, also, there are costs due to the overall effect on the morale and motivation of employees in a workforce with high prevalence rates, however hard it is to measure. To date, HIV/AIDS has had a smaller or less noticeable impact on the demand side than on the production side of business, but 30% of the companies surveyed by SABCOHA expect the epidemic to have an adverse impact on sales over the next five years.

Impact of AIDS on employee benefits (as a proportion of salary)

Benefit	Projected proportion of salary (%)		
	Year		
	1995	2000	2005
Lump sum at death	1.5	3.7	6.0
Spouse's pension	4.0	7.5	10.0
Disability pension	1.5	2.3	3.0
All benefits	7.0	13.5	19.0

Table 3.4

Source: Doyle, 1991

Overall, total costs can represent a significant burden to companies. A survey of five companies in Kenya revealed that the cost of AIDS reached US$45 per employee annually, representing 3% of company profits. It was projected that the cost could climb to US$120 per employee by 2005, in the absence of workplace programmes. Studies have shown that one coping strategy for companies is to adjust their costs downwards by altering employee contracts and benefits. Evidence from one South African company suggests that it reduced the ceiling for HIV/AIDS-related claims by a factor of almost 7 (from R100, 000 per family to R15, 000). Some companies have outsourced production activities, shifted from labour-intensive to capital-intensive technologies, or attempted to avoid hiring new employees who may be HIV-positive (or who belong to seemingly high-risk groups). There is anecdotal evidence from diverse sources that pre-employment testing is taking place in high-prevalence countries, even where this is against the law or national policy.

Benefits of HIV/AIDS programmes to the enterprise

Despite the cost to businesses of untreated HIV/AIDS, there is widespread under-investment in workplace programmes. A quarter of the firms surveyed by SABCOHA have implemented a formal HIV/AIDS policy, whereas less than a fifth have a voluntary testing and counselling programme, or provide care, treatment and support to workers living with HIV/AIDS.

Nevertheless, an increasing number of companies are demonstrating that the heaviest cost associated with HIV/AIDS is the cost of inaction.

HIV/AIDS programmes at the workplace have demonstrably positive returns for the workplace and the wider community. Firstly, they help ensure stable production by reducing turnover of labour, stemming the loss of valuable skills and experience, reducing recruitment and training costs, and decreasing absenteeism. Secondly, the programmes can alter the entire work environment in productive ways because they also enhance employee morale, help to both retain and attract better workers, foster a higher level of employee commitment and respect worker rights, particularly when based on a policy to counter discrimination and stigmatization. Thirdly, the corporate image can be improved, heightening reputation and raising consumer loyalty. Last but not least, incorporation of programmes at the workplace can reduce financial liabilities, through decreases in all health-related costs and benefit payouts. A decline in prevalence rates from 28.8% to 22.6% from 1999 to 2001 has been reported in Botswana's mining sector, where a range of workplace policies have been applied.

Maintaining production and productivity

Two key facts can help employers cope with the impact of HIV/AIDS on their enterprise:

1. HIV-positive status is not in itself a sickness and does not prevent an employee from continuing to work productively for a number of years.
2. The falling costs of antiretroviral drugs and the increased funding available to support treatment mean that even small enterprises have the possibility of treating and retaining their staff.

ii) The public sector and HIV/AIDS

Worldwide, but especially in developing countries, the public sector undertakes key functions that are essential for development, and a significant proportion of persons with technical skills, professional qualifications and management expertise are employed in government and public services. The quality and range of public services—education, health, law and order, water and sanitation, telecommunications and roads, and so on—are thus dependent not only on government revenues and others sources of finance, but also on the stock of public employees with the requisite skills and expertise. At the same time, it has long been an objective of governments and donors to enhance the range, coverage and quality of existing public services, most obviously in education and health, which are often seen as basic rights as well as being essential for social and economic development. These are also the two sectors that are most crucial to the prevention, care and treatment of HIV/AIDS.

The effective functioning of the public sector is increasingly threatened by the HIV epidemic. The epidemic undermines human capital and limits revenues available to finance development while generating increased demand for public services, especially in health. The impact on the public sector can be characterized as systemic, and the consequences may be particularly severe, given the dependence of the public sector on human capital cumulated from private and social investment in training and education. It is already clear that several ministries in Southern Africa are unable to fill an increasing number of vacancies, the majority resulting from AIDS-related sickness and mortality. Loss of human resources due to HIV/AIDS will especially damage the capacity of the state to supply essential goods and services, with far-reaching effects on the rest of the economy.

Education and health are key components of the public sector. The education sector is particularly hard hit by HIV/AIDS, because both the demand for and the supply of education are affected. Not only do children drop out of school because of HIV/AIDS (for a range of reasons that are discussed below), but teachers and also educators, school managers and educational policy-makers are themselves dying of AIDS. At the same time, education is crucial to the creation and enhancement of human capital, essential for sustainable development. Similarly, HIV/AIDS places extraordinary burdens on the health sector, because it has the responsibility of caring for ill persons whereas it is also facing the impact of illness in its own ranks, which diminishes its capacity for planning and growth.

Keeping school systems going

...education is crucial to the creation and enhancement of human capital, essential for sustainable development...

The education sector is crucial for sustainable economic and social development, but decades of investment in human capital formation are at risk of reversal as a result of the impact of AIDS. In addition to students, HIV affects staff at all levels, impedes the educational process, jeopardizes the quality of education and heightens the risk of illiteracy and out-of-school youth. At the same time, reduced economic growth due to HIV/AIDS affects the public revenue base, reducing public expenditure on education, as well as on other sectors such as health that help build and sustain human capital. HIV/AIDS is a major challenge to the success of *Education for All* — an initiative led by a coalition of national and international partners to meet the Millennium Development Goal of achieving universal primary education by 2015, which is strongly supported by the ILO.

Globally, well over 100 million children are not getting a basic education, two-thirds of them girls. Of the countries least likely to achieve *Education for All*, the bulk of them are in sub-Saharan Africa and also among the countries worst affected by HIV/AIDS. Public education in this region was already beset with problems before the advent of HIV/AIDS. Inadequately trained teachers, lack of infrastructure, and high dropout rates are longstanding problems now compounded by teacher shortfalls due to sickness and absenteeism and the dwindling number of managers in ministries and other institutions. The effects of HIV/AIDS on education can be detailed in every country of the region affected.

...but decades of investment in human capital formation are at risk of reversal as a result of AIDS and its impact.

The World Bank had already projected in 1998 that in Malawi, for example, over 40% of educational personnel in urban areas would die as a result of AIDS by 2005.

By 2006, an estimated 45,000 trained teachers will be needed to make up for those lost to AIDS in Tanzania, where 100 primary-school teachers are now dying each month as a result of the disease. The loss of teachers results in either cancellation of classes or combining them to create classes of 50–100 pupils. A similar phenomenon is found in South Africa where the pupil-teacher ratio rose from an average of 1:27 in 1990 to 1:34 in 2001—an increase of more than a quarter (25.5%). In Botswana, death rates of primary-school teachers similarly increased from 0.7 per 1,000 in 1994 to 7.1 per 1,000 in 1999. Reports indicate that teacher-training colleges are unable to graduate enough teachers to fill the vacancies created by deaths and retirements of existing teachers.

In Central and West Africa, the educational system has similarly been seriously stressed, although HIV prevalence is generally lower. In

the Central African Republic, 85% of deaths among teachers are due to AIDS, and the age at death of teachers due to AIDS is on average 10 years before the minimum age of retirement, so each death robs the educational system of 10 teacher-years of a valuable resource. In Côte d'Ivoire, 70% of deaths among teachers are as a result of AIDS.

Fundamental education is seriously threatened in these circumstances. But fundamental education is already no longer an option for many children in precarious situations. There is evidence everywhere of lower enrolment and higher dropout rates among children who are orphaned or have a family member who is ill as a result of HIV/AIDS, particularly at the secondary and tertiary levels. In Swaziland, school enrolment has already dropped as a result of AIDS and girls are clearly more affected. Even the provision of free primary schooling in Malawi and South Africa to assist girls in securing access to education has not stemmed the tide, and precious gains have been curtailed by HIV/AIDS. When households lose income, there is a lack of funds to send children to school or university. A study in Uganda found that 47% of households with orphans did not have enough money to send children to school, in contrast to 10% of households without orphans. A 2000 survey in Zimbabwe found that 31% of households interviewed had a child not attending school following the death of the child's mother; and a survey of 116 families affected by AIDS in Zambia found that 42% of children had simply ceased attending school. Whereas many of the HIV/AIDS-affected countries were already struggling to increase school enrolment, especially among girls, coping with AIDS further hinders the economic prospects of the young. De-schooling caused by poverty brought on by HIV/AIDS in the household can only lead to further impoverishment, as under-skilled youth find themselves entering the labour force prematurely with few or no skills and in highly marginal work.

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In this way, therefore, the most severe impact of HIV/AIDS on the education sector is anticipated to lie ahead. For example, a US Bureau of Census study estimates that 6 of the 26 countries worst affected by HIV/AIDS will have such declines in enrolment rates that they will show absolute reductions in their schooled populations by 2015. In the coming 10 years, the numbers of children in primary school are expected to be lower than they would be without AIDS—by 12% in Uganda, 13% in Kenya, 20% in Zambia, 23% in Swaziland, and 24% in Zimbabwe.

Typical strategies of replacing teachers with newly trained and recruited staff promise to be woefully inadequate to the task in current circumstances. Budgets are having to accommodate higher recruitment and training costs to replace the growing numbers of teachers no longer able to work and who are dying, as well as the payment of full salaries for those who are absent or ill, and salary costs for substitute teachers. In Swaziland, the cost of hiring and training teachers to replace those lost to AIDS is projected to reach US$233 million by 2016—a cost that exceeds the total 1998–1999 government budget. In Mozambique, it has been estimated that the epidemic's financial burden on the education sector will amount to US$50 million between 2000 and 2010, to meet the costs of increasing the supply of teachers while paying the salaries of teachers on sick leave. The cost of providing substitute teachers for those who are absent is likely to be a much greater drain on budgets than the cost of training. The World Bank estimates that HIV/AIDS will add between US$450 million and US$550 million per year to the cost of ensuring the success of the *Education for All* initiative in Africa.

Already a challenge, curriculum design and delivery of HIV/AIDS education have now become daunting tasks. The Teachers Union in Tanzania has acknowledged that teachers already work in difficult conditions with a severe shortage of teaching equipment and are inadequately skilled to educate students on HIV/AIDS, or to take on the increased burden of pastoral care as children lose their parents. Teachers are seen to lack both the competence and the commitment to teach these topics in already over-crowded and examination-driven curricula. Little or no training is provided, and there is little support from guidance and counselling services, or from peer education—all similarly inadequate to the task. Whereas workplace programmes expand in the private sector, there is almost no evidence of personnel policies on HIV/AIDS

for teachers, or interventions to protect rights and promote prevention and care among workers in the education sector.

Educational systems in the most heavily affected countries which have experienced severe losses of human capacity in the sector may require fundamental reforms, including revision of teacher training processes and review of employment and other contractual conditions of the sector's labour force.

Current and future demands on the public sector health system

In the countries most affected by HIV/AIDS, the health sector is experiencing enormous pressure—financial, organizational, and in terms of human resources—because of the increased number of persons seeking health care. It is worth noting that, apart from the actual care of persons who are ill, the requisite health service responsibilities to address the HIV/AIDS epidemic include epidemiological and behavioural surveillance; blood safety management and monitoring; voluntary counselling and testing; the delivery and monitoring of treatment; and the planning and management of prevention responses.

As the public sector is already strained, the increased financial and managerial burden leads to further dysfunction in many resource-poor settings. By the mid-1990s, HIV treatment was already consuming 66% of health spending in Rwanda and over 25% in Zimbabwe. HIV-positive patients occupy over 70% of beds at the Prince Regent Hospital in Bujumbura, Burundi. As the demand for HIV-related care increases, patients with other conditions may be admitted later or not treated at all. Other infections may spread more easily, as a result. Additional factors are the higher cost of treatment for HIV-related illnesses than for many other diseases and, above all, the fact that governments have to cope with the same increased mortality and morbidity due to HIV/AIDS in their own staff as in the patient population. These factors undermine the public sector's ability to maintain the expertise needed to respond to the epidemic.

The most critical pressure point in the system is among health-care workers themselves. The pressure is manifest in terms of numbers, workload and working conditions; training; fear of infection, risk of infection and means of protection; and the stigmatization of patients by health workers and of health workers by the general public.

Caring for health-care workers

The provision of care and health services is undermined in particular by the diminishing supply of health-care workers due to illness and death, to departures from the health service (including dismissals), and to migration. The health service in South Africa reports that, between 1997 and 2001, 14% of staff (principally nursing staff) died as a result of AIDS. In Zambia, the death rate among nurses due to AIDS quadrupled between 1986 and 1991 to reach 3% per year. HIV prevalence in midwives and nurses in the capital, Lusaka, stood at 40% in 1991, and the death rate among this group may already be 4–9% a year; between a fifth and almost half of nurses in the city may die due to HIV/AIDS in the next five years (2004 to 2008), without treatment. It is estimated that Botswana will have lost 17% of its health workforce between 1999 and 2005, and, if health-care workers are not treated, the proportion of those dying as a result of HIV/AIDS may reach 40% by 2010.

Training of new staff and replenishment of staff rosters barely keep up. In 1999, the annual gain to health services in Zambia was only 76 nurses: the government-trained graduating class consisted of only 487 nurses, whereas 411 nurses were lost (185 due to deaths from all causes). Similarly, in Malawi, 110 nurses graduated in 1997–1998, but 44 nurses died and 58 were lost for other reasons, leaving only 8 extra nurses at the end of the period. In Zimbabwe, in 1998, 45 nurses died, but eight times as many (330 nurses) were lost to the health services for other reasons. Migration has become an increasingly popular option, not only for economic reasons but in order to move to a country with a lower prevalence of HIV.

For HIV-positive staff to treat patients with AIDS in settings where antiretroviral therapy is lacking is deeply stressful: the high mortality of patients with HIV-related diseases undermines feelings of professional adequacy and, all too often, health-care workers know they share the same risks and poor prospects as the patients under their care. Other sources of stress include inadequate HIV/AIDS-specific knowledge and skills (in a survey of South African health workers, only a third had received training on HIV transmission and on dealing with, and caring for, persons living with AIDS), heavy patient loads, high turnover of colleagues, generalized staff shortages, low salaries, and insufficient means and medical supplies. It is not surprising that, in the South African survey, 33% of staff reported

Universal blood and body-fluid precautions to prevent the transmission of HIV and other pathogens

When implemented, these infection-control measures prevent the transmission of infection from one patient to another. They also serve to protect health workers from bloodborne infections when providing health care. They are universal because they are applied universally to all persons regardless of their presumed infectious status.

The precautions, which can be complemented with immunization, personalizing protective equipment, and post-exposure management, include the following:

1. Hand-washing after any direct contact with patients
2. Safe collection and disposal of sharps (needles or other sharp objects) instruments
3. Wearing gloves for contact with body fluids, non-intact skin and mucous membranes
4. Wearing a mask, eye protection, gown or plastic apron if blood or body fluids might splash
5. Covering cuts and abrasions with waterproof dressing
6. Cleaning up spills of blood and other body fluids
7. Safe system for waste management and disposal
8. Proper disinfection of all contaminated equipment
9. Proper handling of soiled linen

Source: adapted from Centers for Disease Control and Prevention, 1999

low morale, and over 16% had treatment for stress-related conditions. At any given time, over 10% of staff were absent on sick leave due to stress on the job. The impact not just on the numbers of health workers, but also on their workload and capacity to cope, is a policy and management issue that most health ministries are finding hard to address, especially as their staff face similar risks and pressures.

Another factor that is specific to the health system is the occupational risk. Health sector employees are all working adults exposed to the same risks of HIV infection as the general population and most of those who become HIV-positive will have been infected through sexual transmission. Findings from a health sector survey of South Africa suggest that the prevalence of HIV among hospital staff under the age of 36 (20%) is virtually the same as the estimated national prevalence (23.5%). Occupational risk is, however, real. The major risk is infection following injury with needle-sticks (when recapping with both hands), and during unsafe disposal of needle waste. Inappropriate disposal of sharps (needles or other sharp objects) exposes not only health workers, but also cleaners and waste collectors to the risk of injury and infection. One survey showed that 13% of health-care workers were exposed to HIV from occupational injuries in South Africa and, globally, an estimated 40% of hepatitis cases among health staff are attributed to such injuries. The World Health Organization (WHO) estimates that health workers suffer 170,000 injuries with an associated risk of HIV infection every year, and that about 500 infections result worldwide, over 90% of which occur in resource-poor settings. Research in the mid-1990s found that surgeons in highly affected countries of Africa faced a 15-fold greater risk of HIV infection in the course of their work than their counterparts in developed countries.

Prevention of this occupational risk is embodied in 'universal precautions' (see box) to prevent the transmission of HIV and other

pathogens transmitted through blood and body fluids. Awareness of universal precautions needs to be supported by the provision of protective equipment and clothing. The South Africa health sector survey found that only 36% of health workers had training in universal precautions, whereas 6% of large public hospitals reported that they did not stock sterilizing equipment, and over 10% of them reported stocking gloves and protective clothing less than 75% of the time. The provision of information and training on HIV and AIDS is of particular importance to protect workers, to increase their competence in treating patients, and to help reduce discrimination.

In this regard, a new joint ILO/WHO initiative is very timely. The two agencies are preparing joint guidelines on HIV/AIDS for health-care workers to address the prevention of HIV, mitigate the impact of the epidemic, and reduce stigma and discrimination in the health sector.

In this context, initiatives to massively expand access to antiretroviral treatment present both an opportunity and an additional pressure for health systems and their staff. Many deaths among health-care workers would be averted through treatment, and these workers would then be available to help treat others. But the increased workload on existing staff and the need for unusually large numbers of additional workers will put additional strain on the system. The joint initiative of WHO and of the Joint United Nations Programme on HIV/AIDS (UNAIDS) to bring antiretroviral therapy to 3 million persons by 2005 relies on the training and deployment of tens of thousands of community health workers to carry out the delivery and monitoring of treatment. Building capacity to scale up antiretroviral therapy to reach the '3 by 5' goals entails developing simple, standard training packages; the retention, recruitment or return of sufficient health staff to the sector; training of sufficient existing and lay staff to meet targets; and developing supervisory tools to monitor staff performance and ensure quality control.

Independent estimates suggest that over 80,000 community health workers would be required just to administer AIDS treatment to 3 million patients on a regular basis. Health-system managers would also be needed to oversee treatment and manage front-line personnel. Training of personnel will be needed. Yet other categories of personnel will be called for, notably persons to manage the purchasing, shipping, storage, distribution and flow control of as many as 4 billion or more tablets each year, which could mean dealing with 84 million tablets each week.

The extraordinary demand for health workers to implement the '3 by 5' initiative in the face of a severely enfeebled health sector in high-prevalence settings points to an apparently urgent need to provide health workers with antiretroviral therapy. In resource-poor settings in high-prevalence areas, the first-line treatment of sick health workers may, in fact, become a priority. In view of the urgency of the situation, however, antiretroviral therapy can be made available most speedily on a workplace basis, especially where occupational health services already exist.

Finally, this chapter presents some of the effects of HIV/AIDS on the agricultural and informal sectors. The epidemic's effects are particularly damaging because these sectors often represent livelihoods of first and last resort; here, the presence of HIV/AIDS can make the difference between survival and extraordinary hardship. For dependent household members, especially, the increasing failure of adult men and women to grow food or run a family-based business causes reductions in income and well-being that can leave entire households destitute.

iii) The impact of HIV/AIDS on agriculture: falling production and growing food insecurity

The majority of African economies rely on agriculture and export-oriented farming for a large part of employment and national output. In Swaziland, export farming generates 10% of GDP and subsistence agriculture employs 80% of the population. With the advent of HIV/AIDS, the agricultural sector in the most affected countries is experiencing high mortality rates that lead to a decline in production. Accompanying income losses are compounded by the inability of other sick family members to work, with the result that cash crops are incompletely tended or left unsold. A number of national studies suggest that the economic contribution of the agriculture sector will decline as a function of HIV transmission in rural areas. From the research so far carried out on this sector, observations indicate that HIV/AIDS is worsening the economic situation of impoverished rural households that lack access

to health and care, and is exhausting the ability of rural communities to withstand shocks.

The Food and Agriculture Organization of the United Nations (FAO) estimates that 7 million agricultural workers died as a result of AIDS globally between 1985 and 2000. In the 12 most affected African countries, the losses to the agricultural labour force ranged from 2.3% to 12.8% by 2000 (see Table 3.5). FAO projects that a further 16 million will likely die by 2020, which represents a range of 10.7–26% of the agricultural labour force in the worst affected countries. Botswana, Mozambique, Namibia, South Africa and Zimbabwe are expected to lose between a fifth and a quarter of their agricultural labour in less than a generation.

A survey in rural Zambia found that heads of households who were chronically ill reduced the area of land they cultivated by 53%, which resulted in reduced crop production and lower food availability. Household studies in the United Republic of Tanzania and Zambia have recorded that adults experience losses of two years of labour and one-third of annual income between the onset of symptomatic AIDS and death—an observation that is consistent with the data presented in the main tables of this report. Output fell in many areas and some households temporarily abandoned their land, lacking the labour and resources for planting, weeding and harvesting.

Yet it is women in agricultural households who most often provide the labour for food production. Another study confirms that

Crozet M./ILO

Women crushing millet

Projected agricultural labour force loss due to HIV/AIDS in the most affected countries of Africa, 2000 and 2020

Country in descending order of labour force loss in 2020	Projected agricultural labour force loss (%) by year	
	2000	2020
Namibia	3.0	26.0
Botswana	6.6	23.2
Zimbabwe	9.6	22.7
Mozambique	2.3	20.0
South Africa	3.9	19.9
Kenya	3.9	16.8
Malawi	5.8	13.8
Uganda	12.8	13.7
Tanzania	5.8	12.7
Central African Rep	6.3	12.6
Côte d'Ivoire	5.6	11.4
Cameroon	2.9	10.7

Table 3.5

Source: FAO, 2004

women in southern Zambia were forced to abandon harvesting because their time became entirely taken up with the care of sick household members. When the women tried to work extra hours to make up for lost time, many decided to reduce the number of hours they spent in cultivation. Similarly, a study in Ethiopia in the mid-1990s found that women spent about 100 hours per week nursing the sick, largely at the expense of their children and their farms. These observations are consistent with the findings documented in Main tables 6 A, B, and C on the increased burden that befalls working-age adults, particularly women, in households affected by HIV/AIDS.

Private agribusiness firms also report the impact of HIV/AIDS due to increased absenteeism. A sugar mill in South Africa with 400 employees reported that absenteeism of employees, together with recruitment and training of new workers, disrupted the flow of production, and was associated with major costs for the firm. Employee absenteeism during the two years prior to taking a medical retirement was, on average, about five working weeks. On the basis of the estimates in the main tables, this suggests that medical retirement was recommended within a few months of the onset of symptomatic AIDS, in the process of declining capacity to work.

A study of the Mhlume Sugar Company in Swaziland concluded that, in a three-year period, about 30% of all employee deaths were due to HIV/AIDS and that the epidemic had a major impact on the estate's production, employee benefits and medical costs. The study also concluded that labour was diverted by household obligations to care for sick relatives, and that there were increased household expenditures on health care and funerals. In Swaziland, also, research has shown that, relative to other households with a death, in households with an AIDS death, there was a reduction in maize crop yields of 54%, a fall in cattle-rearing of 30%, and a 41% decline in the proportion of land cultivated, on average, in only a year.

Ministries of Agriculture are concerned to ensure that land remains productive and continues to serve the population. Yet the losses in agricultural productivity are being exacerbated by the rising attrition of staff in agricultural ministries. Within the ministries of the most affected countries, there are staffing problems and under-capacity due to HIV/AIDS. A United Nations Development Programme (UNDP) study of Malawi found increasing levels of early retirement and excess mortality (twice the national average) due to HIV/AIDS, and a vacancy rate that stood at 67% for professional posts.

A survey in rural Zambia found that heads of households who were chronically ill reduced the area of land they cultivated by 53%, which resulted in reduced crop production and lower food availability.

Existing food insecurity is seriously aggravated by HIV/AIDS. The US Department of Agriculture has estimated that the reduction in numbers of agricultural labourers in Southern Africa will reduce agricultural labour productivity by 12% per year, which will result in a 3.3% loss in grain output. This critical threat to the agricultural sector from HIV/AIDS is of major concern. Reviewing the impact of HIV/AIDS on the agricultural sector globally, FAO reports that the HIV/AIDS epidemic is seriously undermining the ability of many countries in the African region to realize the World Food Summit commitment and the Millennium Development Goal to reduce by half the number of people suffering from hunger between 1990 and 2015. In countries where HIV/AIDS was already widespread in 1991, malnutrition has continued to increase, whereas it is declining elsewhere in the region.

Aside from the most salient impacts on the agricultural sector from losses in agricultural production and productivity due to scarcity of labour, major factors undermining the sector include reduced access to agricultural inputs, increased soil erosion, and loss of agricultural knowledge and skills, and reduced capacity to respond to other crises such as drought or flood. Distress land sales, sales of other productive assets to raise cash for medical and funeral expenses, and property grabbing by relatives of deceased farmers all add to the burden of economic loss for farming households.

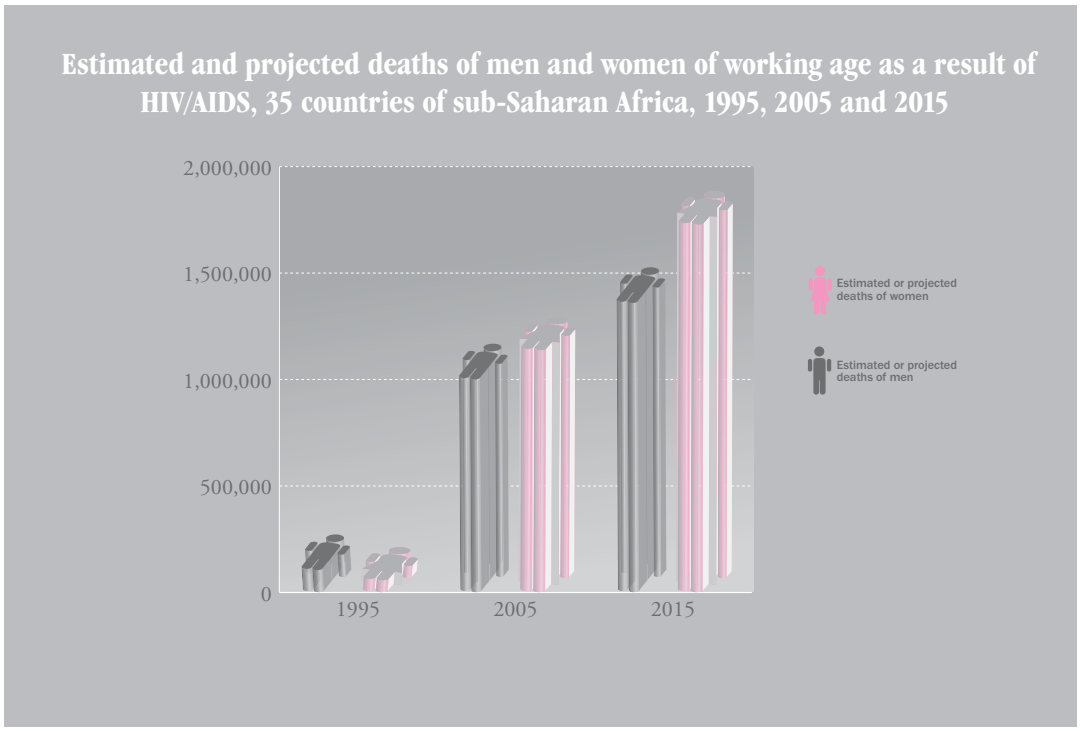

Figure 3.2

Source: Main table 5

iv) The informal economy

Not only do informal economy workers have precarious livelihoods, but they generally have no access to health-care facilities or any form of social security.

The labour force losses discussed in Chapter 2 and sections i) and ii) above refer to economically active labour force participation, whether formally registered or estimated. Similarly, the implications of these losses have been examined with respect to measuring the macroeconomic impact of HIV/AIDS and its impact on formal public and private sector workplaces. As Main tables 5 and 6 seek to underscore, however, the impact is far greater when one takes into account the fact that over 90% of those living with HIV/AIDS are 15 to 64 years of age, and the great majority of them are inevitably working and productive, if not formally employed. This explains why informal workplaces are experiencing comparable effects, but generally from a position of even greater vulnerability and economic insecurity. Not only do informal economy workers have precarious livelihoods, but they generally have no access to health-care facilities or any form of social security.

No discussion of these topics can claim to be comprehensive in the face of a persistent dearth of data on informal activities and with respect to the vulnerability of the informal economy to the epidemic's impact. Yet the simple projection of HIV/AIDS-related deaths among men and women of working age is evocative of the epidemic's full effects. Figure 3.2 shows the estimated and projected deaths among men and women for the 35 African countries covered in this report. The progressively greater impact of HIV/AIDS on women is clearly discernible.

The informal economy has been a dynamic source of employment and income growth in all developing countries for several decades. In Ghana, for example, it accounts for 70–80% of total employment and, in India, nearly 90%. It is characterized by enterprises that are unincorporated and that comprise economic production units owned by households, often tantamount to self-employment. Because the informal economy tends to absorb most of the growing labour force in many developing countries, the impact of HIV/AIDS may be detrimental, pervasive and complex.

Absenteeism, illness and death of workers place a great strain on the sustainability of informal sector enterprises. Savings and, consequently, investments are threatened by the demands on revenues and on capital to meet higher levels of health expenditures. Also serious are the losses of key persons with

Maillard J/ILO

Woman selling pineapples on the side of the road in Côte d'Ivoire.

experience and with management and technical skills who are essential for the survival of small, labour-intensive enterprises. In some cases, such losses can lead to the enterprise's failure.

The transient and vulnerable nature of the workplace itself means that operators are likely to lose their job as soon as they are away from it. A study of female traders in markets in Uganda has shown how quickly they can lose their livelihoods when their work is interrupted, either through their own illness or the need to care for someone close to them. Spoilage of stock occurs quickly, their small financial reserves are rapidly depleted to the point where they cannot replace stock, they must forfeit their stalls, and their businesses collapse. It has been found that women ruined in this way may turn to the sale or bartering of sexual services in the hope of regaining some financial security. In Ghana, too, itinerant trading is a very important economic activity for women. Women can stay away from their homes for days or even weeks at a time. Not only are itinerant traders vulnerable to the risk of HIV infection, but the loss of the income from trading when women become sick places severe stress on the budgets of affected households.

The interconnections between formal and informal activities in both urban and rural settings, and between households and the economy, are discussed more fully in Chapter 3 sections i) and iii), and in Chapter 4.

Chapter 4. The impact on women and children

i) Women and HIV/AIDS: lost contributions to the economy and to the family

> *"The effects of HIV/AIDS on socially reproductive labour … have not been explored and may be more important than some more obviously measurable economic impacts".*
>
> N.M. Ncube, 1999

A striking feature of the epidemic is that more women than men are now HIV-positive in the countries most affected by the epidemic, and women typically become infected at earlier ages because of the general tendency for men to seek relationships with younger women. Consequently, as women generally live longer than men, they lose more years of healthy and productive life. Worldwide, half of all persons living with HIV/AIDS are women; in sub-Saharan Africa, the figure is 58%. New infections are occurring faster among women than men in Asia as well as Africa. On the basis of the UN data for the 50 countries studied here, the ILO has estimated that 29.5 years of life expectancy will have been lost by the female population by 2005, compared to 26.5 years by the male population; by 2020–2025, the gap will have widened and the female population is projected to lose 6 more years of life expectancy than males, in some countries. Figure 4.1 shows the projected life expectancy differences for three heavily affected countries up to 2015. The gender differential in HIV infection is especially wide with respect to young men and women aged 15 to 24 (two-thirds of infections are among young women), which is the critical age of entry into social and economic roles, thereby creating a major challenge for policy-makers.

There is ample evidence that the high and increasing vulnerability of women to HIV in Africa is due to gender-based economic inequalities; sexual violence in homes, the workplace and other social spheres, including schools; and lack of access to prevention, education and training, and care. The different attributes and roles that societies assign to their male and female members affect behaviours, the ability to self-protect against HIV/AIDS, and the capacity to cope with its impact. The power imbalance between women and men is compounded when the man is older, and the economic dependence of young women on (older) men is also greater.

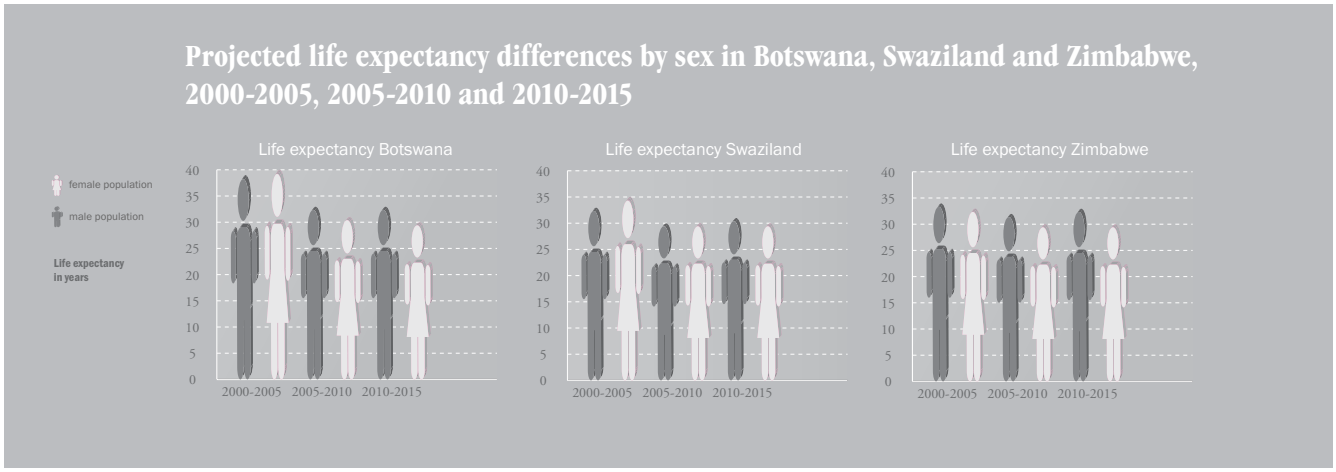

Figure 4.1

Source: UN,2003

Maintenance of women's economic position, however fragile, is key to reducing poverty, yet is seriously threatened by HIV/AIDS

A vicious cycle develops when AIDS strikes: poor and disadvantaged women become even less economically secure as a result of the impact of HIV/AIDS on the level and distribution of household incomes; women are often deprived of rights to housing, property or inheritance upon the loss of their spouses to AIDS, or if it becomes known that they are infected; bearing in mind that women perform the majority of agricultural tasks in rural areas, any decline in agricultural production caused by labour shortage due to HIV/AIDS leads to food insecurity, depriving women and men of the means to feed their families; and income and food insecurity, in turn, leads to family break-ups, migration, child labour, trafficking and prostitution, all of which increase the risk of HIV transmission and cause a deeper decline into poverty.

A report based on Kenya's export-oriented sectors (coffee and tea plantations and light manufacturing industries) found that women experienced sexual harassment and violence as a normal part of their working lives. Also, an increasing number of women are being trafficked, mainly across national borders, for sexual exploitation.

Moreover, the global HIV/AIDS epidemic is taking a devastating toll on women in terms of the burden it places on them to be caregivers and to cope with the impact of the disease on their family and livelihood. Women are increasingly bearing the brunt of the epidemic and, as a consequence, are becoming poorer. Within the household, the burden of caring for sick family members falls more heavily on women and girls, which not only adds to their workload but also undermines the other vital roles they play. Women's contributions to the economy have long been systematically underestimated, as well as unpaid. These include both productive activities such as subsistence agriculture and domestic work, characterized as the care economy. UNDP estimates that unpaid work produces an output in the developed world of at least half of GDP. The global estimated product of women's unpaid work at the global level was estimated by UNDP at US$11 trillion, compared to a global GDP of about US$23 trillion in the mid-1990s. Of all 'invisible' activities, the unpaid care economy may account for the largest share, with about 70% of women's unpaid time being spent on the care of family members.

Women must often manage both paid employment and home-based provision of care. Lack of support for caregivers in the face of increasing burdens due to HIV/AIDS, however, means that it is increasingly difficult for women to find and keep work in all types of employment. The higher demands made on them have led to women's increased absenteeism on the job. Women who lose formal employment in many of the high-prevalence countries contribute to the over-representation of women in the informal economy, where they have no income security or social protection and no access to health facilities. These consequences of the epidemic are costly to households and to society at large. When women's time is spent caring for patients, not only is their time devoted to formal work diverted, but also the time needed for other essential 'invisible' tasks such as subsistence agriculture (of fundamental importance to survival in many of the most affected communities). One outcome is the depletion of savings and other resources, as well as distress sales of assets. A cycle of impoverishment can result, and women may suffer increased hardship in their old age.

Both government and employers need to share the burden of care. Effective support to caregivers requires the creation of public and enterprise-based social protection programmes. Social support to caregivers competes, however, with macroeconomic goals. The costs to social programmes are very high when governments alter priorities to meet externally generated and changing agendas. Already, the expansion of social protection is competing against costs of economic adjustment priorities and required fiscal constraints. Decreases in social investment have occurred in many countries at a time when such investment is desperately needed. Such policies have often been pursued without taking into account the importance of the care economy as a productive sector of the economy, itself needing investment.

ii) The impact of HIV/AIDS on children: out of school and into labour

Without adult mentors and with limited prospects for education, many orphaned children miss out on the developmental skills and technical know-how needed to obtain decent work in their adult lives.

The high mortality of adults has resulted in an increasing number of children growing up without a parent or responsible guardian. There are nearly 15 million children under 18 years of age who have lost one or both parents as a result of AIDS, according to estimates for 2003, and over 12 million of them live in sub-Saharan Africa (see Main Table 5). A joint report published by UNAIDS/UNICEF/USAID in 2002 estimated that a third (32.2%) of all orphans under the age of 15 had lost their parent(s) to AIDS. The report projections suggest that this proportion will exceed 40% in 2005 and reach nearly 50% in 2010. The projected levels are even higher (between 60% and 90% by 2010) for the countries currently most affected by HIV/AIDS, and the proportion of all children likely to be orphans in these countries will range from 15% to 25%.

Outside Africa, even where the prevalence is lower or has declined, populations affected by HIV/AIDS are expected to show effects of parental loss. AIDS is projected to account for over a third of all orphans in Thailand by 2010, and for 40–50% of all orphans in countries of Latin America and the Caribbean, including the Bahamas, Belize, the Dominican Republic, Guyana, Haiti, and Trinidad and Tobago. In Guyana and Haiti, more than 10% of all children under 15 would be orphans by 2010. ILO research has shown that as many as 50% of orphans in Brazil have lost one or both parents to AIDS.

The implications of increasing numbers of children growing up in households and communities where the HIV epidemic is undermining social and economic structures are profound, both for the children themselves and for society as a whole.

Without adult mentors and with limited prospects for education, many orphaned children miss out on the developmental skills and technical know-how needed to obtain decent work in their adult lives. There is ample evidence that increasing numbers of children from HIV-affected households are not enrolled in school in countries with a mature epidemic of HIV; this is especially true for girls, but boys are also affected. In Mozambique in 2004, German Technical Cooperation (GTZ) found local estimates of up to as many as 60,000 orphans in one province alone (Sofala), and recent field estimates by UNICEF put the number of orphans at 379 in a single district of about 3,000 inhabitants. Most of the orphans had dropped out of school because they could not afford the US$1.50 annual school fee, and the cost of learning materials and school uniforms.

Even before they are orphaned, children in households affected by HIV/AIDS face impoverishment and malnutrition, and are taken out of school to help with the care of sick family members and/or to supplement household income. When out of school, children become among the hardest groups to reach with HIV-prevention information.

De-schooling of children on such a scale leads to de-skilling of their entire generation. Beyond damaging the future of individual children, HIV/AIDS impedes human capital formation and compromises sustainable development. As a group, these individuals are inadequately schooled and inexperienced when they enter the labour force. This depresses their wages and limits their opportunity of later moving to better-paying jobs. They also experience a loss of expected long-term income due to the lost years of education. In these ways, HIV/AIDS not only harms individual children, but can cause a reversal of any gains achieved in recent years in improving the welfare of whole generations of children.

At the same time, there is exacerbation of child labour due to the necessity for orphaned children to enter the labour force prematurely and ill-equipped—sometimes in physically dangerous and equally psychologically damaging work including child prostitution—to support themselves and younger siblings. The pressures on households affected by HIV/AIDS are immense, and their reactions have implications for intergenerational transmission of poverty through effects on the future labour force. A long-term reduction in the quality of the labour force, and thus on economic growth and employment, works against

policies for poverty reduction and increased social protection. As a result, also, the HIV/AIDS epidemic poses a particular challenge to the elimination of child labour, and constitutes a real threat to the global fight against child labour spearheaded by the ILO.

A study conducted by the *Innocenti* centre reported a strong association between parental loss and child labour on the basis of household surveys in 11 sub-Saharan African countries (Angola, Burundi, Central African Republic, Côte d'Ivoire, Gambia, Ghana, Kenya, Lesotho, Senegal, Swaziland and Zambia). The study's findings indicate that orphans are twice as likely to work as other children, especially in poor households. Girls are more likely to stop attending school to meet the burden of care for a sick parent, to compensate for the loss of adult income due to parental incapacity to work and, ultimately, because of impoverishment following parental death.

De-schooling of children on such a scale leads to de-skilling of their entire generation. Beyond damaging the future of individual children, HIV/AIDS impedes human capital formation and compromises sustainable development.

Rapid assessments to investigate the situation of working children in South Africa, the United Republic of Tanzania, Zambia and Zimbabwe conducted by the ILO's International Programme on the Elimination of Child Labour (IPEC) in 2002–2003 revealed that orphaned children are far more likely than non-orphans to be working in commercial agriculture, domestic service, sex work and as street vendors. In South Africa, one-third of the orphans surveyed in these sectors had lost their parent(s) to AIDS. In Zambia, HIV/AIDS was estimated to have increased the child labour force by 23–30%. Moreover, all the assessments established strong links between HIV/AIDS, orphanhood and the worst forms of child labour, as defined by the ILO's Worst Forms of Child Labour Convention, 1999, which include slavery in all its forms and practices, child prostitution, children in drug trafficking, and other physically or mentally harmful work.

In parts of South-East Asia, 50–90% of children rescued from brothels have been found to be HIV-positive. According to ILO estimates, about 1.2 million children—both boys and girls—are trafficked each year into exploitative work in agriculture, mining, factories, armed conflict, and sex work. As many as 1 million children around the world may be forced into prostitution each year, and the total number of prostituted children could be as high as 10 million at any time, of whom a minority (1.8 million) are older children aged 15 to 17.

In the absence of social security nets, most African societies rely on the tradition that the extended families and communities take care of orphans, but the system is showing signs of strain with the advance of HIV/AIDS. Even though grandparents are most likely to take care of orphaned grandchildren, studies in Thailand, Uganda and the United Republic of Tanzania have shown that grandparents are often poor and unable to offer substantive material support; it is particularly hard for them to care for very young children and for older adolescents, and the number of child-headed households is increasing.

The ILO's pro-child actions aim to remove children from child labour and to provide training to orphans so that they can become productive members of society. This is challenging because most children who are already out of school are beyond the reach of preventive education policies. Yet such children are especially vulnerable to HIV transmission because of their age (the highest rate of new infections with HIV is in the 15–24-year-old age group) and their life styles. Resorting to risky sexual behaviours is too often the fallout of the absence of decent work opportunities.

Existing rates of unemployment among young people are extraordinarily high, in part because they do not possess the requisite skills to take on jobs. In addition, the high school dropout and failure rates, which are higher for orphans, further diminish these orphans' chances of entering the labour force. This reality calls for initiatives to ensure the educational attainment and skills of working children and, ultimately, the quality of an increasingly youthful supply of labour. On the demand side, employment-generation opportunities must be created for youth entering the labour market.

Part II.
Policy implications and the response to HIV/AIDS in the world of work

Chapter 5. Policy implications

An analysis of the main tables leads to two inescapable conclusions: the first cautionary and the second affirmative. Firstly, by not addressing the human capital and labour force implications of HIV/AIDS, the global community will fail to avert a potential developmental catastrophe—for Africa, in the first instance, but with impacts in all regions. We need to intensify efforts and press ahead, while recognizing that the research and data needed to inform our responses are still in very short supply. Secondly, the workplace is well placed to support prevention and mitigate the impact of the epidemic, because of its natural focus on sustaining output and productive capacity.

The information conveyed by the main tables underscores the wide-ranging implications of HIV/AIDS for concerned countries, including the impact on all persons of working age, on women and on children as well as on labour force participants. The world of work has an undeniable role to play in averting the consequences projected to arise, which are summarized in terms of the increased socio-economic burden expected to fall on workers who survive the epidemic (Main Tables 6B and 6C). Responses to date have been positive, but also piecemeal, and a comprehensive and enabling policy environment is required to adequately address the problem.

A supportive policy environment

The countries with the greatest success in addressing the complex issues of HIV/AIDS have generally had a more open policy environment that is supportive of discussion and policy development. Constraints to implementing comprehensive responses have not been simply financial: they also include the undue emphasis on health aspects of the epidemic and a general inability until recent years to develop multisectoral plans and programmes. Many countries have developed new strategic plans for HIV/AIDS and, whereas they offer the possibility of a broader framework for national activities, they do not in themselves address the issues of operationalization.

The challenge now is to develop and implement policies that address human capital issues. This requires research in two key areas: policy and legal frameworks, and the impact of HIV/AIDS on the labour market, including particular implications for the public sector. The work to be done must go beyond mere study of the problem; governments will need to develop policies and programmes to avert and address the effects of human capital losses on their capacity to sustain the supply and quality of public goods and services.

It is critical that personnel in all sectors be provided with the range of means to prevent HIV transmission, and be supported through comprehensive workplace programmes. Such programmes are largely lacking in most areas of the public and private sectors, even though everywhere the majority of national human resources are HIV-negative and thus need to, and can benefit from prevention programmes. Central, also, to the success of all policies and programmes are activities that focus on social inclusion and social mobilization, because it is the entire national human capital that represents a vital resource. Building partnerships based on supportive policy frameworks—across sectors and between civil society and government—is essential for effective national responses that benefit all members of the society.

Specific policy implications

Establishing a policy and legal framework: It must be determined whether a framework of policy and of law exists to protect the rights of all persons and workers living with HIV/AIDS, to promote prevention, and to provide care and support in both formal and informal workplaces. Where gaps are identified, it will be important to identify the obstacles to filling them in.

As HIV/AIDS has far-reaching effects on sustainable development, it is critical to move beyond the immediate effects of the epidemic and review how social sector plans (for education and health, especially) integrate HIV/AIDS; it is also important to assess whether governments are taking account of the effects of the epidemic on human capital in their public expenditure and development plans, and whether government, and major employers understand and plan to address its labour market and employment implications.

Developing a research strategy: There is a scarcity of qualitative and quantitative information relating to the impact of HIV/AIDS on labour markets. This can be remedied only through a programme of applied research focusing on the needs of policy- and decision-makers to identify what is currently happening to labour supply and labour demand in different labour markets, and the implications of these trends for development processes.

Sustaining educational and training capacity: Loss of human capital as a result of HIV/AIDS burdens the capacities of all training institutions in unpredictable ways. It is essential that capacity be sustained if countries are to move towards fulfilment of the Millennium Development Goals and their specific targets. Human capital audits can help support the planning of educational supply relative to demand.

Focusing on poverty: There is a crucial need for applied research to identify what is happening to rural poverty and food insecurity, and what can be done to strengthen policy and programme assistance for affected populations. It is clear that an expansion of food support will be necessary and that children will require targeted health and nutrition programmes. The latter are critical to enabling the future labour supply of the country to benefit from access to educational and other programmes relating to skill development, which ultimately enhances productivity.

Integrating development strategy: The workload of women is already excessive and HIV/AIDS increases demands made on women who are themselves often HIV-positive. It is essential that the greater constraints facing both agriculture and informal economic activities be urgently addressed, and that programmes be rapidly developed to relieve such constraints. It is evident from country experience in sub-Saharan Africa that relatively small-scale investment with a focus on women's labour can significantly reduce labour constraints.

Sustaining employment: The labour force will consist of younger and less well-educated persons—a fact that will make it more difficult to create and sustain employment growth. It may well be that the new conditions cannot be left to market processes alone to address. A deliberate programme aimed at enhancing labour skills through vocational education and training is probably essential, requiring public investment in building human and organizational capacity. It will be possible to tackle employment growth only under conditions where the labour supply has the skills requested by public and private employers.

Modelling the social policy costs and consequences of HIV/AIDS in the Russian Federation

The ILO's Subregional Office for Eastern Europe and Central Asia, based in Moscow, commissioned a research team to conduct a study initiated and funded by ILO/AIDS to assess the social and economic repercussions of HIV/AIDS in the Russian Federation. The model developed can be applied to other Commonwealth of Independent States (CIS) countries with similar social protection systems. As it is, the model may need revision after the pension reform currently under way in the Russian Federation and other countries.

In recent years, the Russian Federation has experienced an exceptionally steep rise in reported HIV transmission. The total number of reported HIV cases rose sharply between the end of 1998, when 11,000 cases were reported, and mid-2002, when over 200,000 cases were reported. Up to 90% of the reported cases are attributed to injecting drug use (IDU). Although the number of persons reported as HIV-positive is small relative to many other countries, the growth rate of HIV transmission in the Russian Federation is now one of the world's highest.

Taking into account discussions with a tripartite working group on HIV/AIDS, the research team developed a model to assess the impact of HIV/AIDS in the Russian Federation on:

- the general population and the economically active population
- the financial sustainability of the pension fund
- the costs of short-term disability benefits
- health-care expenditures for diagnosing and treating people living with HIV/AIDS
- productivity and, hence, on the national output (GDP)

The team developed estimates of probabilities of infection by age and sex on the basis of data for 2000–2002 from the Russian Federal AIDS Centre. The resulting distribution was adjusted for under-reported cases and the model to estimate the social and economic costs was based on the following observations and assumptions:

- the numbers of recognized HIV and AIDS cases by 2003
- the probabilities of being HIV-positive for men and women, by age
- the probability of death after onset of symptomatic AIDS in untreated cases
- the annual cost of antiretroviral therapy
- the costs of medical examinations at different stages of HIV/AIDS
- the average number of paid days in the case of short-term disability
- the reduction in the level of ability to work
- projected numbers of pensioners, persons on long-term disability benefits (the model allows for granting disability status after a person develops symptomatic AIDS), and numbers of orphans on survivor benefits

Three basic scenarios were drawn up to illustrate costs if the probability of being HIV-positive by sex and age were projected to remain constant, to rise, or to decline. A fourth scenario was based on the assumption that transmission would occur at older ages, reflecting a shift from transmission through injecting drug use to heterosexual

transmission. A fifth scenario projected saturation of the high-risk group of injecting drug users, assumed to number 1 million, and looked at the consequences.

A projection to 2050, which ignored HIV/AIDS, was compared with a projection taking into account the effects of HIV/AIDS, and the resulting model yielded the following findings:

- In the first four scenarios, the number of HIV cases is anticipated to peak at 640,000-–700,000 between 2006 and 2008, whereas, in the saturation scenario, the number of cases would rise to nearly 1.2 million by 2008.
- The numbers of AIDS cases would then peak at 255–259,000 in 2011–2012 in the first four scenarios. In the fifth scenario, the number of AIDS cases would peak at 385,000 in 2010.
- In the first four scenarios, expected health-care costs would peak at 0.25–0.26% of GDP in 2010–2012, whereas, in the last scenario, the health-care costs would peak at 0.43% of GDP in 2011.
- By 2050, the labour force is anticipated to shrink by 1.4–3.0% in the first scenarios, but by 5.4% in the last one.
- The numbers of pensioners would fall by 1.4–4% by 2050.
- The affordable replacement rate for the pay-as-you-go pension system would similarly decrease by 1.4–4%.
- By 2010–2015, the number of persons receiving disability pensions and survivor benefits is projected to be greater by over 4% in the first four scenarios, and by 7–8% in the fifth.
- The maximum growth in short-term disability benefit costs is projected to be about 7% in 2005–2010 in the first four scenarios, but reaches 11–12% in 2005–2015 in the fifth.

Although it is difficult to foresee the course of the HIV epidemic, given the numerous factors involved, it will be important to constantly track emerging trends and new factors that can affect the epidemic's development. These include changes in the risk-group structure, implementation of vigorous anti-epidemic measures, and the ease or difficulty of accessing treatment. The model can be updated accordingly and its applications will continue to be relevant. The results of such monitoring are already available to specialists in HIV/AIDS and to governments, trade unions, employer organizations, and non-governmental organizations. In this way, the model can help create a consensus on the necessity to make appropriate decisions and course corrections. It can also serve to evaluate the effectiveness of prevention interventions, of broad-based campaigns designed to change youth behaviour, and advocacy for the use of condoms and for treatment. As the above-mentioned projections are not exhaustive, the model can be expanded with additional modules, as required (Source: Mashkilleyson, et al. 2004).

Chapter 6. The response to HIV/AIDS in the world of work

In June 2001, when 189 Heads of State adopted the UN Declaration of Commitment on HIV/AIDS, they committed themselves to,

"By 2003, develop a national legal and policy framework that protects in the workplace the rights and dignity of persons living with and affected by HIV/AIDS and those at greater risk of HIV/AIDS, in consultation with representatives of employers and workers, taking account of established international guidelines on HIV/AIDS and the workplace"(§69).

United Nations, 2001

The ILO Programme on HIV/AIDS and the World of Work

The ILO's multifaceted response to HIV/AIDS emerged following the International Labour Conference of 2000. At its 88th Session, the Conference passed a resolution requesting that the Director-General expand the ILO's capacity to respond. A global Programme on HIV/AIDS and the World of Work (ILO/AIDS) was created in November 2000. The Director-General also requested that all programmes and units identify ways of mainstreaming AIDS-related issues into their ongoing work to ensure a comprehensive approach to the many developmental implications of the epidemic.

ILO/AIDS aims to strengthen the capacity of the Organization's tripartite constituents to create and activate workplace policies and programmes to achieve three overarching objectives: prevent transmission of HIV, reduce the impact of the epidemic on workers, families and communities, and ensure the protection of human rights.

The ILO brings together governments, employers and workers around the world in common action to improve social protection and conditions of living and work—the Decent Work Agenda. The ILO took action to respond to the HIV epidemic in recognition of the threat posed to the health, rights and livelihoods of its constituents, as well as to sustainable development. The Organization also recognized the potential for workplace action to prevent the spread and mitigate the impact of the epidemic.

Specific objectives of the ILO's HIV/AIDS programme are:

- to increase knowledge and understanding of the economic, labour and social consequences of HIV/AIDS;
- to mobilize the commitment and resources of constituents locally, nationally and globally;
- to guide national action programmes on HIV/AIDS (ensuring that they include the world of work and oppose discrimination) and advise on the reform of labour legislation; and
- to strengthen the capacity of government, employers' and workers' organizations to plan and implement workplace policies and programmes.

Core activities include research and policy analysis; awareness-raising and advocacy; advisory services, policy guidance and training; building partnerships at national and international levels with an emphasis on collaboration in technical cooperation; and the documenting and dissemination of good practices based on national experience. The improved availability and affordability of antiretroviral treatment and the growing awareness of the business costs of human capital losses have provided the impetus to include elements of care, treatment and social protection in workplace programmes.

The ILO Code of Practice (2001): HIV/AIDS and the world of work

This internationally recognized guideline stands on 10 key principles:

1. Recognition of HIV/AIDS as a workplace issue
2. No discrimination against workers on the basis of real or perceived HIV status
3. Gender equality because more equal gender relations are vital to the prevention of HIV transmission and to the management of its impact
4. Healthy work environments to minimize occupational risk and ensure the workplace is adapted to the capabilities of workers living with HIV/AIDS
5. Social dialogue because policies are best implemented through cooperation and trust between employers, workers and governments.
6. No screening for purposes of exclusion from employment or work processes
7. Confidentiality to protect workers personal data
8. Continuation of employment relationship as long as workers are medically fit
9. Prevention through information, education and addressing socio-economic factors
10. Care and support including access to social security, occupational benefits and affordable health services

The ILO Code of Practice on HIV/AIDS and the world of work

The Code of Practice was developed through consultations involving representatives of government, employers and workers in all regions. Finalized by a tripartite meeting of experts and adopted by the ILO Governing Body in June 2001, it was launched the same month at the United Nations General Assembly 26th Special Session held in New York on HIV/AIDS. The Code sets out fundamental principles for policy development and practical guidelines from which concrete responses to HIV/AIDS can be developed at enterprise, community and national levels. It promotes a comprehensive approach to workplace programmes, including:

- the protection of workers' rights, including employment protection, gender equality, entitlement to benefits, and non-discrimination;
- prevention through education, gender-aware programmes, and practical support for behavioural change;
- care and support, including reasonable accommodation access to benefits, confidential voluntary testing and counselling, and treatment in settings where local health-care systems are inadequate.

To complement and guide the application of the Code, the ILO has produced an education and training manual, *Implementing the ILO Code of Practice on HIV/AIDS and the world of work*. The manual serves as a reference document as well as providing guidelines, case studies and practical activities to help users apply the Code to national strategic plans and workplace policies and programmes. Together, the Code and the manual are being used to develop skills and institutional capacity for the benefit of ILO constituents in all regions.

HIV/AIDS and work: changing the laws to make them work

Enlightened legislation in the form of revised or new laws can play an important role in mitigating the impact of HIV/AIDS at the workplace. The *ILO Code of Practice on HIV/AIDS and the world of work* guides the development or reform of national legislation to address negative fallouts of the epidemic. The Code states that, in order to eliminate workplace discrimination and promote workplace action, governments (along with social partners) should provide a relevant regulatory framework and, where necessary, revise labour laws and other legislation[1]. In recent years, several countries have adopted or revised legislation specifically to cover HIV/AIDS and employment issues. In others, especially countries with common law systems, courts have used human rights provisions in existing legislation (such as constitutions) to confer protection to persons who are HIV-positive and to those around them whose lives are changed by HIV/AIDS[2]. A variety of legal initiatives can be used to respond to HIV/AIDS in the world of work, including AIDS-specific laws, labour legislation, anti-discrimination and human rights legislation, disability laws and insurance laws[3].

Specific HIV/AIDS laws allow for a comprehensive and coordinated approach[4]. For example, the Cambodian Law on the prevention and control of HIV/AIDS covers education and information dissemination, safe practices and procedures against HIV occupational transmission, the ban of HIV testing for employment purposes, health and support services, and non-discrimination and confidentiality issues as well as budget appropriations. Of great interest is the obligation for all institutions and enterprises to collaborate with the national AIDS authorities to develop HIV/AIDS workplace education programmes and prevention plans. As most of the provisions covering AIDS issues are included in one document, it is easier to understand the protections provided. In general, also, HIV/AIDS laws can be more detailed and include the definition of fundamental issues so they are not left to the interpretation of the courts.

Labour legislation is widely used to both regulate employer-employee relationships and establish the framework for workers and employers to define their relations through collective patterns of interaction, such as collective bargaining. Legislation serves to recall and guarantee fundamental principles and rights at work, where much discrimination occurs. An increasing number of countries, especially in Africa and in the Caribbean, include provisions prohibiting discrimination and mandatory HIV testing for the purposes of employment in their labour legislation[5]. Others adopt legislation or codes of conduct that specifically address HIV/AIDS and employment issues[6]. Collective agreements are also used to protect the rights of workers and to support the adoption of workplace policy on HIV/AIDS[7].

Anti-discrimination and human rights legislation has the specific objective of ensuring the protection of fundamental rights and freedoms. Complaints under these laws are often filed before specialized courts that are well versed in discrimination and rights-based issues. Anti-discrimination and human rights legislation does not aim primarily to punish the perpetrator of a prohibited act but rather to educate and provide remedies that fully repair the prejudices caused by the violations of a right. In addition to compensation and reinstatement in employment, innovative remedies such as workplace education on non-discrimination can be obtained. For example, the Romanian Emergency Ordinance No. 137/2000 on Preventing and Punishing all Forms of Discrimination prohibits HIV-based discrimination in employment[8], and provides for affirmative measures to ensure the elimination of discrimination[9].

Disability laws aim to protect persons with a disability against discrimination, to ensure equal treatment, and to integrate persons with a disability as much as possible into society. These laws often contain detailed provisions on the obligation of employers to make reasonable accommodation (adapting hours, tasks and working space) to help persons with disabilities to remain in work as long as possible. They can be very useful in providing protection for persons who have symptomatic HIV/AIDS and are still able to work[10]. The protection of asymptomatic HIV-positive persons is, however, often uncertain. It depends on the definition of disability given in the law and its interpretation by the courts[11].

The exclusion of HIV-positive persons from life- and health-insurance schemes, by either non-eligibility or exclusion from benefits, is a common practice worldwide. Indirect exclusion by charging unaffordably high insurance premiums is similarly practised. Many HIV-positive persons and their households find themselves without cover when they need it the most. Numerous governments

Maillard J./ILO

Long distance lumber hauling.

are struggling to come up with policies that can both reduce exclusion and ensure a viable and sustainable insurance industry. In South Africa, the Medical Schemes Act 131 of 1998[12] provides that a registered medical aid scheme may not unfairly discriminate directly against its members on the basis of their HIV status[13].

All these legal instruments show that different regulatory frameworks can be used to eliminate workplace discrimination related to HIV/AIDS and ensure workplace prevention as well as social protection. The use of one type of instrument does not preclude the use of others. On the contrary, different provisions covering HIV/AIDS issues can be incorporated into labour, disability, anti-discrimination and human rights legislation[14]. This multifaceted approach ensures that every issue is covered under a relevant instrument. Each state has to choose the regulatory framework that properly reflects considerations agreed at the national or regional level after consultation with social partners and other relevant stakeholders.

The transport sector in Southern Africa: developing a national policy in Zimbabwe

As most transport workers (truck drivers, train and airline crews, and sailors, among others) are away from their homes and families for long periods, they face higher-than-average levels of risk as a result of sexual activity with casual partners; this risk is shared by the communities along highways, or concentrated around some of the principal transport nodes (junctions or ports), and the communities from which they come. In response, the ILO, with support from SIDA (Sweden), carried out a one-year pilot project (2002–2003) in eight member countries of the Southern African Development Community (SADC): Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland and Zimbabwe. The overall aim was to assist the social partners and key stakeholders in developing coordinated national strategies, designed to be harmonized at the subregional level, for all transport modes and support facilities, in order to reduce the incidence of HIV in transport workers and their families and mitigate the impact of AIDS on the sector.

In Zimbabwe, the project was launched in September 2002 at a national workshop that brought together the ILO constituents, key players in the transport industry, UN agencies and other development partners in the country. The aim of the workshop was to create awareness of the project and ensure a buy-in by all stakeholders; a Project Advisory Committee (PAC) was then established. A

[1-14] *See Technical notes*

country assessment reviewed the impact of HIV/AIDS in the sector as well as the status of relevant national legislation and policies on HIV/AIDS. A 'knowledge, attitudes and practice' survey was conducted to provide baseline data for monitoring and evaluation.

There are an estimated 30,000 road and inland waterway workers in Zimbabwe (including both urban and rural taxi drivers and haulers); about 9,500 persons work for the national railways (with their dependants, they number 38,000 persons at risk); and air transport involves about 1,500 persons. More persons are actually engaged in this sector, but in small, regional or private transport operations where they are undercounted. Even a total of about 100,000 transport workers may appear small in a total population of working-age persons of 7 million (see Main Table 1). Nevertheless, findings from the country assessment confirm that, because of the wide reach of transport operations, the sector generates particular vulnerabilities owing to the prevalence of risky behaviours. More than 25% of male air transport workers, for example, reported multiple sexual partners in the preceding year, more than 1 in 10 of the married workers reported that their most recent sexual partner was not their spouse, and nearly a third reported having had a sexually transmitted infection.

The project held a policy-drafting workshop based on the data. The session also defined strategies for policy implementation, and was followed by a stakeholder consultative meeting to review, and adopt, the policy draft. This process resulted in the development of a national transport sector policy. At this stage, the project is focusing on capacity-building in the key subsectors through training of personnel in proposal development for resource mobilization and in programme management. The road transport subsector has since secured resources to implement its programme.

The policy was submitted to the Zimbabwe parliament for *noting* by the Cabinet Committee on Social Services—a procedure to formalize it, given that it had been developed within the framework of the existing National Policy on HIV/AIDS. In May 2004, the policy was approved by Zimbabwe's parliamentary committee, and the ILO was asked to draft the policy foreword.

The project has already identified some key operational and procedural modalities for successful programme implementation. They include the following:

- Support at the highest level was accomplished by means of a launch workshop officially opened by the Minister of Labour, attended by over 60 participants with responsibilities in the transport sector; this earned extensive media coverage.
- The principle of tripartite consultations and involvement of the ILO's constituents and other key stakeholders was a major contributory factor to the success of the project. All stakeholders adopted the principles of the *ILO Code of Practice on HIV/AIDS in the world of work* as a reference and a guide to policy development, as well as the *Southern African Development Community (SADC) Code on HIV/AIDS and Employment.*
- Effective project management and coordination, using participatory decision-making and consultation. The social partners were given effective support to develop a comprehensive plan of action for tackling HIV/AIDS in the world of work. This resulted in a sector-specific policy, as well as operational guidelines to implement appropriate interventions in the various subsectors.
- The project was enhanced by a country assessment that provided relevant information. It provided a basis for policy development, to define rapid interventions and to find strategies to avoid pitfalls in implementing recommended interventions and ensure their sustainability. It also identified potential allies, entry points and other opportunities for action.

The Zimbabwe transport sector policy-development process is now used as a blueprint for other sectors; for example, a draft mining sector policy on HIV/AIDS has been developed with ILO technical assistance, and the ILO has also been involved in the development of an HIV/AIDS policy for the public sector. The Zimbabwe policy has also given a major boost to the subregional project as a whole.

India confronts stigma and discrimination

Stigma (or 'a mark of shame') is attached to persons by others in order to devalue and discredit them. Upholding a stigma allows perpetrators to believe that they do not share the same risks as those they stigmatize and can avoid being treated in the same way. Stigma is often the product of fear, and prejudice typically builds on, and reinforces, existing inequalities. In the context of HIV/AIDS, stigmatization is deeply harmful. It fosters false beliefs in both the perpetrator and the persons being stigmatized. Those who stigmatize deny that they are at risk and, based on this delusion, do not seek information on prevention, do not change their risky behaviours, avoid testing, and fail to help persons living with HIV/AIDS. On the other hand, being the object of stigma diminishes the self-respect of persons who are stigmatized, so that they feel insecure and become inhibited, fail to find the resources they need to defend themselves, and tend to withdraw. In the population as a whole, there is enormous reluctance to come forward for testing for fear of being labelled and identified as a person living with HIV/AIDS, even when and where antiretroviral therapy is available. A vast potential for preventive behaviour is therefore left un-mobilized, and sick persons go untreated. Stigma also fuels discriminatory actions, and discrimination entails violation of human rights, including the right to non-discrimination, the right to privacy, and the right to appropriate protection in social security.

> *"In the spirit of decent work and respect for the human rights and dignity of persons infected or affected by HIV/AIDS, there should be no discrimination against workers on the basis of real or perceived HIV status. Discrimination and stigmatization of people living with HIV/AIDS inhibits efforts aimed at promoting HIV/AIDS prevention"*
>
> *(§ 4.2* **Non-discrimination***).*
>
> *ILO, 2001*

Stigma and discrimination persist to some degree worldwide, and the levels in India, where perhaps as many as 5 million persons are living with HIV/AIDS, are possibly no better and no worse than elsewhere. In India, however, a number of organizations of persons living with HIV/AIDS have sought to face the issue squarely in recent years and have provided, in particular, some solid documentation of the extent of stigma and discrimination that persons living with HIV/AIDS face in the world of work.

One study carried out by four organizations of persons living with HIV/AIDS (the Delhi Network of Positive People, the Manipur Network of People living with HIV/AIDS, the Network of Maharashtra People Living with HIV/AIDS and the Positive Women's Network of South India) was supported by the ILO. The study found that about one-third of respondents (29%) were unemployed principally because of ill-health; a third still worked, but had not disclosed their HIV status to their employer (38%) (mostly for fear of losing their job); and only about a third worked *and* had revealed their status to their employer (33%). Among those working who had disclosed their status, however, three-quarters of them (74%) actually received assistance in some form (mostly for medical expenses) from their employers. Among the other workers, 6% reported blatant discrimination at the workplace: 33% received no benefits, 25% were refused promotion, and 25% were forced to take early retirement. About 12% of respondents changed jobs because of ill-health, because they had been asked to quit, or because they had been sacked. Another major reason for changing jobs was stigmatization and rejection by co-workers. Some workers had to take leave often because of ill-health, and about 20% reported that their absence from work had brought about a loss of income.

In order to face their income loss and the expenses of medical care, respondents sold assets, borrowed heavily, and drastically altered their patterns of spending. Some respondents just had to stop buying their medicines. One highly damaging outcome was that expenditures on children's education was reduced by 80%, with the result that children were withdrawn from school, 35% of children in the respondents' households were denied basic amenities, and 17% took up work to help meet the family's needs. Yet, despite these sacrifices, only 18% of respondents could afford to receive antiretroviral therapy.

A second study designed to document human rights violations was conducted by the Asia Pacific Network of People Living with

Crozet M./ILO

Patient receiving care information in India

HIV/AIDS, and its findings were similar to those of the Indian Network of People Living with HIV/AIDS. About 8% of all respondents reported blatant discrimination by their employer, and 7% reported losing their job as a result of their HIV status. Discrimination had also taken other forms, in their experience: 24% lost promotions, 24% were asked to take early retirement, and 33% had their duties changed. Furthermore, 12% of all respondents reported discrimination by their co-workers, and 6% harassment or discomfort on the job.

The second study also revealed stigma and discrimination from health sector workers: 30% of all respondents reported that they had experienced discrimination by a health worker; over 21% reported having been refused medical treatment by a health worker, and 20% reported having experienced a delay in obtaining services, due to their HIV status. Furthermore, nearly 7% of respondents had been advised by a health-care worker *not* to access health care. These findings show the powerful effects of stigma not only in of the various workplaces of the Indian workers living with HIV/AIDS, but even more so in the workplaces of the health sector on which such workers depend for care, treatment and support.

The response of employers was encouraging in the first study, with most employers of persons who had disclosed their status providing support to their employees, in the form of medical care expenses and paid leave. The respondents reported that the moral support of their employer was of invaluable assistance to them. It should be said, however, that most of the employers who were supportive were NGOs or institutes working in the field of HIV/AIDS (39% of the respondents were employed either in the public sector or in NGOs), who were therefore sensitive to the employees' needs. Nevertheless, there is no reason for other employers not to emulate supportive approaches to dealing with workers living with HIV/AIDS.

Stigma and discrimination persist to some degree worldwide, and the levels in India, where perhaps as many as 5 million persons are living with HIV/AIDS, are possibly no better and no worse than elsewhere.

A number of initiatives in India are helping to cap stigma and prevent or overturn the effects of discrimination. The ILO, in consultation with its tripartite constituents and the National AIDS Control Organization, and supported by the US Department of Labor, developed a programme in India aimed at establishing sustainable tripartite national action on HIV/AIDS prevention, care and support in the world of work. The programme's two overarching objectives are to help reduce risky behaviour through

participatory education and practical support, and to counter stigma and discrimination.

Another example is the Lawyer's Collective that was established in 1981 to give legal aid to marginalized groups in litigation relevant to the public interest. The Collective successfully defended the rights of workers who lost their jobs because of their HIV-positive status, and achieved a 'suppression of identity' clause in this area of litigation. This means that individual persons can file lawsuits under a pseudonym to avoid further stigma or discrimination. Importantly, the Collective has won a case against a hospital for breach of confidentiality after it disclosed the HIV status of a patient to the patient's employer. This is a problem of particular note in India: in the study documenting human rights violations, nearly a third (29%) of respondents reported that someone had been informed of said respondents' HIV status without their consent; moreover, in nearly half of these cases (49%), disclosure was to someone who was not a spouse or a family member of the respondent, but a health-care worker, a co-worker, a friend, a member of the community or a government official.

Another means of addressing stigma and discrimination is finding community leaders to promote dispassionate dialogue on subjects that are typically taboo. The Tata Iron and Steel Company (Ltd) created a 'Ladies' Core Group' to promote HIV awareness. Made up of wives of chief executive officers, the 'Ladies' are trained to reach out to, and engage, women in marginalized groups, crossing some of the communication barriers and reducing cultural inhibitions.

The Sonagachi project empowers sex workers to negotiate condom use and thereby overcome the aggravated risk they run because of the stigma and low status attached to their work. The project was set up in an area where 370 brothels were located, and 4,000 sex workers lived and worked. At the start of the project, most sex workers were illiterate and had never used a condom. They were provided with training in literacy skills and legal rights, and with health services, while peer educators were trained to promote safe sex and condom use. The sex workers also had access to social and economic assistance, savings-and-loans schemes and childcare programmes. The project has been successful in two critical ways: the rate of sexually transmitted infections (STIs), which can act as co-factors for HIV, declined, and condom use rose sharply.

Workplace initiatives in Thailand: from migrant workers to life insurance discounts

The first case of AIDS was reported in Thailand in 1984, and the epidemic then increased rapidly. The response of the Government of Thailand was equally rapid, however, and national prevention programmes effectively reduced transmission, bringing down the number of new infections by 80% in 10 years (from 143,000 in 1991 to 29,000 in 2001).

In 1991, HIV/AIDS became a prime ministerial priority, putting the HIV/AIDS prevention programme squarely within the Prime Minister's Office. The budget was increased 20- fold, complemented by a massive public information campaign and a '100% condom-use' programme. It is this massive effort that succeeded in increasing condom usage, decreasing the transmission of sexually transmitted infections and in bringing about the remarkable reduction in HIV transmission. Nevertheless, the epidemic and its impact are far from over. The ILO estimates that over 1% of the total population of persons of working age (15 to 64)—more than half a million persons—are HIV-positive, and UNAIDS estimates that there are 290,000 orphans under 18 years of age (see Main Tables 1 and 5).

In Thailand, a range of innovative workplace programmes have been put in place. The aim of one initiative among migrant female factory workers in North Thailand was to increase their condom use. Many of these women believed that HIV transmission concerned only sex workers and was not a risk in 'romantic' relationships. They also felt that they would be poorly judged for using condoms or suggesting their use. Peer educators worked with these cultural perceptions of condom use to communicate the importance of protection, educating the women about the risks of transmission, and providing them with the necessary skills to negotiate condom use. In addition, condoms were distributed at the places of work, given that, as migrants, many of the women did not have access to health-care services.

The risks of HIV transmission for transport workers are widely acknowledged. The Shell Company of Thailand identified filling stations as points of risk for the truck drivers who stop there and the sex workers who offer their services. The Peer Education at the Pump Project (PEPP) was launched by Shell in 1997 with the support of UNICEF. Petrol pump staff members, the majority of whom are sexually

ILO

Women workers in Thailand

active youth, were trained as peer counsellors and educators for the drivers (largely men) and the sex workers (largely women). The initiative was successful for several reasons, including investment in the peer counsellors, and efforts to sustain their motivation and provide them with accessible materials and ongoing support. Other oil companies have followed suit and adopted similar programmes.

The AIDS-Response Standard Organisation (ASO) of Thailand, is a certification scheme introduced by the Horizons Project of The Population Council and the Thailand Business Coalition on AIDS (TBCA) in cooperation with the American International Assurance (AIA) - the largest insurance company in Thailand. It serves to encourage comprehensive HIV/AIDS workplace policies through life insurance premium discounts of 5–10% to participating firms. The scheme is aimed at accrediting, giving public recognition and financially rewarding companies that comply with specific standards on HIV/AIDS prevention and intervention in the workplace. The company qualifies for a minimum bonus if no HIV screening test is administered to applicants or current employees, and the company continues to employ HIV-positive workers. Companies are eligible to receive the maximum 10% discount for an HIV/AIDS programme that meets all specified criteria of an enlightened policy. In the first year of operation, about 83,000 workers were reached via 125 participating companies from three different sectors—the industrial sector (71 companies), the hospitality industry (30) and the service sector (24).

This programme and a number of other company initiatives have been created or supported by the TBCA. Another example is Nike Inc., also working with the Horizons Project of The Population Council. The prevention education programme focuses on training, peer educators, and voluntary testing and counselling. It provides information and consultations for current employees, a short HIV/AIDS orientation programme for new employees, and only voluntary confidential testing. Employees who are HIV-positive are treated in a non-discriminatory manner and are allowed to continue working as long as medically approved. The human resource managers from all Nike contract factories are trained in HIV/AIDS policy development.

Providing programmes in the workplace has the unique advantage of most directly addressing the age groups of the population at highest risk of HIV transmission. Thailand demonstrates that the workplace offers a variety of possibilities to influence the course of the epidemic through comprehensive workplace-based programmes. A major step forward is the policy-level decision by the Thai Social Security Office to cover antiretroviral therapy with generic drugs for all persons living with HIV/AIDS employed in the private sector as of April 2004.

Moreover, plans to expand the outreach of HIV/AIDS workplace programmes are about to be realized in Thailand. A collaborative project based on a partnership between the Department of Labour Protection and Welfare of the Thai Ministry of Labour, the TBCA, and the ILO is approaching completion that has successfully demonstrated a multi-level approach across one province, Rayong. This public-private partnership now receives funding from the Global Fund to Fight Tuberculosis, AIDS, and Malaria, and has created mechanisms and tools for workplace programmes that can be replicated at national level.

Crozet M./ILO

Repair work on a trailer

Behaviour change in the informal sector: mechanics and garage owners in Ghana

The prevalence of HIV in Ghana was estimated to be over 3% in persons aged 15 to 49 at the end of 2003. The vast majority (virtually 90%) of reported HIV/AIDS cases in this country are among working-age persons who comprise 58% of the population and the economic base of the labour force. The private sector and entrepreneurship development, with a focus on small-scale businesses, have been identified as essential elements in the drive towards an efficient market-oriented economy. In spite of having prevalence levels much lower than those in Southern or East Africa, but comparable to those in most of West Africa, Ghana is reporting a range of effects on business. These include direct costs related to health-care expenditure and absenteeism as well as indirect costs stemming from the loss of employees with key management and technical skills. The informal economy, which provides 70–80% of total employment, is under similar pressure. Ghana's national policy on HIV/AIDS and STIs and the HIV/AIDS Strategic Framework (2001–2005) provide for the development of comprehensive workplace policies, and advocate the role of the private sector in implementing workplace action. In response, and in the context of a project under the International HIV/AIDS Workplace Education Programme funded by the US Department of Labor, the ILO commissioned a study of several sectors in Ghana: for the informal economy, the study focused on a group of mechanics and garage owners to determine their level of knowledge on HIV and AIDS, understand their risk, and develop behaviour change communications tools with them.

Mechanics and small garage owners were selected for study because of their complex 'ecosystem' and network of contacts, involving transport workers and other mobile groups susceptible to HIV transmission. At the time of the study, the group of garages had not benefited from any direct HIV/AIDS intervention. On the basis of random selection, 395 respondents situated in different urban-based garages were included in the study from the three regions with the highest HIV prevalence rates in Ghana: Greater Accra (195 respondents), Brong Ahafo (102 respondents) and Eastern Region (98 respondents). The respondents included garage owners, apprentices, chief mechanics and the foodstuff sellers whom the garages regularly patronized. The information was collected by means of structured questionnaires that were filled in by interviewers as most of the respondents were functionally illiterate.

According to the findings, the HIV/AIDS knowledge level of respondents was high. In Accra and in the Brong Ahafo Region, more than 80% of all respondents reported being aware of the fact that there was no cure for AIDS. In contrast, the reported knowledge level on issues concerning HIV/AIDS in the Eastern Region was lower, at 47%. Risk-perception levels were, however, comparatively low in all regions.

The behaviour change communication (BCC) tools used included an information, education and communications kit whose

contents were developed for peer education. The kits included HIV/AIDS training handbooks, cue cards for STIs and HIV/AIDS, anatomical models, and male and female condoms. Peer educators were recruited from all categories of garage respondents, and were given a comprehensive training programme that covered STIs, condoms, fertility management, communication skills, gender issues and information on HIV/AIDS.

The behaviour change reported was very encouraging. After 7 months, high-risk behaviours decreased by almost half (47.2%) across the categories of garage respondents, condom use rose by nearly a third (28%), and the number of regular partners fell from an average of 4.7 to 1.5.

Owners of small and informal garages are part of a federation, but there is no workers' organization, so the apprentices and mechanics could be encouraged to form an association. Such an association would make it much easier to reach this group with targeted programmes, and future interventions could be designed to provide a link between informal sector associations and the local government authorities. Links of this type can empower groups, giving them opportunities to reach district assemblies and sources of funds to implement programmes for their own benefit.

The findings of this study indicate that targeted interventions can be highly successful and they point to the need to expand similar interventions to reach other workplace groups. Peer educators can be recruited, trained and equipped from other informal sector groups such as caterers, distillers, dressmakers, hairdressers and their apprentices. Such a strategy could eventually build educational capacity among a large number of workers and increase the reach of this type of intervention.

Treatment in the workplace: the example of international business

Workplace programmes on HIV/AIDS are most effective when they are comprehensive (incorporating prevention, care, and measures to combat discrimination) and developed with employer-worker collaboration. It is in the best interests of employers and workers for HIV transmission to be kept low, and for workers living with HIV/AIDS to be able to continue working. The workplace can therefore make a major contribution to national efforts to limit HIV transmission.

Companies worldwide have implemented workplace programmes, following the lead of those with the resources to measure costs and take action. The Global Health Initiative (GHI) of the World Economic Forum was set up to help its 1,000 member companies, and other businesses, take action against HIV/AIDS, tuberculosis and malaria. The Global Business Coalition on HIV/AIDS (GBC) was established in 1997 to increase the range and quality of business sector programmes to address HIV/AIDS in the workplace and the community. The GHI and the GBC underscore the fact that HIV/AIDS is a core business issue. Since 1998, the GBC gives Awards for Business Excellence to recognize and promote business responses to HIV/AIDS. The two awardees in 2003 were TataSteel, for its community outreach programmes of HIV prevention (which address women, particularly), and Standard Chartered Bank, for its workplace programmes 'Staying Alive' and 'Living with HIV', which provide support for employees living with HIV and their families, and promote non-discrimination.

The GBC also commended, among others, Anglo American for its workplace programme in South Africa. Having implemented prevention programmes for 12 years, the company started providing antiretroviral therapy in 2002.

Anglo American adopted the World Health Organization treatment recommendations, and a subsidiary company, Aurum Health Research, developed comprehensive clinical and operational guidelines and now manages implementation of the treatment programme. By spring 2003, health-care staff members at 32 company sites had been trained to deliver ARVs, and 223 employees were being treated. By summer 2003, the personnel at 45 sites had been trained, and 553 employees were being treated. Anglo American expect to be treating 3,000 persons by the end of the first year of operation (in the course of 2004). Estimating that about 30,000 (or 24%) of their 125,000 employees based in South Africa are HIV-positive, the company expects about 10% of HIV-positive employees to join the treatment programme each year. The company also hopes to extend the programme beyond the workplace into the community.

Anglo American sees access to antiretroviral therapy as the single most effective short-term approach to arresting the transmission and reducing the impact of HIV/AIDS. The cost of drugs and monitoring ran at about US$1,150 per person treated per annum in 2003, but is

CARE AND TREATMENT AT THE WORKPLACE

Many larger workplaces have some form of medical (occupational health) service in place that can complement national health-care systems in the response to HIV/AIDS. Their broad approach to care makes them useful partners in prevention, psychosocial support and the promotion of social protection. They can encourage voluntary testing and counselling through 'know your status' campaigns, administer therapies, and provide the support and monitoring needed to ensure effective treatment.

Until the advent of antiretroviral therapy, care had a connotation of symptom relief and support only. At a time when antiretroviral drugs (ARVs) are becoming more available and affordable, the term 'care' has taken on new meaning and promise. The direct provision of ARV medication and monitoring in the workplace has become an important and growing feature of collaboration between the world of work and the health sector. The provision of treatment is of particular benefit in retaining the acquired capital of workforce skill and experience.

How the ILO sees care and support

In the context of the ILO, care and support for people living with HIV/AIDS covers the following broad categories, with an emphasis on the rights of those affected to continue working without fear of stigma or discrimination:

- Access to treatment and drugs, both therapeutic and palliative
- Information on living healthily and referral to relevant community services
- Psychosocial support
- Working conditions reasonably adapted to the worker's state of health
- Social protection, which includes the implementation of social security, health insurance schemes and medical benefits.

An ILO programme piloted in Guyana, Nigeria and the United Republic of Tanzania provides a package that includes treatment in the workplace that is paid by the employer, while the donor cosponsor pays for the treatment for spouses and children.

The example of Heineken

Heineken International has provided a comprehensive HIV-prevention programme in Central Africa for over 10 years. It first included information, voluntary testing and counselling, access to condoms, workplace clinics, and short courses of antiretroviral therapy to prevent mother-to-child transmission. In 2001, Heineken decided to expand its HIV policy to offer ARVs to all employees and families, starting with breweries in Rwanda and Burundi, followed by the Democratic Republic of Congo, and Congo. AIDS had been the main cause of death in these plants for the preceding five years. Since the start of the treatment programme, there has been only one death as a result of AIDS. The cost of the prevention programme is entirely borne by the company, while the costs of tests and treatment require personal contributions.

expected to decline because of the continuing drop in drug prices as well as economies of scale in the programme. Anglo American sees these costs offset by the sharp decline in mortality—from 30% to 3.4% already in the first year—and in absenteeism due to illness as well as a reduction in other medical costs. By mid-2003, 94% of treated employees were capable of normal work, whereas, without treatment, persons living with AIDS were often bedridden.

Although antiretroviral therapy is provided at the company's expense, employees progressing to AIDS have been slow to enrol for treatment. The company sees this as evidence

of denial because of the stigma associated with HIV/AIDS. Other companies have found that the close involvement of workers' representatives and trade unions has helped the workforce overcome possible mistrust of management and the fear of discrimination and dismissal.

On another continent and at a lower national prevalence level, Volkswagen do Brasil recognized its first case of HIV/AIDS in 1986—the same year as Anglo American. By 1996, the company, which employs 30,000 persons, had a comprehensive package in place for the prevention and care of all employees and their dependants, including extended family members and retirees. Funded through cost savings from reduced absenteeism and low worker turnover, the prevention programme includes education, information and provision of free condoms; and their care programme includes treatment and counselling, access to a range of specialists, and access to antiretroviral therapy and monitoring. The company has also adopted a number of anti-discrimination measures, including prohibition of mandatory testing and dismissal of workers with HIV, and the right to confidentiality. By mid-2002, over 50 persons were receiving ARVs, and the company recorded a 90% drop in hospitalizations, with a 40% reduction in annual HIV/AIDS-related costs, lowered absenteeism and higher morale. Moreover, 90% of employees living with AIDS were active and symptom-free.

Mining in Southern Africa: implementing treatment through social dialogue

Since 1986, when the first mineworkers tested positive for HIV, the mining industry has been active in developing HIV/AIDS programmes at the workplace. This has occurred notably in South Africa, but these changes are now widespread, at least among the larger and better-resourced companies. Mining trade unions are also closely involved in the development and implementation of HIV/AIDS policies and programmes that affect their members. Their support has been essential to the success of these policies and programmes, and cooperation between enterprises and the workers' associations has yielded remarkable achievements. In 1991, the South African Chamber of Mines signed an agreement with the National Union of Mineworkers (NUM) to address fundamental issues such as pre-employment testing, confidentiality, training and benefits. Ten years later, in 2001, mining companies signed specific HIV/AIDS agreements with trade unions and, in 2002, South African mining companies signed agreements with The Employment Bureau of Africa (TEBA) to provide home-based care for terminally ill mineworkers who had returned to their rural homes.

The tripartite Declaration of Intent signed in South Africa in 2003 acknowledged that the response to HIV/AIDS could only be effective if all parties shared a common vision and strategy. It stipulated that prevention and awareness should be the central focus. To this end, the parties agreed that voluntary testing and counselling were crucial and that all employees were to be encouraged to use testing services to determine their status in a context of informed consent, confidentiality and non-discrimination. Furthermore, they agreed that prevention, treatment, care and support were mutually reinforcing and must be integrated in a comprehensive response. It was also recognized that good nutrition was an essential component of prevention and management. Finally, the commitments made by the parties to the Declaration included that, by the end of 2004, every mining workplace would have an HIV/AIDS policy and programmes aimed at encouraging openness about the disease, and reducing stigmatization, discrimination and prejudice against infected workers. Importantly, the parties committed to transforming the living conditions of workers, and the NUM has called for family accommodation for all mineworkers by the end of 2005.

In March 2004 the International Federation of Chemical, Energy, Mine and General Workers' Unions (ICEM) called on the mining industry to join with it in providing medical clinics with fully trained staff at all major workplace locations. ICEM envisions fully equipped medical clinics that can provide a basic infrastructure for drug treatment to employees, family members and persons in the immediate community.

The costs of workplace programmes may rise initially, but are expected to substantially fall over time. In the absence of ARV provision, HIV/AIDS programmes typically cost US$30–60 per worker per year. For some companies, this is equivalent to about 1% of total payroll costs. Some observers suggest that the cost could peak at 8–10% before falling. In one company, where about 1,000 workers started ARVs at an annual cost per worker of about US$825 (plus testing costs of about US$340), over 90% of persons treated became medically fit for normal work. Furthermore, the costs of drugs and of testing are falling. In another company, which has made ARVs

Gianotti E./ILO

A woman feeds her baby after a day of hard work in the mines.

available to workers since the end of 2002, the cost is about US$140 per worker per month—down from US$244 when the scheme started.

In the mining workplace, increasing uptake of voluntary testing and counselling is key to expanding treatment. At present, typically 8–20% of workers have come forward for testing and counselling. Most companies aim to increase the proportion to 70% of the workforce by the end of 2004. To achieve this, workers have to be convinced that promises (of continued employment while medically fit to work, of no discrimination, victimization or harassment, and of confidentiality) will be kept. The role of the unions is key. For example, at an April 2004 WHO/UNAIDS meeting, the Sasol mining and chemical company of South Africa reported an average of 84% in the uptake of testing and counselling at four sites, which it largely ascribes to close relations with the trade union and a collaborative approach to the development of the company programme.

Removing barriers of stigma and discrimination are an integral part of voluntary testing and counselling, and the role of peer educators is seen as effectively contributing to this end. Across a selection of companies, the ratio of peer educators to workers ranged from 1:27 to 1:145, and many were at about 1:65. The ideal situation is to have one peer educator for every 50 workers.

Once an HIV-positive diagnosis has been made, wellness programmes seek to prolong the asymptomatic productive life of the workers in question. These programmes include lifestyle and skills education, counselling about nutrition, immune system boosters and the management of opportunistic infections, such as tuberculosis (TB). The Employment Bureau of Africa (TEBA), which used to recruit for the South African mining industry, is now in the forefront of providing home-based care on behalf of several large mining companies.

An essential component of workplace programmes is tracking and measuring progress against costs. Data on such diverse aspects of the HIV/AIDS epidemic as shifts lost, health-seeking behaviour, ill-health retirement, incidence of TB and of STIs, and increased severity of injuries in HIV-positive workers are being assembled to inform actuarial assessments of the costs and effectiveness of company programmes. Increases in training sessions for HIV/AIDS and attendance at events, the ratio of peer educators, and the rate of condom distribution all point to the wider reach of awareness-raising programmes. Where HIV incidence has peaked in advance of a projection and below the projected level (as a result of proactive interventions), where the level of voluntary testing and counselling approaches 100% of the workforce, and where enrolment in ARV therapy approaches the level of the eligible population, progress is clearly being made and denial and stigma are losing their hold. In one company, the AIDS-related death rate has declined since 2001. In another, HIV prevalence peaked some time in 2003.

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Technical notes

Technical notes

Sources: Text

Many individuals contributed information for this report, and the bibliography was assembled to include all sources. Nevertheless, ILO/AIDS wishes to recognize the following individuals who contributed initial text on specific topics: Alex Banful, on behavioural change communication with mechanics and garage owners in Ghana; Evelyn Serima, on the development of a national policy for the transport sector in Zimbabwe; Norman Jennings, on social dialogue and treatment in the mining sector in Southern Africa; and Nikolai Mashkilleyson, Svetlana Misikhina, Dmitri Pomazkin and Vadim Pokrovsky, on modelling the social policy costs of HIV/AIDS in the Russian Federation.

Sources: Main tables

The principal sources of the main tables are: the United Nations Population Division, for estimates and projections of populations by age and sex, with and without HIV/AIDS, a basis for all the tables (United Nations, 2003, 2003a) (the HIV projections were developed by the UNAIDS Reference Group on Estimates, Modelling and Projections (UNAIDS Reference Group on Estimates, Modelling and Projections, 2002)); the ILO, for the most recent estimates and projections of the economically active populations for all countries (ILO, 2004); the World Bank, for estimates and projections of GDP and GDP/ca for all countries (World Bank, 2004); and UNAIDS, for the estimated prevalence of HIV in persons aged 15 to 49, by country, for 2003, as well as estimates of the numbers of orphans aged 0–17 by country (UNAIDS, 2004). Additional sources for tables and figures are provided in the text.

Of the 53 countries included in the study of the impact of HIV/AIDS conducted by the United Nations Population Division (UN, 2003 and 2003a), three countries were not retained for the analysis in this report (Equatorial Guinea, Guinea-Bissau and Sierra Leone) because of the absence of an HIV prevalence estimate for 2003. Hence, 50 countries are covered by this report, except in the case of the macroeconomic analysis that included 47 countries (see Main table 2).

Throughout the tables, *estimates* refer to periods for which observations later confirm (or modify) earlier projections (for example, national censuses or surveys), whereas *projections* refer to periods for which only projections are available (this may include years in the past for which no data to confirm or alter data are yet available). Most generally, estimates are for past periods, whereas projections are for future periods. In this report, data prior to 2000 are generally estimates (including the time period 1995–2000), whereas data for 2000 and beyond are projections (including the period 2000–2005).

UNAIDS estimates of the prevalence of HIV relate to the 15–49-year-old age group. To include those aged 50–64 who work, the ILO adjusted the prevalence estimates for the 50–64-year-old age group by estimating deaths with and without HIV/AIDS in that age group, applying the multiplier to HIV prevalence estimates and/or economically active population rates, where necessary.

Definitions and derivation of variables by main table

Main table 1

The estimated number of persons aged 15–64 in the labour force who were HIV-positive in 2003 is based on UN population counts for the age groups, the estimates of the economically active populations aged 15–49, and the HIV prevalence rate for those aged 15–49, adjusted on the basis of mortality differentials between 15–49- and 15–64-year-olds.

Population data for infant mortality, life expectancy, total fertility and the rate of growth are normally estimated or projected by the United Nations Population Division for quinquennial (5-year) periods, whereas total population is estimated or projected annually.

Infant mortality rate is the number of deaths before one year of age, per 1,000 children who are born alive.

Life expectancy at birth is the average number of years of life a newborn is expected to live on the basis of current mortality conditions.

Total fertility rate is the average number of live births a woman would have in her lifetime, if the current fertility levels of women of different ages are maintained.

The annual rate of population growth at national level is the difference between births and deaths (taking account of immigration and emigration) expressed as a percentage.

The dependency ratio of a population is the ratio of the sum of the numbers of persons 0–14 years of age and 65 years old and over (numerator) to the number of persons of working age, i.e. 15–64 (denominator). The dependency ratio is usually expressed per 100 persons.

Main table 2

Of the 50 countries selected for inclusion in this report (see introduction to Technical notes), and for which there was an HIV prevalence estimate for 2003, three countries were not retained for the macroeconomic analysis (Eritrea, Liberia and Myanmar) because they each had several years of missing data. Of the 47 remaining countries that appear in Main table 2, Thailand and Uganda had already passed their HIV epidemic peak by more than a quarter of peak level by 2003, and could not be included in the analysis of the effects of HIV/AIDS over the period 1992–2002. Nevertheless, economic growth in these two countries (Thailand and Uganda) was estimated *ex post facto* by applying the general model, and they are included in Main table 2. Their inclusion gives an indication of the likely impact of HIV prevalence on the growth rates of these two economies, had they been originally included in the model.

Gross domestic product (GDP) is the total output of goods and services produced by all resident producers, plus any product taxes (less subsidies) not included in the valuation of output. It is given here in constant US$ 1995 and converted to international dollars using purchasing power parity (PPP) conversion factors. Growth is calculated from constant GDP data and applying the least-squares growth rate method.

Real GDP and GP per capita refer to the US$ 2002 values of observed or estimated measures of output, for the most recent year of measurement of economic performance. They are provided as background documentation on each country.

GDP per capita is the GDP divided by the mid-year population. GDP per capita growth is based on GDP measured in constant prices and applying the least-squares growth rate method.

Percentage average annual loss in growth of GDP or of GDP per capita refer to the reduction in the average annual growth rate expressed as a percentage-point difference when compared to the equivalent result when the effect of HIV/AIDS is removed. It represents the additional average annual percentage points by which GDP (or GDP per capita) would have grown in the absence of HIV/AIDS.

Average annual dollar loss in growth of GDP and of GDP per capita refer to the average annual amount in dollars a country 'regains' if the effect of HIV/AIDS is removed.

Summary figures for Main table 2 were computed on the basis of the econometric model.

Main tables 3A, 3B and 3C

The base population in these tables consists of labour force participants (products of the age and sex groups of the population and the applicable economic activity rates by age and sex for each country). Estimates of the numbers of labour force participants partially and fully unable to work were calculated using deaths attributable to AIDS and an estimate of the length of time a person with HIV/AIDS is symptomatically ill prior to death, in the absence of treatment.

The introduction of durations of time for the period of which persons are first partially and eventually fully unable to work in the absence of treatment and prior to death is based on the application of the stages of HIV and activity level proposed by WHO (WHO, 2003). Stage 3 is defined here as the stage during which a person living with HIV/AIDS is bedridden for up to 50% of the time and can work only partially (50% of the time); and Stage 4 as the stage during which the person living with HIV/AIDS is bedridden for more than 50% of the time and is fully no longer able to work.

The length of time when partially and fully unable to work was estimated from a very small, but broadly consistent body of literature on progression of HIV/AIDS from onset of symptoms to death, in the absence

Stages of HIV and AIDS and activity level

Clinical stage I

Normal activity and *asymptomatic*

Clinical stage II

Normal activity, but some *weight loss*, *minor skin* and *mouth infections* and *recurrent sinusitis*

Clinical stage III

Bedridden for up to 50% of the time in the last month, and numerous symptoms: *weight loss*, *diarrhoea*, *fever*, *mouth infections*, *tuberculosis* and other *severe lung infections*, including *pneumonia*

Clinical stage IV

Bedridden for more than 50% of the time in the last month, and multiple symptoms: *wasting*, *pneumonia*, and *fungal*, *viral* and *bacterial infections* of the *mouth, brain, digestive system* and *other organs*

At stage IV also, *encephalopathy due to HIV* manifests itself in disabled cognitive and/or motor functions that interfere with the activities of daily life and that are progressive over weeks and months until death.

Source: based on *WHO Staging system for HIV infection and disease in adults and adolescents (WHO, 2003:49-50).*

of treatment (see Dilys et al., 2002; Del Amo et al., 1998; Hira et al., 2003; Mocroft et al., 1997, Roger et al., 1997; Yan Yan et al., 2003; and Collaborative Group on AIDS Incubation and HIV survival, 2000). On the basis of these studies, three combined durations were assumed for Stage 3 and Stage 4 (see table below).

The concept of *inability* - or of an individual being *unable* - to work is used in contradistinction to "medically fit for appropriate employment" (ILO, 2001), and relates to the clinical inability to work that progressively occurs in the course of untreated symptomatic HIV/AIDS, whether or not it falls under strictly medical observation. The term is used to apply to the acquired and enduring incapacity to work that very often results in withdrawal from the economically active population, to emphasize the divergence (to the extent possible) with persons with disabilities, on the one hand, and with labour force participants who are in a period of sick leave (even extended sick leave), on the other. An unknown share of persons estimated to be unable to work will still be employed and benefiting from reasonable accommodations of various types. Generally, however, all untreated persons living with HIV/AIDS will eventually become totally disengaged from productive activity.

On this basis, the number of persons in the labour force partially unable to work, the number of persons in the labour force fully unable to work, and the arithmetic sum of the total number of persons unable to work (whether partially or fully) are estimated for each of the three combinations of durations for 1995 (Main table 3A), projected for 2005 (Main table 3B), and projected for 2015 (Main table 3C).

Selected combined durations of time for which working persons who are untreated for symptomatic AIDS are partially and fully unable to work

Possible combined durations:	Duration Stage 3 Partially unable to work(months)	Duration Stage 4 Fully unable to work(months)	Total duration prior to death (months)
Combined durations 1	15	9	24
Combined durations 2	12	6	18
Combined durations 3	15	3	18

Technical notes, Table 1

Source: WHO, 2003

Main table 4

The basic data for this table are the products of the age and sex group mortality rates that are estimated and projected with and without HIV/AIDS and applicable economic activity rates by age and sex. The losses represent the difference between the number of persons in the labour force had there been no HIV/AIDS, and the lower estimated or projected number of persons in the labour force as a result of HIV/AIDS.

Main table 5

The estimated numbers of orphans are the most recent estimates from UNAIDS (2003). Orphans are defined as children who are legally minor (not emancipated for any other reason), who have lost their mother or father, or both parents, as a result of HIV/AIDS, and who were alive and under the age of 18, as stated in Article 1 of the Convention on the rights of the Child (1989): "For the purposes of the present Convention, a child means every human being below the age of eighteen years unless, under the law applicable to the child, majority is attained earlier".

Earlier estimates (and projections) of numbers of orphans can be found in *Children on the Brink 2002: A Joint Report on Orphan Estimates and Program Strategies* (UNAIDS, UNICEF & USAID, 2002), which refers to orphans aged less than 15 years.

Main tables 6 A, 6B and 6C

The basic data for these tables are the estimated and projected populations by age and sex, the economic activity rates by age and sex, and the numbers of working-age persons and of labour force participants who are estimated and projected to be partially or fully unable to work.

As in tables 3A, 3B and 3C, working-age persons and labour force participants unable to work are estimated and projected for three possible combined durations of Stages 3 and 4 of HIV/AIDS (see Main tables 3A, 3B and 3C).

The economic dependency ratio in the presence of HIV/AIDS is the ratio of the sum of the population under 15 years of age, the population aged 65 and over, persons aged 15–64 who are not economically active and persons aged 15–64 who are unable to work as a result of HIV/AIDS (numerator), to the population of persons aged 15–64 who are economically active and excluding labour force participants who are unable to work as a result of HIV/AIDS (denominator). Labour force participants in the denominator include workers who are HIV-positive and in Stages 1 and 2 of HIV/AIDS (see WHO, 2003). In the absence of HIV/AIDS, the same ratio is calculated without adding persons aged 15–64 who are unable to work as a result of HIV/AIDS in the numerator, and without excluding labour force participants who are unable to work as a result of HIV/AIDS in the denominator. The economic dependency ratio is expressed per 100 economically active persons.

The impact due to deaths is the difference in the two economic dependency ratios due to the difference between deaths in the presence and in the absence of HIV/AIDS, expressed as a percentage.

The additional impact due to illness prior to death is the difference between the economic dependency ratio in the presence and in the absence of HIV/AIDS, over and above the difference due to mortality with and without HIV/AIDS. It is also expressed as a percentage.

The total impact is a product of the impact due to deaths and the impact due to illness. For example, if the impact due to death is 5%, and due to illness is 2%, the total impact would be 1.05*1.02=1.071, yielding a total impact of 7.1%.

The definition of a dependency ratio is provided in Main table 1 (see Main table 1 and Technical note for Main table 1). The *adjusted* dependency ratio used to illustrate changes in the social burden is the dependency ratio in the presence of HIV/AIDS, in which persons of working age (15–64-year-olds) who are unable to work as a result of HIV/AIDS are added to the numerator of dependants, and removed from the denominator of persons of working age.

The impact due to deaths is the difference between the dependency ratio calculated for a population in the presence and in the absence of HIV/AIDS.

The impact due to illness is the additional impact due to the proportion of working-age persons who are unable to work, and is the difference between the dependency ratio in the population with HIV/AIDS and the adjusted dependency ratio for the same population.

The total impact is a product of the impact due to deaths and the impact due to illness.

Notes for HIV/AIDS and work: changing the laws to make them work

1 Section 5.1 (i)

2 See, for example: Diau v. Botswana Building Society (BBS), Industrial Court of Botswana, 9 February 2004; X. v. Bank of India, Bombay High Court of Judicature, 16 January 2004; G. v. New India Assurance Company Ltd, Bombay High Court of Judicature, 16 January 2004; Québec (Commission des droits de la personne et des droits de la jeunesse) v. Montréal (City), Québec (Commission des droits de la personne et des droits de la jeunesse) v. Boisbriand (City), 2000 SCC 27 [2000] SCJ No 24 (QL); N. v. Minister of Defence, Labour Court of Namibia, 10 May 2000, Case No. LC 24/98; CCT 17/00; Hoffmann v. South African Airways, Constitutional Court of South Africa, 28 September 2000; and Thwaites v. Canada (Canadian Armed Forces) [1993] CHRD No. 9 (7 June 1993); affirmed Canada (Attorney General) v. Thwaites, [1994] 3 FC 38 (TD).

3 For further details on these types of initiatives, see Chartier, M.-C., Legal initiatives that can help fight HIV/AIDS in the world of work, ILO/AIDS, September 2003, Geneva. To access the full text of some of these instruments, see the ILO/AIDS website: http://mirror/public/english/protection/trav/aids/laws/index.htm.

4 For examples of AIDS-specific laws addressing the world of work, see: Costa Rica, general Act HIV/AIDS No. 7771, 1998 and its regulations, No. 27894-S, 1999; Dominican Republic Law No. 55-93 of 31 December 1993 (*Gaceta Oficial*, Vol. 143, No. 9875, 31 January 1994); Kenya, HIV/AIDS Prevention and Control Bill, 23rd September 2003, *Kenya Gazette Supplement* No. 76 (Bills No. 22); Mexico Norma official Mexicana, NOM-010-SSA2-1993, para la prevención y control de la infección por VIH; and Philippines Republic Act No. 8504, June 29 1998. India is also in the process of adopting comprehensive legislation on HIV/AIDS. Nationwide consultations on the draft Bill were held with representatives of various sectors that are impacted by the epidemic, including representatives from the world of work. For more information, see: www.lawyerscollective.org/lc-hiv-aids/Abstracts/abstracts.htm .

5 United Republic of Tanzania (Zanzibar), Employment and Labour Relations Bill (Bill supplement No. 5 to the *Gazette of the United Republic of Tanzania* No. 14 Vol. 85, 2 April 2004); Bahamas, Employment Act No. 27, 2001 (*Official Gazette*, 2001, No. 27 pp. 1-45); Zimbabwe, *Labour Relations Act [Chapter 28:01],* as amended by the *Labour Relations Amendment Act*, 2002 and the *Labour Relations (HIV/AIDS) Regulations*, 1998; South Africa, Employment Equity Act No. 55 of 1998, *Government Gazette*, 19 October 1998, Vol. 400, No. 19370. Labour legislation reforms, expected to result in the integration of provisions protecting the rights of workers and job applicants are in progress in Barbados, Kenya, Lesotho, St-Lucia, Ukraine and Zambia. The 16 Member States of the OHADA (Organisation pour l=harmonisation en Afrique du droit des affaires), Benin, Burkina Faso, Cameroon, Central African Republic, Comoros, Congo, Côte d'Ivoire, Gabon, Guinea, Guinea-Bissau, Equatorial Guinea, Mali, Niger, Senegal, Chad and Togo also undertook law reform in 1999 aimed at adopting an *Acte uniforme en droit du travail*. The draft Act is an attempt to create a common legislative tool among the Member States in respect of labour issues. It contains provisions prohibiting discrimination based on HIV status, and mandatory HIV screening.

6 Mozambique, Lei No. 5 2002 de 5 February 2002 (*Boletim da República*, quarte-feira, 13 February 2002); Angola, Decreto n° 43/03 (*Diário da República*, Seixta feira, de 4 July 2003, No. 52); Namibia, *National Code on HIV/AIDS in Employment*, 1998, adopted in terms of section 112 of the *Labour Act*, 1992 (Act No. 6 of 1992), and South Africa Code of Practices on Key Aspects of HIV/AIDS and Employment, (*Government Gazette*, 1 December 2000, vol. 426, no. 21815) adopted under the Employment Equity Act No. 55 of 1998 and the Labour Relations Act, no. 66 of 1995.

7 In 2003, for example, several credit union cooperative societies in Trinidad and Tobago (the Antilles Employees Credit Union Co-operative Society Limited, the San Fernando Community Credit Union Co-operative Society Limited, the First National Credit Union and the NHA Employees Credit Union Co-operative Society Limited) signed a collective agreement with the Banking Insurance

and General Workers Union, under which both parties commit themselves to hold discussions with a view to formulating a policy on HIV/AIDS. In South Africa, in 2001, GFL Mining Services Limited and the NUMW, the UASA and the MWUS signed a collective agreement regarding HIV/AIDS and the workplace.

8 Employment includes: conclusion, suspension or modification of employment contracts, remuneration and benefits, training and promotion. Complaints are filed with the National Council for the Prevention of Discrimination.

9 For other examples, see: Québec (Canada) Charter of Human Rights and Freedom, 1975, (RSQC-12) and South Africa Promotion of Equality and Prevention of Unfair Discrimination Act, No.4 of 2000, *Government Gazette*, 9 February 2000, vol. 416, No. 20876.

10 For example, whereas most US courts have accepted that HIV is a disability *per se*, some courts have required proof that HIV limits a major life activity prior to accepting that HIV is a disability. This has affected the realm of protection for persons with asymptomatic HIV under the *Americans with Disabilities Act (1990)*. See also, for example, Hong Kong Disability Discrimination Ordinance (DDA) No. 86 of 1995 and the UK Disability Discrimination Act 1995 (A Bill amending the DDA to cover HIV from the moment of diagnosis was announced in the Queen's Speech to Parliament on 26 November 2003).

11 See, for examples: Bragdon v. Abbott 118 S Ct 2196 (US 1998); Runnebaum v. Nationsbank of Maryland 1997 WL 465301; Jurgens, R. Important Legal Victories for People with HIV/AIDS in the US, *Canadian HIV/AIDS Policy and Law Review*, vol. 4, Number 2, 3, Spring 1999; Jurgens, R. Your Health is Back. Now You May Lose Your Protection against Discrimination, *Canadian HIV/AIDS Policy and Law Review*, vol. 3, Number 4, Winter 1997/1998.

12 GG 20556, 20 October 1999.

13 It states that no medical schemes shall be registered under this Act unless the Council is satisfied that the medical scheme does not or will not unfairly discriminate directly or indirectly against any person on one or more arbitrary ground including the state of health. The Act also makes provision for regulations stipulating a basket of minimum level of benefits that all schemes must offer to their members.

14 For example, Kenya adopted an HIV/AIDS Prevention and Control Bill in September 2003, (*Kenya Gazette Supplement* No. 76, Bills No. 22), which covers many issues such as HIV/AIDS education (with particular emphasis on schools, workplaces, health-care services and communities), confidentiality of HIV/AIDS records and information, and access to health-care services. It outlaws discriminatory acts and practices against persons living with HIV/AIDS, and prohibits compulsory HIV testing as a precondition for employment. A labour legislation reform reinforcing the rights of workers granted by the HIV/AIDS Bill is also in progress.

Main tables

Main table 1: Basic data on HIV/AIDS, the labour force, population, age groups and dependency, 50 countries, 2000-2005

Country	HIV/AIDS		Population					Age groups and dependency			
Alphabetical order by region	Estimated HIV prevalence in persons 15-49 years (%) 2003	Estimated number of persons 15-64 years in the labour force who are HIV positive in 2003	Projected total population 2005 ('000s)	Projected infant mortality 2000-2005 (per 1000 live births)	Projected life expectancy at birth 2000-2005 (years)	Projected total fertility rate 2000-2005 (live births per woman)	Projected annual rate of growth of the population 2000-2005 (%)	Projected number of persons aged 0 to 14 years 2005 ('000s)	Projected number of persons aged 15 to 64 years 2005 ('000s)	Projected number of persons aged 65 years and over 2005 ('000s)	Projected dependency ratio (dependants per 100 non-dependent persons) 2005
Sub-Saharan Africa											
Angola	3.9	198,700	14,533	140	40	7.2	3.2	6,958	7,186	389	102
Benin	1.9	54,100	7,103	93	51	5.7	2.7	3,174	3,741	188	90
Botswana	37.3	253,600	1,801	57	40	3.7	0.9	709	1,037	55	74
Burkina Faso	4.2	245,700	13,798	93	46	6.7	3.0	6,732	6,712	354	106
Burundi	6.0	224,900	7,319	107	41	6.8	3.1	3,288	3,829	202	91
Cameroon	6.9	382,800	16,564	88	46	4.6	1.8	6,869	9,075	620	83
Central African Republic	13.5	202,600	3,962	100	40	4.9	1.3	1,700	2,101	161	89
Chad	4.8	160,900	9,117	115	45	6.7	3.0	4,285	4,555	278	100
Congo	4.9	62,700	3,921	84	48	6.3	2.6	1,853	1,954	113	101
Côte d'Ivoire	7.0	399,400	17,165	101	41	4.7	1.6	6,936	9,648	581	78
Democratic Republic of Congo	4.2	713,600	56,079	120	42	6.7	2.9	26,377	28,231	1,472	99
Djibouti	2.4	6,051	721	102	46	5.7	1.58	308	389	24	85
Eritrea	2.7	47,800	4,456	73	53	5.4	3.7	2,003	2,358	95	89
Ethiopia	4.4	1,336,766	74,189	100	45	6.1	2.5	33,511	38,485	2,193	93
Gabon	8.1	37,800	1,375	57	57	4.0	1.8	547	770	59	79
Gambia	1.2	5,800	1,499	81	54	4.7	2.7	602	841	56	78
Ghana	3.1	292,297	21,833	58	58	4.1	2.2	8,483	12,590	760	73
Guinea	3.2	121,200	8,788	102	49	5.8	1.6	3,849	4,685	255	88
Kenya	6.7	1,003,534	32,849	69	45	4.0	1.5	13,240	18,642	967	76
Lesotho	28.9	211,300	1,797	92	35	3.8	0.1	706	1,004	87	79
Liberia	5.9	61,400	3,603	147	41	6.8	4.1	1,688	1,835	80	96
Malawi	14.2	737,700	12,572	115	38	6.1	2.0	5,872	6,259	441	101
Mali	1.9	106,600	13,829	119	49	7.0	3.0	6,827	6,676	325	107
Mozambique	12.2	1,128,500	19,495	122	38	5.6	1.8	8,498	10,358	639	88
Namibia	21.3	152,400	2,032	60	44	4.6	1.4	869	1,084	80	88
Nigeria	5.4	2,406,500	130,236	79	51	5.4	2.5	57,192	68,946	4,098	89
Rwanda	5.1	230,600	8,607	112	39	5.7	2.2	3,886	4,496	224	91
South Africa	21.5	3,698,827	45,323	48	48	2.6	0.6	14,600	28,800	1,924	57
Sudan	2.3	25,600	35,040	77	56	4.4	2.2	13,657	20,089	1,294	74
Swaziland	38.8	134,100	1,087	78	34	4.5	0.8	467	581	39	87
Togo	4.1	74,800	5,129	81	50	5.3	2.3	2,218	2,746	165	87
Uganda	4.1	454,242	27,623	86	46	7.1	3.2	13,904	13,044	675	112
United Republic of Tanzania	8.8	1,401,300	38,365	100	43	5.1	1.9	17,011	20,425	929	88
Zambia	16.5	726,800	11,043	105	32	5.6	1.2	5,162	5,538	342	99
Zimbabwe	24.6	1,309,600	12,963	58	33	3.9	0.5	5,453	7,035	476	84
Asia											
Cambodia	2.6	149,500	14,825	73	57	4.8	2.4	6,027	8,364	434	77
China	0.1	857,300	1,322,273	37	71	1.8	0.7	288,830	934,056	99,387	42
India*	0.8	3,087,700	1,096,917	64	64	3.0	1.5	350,244	688,497	58,177	59
Myanmar	1.2	275,400	50,696	83	57	2.9	1.3	15,769	32,525	2,402	56
Thailand	1.5	516,700	64,081	20	69	1.9	1.0	15,817	44,198	4,067	45
Latin America and Caribbean											
Bahamas	3.0	4,400	321	18	67	2.3	1.1	91	210	20	52
Belize	2.4	2,300	266	31	71	3.2	2.1	97	158	11	69
Brazil	0.7	549,100	182,798	38	68	2.2	1.2	49,589	122,558	10,651	49
Dominican Republic	1.7	66,200	8,998	36	67	2.7	1.5	2,804	5,751	443	56
Guyana	2.5	7,500	768	51	63	2.3	0.2	225	504	39	52
Haiti	5.6	222,600	8,549	63	50	4.0	1.3	3,197	5,010	343	71
Honduras	1.8	43,500	7,257	32	69	3.7	2.3	2,840	4,139	278	75
Trinidad and Tobago	3.2	22,000	1,311	14	71	1.6	0.3	278	937	96	40
More developed regions											
Russian Federation	1.1	741,000	141,553	16	67	1.1	0.6	20,477	101,055	20,022	40
USA	0.6	928,800	300,038	7	77	2.1	1.0	63,641	199,548	36,849	50

Main table 1: Summary

Basic data on HIV/AIDS, the labour force, population, age groups and dependency, 50 countries, 2000-2005

	HIV/AIDS		Population					Age groups and dependency			
	Estimated HIV prevalence in persons 15-49 years (weighted) (%) 2003	Estimated number of persons 15-64 years in the labour force who are HIV positive in 2003	Projected total population 2005 ('000s)	Projected infant mortality 2000-2005 (per 1000 live births)	Projected life expectancy at birth 2000-2005 (years)	Projected total fertility rate 2000-2005 (live births per woman)	Projected annual rate of growth of the population 2000-2005 (%)	Projected number of persons aged 0 to 14 years 2005 ('000s)	Projected number of persons aged 15 to 64 years 2005 ('000s)	Projected number of persons aged 65 years and over 2005 ('000s)	Projected dependency ratio (dependants per 100 non-dependent persons) 2005
Total (Sub-Saharan Africa, 35 countries)	7.7	18,610,517	665,816					289,433	355,743	20,640	87
Total (Asia, 5 countries)	0.4	4,886,600	2,548,793					676,686	1,707,640	164,467	49
Total (Latin America and Caribbean, 8 countries)	1.0	917,600	210,269					59,120	139,267	11,881	51
Total (More developed regions, 2 countries)	0.8	1,669,800	441,591					84,117	300,603	56,871	47
Total (50 countries)	1.5	26,084,517	3,866,468					1,109,355	2,503,253	253,859	55

* HIV prevalence is a mid-range estimate used by ILO on the basis of the low-high range of estimates (0.4% - 1.3%) of UNAIDS for 2003

Source: See Technical notes

Main table 2: Estimated impact of HIV/AIDS on economic growth, 47 countries, 1992-2002

Country	HIV prevalence	Country macroeconomic data (latest available year)		Impact on GDP and GDP per capita			
Alphabetical order by region	Estimated prevalence in persons 15-49 years (%) 2003	Real GDP for 2002 (US$ millions) 2002	Real GDP per capita (US$) 2002	Estimated average annual rate of growth of GDP loss attributable to HIV/AIDS (%) 1992-2002	Estimated average annual rate of growth of GDP per capita loss attributable to HIV/AIDS (%) 1992-2002	Estimated average annual GDP loss attributable to HIV/AIDS (US$ millions) 1992-2002	Estimated average annual GDP per capita loss attributable to HIV/AIDS (US$) 1992-2002
Sub-Saharan Africa							
Angola	3.9	21,892	1,891	0.6	0.4	97	7
Benin	1.9	6,273	950	0.2	0.1	11	1
Botswana	37.3	12,787	7,233	2.8	1.8	270	105
Burkina Faso	4.2	10,912	971	0.7	0.4	57	4
Burundi	6.0	3,915	561	0.9	0.6	35	4
Cameroon	6.9	28,182	1,769	1.0	0.6	233	10
Central African Republic	13.5	4,157	1,039	1.6	1.0	58	11
Chad	4.8	7,418	904	0.7	0.5	43	4
Congo	4.9	3,190	867	0.8	0.5	21	4
Côte d'Ivoire	7.0	23,556	1,347	1.0	0.6	220	9
Democratic Republic of Congo	4.2	28,685	578	0.7	0.4	213	3
Djibouti	2.4	1,241	1,766	0.3	0.2	4	4
Ethiopia	4.4	44,096	693	0.7	0.4	234	2
Gabon	8.1	7,345	5,841	1.1	0.7	76	41
Gambia	1.2	2,112	1,501	< 0.1	< 0.1	<1	<1
Ghana	3.1	36,642	1,882	0.5	0.3	139	5
Guinea	3.2	14,364	1,858	0.5	0.3	57	5
Kenya	6.7	28,893	902	1.0	0.6	263	6
Lesotho	28.9	5,160	2,147	2.4	1.6	107	28
Malawi	14.2	5,698	515	1.7	1.0	83	5
Mali	1.9	8,890	820	0.2	0.1	15	1
Mozambique	12.2	19,336	929	1.5	1.0	192	7
Namibia	21.3	11,061	5,500	2.1	1.3	196	71
Nigeria	5.4	100,100	758	0.8	0.5	750	4
Rwanda	5.1	8,990	1,126	0.8	0.5	53	5
South Africa	21.5	392,380	8,923	2.1	1.3	7,230	115
Sudan	2.3	49,764	1,608	0.3	0.2	111	3
Swaziland	38.8	4,153	4,027	2.8	1.8	102	71
Togo	4.1	6,207	1,309	0.6	0.4	35	5
Uganda	4.1	28,134	1,229	0.6	0.4	136	4
United Republic of Tanzania	8.8	18,012	513	1.2	0.8	177	4
Zambia	16.5	7,871	743	1.8	1.1	127	9
Zimbabwe	24.6	25,954	2,124	2.3	1.4	638	35
Asia							
Cambodia	2.6	18,080	1,820	0.4	0.2	53	3
China	0.1	5,199,486	4,054	...	...	...	...
India*	0.8	2,454,281	2,365	...	...	...	...
Thailand	1.5	382,919	6,208	0.1	0.1	424	4
Latin America and Caribbean							
Bahamas**	3.0	4,687	15,306	0.4	0.3	18	40
Belize	2.4	1,279	5,386	0.3	0.2	3	9
Brazil	0.7	1,170,587	6,878	...	...	...	...
Dominican Republic	1.7	46,200	5,881	0.2	0.1	61	5
Guyana	2.5	2,662	3,770	0.3	0.2	8	8
Haiti	5.6	11,955	1,427	0.9	0.5	99	8
Honduras	1.8	15,111	2,307	0.2	0.1	26	3
Trinidad and Tobago	3.2	11,443	8,354	0.5	0.3	45	22
More developed regions							
Russian Federation	1.1	1,044,623	7,289	< 0.1	< 0.1	<240	<1
USA	0.6	9,221,212	31,660	...	...	...	...

Main table 2: Summary

Estimated impact of HIV/AIDS on economic growth, 47 countries, 1992-2002

	HIV prevalence	Country macroeconomic data (latest available year)		Impact on GDP and GDP per capita			
	Estimated prevalence in persons 15-49 years (weighted) (%) 2003	Real GDP for 2002 (US$ millions) 2002	Real GDP per capita (US$) 2002	Estimated average annual rate of growth of GDP loss attributable to HIV/AIDS (%) 1992-2002	Estimated average annual rate of growth of GDP per capita loss attributable to HIV/AIDS (%) 1992-2002	Estimated average annual GDP loss attributable to HIV/AIDS (US$ millions) 1992-2002	Estimated average annual GDP per capita loss attributable to HIV/AIDS (US$) 1992-2002
Sub-Saharan Africa, 33 countries***	7.9	949,234	1,588	1.1	0.7	9,232	11
Asia, 4 countries***	0.4	8,054,765	3,276	...	...	...	...
Latin America and Caribbean, 8 countries***	1.0	1,263,924	6,294	0.5	0.3	396	10
More developed regions, 2 countries	0.8	10,265,835	23,739	...	...	...	...
All (41 countries)****	6.3	2,105,274	2,697	0.9	0.6	17,477	15
All (45 countries)*****	1.6	20,150,840	5,641	0.2	0.1	25,092	5

* HIV prevalence is a mid-range estimate used by ILO on the basis of the low-high range of estimates (0.4% - 1.3%) of UNAIDS for 2003

** Economic data are for 2000

*** Thailand excluded from Asia and Uganda excluded from Africa because in both cases HIV prevalence reached a peak and subsequently declined by more than a quarter of peak value within the period 1992-2002. Individual data for Thailand and Uganda were calculated by applying the model *ex post facto* and are illustrative. Brazil excluded from Latin America because of absence of measurable impact

**** Brazil excluded from Latin America, China and India excluded from Asia, and USA from more developed regions because of absence of measurable impact. Thailand and Uganda excluded

***** Thailand and Uganda excluded

... Impact not measurable

Source: See Technical notes

Main table 3A: Estimated impact of HIV/AIDS on the labour force*, according to 3 durations of Stages 3 and 4 of HIV/AIDS, 50 countries, 1995

Country	HIV prevalence	Impact of HIV/AIDS on the labour force								
		Duration 1			Duration 2			Duration 3		
Alphabetical order by region	Estimated prevalence in persons 15-49 years (%) 2003	Estimated number of persons partially unable to work in Stage 3	Estimated number of persons fully unable to work in Stage 4	Estimated total number of persons unable to work in Stages 3 & 4	Estimated number of persons partially unable to work in Stage 3	Estimated number of persons fully unable to work in Stage 4	Estimated total number of persons unable to work in Stages 3 & 4	Estimated number of persons partially unable to work in Stage 3	Estimated number of persons fully unable to work in Stage 4	Estimated total number of persons unable to work in Stages 3 & 4
Sub-Saharan Africa										
Angola	3.9	1,100	1,040	2,140	1,110	1,020	2,130	1,300	600	1,900
Benin	1.9	170	170	340	180	160	340	200	100	300
Botswana	37.3	1,440	1,370	2,810	1,460	1,340	2,800	1,700	790	2,490
Burkina Faso	4.2	3,490	3,300	6,790	3,520	3,240	6,760	4,110	1,900	6,010
Burundi	6.0	7,970	7,550	15,520	8,030	7,420	15,450	9,400	4,340	13,740
Cameroon	6.9	1,510	1,430	2,940	1,520	1,410	2,930	1,780	820	2,600
Central African Republic	13.5	2,060	1,960	4,020	2,080	1,920	4,000	2,430	1,120	3,550
Chad	4.8	1,070	1,020	2,090	1,080	1,000	2,080	1,270	580	1,850
Congo	4.9	1,390	1,320	2,710	1,400	1,290	2,690	1,640	760	2,400
Côte d'Ivoire	7.0	8,390	7,940	16,330	8,460	7,800	16,260	9,890	4,560	14,450
Democratic Republic of Congo	4.2	27,860	26,400	54,260	28,090	25,930	54,020	32,860	15,170	48,030
Djibouti	2.4	520	500	1,020	530	480	1,010	620	280	900
Eritrea	2.7	220	210	430	220	210	430	260	120	380
Ethiopia	4.4	12,870	12,190	25,060	12,970	11,980	24,950	15,180	7,000	22,180
Gabon	8.1	230	210	440	220	210	430	260	120	380
Gambia	1.2	90	90	180	90	90	180	110	50	160
Ghana	3.1	2,690	2,540	5,230	2,710	2,500	5,210	3,170	1,460	4,630
Guinea	3.2	560	530	1,090	560	520	1,080	660	300	960
Kenya	6.7	10,150	9,620	19,770	10,230	9,450	19,680	11,970	5,530	17,500
Lesotho	28.9	80	70	150	80	70	150	90	40	130
Liberia	5.9	120	120	240	120	110	230	140	70	210
Malawi	14.2	7,650	7,240	14,890	7,710	7,120	14,830	9,020	4,160	13,180
Mali	1.9	930	880	1,810	940	860	1,800	1,100	510	1,610
Mozambique	12.2	2,050	1,940	3,990	2,070	1,910	3,980	2,420	1,120	3,540
Namibia	21.3	240	220	460	230	220	450	280	130	410
Nigeria	5.4	10,350	9,800	20,150	10,430	9,630	20,060	12,200	5,630	17,830
Rwanda	5.1	1,150	1,090	2,240	1,160	1,070	2,230	1,350	620	1,970
South Africa	21.5	4,150	3,940	8,090	4,190	3,860	8,050	4,900	2,260	7,160
Sudan	2.3	5,680	5,380	11,060	5,730	5,290	11,020	6,700	3,090	9,790
Swaziland	38.8	130	130	260	130	130	260	160	70	230
Togo	4.1	490	460	950	490	450	940	570	270	840
Uganda	4.1	31,730	30,060	61,790	31,990	29,520	61,510	37,420	17,270	54,690
United Republic of Tanzania	8.8	11,070	10,490	21,560	11,160	10,300	21,460	13,060	6,030	19,090
Zambia	16.5	11,280	10,680	21,960	11,370	10,490	21,860	13,300	6,140	19,440
Zimbabwe	24.6	14,800	14,020	28,820	14,920	13,780	28,700	17,460	8,060	25,520
Asia										
Cambodia	2.6	130	130	260	130	120	250	160	70	230
China	0.1	6,950	6,580	13,530	7,000	6,470	13,470	8,190	3,780	11,970
India**	0.8	24,560	23,270	47,830	24,770	22,860	47,630	28,970	13,370	42,340
Myanmar	1.2	2,200	2,080	4,280	2,220	2,040	4,260	2,590	1,200	3,790
Thailand	1.5	19,910	18,860	38,770	20,070	18,530	38,600	23,480	10,840	34,320
Latin America and Caribbean										
Bahamas	3.0	80	80	160	80	80	160	100	40	140
Belize	2.4	0	0	0	0	0	0	0	0	0
Brazil	0.7	4,450	4,220	8,670	4,490	4,140	8,630	5,250	2,420	7,670
Dominican Republic	1.7	570	540	1,110	580	540	1,120	680	310	990
Guyana	2.5	70	70	140	70	70	140	90	40	130
Haiti	5.6	5,540	5,240	10,780	5,580	5,150	10,730	6,530	3,010	9,540
Honduras	1.8	240	220	460	240	220	460	280	130	410
Trinidad and Tobago	3.2	100	90	190	100	90	190	110	50	160
More developed regions										
Russian Federation	1.1	0	0	0	0	0	0	0	0	0
USA	0.6	30,100	28,510	58,610	30,350	28,010	58,360	35,500	16,380	51,880

Main table 3A: Summary

Estimated impact of HIV/AIDS on the labour force*, according to 3 durations of Stages 3 and 4 of HIV/AIDS, 50 countries, 1995

	HIV prevalence	Impact of HIV/AIDS on the labour force								
		Duration 1			Duration 2			Duration 3		
	Estimated prevalence in persons 15-49 years (weighted) (%) 2003	Estimated number of persons partially unable to work in Stage 3	Estimated number of persons fully unable to work in Stage 4	Estimated total number of persons unable to work in Stages 3 & 4	Estimated number of persons partially unable to work in Stage 3	Estimated number of persons fully unable to work in Stage 4	Estimated total number of persons unable to work in Stages 3 & 4	Estimated number of persons partially unable to work in Stage 3	Estimated number of persons fully unable to work in Stage 4	Estimated total number of persons unable to work in Stages 3 & 4
Total (Sub-Saharan Africa, 35 countries)	7.7	185,680	175,910	361,590	187,180	172,780	359,960	218,980	101,070	320,050
Total (Asia, 5 countries)	0.4	53,750	50,920	104,670	54,190	50,020	104,210	63,390	29,260	92,650
Total (Latin America and Caribbean, 8 countries)	1.0	11,050	10,460	21,510	11,140	10,290	21,430	13,040	6,000	19,040
Total (More developed regions, 2 countries)	0.8	30,100	28,510	58,610	30,350	28,010	58,360	35,500	16,380	51,880
Total (50 countries)	1.5	280,580	265,800	546,380	282,860	261,100	543,960	330,910	152,710	483,620

* Persons incapacitated as a result of AIDS and who become partially (Stage 3) or fully (Stage 4) unable to work (see Frank and Sehgal, 2004)

** HIV prevalence is a mid-range estimate used by ILO on the basis of the low-high range of estimates (0.4% - 1.3%) of UNAIDS for 2003

Source: See Technical notes

Main table 3B: Projected impact of HIV/AIDS on the labour force*, according to 3 durations of Stages 3 and 4 of HIV/AIDS, 50 countries, 2005

Country	HIV prevalence	Impact of HIV/AIDS on the labour force								
		Duration 1			Duration 2			Duration 3		
Alphabetical order by region	Estimated prevalence in persons 15-49 years (%) 2003	Projected estimate of persons partially unable to work in Stage 3	Projected estimate of persons fully unable to work in Stage 4	Projected total estimate of persons unable to work in Stages 3 & 4	Projected estimate of persons partially unable to work in Stage 3	Projected estimate of persons fully unable to work in Stage 4	Projected total estimate of persons unable to work in Stages 3 & 4	Projected estimate of persons partially unable to work in Stage 3	Projected estimate of persons fully unable to work in Stage 4	Projected total estimate of persons unable to work in Stages 3 & 4
Sub-Saharan Africa										
Angola	3.9	9,430	8,930	18,360	9,510	8,780	18,290	11,120	5,130	16,250
Benin	1.9	3,110	2,940	6,050	3,130	2,890	6,020	3,660	1,690	5,350
Botswana	37.3	9,140	8,660	17,800	9,220	8,510	17,730	10,780	4,980	15,760
Burkina Faso	4.2	15,010	14,220	29,230	15,130	13,970	29,100	17,700	8,170	25,870
Burundi	6.0	9,680	9,170	18,850	9,760	9,010	18,770	11,420	5,270	16,690
Cameroon	6.9	25,140	23,820	48,960	25,350	23,400	48,750	29,650	13,690	43,340
Central African Republic	13.5	9,900	9,380	19,280	9,980	9,210	19,190	11,670	5,390	17,060
Chad	4.8	5,510	5,220	10,730	5,560	5,130	10,690	6,500	3,000	9,500
Congo	4.9	5,240	4,960	10,200	5,280	4,880	10,160	6,180	2,850	9,030
Côte d'Ivoire	7.0	17,060	16,170	33,230	17,210	15,880	33,090	20,130	9,290	29,420
Democratic Republic of Congo	4.2	49,140	46,550	95,690	49,540	45,730	95,270	57,960	26,750	84,710
Djibouti	2.4	750	710	1,460	760	700	1,460	890	410	1,300
Eritrea	2.7	1,420	1,350	2,770	1,430	1,330	2,760	1,680	780	2,460
Ethiopia	4.4	76,070	72,070	148,140	76,700	70,800	147,500	89,720	41,410	131,130
Gabon	8.1	1,070	1,010	2,080	1,080	990	2,070	1,260	580	1,840
Gambia	1.2	480	450	930	480	440	920	560	260	820
Ghana	3.1	12,420	11,760	24,180	12,520	11,550	24,070	14,640	6,760	21,400
Guinea	3.2	3,050	2,890	5,940	3,070	2,840	5,910	3,590	1,660	5,250
Kenya	6.7	84,000	79,580	163,580	84,690	78,180	162,870	99,070	45,730	144,800
Lesotho	28.9	8,600	8,150	16,750	8,670	8,010	16,680	10,150	4,680	14,830
Liberia	5.9	2,690	2,550	5,240	2,710	2,500	5,210	3,170	1,460	4,630
Malawi	14.2	37,070	35,120	72,190	37,380	34,500	71,880	43,730	20,180	63,910
Mali	1.9	3,650	3,450	7,100	3,680	3,390	7,070	4,300	1,980	6,280
Mozambique	12.2	39,270	37,210	76,480	39,600	36,550	76,150	46,320	21,380	67,700
Namibia	21.3	6,470	6,130	12,600	6,530	6,020	12,550	7,640	3,520	11,160
Nigeria	5.4	100,220	94,940	195,160	101,040	93,270	194,310	118,200	54,550	172,750
Rwanda	5.1	16,600	15,720	32,320	16,730	15,450	32,180	19,570	9,030	28,600
South Africa	21.5	153,170	145,110	298,280	154,430	142,550	296,980	180,650	83,380	264,030
Sudan	2.3	8,860	8,390	17,250	8,930	8,250	17,180	10,450	4,820	15,270
Swaziland	38.8	5,550	5,250	10,800	5,590	5,160	10,750	6,540	3,020	9,560
Togo	4.1	5,150	4,880	10,030	5,190	4,790	9,980	6,070	2,800	8,870
Uganda	4.1	29,630	28,070	57,700	29,870	27,570	57,440	34,940	16,130	51,070
United Republic of Tanzania	8.8	55,900	52,960	108,860	56,360	52,030	108,390	65,930	30,430	96,360
Zambia	16.5	46,870	44,400	91,270	47,260	43,620	90,880	55,280	25,510	80,790
Zimbabwe	24.6	82,480	78,140	160,620	83,160	76,760	159,920	97,280	44,900	142,180
Asia										
Cambodia	2.6	4,450	4,220	8,670	4,490	4,140	8,630	5,250	2,420	7,670
China	0.1	20,370	19,290	39,660	20,530	18,950	39,480	24,020	11,090	35,110
India**	0.8	147,010	139,280	286,290	148,220	136,820	285,040	173,390	80,030	253,420
Myanmar	1.2	7,700	7,300	15,000	7,770	7,170	14,940	9,090	4,190	13,280
Thailand	1.5	36,080	34,180	70,260	36,370	33,570	69,940	42,540	19,640	62,180
Latin America and Caribbean										
Bahamas	3.0	290	270	560	290	270	560	340	160	500
Belize	2.4	80	80	160	80	80	160	100	40	140
Brazil	0.7	15,280	14,480	29,760	15,410	14,220	29,630	18,020	8,320	26,340
Dominican Republic	1.7	3,770	3,570	7,340	3,800	3,510	7,310	4,450	2,050	6,500
Guyana	2.5	430	400	830	430	400	830	500	230	730
Haiti	5.6	11,890	11,270	23,160	11,990	11,070	23,060	14,030	6,470	20,500
Honduras	1.8	1,520	1,440	2,960	1,530	1,420	2,950	1,800	830	2,630
Trinidad and Tobago	3.2	610	580	1,190	610	570	1,180	720	330	1,050
More developed regions										
Russian Federation	1.1	11,200	10,620	21,820	9,170	8,460	17,630	10,730	4,950	15,680
USA	0.6	7,640	7,240	14,880	7,700	7,110	14,810	9,010	4,160	13,170

Main table 3B: Summary

Projected impact of HIV/AIDS on the labour force*, according to 3 durations of Stages 3 and 4 of HIV/AIDS, 50 countries, 2005

	HIV prevalence	Impact of HIV/AIDS on the labour force								
		Duration 1			Duration 2			Duration 3		
	Estimated HIV prevalence in persons 15-49 years (weighted) (%) 2003	Projected estimate of persons partially unable to work in Stage 3	Projected estimate of persons fully unable to work in Stage 4	Projected total estimate of persons unable to work in Stages 3 & 4	Projected estimate of persons partially unable to work in Stage 3	Projected estimate of persons fully unable to work in Stage 4	Projected total estimate of persons unable to work in Stages 3 & 4	Projected estimate of persons partially unable to work in Stage 3	Projected estimate of persons fully unable to work in Stage 4	Projected total estimate of persons unable to work in Stages 3 & 4
Total (Sub-Saharan Africa, 35 countries)	7.7	939,800	890,310	1,830,110	947,530	874,640	1,822,170	1,108,400	511,570	1,619,970
Total (Asia, 5 countries)	0.4	215,610	204,270	419,880	217,380	200,650	418,030	254,290	117,370	371,660
Total (Latin America and Caribbean, 8 countries)	1.0	33,870	32,090	65,960	34,140	31,540	65,680	39,960	18,430	58,390
Total (More developed regions, 2 countries)	0.8	18,840	17,860	36,700	16,870	15,570	32,440	19,740	9,110	28,850
Total (50 countries)	1.5	1,208,120	1,144,530	2,352,650	1,215,920	1,122,400	2,338,320	1,422,390	656,480	2,078,870

* Persons incapacitated as a result of AIDS and who become partially (Stage 3) or fully (Stage 4) unable to work (see Frank and Sehgal, 2004)

** HIV prevalence is a mid-range estimate used by ILO on the basis of the low-high range of estimates (0.4% - 1.3%) of UNAIDS for 2003

Source: See Technical notes

Main table 3C: Projected impact of HIV/AIDS on the labour force*, according to 3 durations of Stages 3 and 4 of HIV/AIDS, 50 countries, 2015

Country	HIV prevalence	Impact of HIV/AIDS on the labour force								
		Duration 1			Duration 2			Duration 3		
Alphabetical order by region	Estimated prevalence in persons 15-49 years (%) 2003	Projected estimate of persons partially unable to work in Stage 3	Projected estimate of persons fully unable to work in Stage 4	Projected total estimate of persons unable to work in Stages 3 & 4	Projected estimate of persons partially unable to work in Stage 3	Projected estimate of persons fully unable to work in Stage 4	Projected total estimate of persons unable to work in Stages 3 & 4	Projected estimate of persons partially unable to work in Stage 3	Projected estimate of persons fully unable to work in Stage 4	Projected total estimate of persons unable to work in Stages 3 & 4
Sub-Saharan Africa										
Angola	3.9	19,280	18,270	37,550	19,440	17,940	37,380	22,740	10,500	33,240
Benin	1.9	5,650	5,360	11,010	5,700	5,260	10,960	6,670	3,080	9,750
Botswana	37.3	14,480	13,710	28,190	14,590	13,470	28,060	17,070	7,880	24,950
Burkina Faso	4.2	17,250	16,350	33,600	17,400	16,060	33,460	20,350	9,390	29,740
Burundi	6.0	15,680	14,860	30,540	15,810	14,600	30,410	18,500	8,540	27,040
Cameroon	6.9	47,230	44,750	91,980	47,620	43,960	91,580	55,710	25,710	81,420
Central African Republic	13.5	10,980	10,400	21,380	11,070	10,220	21,290	12,950	5,980	18,930
Chad	4.8	6,600	6,260	12,860	6,660	6,150	12,810	7,790	3,600	11,390
Congo	4.9	6,320	5,990	12,310	6,370	5,880	12,250	7,450	3,440	10,890
Côte d'Ivoire	7.0	25,850	24,490	50,340	26,060	24,060	50,120	30,490	14,070	44,560
Democratic Republic of Congo	4.2	59,270	56,160	115,430	59,760	55,170	114,930	69,910	32,270	102,180
Djibouti	2.4	9,370	8,880	18,250	9,450	8,720	18,170	11,050	5,100	16,150
Eritrea	2.7	3,350	3,180	6,530	3,380	3,120	6,500	3,960	1,820	5,780
Ethiopia	4.4	103,340	97,910	201,250	104,190	96,180	200,370	121,890	56,260	178,150
Gabon	8.1	1,180	1,110	2,290	1,180	1,090	2,270	1,380	640	2,020
Gambia	1.2	540	510	1,050	540	500	1,040	630	290	920
Ghana	3.1	15,610	14,790	30,400	15,740	14,530	30,270	18,420	8,500	26,920
Guinea	3.2	3,390	3,220	6,610	3,420	3,160	6,580	4,000	1,850	5,850
Kenya	6.7	117,780	111,590	229,370	118,750	109,620	228,370	138,920	64,120	203,040
Lesotho	28.9	10,890	10,320	21,210	10,980	10,140	21,120	12,850	5,930	18,780
Liberia	5.9	5,160	4,880	10,040	5,200	4,800	10,000	6,080	2,810	8,890
Malawi	14.2	42,530	40,290	82,820	42,880	39,580	82,460	50,160	23,150	73,310
Mali	1.9	4,620	4,370	8,990	4,650	4,300	8,950	5,440	2,510	7,950
Mozambique	12.2	51,840	49,110	100,950	52,260	48,240	100,500	61,140	28,220	89,360
Namibia	21.3	9,750	9,230	18,980	9,830	9,070	18,900	11,500	5,300	16,800
Nigeria	5.4	186,510	176,700	363,210	188,050	173,580	361,630	219,970	101,530	321,500
Rwanda	5.1	15,480	14,670	30,150	15,610	14,410	30,020	18,260	8,430	26,690
South Africa	21.5	247,380	234,360	481,740	249,410	230,230	479,640	291,760	134,660	426,420
Sudan	2.3	24,420	23,130	47,550	24,620	22,720	47,340	28,800	13,290	42,090
Swaziland	38.8	7,600	7,200	14,800	7,660	7,070	14,730	8,960	4,140	13,100
Togo	4.1	6,980	6,610	13,590	7,040	6,500	13,540	8,230	3,800	12,030
Uganda	4.1	17,500	16,580	34,080	17,650	16,290	33,940	20,640	9,530	30,170
United Republic of Tanzania	8.8	53,870	51,040	104,910	54,310	50,130	104,440	63,540	29,320	92,860
Zambia	16.5	46,780	44,310	91,090	47,160	43,530	90,690	55,170	25,460	80,630
Zimbabwe	24.6	95,730	90,700	186,430	96,520	89,100	185,620	112,910	52,110	165,020
Asia										
Cambodia	2.6	10,390	9,850	20,240	10,480	9,670	20,150	12,260	5,660	17,920
China	0.1	280,310	265,560	545,870	282,610	260,870	543,480	330,600	152,590	483,190
India**	0.8	420,190	398,080	818,270	423,640	391,050	814,690	495,580	228,730	724,310
Myanmar	1.2	20,330	19,260	39,590	20,500	18,920	39,420	23,980	11,070	35,050
Thailand	1.5	21,070	19,970	41,040	21,250	19,620	40,870	24,860	11,470	36,330
Latin America and Caribbean										
Bahamas	3.0	330	320	650	340	310	650	390	180	570
Belize	2.4	150	140	290	150	140	290	180	80	260
Brazil	0.7	14,990	14,200	29,190	15,110	13,950	29,060	17,680	8,160	25,840
Dominican Republic	1.7	7,570	7,170	14,740	7,630	7,050	14,680	8,930	4,120	13,050
Guyana	2.5	640	600	1,240	640	590	1,230	750	350	1,100
Haiti	5.6	14,270	13,520	27,790	14,390	13,280	27,670	16,830	7,770	24,600
Honduras	1.8	4,290	4,060	8,350	4,330	3,990	8,320	5,060	2,330	7,390
Trinidad and Tobago	3.2	1,370	1,300	2,670	1,380	1,280	2,660	1,620	750	2,370
More developed regions										
Russian Federation	1.1	37,680	35,700	73,380	37,990	35,070	73,060	44,440	20,510	64,950
USA	0.6	10,650	10,090	20,740	10,740	9,920	20,660	12,570	5,800	18,370

Main table 3C: Summary

Projected impact of HIV/AIDS on the labour force*, according to 3 durations of Stages 3 and 4 of HIV/AIDS, 50 countries, 2015

	HIV prevalence	Impact of HIV/AIDS on the labour force								
		Duration 1			Duration 2			Duration 3		
	Estimated HIV prevalence in persons 15-49 years (weighted) (%) 2003	Projected estimate of persons partially unable to work in Stage 3	Projected estimate of persons fully unable to work in Stage 4	Projected total estimate of persons unable to work in Stages 3 & 4	Projected estimate of persons partially unable to work in Stage 3	Projected estimate of persons fully unable to work in Stage 4	Projected total estimate of persons unable to work in Stages 3 & 4	Projected estimate of persons partially unable to work in Stage 3	Projected estimate of persons fully unable to work in Stage 4	Projected total estimate of persons unable to work in Stages 3 & 4
Total (Sub-Saharan Africa, 35 countries)	7.7	1,310,190	1,241,290	2,551,480	1,320,960	1,219,380	2,540,340	1,545,290	713,230	2,258,520
Total (Asia, 5 countries)	0.4	752,290	712,720	1,465,010	758,480	700,130	1,458,610	887,280	409,520	1,296,800
Total (Latin America and Caribbean, 8 countries)	1.0	43,610	41,310	84,920	43,970	40,590	84,560	51,440	23,740	75,180
Total (More developed regions, 2 countries)	0.8	48,330	45,790	94,120	48,730	44,990	93,720	57,010	26,310	83,320
Total (50 countries)	1.5	2,154,420	2,041,110	4,195,530	2,172,140	2,005,090	4,177,230	2,541,020	1,172,800	3,713,820

* Persons incapacitated as a result of AIDS and who become partially (Stage 3) or fully (Stage 4) unable to work (see Frank and Sehgal, 2004)

** HIV prevalence is a mid-range estimate used by ILO on the basis of the low-high range of estimates (0.4% - 1.3%) of UNAIDS for 2003

Source: See Technical notes

Main table 4: Estimated and projected cumulative mortality losses to the male, female and total labour force as a result of HIV/AIDS, and equivalent proportion of the total labour force, 50 countries, 1995-2015

Country	HIV prevalence	Cumulative mortaliity losses to the male, female and total labour force to years 1995, 2000, 2005, 2010 and 2015									
		To 1995				To 2000				To 2005	
Alphabetical order by region	Estimated prevalence in persons 15-49 years (%) 2003	Men	Women	Total	Total losses as a proportion of the total labour force (%)	Men	Women	Total	Total losses as a proportion of the total labour force (%)	Men	Women
Sub-Saharan Africa											
Angola	3.9	10,200	6,000	16,200	0.3	37,100	27,900	65,000	1.1	95,700	82,300
Benin	1.9	2,800	800	3,500	0.1	13,200	5,100	18,200	0.6	36,500	23,800
Botswana	37.3	900	500	1,400	0.2	14,200	9,700	24,000	3.1	61,000	63,300
Burkina Faso	4.2	30,900	20,100	51,100	1.0	95,400	81,500	176,800	3.0	187,000	183,100
Burundi	6.0	76,300	74,200	150,600	4.6	144,500	150,900	295,400	8.3	223,500	233,800
Cameroon	6.9	15,700	5,200	20,900	0.4	74,500	31,200	105,700	1.7	233,800	133,300
Central African Republic	13.5	18,500	9,700	28,200	1.7	59,000	41,700	100,800	5.5	116,500	97,700
Chad	4.8	10,900	6,000	16,900	0.6	33,700	24,500	58,200	1.6	37,500	58,600
Congo	4.9	12,600	4,100	16,600	1.4	41,400	20,700	62,200	4.2	58,800	68,200
Côte d'Ivoire	7.0	77,500	25,700	103,200	1.8	238,700	107,400	346,100	5.2	444,500	237,800
Democratic Republic of Congo	4.2	303,100	198,400	501,500	2.8	466,300	356,800	823,000	4.4	728,800	572,000
Djibouti	2.4	900	300	1,200	0.5	3,000	1,500	4,500	1.6	7,600	4,400
Eritrea	2.7	3,900	3,100	7,100	0.5	8,600	6,700	15,300	0.8	18,600	15,600
Ethiopia	4.4	128,800	59,800	188,600	0.7	420,900	313,400	734,200	2.1	922,900	862,400
Gabon	8.1	2,600	1,400	4,000	0.8	6,900	4,900	11,900	2.1	13,100	11,100
Gambia	1.2	1,200	500	1,700	0.4	3,900	2,100	6,000	0.9	7,500	5,400
Ghana	3.1	28,700	12,700	41,400	0.5	85,200	56,700	141,800	1.5	163,200	138,800
Guinea	3.2	6,800	3,900	10,600	0.3	19,500	14,600	34,200	0.8	38,700	34,300
Kenya	6.7	101,400	40,600	141,900	1.1	398,000	250,200	648,300	4.2	912,900	752,000
Lesotho	28.9	39,200	200	39,300	6.0	54,700	6,700	61,500	8.3	77,000	38,000
Liberia	5.9	2,300	1,200	3,500	0.5	10,200	5,900	16,100	1.6	25,700	15,900
Malawi	14.2	76,800	38,700	115,500	2.3	230,400	162,400	392,800	6.9	450,800	392,500
Mali	1.9	9,900	6,600	16,500	0.3	26,200	21,300	47,500	0.8	48,800	45,000
Mozambique	12.2	23,600	6,000	29,600	0.4	147,000	79,100	226,100	2.4	400,500	318,600
Namibia	21.3	2,100	700	2,800	0.5	17,100	8,100	25,200	3.2	58,100	37,800
Nigeria	5.4	109,500	38,200	147,700	0.4	395,700	186,800	582,500	1.3	1,030,400	598,400
Rwanda	5.1	30,200	28,700	59,000	2.2	141,200	145,800	287,100	6.5	242,700	271,400
South Africa	21.5	51,600	13,400	64,900	0.4	374,800	125,100	499,900	2.5	1,387,000	683,000
Sudan	2.3	5,000	2,400	7,400	0.1	22,000	6,700	28,700	0.2	91,600	29,100
Swaziland	38.8	1,200	400	1,500	0.5	12,800	5,700	18,500	4.9	44,100	25,700
Togo	4.1	4,900	1,800	6,700	0.4	23,300	10,700	34,000	1.7	55,700	33,100
Uganda	4.1	287,400	190,300	477,700	4.6	563,600	474,100	1,037,700	8.4	773,200	708,300
United Republic of Tanzania	8.8	102,900	63,100	166,000	1.1	331,600	277,300	608,900	3.3	666,900	655,700
Zambia	16.5	95,800	49,900	145,700	3.5	296,100	205,100	501,200	10.2	555,900	438,700
Zimbabwe	24.6	132,400	73,200	205,600	3.7	443,800	322,600	766,400	11.7	948,600	801,400
Asia											
Cambodia	2.6	3,100	-1,700	1,400	0.0	13,200	3,200	16,400	0.2	48,600	21,900
China	0.1	21,200	50,000	71,100	0.0	63,000	83,100	146,200	0.0	257,000	200,500
India*	0.8	382,300	161,200	543,600	0.1	1,107,600	351,700	1,459,400	0.4	2,386,100	719,400
Myanmar	1.2	28,900	12,300	41,300	0.2	90,800	24,700	115,500	0.5	240,000	67,400
Thailand	1.5	279,500	54,400	333,900	1.0	611,000	129,200	740,200	2.1	937,300	215,200
Latin America and Caribbean											
Bahamas	3.0	800	300	1,100	0.8	2,400	1,400	3,800	2.4	4,200	3,100
Belize	2.4	0	0	0	0.0	200	100	300	0.3	800	300
Brazil	0.7	55,500	16,700	72,200	0.1	243,800	54,500	298,300	0.3	512,400	138,300
Dominican Republic	1.7	7,300	1,400	8,700	0.3	21,100	6,100	27,200	0.7	48,000	20,000
Guyana	2.5	600	200	800	0.3	1,900	900	2,700	0.9	4,400	2,400
Haiti	5.6	47,300	29,100	76,400	2.3	114,600	100,300	214,900	5.5	180,500	197,400
Honduras	1.8	4,200	1,200	5,300	0.3	10,100	4,000	14,100	0.5	21,300	9,500
Trinidad and Tobago	3.2	1,100	100	1,100	0.2	3,600	600	4,200	0.7	8,200	2,400
More developed regions											
Russian Federation	1.1	0	0	0	0.0	7,400	1,300	8,700	0.0	167,300	45,100
USA	0.6	470,300	35,800	506,000	0.4	861,300	60,700	922,000	0.6	1,208,100	108,100

To 2005 (cont.)		To 2010				To 2015				Country
Total	Total losses as a proportion of the total labour force (%)	Men	Women	Total	Total losses as a proportion of the total labour force (%)	Men	Women	Total	Total losses as a proportion of the total labour force (%)	Alphabetical order by region
										Sub-Saharan Africa
178,000	2.7	188,500	176,400	364,800	4.7	308,500	299,700	608,100	6.8	Angola
60,300	1.7	67,100	52,700	119,900	3.1	100,400	89,800	190,200	4.2	Benin
124,200	13.3	129,900	143,300	273,100	26.4	198,000	229,500	427,500	36.2	Botswana
370,100	5.5	292,500	299,300	591,800	7.6	423,400	432,500	855,900	9.3	Burkina Faso
457,300	10.5	321,000	338,600	659,600	12.8	448,000	465,800	913,800	15.8	Burundi
367,100	5.0	476,300	317,400	793,700	9.6	754,900	542,600	1,297,500	13.8	Cameroon
214,100	10.5	178,700	163,200	341,900	14.8	248,600	233,600	482,200	18.4	Central African Republic
126,100	3.0	73,000	95,800	201,500	4.2	116,200	138,100	289,200	5.2	Chad
140,800	8.5	90,000	94,300	199,700	10.3	129,000	126,200	272,400	12.0	Congo
682,300	8.8	658,300	372,600	1,031,000	11.8	893,100	516,800	1,409,800	14.3	Côte d'Ivoire
1,300,700	6.3	1,005,000	826,100	1,831,100	7.6	1,343,100	1,118,200	2,461,300	8.9	Democratic Republic of Congo
12,000	3.9	14,200	8,900	23,100	6.9	22,200	14,200	36,400	9.7	Djibouti
34,300	1.6	35,400	33,000	68,300	2.6	56,400	55,800	112,200	3.7	Eritrea
1,785,300	4.3	1,546,200	1,438,800	2,985,000	6.5	2,289,600	2,158,300	4,447,800	8.5	Ethiopia
24,300	3.7	19,800	17,900	37,700	5.1	27,200	25,000	52,200	6.1	Gabon
12,900	1.6	11,000	8,700	19,700	2.2	14,900	12,500	27,400	2.7	Gambia
302,000	2.7	248,300	238,800	487,100	3.7	348,200	356,200	704,300	4.7	Ghana
73,000	1.7	59,700	57,600	117,200	2.4	84,100	83,400	167,500	2.9	Guinea
1,664,900	9.2	1,554,000	1,445,300	2,999,300	14.2	2,303,000	2,245,000	4,548,000	18.9	Kenya
115,000	13.8	139,000	83,100	222,100	24.1	198,000	129,300	327,200	32.3	Lesotho
41,600	3.5	48,800	34,800	83,500	6.0	75,400	55,300	130,700	8.2	Liberia
843,300	13.1	701,600	678,300	1,379,800	18.4	991,600	998,900	1,990,500	22.5	Malawi
93,800	1.5	75,100	72,600	147,700	2.0	108,800	105,100	213,800	2.5	Mali
719,100	6.6	691,500	669,000	1,360,500	11.1	1,004,200	1,048,800	2,053,000	14.9	Mozambique
95,900	10.5	112,700	84,300	197,000	18.5	170,700	133,200	303,900	24.6	Namibia
1,628,800	3.0	1,986,300	1,285,700	3,272,000	5.3	3,180,200	2,165,300	5,345,500	7.5	Nigeria
514,100	10.3	350,200	410,300	760,400	13.4	470,400	547,200	1,017,600	15.7	Rwanda
2,070,000	9.2	2,782,300	1,641,000	4,423,300	18.2	4,057,300	2,577,200	6,634,500	25.3	South Africa
120,600	0.9	226,200	81,000	307,300	2.1	376,200	150,200	526,400	3.2	Sudan
69,800	15.7	82,900	52,500	135,400	26.2	124,600	80,000	204,600	34.3	Swaziland
88,800	3.9	93,800	63,000	156,800	6.0	138,700	97,600	236,300	8.0	Togo
1,481,500	10.4	948,400	895,300	1,843,700	11.0	1,143,300	1,086,400	2,229,700	11.2	Uganda
1,322,600	6.3	1,010,800	1,069,400	2,080,200	8.8	1,375,400	1,482,800	2,858,300	10.6	United Republic of Tanzania
994,600	17.9	831,900	685,500	1,517,400	23.6	1,151,400	953,800	2,105,200	28.1	Zambia
1,749,900	22.8	1,533,100	1,390,300	2,923,500	32.7	2,165,300	1,990,600	4,156,000	40.7	Zimbabwe
										Asia
70,500	0.9	111,800	78,200	189,900	2.1	187,000	147,100	334,000	3.3	Cambodia
457,500	0.1	1,285,200	492,300	1,777,500	0.2	3,955,400	1,288,600	5,243,900	0.6	China
3,105,500	0.7	4,546,700	1,404,300	5,951,000	1.2	7,811,200	2,463,800	10,275,000	1.9	India*
307,300	1.1	502,800	161,700	664,500	2.2	847,300	296,800	1,144,100	3.5	Myanmar
1,152,600	3.1	1,160,600	295,900	1,456,500	3.7	1,260,500	350,600	1,611,100	3.9	Thailand
										Latin America and Caribbean
7,300	4.1	5,800	4,800	10,600	5.6	7,700	6,800	14,400	7.0	Bahamas
1,100	1.0	1,600	600	2,200	1.8	2,500	1,100	3,600	2.6	Belize
650,600	0.7	749,000	225,400	974,500	1.0	931,000	315,600	1,246,700	1.2	Brazil
68,000	1.6	87,500	39,100	126,600	2.8	134,200	63,100	197,300	4.0	Dominican Republic
6,700	2.0	7,600	4,200	11,700	3.4	11,000	5,900	16,900	4.9	Guyana
377,900	8.1	252,200	254,000	506,200	10.1	339,500	346,200	685,700	12.3	Haiti
30,800	1.0	41,300	19,000	60,300	1.7	70,600	34,000	104,600	2.6	Honduras
10,600	1.6	14,600	6,000	20,600	3.0	21,800	10,900	32,700	4.7	Trinidad and Tobago
										More developed regions
212,400	0.3	552,800	199,100	751,900	1.0	1,041,800	477,700	1,519,600	2.2	Russian Federation
1,316,200	0.8	1,540,100	174,700	1,714,800	1.0	1,873,300	270,600	2,143,900	1.3	USA

Main table 4: Summary

Estimated and projected cumulative mortality losses to the male, female and total labour force as a result of HIV/AIDS, and equivalent proportion of the total labour force, 50 countries, 1995-2015

Country	HIV prevalence	Cumulative mortaliity losses to the male, female and total labour force to years 1995, 2000, 2005, 2010 and 2015									
		To 1995				To 2000				To 2005	
Alphabetical order by region	Estimated prevalence in persons 15-49 years (weighted) (%) 2003	Men	Women	Total	Total losses as a proportion of the total labour force (%)	Men	Women	Total	Total losses as a proportion of the total labour force (%)	Men	Women
Total (Sub-Saharan Africa, 35 countries)	7.7	1,808,500	987,800	2,796,000	1.2	5,254,500	3,550,900	8,805,700	3.2	11,165,100	8,670,500
Total (Asia, 5 countries)	0.4	715,000	276,200	991,300	0.1	1,885,600	591,900	2,477,700	0.2	3,869,000	1,224,400
Total (Latin America and Caribbean, 8 countries)	1.0	116,800	49,000	165,600	0.2	397,700	167,900	565,500	0.6	779,800	373,400
Total (More developed regions, 2 countries)	0.8	470,300	35,800	506,000	0.0	868,700	62,000	930,700	0.0	1,375,400	153,200
Total (50 countries)	1.5	3,110,600	1,348,800	4,458,900	0.2	8,406,500	4,372,700	12,779,600	0.6	17,189,300	10,421,500

* HIV prevalence is a mid-range estimate used by ILO on the basis of the low-high range of estimates (0.4% - 1.3%) of UNAIDS for 2003

Source: See Technical notes

To 2005 (cont.)		To 2010				To 2015				
Total	Total losses as a proportion of the total labour force (%)	Men	Women	Total	Total losses as a proportion of the total labour force (%)	Men	Women	Total	Total losses as a proportion of the total labour force (%)	
19,879,100	6.3	18,583,500	15,324,800	33,956,100	9.4	26,840,300	22,744,900	49,636,900	12.0	Total (Sub-Saharan Africa, 35 countries)
5,093,400	0.4	7,607,100	2,432,400	10,039,400	0.7	14,061,400	4,546,900	18,608,100	1.2	Total (Asia, 5 countries)
1,153,000	1.1	1,159,600	553,100	1,712,700	1.5	1,518,300	783,600	2,301,900	1.9	Total (Latin America and Caribbean, 8 countries)
1,528,600	0.3	2,092,900	373,800	2,466,700	0.7	2,915,100	748,300	3,663,500	1.1	Total (More developed regions, 2 countries)
27,654,100	1.3	29,443,100	18,684,100	48,174,900	2.2	45,335,100	28,823,700	74,210,400	3.2	Total (50 countries)

Main table 5: Estimated indirect mortality impact of HIV/AIDS on children, 2003, and direct impact on working-age persons, 50 countries, years 1995, 2005 and 2015

Country	HIV prevalence	Mortality impact of HIV/AIDS									
		On children	On men and women of working age (15 to 64 years)								
		2003	1995			2005			2015		
Alphabetical order by region	Estimated prevalence in persons 15-49 years (%) 2003	Estimated total number of orphans 0-17 years as a result of HIV/AIDS	Estimated annual deaths due to HIV/AIDS of working-age men	Estimated annual deaths due to HIV/AIDS of working-age women	Estimated total annual deaths due to HIV/AIDS in working ages	Projected annual deaths due to HIV/AIDS of working-age men	Projected annual deaths due to HIV/AIDS of working-age women	Projected total annual deaths due to HIV/AIDS in working ages	Projected annual deaths due to HIV/AIDS of working-age men	Projected annual deaths due to HIV/AIDS of working-age women	Projected total annual deaths due to HIV/AIDS in working ages
Sub-Saharan Africa											
Angola	3.9	110,000	1,650	1,230	2,880	11,640	13,070	24,710	22,480	28,040	50,520
Benin	1.9	34,000	390	70	460	4,740	3,400	8,140	6,790	8,020	14,820
Botswana	37.3	120,000	3,680	110	3,780	11,890	12,070	23,960	16,530	21,390	37,930
Burkina Faso	4.2	260,000	5,080	4,050	9,130	16,990	22,340	39,320	20,050	25,160	45,210
Burundi	6.0	200,000	9,870	11,010	20,880	10,580	14,790	25,370	18,110	22,980	41,090
Cameroon	6.9	240,000	2,690	1,270	3,960	32,580	33,300	65,870	54,830	68,930	123,750
Central African Republic	13.5	110,000	3,100	2,310	5,410	11,620	14,320	25,930	12,830	15,940	28,770
Chad	4.8	96,000	1,620	1,190	2,810	6,490	7,960	14,440	7,790	9,520	17,310
Congo	4.9	97,000	2,410	1,230	3,640	6,570	7,160	13,730	7,490	9,070	16,560
Côte d'Ivoire	7.0	310,000	12,900	9,070	21,970	20,570	24,150	44,710	42,310	25,410	67,730
Democratic Republic of Congo	4.2	770,000	35,490	37,510	73,000	58,040	70,710	128,750	69,780	85,530	155,310
Djibouti	2.4	5,000	140	100	240	910	1,060	1,970	1,470	1,850	3,320
Eritrea	2.7	39,000	340	240	580	1,800	1,930	3,730	3,890	4,900	8,790
Ethiopia	4.4	720,000	19,450	14,270	33,710	90,960	108,360	199,320	121,350	149,420	270,780
Gabon	8.1	14,000	340	250	590	1,250	1,550	2,800	1,370	1,710	3,080
Gambia	1.2	2,300	190	60	250	600	650	1,250	620	780	1,410
Ghana	3.1	170,000	4,730	2,310	7,040	15,510	17,020	32,530	18,480	22,430	40,910
Guinea	3.2	35,000	940	530	1,470	3,770	4,210	7,980	4,020	4,880	8,900
Kenya	6.7	650,000	17,830	8,760	26,590	104,980	115,110	220,090	138,000	170,620	308,610
Lesotho	28.9	100,000	170	20	190	11,440	11,100	22,540	11,700	16,840	28,540
Liberia	5.9	36,000	190	130	320	3,310	3,730	7,040	5,960	7,540	13,510
Malawi	14.2	500,000	12,540	7,500	20,040	44,680	52,460	97,140	49,660	61,780	111,440
Mali	1.9	75,000	1,340	1,090	2,430	4,150	5,400	9,550	5,350	6,740	12,090
Mozambique	12.2	470,000	4,310	1,060	5,370	50,870	52,030	102,910	58,610	77,210	135,820
Namibia	21.3	57,000	450	170	620	8,440	8,520	16,960	11,240	14,290	25,540
Nigeria	5.4	1,800,000	16,730	10,380	27,110	124,660	137,930	262,580	218,320	270,370	488,680
Rwanda	5.1	160,000	1,490	1,510	3,010	17,680	25,800	43,490	16,410	24,150	40,560
South Africa	21.5	1,100,000	8,610	2,270	10,880	211,730	189,600	401,330	285,210	362,950	648,160
Sudan**	2.3	87,000	370	14,520	14,880	13,640	9,580	23,220	30,320	33,660	63,980
Swaziland	38.8	65,000	230	120	350	6,540	7,990	14,530	8,350	11,550	19,900
Togo	4.1	54,000	870	410	1,280	6,520	6,980	13,500	8,240	10,040	18,290
Uganda	4.1	940,000	46,180	36,950	83,130	35,090	42,540	77,630	20,650	25,200	45,860
United Republic of Tanzania	8.8	980,000	16,730	12,280	29,010	65,500	80,970	146,470	62,870	78,280	141,150
Zambia	16.5	630,000	16,910	12,640	29,540	54,750	68,060	122,810	54,740	67,810	122,560
Zimbabwe	24.6	980,000	22,430	16,350	38,780	98,000	118,120	216,110	111,510	139,330	250,830
Asia											
Cambodia**	2.6	92,000	240	100	340	7,000	4,660	11,660	15,020	12,210	27,230
China**	0.1	100,000	4,820	13,390	18,210	40,020	13,340	53,360	555,640	178,800	734,440
India* **	0.8	1,500,000	44,160	20,200	64,360	246,600	138,590	385,190	669,150	431,790	1,100,940
Myanmar**	1.2	71,000	4,340	1,420	5,760	15,460	4,720	20,190	37,560	15,710	53,270
Thailand**	1.5	290,000	42,580	9,590	52,170	72,690	21,830	94,520	38,220	17,000	55,220
Latin America and Caribbean											
Bahamas**	3.0	2,600	160	50	210	390	360	750	440	440	880
Belize**	2.4	1,300	3	3	6	120	100	220	190	210	400
Brazil**	0.7	260,000	9,170	2,500	11,660	29,280	10,760	40,040	24,930	14,350	39,280
Dominican Republic**	1.7	47,000	1,110	400	1,510	5,570	4,310	9,880	10,020	9,820	19,840
Guyana**	2.5	5,200	110	90	190	550	570	1,120	810	860	1,670
Haiti**	5.6	200,000	8,090	6,410	14,500	13,710	17,440	31,160	16,570	20,830	37,390
Honduras**	1.8	22,000	370	240	610	2,130	1,860	3,990	5,670	5,570	11,240
Trinidad and Tobago**	3.2	7,400	230	20	250	1,030	570	1,600	1,810	1,780	3,590
More developed regions											
Russian Federation**	1.1	54,000	0	0	0	18,290	11,070	29,360	63,400	35,330	98,730
USA	0.6	...	71,610	7,260	78,860	17,650	13,340	20,020	22,540	5,370	27,920

Main table 5: Summary

Estimated indirect mortality impact of HIV/AIDS on children, 2003, and direct impact on working-age persons, 50 countries, years 1995, 2005 and 2015

	HIV prevalence	Mortality impact of HIV/AIDS									
		On children	On men and women of working age (15 to 64 years)								
		2003	1995			2005			2015		
	Estimated HIV prevalence in persons 15-49 years (weighted) (%) 2003	Estimated total number of orphans 0-17 years as a result of HIV/AIDS	Estimated annual deaths due to HIV/AIDS of working-age men	Estimated annual deaths due to HIV/AIDS of working-age women	Estimated total annual deaths due to HIV/AIDS in working ages	Projected annual deaths due to HIV/AIDS of working-age men	Projected annual deaths due to HIV/AIDS of working-age women	Projected total annual deaths due to HIV/AIDS in working ages	Projected annual deaths due to HIV/AIDS of working-age men	Projected annual deaths due to HIV/AIDS of working-age women	Projected total annual deaths due to HIV/AIDS in working ages
Total (Sub-Saharan Africa, 35 countries)	7.7	12,016,300	272,390	212,970	485,330	1,168,490	1,293,970	2,462,410	1,527,330	1,884,320	3,411,710
Total (Asia, 5 countries)	0.4	2,053,000	96,140	44,700	140,840	381,770	183,140	564,920	1,315,590	655,510	1,971,100
Total (Latin America and Caribbean, 8 countries)	1.0	545,500	19,243	9,713	28,936	52,780	35,970	88,760	60,440	53,860	114,290
Total (More developed regions, 2 countries)	0.8	54,000	71,610	7,260	78,860	35,940	24,410	49,380	85,940	40,700	126,650
Total (50 countries)	1.5	14,668,800	459,383	274,643	733,966	1,638,980	1,537,490	3,165,470	2,989,300	2,634,390	5,623,750

* HIV prevalence is a mid-range estimate used by ILO on the basis of the low-high range of estimates (0.4% - 1.3%) of UNAIDS for 2003

** Number of orphans is a provisional estimate

... Not available

Source: See Technical notes

Main table 6A: Estimated increase in economic burden and social burden due to deaths and due to illness for durations 1, 2 and 3 of Stages 3 and 4 of HIV/AIDS, 50 countries, 1995

Country	HIV prevalence	Increase in economic burden due to HIV/AIDS						
		Durations 1,2,3	Duration 1		Duration 2		Duration 3	
		Impact due to deaths	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)
Alphabetical order by region	Estimated prevalence in persons 15-49 years (%) 2003	Increase in the estimated economic dependency ratio for 1995 due to HIV/AIDS (%)	Estimated additional increase in the economic dependency ratio (%)		Estimated additional increase in the economic dependency ratio (%)		Estimated additional increase in the economic dependency ratio (%)	
Sub-Saharan Africa								
Angola	3.9	0.3	0.1	0.3	0.1	0.3	0.1	0.3
Benin	1.9	...	0.0	0.0	0.0	0.0	0.0	0.0
Botswana	37.3	...	0.8	0.8	0.8	0.8	0.7	0.7
Burkina Faso	4.2	0.5	0.2	0.7	0.2	0.7	0.2	0.7
Burundi	6.0	0.4	1.0	1.4	1.0	1.4	0.9	1.3
Cameroon	6.9	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Central African Republic	13.5	0.0	0.4	0.4	0.4	0.4	0.4	0.4
Chad	4.8	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Congo	4.9	...	0.3	0.3	0.3	0.3	0.3	0.3
Côte d'Ivoire	7.0	...	0.4	0.4	0.4	0.4	0.3	0.3
Democratic Republic of Congo	4.2	...	0.4	0.4	0.4	0.4	0.4	0.4
Djibouti	2.4	...	0.1	0.1	0.1	0.1	0.1	0.1
Eritrea	2.7	...	0.0	0.0	0.0	0.0	0.0	0.0
Ethiopia	4.4	...	0.2	0.2	0.2	0.2	0.1	0.1
Gabon	8.1	...	0.1	0.1	0.1	0.1	0.1	0.1
Gambia	1.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2
Ghana	3.1	...	0.1	0.1	0.1	0.1	0.1	0.1
Guinea	3.2	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Kenya	6.7	...	0.3	0.3	0.3	0.3	0.2	0.2
Lesotho	28.9	3.6	0.0	3.7	0.0	3.7	0.0	3.7
Liberia	5.9	...	0.0	0.0	0.0	0.0	0.0	0.0
Malawi	14.2	0.3	0.6	0.8	0.6	0.8	0.5	0.8
Mali	1.9	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Mozambique	12.2	...	0.1	0.1	0.1	0.1	0.1	0.1
Namibia	21.3	...	0.1	0.1	0.1	0.1	0.1	0.1
Nigeria	5.4	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Rwanda	5.1	...	0.2	0.2	0.2	0.2	0.1	0.1
South Africa	21.5	...	0.1	0.1	0.1	0.1	0.1	0.1
Sudan	2.3	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Swaziland	38.8	...	0.1	0.1	0.1	0.1	0.1	0.1
Togo	4.1	...	0.1	0.1	0.1	0.1	0.1	0.1
Uganda	4.1	...	1.2	1.2	1.2	1.2	1.0	1.0
United Republic of Tanzania	8.8	...	0.3	0.3	0.3	0.3	0.2	0.2
Zambia	16.5	0.1	0.8	0.9	0.8	0.9	0.7	0.8
Zimbabwe	24.6	1.9	0.9	2.9	0.9	2.9	0.8	2.8
Asia								
Cambodia	2.6	...	0.0	0.0	0.0	0.0	0.0	0.0
China	0.1	...	0.0	0.0	0.0	0.0	0.0	0.0
India*	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Myanmar	1.2	...	0.0	0.0	0.0	0.0	0.0	0.0
Thailand	1.5	...	0.3	0.3	0.3	0.3	0.2	0.2
Latin America and Caribbean								
Bahamas	3.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
Belize	2.4	...	0.0	0.0	0.0	0.0	0.0	0.0
Brazil	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dominican Republic	1.7	...	0.1	0.1	0.1	0.1	0.0	0.0
Guyana	2.5	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Haiti	5.6	...	0.5	0.5	0.5	0.5	0.5	0.5
Honduras	1.8	...	0.0	0.0	0.0	0.0	0.0	0.0
Trinidad and Tobago	3.2	...	0.1	0.1	0.1	0.1	0.0	0.0
More developed regions								
Russian Federation	1.1	...	0.0	0.0	0.0	0.0	0.0	0.0
USA	0.6	...	0.0	0.0	0.0	0.0	0.0	0.0

Increase in social burden due to HIV/AIDS							Country
Durations 1,2,3	Duration 1		Duration 2		Duration 3		
Impact due to deaths	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	
Increase in the estimated dependency ratio for 1995 due to HIV/AIDS (%)	Estimated increase for adjusted dependency ratio (%)		Estimated increase for adjusted dependency ratio (%)		Estimated increase for adjusted dependency ratio (%)		Alphabetical order by region
							Sub-Saharan Africa
...	0.1	0.1	0.1	0.1	0.1	0.1	Angola
...	0.0	0.0	0.0	0.0	0.0	0.0	Benin
...	0.9	0.9	0.9	0.9	0.8	0.8	Botswana
0.0	0.3	0.3	0.3	0.3	0.2	0.3	Burkina Faso
1.5	1.0	2.5	1.0	2.5	0.9	2.4	Burundi
...	0.1	0.1	0.1	0.1	0.1	0.1	Cameroon
0.4	0.5	0.9	0.5	0.9	0.4	0.8	Central African Republic
...	0.1	0.1	0.1	0.1	0.1	0.1	Chad
0.5	0.4	0.9	0.4	0.9	0.3	0.8	Congo
0.4	0.5	0.8	0.5	0.8	0.4	0.8	Côte d'Ivoire
0.8	0.5	1.3	0.5	1.3	0.4	1.2	Democratic Republic of Congo
...	0.1	0.1	0.1	0.1	0.1	0.1	Djibouti
0.0	0.1	0.0	0.1	0.0	0.0	0.0	Eritrea
...	0.2	0.2	0.2	0.2	0.2	0.2	Ethiopia
0.1	0.2	0.2	0.2	0.2	0.1	0.2	Gabon
...	0.1	0.1	0.1	0.1	0.1	0.1	Gambia
...	0.1	0.1	0.1	0.1	0.1	0.1	Ghana
...	0.1	0.1	0.1	0.1	0.1	0.1	Guinea
0.1	0.3	0.4	0.3	0.4	0.3	0.4	Kenya
2.4	0.0	2.4	0.0	2.4	0.0	2.4	Lesotho
0.2	0.0	0.2	0.0	0.2	0.0	0.2	Liberia
1.2	0.6	1.8	0.6	1.8	0.5	1.8	Malawi
...	0.1	0.1	0.1	0.1	0.1	0.1	Mali
...	0.1	0.1	0.1	0.1	0.1	0.1	Mozambique
...	0.1	0.1	0.1	0.1	0.1	0.1	Namibia
...	0.1	0.1	0.1	0.1	0.1	0.1	Nigeria
0.0	0.2	0.2	0.2	0.2	0.2	0.2	Rwanda
0.0	0.1	0.1	0.1	0.1	0.1	0.0	South Africa
...	0.2	0.2	0.2	0.2	0.1	0.1	Sudan
...	0.1	0.1	0.1	0.1	0.1	0.1	Swaziland
...	0.1	0.1	0.1	0.1	0.1	0.1	Togo
2.3	1.2	3.5	1.2	3.5	1.1	3.4	Uganda
0.4	0.3	0.7	0.3	0.6	0.2	0.6	United Republic of Tanzania
1.1	0.9	2.0	0.9	2.0	0.8	1.9	Zambia
1.2	1.0	2.2	1.0	2.2	0.9	2.1	Zimbabwe
							Asia
...	0.0	0.0	0.0	0.0	0.0	0.0	Cambodia
0.0	0.0	0.0	0.0	0.0	0.0	0.0	China
0.0	0.0	0.0	0.0	0.0	0.0	0.0	India*
0.0	0.0	0.1	0.0	0.1	0.0	0.1	Myanmar
0.6	0.3	0.9	0.3	0.9	0.3	0.8	Thailand
							Latin America and Caribbean
0.3	0.2	0.5	0.2	0.5	0.2	0.5	Bahamas
0.0	0.0	0.0	0.0	0.0	0.0	0.0	Belize
...	0.0	0.0	0.0	0.0	0.0	0.0	Brazil
0.0	0.1	0.1	0.1	0.1	0.1	0.1	Dominican Republic
0.0	0.1	0.1	0.1	0.1	0.1	0.1	Guyana
0.8	0.6	1.4	0.6	1.4	0.5	1.3	Haiti
...	0.0	0.0	0.0	0.0	0.0	0.0	Honduras
0.1	0.1	0.2	0.1	0.2	0.1	0.2	Trinidad and Tobago
							More developed regions
0.0	0.0	0.0	0.0	0.0	0.0	0.0	Russian Federation
0.2	0.0	0.3	0.0	0.3	0.0	0.3	USA

Main table 6A: Summary

Estimated increase in economic burden and social burden due to deaths and due to illness for durations 1, 2 and 3 of Stages 3 and 4 of HIV/AIDS, 50 countries, 1995

	HIV prevalence	Increase in economic burden due to HIV/AIDS						
		Durations 1,2,3	Duration 1		Duration 2		Duration 3	
		Impact due to deaths	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)
	Estimated prevalence in persons 15-49 years (weighted)(%) 2003	Increase in the estimated economic dependency ratio for 1995 due to HIV/AIDS (%)	Estimated additional increase in the economic dependency ratio (%)		Estimated additional increase in the economic dependency ratio (%)		Estimated additional increase in the economic dependency ratio (%)	
Total (Sub-Saharan Africa, 35 countries)	7.7	0.4	0.2	0.6	0.2	0.6	0.2	0.6
Total (Asia, 5 countries)	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (Latin America and Caribbean, 8 countries)	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (More developed regions, 2 countries)	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (50 countries)	1.5	0.0	0.1	0.1	0.1	0.1	0.0	0.0

* HIV prevalence is a mid-range estimate used by ILO on the basis of the low-high range of estimates (0.4% - 1.3%) of UNAIDS for 2003

... Insignificantly different from zero

Source: See Technical notes

Increase in social burden due to HIV/AIDS							
Durations 1,2,3	Duration 1		Duration 2		Duration 3		
Impact due to deaths	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	
Increase in the estimated dependency ratio for 1995 due to HIV/AIDS (%)	Estimated increase for adjusted dependency ratio (%)		Estimated increase for adjusted dependency ratio (%)		Estimated increase for adjusted dependency ratio (%)		
0.1	0.3	0.4	0.3	0.4	0.2	0.4	Total (Sub-Saharan Africa, 35 countries)
0.1	0.0	0.1	0.0	0.1	0.0	0.1	Total (Asia, 5 countries)
0.0	0.1	0.1	0.1	0.1	0.0	0.1	Total (Latin America and Caribbean, 8 countries)
0.1	0.0	0.1	0.0	0.1	0.0	0.1	Total (More developed regions, 2 countries)
0.0	0.1	0.1	0.1	0.1	0.1	0.1	Total (50 countries)

Main table 6B: Projected increase in economic burden and social burden due to deaths and due to illness for durations 1, 2 and 3 of Stages 3 and 4 of HIV/AIDS, 50 countries, 2005

Country	HIV prevalence	Increase in economic burden due to HIV/AIDS						
		Durations 1,2,3	Duration 1		Duration 2		Duration 3	
		Impact due to deaths	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)
Alphabetical order by region	Estimated prevalence in persons 15-49 years (%) 2003	Increase in the projected economic dependency ratio for 2005 due to HIV/AIDS (%)	Projected additional increase in the economic dependency ratio (%)		Projected additional increase in the economic dependency ratio (%)		Projected additional increase in the economic dependency ratio (%)	
Sub-Saharan Africa								
Angola	3.9	4.3	0.5	4.7	0.5	4.7	0.4	4.7
Benin	1.9	...	0.3	0.3	0.3	0.3	0.3	0.3
Botswana	37.3	7.6	3.4	11.3	3.4	11.3	3.0	10.8
Burkina Faso	4.2	2.1	0.8	2.9	0.8	2.8	0.7	2.8
Burundi	6.0	2.5	0.9	3.4	0.9	3.4	0.8	3.3
Cameroon	6.9	1.7	1.0	2.7	1.0	2.7	0.9	2.6
Central African Republic	13.5	2.8	1.7	4.5	1.7	4.5	1.5	4.3
Chad	4.8	2.5	0.4	2.9	0.4	2.9	0.4	2.9
Congo	4.9	1.9	0.9	2.8	0.9	2.8	0.8	2.7
Côte d'Ivoire	7.0	0.6	0 .6	1.2	0.6	1.2	0.5	1.1
Democratic Republic of Congo	4.2	0.7	0.6	1.3	0.6	1.3	0.5	1.2
Djibouti	2.4	0.2	0.7	0.8	0.6	0.8	0.6	0.7
Eritrea	2.7	0.1	0.2	0.3	0.2	0.3	0.2	0.3
Ethiopia	4.4	0.5	0.7	1.2	0.7	1.2	0.7	1.1
Gabon	8.1	2.2	0.5	2.8	0.5	2.8	0.5	2.7
Gambia	1.2	1.7	0.2	1.9	0.2	1.9	0.2	1.9
Ghana	3.1	0.6	0.4	1.1	0.4	1.1	0.4	1.0
Guinea	3.2	1.6	0.2	1.8	0.2	1.8	0.2	1.8
Kenya	6.7	0.0	1.8	1.8	1.8	1.8	1.6	1.6
Lesotho	28.9	9.1	3.2	12.6	3.2	12.5	2.8	12.1
Liberia	5.9	0.3	0.5	0.8	0.5	0.8	0.4	0.8
Malawi	14.2	3.9	2.2	6.1	2.2	6.1	1.9	5.9
Mali	1.9	0.2	0.2	0.3	0.2	0.3	0.2	0.3
Mozambique	12.2	1.2	1.5	2.7	1.5	2.7	1.3	2.6
Namibia	21.3	1.5	2.2	3.7	2.2	3.7	2.0	3.5
Nigeria	5.4	3.1	0.5	3.6	0.5	3.6	0.4	3.5
Rwanda	5.1	0.4	1.4	1.8	1.4	1.8	1.2	1.6
South Afirica	21.5	1.6	2.1	3.7	2.1	3.7	1.9	3.5
Sudan	2.3	0.4	0.2	0.6	0.2	0.6	0.1	0.5
Swaziland	38.8	7.4	3.3	10.9	3.3	10.9	2.9	10.5
Togo	4.1	1.1	0.6	1.8	0.6	1.7	0.6	1.7
Uganda	4.1	0.5	0.8	1.3	0.8	1.3	0.7	1.3
United Republic of Tanzania	8.8	2.1	1.1	3.2	1.1	3.2	0.9	3.1
Zambia	16.5	4.8	2.9	7.8	2.9	7.7	2.5	7.4
Zimbabwe	24.6	14.0	4.6	19.2	4.5	19.1	4.0	18.5
Asia								
Cambodia	2.6	0.1	0.2	0.4	0.2	0.4	0.2	0.3
China	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1
India*	0.8	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Myanmar	1.2	0.4	0.1	0.5	0.1	0.5	0.1	0.5
Thailand	1.5	0.1	0.4	0.5	0.4	0.5	0.4	0.5
Latin America and Caribbean								
Bahamas	3.0	0.6	0.7	1.2	0.6	1.2	0.6	1.1
Belize	2.4	0.0	0.2	0.2	0.2	0.2	0.2	0.2
Brazil	0.7	0.2	0.1	0.3	0.1	0.3	0.1	0.3
Dominican Republic	1.7	0.3	0.3	0.5	0.3	0.5	0.2	0.5
Guyana	2.5	0.4	0.3	0.7	0.3	0.7	0.3	0.7
Haiti	5.6	0.5	1.1	1.6	1.1	1.6	0.9	1.5
Honduras	1.8	0.3	0.1	0.4	0.1	0.4	0.1	0.4
Trinidad and Tobago	3.2	0.1	0.3	0.4	0.3	0.4	0.3	0.4
More developed regions								
Russian Federation	1.1	0.1	0.0	0.2	0.0	0.2	0.0	0.2
USA	0.6	0.1	0.0	0.2	0.0	0.2	0.0	0.2

Increase in social burden due to HIV/AIDs							Country
Durations 1,2,3	Duration 1		Duration 2		Duration 3		
Impact due to deaths	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	
Increase in the projected dependency ratio for 2005 due to HIV/AIDS (%)	Increase projected for adjusted dependency ratio (%)		Increase projected for adjusted dependency ratio (%)		Increase projected for adjusted dependency ratio (%)		Alphabetical order by region
							Sub-Saharan Africa
0.8	0.5	1.3	0.5	1.3	0.4	1.2	Angola
0.6	0.3	1.0	0.3	1.0	0.3	0.9	Benin
6.1	4.1	10.4	4.1	10.4	3.6	9.9	Botswana
1.3	0.9	2.2	0.8	2.2	0.8	2.1	Burkina Faso
1.3	1.0	2.4	1.0	2.4	0.9	2.3	Burundi
2.0	1.2	3.2	1.2	3.2	1.1	3.0	Cameroon
4.4	2.0	6.5	2.0	6.5	1.7	6.2	Central African Republic
...	0.5	0.5	0.5	0.5	0.4	0.4	Chad
0.1	1.0	1.2	1.0	1.1	0.9	1.0	Congo
3.0	0.8	3.8	0.8	3.8	0.7	3.7	Côte d'Ivoire
1.7	0.7	2.4	0.7	2.4	0.6	2.3	Democratic Republic of Congo
0.6	0.8	1.5	0.8	1.5	0.7	1.4	Djibouti
0.3	0.3	0.6	0.2	0.6	0.2	0.6	Eritrea
1.0	0.8	1.8	0.8	1.8	0.7	1.7	Ethiopia
1.4	0.6	2.0	0.6	2.0	0.5	1.9	Gabon
0.4	0.3	0.7	0.3	0.7	0.2	0.7	Gambia
0.7	0.5	1.2	0.5	1.2	0.4	1.1	Ghana
0.2	0.3	0.5	0.3	0.5	0.2	0.4	Guinea
3.6	2.0	5.8	2.0	5.7	1.8	5.5	Kenya
6.5	3.8	10.6	3.8	10.6	3.4	10.2	Lesotho
1.2	0.6	1.8	0.6	1.8	0.5	1.8	Liberia
5.6	2.3	8.0	2.3	8.0	2.1	7.8	Malawi
0.4	0.2	0.6	0.2	0.6	0.2	0.6	Mali
2.8	1.6	4.4	1.6	4.4	1.4	4.3	Mozambique
4.1	2.5	6.8	2.5	6.7	2.2	6.4	Namibia
0.8	0.6	1.4	0.6	1.4	0.5	1.3	Nigeria
2.8	1.5	4.3	1.5	4.3	1.3	4.1	Rwanda
4.6	2.9	7.6	2.9	7.6	2.5	7.2	South Africa
0.1	0.2	0.3	0.2	0.3	0.2	0.3	Sudan
5.5	4.1	9.8	4.1	9.8	3.6	9.3	Swaziland
1.2	0.8	2.0	0.8	2.0	0.7	2.0	Togo
4.1	0.8	4.9	0.8	4.9	0.7	4.8	Uganda
2.3	1.1	3.5	1.1	3.5	1.0	3.3	United Republic of Tanzania
7.4	3.4	11.0	3.3	10.9	3.0	10.5	Zambia
10.1	5.1	15.7	5.1	15.7	4.5	15.1	Zimbabwe
							Asia
0.3	0.2	0.6	0.2	0.6	0.2	0.5	Cambodia
0.0	0.0	0.0	0.0	0.0	0.0	0.0	China
0.2	0.1	0.3	0.1	0.3	0.1	0.3	India*
0.6	0.1	0.7	0.1	0.7	0.1	0.7	Myanmar
2.1	0.5	2.6	0.5	2.6	0.5	2.6	Thailand
							Latin America and Caribbean
2.2	0.8	2.9	0.8	2.9	0.7	2.9	Bahamas
0.4	0.2	0.7	0.2	0.7	0.2	0.6	Belize
0.4	0.1	0.4	0.1	0.4	0.1	0.5	Brazil
0.7	0.4	1.1	0.4	1.1	0.3	1.1	Dominican Republic
5.1	0.5	5.6	0.5	5.6	0.4	5.5	Guyana
1.8	1.1	3.0	1.1	3.0	1.0	2.9	Haiti
0.3	0.2	0.4	0.2	0.4	0.1	0.4	Honduras
0.9	0.4	1.4	0.4	1.4	0.4	1.3	Trinidad and Tobago
							More developed regions
0.1	0.1	0.2	0.1	0.2	0.1	0.2	Russian Federation
0.6	0.0	0.6	0.0	0.6	0.0	0.6	USA

Main table 6B: Summary

Projected increase in economic burden and social burden due to deaths and due to illness for durations 1, 2 and 3 of Stages 3 and 4 of HIV/AIDS, 50 countries, 2005

	HIV prevalence	Increase in economic burden due to HIV/AIDS						
		Durations 1,2,3	Duration 1		Duration 2		Duration 3	
		Impact due to deaths	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)
	Estimated prevalence in persons 15-49 years (weighted) (%) 2003	Increase in the projected economic dependency ratio for 2005 due to HIV/AIDS (%)	Projected additional increase in the economic dependency ratio (%)		Projected additional increase in the economic dependency ratio (%)		Projected additional increase in the economic dependency ratio (%)	
Total (Sub-Saharan Africa, 35 countries)	7.7	2.5	1.0	3.5	1.0	3.5	0.9	3.4
Total (Asia, 5 countries)	0.4	0.1	0.1	0.1	0.1	0.1	0.0	0.1
Total (Latin America and Caribbean, 8 countries)	1.0	0.3	0.1	0.4	0.1	0.4	0.1	0.4
Total (More developed regions, 2 countries)	0.8	0.1	0.0	0.1	0.0	0.1	0.0	0.1
Total (50 countries)	1.5	0.2	0.2	0.4	0.2	0.4	0.2	0.4

* HIV prevalence is a mid-range estimate used by ILO on the basis of the low-high range of estimates (0.4% - 1.3%) of UNAIDS for 2003

... Insignificantly different from zero

Source: See Technical notes

Increase in social burden due to HIV/AIDs							
Durations 1,2,3	Duration 1		Duration 2		Duration 3		
Impact due to deaths	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	
Increase in the projected dependency ratio for 2005 due to HIV/AIDS (%)	Increase projected for adjusted dependency ratio (%)		Increase projected for adjusted dependency ratio (%)		Increase projected for adjusted dependency ratio (%)		
2.1	1.1	3.2	1.1	3.2	1.0	3.1	Total (Sub-Saharan Africa, 35 countries)
0.1	0.1	0.2	0.1	0.2	0.1	0.2	Total (Asia, 5 countries)
0.5	0.1	0.6	0.1	0.6	0.1	0.6	Total (Latin America and Caribbean, 8 countries)
0.3	0.0	0.3	0.0	0.3	0.0	0.3	Total (More developed regions, 2 countries)
0.1	0.3	0.4	0.3	0.4	0.2	0.3	Total (50 countries)

Main table 6C: Projected increase in economic burden and social burden due to deaths and due to illness for durations 1, 2 and 3 of Stages 3 and 4 of HIV/AIDS, 50 countries, 2015

Country	HIV prevalence	Increase in economic burden due to HIV/AIDS						
		Durations 1,2,3	Duration 1		Duration 2		Duration 3	
		Impact due to deaths	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)
Alphabetical order by region	Estimated prevalence in persons 15-49 years (%) 2003	Increase in the projected economic dependency ratio for 2015 due to HIV/AIDS (%)	Projected additional increase in the economic dependency ratio (%)		Projected additional increase in the economic dependency ratio (%)		Projected additional increase in the economic dependency ratio (%)	
Sub-Saharan Africa								
Angola	3.9	4.5	0.7	5.2	0.7	5.2	0.6	5.1
Benin	1.9	0.7	0.5	1.2	0.5	1.2	0.4	1.1
Botswana	37.3	10.2	5.6	16.3	5.5	16.3	4.9	15.6
Burkina Faso	4.2	2.5	0.7	3.2	0.7	3.2	0.6	3.1
Burundi	6.0	1.8	1.2	2.9	1.2	2.9	1.0	2.8
Cameroon	6.9	3.8	1.5	5.4	1.5	5.4	1.4	5.2
Central African Republic	13.5	7.3	1.6	9.0	1.6	9.0	1.4	8.8
Chad	4.8	5.8	0.4	6.2	0.4	6.2	0.3	6.2
Congo	4.9	3.0	0.8	3.8	0.8	3.8	0.7	3.7
Côte d'Ivoire	7.0	4.2	0.8	5.1	0.8	5.1	0.7	5.0
Democratic Republic of Congo	4.2	2.0	0.5	2.5	0.5	2.5	0.5	2.4
Djibouti	2.4	0.6	0.9	1.5	0.9	1.5	0.8	1.4
Eritrea	2.7	0.5	0.4	0.9	0.4	0.9	0.3	0.9
Ethiopia	4.4	2.3	0.8	3.1	0.8	3.1	0.7	3.0
Gabon	8.1	3.6	0.5	4.1	0.5	4.1	0.4	4.1
Gambia	1.2	2.6	0.2	2.8	0.2	2.8	0.2	2.8
Ghana	3.1	1.4	0.4	1.9	0.4	1.9	0.4	1.8
Guinea	3.2	3.5	0.2	3.7	0.2	3.7	0.2	3.7
Kenya	6.7	0.8	2.3	3.1	2.2	3.1	2.0	2.8
Lesotho	28.9	16.2	3.9	20.7	3.9	20.7	3.5	20.2
Liberia	5.9	1.8	0.7	2.5	0.7	2.5	0.6	2.4
Malawi	14.2	9.3	2.1	11.6	2.0	11.6	1.8	11.3
Mali	1.9	0.8	0.2	1.0	0.2	1.0	0.2	1.0
Mozambique	12.2	4.9	1.7	6.7	1.7	6.7	1.5	6.5
Namibia	21.3	9.9	2.9	13.1	2.9	13.1	2.6	12.7
Nigeria	5.4	3.7	0.7	4.4	0.7	4.4	0.6	4.3
Rwanda	5.1	1.7	1.1	2.8	1.1	2.7	0.9	2.6
South Africa	21.5	9.3	3.3	12.9	3.3	12.9	2.9	12.5
Sudan	2.3	1.4	0.3	1.7	0.3	1.7	0.3	1.7
Swaziland	38.8	18.0	4.2	23.0	4.2	22.9	3.7	22.4
Togo	4.1	2.2	0.7	2.9	0.7	2.9	0.6	2.8
Uganda	4.1	1.3	0.3	1.7	0.3	1.7	0.3	1.6
United Republic of Tanzania	8.8	6.5	0.8	7.4	0.8	7.4	0.7	7.3
Zambia	16.5	8.5	2.5	11.2	2.4	11.2	2.2	10.9
Zimbabwe	24.6	24.7	5.2	31.2	5.2	31.1	4.6	30.4
Asia								
Cambodia	2.6	0.8	0.4	1.3	0.4	1.3	0.4	1.2
China	0.1	0.5	0.2	0.7	0.2	0.7	0.1	0.7
India*	0.8	0.7	0.2	0.9	0.2	0.9	0.2	0.9
Myanmar	1.2	2.8	0.3	3.1	0.3	3.0	0.2	3.0
Thailand	1.5	1.4	0.2	1.6	0.2	1.6	0.2	1.6
Latin America and Caribbean								
Bahamas	3.0	1.8	0.7	2.4	0.7	2.4	0.6	2.4
Belize	2.4	1.1	0.3	1.3	0.3	1.3	0.2	1.3
Brazil	0.7	1.5	0.1	1.6	0.1	1.6	0.1	1.6
Dominican Republic	1.7	0.5	0.4	1.0	0.4	1.0	0.4	0.9
Guyana	2.5	1.5	0.5	2.0	0.5	2.0	0.4	2.0
Haiti	5.6	1.4	1.1	2.5	1.1	2.4	0.9	2.3
Honduras	1.8	1.6	0.3	1.9	0.3	1.9	0.3	1.9
Trinidad and Tobago	3.2	0.7	0.6	1.3	0.6	1.3	0.5	1.3
More developed regions								
Russian Federation	1.1	0.6	0.2	0.8	0.2	0.8	0.2	0.8
USA	0.6	0.7	0.0	0.7	0.0	0.7	0.0	0.7

Increase in social burden due to HIV/AIDS							Country
Durations 1,2,3	Duration 1		Duration 2		Duration 3		
Impact due to deaths	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	
Increase in the projected dependency ratio for 2015 due to HIV/AIDS (%)	Increase projected for adjusted dependency ratio (%)		Increase projected for adjusted dependency ratio (%)		Increase projected for adjusted dependency ratio (%)		Alphabetical order by region
							Sub-Saharan Africa
2.2	0.8	3.0	0.8	3.0	0.7	2.9	Angola
1.3	0.5	1.8	0.5	1.8	0.4	1.7	Benin
19.1	7.0	27.4	6.9	27.3	6.1	26.4	Botswana
2.6	0.7	3.4	0.7	3.4	0.6	3.3	Burkina Faso
4.1	1.3	5.5	1.2	5.4	1.1	5.3	Burundi
5.4	2.0	7.5	2.0	7.5	1.8	7.3	Cameroon
8.1	1.9	10.1	1.9	10.1	1.7	9.9	Central African Republic
0.6	0.4	1.0	0.4	1.0	0.4	0.9	Chad
2.1	0.9	3.1	0.9	3.1	0.8	3.0	Congo
5.5	1.1	6.6	1.0	6.6	0.9	6.4	Côte d'Ivoire
2.6	0.6	3.2	0.6	3.2	0.6	3.1	Democratic Republic of Congo
2.1	1.2	3.3	1.2	3.3	1.1	3.2	Djibouti
1.0	0.5	1.5	0.4	1.5	0.4	1.4	Eritrea
2.2	0.9	3.1	0.9	3.1	0.8	3.0	Ethiopia
2.3	0.6	2.9	0.6	2.9	0.5	2.8	Gabon
0.8	0.2	1.1	0.2	1.1	0.2	1.0	Gambia
1.4	0.5	1.9	0.5	1.9	0.4	1.8	Ghana
0.6	0.2	0.8	0.2	0.8	0.2	0.8	Guinea
8.0	2.6	10.8	2.6	10.8	2.3	10.5	Kenya
16.9	5.1	22.9	5.1	22.8	4.5	22.2	Lesotho
2.4	0.9	3.3	0.9	3.3	0.8	3.2	Liberia
9.6	2.2	12.0	2.2	12.0	2.0	11.8	Malawi
0.6	0.2	0.8	0.2	0.8	0.2	0.8	Mali
4.8	1.8	6.8	1.8	6.7	1.6	6.5	Mozambique
9.0	3.6	12.9	3.6	12.9	3.2	12.4	Namibia
2.2	0.9	3.2	0.9	3.2	0.8	3.1	Nigeria
3.9	1.2	5.1	1.1	5.1	1.0	5.0	Rwanda
13.4	4.9	18.9	4.8	18.9	4.3	18.3	South Africa
0.7	0.5	1.2	0.5	1.2	0.4	1.2	Sudan
13.9	5.7	20.4	5.7	20.4	5.0	19.7	Swaziland
2.5	0.9	3.4	0.9	3.4	0.8	3.3	Togo
4.1	0.3	4.5	0.3	4.5	0.3	4.4	Uganda
4.0	0.9	5.0	0.9	5.0	0.8	4.9	United Republic of Tanzania
12.6	2.9	15.9	2.9	15.9	2.6	15.5	Zambia
23.5	6.0	30.9	5.9	30.9	5.3	30.0	Zimbabwe
							Asia
1.2	0.5	1.7	0.5	1.7	0.4	1.6	Cambodia
0.3	0.2	0.5	0.2	0.5	0.2	0.5	China
0.8	0.3	1.1	0.3	1.1	0.3	1.0	India*
2.0	0.3	2.3	0.3	2.3	0.3	2.2	Myanmar
2.5	0.3	2.7	0.3	2.7	0.2	2.7	Thailand
							Latin America and Caribbean
4.0	0.8	4.8	0.8	4.8	0.8	4.7	Bahamas
1.3	0.4	1.7	0.4	1.7	0.4	1.6	Belize
0.7	0.1	0.8	0.1	0.8	0.1	0.8	Brazil
2.3	0.6	2.9	0.6	2.9	0.6	2.8	Dominican Republic
t8.2	0.8	9.0	0.7	9.0	0.7	8.9	Guyana
4.0	1.2	5.2	1.2	5.2	1.1	5.1	Haiti
1.1	0.4	1.5	0.4	1.5	0.4	1.4	Honduras
2.7	1.0	3.7	1.0	3.7	0.8	3.6	Trinidad and Tobago
							More developed regions
1.3	0.3	1.6	0.3	1.6	0.2	1.6	Russian Federation
0.8	0.0	0.8	0.0	0.8	0.0	0.8	USA

Main table 6C: Summary

Projected increase in economic burden and social burden due to deaths and due to illness for durations 1, 2 and 3 of Stages 3 and 4 of HIV/AIDS, 50 countries, 2015

	HIV prevalence	Increase in economic burden due to HIV/AIDS						
		Durations 1,2,3	Duration 1		Duration 2		Duration 3	
		Impact due to deaths	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)
	Estimated prevalence in persons 15-49 years (weighted) (%) 2003	Increase in the projected economic dependency ratio for 2015 due to HIV/AIDS (%)	Projected additional increase in the economic dependency ratio (%)		Projected additional increase in the economic dependency ratio (%)		Projected additional increase in the economic dependency ratio (%)	
Total (Sub-Saharan Africa, 35 countries)	7.7	4.2	1.0	5.3	1.0	5.3	0.9	5.1
Total (Asia, 5 countries)	0.4	0.7	0.2	0.8	0.2	0.8	0.2	0.8
Total (Latin America and Caribbean, 8 countries)	1.0	1.5	0.1	1.6	0.1	1.6	0.1	1.6
Total (More developed regions, 2 countries)	0.8	0.6	0.1	0.7	0.1	0.7	0.1	0.7
Total (50 countries)	1.5	0.7	0.3	1.0	0.3	1.0	0.3	0.9

* HIV prevalence is a mid-range estimate used by ILO on the basis of the low-high range of estimates (0.4% - 1.3%) of UNAIDS for 2003

Source: See Technical notes

Increase in social burden due to HIV/AIDS							
Durations 1,2,3	Duration 1		Duration 2		Duration 3		
Impact due to deaths	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	Impact due to illness	Total impact (%)	
Increase in the projected dependency ratio for 2015 due to HIV/AIDS (%)	Increase projected for adjusted dependency ratio (%)		Increase projected for adjusted dependency ratio (%)		Increase projected for adjusted dependency ratio (%)		
4.5	1.3	5.8	1.3	5.8	1.1	5.7	Total (Sub-Saharan Africa, 35 countries)
0.6	0.2	0.8	0.2	0.8	0.2	0.8	Total (Asia, 5 countries)
0.9	0.2	1.1	0.2	1.1	0.2	1.1	Total (Latin America and Caribbean, 8 countries)
1.0	0.1	1.1	0.1	1.1	0.1	1.1	Total (More developed regions, 2 countries)
0.6	0.4	1.1	0.4	1.1	0.4	1.0	Total (50 countries)