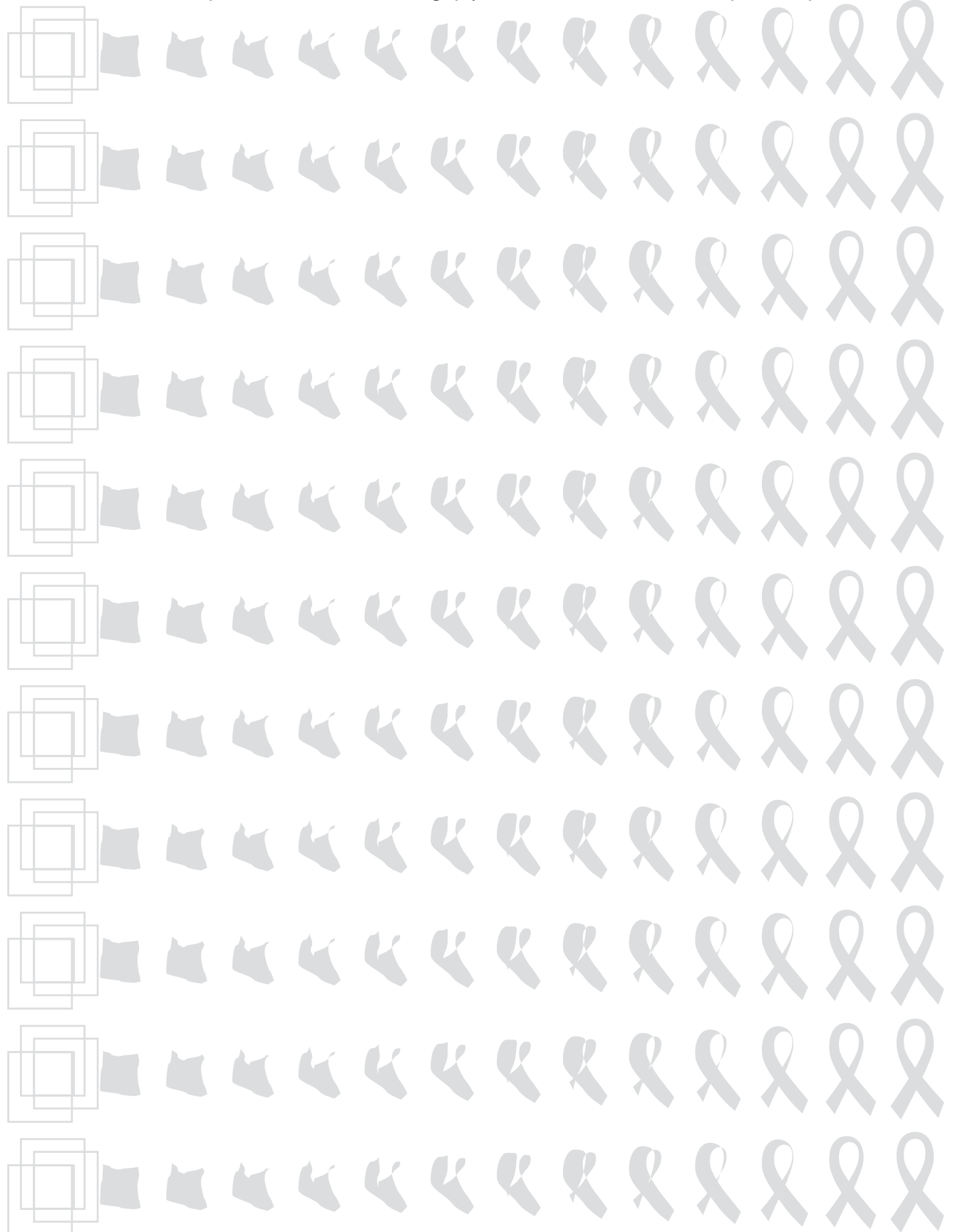




# HIV/AIDS and work: global estimates, impact and response 2004

This document is one of 6 chapters, 6 sets of tables, the bibliography and the technical notes that make up the full report.



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## **Part I.**

# **Global estimates of the impact of HIV/AIDS on the world of work**

# Chapter 1. Global estimates: overview of main tables

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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.

### 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

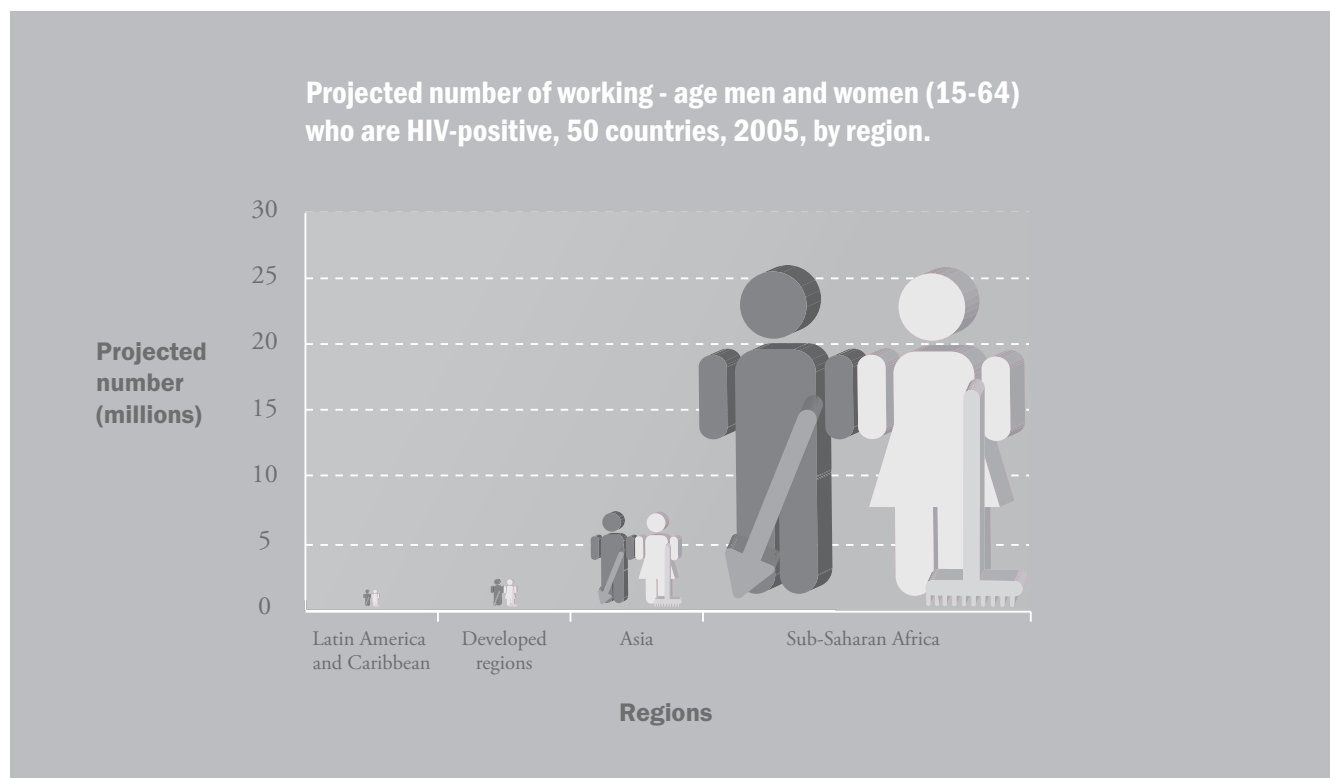


Figure 1.1

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.

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 3A 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 number of persons in the labour force projected to be lost in the absence of treatment is expected to 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

*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.*

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.

**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.

