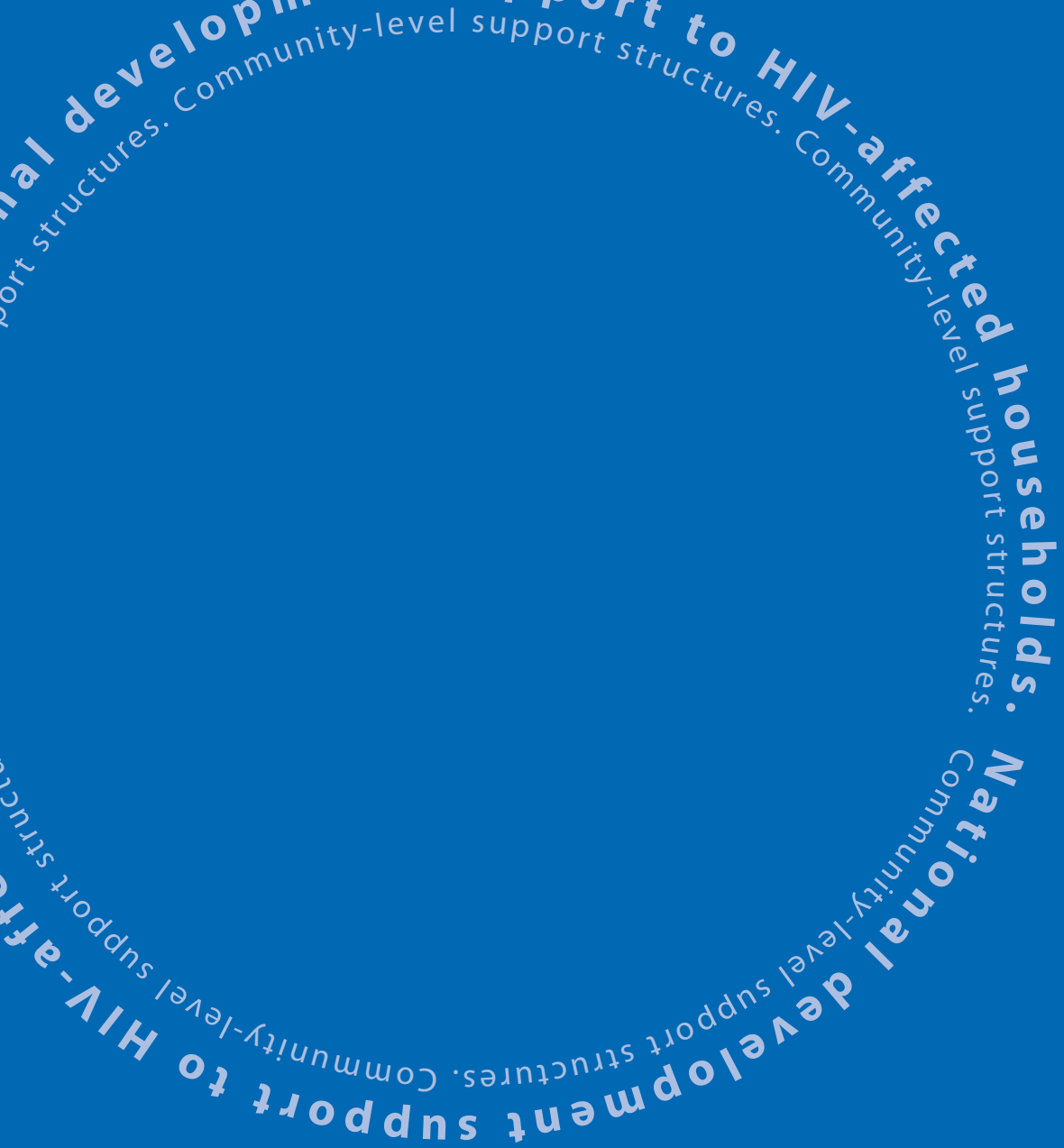
2007 ZAMBIA
Human Development Report

Enhancing household capacity to respond to HIV and AIDS



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Enhancing household capacity to respond to HIV and AIDS

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Team for the preparation of
2007 Zambia Human Development Report

UNDP Zambia team: Abdoulie Sireh-Jallow, Senior Economist; Elda Chirwa, National Economist; Veera Virmasalo, Communication Officer; Angelah Kumwembe, Administrative Assistant

Team of independent consultants: Dennis Chiwele, Nakando Luo, Augustus Kapungwe

Review team: Akashambatwa Lewanika, National Economic Advisory Council; Alex Simwanza, National AIDS council; Andre' Loosekoot, Embassy of the Netherlands; Anthony Tambatamba, Young Men's Christian Association; Ben Chirwa, National AIDS Council; Bonaventure Mutale, Ministry of Labour and Social Security; Chieftainess Chiyaba, House of Chiefs; Chris Petrouskis, Jesuit Centre for Theological Reflection; Christine Kaseba, Medical Women Association of Zambia; Clement Mufuzi, Network of People Living with AIDS; Cosmas Musumali, Economic Association of Zambia; E. Kafwembe, Tropical Disease Research Centre; Eato Aall, Kenneth Kaunda Children of Africa Fund; Elfridah Chulu, Central Statistical Office; Engware Mwale, Non-Governmental Organization Coordination Committee; Flint Zulu, Civil Society for Poverty Reduction; Grace Mtonga, Ministry of Labour and Social Security; Howard Armistead, PATH (A Catalyst for Global Health); J.E.K. Phiri, Cabinet Office-Gender in Development Division; John Milimo, Participatory Poverty Assessment Group; K.V. Masupu, National AIDS Council; Kenneth Mwansa, Alliance of Mayors Initiative to Combat AIDS at the Local Level; Leah D. Mitaba, Non-Governmental Organization Coordination Committee; M. Banda, Central Statistics Office; Millica Mwela, Zambia Association for Research & Development; Mubanga Mishimba, Ministry of Agriculture and Cooperatives; Munda Mwila, Ministry of Energy and Water Development; Muyunda Mwanalushi, Copperbelt University; Ndrew Bowden, German Technical Cooperation; P. Ndubani, Institute of Economic & Social Research; P. Njobvu, Zambia Medical Association; Patrick H. Choolwe, Ministry of Finance and National Planning; Peter Henriot, Jesuit Centre for Theological Reflection; R. Sikamanu, Zambia Business Coalition on HIV/AIDS; Rana Ahluwalta, Kenneth Kaunda Children of Africa Fund; Rhoda M. Mwiinga, Cabinet Office-Gender in Development Division; Rodwell Vongo, Traditional Health Practitioners Association of Zambia; Ronah K. Lubinda, Royal Danish Embassy; Rosario Fundanga, Global Compact; S. Chibangula, Traditional Health Practitioners Association of Zambia; Simon Nkunika, National Malaria Control Centre; Susan C. Mulenga, Council Churches of Zambia; Taziowa M. Banda, Cabinet Office-Gender in Development Division; Thomas M.C Mambwe, Zambia Open University; V. Ncube, Zambia Institute of Chartered Accountants; Victor Chabala, Young Men's Christian Association; W.S. Mweenda, Law Association of Zambia; Waza Kaunda, Kenneth Kaunda Children of Africa Fund; William Muyaka, Central Statistics Office; Yussuf Ayami, Zambia Interfaith NGO Network

Peer reviewers: Alex Zinanga, UNDP Zimbabwe; Sennye Obuseng, UNDP Botswana

UN system readers: Barbara Barungi, RBA, UNDP; Catherine Sozi, UNAIDS; Golden Mulilo, UNFPA; Josefina Halme, UNDP; Lamin Manneh, RBA, UNDP; Rosemary Kumwenda, UNDP; Saskia Husken, FAO; Yolaine Michaud, RBA, UNDP

Message from the Government

HIV and AIDS is one of the major development challenges facing Zambia. The epidemic has affected every fabric of human existence. It has become the major cause of illness and death among the young and middle aged Zambians, who are the most productive age group. Consequently, it has deprived households and society of a critical human resource base. Further, it is reversing the social and economic gains the country is striving to attain. It has also continued to diminish the chances of alleviating poverty and hunger, achieving universal primary education, promoting gender equality, reducing child and maternal mortality and ensuring environmental sustainability. In effect, HIV and AIDS is among the factors limiting the achievement of the MDGs.

In view of the foregoing, the Zambian Government has declared HIV and AIDS as a national disaster and emergency requiring concerted efforts for all relevant stakeholders. While there have been major advancement in HIV and AIDS prevention, treatment and care in Zambia, efforts to significantly scale up responses to HIV and AIDS have been inadequate.

In view of the above, it is clear that HIV and AIDS is a huge challenge to development and therefore, there should be no business as usual. In trying to respond to this challenge, I urge all our cooperating partners to consider coming up with strategies that will help to prevent new infections; designing programmes that address specific problems brought about by HIV and AIDS such as taking care of children orphaned by the disease; and mitigating the effects of HIV and AIDS on poverty.

Furthermore, a more systematic approach is needed to build local capacity to manage a comprehensive response to the epidemic. To this end, the focus of the Report on enhancing household capacity to respond to HIV and AIDS is very appropriate and timely. Therefore, I would like to encourage all our development partners to read this Report and consider how they can adopt some of the ideas in the Report.

Ng'andu P. Magande, M.P.
Minister of Finance and National Planning

Foreword

The 2007 Zambia Human Development Report (ZHDR) focuses on the sixth Millennium Development Goal (MDG), which is combating HIV and AIDS, malaria and other diseases. It particularly emphasises enhancing household capacity to respond to HIV and AIDS. It is the fifth in a series of bi-annual Reports that have been produced since 1997. The topics addressed since then have included poverty, provision of basic social services, employment and sustainable livelihoods, and eradication of extreme poverty and hunger.

The Report places households at the centre of Zambia's efforts to respond to HIV and AIDS because the immediate impact is felt at the household level. The effects are felt through various ways, which by aggregation adversely affect socio-economic sectors in varying degrees at the macro level. Focusing on the households gives a better opportunity to understand the many facets of HIV and AIDS and how the epidemic can be holistically addressed.

The Report pursues the theme of the household's capacity to respond to HIV and AIDS from three key inter-related and mutually reinforcing aspects. Firstly, the relationship between HIV and AIDS and human development. The Report shows that HIV and AIDS undermines all the tenets that constitute human development as can be seen in falling life expectancy, low educational attainment and standards of living. Secondly, the impact of HIV and AIDS on achievement of the MDGs. The 2007 MDG Progress Report states that Zambia is on track to achieving all the MDGs, except for maternal mortality and environmental sustainability. However, there is a real danger that this progress will be undone if the response to HIV and AIDS is not intensified and won. Thirdly, enhancing household capacity to respond to HIV and AIDS. The household where the negative impacts of the epidemic are first felt needs to be recognised as the first and central line of action against HIV and AIDS.

The Report recommends that for households to be effectively involved in responding to HIV and AIDS, the development process should be made more supportive to HIV affected households. Macro-level institutions should be strengthened so that HIV and AIDS do not unravel their capacity to deliver on their mandates. Adaptive structures at the district level, which are closer to households and communities, should be allowed to flourish. HIV-affected households should be helped to rebuild capital asset base.

This Report was formulated through a consultative and participatory process, which involved all the relevant national stakeholders and external reviewers from the UNDP Bureau for Development Policy and other Country Offices. The preparation process was guided by the NHDR National Advisory Committee. I hope that it will be a useful policy tool for the Government and its development partners in the collective fight against HIV and AIDS in Zambia. I commend the analysis and recommendations contained therein to a wide readership and welcome any comments on how to improve its value.

Aeneas C. Chuma
UNDP Resident Representative

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PROGRESS	CHALLENGES
Income and poverty	
▪ Extreme poverty in rural areas has declined from 71 percent in 1998 to 53 percent in 2004 ▪ Per capita GDP has grown from K234,933 in 1998 to K276,416 in 2004 ▪ Poverty reduction and broad-based economic growth has been prioritised in the Fifth National Development Plan	▪ Overall extreme poverty at 68 percent is still too high ▪ Extreme poverty in urban areas reduced only marginally - from 36 percent in 1998 to 34 percent in 2004 ▪ Only marginal reductions in the proportion of stunted children - 53 percent in 1998 to 50 percent in 2004 - malnutrition is still too high ▪ Growing GDP consistently, at over 7 percent for 25 years, to make significant impact on poverty is a big challenge
Education	
▪ Net enrolment in primary education increased from 66 percent in 2000 to 78 percent in 2004 ▪ The proportion of pupils who reach grade 7 increased from 64 percent in 1990 to 82 percent in 2004	▪ Youth literacy rate (ages 15-24) reduced from 74.9 percent in 1990 to 70.1 percent in 2000
Gender equality	
▪ Percentage of women in formal employment rose from 25.2 percent in 2002 to 27.3 percent in 2004 ▪ Proportion of seats held by women in the National Parliament increased from 6 percent in 1990 to 12 percent in 2004	▪ Ratio of girls to boys in primary school reduced from 0.98 in 1990 to 0.95 in 2005 ▪ Ratio of girls to boys in secondary school dropped from 0.92 in 1990 to 0.83 in 2005
Child mortality	
▪ PMTCT services have been integrated into routine reproductive health services ▪ Under-five mortality ratio reduced from 197 in 1996 to 168 in 2002 ▪ Infant mortality ratio reduced from 109 in 1996 to 95 in 2002 ▪ Child mortality ratio reduced from 98 in 1996 to 81 in 2002	▪ The proportion of wasted children increased from 5 percent in 1998 to 6 percent in 2002 ▪ The proportion of children who were immunised against measles reduced from 91 percent in 1998 to 86.2 percent in 2004
Maternal mortality	
▪ A reproductive health policy has been drafted and is under consideration ▪ Pregnant women, alongside children and the aged (64 years and above), have been exempted from paying user fees ▪ Government is implementing prevention of malaria in pregnancy strategies	▪ Maternal mortality rate increased from 649 in 1996 to 729 in 2002 ▪ Percentage of births attended to by skilled personnel dropped from 51 percent in 1992 to 45 percent in 2002
HIV and AIDS, malaria and other diseases	
▪ Progress has been made in reversing the HIV prevalence ▪ The cure rate for TB has been improving for all provinces except for Eastern and Southern provinces ▪ Malaria incidence rate per 1,000 fell from 400 in 2000 to 200 in 2004	▪ Unprotected sex continues to be a problem ▪ VCT uptake is low. Only 11 percent of men and 15 percent of women went for VCT in 2005 ▪ The number of children orphaned by AIDS reached 1,197,867 in 2005, two thirds of the total number of orphans

PROGRESS	CHALLENGES
...HIV and AIDS, malaria and other diseases	
	▪ The incidence rates of TB and malaria at 512 per 100,000 persons in 2000 and at 200 per 1,000 persons in 2004, respectively are too high
Water and sanitation	
▪ Percentage of people without toilet facilities reduced from 16 percent in 1998 to 14 percent in 2004 ▪ Progress has been made in reducing unaccounted for water	▪ Percentage of people without access to safe water in the dry season remained almost stagnant at 43 percent in 1998 and 42.8 percent in 2004
Equity	
▪ There has been a reduction in income inequality. The Gini coefficient declined from 0.66 in 1998 to 0.57 in 2004 ▪ Whereas the last 20 percent of households accounted for 67.8 percent of the total income in 1996, this dropped to 44.9 percent in 2004	▪ Despite improvement, income inequality remains extremely high ▪ Economic growth in recent years has not been broad-based enough. This is mostly due to underperformance of the agriculture sector where the majority of Zambians earn a living
Employment and sustainable livelihoods	
▪ Overall unemployment rates dropped from 12 percent in 1998 to 9 percent in 2004 ▪ Urban unemployment rates declined from 27 percent in 1998 to 21 percent in 2004 ▪ Male unemployment rate fail from 25 percent in 1998 to 18 percent in 2004	▪ Slow reduction of female urban unemployment rate - from 29 percent in 1998 to 26 percent in 2004
Environmental sustainability	
▪ Percentage of households using electricity as cooking energy rose slightly from 15 percent in 1998 to 16.2 percent in 2004 ▪ The Natural Resources Consultative Forum was established to facilitate dialogue on contentious environmental issues ▪ Environmental Council of Zambia established additional offices in Southern and Copperbelt provinces	▪ Large percentage of Zambia's households (83.4 percent in 2004) relies on firewood and charcoal as cooking energy. This is a threat to the forests ▪ Species efficacious in the cure of many diseases are being depleted at a fast rate
Politics, governance and human rights	
▪ 2002-2006 National Parliament was more balanced with a sizeable number of opposition members ▪ Task Force on Corruption was created in 2002. ▪ Draft Constitution, with more progressive provisions, was presented to government	▪ The number of reported incidents of gender-based violence is still very high ▪ The process of constitutional and electoral reforms still to be concluded ▪ Little progress made on decentralisation ▪ The justice delivery system continues to be slow and inefficient to guarantee the rights of the majority of Zambians

"Shaking hands is not a problem"*

People today have stopped greeting each other because they believe that they might get HIV through shaking hands. You can't get HIV/AIDS through shaking hands or greeting each other; you can get HIV/AIDS through having sex without using a condom.

Photographer: Kelvin Chembo

** All photographs in this report were taken with disposable cameras by children and youths participating in the Kuwala project under a Lusaka NGO called Back to School. Photos are accompanied with a caption where the photographer describes in his or her own words what the photo is about. More information about the photographs on p. 2.*

Overview: Enhancing household capacity to respond to HIV and AIDS

Zambia has made great strides to respond to HIV and AIDS since the first HIV-case was identified in the country during the mid-1980s. A number of initiatives started in Zambia are now practiced throughout the developing world, including home-based care, tackling psychosocial impact of HIV and AIDS and the public declaration of people living with HIV and AIDS to fight stigma. At an institutional level, Zambia has been one of the champions in coordinated, multisectoral national response.

There is, however, a growing concern that the efforts and resources are not matching the results. This suggests that programmes may not have been efficient enough in focusing the effort where it matters most. The rallying call of the 2007 Zambia Human Development Report (ZHDR) is therefore the need to place the household at the centre of Zambia's HIV and AIDS response. Several reasons exist for this appeal:

- Placing the household at the centre would make the response more effective. The immediate impacts of HIV and AIDS are at the household level. These impacts are remitted by various transmission mechanisms and then by aggregation adversely affect sectors and the macro level. Therefore, responses must be rooted in household realities if they are to be effective.

- As already recognized, households are the primary units for coping with HIV and AIDS and its consequences. They carry the greatest burden of the disease and need to be empowered to take action against it.

- Focusing on the smallest social unit in society, the household, gives us a better opportunity to understand the many facets of HIV and AIDS. This will help different players, from national level to the grassroots, identify their specific strengths in responding to the pandemic. It will also give insights to how diverse efforts can be coordinated for maximum impact.

- Analysing the way HIV and AIDS affects the household can also help overcome the challenges the pandemic poses for institutions, such as sector ministries and non-governmental organisations as they work to achieve their mandates.

- Focusing on the household helps us to isolate the impacts of various initiatives and measure them.

HIV and AIDS situation in Zambia

High prevalence rates

There are signs that the HIV prevalence rate in Zambia is stabilising. However, this stability is occurring at very high prevalence levels and the epidemic will continue to destroy Zambia's national fabric in more ways than one.

The high levels of infections are of great concern. In 2002, when a sample survey - Zambia Demographic and Health Survey (ZDHS) - involving HIV test was conducted on a large scale, nearly 16 percent of the population aged 15 to 49 years was found to be HIV positive.

The epidemic is most prevalent among the most productive age group. This has negative implications for economic growth

The photographs in this report

All photographs in this report were taken with disposable cameras by children and youths participating in the *Kuwala* project under a Lusaka NGO called Back to School. Kuwala is Chewa, one of the about twenty distinct languages in Zambia, and means to shine or to stand out. The aim of the project is to provide children and youths with skills to conceptualize their life and problems through photography. In particular, the project helps them to deal with problems related to HIV and AIDS.

Kuwala team leader Petter Bolme says that the project tried to bring out children's own perspective to HIV and AIDS. "All that the kids had been told was that they were going to learn how to take photos. The idea was that, before talking to them about the pandemic, we wanted to learn how they would illustrate it themselves. Just before they left to go out and shoot we told them to take pictures also related to HIV and AIDS," Bolme says.

As a result, some photos in the first batch from the field illustrated HIV and AIDS. One showed a 3-year old orphan, another a 14-year old prostitute, and yet another told a story about alcohol and unprotected sex.

When the project staff discussed the photos with the kids during a session on sexual and reproductive rights, it came out clearly that the kids were at risk of contracting HIV. Before the Kuwala kids met Back to School, they had dropped out of school because their parents, if they have parents, could not afford to keep them there. Most of them were just hanging out at the local shopping centre, begging for money. At least three of the kids had already had a sexually transmitted infection. Only the youngest, under 14-year olds, had not had sex. The rest had had sex without protection.

For their next assignment, the kids were asked to illustrate HIV and AIDS from various perspectives: the effects the pandemic has on their community; how to prevent oneself from being infected; how it is to live with HIV and AIDS; how neighbourhoods are working to combat HIV and AIDS. The children worked in groups and each one had tackled the assignment in quite different ways.

Some of the best Kuwala photos were selected to illustrate this report. The pictures include images of HIV and AIDS, poverty and despair but also images of play and happiness. All photos are accompanied with a caption where the photographer describes in his or her own words what the photo is about. In return for the photos, UNDP Zambia is supporting Back to School in paying the children's school fees.

Kuwala is a non-profit project by Back to School (Zambia), Youth Vision (Zambia) and Global Reporting (Sweden). The children and youths are participating in the project with consent from their parents or guardians. Likewise, all people in the photographs have given their consent for the photos to be published.

and provision of essential services such as health and education. HIV is also undermining the future prosperity of the nation. About 39.5 percent of babies born to HIV positive mothers are infected with HIV and are likely to die within a few years.

Worsening gender divide

HIV prevalence is not gender neutral. During the survey quoted above (ZDHS), more women (18 percent) than men (13 percent) were found to be HIV positive. Overall, women accounted for more than half of the adults estimated to be HIV infected. Young women are the hardest hit by the epidemic, with those aged 15 to 19 years being five times more likely to be infected compared to their male peers. This is mainly due to early involvement in sexual activity among girls. In most cases, these sexual encounters are with older men who may already be infected.

The disproportionate prevalence rates reflect a deeper rooted problem. The unequal power relations between men and women due to socialisation, cultural beliefs and lack of economic empowerment of women are to a great extent fuelling the spread of HIV. This is a society which is tolerant to male infidelity and the woman has little power to negotiate safer sex, even when it is clear that she may be at risk of acquiring the HIV infection.

There are other ways in which AIDS is worsening gender inequalities. Already prevailing inequalities mean that the quality of female human capital is much lower than that of men - women are less educated and are locked away from prospects of skills development that would improve their livelihood.

Women also have less access to productive assets such as land and livestock. When the man in the home dies, the widow and her dependents are often rendered destitute. This is because her asset base is already weak. This is reinforced by property grabbing by the late husband's relatives. Some widows have turned to sex work to survive. Women, compared to men, bear a greater burden of the epidemic even when they are not infected because they are the prime caregivers of the chronically ill and orphans in the home.

Rural and urban

Prevalence rates differ across geographical location. The rates were found to be much higher in urban districts along the line of rail than rural districts. The urban district with the highest prevalence rate was Livingstone at 30.9 percent compared to 5.2 percent in some rural districts of Northern Province. Overall, HIV prevalence in urban areas (23 percent) is more than twice the prevalence in rural areas (11 percent). There are, however, signs that urban prevalence rates may be stabilising while they are projected to rise in rural areas.

Poverty reinforces the spread of HIV and vice versa. Although affecting the whole country, poverty is predominantly rural thereby increasing the prospects of higher HIV prevalence in rural areas. This should be viewed with great apprehension as fragile societies of rural Zambia, already staggering under the great weight of poverty, will face a bleak future unless something is done to reverse the trend.

Impacts of HIV and AIDS

Life expectancy and mortality

HIV and AIDS is reversing many of the developmental gains Zambia would have achieved. Zambia's life expectancy at birth in 2000 was four years less, due to HIV and AIDS. According to the 2000 Census Report (see Chapter 5) life expectancy stood at 50 years. This reduced Zambia's human development index (HDI) from 0.491 to 0.462 in 2004 or by 5.9 percent. Furthermore, by 2010, HIV is projected to reduce life expectancy by eight years.

The child and infant mortality rate that had started to take a declining trend (109 in 1996 and 95 in 2002) is now worsening. Diseases like tuberculosis which had been contained are now some of the major public health problems in the country. The impact of the loss of health workers and teachers is not only immediate but also threatens the foundation for future growth, as the health status of the country gets further eroded and children leave school not adequately prepared to play their future developmental roles.

Economic growth and decent standards of living

HIV and AIDS is undermining Zambia's strides to provide decent standards of living for the citizenry. Although the economic impact of HIV and AIDS has not been modelled for Zambia, other countries that have carried out this exercise have found that the impact of HIV and AIDS would reduce gross domestic product (GDP) by as much as 1 percent. If this was to hold for Zambia, it would be a huge reversal for a country where GDP growth in the last seven years, the longest uninterrupted growth the country has achieved, has averaged only 4.2 percent. Zambia's national economy needs to grow consistently at over 7 percent to make sufficient inroads into widespread poverty reduction and improve the welfare of the people.

Agriculture

The performance of agriculture, considered as the mainstay of economic development, is under serious threat. HIV and AIDS affected households are reducing their area under cultivation as they face serious labour constraints related to death, care of chronically ill patients and attending funerals. Yields are falling because the most productive farmers are dying. Many extension workers who are expected to train farmers are also dying or are too sick to work effectively. Farming households are too labour-constrained to manage their farmsteads properly and they may not afford the cost of fertilizers or improved seeds because they have to spend money on medicines and burying their dead. Over time, farming households are reverting back to subsistence agriculture and in most cases, cannot secure full household food security.

Orphans

AIDS has led to an increase in the number of orphans. The number of children orphaned by AIDS was projected to reach 1,197,867 in 2005, two-thirds of the total number of orphans in that year. Without AIDS, the number would have been 598,934. This has been costly socially and economically.

For a country with no well-developed social security system, kinship relationships are the only safety nets that families in need fall back on. The burgeoning numbers of children orphaned by AIDS and needing support and care are overloading the caring capacity of Zambia's traditional extended family system. The system has performed heroically given the scale of the problem.

However, the emergence of child-headed households, where children as young as eight years old are taking on the role of household heads including providing care for other children, seems to suggest that the extended family system's capacity has been seriously eroded. The fact that the HIV epidemic coincided with sharp rises in poverty meant that the system was already at its weakest point to take on this extra burden.

Many of the children whose parents have died lack, not only parental care and guidance, but also cultural, social and familial ties and life skills that are usually passed on from generation to generation. They are deprived of their childhood and many of them lose the opportunity to go to school. These children tend to be attracted to big cities and towns thereby increasing the number of street children. Economic hardships lead them to look for means of sur-

vival that increase their vulnerability to HIV infection. These include substance abuse, child labour, prostitution and delinquent behaviour.

Millennium Development Goals

Perhaps what sums up these effects is that the recent progress made in meeting the Millennium Development Goals is unlikely to accelerate, unless the response to HIV and AIDS begins to produce good results soon. A goal by goal assessment in Chapter 1 indicates that HIV and AIDS is undermining each of the goals in multiple ways.

A twin problem of poverty and HIV and AIDS

Zambia has one of the highest incidences of poverty in the world with 68 percent of population living in poverty in 2004. HIV and AIDS is making it much more difficult for Zambia to fight these high levels of poverty. It is undermining the capacity of households to accumulate or make adequate use of assets at their disposal to pursue viable livelihood strategies.

Both the quality and quantity of human capital in households are diminishing due to deaths, illness or children dropping out of school because they are orphans or need to help out in providing for the household. This impacts negatively on the foundation of households' capacities to get beneficial livelihood outcomes and also reinforces the already widespread poverty.

HIV and AIDS have been known to deplete other assets as well. For example, households cannot afford farm inputs because of the escalating medical costs associated with increased morbidity and mortality. The accumulation of productive assets such as livestock and land is being negatively affected due to distress selling and property grabbing that often follows the death of a spouse.

Ecological balance is also under attack. Households are losing the capacity to exploit natural resources in a sustainable manner. Indigenous natural resource management skills are being lost due to AIDS-related deaths while over exploitation of certain natural resources is becoming rampant because households have little else to turn to for provision of their needs. Ultimately, the natural resource base is becoming less supportive to HIV-affected households.

Perhaps the most telling sign of worse things to come concerns how HIV and AIDS has changed the vulnerability context. Shocks to which households were once resilient are causing unimaginable devastation. For example, droughts are not a recent phenomenon to this country. In fact long term rainfall patterns show that the amount of rainfall at the beginning of the 20th century was not any different from that at the end of the 20th and the beginning of the 21st centuries. Communities recovered after a short while without food aid.

This resilience has to a large extent disappeared because of the mutually reinforcing problems of AIDS and poverty. At the national level, this is leading to chronic dependency on food imports, which in turn negatively affect the agriculture sector as food relief depresses agriculture prices, further undermining the sustainability of livelihoods and reinforcing poverty in a country where 67 percent of the population depends on agriculture.

Defining households with capacity to respond to HIV and AIDS

Households can be powerful allies in HIV and AIDS response. However, they can only assume this role if they themselves have capacity to respond to the pandemic. A household will be considered to have capacity to respond to HIV and AIDS when it - without undermining its ability to obtain beneficial livelihood outcomes - can summon its resources and deploy them at the three globally accepted strands for tak-

ing action against HIV and AIDS. The three strands are: prevention, treatment and care, and impact mitigation.

- *Prevention.* Household members should be able to access information about HIV and AIDS and take measures to prevent themselves and others against HIV infection. This is not as easy as it appears. Eroded human capital, high levels of poverty and lack of empowerment of women prevent households from accessing and processing information properly and at times also force them to make decisions that put them at risk of HIV infection.

- *Treatment and care.* An HIV-affected household should be able to access treatment for its members with AIDS-related illnesses and provide care to them, without compromising the prospects of its livelihood outcomes. HIV-affected households, particularly if under the crushing weight of extreme poverty, face a multiplicity of factors that throw the livelihood in a total dilemma. These households have problems to access and adhere to treatment. Although they may heroically do their best to look after sick members, this comes at a high cost such as suspending activities essential for achieving beneficial livelihood outcomes.

- *Impact mitigation.* Households should be able to make successful adjustments to respond to the challenges caused by the pandemic. This is difficult even at the best of times but made worse by the widespread poverty, changing vulnerability context and the fact that HIV and AIDS erodes the core assets with which the household would manage a recovery.

Required steps

If households are going to be involved in taking action against HIV and AIDS, a supportive environment should be created. In this regard, actions are required in five main areas listed below.

1. Reforming the development process to make it more supportive to HIV-affected households

The development process should be more inclusive so that the weak in society can participate in it. HIV and AIDS should focus our thinking on removing the fault lines in our tools of development which, more often than not, exclude the majority of the country's population. Policies and laws should promote and protect the livelihood security of HIV-affected households and create an environment in which a future is assured for such households.

2. Strengthening macro and meso level institutions so that HIV and AIDS does not unravel their capacity to deliver on their mandates

Organisations must respond to the external and internal risks posed by HIV and AIDS in fulfilling their mandates. The current multisectoral approach has correctly emphasised all these. However, more needs to be done by helping organisations to refine their instruments to ensure that they are more supportive to households faced with HIV and AIDS.

3. Promoting an environment that allows adaptive structures to flourish

District and sub-district level structures which are closer to households and communities than macro and meso level organisations must be allowed to be in the frontline in enhancing household capacities to respond to HIV and AIDS. However, overcentralisation of the governance system has undermined their effectiveness, and democratic decentralisation should therefore be accorded high priority. At the core is the need to make government more accountable to the people, expand opportunities for people's participation and increase the chances of decisions taken to match as much as possible the aspirations of the

people themselves. Alongside this should be measures to strengthen local authorities which have undergone serious dilapidation over the years.

4. Revitalising structures and processes

The social, institutional, and organisational environment at community level should be addressed and made more supportive to HIV-affected households. This implies identifying, strengthening and promoting the positive elements within communities that could help HIV-affected households to make successful adjustments to the situation. Cultural norms and traditional structures based on social solidarity must be made to thrive once again.

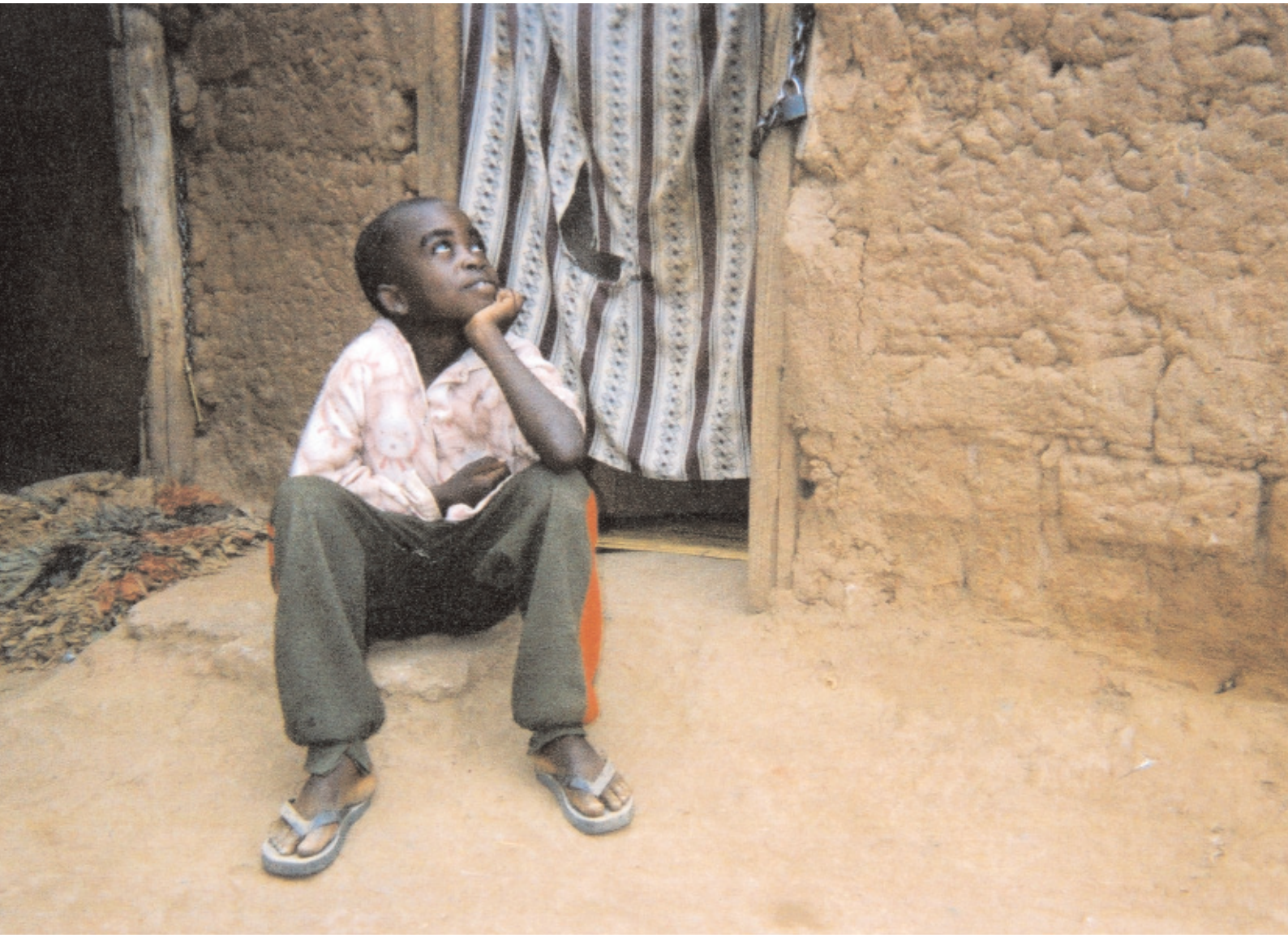
Secondly, the negative elements within these structures and processes that are inhibitors to a successful adjustment of HIV-affected households should be addressed. Examples are many but would include such negative practices as sexual cleansing and property grabbing.

5. Help HIV-affected households rebuild their asset base

Livelihood assets - human capital, financial capital, physical capital, social capital, and natural capital - are key for households to respond to HIV and AIDS. Measures must be taken to protect and promote each of the five asset groups. Only with this will HIV-affected households be able to obtain beneficial livelihood outcomes.

Reforming the institutional framework

Zambia has been among the champions in coordinated, multisectoral response to HIV and AIDS. In terms of institutional framework, Zambia responded to the epidemic by, among other things, establishing the National HIV/AIDS/STI/TB Council (NAC), to champion and coordinate the national response to HIV and AIDS. At the core to the institutional framework is the multisectoral approach, which Zambia has again helped to internationally champion. The approach is founded on the fact that HIV has many dimensions with respect to transmission, treatment, care and social impacts. The focus on the household is, however, currently inadequate because the institutional framework is not yet fully oriented to that effect. The institutional framework must be reformed to help put the household at the centre of responding to HIV and AIDS.



"Mabvuto"

This boy stays with his mother but the mother doesn't work. Mabvuto was not going to school because the mother had no money to pay. Now he has started going to school at the age of 10. He is in grade two.

Photographer: Kennedy Kamanga

1 ~ HIV and AIDS and human development

The first case of HIV, the virus that causes AIDS, in Zambia was diagnosed in 1984. By the end of 2005, 489,330 people were estimated to have died of AIDS-related illnesses while 914,691 were said to be living with the virus. There were 44,329 new infections in 2005, compared to 629 in 1985. The epidemic has created an unprecedented orphanhood situation. By the end of 2005, there were 801,420 children orphaned by AIDS. This figure accounted for two-thirds of the total number of orphans. The medical and clinical implications of HIV and AIDS have been devastating.

In Zambia, like many other countries, HIV has emerged as a human catastrophe of unprecedented scale. The effects are more than clinical, affecting individuals, households, communities and nations in multiple ways. Every Zambian knows a relative, friend or an associate who has died of an AIDS-related illness. The adage "we are all either infected or affected" accurately portrays the situation as it exists today.

The immediate impacts of HIV and AIDS are at the household level. Households are losing human capital through death or due to the rising burden of caring for the chronically ill. When a household member falls ill, the financial cost of care can be colossal. With productivity and production undermined, households are resorting to distress sale of their physical assets, further undermining their resilience against shocks. The social networks that have supported households, such as the extended family system, are now under severe stress and are failing to cope with the impacts of the epidemic.

These impacts are remitted through various transmission mechanisms and are by aggregation adversely affecting society. Although the instruments for understanding the national economic impacts of HIV and AIDS are still being refined, emerging evidence suggests that when the direct and indirect effects are taken together, adverse impacts on development are significant.

This Report demonstrates that we are only beginning to understand the scale of the impact of HIV and AIDS. One thing is, however, already clear - Zambia and the international community cannot afford to assume a 'business as usual' approach. Fortunately, this has been recognised and there is now a growing international alliance rallied to respond to this epidemic.

Some of the responses by the international community include the Millennium Declaration of September 2000 adopted at the United Nations (UN) Summit of heads of states, the Declaration of Commitment to fight HIV and AIDS of June 2001 adopted during the UN General Assembly Special Summit, the Global Fund to fight HIV and AIDS, Tuberculosis and Malaria and the President's Emergency Plan for AIDS Relief by the United States Government.

In Zambia too, many players have rallied to act against this epidemic. Parliament passed a National HIV and AIDS Bill in November 2002 that mandated the National HIV/AIDS/STD/TB Council (NAC) to coordinate the national response. National, sector, district and community based initiatives have since followed and they are supported by the Government of the Republic of Zambia, donors, non-governmental organisations, community-based organisations, faith-based organisations and the business sector.

Generally, the will and determination to actively respond to HIV and AIDS is grow-

ing. However, when HIV was first diagnosed it was shrouded in stigma and denial, which means that much ground has already been lost.

The delayed response means that we need to do much more to halt and reverse the spread of the infection. HIV and AIDS must be brought to the centre of the national development agenda much more strongly than has been the case so far. This requires an urgent response, focusing on household level, by all stakeholders.

2007 Zambia Human Development Report

The 2007 Zambia Human Development Report (ZHDR) pursues the central theme of the household's capacity to respond to HIV and AIDS. The Report looks at the theme from three key inter-related and mutually reinforcing aspects.

The first is the relationship between HIV and AIDS and human development. As shown in this Chapter, HIV and AIDS threatens all the tenets that constitute human development. Threat on longevity has been perhaps the most visible, as seen in falling life expectancy.

Educational attainment is also being adversely affected as the epidemic reduces the number of teachers the country is able to deploy. In addition, children are withdrawn from school to provide labour at home to help make ends meet. Furthermore, the psychosocial consequences of the trauma of seeing a parent die after prolonged illness diminishes children's ability to learn.

This Report shows that HIV and AIDS reinforces poverty while poverty in turn makes people susceptible to HIV and AIDS. The pandemic is undermining the achievement of decent standards of living while poverty in turn makes the tackling of HIV and AIDS difficult. The 2007 ZHDR advocates that responding to HIV and AIDS is fundamental to Zambia to make progress in human development.

The second angle (pp. 20-24) is an examination of how HIV and AIDS is

Box 1.1: National Human Development Reports in Zambia

The 1997 ZHDR tackled the theme of poverty. It presented the state and trends in Zambia's human development and poverty since the mid-1970s. It also discussed trends in factors with a close bearing on human development: health, education, employment, security, equity, environment and participation.

The 1998 ZHDR focused on the provision of basic social services. It advanced the thesis that poverty reduction entails empowerment of the people, especially of those who suffer deep deprivation. The provision of and ready access to basic social services constitutes one of the major sources of such empowerment.

The 1999/2000 ZHDR tackled the theme of employment and sustainable livelihoods. The report concluded that various resources (human, physical, social and natural) were available within Zambia which, with improved strategies, could be used to build people's livelihoods and help promote human development.

The 2003 ZHDR addressed the eradication of extreme poverty and hunger.

The preparation of National Human Development Reports is guided by corporate principles that include national ownership, independent analysis and participatory and inclusive preparation. Each theme is selected following a process of consultation with representative stakeholders and is picked for its merit to provide the country an opportunity to reflect and hold dialogue over an issue that touches on the well-being of the majority of Zambians.

affecting the achievement of the Millennium Development Goals (MDGs). As the economic environment improves and development policies begin to focus more strongly on people, Zambia is beginning to make some progress in achieving the MDGs. Nevertheless, there is a real danger that this progress will be undone if the response to HIV and AIDS is not intensified and won. HIV and AIDS is a threat to each of the eight MDGs and reversing its spread forms a central platform for Zambia to achieve the goals.

The third angle (Chapter 3) is the main focus of the ZHDR as it presents information on household capacity to respond to HIV and AIDS. The HIV and AIDS epidemic is re-shaping Zambian households in fundamental ways including those not hosting persons living with the virus as they adjust to its various consequences.

The household must be recognised as the first and central line of action against HIV and AIDS. If this is to happen, we need to understand better the manifold ways in which the epidemic affects households, how it is shaping their vulnerability context, what their coping strategies are and whether these point to areas we should be seeking to build upon and what the impact on livelihood outcomes has been.

The 2007 ZHDR aims, as was the case with the previous reports (see Box 1.1), to serve as an advocacy tool and a source of information in the ongoing debate and dialogue on the critically important national issue, while also providing the basis for some specificity with regard to the implementation of strategies outlined in national development plans.

Human development, HIV and AIDS interface

We should be concerned about HIV and AIDS because it is a serious blow to human development. The annual global UNDP Human Development Report (HDR), first published in 1990, advocates a human development approach to development that puts the well-being of people at the centre. Human development is defined as a process of expanding choices for people to live the kind of life they value. The range of choices is potentially unlimited and varies from individual to individual.

Nevertheless, there is consensus that four fundamental choices are essential for people to find fulfillment - to lead a long and healthy life, to be knowledgeable, to have access to the resources needed to have a decent standard of living and to participate in the life of the community. There are many other choices besides these four. It is, however, agreed that these four choices, and when taken together, are a necessary gateway to other choices.

On the following pages, this Report provides a definition of each of the choices as well as a discussion on how HIV and AIDS undermines each of them.*

HIV and AIDS is undermining the choice to longevity

To lead a long and healthy life is considered a common choice as people would like to avoid dying young as long as the long life that they lead is healthy. A long healthy life to be achieved must be supported by good nutrition, a clean and hygienic environment, access to good housing, clean and safe water, access to information, and access to health facilities.

The impact of HIV and AIDS is most obvious here as it results in higher morbidity. Chapter 5 provides evidence of how HIV is undermining the choice to longevity by leading to higher infant and child mortality, maternal mortality and deaths from opportunistic infections. An evident way in which HIV and AIDS is negatively affecting human development is by diminishing access to health services. The epidemic places a demand on health services, affecting the extent to which other health needs can be met by the sector. For example, an

** For detailed explanation of the human development concept and how its different measures are calculated, please refer to the technical annex on pp. 94-100.*

increasing share of hospital beds - currently estimated at 50 percent - is being allocated to AIDS-related illnesses. Medical personnel have also been hit hard, depleting further their already low staffing levels.

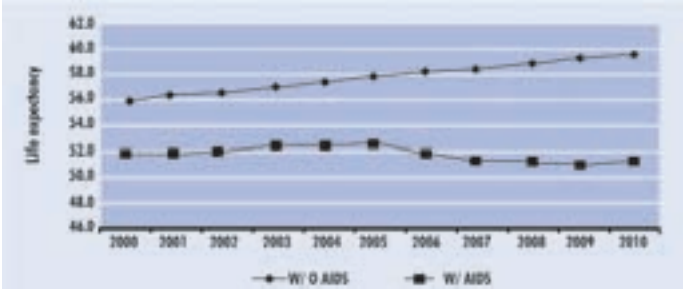
As captured by life expectancy projections, HIV and AIDS was estimated to have had lessened life expectancy in Zambia by about 4 years in 2000, and the figure is projected to rise to about 8 years by 2010 (see Figure 1.1).

HIV and AIDS is undermining the choice to be knowledgeable

To be knowledgeable is another common choice to mankind. No one chooses ignorance and to be cut out from the world of information. There are many ways through which this choice is acquired.

Fundamentally, people must learn and acquire the capacity to access and make use of available information. Formal education imparts knowledge and also builds people's capacity to acquire the knowledge they can apply in the pursuit of other fundamental choices of life. It is an important means of fulfilling this choice. We should not, however, discount the informal learning taking place through human interaction in the household, community and broader society including at the workplace. Intergenerational transfer of knowledge and skills in the family and society, access to an unfettered media and indigenous ways of teaching and learning are also important in fulfilling the choice to be knowledgeable.

Figure 1.1: Projected life expectancy with and without HIV and AIDS, 2000-2010



GRZ, 2003: Population Projections Report

According to evidence in chapters 3 and 5, HIV and AIDS is indeed an affront to the choice of being knowledgeable. It is diminishing opportunities to a sound formal education. Through increased deaths of teachers, class sizes are increasing to the point that children do not get adequate attention. Educational prospects of children orphaned by AIDS deaths are also adversely affected. Children in such situations suffer from many conditions that make effective learning difficult. The psychosocial impact of seeing a parent ill for a prolonged period, sometimes even being forced to take care of a terminally ill parent, undermines the ability of these children to learn even before they are orphaned. There is also evidence that children with parents at an advanced stage of HIV infection are stigmatised at school, affecting their effective learning.

HIV and AIDS is robbing the new generation of knowledge and skills that are passed on from one generation to another. Children are losing parents at tender ages, where they cannot be expected to have had any meaningful knowledge and skills passed on to them from their parents. Other children are growing among fellow children, in the absence of elders to pass intergenerational knowledge and skills to them.

HIV and AIDS is undermining decent standards of living

To enjoy a decent standard of living as a human development choice constitutes freedom from poverty and the ability to acquire the material necessities of life to support an acceptable lifestyle. A decent level of income is needed to support this choice. Having a job that earns one, and one's household, a decent living is fundamental. This choice is intricately linked to the other choices as it opens a window to access other human development supporting choices such as food, education, health, housing, clean water and sanitation. Improvements in per capita income seen in chapters

2 and 5 indicate that the economic environment is becoming more supportive to a decent standard of living for Zambians. However, household level evidence points to the fact that HIV and AIDS is undermining efforts to have the benefits of economic improvements become broad-based. The epidemic is feeding poverty as it devastates people's livelihoods. The epidemic has infused new dynamics into the vulnerability context of Zambian households and communities. It is devastating all the assets (human, financial, natural, economic and social) that households use in pursuit of livelihood outcomes. At the same time, the capacity of institutions to support households to upgrade their standards of living is being devalued in various ways, chief of which is the loss of labour due to death and absenteeism.

HIV and AIDS is undermining the choice to participate in the life of the community

Freedom to feel appreciated by the society to which one belongs is a fundamental choice constituting one's well-being. It is supported by many aspects. First is the freedom of association and to belong to any grouping promoting legitimate interests of the society. Second is its twin freedom of expression as long as this does not take away from the rights of others or society at large. Third is the choice to be useful to the community by contributing to its collective advancement. Fourth is to be accorded dignity and respect in the community. Fifth is the right to feel protected against arbitrary interference in one's course of life by the more powerful in the society.

Regrettably, HIV is endangering these aspects that enable people to participate in the community in a number of ways. The stigma associated with HIV and AIDS is a serious encroachment on people's dignity and self-respect. The psychosocial adverse effects it brings about make it difficult for people to meaningfully participate in and enjoy the life of the community. People living with HIV and AIDS face physical and social isolation from family, friends, and community (Nybade, et al, 2003). In the process they lose some of their rights and access to resources and livelihoods. As they internalise these experiences, they consequently feel guilty, ashamed and inferior. In extreme cases, they isolate themselves and lose hope. The poverty induced by HIV and AIDS also undermines the dignity and self-respect of HIV infected people and their close relations. They tend to forfeit essential ingredients for feeling at ease with oneself and being confident to pursue meaningful relationships with others. Some times HIV-affected households, being preoccupied with survival, tend to have little time left to participate in the various aspects of the life of their community even if they wished.

Putting the household at the centre of the HIV and AIDS response

Many HIV and AIDS initiatives recognise the importance of the household. However, very few have placed the household clearly at the centre although the household is widely recognised as the frontline unit for care giving and psychosocial support.

Zambia was one of the first countries to recognise the weaknesses of established health institutions in providing long term care to people with AIDS-related illnesses. Zambia championed the concept of home-based care, which is now internationally accepted as an important model in meeting some of the challenges of HIV and AIDS, particularly as the pandemic threatens to overwhelm the already weak health care institutions.

In initiatives focused on dealing with orphans and other vulnerable children, the household is recognised as playing a key role and special focus is placed there. In particular, over time there has been a growing view that institutionalised care is perhaps not the best option and that the

household is better placed to play this role. However, most initiatives that recognise the household as the centre of the HIV and AIDS response are often driven by individual organisations and lack a national character. Their efforts are often on a small scale, isolated and disconnected. They are also without a framework that reflects the multidimensional nature of not only the problem of HIV and AIDS but also the household that they wish to support.

The multisectoral approach to respond to HIV and AIDS, of which Zambia is playing a championing role in promoting and refining, recognises the multidimensional nature of HIV and AIDS. The approach has been spearheaded by NAC and a number of major funding organisations and agencies have bought into it. It is an attempt to coordinate different ministries and other agencies providing services to the Zambian population so that efforts to respond to HIV and AIDS are integrated and holistic. Zambia is a frontrunner on the continent in this regard.

There is, however, a growing view that the multisectoral approach so far has focused mostly on sector level institutions and is doing little to deal with micro level institutions, of which the household is part. It is true that strengthening the capacity of sector institutions to respond to HIV and AIDS will help them deal better with households and other organisations at the micro level. This assumption is undermined by the centralised Zambian governance system, where sector level institutions are not accountable to people at the grassroots. There is little effort to engage stakeholders and devise workable approaches with them that would strengthen households' capacity to halt the spread of HIV and AIDS and mitigate its impacts.

There are a number of merits to focusing on the household. The most obvious is that, as already recognised, the immediate impacts of HIV and AIDS are at the household level. These impacts are remitted through various transmission mechanisms and then by aggregation adversely affect sectors and the macro level. To meaningfully mitigate impacts of HIV and AIDS, the greatest leverage points are at the household level (see Figure 1.2). For responses to HIV and AIDS to have greater effect, they must be rooted in the realities found at household level.

Understanding these household level impacts would force us to think and respond holistically to what is obviously a multidimensional crisis. Although not always easy, looking at the household provides us with insights into the multidimensional nature of the epidemic and the various ways in which it should be dealt with. The needs of a household transcend sectoral boundaries. For initiatives to be effective, they would need to be dimensional. Looking at HIV and AIDS from household perspective would illumine the roles of different players and how the diverse efforts could be coordinated and contribute to defeating a common problem. We do not need to dismantle the institutions already playing their role but to reorient the effort by giving it a framework that pulls the different strengths together. The household is the easiest point around which such a framework can be built.

There is an additional problem that a focus on the household helps us to resolve: It has often been difficult to know the impacts of various initiatives. The call to take a fresh look at the household as the entry point in tackling HIV and AIDS arises from the growing disquiet that progress made so far is not measuring to the effort and amount of resources poured into the response to the epidemic. Perhaps the problem is just too immense and we are actually not doing enough. Most likely we are not being efficient enough in focusing the effort where it matters most. Focusing on households helps us to isolate the impacts of the initiatives better and measure them. Related to this is that sector level

institutions are able to understand better the vicious cycle between HIV and AIDS and the attainment of their sector mandates only by looking at household level impacts of HIV and AIDS. This should help to identify the necessary entry points for various sectors. An example of how HIV and AIDS can adversely affect the achievement of sector goals from the household's perspective is provided in Figure 1.3 on p. 16. Household level responses to HIV and AIDS should focus on turning the vicious cycle to a virtuous cycle.

Figure 1.2: Leverage points by level

Governance system that supports accountability and participation

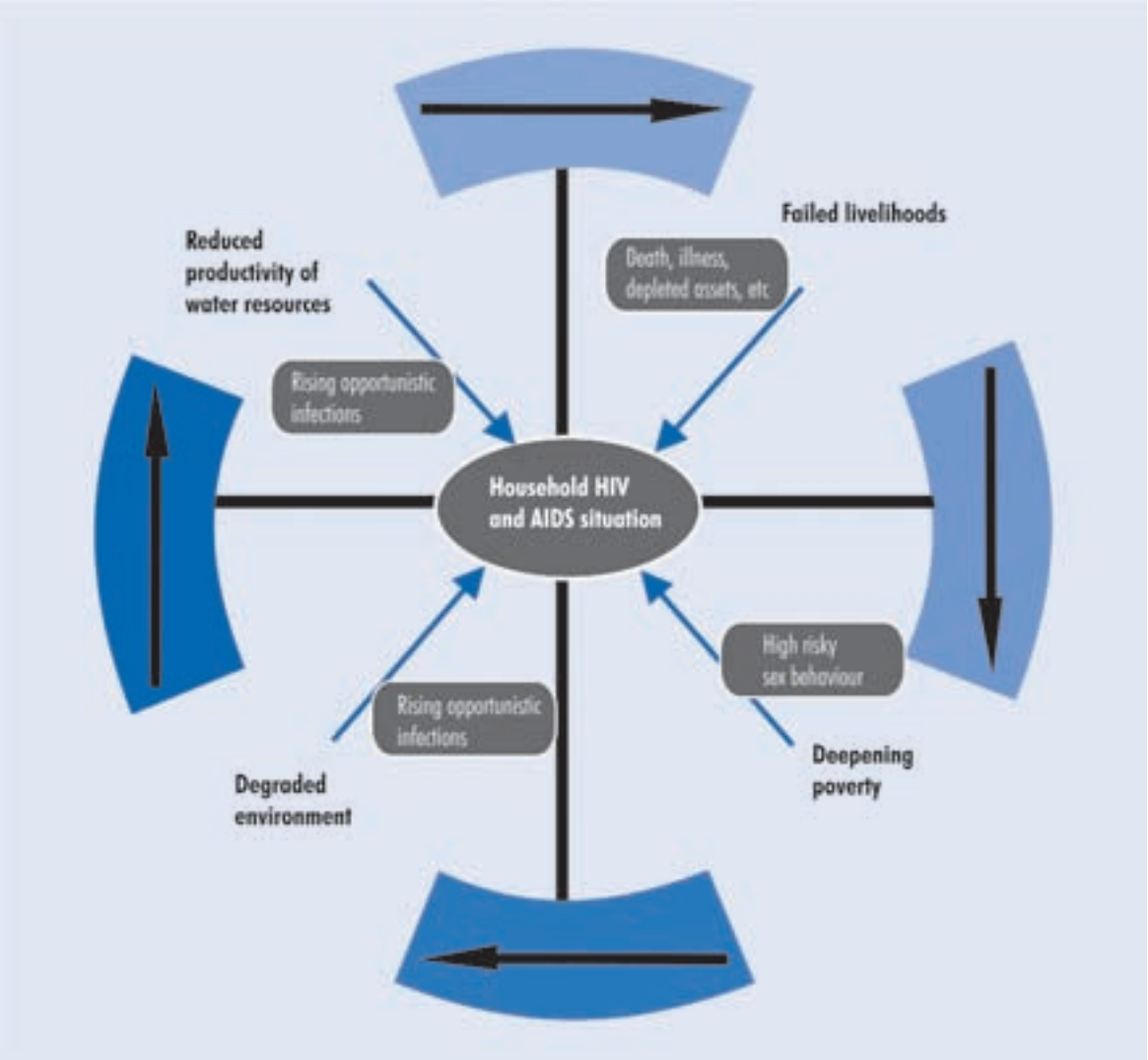
If households are to be placed at the centre of the response to HIV and AIDS, there is a need to reconstitute Zambia's governance system. This is currently highly centralised, which creates significant gaps in the service delivery capacity of structures closest to households. Local authorities which are supposed to provide a framework for development coordination at sub-national levels have over the years been undermined by successive administrations. In turn this has undermined effective participation of local people in shaping the nature of development in their area. District and sub-district officials are largely unaccountable to the people on the ground.

The dual structure of Zambia's governance system at district level does not favour accountability and participation. Each district has a devolved local elected government with powers and functions defined by the Local Government Act of 1991 and as amended in 1996. But there are also sector ministries accountable to central government through their headquarters in Lusaka. A District Development Co-ordinating Committee (DDCC) has been put in place in an attempt to co-ordinate activities of the two structures. At first these were chaired by the district secretary before the appointment of district administrators, later renamed district commissioners. The District Secretary now merely represents the Council (elected body of councilors) on the DDCC which no longer has power to override any decision passed by the Council. The Council has no legal or administrative power over the line ministries.

Most of the development work is carried out by line ministries because they are more resourced than councils. However, the Local Government Act has given local authorities the responsibility to undertake wide-ranging development interventions in the districts. Local authorities, however, face serious resource constraints to fulfill their developmental responsibilities due to: (i) The erosion of the local governments asset base through various actions by the central government over the years; (ii) The declining and erratic disbursements of grants from central government; and, (iii) The poor macroeconomic situation that has undermined the capacity of the Zambian population to pay for services provided by local authorities.

Participation of the people in shaping their affairs is limited by absence of elected or delegated local government bodies at sub-district level. Wards are used for only electing councilors. Combined with the fact that local governments have little resources for meaningful development, local citizens

Figure 1.3: HIV and AIDS and water resources - vicious cycle



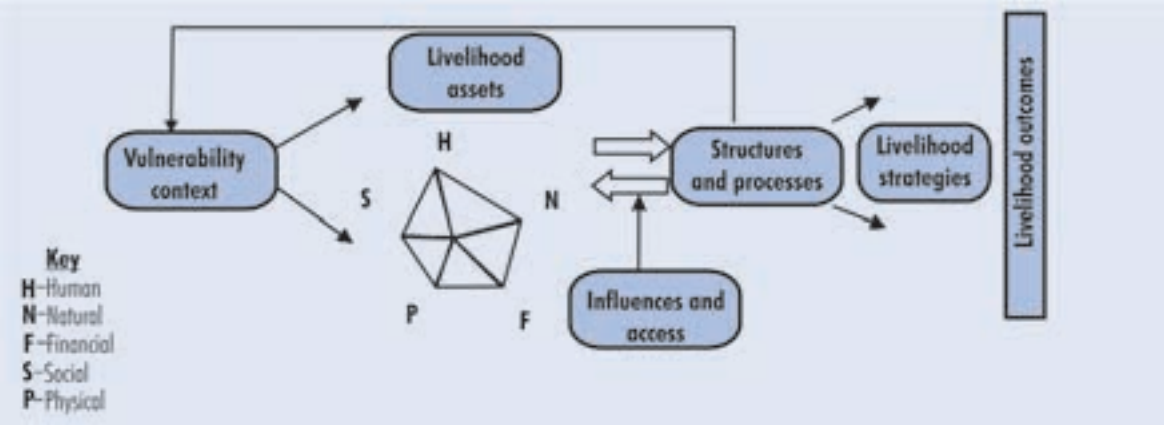
are generally apathetic to the politics and affairs of local authorities. They are at the same time not in a position to hold officials of the line ministries accountable.

Given the above inadequacies in service delivery, participation and accountability, efforts have been made to bridge the gap in two main ways. First, line ministries have been building structures at district and sub-district levels that allow for more accountability of officials and participation of the people. Second, some ministries, such as health, education and to a certain extent agriculture, are having some of their functions devolved to the local authorities.

Various donors have given their support to the decentralisation process. The community and district level structures created by NAC have been adopted to help the identified gaps in responding to HIV and AIDS. Non-governmental organizations have also built their own participatory structures at the district and sub-district levels for the same reasons.

Inadequacies in the current governance system with respect to how it facilitates development at the local level have been broadly acknowledged. To that effect, the Zambian Government in 2002 adopted a National Decentralisation Policy that intends to end the presence of most sector ministries at the district level. They will instead have their functions integrated in local government structures. However, con-

Figure 1.4: Sustainable livelihoods framework



cern has been expressed at the slow pace at which decentralisation is being implemented. Some sectors are stating that there is little political will to push such an aggressive agenda forward. The Draft Constitution of 2006 has included democratic decentralisation as a major aspect of the modified governance system. This came about after many submissions to the Constitution Review Commission that demanded for democratic decentralisation, meaning that there is an overwhelming support by the people themselves for such a governance system. Such a governance system will help attempts to bring households at the centre in the response to HIV and AIDS.

Framework for building household capacity to respond to HIV and AIDS

In searching for a framework that helps to expose the various impacts of HIV and AIDS on the household and identify entry points for helping households deal better with the epidemic, we can rely on the sustainable livelihoods approach (SLA) discussed extensively in the 2000 ZHDR.

The SLA framework opens a window of seeing how the epidemic is devastating the capacity of households to cope with shocks. The sustainable livelihoods framework is provided in Figure 1.4 above and the meaning of its various terms in Box 1.2 on p. 18.

In summary, this framework states that households need to access and utilise assets in order to achieve beneficial livelihood outcomes - increased household food security, higher incomes, well-being and reduced vulnerability to shocks such as natural disasters. In this sense, the SLA amplifies upon the basic needs approach, a development approach that has been used to define the minimum requirements of people to gain a dignified existence. These assets gain their value through the prevailing social, institutional and organisational environment (structures and processes) that influences and shapes the livelihood strategies (ways of combining assets) adopted in pursuit of beneficial livelihood outcomes.

All these aspects exist together in a vulnerability context which is defined by shocks such as natural calamities, long-term trends including economic decline and seasonal effects like annual food availability. The vulnerability context determines the extent to which households can actually obtain beneficial livelihood outcomes.

Using the SLA, we are able to expose the many dimensions that enable households and communities achieve the kind of livelihood outcomes they desire and how HIV is affecting them. From the evidence provided in Chapter 3, all the assets at the disposal of households are being seriously devastated by the epidemic. The asset pentagon in the SLA is the heart for gaining

beneficial livelihood outcomes for households. Regrettably, structures and processes as well have become less supportive to households in accumulating and applying these assets. This is deepening household vulnerability, making them less able to cope with shocks. Therefore, whereas in the past households recovered from crises such as droughts, they are now less capable to do so mainly because the vulnerability context has worsened.

Defining an HIV and AIDS affected household

The effects of HIV and AIDS on livelihoods vary from household to household. Not every HIV and AIDS affected household is vulnerable as some are able to cope with shocks even better than some non-affected households.

A number of household-specific factors can alter the way HIV and AIDS shapes the vulnerability context of a household. In

Box 1.2: Terms related to the sustainable livelihoods approach

Livelihoods: Livelihoods are defined as the activities (jobs, work) that people do to earn a living. The freedom to pursue livelihoods that people choose is dependent on people's capabilities which in turn are dependent on the assets at their disposal. There are five livelihood categories:

1. Human: the skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives
2. Social: the social resources upon which people draw in pursuit of their livelihood objectives, including networks, membership of formal and informal groups, and relationships of trust and reciprocity
3. Natural: the natural resource stocks from which resource flows and services useful for livelihoods are derived (e.g. land, trees, water sources)
4. Physical: comprises the basic infrastructure and producer goods needed to support livelihoods (e.g. buildings, roads/ transport, water supply, communications)
5. Financial: the financial resources that people use to achieve their livelihood objectives, including stocks (savings, convertible assets, including livestock) and flows of income

Livelihood strategies: Livelihood strategies are ways in which households combine activities, assets and entitlements in order to obtain desired livelihood outcomes such as increased household food security, higher income, reduced vulnerability to shocks and sustainable use of natural resources.

Sustainability of livelihoods: Sustainability of livelihoods is a key concept in the sustainable livelihoods approach and refers to specific characteristics and values in relation to the way people carry out activities as well as utilise capital and entitlements. There are five characteristics and values constituting sustainability:

1. Resiliency - the ability to cope with and recover from shocks and stresses.
2. Economic efficiency - the use of minimal inputs to generate a given amount of outputs.
3. Ecological integrity - ensuring that livelihood activities do not irreversibly degrade natural resources within a given ecosystem.
4. Social equity - which suggests that promotion of livelihood opportunities for one group should not foreclose options for other groups, either now or in the future.
5. Adaptive governance systems in relation to power dynamics, dispute resolution, devolutionary decision making on entitlement and resource management.

Sustainable livelihoods, therefore, occur where activities and assets of a population are combined in a way that maximises resilience, economic efficiency, ecological integrity, and social equity. This definition takes on specific and operational meaning mainly at the household or community level.

ZHDR 1999/2000

theory there is an infinite array of permutations of these factors. It is nevertheless possible to isolate four factors: (i) the specific nature of the HIV and AIDS situation the household is having to respond to; (ii) the livelihood systems pursued by the household; (iii) the location of the household; and, (iv) the quantity and quality of assets at the disposal of the household.

Household HIV and AIDS situations differ and so do the effects. Some examples include a household hosting a chronically ill patient, a household experiencing an AIDS-related death and a household hosting orphans. During chronic illness, the main effects are loss of labour due to illness or increased caring and increased requirements for spending on health care. Death leads to an immediate loss of labour, but can lead to other changes in household composition that can positively or negatively affect labour availability. There can be changes in livelihood patterns as remaining members try to optimise their available assets. This can lead to successful coping, or - following a period of unsustainable response (e.g. by selling productive assets) - this could ultimately result in the dissolution of the household. The economic effect of taking in an orphan depends on the composition of the household and on the age, gender and skills of the incoming orphan, which determines the net contribution of the orphan to the household.

HIV and AIDS impacts will differ between households in different livelihood systems. It matters whether household members, especially the head, are in formal or informal employment or not. This may predispose the extent of the social security benefits entitlements. As workplace HIV and AIDS policies become more widespread, households in formal employment are likely to have the impacts of the epidemic mitigated in a way that is not possible for households in the informal sector.

Households in agriculture-based livelihoods can quickly descend in a downward spiral as labour shortages are intensified. Within agriculture, however, households that depend mainly on livestock rearing may cope better with the effects of the pandemic as these activities tend to be less labour-intensive.

Fishing households, given the migratory nature of their livelihood system and the level of interaction with fish traders from urban areas, have been known to be highly susceptible to the epidemic. Indeed location by predisposing the chances of one being infected and the nature of livelihood opportunities available is an important variable producing the differential impacts of HIV and AIDS on households. HIV and AIDS will affect households in urban and rural areas differently.

The other important factor determining how HIV and AIDS will affect households is the quantity and quality of assets at the disposal of a household. These can enable survivors in a household sustain or fail to sustain themselves.

Also, depending on who has an AIDS-related illness or who has died due to the infection, households may adjust successfully if other household members can take up their roles. This is difficult when it is one or both of the parents who succumb to AIDS-related illness. Zambian households have a very high dependency ratio. The other household members are likely to be at a stage in life whereby stepping out to ameliorate the effects is likely to come at a high price. It could principally affect adversely the education prospects of the young household members.

Adjustment costs may be minimised by drawing down on savings. This is not, however, an option for many Zambian households in a country where 68 percent of the population lives below the poverty line. In any case, this is only likely to be a short term solution and not sustainable in the medium to long term.

In devising programmes that address household level impacts, analysis should not

be over-generalised. Detailed differentiation of households in varying situations is needed to design appropriate responses. Perhaps this reinforces the need to work with adaptive governance structures existing within the communities themselves who are able to recognise the varying situations between households. One solution will not fit all.

HIV and AIDS and the attainment of MDGs

A comparison between the Millennium Development Goals Report (MDGR) for 2003 and 2005 shows that Zambia is making some progress in attaining the MDGs. The MDGR 2003 reported that Zambia was unlikely to meet the targets on halving the proportion of people living in extreme poverty and hunger. However, the MDGR 2005 reported that Zambia was likely to attain these targets. The prospects for the attainment of universal primary education, gender equality and women empowerment, and halting and reversing the spread of HIV and AIDS also improved from "potentially" to "likely". Out of the ten targets reviewed in the MDGR, Zambia in 2005 had five targets that were likely to be attained compared to none in 2003. Nevertheless, there was also deterioration in the prospects for attaining two targets, i.e. reduction in maternal mortality and environmental sustainability. The prospects for the other three targets remained unchanged.

The prospects for attaining the MDGs are perceived to have improved. The MDGR 2005 attributes this to improvement in the state of national support. There is reason for more optimism as developments in 2005 that strengthened the potential for better national support, not taken into account at the time of preparing the MDGR 2005 start to bear fruit. This is mainly the attainment of the HIPC completion point in April 2005, the substantial debt forgiveness the country has received as a result and rising economic prospects riding at the back of soaring copper prices and production. It is clear from a goal by goal assessment that responding to HIV and AIDS is an essential strategy for attaining MDGs by 2015 because the epidemic undermines each of the goals in a multiplicity of ways.

Millennium Development Goal 1: Eradicate extreme poverty and hunger

The goal is to eradicate extreme poverty and hunger. In terms of quantitative targets, this entails reducing by half, between 1990 and 2015, the proportion of people living in extreme poverty and the proportion of people who suffer from hunger. In 2004, 53 percent of Zambians lived in extreme poverty, a small drop from the 58 percent recorded in 1998. The target, which is to reduce this proportion to 29.1 percent by 2015, is still a long way off. This is because poverty deteriorated in the 1990s over the 1990 base year figure. Also 23 percent of children less than five years old were underweight in 2004, dropping from 28 percent in 1998. According to the global standard, the target is to reduce this figure to 13 percent by 2015. This is potentially achievable if Zambia has successive good harvests for even five years.

HIV and AIDS is related to poverty and hunger in a vicious cycle and tend to reinforce each other. This happens through many channels. As Chapter 3 demonstrates, poverty is one of the factors driving the spread of HIV because it sets the scene for greater susceptibility to infections. The feminisation of poverty, driven by discrimination against women in access to and control of resources for their pursuit of viable livelihoods, means that women are more susceptible in this regard. Once infection occurs, affected people's livelihoods are ravaged, thus festering poverty. The widening vulnerability context due to HIV and AIDS means that people are finding it far more difficult to cope with and recover from shocks such as droughts, floods and sudden increases in food prices. What this means is

that any gain in the fight against poverty will be transitory if there are no substantial gains in responding to HIV and AIDS.

An important aspect that should be considered is the impact of good nutrition in the efficacy of the roll out of anti-retroviral therapy for people living with HIV and AIDS (PLWHA). Even without HIV and AIDS, people's immune functions are undermined by malnutrition. However, malnutrition is a much more complex state for people living with HIV because of the added stress placed on an already weakened immune system and may complicate treatment. Deficiencies in micronutrients are common in PLWHA, a situation that accelerates the death of immune cells and increases the replication of HIV. Good nutrition improves body weight and body cell mass and CD4 cell counts. This reduces the incidence of opportunistic infections and increases survival in adults. Therefore, PLWHA need to maintain an optimal nutritional status at the time when their immune system is being undermined by the virus. Without good nutrition, weight loss and other complications are bound to follow.

Moreover, good nutrition is important for the efficacy of medication as it reduces side effects, improves tolerance to treatment and reduces some obstacles to adherence (M. Fenton and S.A. Meyer, 1998). It delays the progression of HIV and thus reduces the cost of medical care. Good nutrition thus allows the PLWHA to remain productive as they pursue their livelihoods. For all these reasons, nutritional therapy for people living with HIV is believed by many as a critical supportive co-treatment for HIV and AIDS. Some people have suggested that "clinical standards of care that include nutritional services will soon be the foundation for HIV disease management" (S.A. Meyer, 2000).

Millennium Development Goal 2: Achieve universal primary education

Goal 2 is to ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary

Table 1.1: Trends in MDG indicators

Millennium Development Goal indicator	Baseline value 1990	2003 MDGR	2005 MDGR	2015 target
Proportion of people living in extreme poverty (percent)	58.2	58.0	53¤	29.1
Underweight children (percent)	25.0	28.0	20.1¤	12.5
Stunted children (percent)	40.0	47.0	50.0¤	20.0
Wasted children (percent)	5.0	5.0	6.0¤	2.5
Net enrolments in primary education (percent)	80.0	76.0	78.0	100
Proportion of pupils starting grade 1 reaching grade 5 (percent)	64.0	73.0	82.0	100
Literacy rate of 15-24 year olds (percent)	79.0	75.0	70.0	100
Ratio of literate females to males	0.98	0.98	0.95	*
Share of women in wage formal employment (percent)	39.0	35.0	35.0	*
Infant mortality rate	107.0	95.0	*	36.0
Maternal mortality rate	649.0	729.0	*	162
ESS trends of HIV infection among ANC (percent)	20.0	19.1	*	20.0
ZDHS HIV prevalence	*	16.0	*	*
New cases of malaria per 1,000	121	377	*	121
Malaria fatality rate per 1,000	11	48	*	11

Zambia Millennium Development Goals Reports 2003 and 2005

Notes: ¤ Updated with the 2004 LCMS data * No data presented in the MDG Reports.

schooling. According to the localised targets for this MDG, Zambia should increase the net enrolment ratio to 100 percent for both sexes between 1990 and 2015 from 80 percent, the proportion of pupils starting grade 1 who reach grade 7. There has been an upward trend in the indicators in the new millennium unlike the downward trend seen in the 1990s. This is laying a good ground for improvements in literacy levels in the 15 - 24 years old age group, which deteriorated from 75 percent in 1990 to 70 percent in 2000.

By negatively affecting both the supply (less school teachers as a result of deaths and absenteeism and the burgeoning school classes) and the demand (dropping enrolment and survival rates of HIV-affected pupils), HIV and AIDS is obviously complicating efforts to attain universal primary education by 2015 in Zambia.

By undermining educational attainment, the spread of the epidemic is also being fuelled further. The term "education vaccine" was coined in 2000 by some researchers (Vandemoortele and Delamonica, 2005) because it was seen as the most potent tool available for halting the spread of HIV. Sadly, this was seen to go against available evidence because the epidemic was as prevalent among the educated as those less educated.

In some cases as in Zambia, some categories that represent the educated of the nation such as teachers and medical workers appeared to be the worst affected. However, this applied mostly to the initial stage of the epidemic (see Figure 1.5). This is because the main channel through which HIV and AIDS spreads initially exposes the elite who are likely to be more mobile and living in urban areas. After some time, as they receive better information about the virus, they are more likely to take steps to lessen risky behaviour than communities less exposed to information.

HIV and AIDS is linked to education in a vicious cycle to the attainment of universal primary education. Stopping the spread of the virus will help to achieve MDG 2. In turn, the achievement of MDG 2 is a potent tool for stopping the spread of HIV. The mainstreaming of HIV and AIDS concerns in the education sector should thus take this into consideration.

Millennium Development Goal 3: Promote gender equality and empower women

MDG 3 is to promote gender equality and empower women, with particular emphasis on the elimination of gender disparity in education. The specific targets are bringing the ratio of boys to girls in primary and secondary school to 1 by 2015. The other target is to raise the ratio of literate females (aged 15-24 years) to males to 1.

Elimination of society entrenched discrimination against women should lead to raising the proportion of seats held by women in Parliament to 30 percent in 2015 from 6 percent in 1990.

HIV and AIDS undermines educational attainment in general, but this attribute is even much more aggressive against the educational attainment of girls, making progress in MDG 3 even more difficult.

The prevalence rate and the resulting impact of the epidemic are not gender neutral. As evidence provided in Chapter 3 indicates, girls aged 15-19 years are more likely to be infected by HIV than boys. This is attributable to the early onset of sexual activity among girls than boys, unfortunately often with older men (the so called sugar daddy syndrome) who may already be infected. It is also due to the prevalence of sexual abuse of girls by older men who are often well known to the girls. This is shrouded in silence and denial by those around. Girls are also more disadvantaged from the resulting consequences of the epidemic than boys. They are more likely to drop out of school to help relieve the labour shortages in the home due to the death or chronic illness of an adult. Even where they continue, they are likely to

attend school more intermittently than boys on account of this.

Millennium Development Goal 4: Reduce child mortality

The quantitative target under MDG 4 is to reduce by two thirds, between 1990 and 2015, the under-five mortality rate. The localised targets are to reduce under-five mortality ratio from 191 per 1,000 live births in 1992 to 63 in 2015 and infant mortality ratio from 107 per 1,000 live births to 36 respectively. Zambia has one of the highest child mortality rates in the world. To make progress in human development, the country should make serious effort to bring child mortality down.

HIV and AIDS is complicating the attainment of the MDG on child mortality. Firstly, babies born to HIV-positive mothers risk getting infected through mother-to-child transmission. It is estimated that about 40 percent of children born to HIV-infected mothers get infected with the virus. Most of these children are likely to die before the age of five. HIV and AIDS threatens the survival of children also in other ways. HIV and AIDS, when linked to poverty and hunger in a vicious cycle as seen above, undermines the capacity of households to provide adequate nutrition to children. This makes children susceptible to many diseases and increases the likelihood of dying before the age of five.

The health seeking behaviour of parents, infected with HIV or experiencing AIDS-related illnesses, for their children is low. This is again attributable to rising poverty in the household linked to HIV and AIDS, loss of strength on the part of parents to access health facilities especially where they have to cover long distances and have to wait for long hours before obtaining the service, competing demands in a situation where labour constraints have been accentuated by chronic illness and adverse psychosocial effects whereby such parents lose hope about themselves and their children and are not motivated enough to live. The diminishing capacity of the health system to provide quality health service due to HIV and AIDS is also threatening the survival of children.

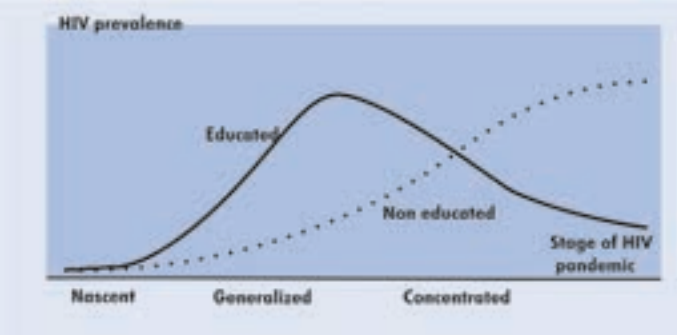
Millennium Development Goal 5: Improve maternal health

This is one of the two MDGs unlikely to be attained by the 2015. The target is to reduce maternal mortality ratio by three-quarters, between 1990 and 2015. This translates into reducing to 162 maternal deaths per every 100,000 live births in 2015 from 649 in 1996. However, the maternal mortality ratio rose to 729 deaths per every 100,000 live births in 2002. There are many factors contributing to these declining prospects. These include inadequate access to health facilities that forces many women, especially in rural areas, to deliver at home. HIV and AIDS should be ranked as one of the leading factors. Where a woman is infected, her health during pregnancy is compromised raising the chances that she might die during childbirth.

Millennium Development Goal 6: Combat HIV and AIDS, malaria and other diseases

Besides halting and beginning to reverse the spread of HIV, the MDG 6 also requires that countries should have halted by 2015, and begun to reverse the incidence of

Figure 1.5: HIV diffusion by level of education and stage of the pandemic



GRZ, 2003: Population Projections Report

malaria and other major diseases. The 2005 MDGR lists the target on HIV and AIDS as one of those likely to be achieved given the effort that has gone into containing the epidemic. It also indicates that there is potential to achieve the target on malaria and other major diseases. Besides malaria, the incidence of tuberculosis is taken as an indicator for other diseases.

The link between HIV and AIDS and other diseases is obvious because HIV and AIDS suppresses the body's immune system, thereby rendering it susceptible to opportunistic infections. Therefore, the presence of the high HIV prevalence is escalating the incidence of so many other diseases. A key example is the rising incidence of tuberculosis. More than 60 percent of tuberculosis cases in Zambia are related to HIV infection.

Despite the improved prospects for responding to HIV and AIDS, the ancillary consequences are likely to continue to increase and cause more pressure on Zambia's social fabric. Challenges to effective response include a lack of a vaccine and cure, early sexual activity, low condom use, low uptake of voluntary counseling and testing and the harsh stigma associated with being HIV positive, which prevents people to talk openly about their status.

Millennium Development Goal 7: Ensure environmental sustainability

Goal 7 has three targets. Firstly, this MDG requires that Zambia and other countries integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources. The second target is to halve the proportion of people that do not have sustainable access to safe drinking water, by 2015. The third target is to attain significant improvement in lives of at least 100 million slum dwellers.

Zambia has a rich biodiversity but this is under threat from poor management. The HIV and AIDS epidemic is also inducing a number of negative impacts on environment. These negative impacts include:

1. The loss to death, as a result of AIDS, is adversely affecting the intergenerational transfer of capacity, skills and knowledge in natural resources management, accumulated by communities over many years. The loss of traditional knowledge of natural resource management is leading to more inappropriate ways of using these resources.

2. There is increased reliance on natural resource use due to chronic illness and death in families affected by HIV and AIDS. The loss of income and labour means that households have little alternative sources of livelihood other than the exploitation of natural resources such as bush meat, medicinal plants and charcoal burning. The rise in charcoal burning as a safety net, for example, has been contributing to deforestation and threatening headwaters, causing loss of topsoil along the river banks and silting water channels.

3. Property grabbing and gender inequality in traditional land tenure systems is leading to a rise in demand for new land as families are forced to resettle after the death of the husband putting further pressure on the environment.

4. Institutions important for the management of natural resources at both local (traditional) and higher levels are losing their capacity at a fast rate due to death and illnesses induced by HIV and AIDS. The epidemic is resulting in increased absenteeism, lower productivity, a rise in personnel costs related to recruitment and training and loss of skills and accumulated experience.

Effective natural resource management is indispensable to Zambia's strive to mitigat-

ing HIV and AIDS. This can be seen from at least four ways:

1. Natural resources are key to the building of sustainable livelihoods and to the reduction of widespread poverty in the country. This is important to the reduction of risky behaviour such as sex work, which increases susceptibility to infection.

2. With reduced poverty and increased food security, the on going rolling out of anti-retroviral therapy (ART) is likely to have better results. Patients on ART are likely to have better health outcomes as measured by the body mass index (BMI) and the CD4 cells, seen from reduced opportunistic infections.

3. A clean environment is key to hygiene which in turn reduces opportunistic infections and helps people with AIDS-related illnesses to lead a more healthy life and lessen the social and economic consequences of the epidemic.

4. Women are intricately linked to natural resource use. They face a higher risk to HIV infection and bare a greater burden of the consequences of the epidemic. Good natural resources management offers a good opportunity to empower women with the capacity to respond to HIV and AIDS and cope with its adverse impacts in the household.

Conclusions

A critical analysis shows that HIV and AIDS is a major human crisis Zambia has to cope with. It has a devastating effect on all aspects of human well-being whether viewed from the fundamental choices for a kind of life that people would value or livelihoods of their own choice. HIV and AIDS is complicating Zambia's efforts to meet the Millennium Development Goals. At the household level, this translates into reduced capacity to overcome and cope with the epidemic and indeed make progress in welfare. It is thus impossible to envisage meaningful development if HIV and AIDS is not tackled aggressively. In tackling HIV and AIDS, the household must be brought under very sharp focus as the central unit for responding to the epidemic.

"Kids in Kalikiliki"

We met these children when we were walking around taking photos one early morning. They were happy when we took their photo. We were happy too.

Photographers: Julius and Richard Zulu

2 ~ Zambia's policy environment

HIV and AIDS is a major development challenge facing Zambia and other developing countries. In the past, the epidemic was viewed mostly from a medical perspective, but it is now agreed that its impacts permeate the entire development fabric of societies. Wealth and health are intricately and unquestionably related (Hamoudi and Sachs, 1999, Bloom et al, 2000). Improved health promotes economic growth while poor health and poverty are mutually reinforcing.

The ability of Zambia to respond to HIV and AIDS is both supported and constrained by global and national trends. For example, developments in the global economy; the extent to which the benefits of globalisation are shared; and the extent to which both developed and developing countries deliver on international commitments. All of the above are important factors in the response to HIV and AIDS.

The greater burden however, is on a country itself to ensure macroeconomic stability, economic growth and the enhancing of participation of the poor in development. This is to lay the proper foundation for responding to the epidemic. Countries need to adopt sensible policy frameworks which should facilitate both broad development as well as the response to the spread of HIV and AIDS. Further, the policy frameworks should aim at enhancing the capacity of households to contribute effectively to the response to HIV and AIDS.

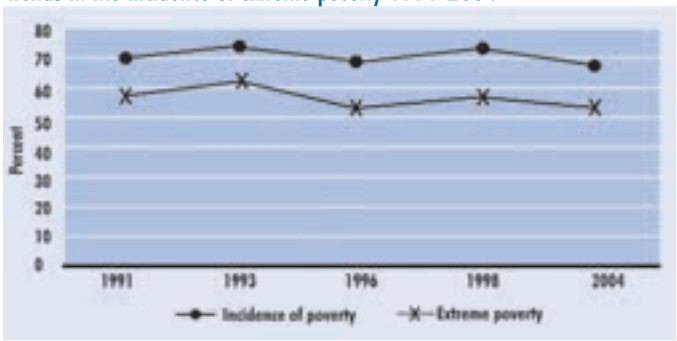
This Chapter sets the development and policy context for addressing HIV and AIDS issues. The question it explores is whether international and domestic environments are supportive to the country's response to HIV and AIDS. It provides an overview of the developmental challenges Zambia faces, and how the HIV and AIDS epidemic complicates the scenario further. Feeding the development challenges faced by Zambia in recent years, is the global economy whose recent developments are also discussed in the Chapter. The implications these circumstances have had for Zambia's development are also analysed. The Chapter further discusses the international and the national HIV and AIDS response. Finally suggestions have been made on how the policy environment could further be improved, to make the response to HIV and AIDS more effective.

Trends in Zambia's post-independence development

If it is admitted that poor health and poverty are mutually reinforcing, then there is little doubt that Zambia faces a huge challenge in halting and reversing the spread of HIV. More than thirty years of marginal economic growth has led to a human development crisis in almost every area of well-being. As shown in Table 1.1 on p. 21, nearly all the indicators that measure progress in attaining the Millennium Development Goals reflected very minimal improvements when compared to the base year of 1990.

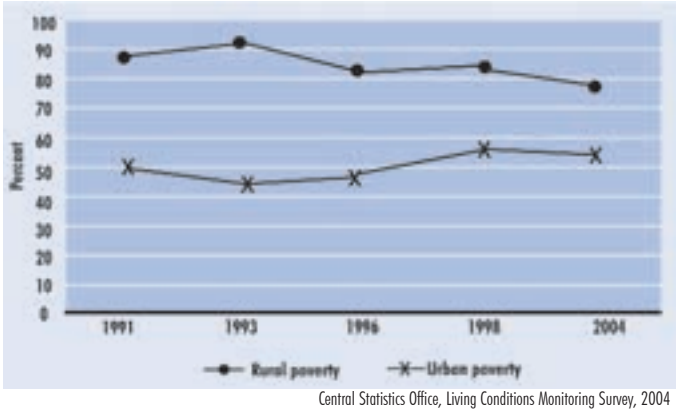
Further, according to UNDP Human Development Reports, the fall in Zambia's human development index (HDI) has been the sharpest among the developing countries (see Figure 5.1 on p. 71). Up to 1985, Zambia's HDI continued to rise despite the fact that the economy had been in decline since 1975 when copper prices collapsed. The adverse impact was cushioned by food subsidies and free social services. The HDI started to fall in 1990 such that by 1995, Zambia's HDI value was lower than it was

Figure 2.1: Poverty and trends in the incidence of extreme poverty 1991-2004



Central Statistics Office, Living Conditions Monitoring Survey, 2004

Figure 2.2: Rural and urban poverty 1991-2004



Central Statistics Office, Living Conditions Monitoring Survey, 2004

Table 2.1: Trends in extreme poverty, 1991-2004

	1991	1993	1996	1998	2004
All Zambia	58	61	53	58	53
Rural/urban					
Rural	81	84	68	71	53
Urban	32	24	27	36	34
Province					
Central	56	71	59	63	63
Copperbelt	44	28	33	47	38
Eastern	76	81	70	66	57
Luapula	73	79	64	69	64
Lusaka	19	24	22	35	29
Northern	76	72	69	66	60
North Western	65	76	65	64	61
Southern	69	76	59	59	54
Western	76	84	74	78	73

GRZ, 2005: Living Conditions Monitoring Survey, Table 12.8

in 1975. Zambia is the only country to experience such a reversal in the world.

Poverty is perhaps the most immediate factor that undermines household capacity to respond to HIV and AIDS (see Chapter 4). In Zambia poverty is extremely high, even though it was slightly lower in 2004 compared to its 1998 level (see Figure 2.1). Poverty levels have been consistently higher in rural areas than in urban areas. However, as depicted in Figure 2.2, the gap in poverty levels narrowed from 37 percent in 1993 to 27 percent in 2004. Urban poverty increased much more sharply than rural poverty. The two most urbanised provinces, Lusaka and Copperbelt, have the lowest poverty levels in Zambia. Extreme poverty peaked in 1993 in rural areas at 84 percent (see Table 2.1). By 2004, it had reduced to 53 percent. Extreme poverty levels had gone up in urban areas from 24 percent in 1993 to 34 percent in 2004. Obviously the economic downturn starting in the mid-1970s and the structural adjustment efforts of the 1980s and 1990s took a much sharper toll on the urban population. Unemployment escalated and real wages tumbled. Urban households also faced higher levels of the HIV and AIDS epidemic. Even though this was the case, rural communities continued to bear a greater poverty burden.

When the first HIV case was diagnosed in Zambia in 1984, the country's capacity to respond effectively was already seriously eroded by the declining economy. Zambia's economy has performed poorly since the mid-1970s leading to the human crisis and high poverty levels as reflected in Table 2.1. The sharp drop in the prices of copper in 1975 was the catalyst for the economic meltdown that followed. The main underlying cause seems to have been the poor economic management. In the first ten years of independence, Zambia had poor fiscal management. This resulted in chronic budget deficits due to high public spending on a wide range of subsidies. For political expedience, the Government failed to remove

Table 2.2: Selected macroeconomic indicators

Year	2000	2001	2002	2003	2004	2005	Avg.
Real GDP at 1994 prices (K billion)	2,499	2,621	2,708	2,847	2,989	3,141	2,800
Real GDP growth rate (percent)	3.6	4.9	3.3	5.1	5.4	5.1	4.6
Inflation rate (percent)	30.1	18.7	26.7	17.2	17.5	16.8	20.0
Interest rates (percent)	37.5	45.8	45.3	40.4	30.7	28.0	39.9

Central Statistical Office and Bank of Zambia

the subsidies when the mineral boom ended in 1975. The adoption of inward-looking policies made the country uncompetitive and inefficient

The Zambian Government for some time remained optimistic regarding the recovery of copper prices. However, by the beginning of the 1980s, it had become plain that the fall in copper prices was not a short-term development. In any case, the fall in copper prices had already devastated the Zambian economy that was overly dependent on copper exports.

Steps to reform the economy were initiated in 1981. Efforts were made to gain macroeconomic stability, through a more prudent management of public expenditure and infusion of economic efficiency. Market-based incentives were initiated with the sponsorship of the World Bank and the International Monetary Fund (IMF).

However, throughout the 1980s, there was little domestic consensus on reforms. They were seen as externally imposed. In May 1987, for example, the IMF programme was suspended after food riots linked to opposition to removal of food subsidies. The programme was restarted in 1989 when it became obvious that the economy sank further into crisis without external help.

With the change of government in 1991 and the abolition of the one-party governance system, a more radical reform agenda was adopted by the new government. The aim was to regain macroeconomic stability. Tight fiscal and monetary policy, liberalisation of financial markets, elimination of chronic budget deficits, a complete liberalisation of the exchange rate regime and the elimination of import controls were among the key measures that were embarked on. Sector reforms were also adopted through a sector-wide approach in agriculture, health, education, environment and roads.

The new government also embarked on a serious agenda to privatise state enterprises. The immediate impact of these reforms, however, appeared to sink the economy further into crisis. High rise in inflation and interest rates as well as the rapid depreciation of the Kwacha characterised the economy of the nation. The economy stagnated with GDP growth averaging about 1 percent in the 1990s. The incidence of poverty worsened between 1991 and 1998 (see Figure 2.1).

Better prospects have emerged in recent years. These have yielded good results and brightened the environment for tackling the spread of HIV and AIDS. In particular, Zambia has posited uninterrupted economic growth for seven years since 1999, the longest uninterrupted growth period since Independence (see Table 2.2). Between 2000 and 2005, the economy grew at an average annual rate of 4.6 percent.

The growth in 2000 and 2002 was slow at 3.6 and 3.3, respectively. This was attributed to enduring negative factors of the 1990s. The factors included the mishandling of the privatisation process, especially of the mines. Other factors related to low copper prices and production, poor macroeconomic management and public service corruption. In 2002, the slow growth rate was largely due to the effects of the drought the country suffered in that year.

Since 2003, the economy has grown at over 5 percent every year. Agriculture has also posted positive growth rates. The rates were above 5 percent in both 2003 and 2004, though only 2.8 percent in 2005 due to a partial drought. Projections for 2006 indicate that the economy might grow above 7 percent, the highest rate of growth reached since the 1960s.

There has been a drop in inflation between 2000 and 2005. From an annual average of 30.1 percent in 2000, inflation declined to 16.8 percent in 2005. This declined further to 8.2 percent in August 2006. Interest rates, however, have not fallen at the same pace averaging 28 percent in 2005 and hovering around 20 percent in August 2006. Prospects for sustaining the single digit inflation rate were high in 2006 given the good harvest, expected to continue having downward pressure on food prices. Food prices have the biggest weight in the country's consumer price index. The exchange rate has been volatile, which after some time of stability between 2002 and 2004 appreciated rapidly in 2005 by about 30 percent. GDP growth has only averaged 4.6 percent between 2000 and 2005, less than the 7 percent needed to make a significant impact on poverty reduction. Nevertheless, the macroeconomic development discussed above have brought renewed hope that full macroeconomic stability is now possible and Zambia may soon return to a sustainable growth path.

In terms of poverty reduction, these macroeconomic developments will not favour the poor. The recent Kwacha appreciation in particular, by threatening the growth of the non-traditional exports which tend to be labour intensive, will lead to a rise in unemployment. Small farmers who grow export crops such as cotton, paprika and tobacco have been adversely affected. The overall impact of the macroeconomic environment on agriculture which absorbs most of the poor people is anticipated to be negative.

Zambia and the global economy

The global policy and economic environment pose challenges to Zambia's effort in responding to the spread of HIV. The unfavourable trade environment continues to disadvantage developing countries. Heavy agriculture subsidies in developed countries undermine the ability of the developing countries to compete favourably in agriculture trade. Subsidies are hurting development prospects of the developing countries and their effort to reduce poverty and respond to calamities such as HIV and AIDS. Trade in services and manufacturing is also heavily tilted towards developed countries. The lack of a more favourable outcome at the previously held World Trade Organisation ministerial conference was a big blow to Zambia's aspirations.

An improved trade regime will not, however, automatically raise market access for Zambia. This is due to a number of reasons. First and foremost, Zambia is a landlocked country. The nearest functioning sea port is over 2,200 kilometers away from the capital, which entails that exports are uncompetitive on the basis of transportation costs alone. This is worsened by the poor road infrastructure especially in rural areas, an inefficient railway system and inadequate airfreight services.

The stringent sanitary and related requirements for agriculture exports in developed countries and the inadequate capacity in Zambia to meet such requirements is another serious obstacle to market access. Other constraints, such as lack of finances and the high cost of production, means that Zambia is unable to produce the right amount of quantities and standards to consistently assure importers abroad.

A number of opportunities have, nevertheless, emerged in the last five years. These may have a positive impact on Zambia's development effort. The first is the relatively better global economic performance in the last few years, which in turn started to have positive effects on Zambia's domestic

economy. After a sluggish start at the beginning of the new millennium, the global economy weathered the 2001 September 11 attack on the World Trade Centre in New York. It began to pick up in 2002 with GDP continuing to grow through 2005. From 2003 to 2005, the rate of growth rose at an average of 4.5 percent compared to 2.1 percent in 2000 to 2002.

Noteworthy is the widespread nature of this growth, with Western Europe alone recording sluggish performance. The 4.4 percent average growth of the sub-Saharan Africa economy was a breath of fresh air given past chronic underperformance. After about a decade of sluggish economic performance, the Japanese economy saw an upturn, growing at an average rate of 3.8 percent and was an important factor in the upswing of the global economy.

The Chinese and Indian economies, which grew at an average rate of 9 percent and 7 percent between 2003 and 2005 respectively, were also an important factor in the upswing of the global economy. The significant rise in world trade was the main driver of the good performance recorded in the world economy. World trade grew at an average rate of 8.5 percent, about twice the rate of growth of the world economy.

Growth has also been anchored by global economic stability seen in subdued rates of inflation, with the average hovering around 2 percent.

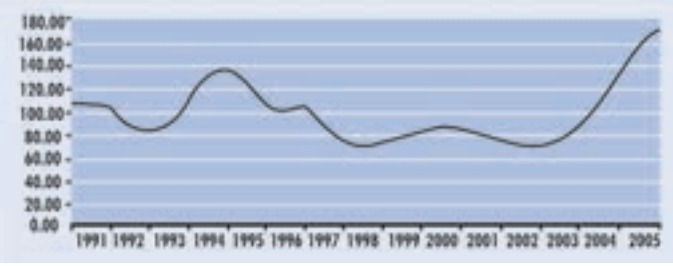
World economic growth, particularly in China and India, has spurred high demand for oil and non-oil minerals with prices rising to record high. Oil prices rose by 28.9 percent in 2004 and by August 2005 oil prices had risen by 60 percent, reaching US$70 per barrel. Although not as dramatic, non-oil mineral prices also rose by 16.8 percent in 2004 and further by 27 percent in 2005.

In 2005, there were price increases of industrial metals, such as iron ore (up by 72 percent), zinc (up by 38 percent), and copper (up by 21 percent). Of major interest to Zambia has been the rise in copper prices (see Figure 2.3). After falling from an average of 91.5 US cents per pound between 1995 and 1999, the price of copper declined further to 66.7 US cents in 2002 before starting to rise again. Copper prices reached 207.4 US cents per pound in December 2005.

The impact on Zambia of these global economic trends is direct. With rising copper prices, there has been a rise in new investments in the copper mines. This has boosted copper revenues from US$423.7 million in 2001 to US$1,616 million in 2005. This is complimented by the rise in non-traditional exports from US$249 million in 2001 to US$545 million in 2005. The ratio of total merchandise exports to GDP has increased from 23.6 percent in 2000 to 33.2 percent in 2004. The share of non-traditional exports in total exports, after rising to 38.5 percent, declined again to 25.2 percent in 2005 due to the resurgence in mineral exports.

Despite the good performance, the global economy remains fragile. High on the list of factors threatening growth is the high oil prices. There are concerns that oil prices will rise further given the volatile political environment in the Gulf region and the constant disruptions to oil supply in Nigeria. The fiscal deficits in the United States (US) economy, which have led to low US saving rates and current account deficits on one hand and the high current surpluses in Asian economies, particularly in China, threaten global financial markets.

Figure 2.3: London Metal Exchange copper prices 1991-2005 (US cent/lb)



GRZ, Macroeconomic Indicators, various issues

In April 2005 Zambia attained the Heavily Indebted Poor Country completion point. This saw her external debt stock reducing from US$7.2 billion to US$3.5 billion. Further, debt write-off under the G8 Gleneagles Initiative and the Multilateral Debt Relief Initiative have reduced the debt stock to less than US$600 million. Reduced debt servicing requirements, significant rise in copper prices, a jump in copper production, rise in foreign direct investment and the increase in non-traditional exports led to the appreciation of the Zambian Kwacha by about 35 percent in 2005.

It is clear that Zambia must take advantage of the positive outcomes in the global economy to lay a solid foundation, which will help the country withstand the external shocks when they come. Improvements in market access are required if Zambia is to turn the positive global developments into beneficial outcomes for her domestic eco-

Box 2.1: National policies and action against HIV and AIDS

Since the first case of HIV and AIDS was reported in 1984, the Government of the Republic of Zambia has put in place a national HIV and AIDS policy and various prevention programmes. The programme started in 1986 with the establishment of the National HIV and AIDS Prevention and Control programme, which formulated short and medium term plans that set priority operational areas. In 1999, the National HIV and AIDS Council (NAC) was created. This semi-autonomous, multisectoral body developed a National HIV/AIDS/STI/TB Strategic Intervention Plan (2002-2005) and also facilitated the formulation of the HIV and AIDS policy. The plan incorporates a mechanism for multisectoral co-ordination and collaboration that provide many interventions on prevention, treatment and care.

The epidemic has been mainstreamed by all sectors including public, private, non-governmental, religious and traditional groups as well as civil society. Thus, there are also specific sector policies on HIV and AIDS. These various HIV and AIDS activities have also been supported by appropriate budget-lines. Such have included programmes on HIV and AIDS at workplaces. In addition, the country has developed care and management guidelines on HIV and AIDS and operationalisation of the system. The political leadership has continued to respond to the epidemic in various ways, notably through regular references to the social, economic, and health impact.

Other efforts in addressing the epidemic have included: the Zambian Parliament passing the NAC Act in 2002; establishing a Cabinet committee on HIV and AIDS; mainstreaming HIV and AIDS in the Poverty Reduction Strategy Paper, the Transitional National Development Plan and the Fifth National Development Plan; establishing HIV and AIDS sub-committees (task forces) under the Provincial and District Development Co-ordinating Committees; providing antiretroviral therapy in public hospitals. Most recently the Government has moved to decentralise the free distribution of ARVs to district levels. The Government has also endorsed the global World Health Organisation *3 by 5* strategy. Other positive measures in addressing HIV and AIDS are the establishment and expansion of voluntary counseling and testing and prevention of mother-to child transmission of HIV programmes to district levels, support to home-based care programmes, incorporation of nutritional programmes as part of care and support of people living with HIV and AIDS and the provision of condoms and drugs for sexually transmitted infections. There are also currently drives to support local remedies.

Other strategies worth noting are establishment of bottom-up planning process in all the districts; building community competencies by all stakeholders and fostering co-ordination efforts at national and community levels; youth involvement in HIV and AIDS programmes; establishing resource mobilisation strategies; initiatives by the transit communities (such as truckers, farmers and sex workers; malaria supportive programmes for people living with HIV and AIDS; and existence of monitoring and evaluation plan to track the response. Such plans also come in the form of annual review programmes.

UNDP/MFNP, 2005: Millennium Development Goals, Zambia Status Report, 2005

nomic development. Zambia should work with other least developed countries to pressure developed nations to open their markets especially in agriculture trade.

It is also imperative that Zambia makes serious investments to build capacity in trade. Prudent macroeconomic management of low inflation and a stable currency should be given high priority. For example, the sudden appreciation of the Kwacha in 2005 arising from some of the positive global economic trends hurt exporters of non-traditional exports, who in the first place mitigated the slump in the country's copper export revenues of the 1980s and 1990s. This has not been helped by swings in 2006 of the Kwacha, which is making it difficult for both importers and exporters to plan for their business.

The global policy environment

The relatively good performance of the global economy analysed above has been complimented by efforts to create an international alliance to help developing countries halt the spread of major diseases. A number of international conferences have adopted commitments to this end.

Millennium Declaration and the MDGs

The first of these commitments is the Millennium Declaration adopted in September 2000 by 147 heads of State and Government and 44 representatives at the UN Millennium Summit in New York. The Declaration outlined the intent of the international community to take aggressive steps to tackle the problems of poverty and major diseases, afflicting a big part of the world's population. A central challenge of turning globalisation into a positive force for all the people of the world was recognised. Thus, based on six fundamental values that need to characterize the 21st Century - freedom, equality, solidarity, tolerance, respect for nature and, shared responsibility - the world leaders committed themselves to freeing the more than one billion people of the world facing abject poverty

The Millennium Declaration adopted a set of inter-connected and mutually reinforcing development goals. Follow-up action by the United Nations Development Group in collaboration with the OECD, World Bank and the International Monetary Fund connected these to other internationally agreed goals and set targets and indicators for each goal. This framework of eight development goals was then designated "Millennium Development Goals" (MDGs).

The sixth MDG, the theme of this report, focuses on tackling HIV and AIDS, malaria and other major diseases. The seventh target commits national governments, including Zambia to "have halted by 2015, and begun to reverse, the spread of HIV and AIDS".

International conferences

The second part of the 1980s was characterised with dramatic years altering international diplomacy. The period saw the end of the Union of Soviet Socialist Republics, the fall of the Berlin Wall leading to the unification of East and West Germany and the end of the cold war. The resulting peace dividend was now expected to free the attention of world leaders and increase their commitment to uplifting the welfare of people in poor nations without the disruptions of cold war politics.

With this opportunity presented, a number of international conferences that helped to galvanise the spirit of co-operation on development have been convened since the 1990s. The 1990 World Summit for Children pioneered the holding of international conferences at the heads of State and Government level.

Taken together, the conferences have helped to shape world thinking on key issues of development - environment, gender, social development, human rights, food, housing, and HIV and AIDS - and put them at the top of the global agenda.

Although there is no universal prescription for successful development, the conferences reflect the growing convergence of views that democracy, development and respect for human rights, including the right to development, are interdependent and mutually reinforcing. By the mid-1990s, these views had been sufficiently espoused and a general consensus had emerged.

A number of international meetings have been held in the current decade since the Millennium Declaration to entrench MDGs even further. In June 2001 the UN General Assembly Special Session adopted a Declaration of Commitment to take action against HIV and AIDS. The Declaration of Commitment is considered a roadmap for achieving the Millennium Development Goal of halting and reversing the HIV and AIDS pandemic by 2015. It sets out specific commitments participating Governments will work to fulfil. This includes prevention campaigns, reducing stigma, building infrastructure, providing necessary resources, and ensuring treatment, care and respect for people living with HIV and AIDS.

Efforts to make the global economic environment fairer to least developed countries (LDCs) have also continued. At the Third UN Conference on LDCs, held in Brussels in May 2001, 193 participating governments committed themselves to end the marginalisation of the poorest countries of the world and improving the quality of lives of the more than 600 million people who live in the LDCs, by beneficially integrating them into the global economy.

This was followed by the International Conference on Financing for Development in March 2002 in Monterrey, Mexico, which explored ways of mobilising domestic and international resources to finance the development challenges mapped by previous conferences. The Monterrey Consensus tackled six themes important to the increase of resource flows in developing countries: i) Domestic financial resources; ii) foreign direct investment and other private flows; (iii) international trade; (iv) international financial and technical co-operation; (v) debt relief; and (vi) systemic issues that focused on reforming the international architecture.

The Paris Declaration on Aid Effectiveness

In March 2005, the Organisation for Economic Cooperation and Development (OECD) countries adopted the Paris Declaration meant to improve aid effectiveness in developing countries. The Declaration adopted 12 indicators and targets to be achieved by 2010 by OECD countries in five areas of aid - ownership, alignment, harmonisation, management and mutual accountability.

In Zambia, donors had started to make progress on these issues, particularly on harmonisation, already before the adoption of the Declaration. Seven like-minded donors - the United Kingdom, Netherlands, Ireland, Sweden, Denmark, Finland and Norway - signed a memorandum of understanding (MoU), with the Government of the Republic of Zambia on aid harmonisation in March 2004. Several other donors, including Germany, the UN system and the World Bank, have since then appended their signatures to the MoU which focuses on issues such as the need to adopt similar financial disbursement modalities and reporting and monitoring arrangements. This development is important for aid management in general and HIV and AIDS resources in particular.

Specifically, the MoU requires that: (i) Reporting and monitoring systems should be country owned and led; (ii) Donors should rely on a single reporting system within a given supported sector for similar activities; (iii) Donors should work towards reaching consensus with the Government on common formats, content and frequency for periodic reporting; (iv) Scaling down the "mission" approach to reporting and monitoring; (v) Building Government

capacity for reporting and monitoring; and, (vi) Donors to rely on Zambia's financial reporting system.

Debt relief

Some of the outcomes of the policy developments discussed above have benefited Zambia immensely. In particular, debt relief and commitment of the leaders of industrialised nations pronounced at the G8 Summit have answered to the concerns voiced at the UN conferences. This development is important for Zambia as it means that resources previously spent on debt servicing could now be deployed to the response to HIV and AIDS and other urgent developmental needs. The UN conferences particularly helped to galvanise world opinion in favour of total debt cancellation and increased aid, as seen from the pressure mounted by Band Aid that signalled the concern of ordinary people in developed countries.

Debt relief at the time when copper prices are soaring is expected to give some boost to the Zambian economy. However, the levels of poverty, at 68 percent in 2004, are so high that the Fifth National Development Plan suggests that the country's economy must grow consistently for the next 25 years, at more than 7 percent for poverty to significantly drop. This will also depend on the nature of growth. If it is driven by mining alone it will not be broad based enough. Majority of the Zambians will be bypassed by this growth. Therefore, the global developments recounted above must be augmented by pro-poor policies if they are to benefit the majority of Zambian households.

The challenge of development in the context of HIV and AIDS

The challenge of development in Zambia has always been daunting and now HIV and AIDS is immensely complicating the situation. The epidemic affects every fabric of human existence and economic development. Various studies provide evidence on the high economic costs of HIV and AIDS.

Regrettably, the techniques for estimating the economic cost of the epidemic have not yet been refined because evidence for the nature of the impact at different levels is not yet fully established. However, there have been attempts to map the mechanisms through which the the economic and social impacts of HIV and AIDS are transmitted from households to sectors and macro level in general.

Transmission mechanisms

HIV infection in an individual is the epicentre, the starting point of a chain of impacts. There are key relationships before infection that predispose certain categories of the population to susceptibility. Two examples illustrate the point.

First, poverty - by driving some people into risky behaviour such as sex work - is a key factor in the spread of HIV. Secondly, more women than men are infected with HIV. This is due to unequal social and economic power in society (see Chapter 3). Therefore, addressing poverty and existing gender disparities are important responses in arresting the spread of HIV even though not the only ones.

After infection, HIV and AIDS induces another chain of key relationships that defines the individual's or household's vulnerability and resilience. Most immediate impacts of the disease are at household and community levels. Families face immediate loss in income earnings due to increasing health care costs because of the sickness. AIDS-related death, if the family member was a breadwinner or contributed to income generation, leads to further and permanent loss in income.

The AIDS epidemic is deepening the vulnerability context of Zambia's societies. Households often have to divert resources (time, finances and productive assets due to distress selling) in order to care for the

chronically sick foregoing productivity in the process. Therefore, societies that once coped well with droughts and other natural shocks are now easily thrown into destitution because resilience against shocks has been seriously undermined by the epidemic. Social safety nets, such as the extended family system, have been regarded as Africa's first line of defense and resilience against shocks. These safety nets have now been overstretched and seriously weakened by the pandemic.

The impacts of HIV and AIDS at household level are not gender neutral as it is women that often have to bear a bigger burden such as caring for the sick and the rising number of orphans (see Chapter 3).

Impacts on the health sector

Zambia's health systems, the very frontline in the action against the HIV and AIDS pandemic are clearly overburdened by the epidemic with the quality of health care being compromised in the process (University of Zambia, 2005a). For example, the health system can no longer afford to isolate tuberculosis (TB) patients because the number of cases has increased drastically due to HIV and AIDS, outstripping available facilities. This has necessitated the need for innovative approaches in the treatment of TB, placing emphasis on household supervision to enhance adherence to treatment. AIDS-related diseases are clearly diverting resources from other diseases. As much as 65 percent of hospital space in some cases is allocated to HIV and AIDS related cases.

Impacts on the education sector

There have been immense direct and indirect costs on education. Studies seem to indicate that this is probably the most hit sector (University of Zambia, 2005b). Teachers are dying at an unprecedented rate. In 1998, 1,300 teachers died mostly due to HIV and AIDS, two thirds of all newly trained teachers. This is complicating progress in lowering class sizes as the number of teachers is declining.

Children are being taken out of school to look after sick parents or help with income generation. There have been enormous psychosocial effects even for the children that remain in school but are having to cope with the impacts of HIV and AIDS at home while sometimes facing stigma in the school (Kelly, 2000). The quantity and quality of services, skills and personnel are being lost at a very critical point.

Impacts on the agriculture sector

The sector impacts of HIV and AIDS on agriculture are more directly connected to the household for most people in the rural areas. The Poverty Reduction Strategy Paper 2002-2004 declared agriculture as the engine of growth and key to Zambia's development as well as the reduction of wide spread poverty. It absorbs 67 percent of the country's labour force and is the main source of income for the majority of the Zambian people. Primary agriculture production contributed on average 16 percent to GDP between 1994 and 2005. Value added from agro-processing industries will add another 8 percent to GDP to raise the average to 24 percent.

Agro-processing industries which directly depend on agriculture constitute 75 percent of Zambia's manufacturing. Agriculture is therefore very important to urban employment as well. As a result of the phenomenal increase in agricultural exports, the contribution of agriculture to balance of payments is on the increase.

It is well documented that the potential for agriculture to grow and spur economic development in the country is huge. However, agriculture performance is under threat by HIV and AIDS from a number of angles. The loss of labour as a result of death or chronic illness and the labour tied to care is leading to reduction in the area under cultivation (University of Zambia, 2005c). There are also declines in yields.

There is further evidence that livestock accumulation is being affected, due to distress sales. In addition, the loss of extension workers is negatively affecting the provision of information to farmers. Farmers are also faced with a limitation of receiving and passing on information at household level. Often when the head of the household dies, this equates to the loss of the most knowledgeable and experienced farmer in the family, affecting negatively the inter-generational transmission of skills.

A change in cropping patterns to the less labour intensive crops (mainly food rather than cash crops) is also being observed. Households are reverting back to subsistence farming. Overall, the ability to recover from natural shocks such as drought and floods is seriously being eroded. At the national level, this is leading to chronic dependency on food imports, which in turn affect negatively the agriculture sector in the way relief food depresses prices of agriculture commodities.

Impacts on the business sector

The Zambian business sector has not been spared by the epidemic. HIV and AIDS is increasing expenditure for business as well as reducing revenue.

One study found that the main causes of ill health at workplaces were those often associated with the HIV and AIDS pandemic, with TB accounting for 46.8 percent and diarrhea 12.9 percent (Garbus, 2003). Employers incurred an average of US$13 per episode of illness. Other HIV and AIDS related costs included productivity losses, paid sick leave, cost of replacing labour and absenteeism.

It is not known yet how industries have responded but it is assumed that as reliability of labour becomes more uncertain while its costs shoot up, employers will change their techniques of production to become more capital intensive. This will lead to a reduction in the ability of the Zambian economy to create employment.

Conclusions

It is clear from the foregoing that HIV and AIDS is a huge challenge to development. There can be no business as usual. In seeking to respond to this challenge, the following need to be considered:

1) Come up with strategies to prevent new infections.
2) Design development projects appropriately taking into account the constraints the epidemic imposes on effectiveness.
3) Design programmes to address specific problems brought about by HIV and AIDS including the need to take care of children orphaned by AIDS as well as those that are vulnerable.
4) Mitigate the effects of HIV and AIDS on poverty.

3 ~ HIV and AIDS and households

HIV and AIDS is arguably the most devastating disease facing humanity at present. Discovered in 1981, the epidemic now threatens to decimate entire populations, cripple national economies and reverse developmental gains. It has caused unprecedented havoc on mankind, more pronounced at community and household level. This Chapter analyses how HIV and AIDS is affecting Zambian households. HIV and AIDS affected households have been defined as those meeting any of the three criteria:

1) Hosting a person with an AIDS-related disease
2) Hosting a child orphaned by AIDS
3) Having experienced an AIDS-related death.

The Chapter provides evidence of how each of the above three aspects qualifies a household to be known as HIV and AIDS affected. Furthermore, it also highlights the social ramifications of HIV and AIDS and the importance of putting the household at the centre of the response to the epidemic.

The Chapter also emphasises that designing initiatives that are long-term, sustainable and targeting households is a significant strategy. It has the potential of reducing the spread of HIV, reducing its impact on various sectors of the country's economy and achieving the Millennium Develop-ment Goals (MDGs).

Global HIV and AIDS situation

Data on HIV and AIDS highlight the epidemic as a global problem of a great magnitude. A total of 40.3 million people were living with HIV by the end of 2005. Since 1981, more than 25 million people have died of AIDS-related illnesses. In 2005 alone, 3.1 million people died of AIDS, out of which 570,000 were children. Close to five million people were also newly infected with HIV in 2005 (UNAIDS, 2005).

Sub-Saharan Africa has been the hardest hit by the pandemic. It is accounting for huge reversals in human development on the continent. Nothing else has ever reversed developmental gains so profoundly as the HIV and AIDS epidemic in some parts of sub-Saharan Africa. This will have critical long-term impact on human development, economic growth and stability, on society, culture, governance and national capacity, for decades to come (Barnett and Whiteside, 2002).

The epidemic reached countries at different times and the risk factors differ from one country to the other. As a result, HIV seems to spread faster in some countries of the same region than in others. Even within a country several epidemic patterns can be observed - low, intermediate and high prevalence epidemics.

HIV and AIDS situation in Zambia

The high HIV prevalence rates in Zambia should be considered within the regional context. Zambia is among the seven countries most affected by HIV and AIDS in sub-Saharan Africa. The other countries are Botswana, Lesotho, Namibia, South Africa, Swaziland, and Zimbabwe (see Map 3.1 on p. 41). These are all Southern African countries where HIV prevalence ranges between 16 and 35 percent. Currently in Zambia, AIDS-related deaths have overtaken malaria and other diseases especially amongst the 15 to 49 age group.

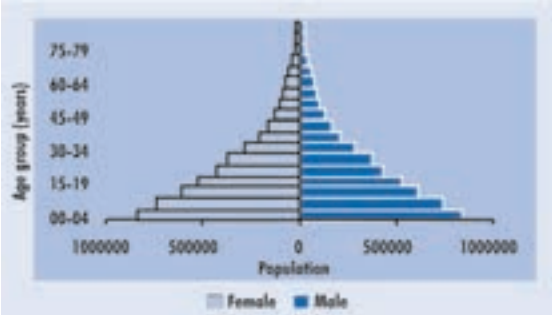
"She just looked at me sad"

She is all alone. Felix mother told me this girls mother and father died of AIDS. I asked how old she was but she didn't answer. I asked if I could take a picture and the older woman said yes. I feel sorry for her.

Photographer: Margaret Chitono

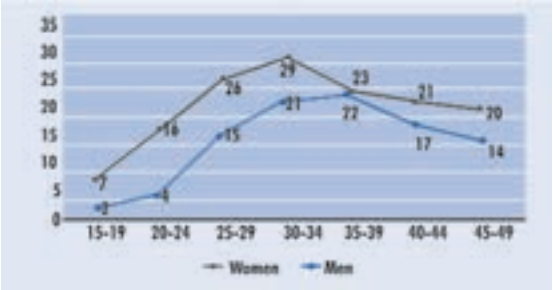
CHAPTER 3

Figure 3.1: Age - sex composition, Zambia 2000



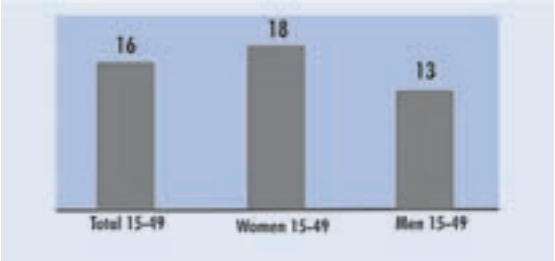
Central Statistical Office, 2003

Figure 3.2: Percentage of HIV positive by age



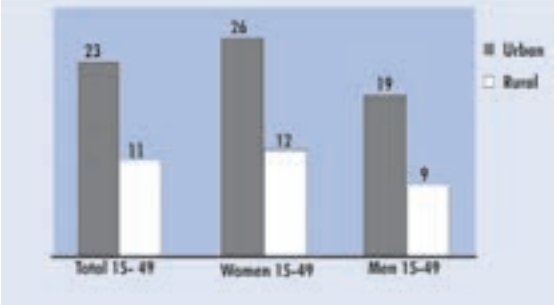
Central Statistical Office, 2005

Figure 3.3: Percentage of HIV positive



Central Statistical Office, 2005

Figure 3.4: Percentage of HIV positive by residence



Central Statistical Office, 2005

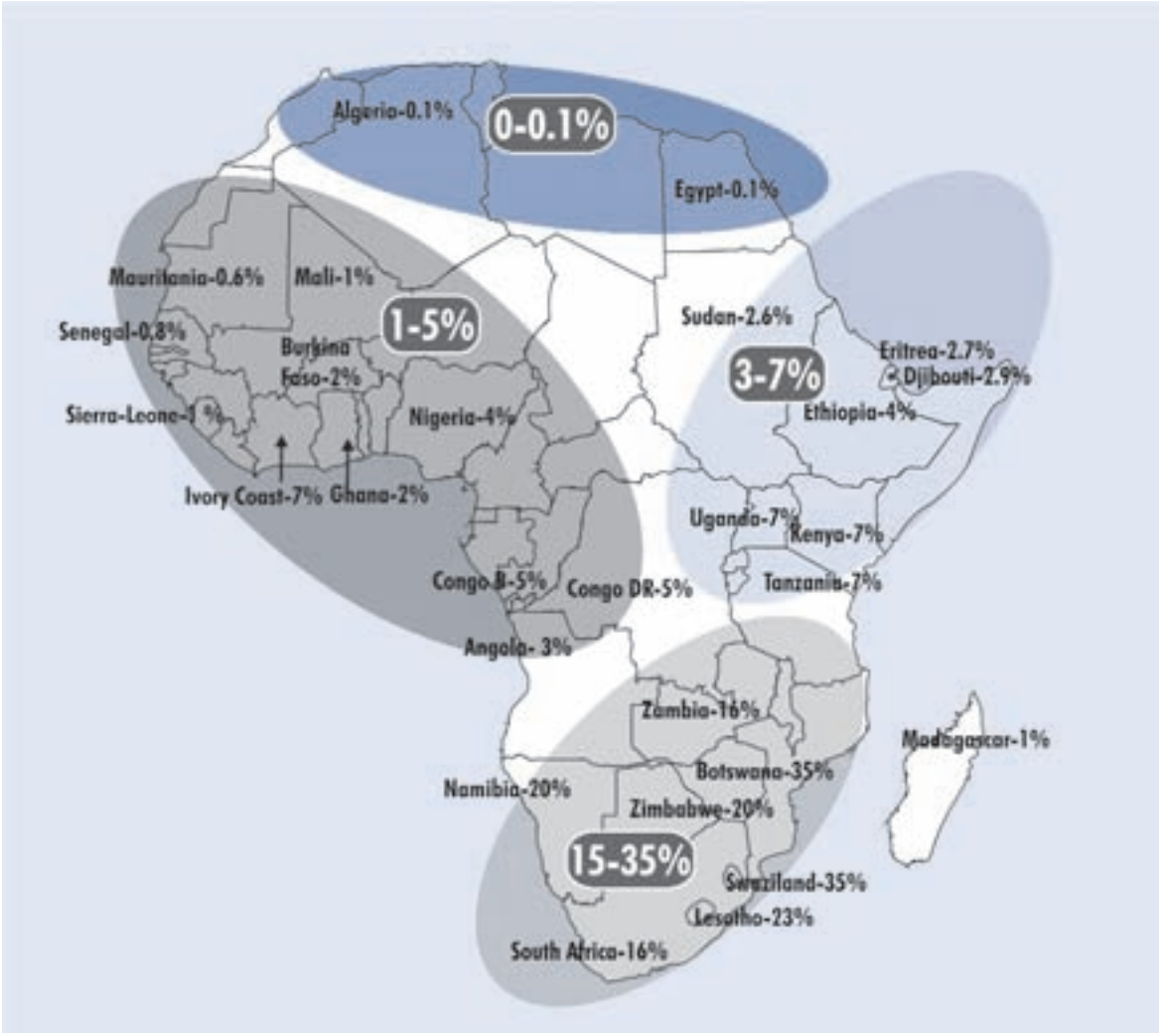
According to the 2001/2002 Zambia Demographic and Health Survey (ZDHS) about 16 percent of the adult population in Zambia is HIV-positive. In addition, approximately 39.5 percent of babies born from HIV-positive mothers are infected with HIV. One of the major problems associated with the HIV and AIDS epidemic is that it mainly attacks the productive age group, peaking at between 30 and 39 years (see Figure 3.2).

There are more women living with HIV (18 percent) than men (13 percent). This is even worse among young women aged 15 to 19 years who are five times more likely to be infected than males in the same age group (Figure 3.2). However, there are more men than women infected with HIV in the 35-45 years age category. The HIV infection gender disparity is as a result of more young women being more susceptible to infection than their male peers.

Regionally, infection rates range from about 21 percent in Lusaka to 15 percent in the urban provinces along the line of rail and between 8 percent in Northern Province to 13 percent in Eastern Province (see Map 3.2 and Figure 3.5 on p. 42). In general, HIV prevalence is more than twice higher in urban areas than in rural areas (23 percent and 11 percent respectively, Figure 3.4). More urban dwellers are likely to die earlier, especially those living in unplanned sites with no access to sanitation and water. They tend to be more susceptible to opportunistic infections. In urban areas, when there is a death of a breadwinner, households adjust to shock by developing quick fix survival strategies. Such include begging on the street, brewing alcohol for sale and/or sex work.

Intra-provincial variations in HIV prevalence are also evident. The range can be seen in the differences between districts in the same province (see Map 3.3 on p. 43). The range can be as wide as between 7.5 and 30.9 percent, like for Southern Province. This is a difference of 23.4 per-

Map 3.1: HIV prevalence in Zambia and other African countries



UNAIDS 2004 estimates used (unless where recent national population-based HIV survey available)

centage range. Others can be as low as between 5.2 and 12.6 percent, like is the case for Northern Province. In general, districts that are predominantly urban have higher prevalence rates than those that are mostly rural. Livingstone had the highest prevalence rate of 30.9 percent in 2004 followed by Ndola at 26.6 percent. Kaputa, Mungwi and Mporokoso in Northern Province had the lowest prevalence rate at 5.2 percent (see Map 3.3 on p. 43).

AIDS is also causing an orphanhood crisis. At the end of 2005, Zambia had 1,197,867 orphans Out of these, 845,546 were orphaned by AIDS. (The total population was 10.3 million.)

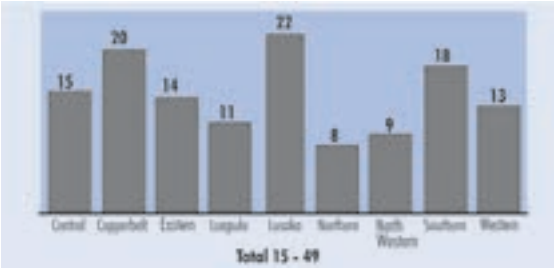
Future outlook of Zambia's HIV and AIDS situation

The epidemiological projections for Zambia are quite optimistic. It is estimated that 917,718 people were infected with HIV in 2004 of which 411,181 were males and 506,537 females. By 2010, the number is projected to decline to 881,143, with 393,233 males and 483,910 females. The prevalence rate is projected to come down from the estimated 14.4 percent in 2004 to about 11.9 percent in 2010. By 2010 the prevalence would decline to 17.1 percent in Lusaka, 15.5 percent on the Copperbelt, 13.3 percent in Southern, 12.2 percent in Central and 6.7 percent in Northern Province.

Map 3.2: HIV prevalence by province

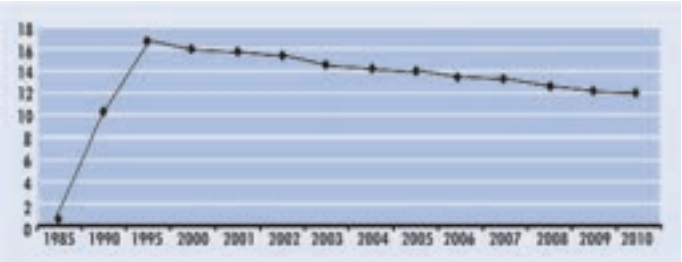
Central Statistical Office, 2005

Figure 3.5: HIV prevalence by province



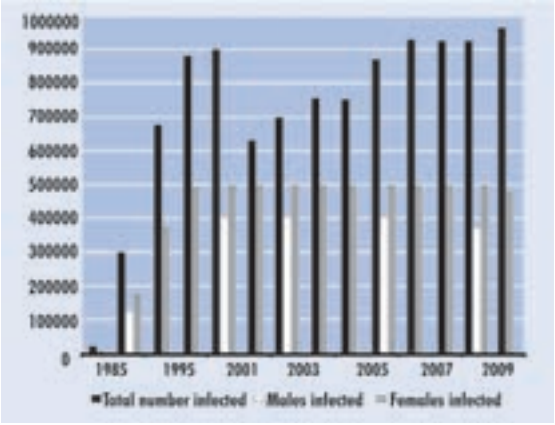
Central Statistical Office, 2005

Figure 3.6: Projected HIV prevalence, 1985-2010



Central Statistical Office, 2005

Figure 3.7: Projected number infected with HIV, 1985-2010



Central Statistical Office, 2005

Despite the projected decline in the prevalence rate, the incidence of new HIV cases and annual deaths from AIDS-related illnesses will continue to rise and only start to fall around 2008 (Figures 3.6 and 3.7). This decline would be facilitated by an increase in condom use, voluntary counseling and testing uptake, more women seeking prevention of mother-to-child trans-mission HIV and the success of the ART programme.

More women than men will continue to be infected with HIV and die. Between 2005 and 2010, more than half of all adults living with HIV will be females. A similar pattern is evident with regards to new HIV infections and related deaths.

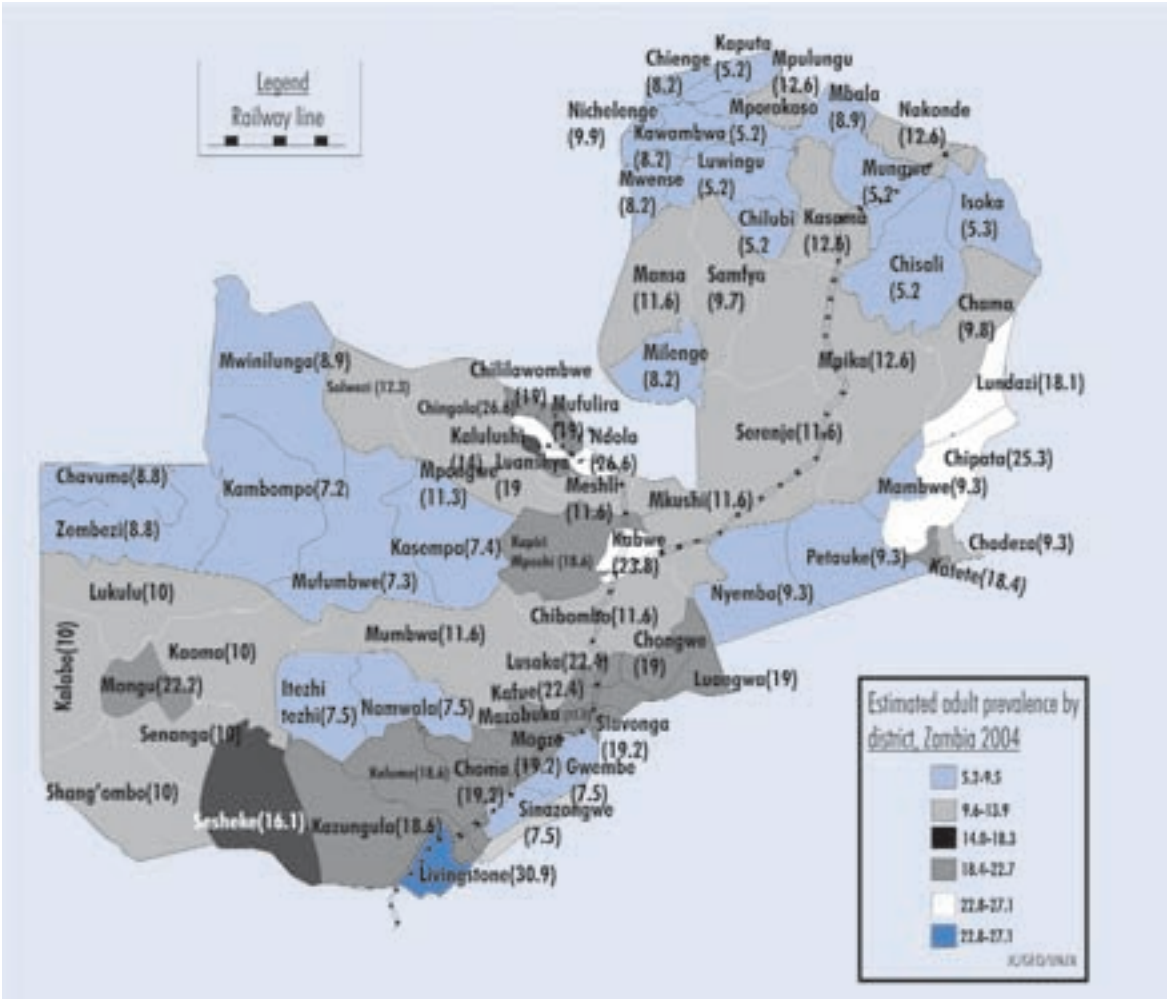
With regards to orphans, the projections are pessimistic. The total number of orphans is expected to increase by about 16 percent to 1,328,000 in 2010. Of these, 42 percent are expected to be maternal orphans, 45 percent paternal orphans and 13 percent dual orphans (see Figure 3.9 on p. 44). Implications of such a large number of orphaned children on society and families have recently been well studied in Zambia and are highlighted below.

Drivers of HIV prevalence in Zambia

There are many drivers of the spread of HIV in Zambia. The primary driver is the sexual activity itself, as HIV infection in Zambia is principally through heterosexual intercourse.

Whether sex occurs for procreation, pleasure, exchange, ritual purposes or experimentation, it will carry with it the risk of infection of HIV and other sexually transmitted infections. This risk can, however, be reduced by changing on the sexual behaviour of the persons involved. What becomes of a critical importance is awareness of basic facts about HIV and AIDS and whether people use this information to take actions to protect themselves and others from HIV infection.

Map 3.3: HIV prevalence by district



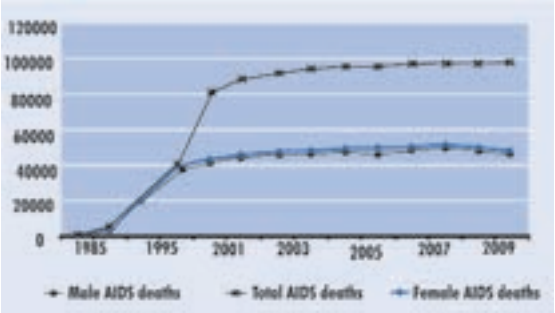
Central Statistical Office, 2005

General awareness of HIV and AIDS is nearly universal among both men and women of reproductive age in Zambia. According to the Zambia Sexual Behaviour Survey (ZSBS) 2005, 97 percent of both men and women and 96 percent of the rural dwellers are aware about HIV and AIDS. This awareness has been on the rise. The proportion of respondents who knew that HIV can be avoided increased to 91 percent in 2005 from 78 percent in 1998 among females and to 94 percent from 84 percent among males. Among females, 89 percent knew that a healthy looking person could be carrying HIV. This was 93 percent for males.

Despite this near universality of HIV and AIDS awareness, only 15.1 percent of respondents in the ZSBS 2005 were reported to have gone for voluntary counseling and testing. The reasons for avoiding VCT were many, including fear of results, which was associated with apprehensions concerning stigma and discrimination. Stigma is still a big issue despite the efforts directed at eradicating the problem. The ZSBS 2005 found that 36 percent of the respondents believed that one's HIV status should be kept a secret. 20 percent reported to know someone who had suffered stigma and discrimination as a result of their status. An even higher proportion (27 percent) believed HIV positive people should be ashamed of themselves.

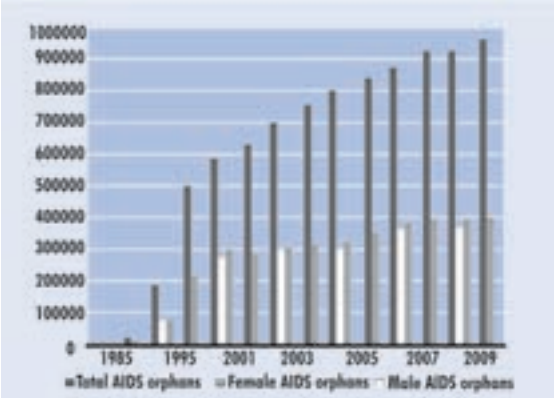
Although there is near universal awareness about HIV and AIDS, sexual behaviour still remains a matter of great concern. According to the ZSBS 2005, condom use

Figure 3.8: Projected total, male and female AIDS deaths



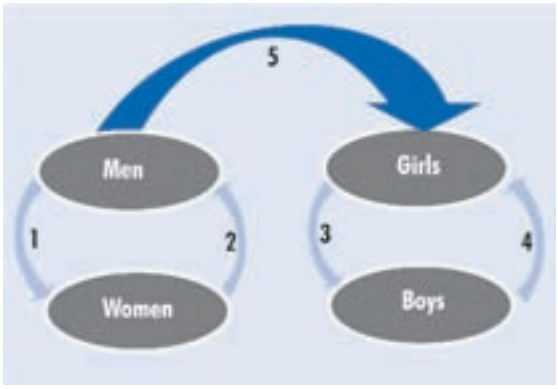
Central Statistical Office, 2005

Figure 3.9: Children orphaned by AIDS by 2010



Central Statistical Office, 2005

Figure 3.10: Direction of sexual relationships



Patrick Chilumba, 2006

among married couples is very low and has declined slightly from 7.9 percent in 2003 to 5.5 percent in 2005. This is worrying in a generalised HIV prevalence context. Of further concern is that a significant proportion of sexually active respondents reported having sex with a non-regular partner (non-marital or non-co-habiting) in the previous 12 months. This was 27.6 percent for males and 15.8 percent for females which averaged at 29 percent for urban respondents compared to 18.5 percent in rural areas.

Although condom use among non-regular sexual partners is higher (48 percent for urban and 25.9 percent for rural), this is still too low in light of the scale of the AIDS epidemic. It is even more worrying that this dropped from 55 percent in 2003 to 50 percent in 2005 among urban males and 26 percent to 16 percent among rural females. Even among men who reported to have had sex with a sex worker, only 53.1 percent used a condom.

There is also the issue of forced sex perpetrated mainly by husbands in marital relationships or other men well known to the victims. In the ZSBS 2005, 15.1 percent of sexually active females reported forced sex. Considering the likelihood of underreporting on this matter, this is a very significant proportion. A double tragedy of this is that condom use is very unlikely.

Some of the reasons for high infection rates among women include socioeconomic problems, social norms, biological reasons, behavioural reasons, the social status of women and their inability to negotiate for safer sex. Young women also more susceptible than their peers because they are more likely to have sex with older men already exposed to HIV (see Figure 3.10). Early marriages and sexual cleansing are the other risk factors. When a household comes under stress due to poverty, at times induced by HIV and AIDS itself as livelihoods fail, there is pressure on girls to engage in prostitution or even occasional sex to buy some form of support.

Box 3.1: Stigma and discrimination

"There is no help that comes from my friends. We do not get on well with my friends, because they always laugh at me. They say we are sick and advise their family members not to interact with my family. When they laugh, they make fun of us, "look the way that person has lost weight. They are so sick of AIDS." But we do not take it to heart, because everyone is certainly affected with the pandemic; just ignore the people, no matter what they say. Only God understands." *42-year-old HIV-positive male, married, Lusaka*

"When I go even to the bus stop, women start singing, "that man is sick". These are situations you experience every other day. Stigma is still a very big problem. I always forgive these people because I think they are ignorant. It never angers me personally but there are those who take it even deeper." *PLWHA, 2006*

"Some people in the community treat households affected by HIV/AIDS with stigma and discrimination. It [HIV and AIDS] also robs one of self esteem. You just find that certain people just start isolating themselves, even from peers, church members and start living a closed life." *Kapiri Mposhi, key informant 2006*

"There isn't actually a home that has not lost a loved one to HIV and AIDS. However, this is still being kept behind closed doors. People do not want to admit that HIV is now in every corner." *Kapiri Mposhi, key informant*

Urbanisation is another strong driver of HIV infection. Zambia is one of the most urbanised countries in Africa, with urban migration characterised by movement from smaller towns to bigger cities. This mobility is of direct relevance to the HIV prevalence. The higher population density in urban areas* means that there is more human interaction and consequently sexual activity. The urban population also has more liberal attitudes towards sex.

The vast majority of people living with HIV in Zambia do not have access to treatment. Of the 153,000 people estimated to be in need of antiretroviral therapy, only an estimated 26,000 to 30,000 (14 to 18 percent) were receiving treatment as of June 2005. This makes Zambia one of the countries defined by the World Health Organisation as having unmet need for antiretroviral treatment.

The low voluntary counseling and testing uptake combined with low condom use suggests that HIV infection rates will remain high in Zambia in spite of the optimistic projections of the prevalence rates (presented on p. 41).

There is enough evidence that suggests that a lot of people, especially the young, deal with socioeconomic problems, society pressures and problems related to poverty by resorting to alcohol. A rapid assessment carried out in Zambia to assess the linkage of alcohol to HIV and AIDS revealed that there is a very strong link between alcohol and the spread of HIV and that young people, especially the orphaned, are the most affected. (STI Situation Analysis, 2004).

Most people living with HIV and AIDS (PLWHA) cited alcohol as being responsible for their HIV infection. Participants in focus group discussions with PLWHA in Lusaka, young people in Solwezi and sex workers at the Tasintha Programme agreed that alcohol impairs judgment and often leads young people to engage in sex with a sex worker and get exposed to HIV. The sex workers said alcohol and substance abuse gives them the courage to have sex with strangers (Luo and Morris 2006).

** For example, Lusaka Province had a population density of 63.5 people per square kilometers compared to 13.1 people per square kilometers for Zambia as a whole.*

HIV and AIDS in the household

HIV and AIDS has put enormous economic stress on households as they care for the sick family members, experience the loss of productive adults or absorb orphans.

A household usually goes through formation when two people start living together. The people could be siblings or spouses, who could start having children. The children later mature into adults. A household goes through dissolution as children grow up and start leaving home. In some cultures the children may not leave home but may be joined by their spouses and children in their households. When the parents become too old, they then die. There are, however, other reasons for dissolution of households now and these include HIV and AIDS.

The demographic impact of HIV and AIDS on a household, comprising a family unit, affects its ability to reproduce itself. Households where adult females are infected with HIV experience lower birth rates and higher infant and child mortality rates. Therefore, in cases where a female parent is HIV-positive, fewer children will be born and out of these, some will die in infancy or early childhood.

These gaps may not be filled. Thus what has been seen from epidemiological evidence provided above, that there are more women infected with HIV than men, has obvious implications for the continuity of households. Even more important is that high infection rates amongst women have far-reaching implications for the household coping capacities given their traditional roles as caregivers, breadwinners and providers of food. The loss of so many women will negatively impact the capacities of Zambian households.

A number of things happen as a result of AIDS-related death, especially in cases of the loss of a breadwinner. Family members may be separated and forced to join other households. Sometimes the children left behind are sent to live in another household, in some cases from urban to rural areas. In certain instances children leave home in search of means of food and/or employment. Although loss of a household reduces the size of the household, this is usually temporary, as one or more new members (orphans) may be added to the household.

In the recent past, the family structures have changed due to considerable number of children orphaned by AIDS and other vulnerable children. Worse still, a household affected by AIDS may disintegrate. Heads of households have been reported to comprise of grandparents, women and children themselves. Evidence is available that suggests that child headed households are vulnerable to exploitation and this can take any form such as sexual and child labour.

Although grandparents are now looking after orphans, they are usually too old to work and adequately care for the children. The older orphans may assume the role of looking for food, caring for the sick and sometimes begging on the street (street children). Sex work is not an uncommon social consequence. Tasintha, a programme that targets sex workers has established a linkage between loss of parents and sex work. Girls usually engage in sex work as a means of survival. Sex work in turn may expose these girls to sexually transmitted infections including HIV (OVC Situation Analysis, 2004).

Impact of HIV and AIDS on the household

Zambian families are usually very large and loss of one or both parents has very serious consequences on the remaining household members. Some of the challenges include added costs, the impact on women and children and the need to assist the "survivors". Families and communities coping with HIV and AIDS related illnesses and death shoulder most of the burden. The epidemic has taken the heaviest toll at the household level and in particular women (Over, 1998).

Some of the major characteristics of the HIV epidemic are the silent nature of the infection, disease progression and eventually death. Its impacts vary with time and from household to household, ranging from immediate and severe shock to complex, gradual and long-term changes. An example of immediate and sharp shock is where the primary breadwinner dies. The living conditions of such a household are immediately affected. Children may find themselves being sent to live in a different place, removed from a good school or withdrawn from school completely (see Box 3.2).

HIV and AIDS has a great bearing on the household. Its effects depend on a number of factors which may include:

- *The number of people infected in the household:* Up to one in five households are looking after someone who is chronically ill (Population Council and RuralNet Associates Limited, 2006). An individual infected with HIV usually requires frequent hospitalisation and may be unable to work, may require treatment of opportunistic infections and/or antiretroviral drugs. As a result of these commitments, household income may decline to such low levels that it becomes difficult to retain the same lifestyle even before the sick members of the household die.

- *The status in the household of the individuals who die:* There is a big difference whether they were parents or not and the contribution they made to the family. The impact is almost immediate if one or both parents become too sick to work effectively. The other members of the family who have to spend time looking after the sick also may lose out on their income generation activities. In cases where the breadwinner is not able to work and there is loss of income, the lifestyle and structure of this household

Box 3.2: The plight of a widow and the family after the death of a spouse

Mr. Kaindu was the only educated person in his family. He was a bank manager and lived in a beautiful one storey house in Kabulonga, an up market residential area in Lusaka. When he died his wife was also not in good health. Worse still, his brothers and sisters grabbed the property the family owned, shared his terminal benefits and his life savings.

The wife died a year later. After the funeral the four children left behind were told that they would be going to live with their grandmother in a village in Mbabala. They are now in a village school and they have learnt to fetch water from the stream like other children. They have very little access to food. They sleep on the floor and have to share the few blankets available with other children in the house. The children talked about how life had become a nightmare.

Box 3.3: The aftermath of property grabbing

Mr. Mulenga was diagnosed HIV-positive in 1991 in Kitwe. He presented to the hospital with recurrent fevers. Shortly afterwards he was hospitalised suffering from pneumonia. The home was crowded with family members who had come to help the wife nurse him due to frequent hospitalisation. Mrs. Mulenga was unemployed and depended on his husband's salary for medical bills, school requirements for the children and food at home. At the time of his death they had used up all his savings. Although his employers bought the coffin and gave a small funeral grant, the major bills had to be paid by the family.

After burial Mr. Mulenga's family members demanded for his bank book, car keys, divided the household assets and his clothes, without any consideration for the children and wife. Today Mrs. Mulenga and children are struggling to survive and have been forced to live with her old parents in Kasama, Northern Province.

Society for Women and AIDS in Zambia, Kasama, Northern Province

is likely to change. Usually the loss of income leads to poor food security, poor access to health services and school children may be withdrawn from school.

- *The asset base of the household and what is left for surviving members:* In households where there is a patient suffering from an AIDS-related illness, family assets may be sold as a source of income when livelihood opportunities diminish, because of high expenditures on medical bills, procurement of food, transport costs and purchase of washing powder. Usually such households become very poor. The situation may become even worse in the event of death as family members may grab all the family assets (see Box 3.3 on p. 47).

- *The capacity and attitudes of extended family members, community members, non-governmental organisations, faith-based organisations and community based*

Table 3.1: Impacts of HIV and AIDS on livelihood assets

Human assets	▪ More frequent incidences of illness and death ▪ Increased expenditure on health and diminishing expenditure on other important areas such as food, clothing and school ▪ Changed household size and composition ▪ Loss of labour and intra-household reallocation of labour ▪ Increasing numbers of affected households are headed by elderly people ▪ Higher dependency ratios for households that keep orphans and foster children ▪ Female headed households take care of greater numbers of orphans and have the highest proportion of total orphans ▪ Increased numbers of school drop-outs ▪ More girls than boys drop out of school ▪ More children in affected households assist in farming/domestic activities ▪ Inter-generational knowledge and skills gap created
Social assets	▪ Emotional stress due to loss of members of the family especially the heads of households ▪ Affected female-headed households participate less in CBOs ▪ HIV and AIDS entrenches gender inequality ▪ Stigma, discrimination and sometimes rejection ▪ Few affected households are members of co-operatives ▪ Affected households have very limited access to community-based support ▪ Lessened reciprocal relationships ▪ Weakens institutional capacity to deliver services ▪ Pressure on the stability and relationships within extended families ▪ Reduced linkages to formal and informal organisations ▪ Emergence of informal non-traditional organisations ▪ Emergence of street children and an increase in sex workers
Natural assets	▪ Affected female-headed households have much smaller portions of agricultural land ▪ Soil fertility decline owing to decreased availability of farm inputs and cattle manure ▪ Increased exploitation of fuel wood and wild foods leading to deforestation and declining wild food resources
Physical assets	▪ Loss of intergenerational knowledge and skills in traditional natural resources conservation and management ▪ Liquidation of assets to meet costs for food, gifts during care and funeral and medical care ▪ Many households own fewer physical assets due to high incidence of property grabbing ▪ Less access to improved farming technologies

organisations to help the affected household.

The sum total of these impacts are summarised in Table 3.1. The table groups the effects according to the different components of the sustainable livelihoods framework introduced in Chapter 1.

The asset pentagon which is the heart of the sustainable livelihoods approach is brought under very serious threat as each of the assets at the disposal of a household is eroded by AIDS. Coping mechanisms discussed in Chapter 4 are usually not only inadequate but also escalate the medium to long term impacts of the disease.

There are reports that people living with HIV may be discriminated or stigmatised by their friends, at work, in the community or by members of their families. A baseline survey for RAPIDS revealed that stigma varied from community to community. While some communities may report stigma and discrimination, others reported a reduction in stigma and discrimination with the recent access to drugs, other services such as voluntary counceling and testing, prevention of mother-to-child-transmission and care (Population Council and RuralNet Associates Limited, 2006).

Changing household structures

The very essence and social fabric upon which Zambian communities are founded are being denuded and destroyed as a result of the HIV and AIDS.

Cultural and social bonds and ties that have developed over many generations have come under massive pressure and trial from the epidemic. They are being challenged in ways that have no historical precedence and are likely to yield to the expediencies of dealing with and responding to HIV and AIDS (OVC Situation Analysis, 2004).

In some cases where children have lost one or both parents, they have been forced to live with members of the extended fami-

Box 3.4: Impact of HIV and AIDS on the family

"As the effects of AIDS starts showing, financial pressure occurs in varying degrees. The person starts to get sick and is suffering from opportunistic infections. This leads to frequent hospitalisation. The patient then gets too sick and is bedridden either in the home or hospital. Eventually the patient dies leaving behind orphans who will need care and support." *Kapiri Mposhi, Key Informant, 2006*

"As a result of an HIV-positive person having more frequent attacks of opportunistic infections, production in anything is reduced." *Kapiri Mposhi, Key Informant, 2006*

Box 3.5: HIV and AIDS and the extended family system

"In Zambia, our family system has been eroded. Before, we had the extended family system. We deemed our brother's child as our own child. Now we have terminologies where one's brother's child is a nephew. It all boils down to a level where you start looking at your family as being only your wife and your own children and all this comes about because we are failing to even provide what is supposed to be a good standard of living for our own children. If you cannot provide for your own children, providing for the next family is an impossible undertaking. Zambians have been pushed against the wall. They would like to do something, but they don't have the capacity". *Person living With HIV, Lusaka.*

"Zambia has always had a culture of the extended family, but now your brother is either sick or absent because of death. You find that the household has no resources and the family unit falls to pieces and there is no one to take care of orphans". *Person living With HIV, Lusaka.*

Box 3.6: An orphan's quest for school

"I was living with my step brother for the past four years. I was doing very well at school and told my teachers that I shall be a doctor when I grow up. One morning my step brother informed me that he would be sending me to live in one of the remotest parts of Zambia, Kaputa, because his own brother had died and would therefore have the responsibility of looking after the children he had left behind.

My dreams were immediately shattered. The next day I was on my way to Kaputa to live with grandparents whom I had never met or known, leaving my friends and family members I had lived with for several years. This all happened within a few days. I left by bus to Kasama, slept at the bus stop and the next day I was on a van to Mporokoso. I spent a few days in Mporokoso at the bus stop with nothing to eat, until a truck going to Kaputa carried me.

On arrival in Kaputa, my grandparents welcomed my desire to continue with school. Unfortunately the school wanted a transfer letter from my previous school, which I had not brought with me. My grandparents had no money to support my travel back to collect the transfer letter. All they had was a bicycle.

I told my grandparents that I would cycle back to Mbala to collect the transfer letter. The journey took two weeks. I cycled through the forest, stopped at any village overnight and depended on their generosity for shelter and food."

'Mwaba" in OVC Situation Analysis in Northern Province, 2004
(The time Mwaba met the NHDR team he had been accepted at Kaputa Secondary School.)

ly or become street children (Box 3.6). They may also live in orphanages. Some children drop out of school, get abused, lack social guidance, live with neighbours or be left on their own. In situations where children are left on their own, the oldest child is expected to look after the young ones. This phenomenon is known as the child-headed household. (OVC study 2003.)

Even as the family units are being destroyed, the social security system continues to be extremely weak. Community social structures and support systems which existed to support households during illnesses and bereavements are breaking down as they fail to cope with the number of sick people and deaths.

As a result of the impact of HIV and AIDS, new forms of households have emerged in Zambia (OVC Situation Analysis, 2004). These include:

- Elderly/grandparent headed household
- Child-headed household
- Single parent (mother, father) headed household
- Cluster foster care; A group of children cared for formally or informally by neighbouring adult household
- Children in subservient, exploited or abused fostering relationships
- Itinerant, displaced or homeless children
- Neglected, displaced children in gangs or groups

These changing structures may not fully match the support that a regular household was able to provide to its member. For example, in a grandparent-headed household, many children drop out of school, the nutrition of the children is affected, children have poor access to health services and are usually very poor. Grandparents may be too old to walk long distances to health institutions, work and produce for the family (OVC Situation Analysis, 2004 and OVC Situation Analysis in Northern Province, 2003).

In a household that comprises the young and elderly, dependency on others increases because they are not able to contribute to any productive activity. In house-

Box 3.7: Voice of a sex worker

"My parents died when I was eleven years old. We had very little to eat because my grandparents were too old to work and provide for me, my young sisters and brothers who were younger. I left for the city for survival.

On arrival I joined the gangs of thieves and I was arrested the very first night of attempted aggravated robbery. I was jailed at the Mukobeko Maximum prison. During my stay there I was abused sexually by the prison wardens.

When I was released from prison, I joined a group of sex workers up to the time I was recruited to the Tasintha programme. Life on the street was rough. A lot of my friends were killed and we contracted a lot of diseases but we had no choice, as money earned on the street was our only means of survival." *Reformed sex worker, Tasintha 2006*

holds where the children are older, they play the role of the parent, such as providing for their siblings. In rural areas they till the land and grow food for the family, cook, collect firewood and water. In the urban cities the children resort to selling or begging on the street.

Overall, the coping mechanisms of households have been weakened by the HIV and AIDS pandemic and the available support networks may be unable to cope with the new situation.

Orphans

Zambia has one of the highest proportions of children orphaned by AIDS in the world. The number of such orphans rose from 842 in 1985 to 845,546 in 2006. This is projected to rise to 936,167 in 2010. A study conducted in Northern Province showed that more widows and grandmothers are taking care of orphans. Sample data from participatory livelihood analysis showed that female-headed households maintained three times more orphans than

Box 3.8: HIV and AIDS: a consequence of poverty

"HIV has increased because people are failing to meet food requirements in their homes. We have become very 'movious' to manage to feed those at home. Some even end up not using a condom so as to get more money. In the process one gets HIV infected." *Woman in focus group discussion, Kapiri Mposhi, 2005*

"Most of the time in this community the men do not work and the women do not have any money for business. So most of the times, the women would like to sleep with a man who can just give them some money to buy a small packet of mealie meal for home. And usually the money given to these women is about K10, 000. Therefore, HIV keeps increasing. So poverty is causing HIV to increase." *Lusaka women focus group discussion, 2005*

"In some households in this community people cannot afford a number of things like a bag of mealie meal, a bar of soap or a bag of charcoal. They can only buy small packets (Pamela). Most men do not work. As a result of husbands not working, women are forced to sleep with other men, whose HIV status they may not even know. All this is just done so that they do not sleep hungry. They do not even think of VCT." *Lusaka women focus group discussion, 2005*

"When I'm looking after a patient with an AIDS-related illness, at the same time looking after children and I'm not working but I would wish that the children eat adequately, I would end up throwing myself at men so that they can assist me." *Kapiri woman in a focus group discussion, 2005*

male-headed households. The female-headed households also bore the brunt of looking after the orphans. (FAO, 2004). Orphanhood is not a new phenomenon in Zambia. What is different is that the traditional Zambian society had systems in place that took care of children who lost parents for one reason or another. One such system has been the extended family system. The recent unprecedented increases in mortality rates due to AIDS-related illnesses, coupled with widespread poverty brought about by prevailing poor economic conditions, has weakened the extended family system.

The burgeoning numbers of children orphaned by AIDS needing support and care are overloading the caring capacity of the traditional extended family systems. By deepening poverty due to partial loss or disappearance of adult labour and the costs associated with caring for the chronically sick and funerals, HIV and AIDS is stretching the capacities of households and other traditional community safety nets beyond their limits.

Many of the children whose parents have died may lack not only parental care and guidance, but also cultural, social and family ties and life skills that are usually passed on from generation to generation. Most of these children are deprived of their childhood and the opportunity to go to school.

When life becomes difficult, orphans and other vulnerable children tend to be attracted to big cities and towns. Economic hardships lead them to look for means and some of the choices of survival, such as migration to big cities, increase their vulnerability to HIV infection. In big cities, children may be exposed to alcohol and substance abuse, child labour, sex work and delinquent behaviour. Alcohol and substance abuse lead to impaired judgment and may thus lead children to engage in casual and indiscriminate sex. This leads to exposure to sexually transmitted infections, including HIV.

In an increasing number of situations, children orphaned by AIDS when rejected, opt to stay together instead of living with relatives. Child-headed households are becoming increasingly common. Children as young as eight years old act as heads of households and take on responsibilities normally carried out by parents, including providing care to other children.

Child-headed households face a wide range of problems that include grief, stigma, discrimination and inadequate support from the community. The most pressing and immediate need of child-headed households relate to survival needs in the midst of poverty.

The creation and existence of child-headed households in Zambia is evidence that the extended family system and indeed other traditional support systems are unable to cope with the challenges created by HIV and AIDS.

Poverty and HIV and AIDS interface

The linkages between HIV and AIDS and poverty or its proxy, food insecurity, are bi-directional. AIDS is a determining factor of poverty as well as a consequence of it. The epidemic is compounding pre-existing problems of chronic poverty thereby presenting a major obstacle to Zambia's developmental agenda (Salinas, IMF, 2006).

HIV and AIDS is an underlying cause of vulnerability to poverty, food insecurity and other shocks. The pandemic fuels poverty by adversely affecting human, social, natural, physical and financial assets essential to household livelihood strategies. Using these assets and capabilities, households are able to develop coping strategies to deal with the physical, social, economic and political environments.

The vulnerability context of households has deteriorated due HIV and AIDS (see Table 3.2) and other factors such as economic decline and widespread failure of the country's service delivery system. House-

Table 3.2: Impacts of HIV and AIDS on the sustainability of livelihoods

Resilience	▪ Livelihood failures as assets are degraded and social structures become less supportive. ▪ Difficulties to recover from shocks, seasonal factors and long-term adverse trends.
Ecological integrity	▪ Rising morbidity adversely affecting intergenerational transfer of capacity. ▪ Increased reliance on natural resources as livelihoods fail. ▪ Property grabbing and gender inequality in traditional land tenure systems. ▪ Institutions important for the management of natural resources at both local (traditional) and higher levels losing capacity at a fast rate.
Social equity	▪ Intensifying poverty widening social inequality in society. ▪ Widening gender disparities as women shoulder greater burden in caring for the sick and orphans. Female rate of infection is also higher.
Adaptive governance systems	▪ Weakening of the extended family system and less able to act as a social safety net. ▪ Capacity of local institutions negatively affected.

hold ability to cope with factors that diminish the opportunities for beneficial livelihood outcomes is also diminishing as a result. Widespread poverty is the face of the widening vulnerability context.

Mapping the vulnerability context itself is a complex matter because of the interplay of so many factors. However, at the root of a deteriorating vulnerability context for Zambian households are failing livelihood systems. This is where AIDS has been very vicious. AIDS is known to turn relatively well-off households into a situation of high vulnerability. Households quickly lose labour due to chronic illness, looking after patients and attending funerals.

Studies (e.g. De Waal and Tumushabe, 2003) have found a strong relationship between the deepening household food insecurity in Zambia and other Southern African countries and HIV and AIDS. This was well illustrated by the 2001-2002 drought and the consequent food shortages in Zambia.

Drought-stricken households had sufficient resilience through use of coping strategies. However, AIDS-affected households could not cope in the same way. Effects were much more for them because

Box 3.9: Observations on nutrition and AIDS

"In the past years, the Red Cross used to assist. They used to give mealie meal to AIDS patients. These used to recover and look well. Even the number of deaths in the community reduced. The patients also used to receive beans, cooking oil and washing soap. Patients used to feel happy about this. They also received blankets and towels. This was good. But since they left, deaths have also increased." *Kapiri women focus group discussion*

Box 3.10: Do not give us fish, teach us how to fish

"It is not enough to be receiving food at all times. It is better that people affected by HIV and AIDS are assisted in income generating activities. So, instead of bringing Kapenta that will only finish in two days, it is better someone brings income generating activities that will sustain our lives. We can help ourselves by keeping some animals like goats and when we are given something, we should contribute our labour. For example, if you give me beans, I should contribute by planting." *40 year old widow living with HIV, Chikankata*

of a number of factors. First of all, the loss of household labour - both quality and quantity - to illness, caring for the sick, funerals, protracted nature of illness, psychological impacts of the illness and loss of skills and experience.

Second is the reduction in available cash income and asset base. This results in reduction in food consumption, erosion of asset base to finance health needs, inability to hire labour and buy inputs, sale of productive assets, consumption of seeds, sale of land, loss of land through dispossession, loss of remittance if affected person was the source and limited access to credit.

Third is the declining capacity of the social environment to offer support to AIDS-affected households. The traditional extended family and non-formal networks are changing as their capacity declines, demand increases, and a reversal of roles between urban and rural areas occurs. There is also the loss of knowledge of agricultural practices and skills, as women (less exposed to agriculture knowledge for cash crops due to gender discrimination) and children take over agricultural tasks.

There are other ways in which HIV and AIDS is entrenching poverty and creating ground for its spread. For example, once individuals live in abject poverty, they may engage in lifestyles that expose them to HIV infection. There are women who have taken up beer brewing for survival once widowed as a result of AIDS. Once drunk, their patrons may end up having sex with them or their girl children. Furthermore, girl children may become sex workers as a means of survival, a vice which puts them at risk of HIV and other sexually transmitted infections.

In poor or food insecure households, individuals, especially women, are poorly motivated to take precautionary steps to protect themselves against HIV infection and engage in unprotected sex. In many cases this may be the only means of providing for one's family.

Malnutrition is another aspect which is not only a consequence of HIV and AIDS but in turn reinforces its devastating impacts. According to the Food and Agriculture Organisation in households affected by AIDS, the food consumption of all members frequently declines, resulting in malnutrition. This results from the factors that undermine food security in AIDS-affected households already discussed above. AIDS, therefore, threatens the nutritional security of HIV-positive individuals and their families. Due to an increased susceptibility to opportunistic infections, poverty-induced malnutrition is likely to lead to an early onset of AIDS. Poor nutrition enhances the progression of AIDS. Community members are aware of the link between nutrition and progression of AIDS (see Box 3.10 on p. 53)

AIDS is not the sole factor that is worsening the vulnerability context for households in Zambia. However, it is deepening this context to levels that make it difficult to recover from shocks and seasonality factors when they occur. Therefore, actions against HIV and AIDS must be at the centre of any strategy that seeks to lessen the vulnerability context for households.

HIV and AIDS and the feminisation of poverty

Even before the advent of HIV and AIDS, in development circles, there was a lot of discussion on feminisation of poverty. This was closely linked to the economic crisis in the country, the social status of women and an increase in female-headed households. HIV and AIDS has however worsened gender-based differences in access to land and other productive resources like labour, technology, credit and water.

In situations where a wife survives the death of her husband from an AIDS-related illness, the weak position of women and the stigma attached to the disease contribute to excessive stripping or grabbing,

by family members, of productive assets from the surviving widow and her children. The widow and the children may sink into more poverty and this forces women into activities that may expose them and their girl children to sexual abuse and sex work. They may even have limitations of access to knowledge about how to protect themselves (UNDP, 2002).

Results from a qualitative study in Northern Province of Zambia (FAO, DCI and GRZ 2004) provide more insights on the disproportionate negative impact of HIV and AIDS on the various livelihood assets of female headed households. Main findings of the study are summarized in Table 3.4 on p. 56.

The negative impact of HIV and AIDS is quite intense in female-headed households. Box 3.12 gives a glimpse into their plight through the story of a 40-year-old widow "M" with only seven years of formal education.

Conclusions

The HIV and AIDS pandemic is a crisis of unequalled proportions in Zambia and in other developing countries as well as at the global level. This is clearly seen in its immense negative effects on the Zambian households described in this Chapter.

The best chance to respond to HIV and AIDS is at the household level because that is where the velocity of its negative impacts is most directed. The household is under attack from different dimensions as captured by the sustainable livelihoods framework (pp. 17-18).

HIV and AIDS is widening the vulnerability context of Zambian households. At the time when households should take measures to protect themselves from the spread of HIV and respond to the negative effects and be able to pursue livelihood strategies of their own choice, they are increasingly finding their capacity seriously eroded by the epidemic itself. It is clear

Box 3.12: A female-headed household

Currently, M is head of a household of seven people, four daughters, one son and her 75 years old father. The children are aged between nine and twenty years. She became head of the household when her husband died about two years ago. The house they live in belongs to her father whose wife died sometime back. The household has very little in terms of assets because when M's husband died almost everything they owned, including beds, was grabbed by her husband's relatives. Now even the children sleep on the floor. Three children share one room while the father has his own room.

The household grows some maize. Sometime back, they used to grow groundnuts but because of M's ill health and the age of the father they cannot manage. They also used to have chickens but a certain disease killed them all.

According to M, she has experienced a lot of problems since her husband died. These include finding food for the children and sending them to school. Most of the time, the household survives on only nshima and vegetables, which she considers inadequate. At the time of the interview, the household had no food and the storage was empty. Sometimes the household receives some food rations from the church but this is irregular and when it comes, it is not enough. The house is in disrepair because they cannot manage to cut the grass or get money to buy grass in order to repair the roof. There is no help from neighbors, government, relatives, or other family members because, according to M, the entire community lives in abject poverty. However, some local non-governmental organizations and support groups provide basic support like beddings and some food like sorghum once in a while.

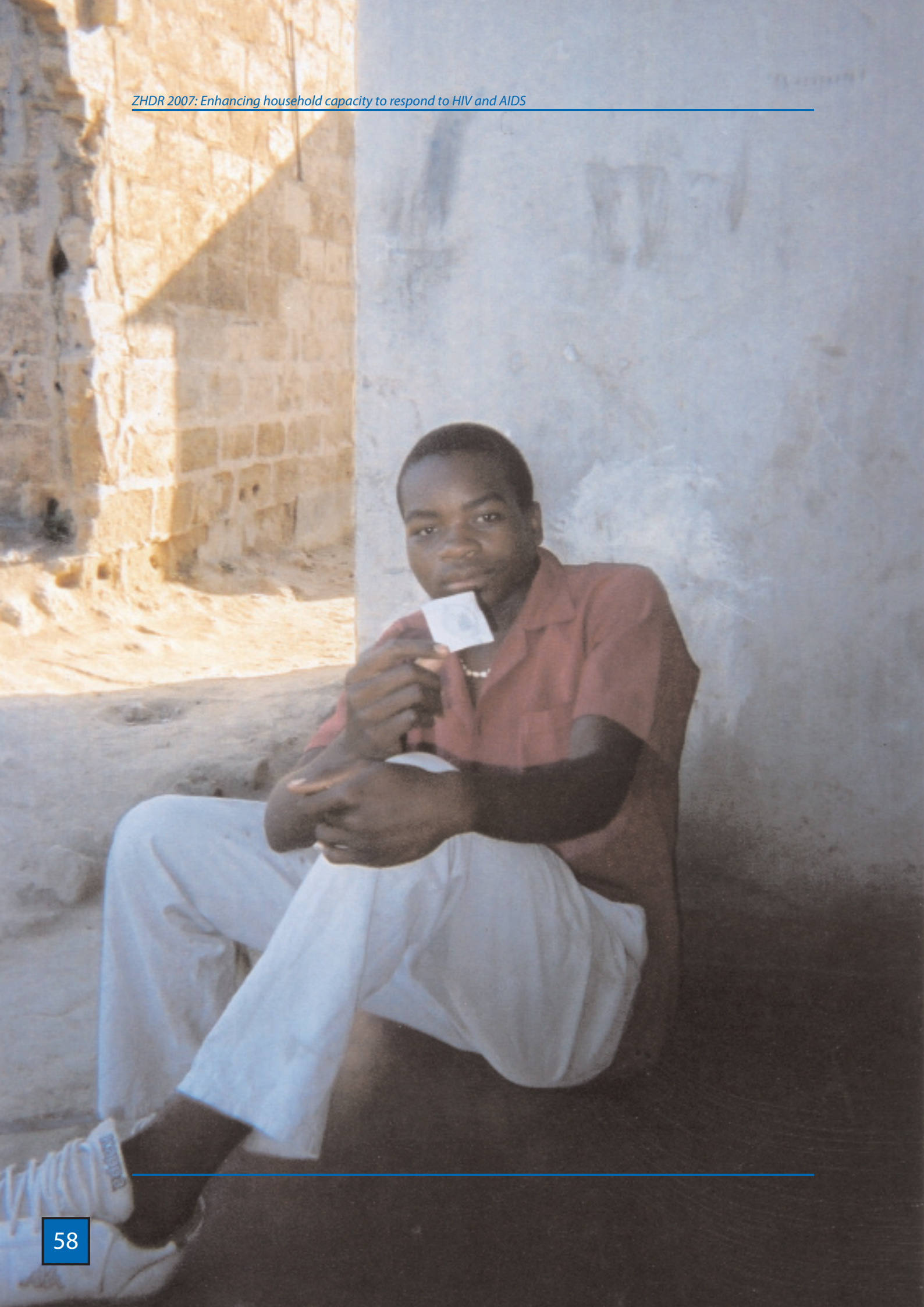
Every day, M asks herself what she is going to give the family to eat. As for the future, her main concern is if the family is suffering now when she is still alive, what will happen to them when she is dead. She prays that she continues receiving ARV treatment from the hospital.

Table 3.3: HIV and AIDS affects female-headed households disproportionately

Female-headed households keep about three times as many orphans as male-headed households. In particular, female-headed households taking care of people living with HIV (PLHIV) bear the brunt of looking after orphans, supporting an average of about 3.6 orphans each.
Female-headed households taking care of PLHIV have few income sources and rely mainly on sales of crops and beer to obtain cash.
Only a few female-headed households with orphans are members of cooperatives, owing to lack of time and financial constraints.
Only few female-headed households looking after PLHIV and/or orphans participate in the community-level area satellite committees.
Female-headed households, particularly those taking care of PLHIV, own fewer physical assets such as axes, shovels and radios owing to distress sale and property grabbing.
Female-headed households taking care of PLHIV and/or orphans use less fertilizer and fewer improved varieties and chemicals than male-headed households. They lack the financial resources to purchase these inputs.
Female-headed households with PLHIV own very few ruminants compared with other household types, owing to constant selling in order to meet immediate cash needs.
Female-headed households experience more property grabbing than male-headed ones. Property grabbing is particularly high among female-headed households taking care of PLHIV.
Female-headed households taking care of PLHIV spend most of their financial resources on purchasing food and on medical expenses, leaving fewer resources for paying school fees and investing in agricultural production.
Female-headed households taking care of orphans, especially those headed by grandmothers, decreased the areas they cultivated owing to competing demands on their time and the inability to purchase farm inputs.

FAO, Development Cooperation Ireland and the Government of Zambia, 2004

from the discussion in this Chapter that to engage the household as an effective partner in responding to HIV and AIDS would require doing so from several angles. The household must be provided with capacity to protect itself against infection and infecting others. It must also be assisted to mitigate the negative impacts of the epidemic. The two are related and are mutually reinforcing.



4 ~ The HIV and AIDS response

At this stage of the epidemic HIV and AIDS requires a well coordinated and sustained action, incorporating lessons learned over two decades of AIDS and the wisdom of communities.

(UNGASS, 2001)

This Chapter provides a brief summary of HIV and AIDS response at global, national and household levels. While a great deal of human, financial and other resources have been spent on HIV and AIDS response, the resources have largely by-passed the household, where much of the effort should be focused. In the absence of a strong, institutionalised support, the households themselves have responded to the pandemic through various coping strategies. These provide valuable lessons learned as to what works and what we should be building upon in national and global response. Some household coping strategies are unfortunately, however, unsustainable short-term measures and have serious negative long-term implications.

Global response

Two years after its first appearance in 1981, HIV had spread to 60 countries (Merson, 2005). Since then, it has spread worldwide and to date, over 25 million people have died. Clearly, a global crisis of this magnitude demanded a truly global response to bring together resources, political power and technological capacity. However, up until 1987, HIV and AIDS was treated just like any other disease (a cure could be found in due course). It took the World Health Organisation in the UN system to respond to the reality that millions of people had been infected with HIV on all continents and hence the need to set a Global Programme on AIDS (WHO, 1987). A few years later, the Programme was disbanded and replaced with the Joint United Nations Programme on AIDS (UNAIDS) which was going to be coordinating AIDS-targeted programming by the UN system, including the World Bank.

Regrettably, global HIV and AIDS response has suffered setbacks due to, in some cases, hostile political environments, poorly designed and targeted programmes, misapplication of resources and lack of consideration of household needs. The debate over HIV prevention has injected controversy because of moral politics associated with the dominant mode of transmission. Further, institutional infighting together with a reluctant political leadership have hampered the emergence of a coordinated response.

The solemn challenge for effective global response has been that of sustained sources of funding. For most low and medium income countries, the action against HIV and AIDS has for a long time been dependant on external funds, and this has over the years increased the vulnerability and complicated abilities to respond (Kates, 2004).

The first new major funding came in 2002 with the setting up of the Global Fund to fight AIDS, Malaria, and Tuberculosis proposed by the United Nations. Shortly after this initiative, President Bush announced the President's Emergency Plan for AIDS Relief (PEPFAR), a five year $15 billion programme for 15 countries with 80 percent AIDS cases. In addition, the World Bank also stepped up AIDS funding through the Multi-Country HIV and AIDS Programme. With these new initiatives, it is estimated that the world committed a total

"Prevention is better than cure!"

Use a condom before having sex. So prevention is needed all the time. Isack is 18 years old and is encouraging people to use a condom before having sex. No condom no sex.

Photographer: Kelvin Chembo

Box 4.1: The *3 by 1* initiative

The *Three by Five* initiative, launched by UNAIDS and WHO in 2003, was a global target to provide antiretroviral treatment to three million people living with HIV and AIDS in low- and middle-income countries with life-prolonging antiretroviral treatment by the end of 2005. The objective was not met. However, the number of people receiving ART in the target countries more than tripled to 1.3 million in 2005 from 400,000 in 2003 and the campaign provided valuable lessons for achieving universal access by 2010.

In Zambia, the number of treatment sites increased from only three to over 110 facilities in just two years. The number of people receiving ART in December 2005 was estimated between 45,000 and 52,000.

WHO and UNAIDS, 2006.

Box 4.2: The *Three Ones* principles

On 25 April 2004, UNAIDS, the United Kingdom and the United States co-hosted a high-level meeting at which key donors reaffirmed their commitment to strengthening national AIDS responses led by the affected countries themselves.

They endorsed the *Three Ones* principles, to achieve the most effective and efficient use of resources, and to ensure rapid action and results-based management:

- *One agreed HIV and AIDS action framework*
- *One national AIDS coordinating authority*
- *One agreed monitoring and evaluation system*

Zambia is a good example of a heavily affected country with a great number of partners providing resources for HIV and AIDS response and implementing their own programmes. Without the application of the Three Ones, there would be duplication of efforts while some important intervention and geographic areas would remain under funded.

of almost $8 billion on HIV and AIDS response in 2005. This is 30 times the amount spent ten years ago (UNAIDS, 2006).

As many recipient countries and institutions do not have structures to effectively ensure that HIV and AIDS funds reach the intended beneficiaries, disbursement has been limited. The big question is how to structure programmes and systems that will help translate global efforts into reality at country and household level.

The biggest impediment to the global HIV and AIDS response, however, is poor donor coordination, duplication and competition. For example, in some cases, Global Fund and PEPFAR get caught up in overlapping goals. This entangles receiving countries and it becomes extremely difficult to achieve the desired targets in the country. The 2004 "Three Ones Principles" (Box 4.2) has attempted to harmonise the various global AIDS institutions.

National HIV and AIDS response from 1985 to 2006

When HIV was first reported to the Ministry of Health by a team of medical experts in the mid 1980s, a national surveillance committee was set up. The membership was drawn from medical experts, Ministry of Health officials and researchers from various research institutions. The major activities of this committee were monitoring and surveillance of the epidemic throughout the country.

In 1987 an emergency Short Term Plan was put in place, which saw the establishment of 33 blood-screening centres all over the country to ensure the provision of safe blood and blood products. This programme was strengthened further and developed into a National Blood Transfusion Service. The laboratories were also reorganised and upgraded, two reference laboratories were established at the University Teaching Hospital and Tropical Diseases Research

Centre and a state of the art virology laboratory was constructed.

From 1988 to 1992 the first Medium Term Plan was developed with the following operational areas: information, education and communication, counselling, laboratory support, epidemiology, STD/clinical management and home-based care.

It was later recognised that the national response to the HIV and AIDS up to 1993 was inadequate and should have looked beyond medical issues. Consultations made within the Second Medium Term Plan for 1993 to 1998 found that:

- The medium term plans had a blanket approach and were not tailored for different populations.
- There was no mechanism to evaluate the implementation or impact of the plans.
- Collaboration with government was highly fragmented.
- There was no high-level political commitment or advocacy and no management of programmes at central level.

These shortfalls consolidated the need to respond to the HIV and AIDS problem through a multisectoral approach. In this regard, HIV and AIDS, STIs, TB and leprosy programmes were consolidated into one programme. The Second Medium Term Plan was implemented from 1994 to 1998. This plan's major strength was intersectoral coordination and collaboration.

In addition, the non-governmental organisations and faith-based organisations worked tirelessly to complement Government's efforts. The Chikankata AIDS programme developed and initiated the home-based care concept. The Churches Health Association of Zambia then established this model of care in most of its institutions. Government also adopted home-based care as an alternative model of care for patients with AIDS-related illnesses. This has since been adopted globally as an effective option in fragile environments where institutional care is unable to cope with the scale of the epidemic.

Kara Counselling developed and initiated counselling, including training for lay persons. People living with HIV came out in the open and established a network of people living with HIV and AIDS. Issues affecting women were also brought to the fore by the Society for Women and AIDS in Zambia and sex workers were mobilised through the Tasintha programme.

As the problem of orphans became apparent, Children in Need was established to coordinate all activities on orphans and vulnerable children. Health education activities were spearheaded by the Copperbelt Health Education Project.

Through these different structures and initiatives by non-governmental organizations and faith-based organizations outlined above, Zambia has implemented various programmes aimed at reducing HIV prevalence and mitigating the impact of HIV and AIDS. However, in spite of the so many HIV and AIDS initiatives and programmes, the epidemic has been spreading silently and rapidly in the population. Although it is stabilising, this stability is occurring at very high seroprevalence levels.

In addition, earlier on in the evolvement of the epidemic, certain pronouncements by political players contributed to the silent spread of HIV in Zambia. For example, there used to be an unwritten rule not to discuss the presence of HIV and AIDS in Zambia, so as not to discourage tourism (The Panos Institute, 1988, Aids and the Third World).

Today, many people are infected with HIV and there are many patients with HIV and AIDS related illnesses in hospitals across the country. To cushion the impact of HIV and AIDS on hospitals, home-based and community care of patients with AIDS-related illnesses has been adopted as an alternative way of patient care. It has also been argued that such patients prefer to die at home amongst their loved ones.

The public announcements by a few Zambians about their HIV positive status, and the formation of the Network of Zambian People Living with HIV (NZP+), made many people realise that one could be HIV positive and yet look very healthy. People also learnt that living positively could help an infected person live longer.

Government further recognised the increasing number of children who were being born with HIV infection. To respond to the situation, the prevention of mother-to-child transmission of HIV (PMTCT) programme was established. The programme was aimed at enabling HIV positive mothers to have HIV negative babies.

In order to attract more people to know their HIV status and benefit from programmes such as PMTCT and others, voluntary counseling and testing (VCT) programmes were rolled out the same year. In addition Government appointed working groups to spearhead various activities such as PMTCT, VCT, vaccines, ART, traditional remedies, epidemiology, counselling and referral. VCT, unfortunately, is primarily delivered in health institutions up to date and access is very limited. It was only in 2006 that mobile VCT services were launched in one part of Lusaka.

In order to improve coordination and collaboration of the different players in HIV and AIDS response and monitor the activities, the National AIDS Council (NAC) was created in 2000. Although the Council was functioning from the time it was set up in 2000, the Act of Parliament was only passed in 2002. At present, NAC is the single high-level institution responsible for coordinating the actions of all segments of all stakeholders in the response to HIV and AIDS.

Initiatives at household level

Evidence available shows that although households may be overburdened and do not have adequate resources, they continue to be the primary support system for the vulnerable, such as children and the elderly (Luo et al, Situation analysis of OVCs in Northern Province, 2004).

Although Zambia has developed a lot of innovative programmes in the health sector, especially in the area of prevention, care and support, very little effort has been directed at addressing social issues and in particular, mitigating the impact of HIV and AIDS on households and communities, who are mostly affected by not only HIV and AIDS but the social ramifications of the epidemic. This gap is surprising because households have always been the most important support system in the various communities of Zambia.

Public sector

The Social Welfare Department in the Ministry of Community Development and Social Services, in partnership with the Department for International Development and the Germany Technical Aid to Zambia, has established a mechanism to provide foster-parent household allowances for orphans and vulnerable children (OVC). This is being piloted in Southern and Eastern provinces. It involves cash transfers of 40,000 to 50,000 Kwacha to vulnerable households. In Eastern Province the support is from UNDP in form of a soft loan of 500,000 Kwacha for income generation activities. The results of these initiatives are yet to be disseminated (DFID, 2005). In addition, the introduction of community schools has been a mitigating strategy for OVCs affected by HIV and AIDS. In 2002 alone, the Ministry of Education recorded in excess of 176,629 OVCs as having enrolled in community schools.

Although the challenge is enormous, it is a step in the right direction as the country continues bracing itself to taking action against HIV and AIDS. However, on the whole, the National Social Welfare Policy although recently developed, is not geared to comprehensively cater for the aged and

Figure 4.1: Conceptual framework for coordination of the multisectoral response

Source: GRZ and NAC, 2006

huge numbers of orphans, who are increasingly dropping out of school, have very little access to health services, are abused and are street children.

Private sector

Private companies and public institutions have also been major players in responding to the challenges of HIV and AIDS. In relation to the private sector, several companies have been very instrumental in responding to the epidemic. They have developed workplace programmes for HIV and AIDS in the interest of their employees and family members. For example, Chloride Batteries, Barclays Bank, Bank of Zambia, Chilanga Cement, Zambia National Commercial Bank and Konkola Copper Mines have developed programmes aimed at sensitising members of staff on HIV and encouraging them to undergo voluntary counselling and testing (VCT).

Chloride Batteries, with about 42 employees, has a workplace policy that encourages HIV positive employees to go for monthly CD-4 count paid for by the company. However these initiatives do not target or benefit the households. They benefit individual employees of the company.

On the other hand, the policies and workplace programmes for Assets Holding Company - Mining Municipal Services and Phoenix Contractor target not only the employees, but also communities where these employees reside. As a result household members have not only benefited but

have been leaders in responding to the social ramifications of HIV and AIDS, such as the support to OVCs.

Non-governmental organisations and faith-based organisations

In the recent past, there has been a dramatic rise in the number of communities with people offering care and support to PLWHA. The major players at this level are non-governmental organisations (NGOs) and faith-based organisations (FBOs).

Some of the NGOs and FBOs that have been making a difference at household level include: Churches Health Association of Zambia (ZHAZ), Copperbelt Health Education Project (CHEP), Society for Women Against AIDS in Zambia (SWAAZ), and Catholic Archdiocese of Ndola, Lusaka, Mpika and Mbala, Extended Hand Community Foundation, The Tasintha Programme, Youth Alive, Youth of Roan, Kara Counselling, Kwashamukwenu, FLAME, Zambia Inter-Faith Working Group (ZINGO), the Network of Zambian People Living with HIV/AIDS (NZP+), Community Youth Concern, Society for Family Health, World Vision etc.

Required response to empower households

HIV and AIDS programmes being offered at all levels in Zambia have been tremendous and encouraging. However, most of these programmes are short-term, not holistic by design with no inbuilt sustainability and have not taken into account all the needs and issues affecting households.

For example, households requiring support are overwhelmed with high numbers of orphans, requiring not only educational support but other forms of support, including psychosocial. Most of these households are impoverished and therefore require support that target poverty reduction. Poverty, as a result of HIV and AIDS, at the household level, is a serious problem. Part of the problem has been an absence of a developmental framework to help gain a holistic understanding of the HIV and AIDS impacts on the household and an agreement on what ought to be the minimum package that should be provided to an AIDS-affected household. NAC in its programming activities, review and strategic planning for a long time did not have a framework to help it target initiatives at household level.

Prior to the adoption of a new strategic framework in May 2006, NAC was supported by eight standing technical committees: (i) Promotion of safer sex practices; (ii) Prevention of mother-to-child transmission of HIV; (iii) Safe blood, blood products and body parts and adoption of infection control measures; (iv) Improvement of the health status of HIV-positive people with symptoms; (v) Promotion of positive living and prevention of opportunistic infections among people living with HIV; (vi) Improvement of care for orphans and vulnerable children; (vii) HIV and AIDS information network and monitoring system; and, (viii) Coordination.

This structure could not help NAC clearly target households and take into account the changing dynamics of the epidemic at the household level.

Realising this, NAC has made revisions to its institutional framework in its National HIV and AIDS Strategic Framework 2006-2010. Six new working groups have been created around the following themes: (i) Intensifying prevention of HIV; (ii) Expanding treatment, care and support for people affected by HIV and AIDS; (iii) Mitigating the socioeconomic impact of HIV and AIDS; (iv) Strengthening the decentralised response and mainstreaming HIV and AIDS; (v) Improving the monitoring of multisectoral response; and, (vi) Integrating advocacy and coordination of the multisectoral response. The revised strategic framework is supposed to be coordinated as shown in Figure 4.1. on p. 63.

It should be pointed out that the framework has been evolving over the years as NAC responded to some of the challenges not specifically addressed in its previous strategic framework.

The establishment of sub-national structures - specifically provincial, district and community AIDS task forces - have been supported by donors including the United Nations Development Programme and Development Cooperation Ireland. These have been integrated as sub-committees on HIV and AIDS in Provincial and District Development Coordinating Committees. It is hoped that a similar arrangement would be made at sub-district level once decentralised structures are consolidated under the National Decentralisation Policy.

These revisions answer much of the concerns expressed in this document. However, there is still need to sharpen further the focus on households which is assumed in the new framework but not explicitly stated. Chapter 6 highlights a number of ways in which this should be done.

Household coping strategies

Due to the limited programmes and formal structures focusing on the households, households have developed their own strategies and coping mechanisms which include (Population Council and RuralNet Associates Limited, 2006):

- A heavy dependency on beer brewing and petty trading as an economic activity, in both rural and urban households.
- Many orphans, widows and family members engaging in piece work.
- Girl children, especially orphans, getting involved in sex work as a way of earning a living.
- Young girls getting pregnant, hoping that their boyfriends or man friends will take care of them. In most cases, unfortu-

Box 4.3: Coping strategies

"Our parents died several years ago leaving the eight of us.

I have five thousand Kwacha which I use to buy charcoal to resell at the market. My profit is five hundred Kwacha and I use it to buy vegetables at the end of each day.

My brother has ten thousand kwacha and he buys paraffin which he resells in the village door to door. The profit of one thousand kwacha he buys one kg of mealie meal. This is how we survive.

I met a freelance prisoner who promised to marry me. When he was freed he abandoned me leaving me pregnant. I have since delivered a set of twins." *Lwingu 2004*

Box 4.4: Prostitution and the orphanhood crisis, the link

In some households you find that both mother and father are chronically ill and they cannot even get up. There is no one to care for the children to check if they have gone to school or if they have eaten.

And when these parents die, the children are left homeless because they have no base; the house was for rent so they are chased. Hence they become street children.

In this community, the problem of orphans is big because if you count these houses you find that there is no house without orphans. Worse still, those who are caring for them do not work and also those cared for by grandparents are even more disadvantaged.

So if these children grow up, they too will not do anything in terms of work and will end up doing prostitution. *Lusaka women focus group discussion*

nately, these young girls end up being abandoned by these men, ending up with the additional burden bringing up babies.
- Young girls being forced to enter into early marriages in order to get support from the men. While some of them may end up being happy, the majority are sexually, physically and psychologically abused.
- Boys and sometimes young girls stealing and may be involved in other criminal activities.
- Children sleeping by the fire to keep warm, as most households lack basic necessities such as blankets.
- Families consulting traditional healers when there is sickness, as they cannot access health services due to distances or cost of transport and services.
- Some households engaging in agricultural activities to ensure food security. Most of them depend on the rain or may put up vegetable gardens along the riverbanks. This therefore is a seasonal and not meaningful activity.

Overall, coping strategies adopted by households are not sustainable and usually have not yielded much success or made an impact. The Tasintha programme, which is focusing on support to sex workers, has documented the association between orphaned children and sex work. The programme has showed that when these women or children are supported with life saving skills and entrepreneurship they do stop sex work, flourish and reintegrate back in society.

Conclusions

Like many countries in Africa, Zambia will have to find innovative, pragmatic solutions to increase household capacities to cope with the social ramifications of HIV and AIDS. It is clear from the evidence provided both in Chapters 3 and 4 that traditional kinship relations and the classical institutional solutions are currently not adequate to deal with this new phenomenon. HIV and AIDS is a major human crisis that Zambian households have to cope with and their capacities to prevent its spread and mitigate the impacts are inadequate. Little can be achieved in terms of improved human development if households are not provided with the capacity to respond to the epidemic.

Recent revisions to the strategic framework of the National AIDS Council give hope that these issues would start to be addressed. However, the household focus in the new framework is not sharp enough and there is need for the National AIDS Council to take steps urgently to revise this.

"Self-portrait"
I "work" outside Melissa in Kabulonga. I don't go to school. That life is bad. It is better to go school because you have a better life.

Photographer: James Sokos

5 ~ The state of human development in Zambia

In this Chapter, we present developments in Zambia's human development index (HDI) between 2000, the last reference year made in the 2003 ZNHDR, and 2004, the reference year made in this report.

The concept of human development seeks to capture the process of expanding choices and opportunities for a kind of life people highly value. The HDI attempts to capture the outcome of this process by looking at three key areas of people's aspirations - education attainment, a healthy and long life and material well-being. The HDI is therefore a composite index representing these three outcomes. HIV, through various transmission mechanisms discussed in previous chapters, undermines these capabilities and opportunities.

Long-term trends in Zambia's HDI

This section provides an update of the 2003 NHDR that compared Zambia's long-term trends in HDI with that of eight other countries whose HDI in 1975 (the first year for which HDI was calculated) fell within the range of 0.4 and 0.5 and could thus be considered as having a similar HDI as Zambia's of 0.468. Figure 5.1 on p. 71 thus provides trends in HDI for these nine countries for nearly thirty years. All the nine countries made progress in the HDI between 1975 and 1985. However, only three - Morocco, Ghana, and Papua New Guinea - maintained a steady increase in their index value up to 2000. Of these three, only Morocco has maintained a steady increase in HDI as that of Ghana and Papua New Guinea experienced a small decline between 2000 and 2003.

Zambia in nearly 30 years has performed worse than the other eight countries. It can be seen from Figure 5.1 that seeds for dismal performance were present even before 1985.

Zambia's HDI grew at a slower rate compared to the other eight countries up to 1985. From then the HDI value declined sharply such that by 1995 Zambia's HDI was lower than its 1975 value. The global Human Development Reports have noted that no other country among the 79 countries with data to allow the calculation of HDI, since 1975, has experienced that kind of reversal. This has happened in a country that has experienced peace since independence in 1964 and still boasts of great development potential given her abundant natural resources and good climate.

Nevertheless, a turn around in the HDI value has taken place in recent years (see Figure 5.2 on p. 71). Zambia's HDI has been rising steadily since 1994, much sharper between 2000 and 2004 from 0.451 to 0.462 respectively. Therefore, the 2004 HDI value narrowly misses the medium HDI mark of 0.500. Of the eight other countries represented in Figure 5.1, only Morocco has performed better than Zambia. The reasons for this performance have been explained in the sections below. They include the sustained growth in the country's economy since 1999, achievements in health reforms and particularly the multisectoral response to HIV and other diseases such as malaria, tuberculosis and diarrhea and gains in education enrolment.

Comparisons of the human development index

HDI values for Zambia and the provinces based on national statistics are presented in Table 5.1 on p. 71*. It is seen that Zambia's

** All the data used are from national statistical sources. The HDI obtained is thus not comparable with that from the global HDR. In particular, whereas the global HDR uses GDP based on purchasing power parity, this is not available for Zambia below the national level. Instead the income per capita from the LCMS has been used as a proxy.*

HDI rose from 0.391 in 2000 to 0.462 in 2004. This is in line with the trends discussed above. All the nine provinces have shown improvements in the HDI. An examination of provincial HDI values and rankings in Table 5.1 reveals a number of things.

1. *The line of rail provinces (Copperbelt, Central, Lusaka and Southern) continue to occupy the first ranks of HDI values. These are the most urbanised provinces.* The outcome is also in line with expectations that HDI is lowest in rural areas which have a much higher incidence of poverty. If we exclude the new districts along the line of rail - Mpongwe, Chibombo, Masaiti, Lufwanyama and Kazungula - line of rail districts all fall within the first twenty-one ranks. These new districts are much more rural than the rest of the districts along the line of rail some of which do not even have a proper administration centre. Mpongwe, Masaiti and Lufwanyama formed Ndola Rural before they were split into three. Within the Copperbelt Province they occupy the last three ranks out of ten districts. Chibombo was Kabwe Rural while Kazungula was the rural part of Livingstone.

2. *Among the districts occupying the first twenty-one ranks are seven rural districts some in very remote areas. Mporokoso with HDI of 0.527 occupies the fifth rank followed by Namwala with HDI of 0.519 at seventh rank.* Although Mporokoso has a higher GDP index than the national average, the main factor driving high HDI in these districts is their life expectancy at birth which is higher than the national average, ranging from 53.6 to 62.6 years compared to 52.4 years for Zambia as a whole. Namwala and Itezhi-tezhi, which were once one district, had respectively the highest life expectancy at birth of 62.5 and 62.6 years projected for 2004. This in turn is due to the low HIV prevalence rates of between 5.2 percent and 7.5 percent compared to the national average of 15.6 percent. This confirms the point made below that HIV is an important factor in determining a district's HDI status.

3. *The largest rise in HDI has been in two rural provinces of the country, that is, North Western and Western provinces, rising by 0.103 and 0.086 respectively.* As a result, Western Province HDI ranking improved from ninth to seventh but ranking remained unchanged for North Western at 5. The least rise in HDI was in Central and Luapula provinces at 0.043 and 0.059, respectively.

4. *Although not providing the whole picture, these trends are in line with recent poverty figures*, which indicate that extreme poverty fell sharply in rural areas from 71 percent in 1998 to 53 percent in 2004 compared to a decline of only two percentage points in urban areas (see Chapter 2).

Explaining developments in human development status

What factors explain these developments in Zambia's HDI? This is a difficult question given the multidimensional nature of the human development concept. To help unravel the factors behind developments in human development as represented by the HDI, it is necessary to examine the changes in variables that constitute the index, i.e. life expectancy and education achievement. Given the theme of this report, it is also necessary to look at how HIV and AIDS may be proving a debilitating factor in each of the variables that constitute the HDI. Realising that human development cannot be narrowly confined to the HDI, this report also provides insights on other factors that are not captured in the HDI but

greatly determine the country's human development path. Of particular interest is unraveling how HIV and AIDS may be complicating Zambia's efforts to improve her human development.

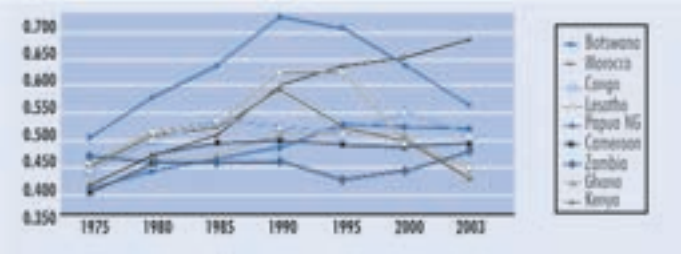
Adult life expectancy

The 2000 Census Report indicates that life expectancy in Zambia rose from 47 years in 1990 to 50 years in 2000. The census projections, which took HIV and AIDS into account, also indicated that life expectancy would improve to 52.7 years in 2004. Without HIV, life expectancy was projected to increase to 57.5 years. The calculation of the HDI utilised the projected life expectancy with HIV in Zambia for 2004. The HDI value would rise if the projected life expectancy without HIV and AIDS was used. Table 5.2 has provided calculations of HDI based on both life expectancy with and without HIV and AIDS.

What comes out is that, without HIV and AIDS Zambia would have an HDI value of 0.491. Therefore, HIV has reduced the HDI by 0.029 or by 5.9 percent. With respect to provincial rankings, the first five ranks are occupied by the same provinces as in the case of HDI with HIV and AIDS. The biggest changes in ranks are Eastern and Northern provinces, which swap ranks of 6 and 9. Lusaka's loss of the first rank to the Copperbelt was due to the fact that Lusaka had a higher HIV prevalence, a factor that reduced its estimated life expectancy when HIV and AIDS is taken into account.

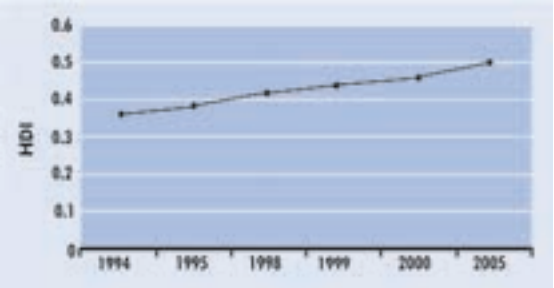
It is also seen that the greatest beneficiaries from a without HIV and AIDS scenario are the line of rail districts which now would occupy the first 13 ranks (see Appendix Tables 1 and 2 on pp. 102-105). As a sign of how the situation would change, Mporokoso which had the fifth rank now drops to 15 - still very respectable for a remote district. The biggest rises in HDI, if the impact of HIV and AIDS on

Figure 5.1: Long-term HDI trends in Zambia and other countries with similar HDI value in 1975



UNDP Database, www.hdr.undp.org/statistics/data/indicators

Figure 5.2: Trends in human development in recent years in Zambia



UNDP, Human Development Reports

Table 5.1: HDI values for Zambia and provinces, 2000 and 2004

	HDI 2000	2000 rank	HDI 2004	2004 rank	2004-2000 HDI difference
Zambia	0.391		0.462		0.071
Central	0.415	3	0.458	4	0.043
Copperbelt	0.481	1	0.552	1	0.071
Eastern	0.340	6	0.406	6	0.066
Luapula	0.326	7	0.385	8	0.059
Lusaka	0.445	2	0.513	2	0.068
Northen	0.310	8	0.384	9	0.074
North Western	0.350	5	0.453	5	0.103
Southern	0.391	4	0.469	3	0.078
Western	0.300	9	0.386	7	0.086

Appendix Table 1

life expectancy is discounted, are in Northern, Southern and Lusaka in that order. North Western would have the least change.

Changes in HDI taking HIV and AIDS into account have only done so from the perspective of life expectancy. However, this is not the whole picture as HIV and AIDS affects human development in various other ways including education attainment and the standard of living as measured by GDP per capita.

In the last three years, controversy has surrounded the estimation of life expectancy. Estimates provided by international organisations such as the USA Bureau of Statistics indicate life expectancy as low as 33 years. The 2005 UNDP HDR used a life expectancy figure of 37.5 years at birth. However, the Central Statistical Office provides much higher life expectancy of 52.7 years with HIV and 57.5 years without HIV. Without entering into this controversy, this report adopts the CSO estimates so as to be consistent with the principle of relying on official statistics in the production of National Human Development Reports. It is also the only way sub-national HDI values could be calculated which is the main added value of National Human Development Reports to global Human Development Reports.

Developments in recent years indicate that progress is being made in areas that have a bearing on the country's life expectancy. There has been a decline in the incidence of the top six diseases since 2001. This is as a result of the response to health reforms and a change in the treatment regime of these diseases (see Figure 5.3). This has been helped by achievements being scored in halting the spread of HIV and the increased access to antiretroviral treatment, both helping to deal effectively with opportunistic infections.

The multisectoral response, by the government in collaboration with other partners, has helped in improving the institutional environment for mitigating HIV and AIDS. Despite the advances made in responding to the epidemic and its impact on affected households, the epidemic remains a big challenge for Zambia.

A slightly more detailed look at two top diseases - malaria and tuberculosis (one of the non-pneumonia respiratory infections) - provides further evidence of some improvement of well being captured in the HDI. Malaria continued to be Zambia's major cause of morbidity and mortality between 2000 and 2004. However, Figure 5.3 shows that the malaria incidence rate per 1,000 fell from 400 in 2000 to just above 200 in 2004. In addition, deaths caused by Malaria reduced from 9,367 in 2001 to 4,765 in 2004. This progress is attributed mainly to the shift in the malaria treatment policy from Chloroquine to more effective arteminisin-based therapy (Coartem) and improvements in the laboratory services. Additional interventions that have contributed to the decline in Malaria include the integrated vector management system, using insecticide treated nets, indoor-residual spraying, package to prevent malaria in pregnancy and the Malaria in School Health Strategy.

Even though this achievement is impressive, the incidence of malaria and morbidity related to malaria are still too high. The situation has been complicated by the high prevalence of HIV, which by compromising the immunity of those infected makes them much more susceptible to malaria. Provision of health services, specifically malaria control programmes (such as the Roll Back Malaria), should receive higher consideration in the delivery of health care through a multisectoral response.

Some progress has also been recorded regarding the treatment of tuberculosis, a disease that has been worsened by the advent of HIV and AIDS. In 2000, the prevalence rate was estimated at 512 per 100,000 (UNDP/MoFNP, 2005). Nevertheless, the cure rate has been

improving with the introduction of a new treatment regime called directly observed treatment (DOTs) and drug compliance (see Figure 5.4). As a result, TB cure rates have improved for all provinces except Luapula and Southern.

By April 2005, all provinces except North Western recorded cure rates beyond 50 percent. Besides DOTs other factors include the rise in treatment seeking behaviour and improved access to diagnosis and treatment centres. There was also improved supply of TB drugs through the Okinawa Infectious Disease Project, in which Japan provided a continuous supply of TB drugs to last up to the end of 2004.

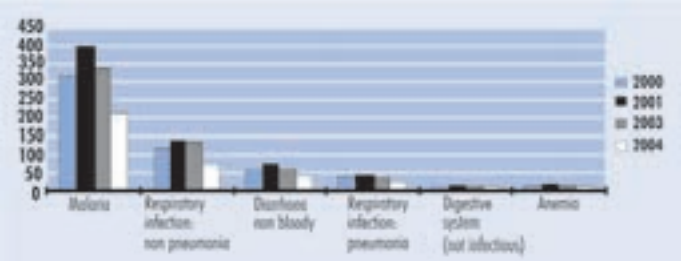
Literacy and education

The rise in the HDI noted above has been helped by improved education achievements. The education attainment index rose to 0.720 in 2004 from 0.620 in 1998 and 0.590 in 2000. An increase in access to education in basic and secondary education is evident (See Figures 5.5 and 5.6 on p. 74). The net enrolment ratio, which was on the decline since 1998, rose from 69.9 percent in 2000 to 76.2 percent in 2003. At the same time, enrolments at secondary schools (grades 8-12) increased from 165,435 in 2000 to 210,061 in 2003 or by 21.2 percent.

These improvements are attributed to policies that have created a positive environment for education, including the successes scored by the Basic Education Sector Investment Programme that ended in 2002 and the adoption of the Free Primary Education Policy in 2002. Funding to the education sector has been on the rise. Thus education has been allocated 27 percent of the total discretionary budget in the 2006 budget compared to 21.7 percent in 2003.

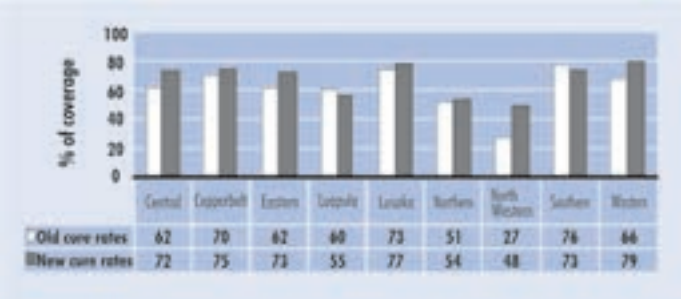
The upgrading of many primary schools to basic schools, i.e. to include grades 8 and 9 classes has helped to push up enrolment in secondary education. As a result, the gross secondary enrolment ratio rose from

Figure 5.3: Incidence of top diseases in Zambia between 2000 and 2004



Ministry of Finance and National Planning. Economic Report, 2004

Figure 5.4: TB cure rates in Zambia, 2005



CBoH, 2005. Report on National TB Meeting, April 2005.

Table 5.2: HDI values with and without HIV and AIDS, 2004

	With HIV and AIDS		Without HIV and AIDS		Difference (percent)
		Rank		Rank	
Zambia	0.462		0.491		5.9
Central	0.458	4	0.490	4	6.5
Copperbelt	0.552	1	0.583	1	5.3
Eastern	0.367	6	0.393	9	6.6
Luapula	0.385	7	0.405	8	4.9
Lusaka	0.513	2	0.560	2	8.3
Northern	0.384	9	0.441	6	13.0
North Western	0.453	5	0.470	5	3.7
Southern	0.469	3	0.512	3	8.4
Western	0.386	8	0.410	7	5.9

Appendix Tables 1 and 2.

25 percent in 2000 to 50 percent in 2004. Much of this was accounted for by the increase in the gross attendance rate in grades 8 and 9 from 44 percent in 2000 to 74 in 2004.

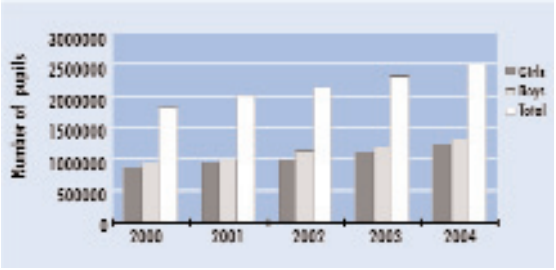
Between 2000 and 2004, the number of basic schools rose from 4,378 in 2000 to 6,728 in 2004, an increase of 54 percent. The introduction of Academic Production Unit classes, supported by the construction of more schools and construction of new classrooms has also been favourable to the increase in enrolment rates in both primary and secondary education.

In both primary and secondary schools, an impressive development has been the rising trend in girls' access to education. The gross enrolment ratio for girls in primary education caught up with that of boys at 90 percent in 2002. The higher enrolment figures for girls have been achieved because of the implementation of the Programme for the Advancement of Girls Education. Results have been most impressive in Lusaka which has seen the proportion of girls (50.7 percent) outstrip that of boys in 2004. Even though a 50:50 boy/girl ratio has been reached at primary school enrolments and to a lesser extent up to grade 8 and 9 in basic schools, areas of concern still remain. Some observers suggest that the quality of education has continued to decline. In many upgraded schools, adequate and well-qualified teachers have not been recruited while overcrowding in classrooms and inadequate supplies of school reading materials have also led to the deterioration of the quality of education. Zambia's quest to reach the HIPC completion point and the cap that was put on public sector recruitments made it difficult to make headway in reducing the pupil-teacher ratio which rose from 38 pupils per teacher in 1996 to 60.7 pupils per teacher in 2004.

HIV and AIDS have not spared the education sector either. The effects have manifested in the decline of the number of teachers. Part of the deterioration in the pupil-teacher ratio has been attributed to AIDS-related deaths. As many as 1,300 teachers died in 1998 due to AIDS-related illnesses. This was about two thirds of all new recruitments. The demand for education is also going down. Children from HIV and AIDS affected households are being withdrawn to help cope with the loss of labour in the home. Where they are not withdrawn altogether, they only attend school intermittently. Their capacity to learn is also affected because they are often tired or are having to deal with negative psychosocial impacts.

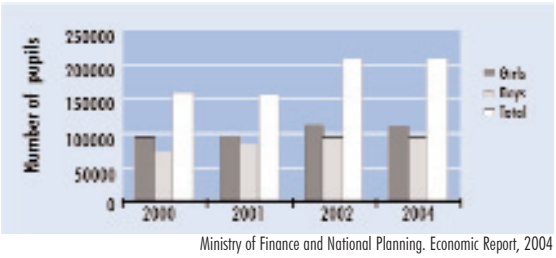
There has been a rapid expansion of the tertiary education sector in recent years. This is mainly due to the success scored in the technical education and vocation training system. According to the Technical Education, Vocational and Entrepreneurship Training Authority and the Ministry of Science, Technology and Vocational Training, the number of approved institutions offering tertiary education, other than universities, rose from 151 in 2000 to 319 in

Figure 5.5: Enrolment in basic schools (grades 1-9) in Zambia, 2000-2004



Ministry of Finance and National Planning. Economic Report, 2004

Figure 5.6: Enrolment in secondary schools (grades 10-12) in Zambia, 2000-2003



Ministry of Finance and National Planning. Economic Report, 2004

2004. In the same period, the number of students increased by 159 percent from 9,660 in 2000 to 32,841 in 2004. Correspondingly, the proportion of female students has increased slightly to 44 percent in 2004 from 41 percent in 2000.

GDP per capita

The rise in Zambia's human development index has benefited from the economic turnaround the country has experienced in the last few years. The economy for the first time since the first years of independence grew for seven years in a row between 1999 and 2005. As a result, GDP per capita rose by 18.9 percent between 1999 and 2005. The rebound in economic growth has been driven by growth in construction, wholesale and retail trading and mining. The agriculture sector has also grown every year except in 2001 and 2004 when there were droughts. Most impressive has been the growth on non-traditional exports mostly driven by agriculture. The mining sector has seen some new investments resulting in a 60 percent increase in copper output from 256,884 metric tonnes (MT) in 2000 to 410,971 MT in 2004. In the same period, cobalt production increased by 80 percent from 3,538 in 2000 to 6,390 in 2004 (MoFNP, 2003 and 2004).

Despite the overall rise in GDP per capita, it has only translated in an average annual increase of 2.7 percent. Therefore, although the economy has been growing, in per capita terms, given the country's population growth rates, it is not very significant. It is thus not surprising that poverty between 1998 and 2004 dropped only slightly from 73 percent to 68 percent despite this growth. It has thus been suggested that for a significant impact on poverty, the Zambian economy needs to grow constantly at a rate higher than 7 percent (GRZ, 2006).

As seen in Chapter 3, the good economic performance is under threat due to the negative effects of HIV and AIDS but particularly through decreased productivity, loss of labour due to death and absenteeism, high turnover of employees and increased replacement and training costs as well as the varied but specific impacts on different sectors and households

Fortunately for Zambia, although there is still a long way to go, the national response has been encouraging. Many stakeholders have advocated for the establishment of HIV and AIDS workplace policies and some companies have already developed and started to implement them while many others have been sensitised to develop such policies. However, at current prevalence levels, the epidemic remains a threat to the growth of the economy.

Human poverty index (HPI) in Zambia

The Human Development Report 1997 inaugurated the concept of human poverty - also called the poverty of lives and opportunities - in an attempt to portray the many faces of poverty. Being analogous to human development, human poverty focuses on deprivations in the three essential areas. Human poverty indices were calculated for 1996 and 1998 in the 1997 and 2000 National Human Development Reports, respectively. HPI was not calculated for 2000 in the 2003 ZHDR due to lack of new LCMS data. To allow strict comparison, the 1996 and 1998 HPI for Zambia and the provinces has been recalculated in this report ensuring that the variables being used are the same. For 2004, data could allow the calculation of HPI for districts as well (Appendix tables 4 and 5 on pp. 108-111). A number of observations arise from the trend in the HPI since 1996.

- The HPI for Zambia improved slightly from 31.4 in 1996 to 29.8 in 1998 and to a further 27.0 in 2004.This reflects a slight lessening in the deprivation of the population in access to critical areas to

support human well-being. The HPI looks at deprivation in a number of things that constitute a desirable living standard - lack of access to safe water, health facilities and food, through the proxy of under-five children who are underweight - as opposed to the incidence of poverty that only takes into account expenditure on food to meet the necessary nutrition and other basic needs.

- The modest improvement in the HPI between 1996 and 2004 is disappointing. It means that, despite the many programmes undertaken since the late 1990s to improve access to facilities that could improve people's lives, there has been no progress made. However, a more detailed look at the different components that constitute the HPI suggests that this is mainly due to worsening deprivation in knowledge, as adult illiteracy rose from 21 percent in 1998 to 32.8 percent in 2004. All the other variables have improved although they remain a source of concern, requiring further progress.

Table 5.3: Growth rates of key economic variables, 2000-2004

Item / sector	Growth rates (%)					
Year	2000	2001	2002	2003	2004	2005
GDP	3.6	4.9	3.3	5.1	5.4	5.2
Population	3.0	2.9	2.9	2.9	2.9	2.8
Mining	0.1	14.0	16.4	3.4	13.9	7.9
Manufacturing	3.6	4.2	5.7	7.6	4.7	2.9
Agriculture	1.0	-6.0	-6.3	8.0	6.1	-4.0
Construction	6.5	11.5	17.4	21.6	20.5	21.2
Wholesale and trading	2.3	5.4	5.0	6.1	5.0	2.4
Non-traditional exports	-10.1	21.2	18.6	-1.5	13.0	19.1

MoFNP, Economic Report 2004 and Macroeconomic Indicators December 2005

- The rise in the percentage of the population that is illiterate is a build up of many school drop outs in both primary and secondary schools after the abolishment of the free basic education policy in the 1980s. The policy was re-introduced in 2002 but its long term benefits from a literacy point of view are yet to be felt. It is also hoped that the increase in enrolments discussed above in recent years will pave way for a more literate society. However, this can only be after some time. The lesson is that gains made in the social sectors need to be protected because their reversal can take place very quickly with serious long term implications.

Table 5.4: Human poverty index for Zambia and provinces, 1996, 1998, 2004

Region	1996	Rank	1998	Rank	2004	Rank
Zambia	31.44		29.80		27.0	
Central	30.63	3	30.04	4	28.0	4
Copperbelt	27.73	2	28.11	3	15.9	2
Eastern	32.74	4	32.92	5	38.5	9
Luapula	41.78	9	44.93	9	34.3	5
Lusaka	19.59	1	19.20	1	15.2	1
Northern	40.77	8	41.90	8	34.8	6
North Western	34.83	5	41.01	7	37.7	8
Southern	37.20	6	26.78	2	23.2	3
Western	38.62	7	37.16	6	35.4	7

Appendix Table 3

- Provinces along the line of rail have had lower HPI than provinces away from the line of rail which consistently occupied the first four ranks as in the case of HDI. However, this excludes Southern Province, which in 1996 occupied the sixth rank. This was as a result of the high proportion of people without access to safe water because of the severe droughts in the 1990s. As expected, deprivation is more prevalent in rural areas.

- Luapula Province had the most deprived population in 1996 and 1998 on account

of the high under-five child mortality, underweight children and proportion of people without safe water. However, Luapula made a significant improvement in the HPI from 44.9 in 1998 to 34.3 in 2004. In Eastern Province HPI deteriorated sharply from 32.9 in 1998 to 38.5 in 2004. This is mainly accounted for by the drastic rise in adult illiteracy from 29.6 percent in 1998 to 52.4 percent in 2004 compared to the rise in the national average from 21 percent to 32.8 percent respectively.

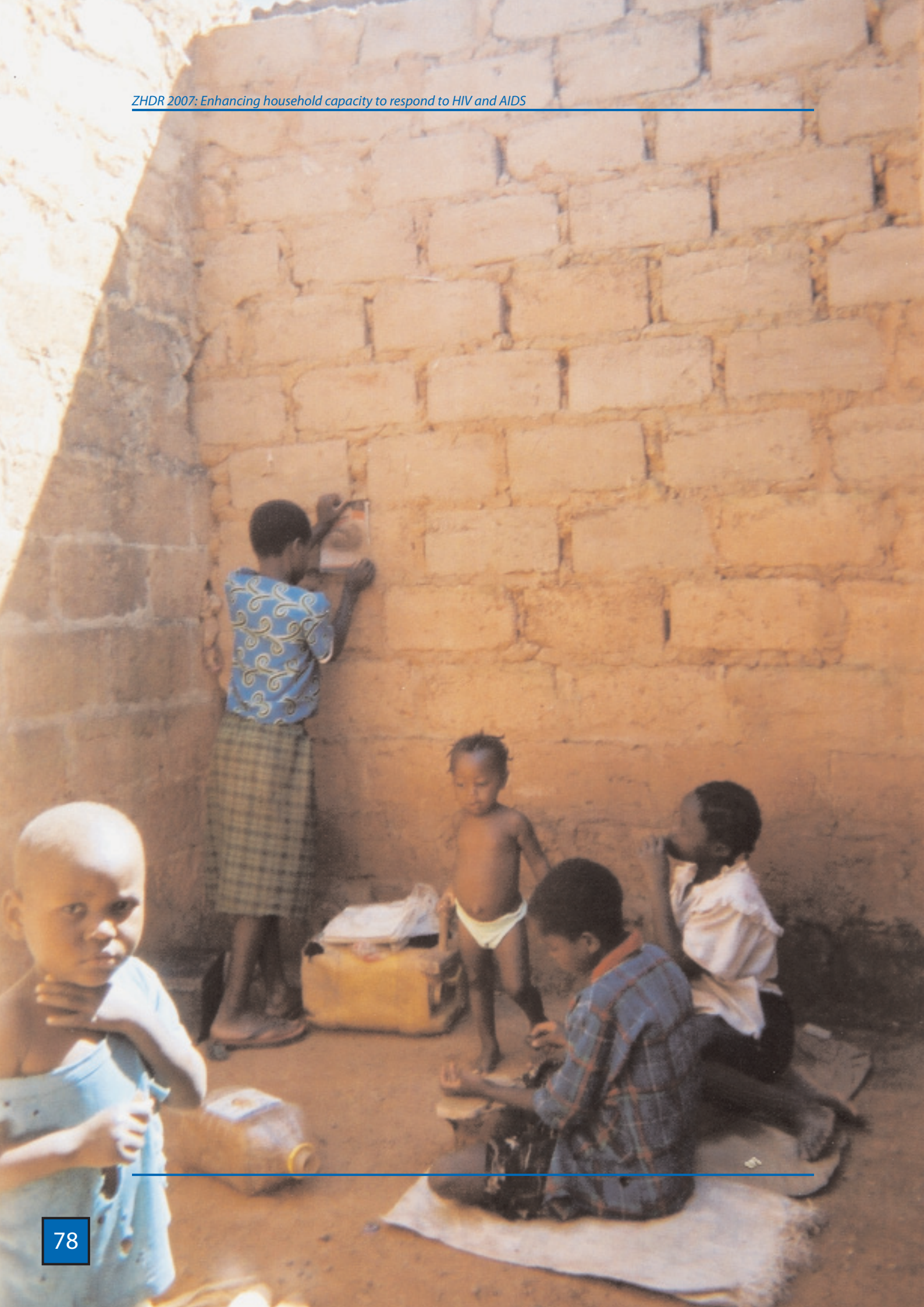
Conclusions

The discussion on the human development status indicates that Zambia may have started to emerge out of its deep human development crisis compounded by HIV and AIDS in the recent past. However, with some improvement in HDI in the last five years, deprivation to longevity of life, decent standard of living and knowledge all remain sources of great concern. Therefore, the HPI improved only slightly between 1998 and 2004.

As the calculation of HDI and HPI for districts has been done for the first time in this report, it is obvious that further effort is required to improve the data for more meaningful analysis to emerge. The HDI values from some rural districts appear too high compared to the general information known about them. It is nevertheless difficult to verify this without a full validation of each of the variables constituting HDI. Such a validation can only be carried out with the help of the Central Statistical Office. There is potential that district based HDI could be adopted as a criteria for spatial planning and resource allocation aimed at upgrading people's well being.

In order for the country to record improvements in the HDI, a number of challenges have to be overcome. These include: improving adult life expectancy through good health programmes; ensuring household food security; improving the enrolment and especially the progression of females to secondary schools and tertiary levels whilst ensuring that the quality of education in currently overcrowded schools is improved; and, ensuring that the real per capita income continues to increase through continuous growth of the economy while focusing on broad based economic growth.

HIV and AIDS has compounded these problems by stretching the little resources households have and reduced productivity which have led to increased food insecurity and poverty.



6 ~ An agenda for enhancing household capacity to respond to HIV and AIDS

As presented in Chapter 3, despite the projected decline in the HIV prevalence, the incidences of new HIV cases and annual AIDS-related deaths in Zambia will remain relatively high for some time to come. This is mainly due to many HIV-infected persons survive for a number of years before eventually developing full-blown AIDS and passing away. Households, being the primary units for coping with the disease and its consequences, will continue to bear most of the burden. They absorb the immediate impact of the HIV and AIDS epidemic. For this reason, efforts to respond to HIV and AIDS in Zambia should focus on enhancing the capacity of the household.

HIV and AIDS initiatives being implemented in Zambia (Chapter 4) have been tremendous and encouraging. However, most of these programmes are short-term, not holistic by design, have not taken into account all the needs and issues affecting households and are without inbuilt sustainability. For example, many households looking after orphans are overwhelmed with the multiple needs confronting them. Most of these households are impoverished and therefore require support that target poverty reduction and improve their capacity to obtain beneficial livelihood outcomes, which include improved incomes and food security. Poverty as a result of HIV and AIDS at the household level is a very serious problem as it has even impacted negatively on household food security.

The bi-directional nature of the relationship between HIV and AIDS and household poverty or food insecurity requires understanding. There is need for measures that: (i) prevent HIV and AIDS affected households from sliding into destitution and risk of starvation; and, (ii) prevent poverty stricken households from engaging in behaviour that puts them at risk of getting HIV infected and transmitting it to others.

In coming up with suggestions on how to comprehensively deal with HIV and AIDS, this chapter relies on the sustainable livelihoods approach (SLA) which has the advantage of amplifying the crucial elements that need to be tackled in successful HIV and AIDS initiatives focused at the household. The impacts of HIV and AIDS on the separate elements of the SLA have been discussed in Chapter 1 with evidence provided in Chapter 3. The sections that follow suggest responses to address HIV and AIDS impacts at household level for each of the elements in the SLA.

Although this is not a proposal for a programme, it nevertheless provides an outline of the framework that will coordinate the actions of various players as they deal with HIV and AIDS with a view to help households adjust successfully to the HIV and AIDS situation.

Goal and immediate objectives

The overall goal of the framework suggested by this Report is to create an inclusive society in which both the strong and the weak can thrive and prosper. This recognises that HIV and AIDS is a key obstacle for creating such a society. Projections are bright that Zambia will experience economic growth in the next few years. However, there is a high possibility that this prosperity will bypass the majority because they have little means to share in it. High levels and widespread poverty have disempowered the majority of Zambia's population to participate meaningfully in the country's devel-

"Playing School"

These kids werre playing school outside their home. One of the girls goes to my class. She is the one we see with the back to us. She is playing the teacher. I liked the way they were playing. It makes me happy.

Photographer: Margaret Chitono

opmental process. AIDS is complicating this situation as it deepens poverty and erodes assets at people's disposal. HIV-affected households risk being excluded from the anticipated economic prosperity. Conversely, they also pose a risk to putting a break on the anticipated economic growth, unless they are made part of the process.

The immediate objective of actions suggested below is to assist HIV and AIDS affected households to adjust successfully to the HIV and AIDS situation within the household and obtain beneficial livelihood outcomes. There is an unlimited range of what each household considers beneficial livelihood outcomes. Universally accepted outcomes include improved household incomes, adequate access to food throughout the year, resilience to shocks and a more sustainable use of natural resources. The sum of these is improvements in a households' human development as outlined in Chapter 1.

For AIDS-affected households to attain this, they must be assisted to adopt viable livelihood strategies. This can be done by strengthening the assets at their disposal and by revitalising the support structures within communities that exist to help the weak. This means addressing the downward spiral of human development into which HIV and AIDS has negatively locked AIDS-affected households.

Strengthening household capacity in the response to HIV and AIDS requires that households are provided with the means to deal with the threats of HIV and AIDS on assets and viable livelihood strategies. No single institution is able to do this. Rather, each institution can contribute something to this process. Fortunately, there is a lot that different institutions can do without duplicating efforts. What is important is to know the unique strengths of different organisations and arrange their effort in such a way that the different dimensions shaping the vulnerability context created by HIV and AIDS are addressed. This requires a well thought through framework.

Expected outcomes and required actions

1 Response to HIV and AIDS at household level

For a household to be deemed as having the capacity to respond to HIV and AIDS, it must be able to tackle the epidemic from three angles: Awareness and prevention, treatment and care and the ability to adopt viable livelihood strategies, despite the impacts of the epidemic.

Awareness and prevention

Household members should be able to access information about HIV and AIDS and take measures to prevent themselves and others against HIV infection. They must have the ability to receive the information, process it and take necessary actions against being infected or infecting others. Instead of stigmatising household members living with HIV, knowledgeable households would commit themselves to providing the sick with care and support.

This outcome faces many challenges. To start with, information must be made available through appropriate channels. Then the quality of human capital in the household is crucially important as educated members are more likely to access this information and act on it. Society's gender discrimination that makes women economically dependent on men makes it difficult for many women to negotiate for safe sex even where their spouse's infidelity is obvious. In most cases, even where women are economically strong, socialisation places women at a disadvantage in avoiding being infected, making it imperative to address society's structures and processes in the response against HIV and AIDS.

Poverty is another big obstacle. Viable livelihoods are an important component in

helping households to take preventive measures. Safer sex is not without cost. Spending money regularly on a condom is actually not an easy option for many poor households. Further, some household members may be forced to sell sex as a means to survive their excruciating poverty. Therefore, even at the level of prevention, the asset base is a critical aspect.

Treatment and care

An AIDS-affected household should be able to access treatment for its members with HIV-related illnesses and provide care to them without harming the prospects of its livelihood outcomes.

Accessing treatment is dependent on the functioning of the country's health system that must be strengthened to cope with the epidemic. From the household's point of view, this is dependent not only on whether treatment is available at a designated health centre but also whether household members can get there. This is a big challenge in a country where many people have to walk for more than five kilometers to the nearest health centre.

The extreme poor, 53 percent of Zambia's population in 2004, have little access to even intermediate means of transportation and such distances are a major constraint in their accessing treatment. If such poor people are put on antiretroviral therapy, adherence on account of transportation difficulties alone will be a big challenge.

The efficacy of antiretroviral treatment is also dependent on the nutritional status of patients, another big challenge in a country with widespread malnutrition. Therefore, strategies that move people out of biting poverty and improve their food security will help them to both access treatment and make better use of it.

When it comes to care, this should not foreclose the household's pursuit of livelihood outcomes of its own choice. However, this is often the case. By adjusting to less labour-intensive but reasonably profitable activities, households may be able to prevent this. The problem is that people already in extreme poverty have few options remaining for obtaining beneficial livelihood outcomes.

Ability to adopt viable livelihood outcomes.

An HIV and AIDS affected household should be able to make successful adjustments to the HIV and AIDS situation, without irretrievably damaging its livelihood outcomes. The three scenarios for HIV and AIDS affected households stated above must be borne in mind. Even at the best of times adjusting successfully to these situations will come at a very high cost. This is even more remote for poor households. Household-focused initiatives must therefore aim at promoting livelihoods security for households being made even more vulnerable by HIV and AIDS. HIV and AIDS affected households should be helped to secure the assets at their disposal. Support systems within each community should render a helping hand and must therefore be revitalised.

Having defined what constitutes household capacity for responding to HIV and AIDS, the SLA framework can be used to propose broad areas that need tackling with a view to build and strengthen this capacity. Three broad action areas are proposed: (i) amending the country's development process so that it becomes more supportive to HIV and AIDS affected households; (ii) revitalising support structures at community level; and, (iii) enhancing household assets.

2 Make development supportive to HIV and AIDS affected households

Measures are required to reform the general economic and policy environment so that it is more supportive to households as they make adjustments to HIV and AIDS. Measures that promote broad-based economic growth, if they are successful in

eradicating the unacceptably high levels of poverty, help to build capacities in households to respond to HIV and AIDS.

Poverty is a chief enemy in the response to the HIV and AIDS pandemic and tackling it must be given due priority in all development initiatives.

The AIDS epidemic is highlighting the fault lines of development initiatives that have existed all along, particularly their limited inclusiveness. This is because they tend to leave out the weak and vulnerable in society. In one sense therefore, the crisis offers us an opportunity to reform our development processes to make them more inclusive. In fact, what is good in responding to HIV and AIDS tends to also be good for poverty eradication and gender empowerment.

Promoting a conducive environment for empowering households to respond to HIV and AIDS besides reforming the overall development process requires a number of specific things to be put in place including:

Strengthening macro and meso level agencies so that HIV and AIDS does not unravel their capacity to deliver on their mandates. Each organisation must become a learning organisation that responds to the risks posed by HIV and AIDS to its mandate and altering internal and external environments of the organisation as a result of the epidemic. Organisations must strengthen their internal capacity to carry on their work in an even more challenging environment. The current multisectoral approach has correctly emphasised all these. However, more needs to be done by helping organisations to refine their instruments to ensure that they are more supportive to households faced with HIV and AIDS.

Adoption of policies and laws that improve the environment for responding to HIV and AIDS and empower households. A reform in the policy and legal framework is required to protect the PLWHA to enjoy the same freedoms and liberties and to be able to access the same level of economic provisioning that is due to everyone else. This should be seen in conjunction with the above point on strengthening macro and meso organisations. Not only should the policies and laws be correct, but there should also be a capacity to enforce them. For example, the passing of the Inheritance Act has moved things in the right direction. However, in a country where the legal system is both costly and inefficient, widows have little recourse to the law when their rights are infringed upon.

Promoting an environment that allows adaptive structures to flourish. District and sub-district level structures - such as local authorities, traditional rulers, faith-based organisations and community-based organisations - are closer to households than are macro and meso level organisations. They must therefore be in the frontline in enhancing household capacities to respond to HIV and AIDS. The centralised nature of Zambia's governance system makes it difficult for these institutions to thrive and be as helpful as they should be to households in difficult circumstances. The capacity to execute effective action seems to exist only at the centre. The first necessary step is reforming this system through democratic decentralisation. A decentralisation policy was adopted in 2002 but steps towards this have only been tentative so far. There is urgent need to quicken the pace both for the HIV and AIDS situation and inclusive development. Secondly, there must be a deliberate focus to strengthen district and sub-district level institutions to attain the needed capacity to promote the well being of citizens they serve at their level.

3 Revitalise support structures at community level

The social, institutional and organisational environment at community level should be

addressed so that it remains supportive to HIV and AIDS affected households as they struggle to make adjustments. Initiatives related to this will have two aspects: identifying positive elements that are supportive to successful adjustment and taking measures to strengthen them. Each community has ways and means to support AIDS-affected households in awareness and prevention, treatment and care and mitigation of the adverse impacts.

HIV and AIDS pandemic weakens the functioning of community support systems. It erodes societal norms of social solidarity with the vulnerable, as local structures are stretched to the limit by the consequences of the crisis.

In seeking to address this, some institutions have sought to support community caregivers, an approach which actually buys into Zambia's cultural norms of this solidarity. This may mean supporting and strengthening structures that are closest to households. Traditional leaders and their structures can be very effective in mobilising societies to help households to adjust to the HIV and AIDS situation and thus their role should be enhanced. The effectiveness of utilising community based organisations in addressing HIV and AIDS affected households is now well recognised and should be further supported.

The second aspect is identifying negative elements within existing structures and processes that are inhibitors to a successful adjustment of HIV and AIDS affected households. This is beginning to be recognised although there is still a long way to go. For example, practices such as sexual cleansing or spouse inheritance are now being widely discouraged. There are also steps to discourage property grabbing though this still remains firmly entrenched in most societies in Zambia.

There is wide discrimination against women in Zambian cultures with respect to access to productive assets. It is difficult for women to obtain land or accumulate livestock as ownership is mostly through the male members of the household. Gender discrimination often means that the quality of female human capital is low because they are less educated and are kept away from processes that impart essential knowledge and skills for higher productivity. Women, therefore, face a sudden downward spiral after the death of their husbands because they lack the basis for pursuing beneficial livelihood outcomes.

4 Enhance household assets

Measures need to be taken to strengthen each of the five elements of the asset pentagon in the sustainable livelihoods approach (see Figure 1.4 on p. 17). Suggestions are provided below.

The main idea is to turn the vicious cycle between livelihoods and HIV and AIDS into a virtuous cycle. An example is provided from the cycle between livelihoods, HIV and AIDS and water resource management and utilisation in Figure 1.3 on p. 16 in Chapter 1.

Human capital

Human capital is often the immediate casualty the household is confronted with when it faces the effects of losing a household member, looking after a chronically ill patient or hosting an orphan. The most pervasive impacts are the depletion of labour that could otherwise be put at the disposal of pursuing beneficial livelihoods outcomes, the degrading of the quality of this labour both in the short and long term and the psychosocial effects that tend to paralyse the potential of household members to pursue viable livelihood strategies. Therefore, the first tool in the initiatives for acting against HIV and AIDS is enhanced human capital. The success of all other initiatives depends on whether households can overcome the erosions to human capital and employ what remains to obtain beneficial livelihoods outcomes. Some of the

measures in this include the following: **Promotion of labour-saving production practices**. In rural areas this would include the promotion of the adoption of conservation farming practices, small livestock such as goats and chickens and household based agro-processing implements that reduce on household labour demands.

Education support schemes for children from AIDS-affected households. Thus far, such schemes have focused on households hosting orphans. This should be widened to cover all types of AIDS-affected households. Although it may be difficult to identify the households due to stigma, proxy indicators could be utilised instead, such as targeting households hosting any chronically ill patient. Apart from helping to meet education costs, cash transfer schemes to vulnerable households reduce the need for children in these households to be withdrawn from school to help the household cope with reduced labour. School feeding programmes have proved effective in keeping children from vulnerable households in school while helping to create a happier environment for learning.

The school place must be made more supportive to children affected by HIV and AIDS. This may require provision of psychosocial support to such children and tackling stigma in schools.

The school curricula should be revised to offer practical skills. The aim is to help orphans enter the labour market from a stronger base. In addition, orphans and other vulnerable children forced to start work early must be offered opportunities to upgrade their educational attainment while working, so that they are not locked in a cycle of low education and poverty.

Financial capital

The varied financial implications of being an HIV-affected household require specific initiatives. The aim is to help these households meet the extra financial burden they face when looking after a chronically ill household member and meeting funeral expenses. It is also meant to help cushion the financial impact of loss of income as a result of death and when a household enlarges as orphans are taken in. In general, initiatives that help poor people expand or protect their financial base are also good for helping HIV-affected households:

Promotion of small livestock such as goats and chickens that can be easily converted into cash at any time of the year. Currently the Agriculture Support Programme is experimenting with a model which encourages poor households to acquire a few chickens and multiply them. The chickens can be sold to raise cash at critical times of the farming season to acquire inputs, pay for labour during cultivation, weeding and harvesting. Some of the cash is used to buy more chickens and the cycle is allowed to continue. For an HIV-affected household, the model is a good way to obtain the extra cash required to cushion the losses it suffers.

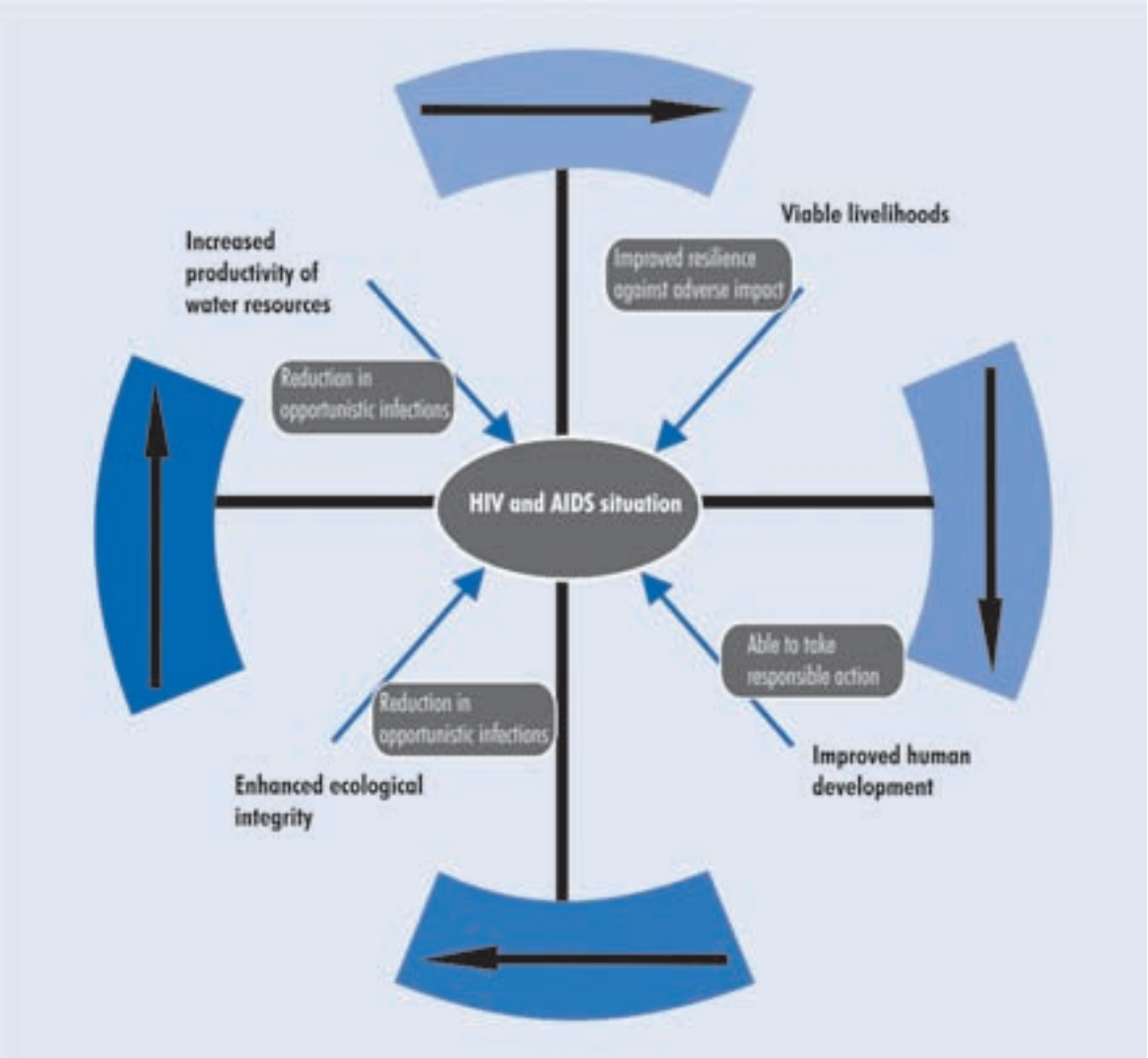
Promotion of pro-poor savings and credit schemes. Accumulated savings and credit associations, such as are being advocated for under the Rural Financial Programme, have the potential of allowing the poorest access cash in critical situations.

Widening the direct cash transfer and other safety nets. The Kalomo Cash Transfer supported by GTZ as a pilot project yielded very good results and must be scaled up. Some HIV-affected households should be helped to meet costs for health, education, food and farm inputs.

Physical capital

Physical assets are depleted due to distress selling, as the household is faced with extra financial obligations. If a household's human and financial capital can be protected, there is good chance that the physical capital will be protected as well. However, additional actions to protect and expand physical assets in HIV and AIDS affected households are required as well:

Figure 6.1: From vicious cycle to virtuous cycle: HIV and AIDS and water management



Livestock multiplication and re-stocking initiatives. This should in particular target households whose livestock has been depleted due to distress selling or property grabbing. This should be backed by strong support services such as livestock extension and provision of veterinary services.

Strong enforcement of the Inheritance Act. This should be aimed at ensuring that property is not grabbed by relatives in the event of one's death.

Ensuring greater access to productive assets by women. Even if property is not grabbed following the death of the husband, women face problems in protecting and expanding these assets because of the ongoing gender discrimination. If a woman has to relocate, for example, from the urban to the rural area, she would face serious difficulties to obtain agricultural land. Women also face problems in accessing credit for acquiring productive assets.

Social capital

The aim is to strengthen the social networks that households in distress first call upon for support. This recognises that whereas AIDS magnifies the need for these networks, it also erodes the capacity for their effective response due to its overburdening nature. It is thus necessary that social capital be rebuilt. However, not much is known with respect to how this social capital works, as this varies from one socie-

ty to another. More in-depth analysis is required before devising specific initiatives. However, some broad principles can be suggested:

Tap into and strengthen the social solidarity to identify with the weak that exist in Zambia's societies. This should start with sensitisation and allowing communities to suggest ways in which they can help households falling in distress.

Encourage the formation of interest groups that are sensitive to AIDS-affected households. These households find it difficult to belong to groups in the first place. Innovative ways are thus required to encourage their participation so that they are part of the ongoing life in the community and make it much easier to be helped.

Support faith and community based organisations that are supporting the vulnerable in the community by strengthening their organisations and capacity to meet the mandates they set out to do.

Natural capital

Natural assets are being depleted due to the negative impacts of poverty in general and AIDS in particular. However, it is also becoming more difficult for households to make good use of these resources because of loss of household capacity. Initiatives in this area should thus aim both at promoting sustainable natural resource exploitation and management and enhancing the capacity for HIV and AIDS affected households to exploit the available natural resources to get beneficial livelihood outcomes. The following measures are important:

Mainstream HIV and AIDS in community-based natural resource management schemes. Zambia has many such schemes such as in forestry, wildlife, fish and water resources. The schemes need to be made more sensitive to AIDS-affected households both from management and utilisation view point.

Promote the adoption of gender-friendly land tenure in communities and at national level. Women should be able to acquire land in their own right so that they are not thrown into destitution when their spouse dies.

Natural resource management groups to pay attention to passing on of skills and knowledge to the younger generation including to some of those who may have lost one or both parents and have little opportunity to acquire such skills from home.

Institutional arrangements

The sustainable livelihoods framework, as discussed earlier in the Chapter, has potential for a comprehensive and holistic response to the problem of HIV and AIDS. As pointed out in Chapter 4, a lot is already being done that answers various aspects of the different elements of the framework. However, these tend to be patchy, uncoordinated and with little inbuilt sustainability. The value of the framework is to enumerate clearly the different dimensions in which HIV and AIDS affect households and therefore point to ways in which a holistic response can be mounted. It is possible to come up with a minimum package of support to HIV and AIDS affected households that is comprehensive enough to help them deal with the often downward spiral in well being and allow them the opportunity to attain beneficial livelihood outcomes.

For the framework to work, it needs to be championed and coordinated. It requires effective structures. However, rather than build new structures, it is proposed that this framework be imbedded in the existing structure under the National HIV/AIDS/STD/TB Council (NAC), which is coordinating the response to HIV and AIDS using a multisectoral approach. The new strategic framework is much more amenable to creating a household focus. For example, under the third theme, one of the strategic objectives is: Promote programmes of food security and income/livelihood generation

for PLWHA and their caregivers or families. NAC can utilise the SLA framework in pursuing this strategic objective.

However, although the new strategic framework has taken steps in the right direction, the household focus is not as explicit as it should be given the importance for targeted actions at that level. There is need to mainstream the household in all the themes and strategic objectives in the National HIV and AIDS Strategic Framework 2006-2010. Examples of some of the issues that need to be added under each theme are provided below.

Intensifying prevention. To make prevention specifically relevant to households, there is need to find ways and means of how prevention can focus on the household. Issues of access to information, affordability of prevention methods being promoted and social and cultural aspects that make prevention difficult at household level, including gender discrimination, should be specifically addressed. Issues of prevention should be linked to promotion of beneficial livelihood outcomes because it has been shown that awareness alone will not translate into prevention if households live in abject poverty.

Expanding treatment, care and support. There are two main issues in treatment, care and support for a household focus. The first is how AIDS-affected households could access treatment more readily and on a sustainable basis. Issues of livelihoods are again key to access and adherence to treatment. The second is the ability of households to care for their members with HIV-related illnesses without compromising their pursuit of beneficial livelihood outcomes. These issues have not been made explicit under this theme.

Mitigation of socioeconomic impact. Mitigation of socioeconomic impacts has been addressed in the preceding chapters. The only call is to utilise the SLA Framework to help enumerate the various ways in which the epidemic is affecting households and then come up with a comprehensive response.

Strengthening the decentralised response and mainstreaming HIV and AIDS. Although one of the strategic objectives is to mainstream HIV and AIDS into district level development policies, strategies, plans and budgets, it is not clearly stated that lower level structures are going to be strengthened so that they are more supportive to AIDS-affected households. There is need for a clear focus on revitalising community structures that would support AIDS-affected households.

Improving the monitoring of the response. NAC needs to put in place participatory monitoring systems that allow community members to contribute to the provision of information and tracking indicators.

Integrating advocacy and coordination of the multisectoral response. There is a need to advocate for a development process that is more supportive of HIV and AIDS affected and other vulnerable households. The issues that should be addressed with this inclusion have been elaborated above.

Table 6.1: Required actions to enhance the capacity of households to respond to HIV and AIDS

REQUIRED ACTIONS AND MAIN PLAYER	TIME FRAME*
GOVERNMENT	
Make the nation's development process more supportive to HIV and AIDS affected households	MT/LT
Intensify external and internal financial resource mobilisation and put in place mechanisms to ensure that funds reach intended beneficiaries (households)	ST/MT
Mainstream a household focus in the current strategic framework of the NAC	ST
Review Zambia's social security system and make it more amenable to AIDS-affected households	ST/MT
Improve the health services especially in rural areas and make treatment more accessible to those with AIDS-related illnesses	MT/LT
Take stock of successful initiatives targeted at households and communities and take steps to scale up these initiatives	ST/MT
Promote gender equality by: (i) Reviewing, strengthening and enforcing ownership and inheritance laws (ii) Promoting awareness, at the community level, of the impact of gender inequality on HIV-affected households (iii) Supporting women's organisations already campaigning for improved access to land, property ownership and inheritance rights (iv) Supporting self-help and support groups (v) Supporting strategies designed to increase women's financial independence, such as micro-credit schemes	MT/LT
Put in place a cadre of extension officers in the health sector to link health institutions with the household	MT/LT
Provide direct cash or support to vulnerable households	ST/MT
Develop policies that create an enabling environment for partnership with other service providers	MT/LT
Develop indicators and mechanisms to monitor and evaluate the effectiveness of activities and initiatives to respond to HIV/AIDS at the household level	MT/LT
Scale up VCT, PMTCT, condom promotion and treatment of opportunistic infections and provision of ARVs	ST/MT
Develop a policy to provide psychosocial support to children affected by HIV and AIDS especially in schools	ST/MT
Re-introduce school health in all schools with a focus on basic hygiene and nutrition	MT
Revise school curricula to offer practical skills	MT/LT
Put in place structures up to village level that will monitor support to households	ST/LT
Provide strong support services such as livestock extension and provision of veterinary services	MT/LT
Provide nutritional care and support to people living with HIV to prevent or forestall nutritional depletion	ST/MT
Mainstream traditional authorities in the governance system and budgetary process	MT
NON-GOVERNMENTAL ORGANIZATIONS	
Participatory tools for monitoring actions to support HIV-affected households	MT
Promote labour-saving production practices	MT/LT
Broker partnership with Government and be the vehicle for providing direct support to households in need	MT/LT
Develop and implement programmes that build capacities for members of the households so that they are able to cope with the impact of HIV and AIDS	ST/MT
Provide psychosocial support to children affected by HIV and AIDS	ST/MT
Provide care and support to members of households living with HIV	ST/MT
Develop and implement sustainable programmes for household food security	MT/LT

** Short term (ST), Medium term (MT) and Long term (LT)*

...Table 6.1: Required Actions to Enhance the Capacity of Households to Respond to HIV and AIDS

REQUIRED ACTIONS AND MAIN PLAYER	TIME FRAME
...NON-GOVERNMENTAL ORGANIZATIONS	
Train households in self-esteem, assertiveness, income generation skills, entrepreneurship and marketing skills	ST/MT
Carry out a mapping exercise of vulnerable households	ST/MT
Promote pro-poor savings and credit schemes	MT
Introduce/scale up direct cash transfer and other safety nets for vulnerable households	ST/MT
Encourage livestock multiplication and re-stocking initiatives	ST/MT/LT
Encourage the formation of interest groups that are sensitive to HIV and AIDS-affected households	ST/MT
Mainstream HIV and AIDS in community-based natural resource management schemes	MT/LT
Promote the adoption of gender-friendly land tenure in communities and at national level	MT/LT
Sensitise communities about cultural/traditional practices (e.g. sexual cleansing, spouse inheritance, property grabbing and discrimination against women) that facilitate the spread of HIV	ST/MT
Identify positive elements in community support structures that help households adjust to the HIV and AIDS situation and sensitise people about them	MT/LT
Provide accurate information to correct misleading information and misconceptions surrounding HIV and AIDS in order to eliminate or reduce stigma and discrimination	MT/LT
TRADITIONAL AUTHORITIES	
Map all households in their jurisdiction	ST
Account for all births and deaths in each household in the community	ST
Mobilise local resources available to support vulnerable households	MT/LT
Find innovative ways of preparing and preserving local foods to ensure that households without food have enough to eat	MT/LT
Ensure that each household has a granary and discourage households from selling and exchanging all the food grown	MT/LT
Encourage/strengthen positive elements in community support structures in order to help households adjust to the HIV and AIDS situation	MT/LT
Discourage traditional/cultural practices (e.g. sexual cleansing, spouse inheritance, property grabbing, and discrimination against women) that facilitate the spread of HIV	MT/LT
Promote small livestock production that can easily be converted into cash at any time of the year	ST/MT/LT
HOUSEHOLDS	
Engage in income generating activities that improve beneficial livelihood outcomes	ST/MT/L
Stop early marriages of girls	MT/LT
Socialise children using approaches that take into account the AIDS epidemic	MT/LT
Rekindle the support systems that existed in various communities to respond to disasters such as HIV and AIDS	MT

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Technical annex

The human development concept

The Human Development concept is an attempt at coming up with a holistic representation of human well-being. It was introduced in 1990 with the first publication of the Human Development Report. Since then, the concept has been refined in subsequent Human Development Reports. Well-being is the ability to meet choices of life that one highly values. Human development is, therefore, the process of expanding these choices. Although these choices are in theory unlimited, certain choices are regarded as very fundamental such that once deprived, one's well being is seriously jeopardised. There is consensus that four of these choices are very essential.

- *A long and healthy life.* To lead a long and healthy life is considered a fundamental choice as people in general would like to avoid dying young as long as their life is healthy. This choice is interrelated to the other choices because, to be fulfilled, it must be supported, for example, by good nutrition, living in a clean and hygienic environment by accessing good housing and clean and safe water, access to information, and access to health facilities.

- *Acquire knowledge.* This choice constitutes learning, becoming literate and attaining the capacity to access and process information for making other individual choices. It is a common choice to mankind because no one ordinarily chooses ignorance and to be cut out from the world of information. There are many ways through which this choice is acquired. Formal education from kindergarten to higher education imparts knowledge. It also builds people's capacity to acquire the knowledge they seek and apply it in the pursuit of other fundamental choices of life. It is an important means of fulfilling this choice. Informal ways of learning such as that which takes place through the normal course of human interaction in the household, community and broader society including at the workplace is also another means. Intergenerational transfer of knowledge and skills in the family and society, access to an unfettered media and other ways of teaching and learning are also important in fulfilling this choice.

- *Enjoy a decent standard of living.* To enjoy a decent standard of living as a human development choice constitutes freedom from poverty and the ability to acquire the material necessities of life to support an acceptable lifestyle. A decent level of income is needed to support the choice of a decent standard of living. Having a job or work that earns one a decent living together with their household is fundamental to the fulfilment of this choice. This choice is intricately linked to the other choices identified as it opens a window of access to other human development supporting choices such as food, education, health, housing and clean water and sanitation. Admittedly, income plays a critical role in helping to expand these choices. At the minimum, people should have enough income for a specified amount of food. Beyond this, people should have enough to access capability-enhancing facilities or services such as for health and education.

- *Freedom to Participate in the Life of the Community.* Freedom to feel appreciated by the society to which one belongs is a fundamental choice constituting one's well-being. It is supported by many

aspects. First is the freedom of association and to belong to any grouping promoting legitimate interests of the society. Second is its twin freedom of expression as long as this does not take away from the rights of others or society at large. Third is the choice to be useful to the community by contributing to its collective advancement. Fourth is to be accorded dignity and respect in the community. Fifth is the right to feel protected against arbitrary interference in one's course of life by the more powerful in the society.

Full human development goes beyond the four essential choices described above. There are other choices ranging from "political, economic and social freedom to opportunities for being creative and productive and enjoying self-respect and guaranteed human rights" (HDR, 1997, p.14). It also takes into account the various ingredients necessary for people to attain dignity and self-respect. The choices described above, help people attain a rightful place in society without being ashamed.

The freedom to make choices of life presumes people's capabilities that enable them to function. Skills, level of education and the health status of people play an important role in building the necessary capabilities. With these, people are better able to make and pursue the choices of life. The availability of opportunities over which the choices are made is also a necessary ingredient. For example, choices with respect to education, health and jobs are achievable only if they are available. A principle objective of policy is therefore to build an environment in which these opportunities could be created and meaningfully pursued.

For human development to have meaning, the process of expanding people's choices must be sustainable. They must be expanded both for the present as well as future generations. Inter-generational equity requires that choices for the present generation should not be expanded at the expense of choices for future generations. It is a holistic concept and encompasses environmental, institutional, cultural, social and political aspects.

The human poverty concept

With such a multi-faceted view of what constitutes human development, the HDRs have also presented poverty as a multi-dimensional phenomenon. Poverty is not only a deprivation of material gain necessary for a decent standard of living. Rather, poverty is presented as a denial of opportunities and choices most basic to human development. Poverty is therefore deprivations in human development.

The Human Development Report 1997 inaugurated the concept of human poverty- also called the poverty of lives and opportunities- in an attempt to portray the many faces of poverty.

Being analogous to human development, human poverty focuses on deprivations in the three essential choices of human development, longevity, knowledge and standard of living.

The human poverty concept also recognises many other deprivations undermining the quality of life that people live. Some of these deprivations are lack of human rights and political freedom, "inability to participate in decision-making, lack of personal security, inability to participate in the life of a community and threats to sustainability and intergenerational equity" (HDR, 1997).

Measures of human development

To capture the features promulgated in the various concepts of human development, a number of indices have been formulated since 1990. These are briefly described below.

The human development index, HDI

The overall concept of human development is measured by the human development index or HDI. First inaugurated in the Human Development Report 1990, it seeks to provide a quantitative representation of the three essential choices of life noted above, a long and healthy life, knowledge and a decent standard of living.

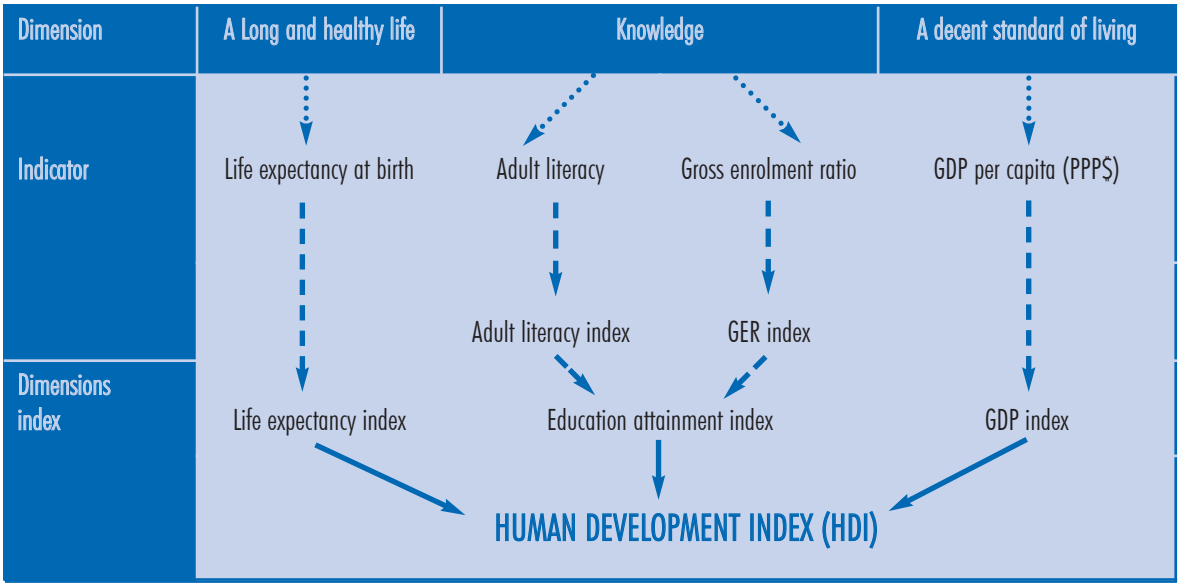
Each of these choices have been assigned corresponding quantitative indicators: a long and health life is measured by life expectancy at birth; educational attainment (representing knowledge) by a weighted average of the adult literacy rate and combined primary, secondary and tertiary enrolment ratios; and decent standard of living by real GDP per capita (PPP$). Therefore, the HDI is a composite index of three indices, the life expectancy index, the educational attainment index and the adjusted real GDP per capita (PPP$) index. It is a simple average of the three indices derived by dividing their sum by 3.

The HDI thus puts all the three basic indicators on a common measuring rod, the minimum and maximum value of each variable range between 0 and 1. The range corresponds to established actual values that depict the defined goal that needs to be attained in each variable.

The immensity of what constitutes human well-being makes the concept of human development too complex to be collapsed into simple measure. However, there is always need to simplify reality this way to practically assess performance and make comparisons. The HDI value for a country shows the distance it has already travelled towards the maximum possible value of 1 and also allows inter-country comparisons.

Over the decade since its first formulation, the HDI has undergone several improvements. However, in 1999, it was significantly refined on the basis of a thorough review of its concept and formulation. Two major changes were effected. The first were methodological changes. The second were the use of new and improved data series. On account of these changes, the HDI values contained in the HDR after the 1998 issue are not comparable with those in reports of the previous years.

The composition of the HDI is represented below.



For each indicator, the maximum and minimum goal posts have been established as shown below:

Indicator	Minimum value	Maximum value
Life expectancy	25 years	85 years
Adult literacy	0%	100%
Gross Enrolment	0%	100%
GDP per capita	US$100	US$40, 000

Except the GDP Index, each of the above three index is calculated using the following formula:

$$Index = \frac{Actual\ value - Minimum\ value}{Maximum\ value - Minimum\ value}$$

The life expectancy, adult literacy, gross enrolment, and the GDP indices are then calculated for Zambia to derive the 2003 and 2004 HDI using the values of the four parameters given below:

Year	Values of the parameters			
	Life expectancy at birth (years)	Adult literacy rate (% age 15 and above)	Combined gross enrolment ratio (%)	GDP per capita (PPP US$)
1998	40.5	76.3	43	719
2000	50	67.2	45	780
2004	52.7	67.2	62.5	882.96

The 2004 human development index has been calculated from the following indices:

1. Life expectancy index

$$= \frac{52.7-25}{85-25} = \frac{25}{60} = 0.462$$

2. The education index is a composite of the adult literacy and the gross enrolment indices with two-third weight given to literacy.

$$= \frac{2}{3}\left[\frac{67-0}{100-0}\right] + \frac{1}{3}\left[\frac{62.5-0}{100-0}\right] = 0.66$$

3. Increases in income are assumed to have a greater impact at lower values because achieving a respectable level of Human Development does not require unlimited income. Therefore, to derive the needed adjustment, the logarithm of income is used.

$$= \frac{Log\ 882.96 - Log100}{Log40000 - Log100} = 0.364$$

4. After calculating the dimension indices (above), the human development index (HDI) is taken as a simple average of the three indices.

$$= \frac{0.462 + 0.66 + 0.364}{3} = 0.495$$

The human poverty Index, HPI

To depict private income, the percentage of malnourished children under five is used as the indicator. Besides the ease of measurement and availability of data, it rationalised that a very high proportion of private income is spent on food and nourishment. Public services provisioning is represented by the percentage of people with access to health services and to safe water.

In the Human Development Report 1998 the need to have different HPI measures for developing and for industrial countries was advanced. The idea is that although deprivation exists in both, different indicators are needed to reflect the way it is manifested in the two country categories. Accordingly, the HPI introduced in the HDR 1997 was designated as presenting deprivation in developing countries and now termed HPI-1. The HPI for the industrial countries was formulated as HPI-2.

Together with the formulation of the human poverty concept discussed above, the HDR 1998 also inaugurated the human poverty index (HPI). This is also a composite index based on indices that represent

deprivation in three choices depicted in the human development concept.

The human poverty index for developing countries (HPI-1) concentrates on deprivations in three essential dimensions of human life already reflected in the HDI which are longevity, knowledge, and a decent standard of living. The first deprivation relates to survival - vulnerability to death at a relatively early age. The second relates to knowledge- being excluded from the world of reading and communication. The third relates to a decent living standard in terms of overall economic provisioning.

In constructing the HPI, the deprivation in longevity is represented by the percentage of people not expected to survive to the age 40 (P_1), and the deprivation in knowledge is represented by percentage of adults who are illiterate (P_2). The deprivation in living standards is represented by a composite (P_3) of three variables- the percentage of people without access to safe water (P_{31}), the percentage of people without access to health services (P_{32}), and the percentage of moderately and severely underweight children under five (P_{33}).

The composite variable P_3 is constructed by taking a simple average of the three variables P_{31}, P_{32}, and P_{33}. Thus

$$P_3 = \frac{P_{31} + P_{32} + P_{33}}{3}$$

Computing the HPI for Zambia in 2004

Country	P_1 (%)	P_2 (%)	P_{31} (%)	P_{32} (%)	P_{33} (%)
Zambia	15	32.8	3	44.56	20

Step one;

$$P_3 = \frac{43 + 44.56 + 20}{3} = 35.85$$

Step two;
Constructing the HPI

$$\begin{aligned} HPI &= [1/3\ (15^3 + 32.8^3 + 35.85^3)]^{1/3} \\ &= [1/3\ (3375+35287.6+46075.23)]^{1/3} \\ &= [1/3\ (84737.83)]^{1/3} \\ &= [28245.94]^{1/3} \\ &= 30.25 \end{aligned}$$

Gender-related development index, GDI and gender empowerment measure, GEM

The Human Development Report 1995 introduced two indices: the gender development index, GDI and the gender empowerment measure, GEM. This recognised that disparities between men and women are a significant manifestation of the deprivations that the world faces. As all the Human Development Reports have shown, "gender inequality is strongly associated with human poverty" (HDR 1997, p.39). Therefore, a treatment of human development or human poverty will not be complete without bringing out this inequality.

The GDI tries to capture progress in the same essential variables in the HDI, i.e. longevity, educational attainment and income. These variables are nevertheless adjusted for gender inequality. It is thus an indicator of gender inequality in basic human capabilities.

The GEM on the other hand measures gender inequality in key areas of economic and political participation. It covers four variables: earned income share of women, percentage of professional and technical female workers, percentage of women administrators and managers and share of parliamentary seats held by women.

Basically, the HDI, GDI, HPI-1 and HPI-2 involve the same dimensions but provide different perspectives through different measurements. Thus the HDI measures progress in the dimensions of longevity, knowledge and overall economic provi-

sioning for a decent standard of living. The GDI measures progress in the same dimensions after adjusting for gender differences. The HPI-1 and HPI-2 measure deprivation in respect of those dimensions that exist in developing and industrial countries respectively. A synoptic picture of these similarities and differences is provided in the table below.

Sources of data used in the construction of the HDI and HPI

This National Human Development Report for Zambia relied heavily on the Living Conditions Monitoring Surveys, conducted every two years by the CSO, to calculate the human development and human poverty indices. Particularly, data on most variables used to calculate the HDIs and the HPIs was obtained from the 2004 Living Conditions Living Monitoring Survey report. The advantages of using this source were two fold. Firstly, it was the only report that had the latest data after the 2000 census and the 2001-2002 Zambia Demogrraphic and Health Survey (ZDHS) Report whose statistics were captured in the NHDR for 2003. Secondly, the data collection methodology of the 2004 Living Conditions and Monitoring Survey was similar to the 1998 and the 1996 Living Conditions Monitoring Surveys.

Therefore, it was possible to compare the computed HDIs and HPIs in this report to those calculated in the 2003 using the end of decade survey sponsored by the International Labour Organisation (ILO) and Central Statistical Office's (CSO) demographic projections 1990-2015, and those calculated in the 1999/2000 NHDR which used the 1998 and 1996 Living Conditions Monitoring Surveys Reports. For data that could not be found in the 2004 Living Conditions Monitoring Survey Report, this NHDR used the 2001-2002 ZDHS Report and the Central Statistical Office's Projection Reports.

HDI, GDI, HPI-1 & HPI-2- same dimensions, different measurements

Index	Longevity	Knowledge	Decent standard of living	Participation or exclusion
HDI	Life expectancy at birth	1. Adult literacy rate 2. Enrolment ratio	Per capita income in PPP$	
GDI	Female and male life expectancy at birth	1. Female and male adult literacy rate 2. Female and male enrolment ratio	Adjusted per capita income in PP$ based on female and male income shares	
HPI-1	Percent of population not expected to survive to age 40	Adult illiteracy rate	1. Percent of people without accessto safe water 2. Percent of people without access to health services 3. Percent of underweight children under 5	
HPI-2	Percent of population not expected to survive to age 60	Adult functional illiteracy	Percentage of people living below poverty line (50 percent of median personal disposable income)	Long-term unemployment rate (12 months or more)

UNDP: Human Development Report 1999, p127. Table 1.

This NHDR never obtained information from the 2002-2003 Living Conditions and Monitoring Survey because it used a different methodology from all other similar surveys used in previous NHDR as detailed above because for the first time, data was collected from the respondents for a the whole year. Details on the data used in the construction of the HDIs and HPI in the 2003 and 1999/2000 NHDRs have been provided in the technical annexes. Therefore, the explanation given in this report is for the data used in the computations of the HDIs and HPIs for 2004.

There were lags for a few variables in the published data and this was particularly the case for the adult literacy rates and life expectancy at birth whose data were based on the Central Statistical Office's 2000 Census Population Projection Report, respectively. This source was also used to obtain projected Under-5 mortality rates used as a proxy variable for deprivation to surviving to 40 years (P1) in the development of the HPIs.

The following are the data used to calculate the 2004 HDIs:

Life expectancy at birth: This is based on the CSO's 2000 Census Projection Report estimates. The projected data used in the calculation of the HDIs are those that were projected while considering HIV and AIDS at national and provincial levels in 2004.

Adult literacy rate: This is based on the 2000 Census as found in the provincial reports.

Gross enrolment ratio: The national and provincial gross enrolment ratios were computed from the gross enrolment ratios for many age groups representing primary, secondary and tertiary education levels in Zambia published in the 2004 LCMS.

Income per capita as proxy for purchase power parity (PPP) per capita GDP (US$): This was obtained from the LCMS 2004.
In order to facilitate comparisons between the HPIs computed in the 1999/2000 NHDR, the procedure followed in calculating the HPIs for 2004 was similar to the one used in the earlier reports. Details on the source of data for the variables that went into the calculation of the HPIs in 2004 are as follows:

The deprivation in longevity (P_1): This is based on the under five mortality rate (U5MR) for 2004 obtained from the CSO's 2000 Census Population Projection Report. This data was used to match the procedure used in the calculation of the 1998 HPIs and there was also no data on the percentage of people not expected to survive up to the age of 40. Thus U5MR were used as a proxy-variable in the calculation of the 1998 and 2004 HPIs.

The deprivation in knowledge (P_2): This is derived from the adult literacy rate and these data were obtained from the 2001-2002 ZDHS Report.

The deprivation to a decent living standard (P_3): was calculated as a composite of the following data.

The percentage of people without access to safe water (P_{31}): This is derived from the 2004 LCMS Report.

The percentage of people without access to health services (P_{32}): This is derived from the 2004 LCMS Report.

The percentage of moderately and severely underweight children (P_{33}): This is derived from the 2004 LCMS Report.

Appendix table 1: Human development index by HDI rank

		Per capita income (US$)	Combined gross attendance rate (%)	Life expectancy without AIDS	Life expectancy with AIDS	Literacy rate	Income index	Education attainment index	Life expectancy with AIDS index	Life expectancy without AIDS index	HDI with AIDS	HDI without AIDS
1	Livingstone	687.4	107.24	62.30	53.00	89.30	0.322	0.953	0.467	0.622	0.580	0.632
2	Chililabombwe	468.9	107.34	63.50	53.00	83.00	0.258	0.911	0.467	0.642	0.545	0.604
3	Kalulushi	434.1	119.83	58.60	50.80	82.90	0.245	0.952	0.430	0.560	0.542	0.586
4	Mufulira	451.5	95.45	58.60	53.40	86.90	0.252	0.898	0.473	0.560	0.541	0.570
5	Mporokoso	372.4	102.12	61.00	58.10	70.30	0.219	0.809	0.552	0.600	0.527	0.543
6	Luanshya	360.9	103.33	56.90	52.30	84.70	0.214	0.909	0.455	0.532	0.526	0.552
7	Namwala	288.6	81.08	66.20	62.50	72.90	0.177	0.756	0.625	0.687	0.519	0.540
8	Kitwe	489.8	99.39	62.40	47.80	87.20	0.265	0.913	0.380	0.623	0.519	0.600
9	Lusaka	649.0	92.98	60.10	47.40	84.10	0.312	0.871	0.373	0.585	0.519	0.589
10	Kasempa	342.7	96.69	63.20	59.60	63.60	0.206	0.746	0.577	0.637	0.510	0.530
11	Mumbwa	334.9	86.89	65.50	59.10	70.30	0.202	0.758	0.568	0.675	0.509	0.545
12	Itezhi-tezhi	288.6	82.57	66.20	62.60	64.50	0.177	0.705	0.627	0.687	0.503	0.523
13	Mufumbwe	343.1	97.76	62.70	59.10	61.10	0.206	0.733	0.568	0.628	0.502	0.522
14	Choma	438.8	92.38	61.00	53.00	72.60	0.247	0.792	0.467	0.600	0.502	0.546
15	Chingola	334.9	93.58	60.10	49.80	84.70	0.202	0.877	0.413	0.585	0.497	0.554
16	Ndola	410.4	95.72	58.60	46.20	83.20	0.236	0.874	0.353	0.560	0.488	0.556
17	Kafue	362.6	99.33	62.30	49.70	74.70	0.215	0.829	0.412	0.622	0.485	0.555
18	Monze	330.3	79.87	61.50	53.60	77.00	0.199	0.780	0.477	0.608	0.485	0.529
19	Kabompo	168.6	129.77	63.50	59.90	52.30	0.087	0.781	0.582	0.642	0.483	0.503
20	Kabwe	374.9	94.50	57.00	46.30	83.20	0.221	0.870	0.355	0.533	0.482	0.541
21	Mazabuka	328.1	83.39	62.40	54.40	70.50	0.198	0.748	0.490	0.623	0.479	0.523
22	Mpika	276.7	103.97	61.50	55.00	62.80	0.170	0.765	0.500	0.608	0.478	0.514
23	Mpongwe	461.0	84.09	63.30	51.60	66.30	0.255	0.722	0.443	0.638	0.474	0.539
24	Sinazongwe	330.3	95.88	60.20	57.00	54.30	0.199	0.682	0.533	0.587	0.471	0.489
25	Zambezi	228.7	112.72	63.70	59.40	48.40	0.138	0.698	0.573	0.645	0.470	0.494
26	Mkushi	323.0	69.12	63.20	57.00	63.50	0.196	0.654	0.533	0.637	0.461	0.495
27	Kasama	268.3	87.77	56.80	51.80	69.50	0.165	0.756	0.447	0.530	0.456	0.484
28	Chongwe	341.9	84.77	62.30	51.70	63.30	0.205	0.705	0.445	0.622	0.452	0.510
29	Kaoma	328.9	89.88	56.90	52.50	57.30	0.199	0.682	0.458	0.532	0.446	0.471
30	Luangwa	380.8	96.68	58.40	48.70	57.30	0.223	0.704	0.395	0.557	0.441	0.495
31	Kawambwa	307.4	77.73	55.00	50.00	68.30	0.187	0.714	0.417	0.500	0.440	0.467
32	Mwinilunga	262.8	87.75	61.50	57.40	46.60	0.161	0.603	0.540	0.608	0.435	0.458
33	Chibombo	227.7	64.71	62.10	56.20	64.60	0.137	0.646	0.520	0.618	0.435	0.467
34	Solwezi	279.0	87.67	57.40	52.10	57.00	0.171	0.672	0.452	0.540	0.432	0.461
35	Chavuma	219.2	91.47	63.70	59.50	42.60	0.131	0.589	0.575	0.645	0.432	0.455
36	Sesheke	182.4	93.72	56.60	49.20	71.70	0.100	0.790	0.403	0.527	0.431	0.472
37	Gwembe	269.6	64.11	62.80	59.50	48.90	0.166	0.540	0.575	0.630	0.427	0.445
38	Masaiti	278.3	61.38	56.90	51.70	67.10	0.171	0.652	0.445	0.532	0.423	0.451
39	Lufwanyama	247.6	74.80	56.90	51.70	61.90	0.151	0.662	0.445	0.532	0.419	0.448
40	Isoka	232.9	79.12	53.30	51.10	61.90	0.141	0.676	0.435	0.472	0.418	0.430
41	Kazungula	328.7	64.23	56.10	49.10	65.20	0.199	0.649	0.402	0.518	0.416	0.455

Central Statistical Office, Living Conditions Monitoring Survey 2004, unpublished data

APPENDIX TABLE 1

... Appendix table 1: Human development index by HDI rank

		Per capita income (US$)	Combined gross attendance rate (%)	Life expectancy without AIDS	Life expectancy with AIDS	Literacy rate	Income index	Education attainment index	Life expectancy with AIDS index	Life expectancy without AIDS index	HDI with AIDS	HDI without AIDS
42	Kapiri Mposhi	272.7	55.82	62.10	53.10	63.60	0.167	0.610	0.468	0.618	0.415	0.465
43	Mambwe	294.0	91.83	51.30	47.70	57.00	0.180	0.686	0.378	0.438	0.415	0.435
44	Chinsali	264.5	52.82	54.70	52.20	65.40	0.162	0.612	0.453	0.495	0.409	0.423
45	Kalomo	228.0	72.84	56.10	48.90	67.30	0.138	0.691	0.398	0.518	0.409	0.449
46	Mungwi	236.3	70.12	56.80	54.20	53.80	0.144	0.592	0.487	0.530	0.408	0.422
47	Luwingu	216.3	76.90	56.40	52.20	57.10	0.129	0.637	0.453	0.523	0.406	0.430
48	Nakonde	395.5	67.99	51.70	46.30	60.00	0.229	0.627	0.355	0.445	0.404	0.434
49	Mongu	208.1	92.55	51.50	42.90	71.10	0.122	0.783	0.298	0.442	0.401	0.449
50	Siavonga	289.9	74.36	56.00	51.00	50.90	0.178	0.587	0.433	0.517	0.399	0.427
51	Mansa	255.8	72.55	52.00	45.40	67.90	0.157	0.694	0.340	0.450	0.397	0.434
52	Serenje	236.9	52.73	56.90	51.10	63.40	0.144	0.598	0.435	0.532	0.392	0.425
53	Petauke	273.2	76.28	55.00	51.30	43.60	0.168	0.545	0.438	0.500	0.384	0.404
54	Lukulu	214.0	74.82	52.20	48.20	55.50	0.127	0.619	0.387	0.453	0.378	0.400
55	Mpulungu	316.2	58.01	53.10	47.60	53.40	0.192	0.549	0.377	0.468	0.373	0.403
56	Nchelenge	265.1	71.68	47.70	42.60	63.10	0.163	0.660	0.293	0.378	0.372	0.400
57	Mbala	237.5	51.46	53.20	50.90	53.80	0.144	0.530	0.432	0.470	0.369	0.382
58	Chadiza	416.6	68.63	51.10	47.50	39.10	0.238	0.489	0.375	0.435	0.368	0.388
59	Kaputa	253.5	59.52	48.50	47.00	54.50	0.155	0.562	0.367	0.392	0.361	0.370
60	Mwense	211.1	61.85	48.30	44.00	64.90	0.125	0.639	0.317	0.388	0.360	0.384
61	Kalabo	176.4	80.83	48.20	44.10	54.60	0.095	0.633	0.318	0.387	0.349	0.372
62	Milenge	162.8	62.28	52.00	47.40	55.80	0.081	0.580	0.373	0.450	0.345	0.370
63	Katete	229.2	71.84	56.40	48.80	37.10	0.138	0.487	0.397	0.523	0.341	0.383
64	Senanga	126.2	74.59	48.10	44.50	59.80	0.039	0.647	0.325	0.385	0.337	0.357
65	Chipata	332.8	72.83	51.30	37.00	54.90	0.201	0.609	0.200	0.438	0.336	0.416
66	Samfya	221.4	58.24	44.50	43.10	53.60	0.133	0.551	0.302	0.325	0.329	0.336
67	Nyimba	165.0	45.12	55.00	51.20	46.90	0.084	0.463	0.437	0.500	0.328	0.349
68	Chama	251.0	77.71	42.30	39.40	46.90	0.154	0.572	0.240	0.288	0.322	0.338
69	Lundazi	419.6	48.85	43.70	38.30	49.90	0.239	0.495	0.222	0.312	0.319	0.349
70	Chienge	217.9	42.97	48.00	44.00	50.30	0.130	0.479	0.317	0.383	0.308	0.331
71	Chilubi	168.2	53.49	50.50	45.50	46.20	0.087	0.486	0.342	0.425	0.305	0.333
72	Shangombo	158.0	55.95	51.60	47.60	33.60	0.076	0.410	0.377	0.443	0.288	0.310
Zambia		**347.4**	**84.70**	**57.50**	**52.40**	**66.00**	**0.208**	**0.722**	**0.457**	**0.542**	**0.462**	**0.491**
1	Central P.	271.6	74.79	60.80	55.00	68.50	0.167	0.706	0.500	0.597	0.458	0.490
2	Copperbelt P.	414.5	98.00	63.20	57.60	82.40	0.237	0.876	0.543	0.637	0.552	0.583
3	Eastern P.	311.8	70.42	51.70	47.00	46.40	0.190	0.544	0.367	0.445	0.367	0.393
4	Luapula P.	243.1	66.22	51.20	47.50	61.50	0.148	0.631	0.375	0.437	0.385	0.405
5	Lusaka P.	588.6	93.04	62.50	54.10	67.20	0.296	0.758	0.485	0.625	0.513	0.560
6	Northern P.	265.7	76.06	55.80	45.50	59.10	0.163	0.648	0.342	0.513	0.384	0.441
7	North W. P.	263.7	99.38	58.70	55.60	53.40	0.162	0.687	0.510	0.562	0.453	0.470
8	Southern P.	362.8	84.55	59.20	51.60	70.20	0.215	0.750	0.443	0.570	0.469	0.512
9	Western P.	210.2	84.11	52.60	48.20	54.90	0.124	0.646	0.387	0.460	0.386	0.410

Appendix table 2: Human development index in Zambia, by province and district

	Per capita income (US$)	Combined gross attendance rate (%)	Life expectancy without AIDS	Life expectancy with AIDS	Literacy rate	Income index	Education attainment index	Life expectancy with AIDS index	Life expectancy without AIDS index	HDI with AIDS	HDI without AIDS
Zambia	**347.43**	**84.7**	**57.5**	**52.4**	**66**	**0.21**	**0.72**	**0.46**	**0.54**	**0.462**	**0.491**
Central P.	**271.59**	**74.7**	**60.8**	**55**	**68.5**	**0.17**	**0.71**	**0.50**	**0.60**	**0.458**	**0.490**
Chibombo	227.71	64.7	62.1	56.2	64.6	0.14	0.65	0.52	0.62	0.435	0.467
Kabwe	374.85	94.5	57.0	46.3	83.2	0.22	0.87	0.36	0.53	0.482	0.541
Kapiri Mposhi	272.66	55.8	62.1	53.1	63.6	0.17	0.61	0.47	0.62	0.415	0.465
Mkushi	322.96	69.1	63.2	57	63.5	0.20	0.65	0.53	0.64	0.461	0.495
Mumbwa	334.89	86.9	65.5	59.1	70.3	0.20	0.76	0.57	0.68	0.509	0.545
Serenje	236.90	52.7	56.9	51.1	63.4	0.14	0.60	0.44	0.53	0.392	0.425
Copperbelt P.	**414.47**	**98.0**	**63.2**	**57.6**	**82.4**	**0.24**	**0.88**	**0.54**	**0.64**	**0.552**	**0.583**
Chililabombwe	468.87	107.3	63.5	53	83	0.26	0.91	0.47	0.64	0.545	0.604
Chingola	334.89	93.6	60.1	49.8	84.7	0.20	0.88	0.41	0.59	0.497	0.554
Kalulushi	434.14	119.8	58.6	50.8	82.9	0.25	0.95	0.43	0.56	0.542	0.586
Kitwe	489.84	99.4	62.4	47.8	87.2	0.27	0.91	0.38	0.62	0.519	0.600
Luanshya	360.88	103.3	56.9	52.3	84.7	0.21	0.91	0.46	0.53	0.526	0.552
Lufwanyama	247.55	74.8	56.9	51.7	61.9	0.15	0.66	0.45	0.53	0.419	0.448
Masaiti	278.26	61.4	56.9	51.7	67.1	0.17	0.65	0.45	0.53	0.423	0.451
Mpongwe	460.95	84.1	63.3	51.6	66.3	0.26	0.72	0.44	0.64	0.474	0.539
Mufulira	451.51	95.5	58.6	53.4	86.9	0.25	0.90	0.47	0.56	0.541	0.570
Ndola	410.44	95.7	58.6	46.2	83.2	0.24	0.87	0.35	0.56	0.488	0.556
Eastern P.	**311.82**	**70.4**	**51.7**	**47.0**	**46.4**	**0.19**	**0.54**	**0.37**	**0.45**	**0.367**	**0.393**
Chadiza	416.59	68.6	51.1	47.5	39.1	0.24	0.49	0.38	0.44	0.368	0.388
Chama	251.01	77.7	42.3	39.4	46.9	0.15	0.57	0.24	0.29	0.322	0.338
Chipata	332.76	72.8	51.3	37.0	54.9	0.20	0.61	0.20	0.44	0.336	0.416
Katete	229.24	71.8	56.4	48.8	37.1	0.14	0.49	0.40	0.52	0.341	0.383
Mambwe	293.99	91.8	51.3	47.7	57	0.18	0.69	0.38	0.44	0.415	0.435
Nyimba	164.98	45.1	55.0	51.2	46.9	0.08	0.46	0.44	0.50	0.328	0.349
Petauke	273.18	76.3	55.0	51.3	43.6	0.17	0.54	0.44	0.50	0.384	0.404
Luapula P.	**243.10**	**66.2**	**51.2**	**47.5**	**61.5**	**0.15**	**0.63**	**0.38**	**0.44**	**0.385**	**0.405**
Chienge	217.89	43.0	48.0	44.0	50.3	0.13	0.48	0.32	0.38	0.308	0.331
Kawambwa	307.35	77.7	55.0	50.0	68.3	0.19	0.71	0.42	0.50	0.440	0.467
Mansa	255.83	72.5	52.0	45.4	67.9	0.16	0.69	0.34	0.45	0.397	0.434
Milenge	162.75	62.3	52.0	47.4	55.8	0.08	0.58	0.37	0.45	0.345	0.370
Mwense	211.11	61.8	48.3	44.0	64.9	0.12	0.64	0.32	0.39	0.360	0.384
Nchelenge	265.14	71.7	47.7	42.6	63.1	0.16	0.66	0.29	0.38	0.372	0.400
Samfya	221.38	58.2	44.5	43.1	53.6	0.13	0.55	0.30	0.33	0.329	0.336
Lusaka P.	**588.59**	**93.0**	**62.5**	**54.1**	**67.2**	**0.30**	**0.76**	**0.49**	**0.63**	**0.513**	**0.560**
Chongwe	341.89	84.8	62.3	51.7	63.3	0.21	0.70	0.45	0.62	0.452	0.510
Kafue	362.56	99.3	62.3	49.7	74.7	0.21	0.83	0.41	0.62	0.485	0.555
Luangwa	380.78	96.7	58.4	48.7	57.3	0.22	0.70	0.40	0.56	0.441	0.495
Lusaka	648.99	93.0	60.1	47.4	84.1	0.31	0.87	0.37	0.59	0.519	0.589

Central Statistical Office, Living Conditions Monitoring Survey 2004, unpublished data

APPENDIX TABLE 2

... Appendix table 2: Human development index in Zambia, by province and district

	Per capita income (US$)	Combined gross attendance rate (%)	Life expectancy without AIDS	Life expectancy with AIDS	Literacy rate	Income index	Education attainment index	Life expectancy with AIDS index	Life expectancy without AIDS index	HDI with AIDS	HDI without AIDS
Northern P.	**265.70**	**76.1**	**55.8**	**45.5**	**59.1**	**0.16**	**0.65**	**0.34**	**0.51**	**0.384**	**0.441**
Chilubi	168.22	53.5	50.5	45.5	46.2	0.09	0.49	0.34	0.43	0.305	0.333
Chinsali	264.52	52.8	54.7	52.2	65.4	0.16	0.61	0.45	0.50	0.409	0.423
Isoka	232.92	79.1	53.3	51.1	61.9	0.14	0.68	0.44	0.47	0.418	0.430
Kaputa	253.50	59.5	48.5	47.0	54.5	0.16	0.56	0.37	0.39	0.361	0.370
Kasama	268.33	87.8	56.8	51.8	69.5	0.16	0.76	0.45	0.53	0.456	0.484
Luwingu	216.26	76.9	56.4	52.2	57.1	0.13	0.64	0.45	0.52	0.406	0.430
Mbala	237.52	51.5	53.2	50.9	53.8	0.14	0.53	0.43	0.47	0.369	0.382
Mpika	276.71	104.0	61.5	55.0	62.8	0.17	0.77	0.50	0.61	0.478	0.514
Mporokoso	372.36	102.1	61.0	58.1	70.3	0.22	0.81	0.55	0.60	0.527	0.543
Mpulungu	316.23	58.0	53.1	47.6	53.4	0.19	0.55	0.38	0.47	0.373	0.403
Mungwi	236.28	70.1	56.8	54.2	53.8	0.14	0.59	0.49	0.53	0.408	0.422
Nakonde	395.48	68.0	51.7	46.3	60	0.23	0.63	0.36	0.45	0.404	0.434
North W. P.	**263.71**	**99.4**	**58.7**	**55.6**	**53.4**	**0.16**	**0.69**	**0.51**	**0.56**	**0.453**	**0.470**
Chavuma	219.17	91.5	63.7	59.5	42.6	0.13	0.59	0.58	0.65	0.432	0.455
Kabompo	168.64	129.8	63.5	59.9	52.3	0.09	0.78	0.58	0.64	0.483	0.503
Kasempa	342.74	96.7	63.2	59.6	63.6	0.21	0.75	0.58	0.64	0.510	0.530
Mufumbwe	343.07	97.8	62.7	59.1	61.1	0.21	0.73	0.57	0.63	0.502	0.522
Mwinilunga	262.80	87.8	61.5	57.4	46.6	0.16	0.60	0.54	0.61	0.435	0.458
Solwezi	278.98	87.7	57.4	52.1	57	0.17	0.67	0.45	0.54	0.432	0.461
Zambezi	228.72	112.7	63.7	59.4	48.4	0.14	0.70	0.57	0.65	0.470	0.494
Southern P.	**362.76**	**84.6**	**59.2**	**51.6**	**70.2**	**0.22**	**0.75**	**0.44**	**0.57**	**0.469**	**0.512**
Choma	438.80	92.4	61.0	53.0	72.6	0.25	0.79	0.47	0.60	0.502	0.546
Gwembe	269.60	64.1	62.8	59.5	48.9	0.17	0.54	0.58	0.63	0.427	0.445
Itezhi-tezhi	288.64	82.6	66.2	62.6	64.5	0.18	0.71	0.63	0.69	0.503	0.523
Kalomo	227.96	72.8	56.1	48.9	67.3	0.14	0.69	0.40	0.52	0.409	0.449
Kazungula	328.66	64.2	56.1	49.1	65.2	0.20	0.65	0.40	0.52	0.416	0.455
Livingstone	687.38	107.2	62.3	53.0	89.3	0.32	0.95	0.47	0.62	0.580	0.632
Mazabuka	328.14	83.4	62.4	54.4	70.5	0.20	0.75	0.49	0.62	0.479	0.523
Monze	330.32	79.9	61.5	53.6	77	0.20	0.78	0.48	0.61	0.485	0.529
Namwala	288.62	81.1	66.2	62.5	72.9	0.18	0.76	0.63	0.69	0.519	0.540
Siavonga	289.93	74.4	56.0	51.0	50.9	0.18	0.59	0.43	0.52	0.399	0.427
Sinazongwe	330.31	95.9	60.2	57.0	54.3	0.20	0.68	0.53	0.59	0.471	0.489
Western P.	**210.22**	**84.1**	**52.6**	**48.2**	**54.9**	**0.12**	**0.65**	**0.39**	**0.46**	**0.386**	**0.410**
Kalabo	176.40	80.8	48.2	44.1	54.6	0.09	0.63	0.32	0.39	0.349	0.372
Kaoma	328.95	89.9	56.9	52.5	57.3	0.20	0.68	0.46	0.53	0.446	0.471
Lukulu	213.99	74.8	52.2	48.2	55.5	0.13	0.62	0.39	0.45	0.378	0.400
Mongu	208.13	92.6	51.5	42.9	71.1	0.12	0.78	0.30	0.44	0.401	0.449
Senanga	126.22	74.6	48.1	44.5	59.8	0.04	0.65	0.33	0.39	0.337	0.357
Sesheke	182.37	93.7	56.6	49.2	71.7	0.10	0.79	0.40	0.53	0.431	0.472
Shangombo	157.96	55.9	51.6	47.6	33.6	0.08	0.41	0.38	0.44	0.288	0.310

Appendix Table 3: Human poverty index by HPI rank

		HPI	Under-5 mortality per 100 live births	Adult illiteracy rate	The simple average of the three variables: P_{31}, P_{32} and P_{33}	Percentage of population without access to safe water (P_{31})	Percentage of population without access to health services(P_{32})	Percentage of moderately and severely underweight children under five (P_{33})
1	Shangombo	48.2	18.3	34.0	24.0	42.8	9.0	20.1
2	Chilubi	44.3	16.7	32.8	29.6	50.0	17.0	21.7
3	Katete	44.1	13.7	35.4	32.2	53.0	19.0	24.5
4	Chadiza	43.4	15.5	16.8	14.1	20.0	2.0	20.4
5	Mwinilunga	42.2	17.7	36.4	34.7	66.0	24.0	14.2
6	Chavuma	41.9	19.5	36.5	33.5	56.0	25.0	19.4
7	Chiengi	41.6	15.5	29.7	19.1	30.0	6.0	21.2
8	Petauke	40.1	20.6	36.6	46.0	77.0	30.0	31.1
9	Chama	38.6	14.9	17.9	14.6	25.0	3.0	15.7
10	Nyimba	38.3	12.4	15.3	5.8	11.0	0.0	6.3
11	Lundazi	38.3	15.6	17.1	10.1	14.0	2.0	14.3
12	Samfya	38.1	14.8	12.8	16.7	36.0	1.0	13.0
13	Mungwi	37.7	15.2	15.3	8.1	9.0	4.0	11.4
14	Zambezi	37.6	16.6	32.9	32.4	69.0	7.0	21.1
15	Kalabo	37.4	11.3	33.7	21.2	32.0	7.0	24.7
16	Serenje	37.3	14.8	13.1	18.1	29.0	0.0	25.3
17	Kaputa	36.8	15.1	16.8	9.5	5.0	12.0	11.6
18	Mbala	36.7	19.6	53.6	21.3	36.0	8.0	19.8
19	Gwembe	36.6	18.8	60.9	23.5	36.0	12.0	22.4
20	Isoka	36.4	23.1	53.1	21.8	36.0	11.0	18.5
21	Chinsali	36.3	18.0	45.1	20.2	28.0	9.0	23.6
22	Milenge	36.1	16.6	62.9	15.1	28.0	1.0	16.4
23	Kabompo	35.9	23.6	50.1	31.0	61.0	13.0	19.0
24	Luwingu	35.6	17.7	43.0	16.4	17.0	10.0	22.1
25	Senanga	35.4	19.1	56.4	19.1	34.0	7.0	16.2
26	Kaoma	35.0	23.3	38.7	36.9	81.0	3.0	26.8
27	Mpulungu	34.6	18.7	31.7	36.6	72.0	7.0	30.7
28	Siavonga	34.5	20.2	32.1	37.6	89.0	2.0	21.7
29	Lukulu	34.1	25.4	35.1	38.0	81.0	3.0	30.1
30	Mwense	33.7	23.1	36.9	31.7	71.0	0.0	24.2
31	Solwezi	33.3	26.2	46.4	36.3	78.0	2.0	28.9
32	Chipata	32.8	14.2	19.3	7.7	4.0	2.0	17.0
33	Sinazongwe	32.5	16.5	36.7	16.7	29.0	6.0	15.2
34	Nakonde	32.2	13.7	25.3	13.4	15.0	8.0	17.3
35	Kasama	31.9	20.2	42.7	9.8	19.0	0.0	10.4
36	Kapiri Mposhi	31.7	13.9	15.9	5.8	0.0	0.0	17.3
37	Nchelenge	31.6	22.0	40.9	36.2	65.0	18.0	25.7
38	Mansa	31.6	33.6	53.8	40.8	83.0	9.0	30.4
39	Mkushi	31.5	22.9	34.6	44.7	82.0	13.0	39.2
40	Mpika	31.1	20.1	38.1	43.3	60.0	41.0	28.9
41	Mambwe	31.0	28.8	45.5	31.5	57.0	10.0	27.6
42	Kawambwa	30.8	19.5	30.5	39.4	69.0	20.0	29.2
43	Luangwa	30.7	20.8	42.9	36.3	69.0	12.0	27.8

Central Statistical Office, Living Conditions Monitoring Survey 2004, unpublished data

APPENDIX TABLE 3

... Appendix table 3: Human poverty index by HPI rank

	HPI	Under-5 mortality per 100 live births	Adult illiteracy rate	The simple average of the three variables: P_{31}, P_{32} and P_{33}	Percentage of population without access to safe water (P_{31})	Percentage of population without access to health services (P_{32})	Percentage of moderately and severely under-weight children under five (P_{33})
44 Lufwanyama	30.4	19.8	46.2	34.9	66.0	25.0	13.6
45 Chibombo	29.9	17.2	37.2	32.3	61.0	15.0	20.8
46 Masaiti	29.1	14.8	29.7	32.4	64.0	12.0	21.3
47 Mufumbwe	28.2	25.3	46.6	19.5	38.0	5.0	15.5
48 Mporokoso	27.7	25.6	40.0	26.9	55.0	13.0	12.6
49 Zambia	27.0	13.5	50.8	29.9	59.0	12.0	18.6
50 Chongwe	26.9	11.0	57.4	31.0	72.0	14.0	7.1
51 Kazungula	26.0	13.5	47.7	30.4	62.0	13.0	16.1
52 Itezhi-tezhi	25.9	12.8	36.4	10.7	22.0	2.0	8.2
53 Kasempa	25.8	15.8	38.9	16.3	34.0	1.0	13.8
54 Mpongwe	25.4	12.5	53.4	41.4	68.0	18.0	38.3
55 Sesheke	25.3	12.5	43.0	30.9	62.0	17.0	13.7
56 Kalomo	25.0	13.4	51.6	26.9	65.0	1.0	14.6
57 Mongu	24.5	15.5	31.4	14.3	21.0	6.0	16.0
58 Mumbwa	23.1	14.6	51.1	21.7	25.0	18.0	22.2
59 Choma	22.2	15.8	35.5	15.5	26.0	3.0	17.4
60 Namwala	22.0	18.6	32.7	17.5	25.0	18.0	9.6
61 Mazabuka	21.3	16.8	34.8	18.2	32.0	9.0	13.7
62 Chililabombwe	19.6	15.8	10.7	7.0	0.0	4.0	17.0
63 Kafue	19.2	12.8	29.5	10.8	13.0	1.0	18.5
64 Monze	17.8	14.3	23.0	12.2	15.0	10.0	11.7
65 Mufulira	15.6	15.2	49.1	10.3	20.0	3.0	7.8
66 Kabwe	15.6	18.1	45.7	11.7	7.0	7.0	21.0
67 Kitwe	14.9	27.5	45.4	35.1	71.0	13.0	21.2
68 Kalulushi	14.9	24.2	42.7	33.3	58.0	11.0	31.0
69 Ndola	14.4	20.7	44.5	28.0	63.0	4.0	17.0
70 Luanshya	13.7	19.8	28.9	23.2	50.0	1.0	18.6
71 Lusaka	13.2	23.9	40.2	37.8	82.0	16.0	15.4
72 Chingola	12.4	22.4	28.3	24.4	26.0	35.0	12.1
73 Livingstone	12.2	23.5	66.4	30.9	57.0	16.0	19.7
Zambia	**27.0**	**18.3**	**34.0**	**24.0**	**42.8**	**9.0**	**20.1**
1 Central P.	28.0	16.7	32.8	29.6	50.0	17.0	21.7
2 Copperbelt P.	15.9	14.9	17.9	14.6	25.0	3.0	15.7
3 Eastern P.	38.5	19.6	53.6	21.3	36.0	8.0	19.8
4 Luapula P.	34.3	23.3	38.7	36.9	81.0	3.0	26.8
5 Lusaka P.	15.2	14.2	19.3	7.7	4.0	2.0	17.0
6 Northern P.	34.8	22.0	40.9	36.2	65.0	18.0	25.7
7 North W. P.	37.7	13.5	50.8	29.9	59.0	12.0	18.6
8 Southern P.	23.2	15.5	31.4	14.3	21.0	6.0	16.0
9 Western P.	35.4	23.3	45.1	30.5	60.0	11.0	20.5

Appendix table 4: Human poverty index in Zambia, by province and district

	HPI	Under-5 mortality per 100 live births	Adult illiteracy rate	The simple average of the three variables: P_{31}, P_{32} and P_{33}	Percentage of population without access to safe water (P_{31})	Percentage of population without access to health services(P_{32})	Percentage of moderately and severely under-weight children under five (P_{33})
Zambia	27.02	18.3	34	23.97	42.8	9.0	20.1
Central Province	27.99	16.7	32.8	29.57	50.0	17.0	21.7
Chibombo	29.90	13.7	35.4	32.17	53.0	19.0	24.5
Kabwe	15.55	15.5	16.8	14.13	20.0	2.0	20.4
Kapiri Mposhi	31.71	17.7	36.4	34.73	66.0	24.0	14.2
Mkushi	31.47	19.5	36.5	33.47	56.0	25.0	19.4
Mumbwa	23.07	15.5	29.7	19.07	30.0	6.0	21.2
Serenje	37.27	20.6	36.6	46.03	77.0	30.0	31.1
Copperbelt P.	15.93	14.9	17.9	14.57	25.0	3.0	15.7
Chililabombwe	19.59	11.9	17	25.17	20.0	35.0	20.5
Chingola	12.37	12.4	15.3	5.77	11.0	0.0	6.3
Kalulushi	14.85	15.6	17.1	10.10	14.0	2.0	14.3
Kitwe	14.92	14.8	12.8	16.67	36.0	1.0	13.0
Luanshya	13.65	15.2	15.3	8.13	9.0	4.0	11.4
Lufwanyama	30.37	18.8	38.1	28.07	53.0	4.0	27.2
Masaiti	29.12	16.6	32.9	32.37	69.0	7.0	21.1
Mpongwe	25.42	11.3	33.7	21.23	32.0	7.0	24.7
Mufulira	15.61	14.8	13.1	18.10	29.0	0.0	25.3
Ndola	14.45	15.1	16.8	9.53	5.0	12.0	11.6
Eastern Province	38.50	19.6	53.6	21.27	36.0	8.0	19.8
Chadiza	43.41	18.8	60.9	23.47	36.0	12.0	22.4
Chama	38.59	23.1	53.1	21.83	36.0	11.0	18.5
Chipata	32.79	18	45.1	20.20	28.0	9.0	23.6
Katete	44.08	16.6	62.9	15.13	28.0	1.0	16.4
Lundazi	38.31	23.6	50.1	31.00	61.0	13.0	19.0
Mambwe	31.01	17.7	43	16.37	17.0	10.0	22.1
Nyimba	38.33	20.4	53.1	22.03	40.0	4.0	22.1
Petauke	40.09	19.1	56.4	19.07	34.0	7.0	16.2
Luapula P.	34.29	23.3	38.7	36.93	81.0	3.0	26.8
Chiengi	41.59	27.2	49.7	41.77	87.0	9.0	29.3
Kawambwa	30.76	18.7	31.7	36.57	72.0	7.0	30.7
Mansa	31.56	20.2	32.1	37.57	89.0	2.0	21.7
Milenge	36.08	22.8	44.2	34.97	79.0	8.0	17.9
Mwense	33.68	25.4	35.1	38.03	81.0	3.0	30.1
Nchelenge	31.58	23.1	36.9	31.73	71.0	0.0	24.2
Samfya	38.08	26.2	46.4	36.30	78.0	2.0	28.9
Lusaka Province	15.18	14.2	19.3	7.67	4.0	2.0	17.0
Chongwe	26.93	16.5	36.7	16.73	29.0	6.0	15.2
Kafue	19.19	13.7	25.3	13.43	15.0	8.0	17.3
Luangwa	30.73	20.2	42.7	9.80	19.0	0.0	10.4
Lusaka	13.20	13.9	15.9	5.77	0.0	0.0	17.3

Central Statistical Office, Living Conditions Monitoring Survey 2004, unpublished data

APPENDIX TABLE 4

... Appendix table 4: Human poverty index in Zambia, by province and district

	HPI	Under-5 mortality per 100 live births	Adult illiteracy rate	The simple average of the three variables: P_{31}, P_{32} and P_{33}	Percentage of population without access to safe water (P_{31})	Percentage of population without access to health services(P_{32})	Percentage of moderately and severely under-weight children under five (P_{33})
Northern P.	**34.82**	**22**	**40.9**	**36.23**	**65.0**	**18.0**	**25.7**
Chilubi	44.34	33.6	53.8	40.80	83.0	9.0	30.4
Chinsali	36.25	22.9	34.6	44.73	82.0	13.0	39.2
Isoka	36.39	20.1	38.1	43.30	60.0	41.0	28.9
Kaputa	36.79	28.8	45.5	31.53	57.0	10.0	27.6
Kasama	31.85	19.5	30.5	39.40	69.0	20.0	29.2
Luwingu	35.63	20.8	42.9	36.27	69.0	12.0	27.8
Mbala	36.74	19.8	46.2	34.87	66.0	25.0	13.6
Mpika	31.09	17.2	37.2	32.27	61.0	15.0	20.8
Mporokoso	27.67	14.8	29.7	32.43	64.0	12.0	21.3
Mpulungu	34.65	25.3	46.6	19.50	38.0	5.0	15.5
Mungwi	37.74	21.1	46.2	37.63	56.0	27.0	29.9
Nakonde	32.20	25.6	40	26.87	55.0	13.0	12.6
North Western P.	**37.66**	**13.5**	**50.8**	**29.87**	**59.0**	**12.0**	**18.6**
Chavuma	41.88	11	57.4	31.03	72.0	14.0	7.1
Kabompo	35.92	13.5	47.7	30.37	62.0	13.0	16.1
Kasempa	25.81	12.8	36.4	10.73	22.0	2.0	8.2
Mufumbwe	28.18	15.8	38.9	16.27	34.0	1.0	13.8
Mwinilunga	42.19	12.5	53.4	41.43	68.0	18.0	38.3
Solwezi	33.32	12.5	43	30.90	62.0	17.0	13.7
Zambezi	37.58	13.4	51.6	26.87	65.0	1.0	14.6
Southern P.	**23.23**	**15.5**	**31.4**	**14.33**	**21.0**	**6.0**	**16.0**
Choma	22.24	13.7	27.4	21.43	38.0	1.0	25.3
Gwembe	36.58	14.6	51.1	21.73	25.0	18.0	22.2
Itezhi-tezhi	25.94	15.8	35.5	15.47	26.0	3.0	17.4
Kalomo	24.99	18.6	32.7	17.53	25.0	18.0	9.6
Kazungula	26.04	16.8	34.8	18.23	32.0	9.0	13.7
Livingstone	12.25	15.8	10.7	7.00	0.0	4.0	17.0
Mazabuka	21.31	12.8	29.5	10.83	13.0	1.0	18.5
Monze	17.80	14.3	23	12.23	15.0	10.0	11.7
Namwala	22.02	19.9	27.1	16.20	32.0	2.0	14.6
Siavonga	34.48	15.2	49.1	10.27	20.0	3.0	7.8
Sinazongwe	32.50	18.1	45.7	11.67	7.0	7.0	21.0
Western P.	**35.37**	**23.3**	**45.1**	**30.50**	**60.0**	**11.0**	**20.5**
Kalabo	37.44	27.5	45.4	35.07	71.0	13.0	21.2
Kaoma	35.04	24.2	42.7	33.33	58.0	11.0	31.0
Lukulu	34.10	20.7	44.5	28.00	63.0	4.0	17.0
Mongu	24.55	19.8	28.9	23.20	50.0	1.0	18.6
Senanga	35.36	23.9	40.2	37.80	82.0	16.0	15.4
Sesheke	25.26	22.4	28.3	24.37	26.0	35.0	12.1
Shangombo	48.17	23.5	66.4	30.90	57.0	16.0	19.7

Appendix table 5: Estimated HIV and AIDS prevalence 2004

	HIV prevalence	Number infected with HIV	New AIDS cases	Annual AIDS deaths	Number of cumulative AIDS deaths
Zambia	14.4	917,718	94,815	93,670	837,184
Central Province	14.8	7,435	8,789	8,399	60,231
Chibombo	11.6	5,387	1,474	1,508	10,815
Kabwe	23.8	4,939	2,398	2,288	16,406
Kapiri Mposhi	18.5	1,063	2,120	2,020	14,495
Mkushi	11.6	7,171	744	712	5,107
Mumbwa	11.6	0,239	1,046	1,001	7,183
Serenje	11.6	8,636	906	870	6,224
Copperbelt Province	18.4	70,525	27,770	27,609	300,021
Chililabombwe	19.0	0,287	1,084	1,078	11,711
Chingola	26.6	5,982	3,720	3,698	40,187
Kalulushi	19.0	1,025	1,132	1,124	12,212
Kitwe	26.6	7,066	7,840	7,794	84,693
Luanshya	19.0	21,632	2,204	2,189	23,785
Lufwanyama	11.3	4,744	503	502	5,453
Masaiti	11.3	7,149	753	751	8,165
Mpongwe	11.3	4,940	527	526	5,720
Mufulira	19.0	1,367	2,200	2,185	23,743
Ndola	26.6	76,334	7,808	7,762	84,353
Eastern Province	13.2	1,785	8,485	9,319	68,145
Chadiza	9.8	2,891	313	344	2,516
Chama	9.8	2,466	261	286	2,094
Chipata	26.3	35,884	3,706	4,037	29,528
Katete	18.1	6,687	1,724	1,872	13,694
Lundazi	18.1	3,089	1,362	1,481	10,830
Mambwe	9.8	1,509	161	176	1,290
Nyimba	9.3	2,266	241	265	1,936
Petauke	9.3	6,993	718	858	6,257
Luapula Province	10.6	9,462	5,162	4,995	37,148
Chiengi	8.2	5,362	551	533	3,966
Kawambwa	8.2	6,707	706	683	5,078
Mansa	11.6	7,822	1,848	1,779	13,235
Milenge	8.2	1,758	183	177	1,320
Mwense	8.2	6,724	722	699	5,201
Nchelenge	9.8	8,814	914	882	6,562
Samfya	9.7	2,275	237	241	1,785
Lusaka Province	20.7	57,997	16,686	16,274	212,742
Chongwe	19.0	3,411	1,370	1,427	10,686
Kafue	22.4	7,489	1,737	1,813	13,570
Luangwa	19.0	1,888	202	210	1,572
Lusaka	22.4	25,209	13,377	12,824	95,913

Central Statistical Office, 2005. HIV/AIDS Epidemiological Projections 1985-2010. Central Statistical Office, Lusaka.

APPENDIX TABLE 5

...Appendix table 5: Estimated HIV and AIDS prevalence 2004

	HIV prevalence	Number infected with HIV	New AIDS cases	Annual AIDS deaths	Number of cumulative AIDS deaths
Northern Province	8.0	63,812	6,392	6,103	41,555
Chilubi	5.2	1,538	165	162	1,104
Chinsali	5.4	3,110	327	320	2,179
Isoka	5.3	2,247	230	227	1,541
Kaputa	5.2	2,029	207	204	1,388
Kasama	12.6	14,941	1,451	1,370	9,327
Luwingu	5.2	1,813	186	183	1,245
Mbala	8.9	8,487	852	810	5,513
Mpika	12.6	2,941	1,293	1,222	8,326
Mporokoso	5.2	1,765	191	188	1,279
Mpulungu	12.6	5,877	574	543	3,695
Mungwi	5.2	2,624	278	274	1,861
Nakonde	12.6	6,441	636	602	4,096
North Western Province	8.6	7,587	2,802	2,684	18,506
Chavuma	8.8	1,228	125	119	822
Kabompo	7.2	2,246	235	228	1,572
Kasempa	7.4	1,721	177	171	1,179
Mufumbwe	7.3	1,439	150	146	1,004
Mwinilunga	8.8	5,010	518	497	3,429
Solwezi	12.3	3,250	1,321	1,258	8,674
Zambezi	8.8	2,694	276	265	1,826
Southern Province	16.2	20,768	12,719	12,524	146,080
Choma	19.2	9,918	2,034	1,989	23,193
Gwembe	7.5	1,103	120	120	1,397
Itezhi-tezhi	7.5	1,415	156	155	1,810
Kalomo	18.6	7,003	1,869	1,833	21,377
Kazungula	18.6	6,713	730	715	8,334
Livingstone	30.9	9,184	1,911	1,921	22,410
Mazabuka	22.5	5,024	2,655	2,602	30,346
Monze	19.2	6,879	1,809	1,769	20,636
Namwala	7.5	2,802	316	314	3,664
Siavonga	19.2	8,044	821	810	9,458
Sinazongwe	7.5	2,684	298	296	3,454
Western Province	12.6	8,347	6,010	5,763	42,476
Kalabo	10.0	6,174	657	639	4,680
Kaoma	10.0	9,036	934	898	6,618
Lukulu	10.0	3,881	406	390	2,873
Mongu	22.2	2,236	2,259	2,155	15,904
Senanga	10.0	5,798	599	576	4,247
Sesheke	16.1	7,485	762	728	5,371
Shangombo	10.0	3,736	392	378	2,783

APPENDIX TABLE 6

	Total population ('000)				Annual pop. growth rates (%)			Area (sq.km)	Population density				% Rural of population
	1969	1980	1990	2000	1969-1980	1980-1990	1990-2000		1969	1980	1990	2000	2000
Zambia	**4,057**	**5,662**	**7,759**	**9,886**	**3.1**	**2.7**	**2.5**	**52,612**	**5.4**	**7.5**	**10.3**	**13.1**	
Central P.	**358.6**	**511.9**	**771.8**	**1,012**	**3.3**	**3.5**	**2.8**	**94,394**	**3.8**	**5.4**	**8.2**	**10.7**	**76.0**
Chibombo	.	.	158.3	241.6	.	.	.	13,423	.	.	11.8	8.0	98.4
Kabwe	65.9	136.0	169.0	176.7	6.8	1.7	1.7	1,572	42.0	86.5	107.5	112.4	.
Kapiri Mposhi	.	.	110.7	194.7	.	.	.	17,219	.	.	6.4	11.3	86.0
Mkushi	56.9	72.1	76.7	107.4	2.2	4.2	4.2	17,726	2.5	3.2	4.3	6.1	90.1
Mumbwa	60.1	83.9	148.9	158.8	3.1	4.3	4.3	1,103	2.8	4.0	7.1	7.5	90.0
Serenje	52.9	73.4	107.9	132.8	3.0	3.5	3.5	23,351	2.3	3.1	4.6	5.7	93.5
Copperbelt P.	**816.3**	**1,251.2**	**1,458.5**	**1,581.2**	**3.9**	**1.3**	**0.8**	**31,323**	**26.1**	**39.9**	**46.6**	**50.5**	**22.1**
Chililabombwe	44.8	62.1	65.2	67.5	3.0	0.1	0.4	1,026	43.7	60.5	63.6	65.8	19.3
Chingola	103.2	145.9	168.9	172.0	3.2	1.0	0.2	1,678	61.6	87.1	100.7	102.6	14.3
Kalulushi	32.2	59.2	69.5	75.8	5.7	1.4	0.9	725	44.5	81.7	96.0	104.6	30.4
Kitwe	199.8	320.3	347.0	376.1	4.4	0.8	0.8	777	257.1	412.2	446.6	484.1	3.3
Luanshya	96.3	129.6	144.8	147.9	2.7	0.9	0.2	811	118.7	159.8	178.6	182.4	21.9
Lufwanyama	.	.	51.7	63.2	.	.	2.0	9,849	.	.	.	77.9	100.0
Masaiti	.	.	84.8	95.6	.	.	1.2	5,383	.	.	.	9.7	100.0
Mpongwe	.	.	.37.7	64.4	.	.	5.2	8,339	.	.	.	12.0	100.0
Mufulira	107.8	150.1	152.7	143.9	3.1	(0.2)	(0.6)	1,637	65.8	91.7	93.3	87.9	15.0
Ndola	159.8	281.3	334.8	374.8	5.3	1.7	1.1	1,103	144.9	255.1	303.5	19.6	.
Eastern P.	**509.5**	**650.9**	**1,004.7**	**1,306.2**	**2.3**	**4.0**	**2.7**	**69.1 06**	**7.4**	**9.4**	**14.5**	**17.8**	**91.1**
Chadiza	32.2	44.9	66.7	79.2	3.1	3.5	2.3	2 ,574	12.5	17.4	25.9	30.8	96.0
Chama	30.9	35.4	55.2	69.3	1.2	3.9	3.1	7,630	1.8	2.0	3.1	3.9	95.0
Chipata	148.4	204.7	261.1	342.9	3.0	3.6	3.5	6,692	12.4	17.1	39.0	28.6	80.0
Katete	80.5	94.2	143.9	179.7	1.5	3.9	2.8	3,989	20.2	23.6	36.1	45.1	94.4
Lundazi	92.2	114.6	179.4	221.9	2.0	4.1	2.8	14,058	6.6	8.2	12.8	15.8	96.0
Mambwe	.	.	60.0	44.8	.	.	2.2	10,509	.	.	11.8	8.5	100.0
Nyimba	.	.	38.3	65.5	.	.	1.6	10,509	.	.	3.6	6.2	98.3
Petauke	125.3	157.0	200.0	223.3	2.1	4.7	1.7	8,359	6.6	9.3	23.9	11.9	93.7
Luapula P.	**335.6**	**420.9**	**564.4**	**775.3**	**2.1**	**2.2**	**3.2**	**0,567**	**6.6**	**8.3**	**11.6**	**15.3**	**87.0**
Chiengi	.	.	47.2	83.8	.	.	5.9	3,965	.	.	11.9	21.1	100.0
Kawambwa	54.7	63.3	85.3	102.5	1.3	2.7	1.9	9,303	2.8	3.3	9.2	11.0	82.5
Mansa	80.3	111.4	132.5	179.7	3.0	2.5	3.1	9,900	5.0	6.9	13.4	18.2	77.2
Milenge	.	.	20.0	28.7	.	.	3.7	6,261	.	.	3.2	4.6	100.0
Mwense	52.9	65.5	86.3	105.8	2.0	2.1	2.1	6,718	7.9	9.8	12.8	15.7	96.4
Nchelenge	56.8	80.2	72.7	111.1	3.2	3.4	4.3	4,090	7.1	10.0	17.8	27.2	81.4
Samfya	90.8	100.4	120.3	163.6	0.9	0.7	3.1	10,329	8.8	9.7	11.6	15.8	89.2
Lusaka P.	**354.0**	**691.0**	**991.2**	**1,391.3**	**6.3**	**3.6**	**3.2**	**21,896**	**16.2**	**31.6**	**45.3**	**63.5**	**18.2**
Chongwe	.	.	95.7	137.5	.	.	3.7	8,669	.	.	10.0	15.9	96.2
Kafue	.	.	117.3	150.2	.	.	2.5	9,396	.	.	10.0	15.9	69.1
Luangwa	7.9	11.5	17.1	18.9	3.4	3.5	1.1	360	2.3	3.3	4.9	5.5	86.0
Lusaka	83.6	5,358.0	761.1	1,084.7	18.4	3.7	3.6	1,896	16.2	31.6	45.3	63.5	.

Central Statistical Office, 2005: Census of Population 2000, Analytical Provincial Reports, Central Statistical Office, Lusaka

... Appendix table 6: Demographic trends in Zambia by province and district

	Total population ('000)				Total population ('000)			Area (sq.km)	Population density				% Rural of population
	1969	1980	1990	2000	1969-1980	1980-1990	1990-2000		1969	1980	1990	2000	2000
Northern P.	545.1	674.7	925.9	1,258.7	2.2	2.4	3.1	47,826	3.7	4.6	6.3	7.9	85.9
Chilubi	.	66.1	44.3	66.3	.	(4.9)	4.1	4,648	.	7.2	9.5	3.8	94.7
Chinsali	58.0	94.0	89.8	128.6	4.9	(1.2)	3.7	15,395	3.8	4.3	5.8	4.1	91.1
Isoka	77.7	44.7	82.6	99.3	(5.4)	10.5	1.9	9,225	5.6	6.8	8.9	5.4	88.4
Kaputa	.	147.6	53.4	87.2	.	(10.3)	5.0	13,004	.	3.4	4.1	6.4	97.3
Kasama	107.8	52.6	125.5	170.9	(6.9)	13.7	3.1	10,788	5.2	7.2	11.6	6.5	56.6
Luwingu	79.2	113.9	72.2	80.8	3.7	(5.2)	1.1	8,892	8.9	5.9	8.1	13.0	93.3
Mbala	95.6	81.3	110.9	149.6	(1.6)	5.3	3.0	8,343	5.2	6.2	13.3	14.9	88.7
Mpika	59.4	41.1	123.1	146.2	(3.6)	10.8	1.7	40,935	1.4	2.0	3.0	15.2	82.3
Mporokoso	67.4	33.2	54.9	73.9	(6.8)	4.7	3.0	12,043	5.6	3.4	4.6	16.7	96.0
Mpulungu	.	.	44.5	67.6	.	.	4.3	9,865	.	.	4.5	16.9	88.9
Mungwi	.	.	74.7	112.9	.	.	4.2	9,766	.	.	7.7	26.0	94.7
Nakonde	.	.	49.9	75.1	.	.	4.2	4,621	.	.	10.8	30.8	87.6
North W. P.	231.7	302.7	438.2	583.3	2.0	2.4	2.9	125,826	1.8	2.4	3.5	4.6	87.7
Chavuma	.	.	27.9	29.9	.	.	0.7	4,280	.	.	6.5	7.0	100.0
Kabompo	33.4	40.3	60.1	71.2	1.9	2.8	1.7	14,532	2.3	2.8	4.1	4.9	91.9
Kasempa	32.7	30.6	42.3	51.9	(0.6)	1.9	2.1	20,821	1.6	1.5	2.0	2.5	90.5
Mufumbwe	.	9.3	25.1	44.0	.	9.5	5.8	20,756	.	0.5	1.2	2.1	87.7
Mwinilunga	51.4	68.8	93.9	117.5	3.0	1.7	2.3	21,116	2.4	3.3	4.4	5.6	90.9
Solwezi	52.9	92.8	137.7	203.8	5.8	3.0	4.0	30,261	1.8	3.1	4.6	6.7	81.3
Zambezi	61.3	60.8	51.0	64.9	(0.1)	1.2	2.4	14,060	3.3	3.3	3.6	4.6	89.7
Southern P.	496.0	671.9	965.6	1,212.1	2.8	3.0	2.3	85,283	5.8	7.9	11.3	14.4	78.8
Choma	91.9	130.4	170.7	204.9	2.9	2.3	1.8	7,296	13.4	17.9	23.4	28.1	80.3
Gwembe	76.4	20.7	39.9	34.1	(12.3)	5.5	1.8	3,879	6.1	4.1	10.3	8.8	94.6
Itezhi-tezhi	.	.	31.4	43.1	.	.	3.2	16,064	.	.	2.0	2.7	84.1
Kalomo	76.6	97.2	127.8	169.5	2.4	5.3	2.9	15,000	3.5	3.1	8.5	11.3	93.5
Kazungula	.	.	45.1	68.3	.	.	4.2	16,835	.	.	2.7	4.1	100.0
Livingstone	49.1	71.5	83.7	1.3.2	3.8	1.5	2.1	695	34.4	50.1	120.5	148.6	5.6
Mazabuka	159.4	112.3	162.3	203.2	(3.4)	3.3	2.3	6,242	23.3	16.4	26.0	32.6	76.8
Monze	.	110.4	133.7	163.6	.	1.3	2.0	4,854	.	22.8	27.5	33.7	85.0
Namwala	36.6	56.1	61.8	82.9	4.4	4.0	3.0	5,687	1.7	2.6	10.9	14.6	95.1
Siavonga	.	29.6	37.5	58.8	.	3.8	1.2	3,871	.	11.3	9.7	15.2	77.8
Sinazongwe	.	43.8	71.7	80.5	.	3.8	1.2	4,860	.	8.8	14.7	16.6	87.1
Western P.	410.0	486.5	638.7	765.1	1.6	2.2	1.8	126,385	3.2	3.8	5.1	6.1	88.0
Kalabo	105.9	98.5	103.9	114.8	(0.7)	(0.1)	10.0	17,526	6.0	5.6	5.9	6.6	93.4
Kaoma	56.4	70.0	116.6	162.6	2.0	4.8	3.4	23,315	2.4	3.0	5.0	7.0	92.4
Lukulu	.	44.8	54.1	68.4	.	1.5	2.4	16	-	2.7	3.3	4.2	95.5
Mongu	110.1	114.4	150.1	162.0	0.3	2.2	0.8	10,075	10.9	11.4	14.9	16.1	72.6
Senanga	88.6	101.9	98.8	109.1	1.3	3.1	1.0	15,537	5.7	6.6	6.4	7.0	91.6
Sesheke	49.0	56.7	68.4	78.2	1.3	1.4	1.3	29,272	1.7	1.9	2.3	2.7	82.2
Shangombo	.	.	46,852.0	0,049.0	.	.	4.1	14	-	-	3.3	4.9	97.6

APPENDIX TABLE 6

Appendix table 7: Estimated number of orphans, 2004

	Total orphans	Total paternal orphans	Total maternal orphans	Total double orphans	Total children orphaned by AIDS	AIDS paternal orphans	AIDS maternal orphans	AIDS double orphans	Children orphaned by AIDS, % of all orphans
Zambia	1,147,614	515,563	488,189	143,862	750,504	299600	323066	127838	65.4
Central P.	93,754	45,262	39,016	9,476	59,248	25958	25044	8246	63.2
Chibombo	7,896	9,767	8,071	1,568	11,313	5,874	4748	1302	63.2
Kabwe	20,968	7,929	7,462	2,505	12,655	5,754	5222	2277	60.4
Kapiri Mposhi	10,622	9,864	8,688	2,416	14,857	7,221	6180	2207	139.9
Mkushi	12,351	5,581	4,128	903	6,225	3,194	2594	769	50.4
Mumbwa	12,511	6,262	5,133	956	7,762	4,035	3317	830	62.0
Serenje	19,406	5,859	5,535	1,117	6,435	2,893	2982	861	33.2
Copperbelt P.	339,777	145,649	140,615	53,513	267,536	104726	111852	50958	78.7
Chililabombwe	15,427	6,830	6,508	2,089	12,149	4,948	5214	1987	78.8
Chingola	44,313	18,184	17,374	7,755	37,516	14,322	15649	7545	84.7
Kalulushi	14,129	6,387	5,828	1,913	10,802	4,366	4630	1806	76.5
Kitwe	88,072	36,500	36,218	15,354	71,637	27,374	29522	14741	81.3
Luanshya	26,990	11,954	11,419	3,618	20,857	8,410	9024	3423	77.3
Lufwanyama	9,183	4,497	3,774	912	5,325	2,293	2270	762	58.0
Masaiti	13,094	6,421	5,389	1,283	7,675	3,335	3262	1079	58.6
Mpongwe	9,586	4,681	3,961	943	5,654	2,465	2394	794	59.0
Mufulira	28,615	12,649	12,139	3,827	22,405	9,050	9719	3636	78.3
Ndola	90,369	37,546	37,005	15,819	73,515	28162	30169	15185	81.3
Eastern P	99,164	45,916	43,763	9,485	51,103	20724	22,953	7426	51.5
Chadiza	5,461	2,688	2,417	356	1,923	827	883	213	35.2
Chama	5,533	2,724	2,363	446	1,505	638	648	219	27.2
Chipata	33,730	14,505	15,082	4,143	22,141	8,590	9894	3657	65.6
Katete	13,700	6,258	6,213	1,230	8,281	3,410	3824	1047	60.4
Lundazi	20,387	9,671	8,659	2,057	9,513	3,935	4082	1496	46.7
Mambwe	2,876	1,430	1,256	190	1,006	432	461	113	35.0
Nyimba	4,076	2,016	1,808	252	1,570	671	738	161	38.5
Petauke	13,400	6,624	5,965	811	5,164	2221	2423	520	38.5
Luapula P.	78,238	39,168	31,696	7,374	38,286	17452	15256	5578	48.9
Chiengi	8,227	4,150	3,289	787	3,810	1736	1498	576	46.3
Kawambwa	10,315	5,180	4,252	883	5,627	2617	2303	708	54.6
Mansa	22,017	10,615	8,994	2,408	13,611	6122	5435	2054	61.8
Milenge	2,593	1,299	10,714	224	1,342	626	541	175	51.8
Mwense	11,888	5,986	4,777	1,124	5,777	2692	2243	841	48.6
Nchelenge	12,397	6,146	4,933	1,218	6,548	2970	2540	1038	52.8
Samfya	10,800	5,791	4,379	630	1,572	688	697	186	14.6
Lusaka Province	149,718	65,003	63,122	21,593	107,850	41582	46402	19866	72.0
Chongwe	17,485	7,651	7,546	2,288	12,637	4921	5609	2107	72.3
Kafue	17,968	7,566	7,791	2,611	13,462	5029	5995	2439	74.9
Luangwa	3,262	1,478	1,320	464	2,265	933	913	419	69.4
Lusaka	111,003	48,309	46,465	16,230	79,486	30700	33886	14901	71.6

Central Statistical Office, 2005. HIV/AIDS Epidemiological Projections 1985-2010. Central Statistical Office, Lusaka.

... Appendix table 7: Estimated number of orphans, 2004

	Total orphans	Total paternal orphans	Total maternal orphans	Total double orphans	Total children orphaned by AIDS	AIDS paternal orphans	AIDS maternal orphans	AIDS double orphans	Children orphaned by AIDS, % of all orphans
Northern P.	**102,505**	**49,641**	**45,717**	**7,147**	**43,250**	**17501**	**20781**	**4968**	**42.2**
Chilubi	5,535	2,805	2,412	318	1,284	1284	615	139	23.2
Chinsali	8,924	4,518	3,939	467	2,496	2496	1228	239	28.0
Isoka	6,516	3,296	2,867	353	1,612	1612	793	164	24.7
Kaputa	6,527	3,339	2,791	396	1,382	1382	672	165	21.2
Kasama	16,729	7,726	7,558	1,445	9,783	8483	4602	1201	58.5
Luwingu	4,733	2,419	2,083	232	1,320	1145	661	119	27.9
Mbala	13,760	6,637	6,103	1,019	6,119	5306	2850	723	44.5
Mpika	11,774	5,286	5,589	900	7,194	6236	3669	770	61.1
Mporokoso	5,023	2,556	2,244	223	1,685	1462	859	131	33.5
Mpulungu	7,007	3,271	3,094	641	3,803	3297	1749	512	54.3
Mungwi	7,820	3,999	3,428	393	2,215	1921	1105	203	28.3
Nakonde	8,158	3,788	3,610	761	4,358	3779	1978	600	53.4
North W. P.	**42,908**	**22,559**	**16,907**	**3,442**	**20,563**	**10714**	**7311**	**2538**	**47.9**
Chavuma	1,848	996	724	128	905	486	324	95	49.0
Kabompo	4,740	2,563	1,885	293	1,993	1079	719	195	42.0
Kasempa	3,215	1,743	1,273	199	1,355	722	500	134	42.1
Mufumbwe	2,872	1,529	1,161	182	1,176	617	440	119	40.9
Mwinilunga	8,775	4,612	3,515	648	1,090	2162	1462	466	12.4
Solwezi	17,252	8,863	6,694	1,696	8,952	4531	3116	1306	51.9
Zambezi	4,206	2,254	1,656	296	2,092	1117	751	223	49.7
Southern P.	**168,727**	**71,411**	**74,888**	**22,428**	**24,982**	**49134**	**54942**	**20906**	**74.1**
Choma	21,625	8,679	8,650	2,602	16,706	6171	7061	2449	77.3
Gwembe	2,569	1,265	1,063	170	1,284	573	652	131	50.0
Itezhi-tezhi	3,434	1,758	1,404	222	1,909	882	951	182	55.6
Kalomo	33,628	13,126	12,592	44,235	25,186	8980	9798	3893	74.9
Kazungula	13,145	5,216	4,821	1,680	9,782	3515	3745	1539	74.4
Livingstone	15,251	5,932	6,173	2,877	12,634	4626	5372	2774	82.8
Mazabuka	32,622	14,462	20,650	5,295	25,840	11089	12584	5086	79.2
Monze	27,651	11,127	10,885	3,488	21,896	8231	9013	3306	79.2
Namwala	6,873	3,523	2,869	431	3,921	1906	1935	358	57.0
Siavonga	4,760	2,770	2,883	914	2,433	1611	2148	806	51.1
Sinazongwe	7,168	3,553	2,898	513	3,391	1552	1682	382	47.3
Western P.	**72,823**	**30,954**	**32,465**	**9,404**	**37,686**	**11809**	**18525**	**7352**	**51.8**
Kalabo	9,969	4,297	4,544	1,128	3,903	943	2230	730	39.2
Kaoma	12,872	5,836	5,775	1,262	6,135	2103	3099	933	47.7
Lukulu	6,351	2,883	2,789	678	2,748	945	1333	469	43.3
Mongu	21,513	8,127	9,624	3,762	14,385	4375	6688	3322	66.9
Senanga	9,183	4,201	3,973	1,010	3,637	1255	1724	658	39.6
Sesheke	7,282	2,990	3,313	979	4,530	1412	2276	843	62.2
Shangombo	5,653	2,620	2,447	586	2,348	776	1174	397	41.5

Appendix table 8: Average distance to selected facilities (km), 2004

	Food market	Post office	Community school	Low basic school (1-4)	Middle basic school (1-7)	Upper basic school (1-9)	High school	Secondary school	Health facility	Hammer mill	Input market	Police station/ police post	Bank	Public transport	Public phone
Zambia	9	18	5	6	4	5	24	21	6	5	19	15	25	5	16
Central P.	8	17	4	5	5	6	25	21	10	5	19	13	23	6	14
Chibombo	7	26	2	4	4	5	19	16	10	3	6	13	29	6	28
Kabwe	3	5	2	3	3	2	5	5	2	1	8	3	6	2	6
Kapiri Mposhi	11	12	5	5	6	9	20	18	14	7	25	10	19	4	7
Mkushi	14	20	5	10	9	10	62	27	12	8	21	10	30	11	12
Mumbwa	7	15	2	6	5	4	22	24	7	3	18	16	24	4	12
Serenje	14	32	8	8	5	15	50	48	14	9	36	31	45	10	38
Copperbelt P.	4	7	3	3	3	4	7	6	4	3	7	5	9	3	3
Chililabombwe	36	33	14	6	32	34	10	45	34	35	14	35	23	34	18
Chingola	1	8	2	0	1	1	6	3	1	1	8	2	8	0	2
Kalulushi	1	2	0	0	2	2	5	3	3	3	2	4	21	0	1
Kitwe	1	5	1	1	1	2	5	3	2	1	5	1	7	0	1
Luanshya	4	5	3	3	5	6	7	6	4	4	9	5	12	7	8
Lufwanyama	9	43	14	7	3	6	27	29	6	3	27	33	60	7	42
Masaiti	8	14	3	4	4	4	9	10	6	4	13	9	26	6	7
Mpongwe	4	18	4	2	4	5	22	7	5	3	11	14	19	36	10
Mufulira	5	6	7	9	4	4	7	5	4	3	7	4	7	4	6
Ndola	0	2	0	1	1	1	1	3	1	0	2	1	6	0	0
Eastern P.	11	17	5	3	4	5	33	20	7	4	16	16	24	7	14
Chadiza	13	16	2	1	2	7	41	16	8	14	15	10	16	7	8
Chama	14	14	12	3	3	4	8	14	8	5	13	11	11	8	10
Chipata	20	5	8	5	5	5	26	27	7	5	22	23	27	7	16
Katete	9	17	3	3	4	4	37	16	5	7	12	15	27	4	12
Lundazi	10	28	7	2	4	6	39	20	11	2	15	18	5	9	31
Mambwe	13	8	5	3	3	3	31	25	6	3	10	6	10	5	9
Nyimba	14	19	2	6	6	8	22	30	7	2	16	17	53	10	17
Petauke	8	12	5	1	2	8	39	13	5	2	12	11	18	5	12
Luapula P.	11	24	11	16	3	5	42	26	4	6	25	22	38	4	31
Chiengi	7	16	0	4	5	8	37	53	6	4	25	22	78	4	73
Kawambwa	8	12	11	2	3	3	48	17	4	3	10	12	29	5	13
Mansa	13	27	8	6	3	3	31	26	5	6	28	24	28	4	28
Milenge	35	34	6	4	5	7	49	54	7	7	41	28	67	20	59
Mwense	9	18	2	71	4	6	64	16	4	5	26	18	67	9	30
Nchelenge	6	13	2	0	1	2	72	13	2	2	11	8	15	0	13
Samfya	16	38	30	34	2	5	49	24	4	11	39	35	48	2	46
Lusaka P.	2	8	1	2	2	2	9	6	2	1	11	3	6	1	4
Chongwe	9	19	2	13	6	4	23	14	5	1	16	12	21	2	17
Kafue	5	10	2	3	3	4	19	6	6	2	8	5	9	5	6
Luangwa	15	42	3	1	1	1	26	32	1	1	5	10	.	1	44
Lusaka	1	4	1	1	1	1	3	3	1	1	10	1	2	0	0

Central Statistical Office, Living Conditions Monitoring Survey 2004, unpublished data

... Appendix table 8: Average distance to selected facilities (km), 2004

	Food market	Post office	Community school	Low basic school (1-4)	Middle basic school (1-7)	Upper basic school (1-9)	High school	Secondary school	Health facility	Hammer mill	Input market	Police station/ police post	Bank	Public transport	Public phone
Northern P.	**16**	**27**	**9**	**6**	**5**	**9**	**35**	**36**	**11**	**7**	**22**	**23**	**37**	**11**	**30**
Chilubi	8	26	5	2	4	8	27	41	8	7	8	22	91	6	90
Chinsali	26	44	20	6	4	10	47	34	11	7	37	26	49	17	35
Isoka	10	15	0	4	3	4	15	21	12	5	13	21	18	10	3
Kaputa	10	13	3	2	3	4	27	84	7	8	10	17	91	2	4
Kasama	15	18	8	29	20	12	20	20	18	13	18	20	19	12	19
Luwingu	37	41	4	5	6	10	48	54	16	10	29	48	84	22	34
Mbala	28	32	3	2	3	12	44	39	14	3	18	32	31	17	27
Mpika	14	29	16	7	3	8	44	39	14	3	18	32	35	11	33
Mporokoso	16	24	17	7	6	11	41	36	7	7	25	24	35	11	22
Mpulungu	14	19	5	4	3	6	29	36	6	3	23	16	18	6	13
Mungwi	6	34	6	3	2	9	50	58	10	7	22	12	62	7	57
Nakonde	3	15	14	3	2	2	16	17	5	2	10	5	12	2	18
North W. P.	**14**	**23**	**12**	**19**	**10**	**10**	**31**	**34**	**9**	**6**	**29**	**29**	**37**	**10**	**26**
Chavuma	9	14	.	6	2	8	23	12	9	6	41	15	85	3	88
Kabompo	33	40	8	6	9	5	35	72	6	5	41	54	55	9	25
Kasempa	7	15	6	2	6	5	12	19	3	3	6	15	15	6	8
Mufumbwe	5	21	3	0	2	4	12	20	4	3	8	18	.	8	10
Mwinilunga	13	18	2	4	4	13	20	19	14	12	13	29	21	13	15
Solwezi	10	24	22	33	17	16	47	43	12	6	49	28	40	8	36
Zambezi	20	20	1	2	5	2	16	29	2	2	9	28	29	17	12
Southern P.	**7**	**21**	**6**	**6**	**4**	**4**	**23**	**27**	**6**	**3**	**26**	**20**	**31**	**3**	**16**
Choma	11	23	11	15	3	4	23	32	4	3	43	22	41	3	19
Gwembe	20	37	6	12	10	10	32	32	14	9	16	24	44	8	35
Itezhi-tezhi	7	10	3	13	4	3	47	44	3	1	8	10	44	2	4
Kalomo	14	23	22	43	5	5	33	36	10	4	29	30	37	5	30
Kazungula	10	49	9	4	5	12	67	52	7	4	58	30	51	7	33
Livingstone	3	9	4	5	5	5	5	9	5	6	6	5	9	1	5
Mazabuka	5	22	4	3	2	4	14	23	5	2	26	21	41	3	8
Monze	6	18	2	0	3	2	19	18	4	3	11	16	23	2	18
Namwala	5	43	3	4	5	5	40	43	6	4	26	38	40	3	33
Siavonga	6	12	1	2	8	3	15	13	4	2	16	8	13	3	2
Sinazongwe	5	10	2	3	3	3	19	20	5	3	13	8	22	5	11
Western P.	**18**	**23**	**5**	**5**	**8**	**7**	**29**	**31**	**8**	**8**	**25**	**18**	**38**	**10**	**23**
Kalabo	32	42	17	4	20	7	45	44	6	6	46	25	55	15	10
Kaoma	10	19	4	2	4	4	11	41	6	5	26	12	36	8	31
Lukulu	29	31	7	6	4	14	28	36	6	11	28	29	92	19	8
Mongu	6	7	1	5	3	2	14	7	4	3	9	5	8	3	8
Senanga	33	35	10	8	13	10	41	41	18	16	34	31	79	22	29
Sesheke	30	29	36	7	4	12	33	36	12	7	36	30	35	4	31
Shangombo	15	47	9	1	5	12	67	43	7	13	20	19	75	14	83

Appendix table 9: Proportion of population within given distance to health facility, 2004

	Within 0-5 km	Within 6-10 km	Within 11-16 km	More than 16 km
Zambia	71	14	6	9
Central Province	58	15	10	17
Chibombo	47	21	13	19
Kabwe	91	2	5	2
Kapiri Mposhi	49	20	7	24
Mkushi	45	13	17	25
Mumbwa	65	23	5	6
Serenje	44	11	15	30
Copperbelt Province	90	5	2	3
Chililabombwe	64	1	.	35
Chingola	99	1	.	.
Kalulushi	98	.	.	2
Kitwe	99	.	.	1
Luanshya	93	2	1	4
Lufwanyama	59	31	5	4
Masaiti	58	27	14	.
Mpongwe	74	12	7	7
Mufulira	85	8	.	7
Ndola	100	.	.	0
Eastern Province	59	26	7	8
Chadiza	50	32	6	12
Chama	60	19	10	11
Chipata	66	16	8	9
Katete	51	46	2	1
Lundazi	40	35	11	13
Mambwe	68	21	1	10
Nyimba	46	33	18	4
Petauke	73	15	5	7
Luapula Province	73	19	4	3
Chiengi	59	24	9	9
Kawambwa	74	19	1	7
Mansa	69	17	12	2
Milenge	61	28	3	8
Mwense	87	9	1	3
Nchelenge	92	8	.	0
Samfya	68	30	1	2
Lusaka Province	94	4	1	2
Chongwe	74	14	6	6
Kafue	74	15	2	8
Luangwa	98	.	2	.
Lusaka	99	1	.	.
Northern Province	49	18	15	18
Chilubi	43	47	0	9
Chinsali	40	27	20	13
Isoka	43	5	10	41
Kaputa	54	26	10	10
Kasama	40	20	20	20
Luwingu	36	27	25	12
Mbala	33	22	20	25

Central Statistical Office, Living Conditions Monitoring Survey 2004, unpublished data

APPENDIX TABLE 9

... Appendix table 9: Proportion of population within given distance to health facility, 2004

	Within 0-5 km	Within 6-10 km	Within 11-16 km	More than 16 km
Mpika	58	7	20	15
Mporokoso	61	9	18	12
Mpulungu	72	17	6	5
Mungwi	53	8	12	27
Nakonde	84	2	.	13
North Western Province	**75**	**10**	**3**	**12**
Chavuma	72	9	5	14
Kabompo	82	3	1	13
Kasempa	90	8	1	2
Mufumbwe	70	22	7	1
Mwinilunga	60	14	8	18
Solwezi	74	9	0	17
Zambezi	90	9	.	1
Southern Province	**73**	**16**	**5**	**6**
Choma	79	10	11	1
Gwembe	62	7	13	18
Itezhi-tezhi	77	18	1	3
Kalomo	41	34	7	18
Kazungula	71	18	1	9
Livingstone	93	0	3	4
Mazabuka	74	23	2	1
Monze	81	9	1	10
Namwala	63	28	7	2
Siavonga	82	12	3	3
Sinazongwe	78	13	2	7
Western Province	**62**	**20**	**7**	**11**
Kalabo	74	9	4	13
Kaoma	60	23	5	11
Lukulu	61	25	10	4
Mongu	74	20	5	1
Senanga	43	27	14	16
Sesheke	45	20	0	35
Shangombo	64	8	12	16

Appendix table 10: Child health and nutrition, 2004

	Proportion of children aged below five who are stunted	Proportion of children aged below five who are wasted	Proportion of children aged below five who are underweight	Infant mortality rate (2000)	Child mortality rate (2000)	Under five mortality rate (2000)
Zambia	49.8	6.0	20.1	110	82	183
Central Province	8.2	7.5	21.7	102	73	167
Chibombo	5.7	7.5	24.5	86	57	137
Kabwe	78.0	5.1	20.4	95	66	155
Kapiri Mposhi	6.0	5.7	14.2	107	79	177
Mkushi	1.1	11.9	19.4	117	89	195
Mumbwa	8.1	4.7	21.2	93	64	151
Serenje	2.5	11.1	31.1	123	95	206
Copperbelt Province	3.9	3.8	15.7	92	63	149
Chililabombwe	8.6	6.2	20.5	75	47	119
Chingola	6.6	3.9	6.3	78	50	124
Kalulushi	7.1	8.0	14.3	95	66	156
Kitwe	3.9	1.5	13.0	91	62	148
Luanshya	3.7	4.0	11.4	94	65	152
Lufwanyama	53.4	4.1	24.2	113	85	188
Masaiti	65.1	3.2	27.2	101	72	166
Mpongwe	31.8	12.9	24.7	72	44	113
Mufulira	44.8	4.3	25.3	91	62	148
Ndola	37.2	3.5	11.6	93	64	151
Eastern Province	59.0	5.0	20.0	129	100	196
Chadiza	59.3	22.4	2.3	119	92	188
Chama	55.1	18.5	15.1	127	76	231
Chipata	66.5	23.6	4.2	111	90	180
Katete	48.2	16.4	4.0	99	78	166
Lundazi	58.2	19.0	6.2	137	133	236
Mambwe	46.8	22.1	5.9	100	77	177
Nyimba	41.7	22.1	7.3	128	101	204
Petauke	68.4	16.2	2.0	120	104	191
Luapula Province	64.3	4.2	26.8	138	110	233
Chiengi	73.9	3.1	29.3	161	132	272
Kawambwa	63.9	8.4	30.7	112	84	187
Mansa	65.7	3.1	21.7	120	93	202
Milenge	61.8	1.7	17.9	135	108	228
Mwense	62.9	2.0	30.1	150	122	254
Nchelenge	8.6	6.5	24.2	136	109	231
Samfya	64.4	3.5	28.9	155	127	262
Lusaka Province	40.3	8.7	17.0	88	82	142
Chongwe	36.9	0	15.2	101	72	165
Kafue	39.8	3.5	17.3	85	57	137
Luangwa	19.3	2.6	10.4	120	93	202
Lusaka	44.2	9.7	17.3	87	58	139
Northern Province	55.8	5.6	25.7	130	103	220
Chilubi	70.1	30.4	1.7	201	169	336
Chinsali	73.2	39.2	7.2	136	108	229
Isoka	48.4	28.9	7.5	120	92	201
Kaputa	51.0	27.6	6.4	171	141	288

Central Statistical Office, Living Conditions Monitoring Survey 2004, unpublished data

APPENDIX TABLE 10

... Appendix table 10: Child health and nutrition, 2004

	Proportion of children aged below five who are stunted	Proportion of children aged below five who are wasted	Proportion of children aged below five who are underweight	Infant mortality rate (2000)	Child mortality rate (2000)	Under five mortality rate (2000)
Kasama	50.8	29.2	4.5	116	89	195
Luwingu	51.4	27.8	6.5	123	96	208
Mbala	55.1	13.6	0.4	118	90	198
Mpika	49.9	20.8	5.1	104	75	172
Mporokoso	55.5	21.3	6.8	91	62	148
Mpulungu	58.9	15.5	5.4	150	121	253
Mungwi	57.4	29.9	7.5	125	98	211
Nakonde	50.3	12.6	9.2	151	123	256
North-Western Province	48.0	9.3	18.6	83.0	56.0	135.0
Chavuma	64.3	6.0	7.1	70	43	110
Kabompo	46.9	4.9	16.1	84	55	135
Kasempa	46.5	1.7	8.2	81	52	128
Mufumbwe	59.0	4.0	13.8	97	68	158
Mwinilunga	39.1	21.7	38.3	79	50	125
Solwezi	51.2	4.5	13.7	79	50	125
Zambezi	41.0	18.9	14.6	84	55	134
Southern Province	39	6	16	95	66	155
Choma	50.4	4.7	25.3	85	57	137
Gwembe	39.2	6.1	22.2	90	61	146
Itezhi-tezhi	31.9	1.2	17.4	97	68	158
Kalomo	17.5	13.1	9.6	112	84	186
Kazungula	49.0	1.7	13.7	102	73	168
Livingstone	36.9	4.5	17.0	97	68	158
Mazabuka	55.4	5.2	18.5	80	52	128
Monze	41.0	4.8	11.7	89	60	143
Namwala	30.4	3.7	14.6	118	60	199
Siavonga	36.9	5.7	7.8	94	91	152
Sinazongwe	44.2	4.4	21.0	109	65	181
Western Province	45.0	6.1	20.5	138.0	81.0	233.0
Kalabo	43.4	9.6	21.2	163	134	275
Kaoma	47.6	7.7	31.0	143	115	242
Lukulu	45.7	3.3	17.0	123	96	207
Mongu	44.7	6.2	18.6	118	90	198
Senanga	56.7	3.8	15.4	141	114	239
Sesheke	23.9	3.4	12.1	132	105	224
Shangombo	42.9	5.4	19.7	139	112	235

Acronyms

AIDS	Acquired immuno-deficiency syndrome
ART	Antiretroviral treatment
APU	Academic Production Unit
BMI	Body mass index
CBOs	Community-based organisations
CHEP	Copperbelt Health Education Project
CHIN	Children in Need
CPI	Consumer price index
CSO	Central Statistical Office
DCI	Development Cooperation Ireland
DDCC	District Development Coordinating Committee
DFID	UK Department for International Development
DOT	Directly observed treatment
FBOs	Faith-based organisations
FAO	Food and Agriculture Organisation
FDI	Foreign direct investment
FNDP	Fifth National Development Plan
GDP	Gross domestic product
GPA	Global Programme on AIDS
GRZ	Government of the Republic of Zambia
GTZ	Germany Technical Aid to Zambia
HDI	Human development index
HDR	Human Development Report
HIV	Human immunodeficiency virus
HPI	Human poverty index
HIPC	Heavily indebted poor countries
LDC	Least developed country
IMF	International Monetary Fund
MDGR	Millennium Development Goals Report
MDGs	Millennium Development Goals
MFNP	Ministry of Finance and National Planning
MoE	Ministry of Education
MoU	Memorandum of Understanding
MTP	Medium Term Plan
NGOs	Non-governmental organisations
NAC	National HIV/AIDS/STD/TB Council
NAPC	National AIDS Prevention and Control Programme
NBTS	National Blood Transfusion Services
NHDR	National Human Development report
NTEs	Non-traditional exports
NZP+	Network of Zambian People Living with HIV and AIDS
OECD	Organisation for Economic Cooperation and Development
OVC	Orphans and vulnerable children
PAGE	Programme for the Advancement of Girls Education
PDCC	Provincial Development Coordinating Committee
PEPFAR	President's Emergency Plan for AIDS Relief
PLHIV	People living with HIV
PLWHA	People living with HIV and AIDS
PMTCT	Prevention of mother-to-child-transmission
PRSP	Poverty Reduction Strategy Paper
RAPIDS	Reaching AIDS Affected People with Integrated Development and Support
RBA	Regional Bureau for Africa (UNDP)
SLA	Sustainable livelihoods approach
STI	Sexually transmitted infection
STP	Short Term Plan
SWAP	Sector-wide approach
SWAAZ	Society for Women and AIDS in Zambia
TB	Tuberculosis
TNDP	Transitional National Development Plan
UNAIDS	Joint United Nations Programme on AIDS
UN	United Nations
UNDG	United Nations Development Group
UNDP	United Nations Development Programme
UNGASS	United Nations General Assembly Special Session on AIDS
US	United States
UTH	University Teaching Hospital
VCT	Voluntary counseling and testing
WHO	World Health Organisation
WTO	World Trade Organisation
ZDHS	Zambia Demographic and Health Survey
ZHDR	Zambia Human Development Report
ZSBS	Zambia Sexual Behaviour Survey

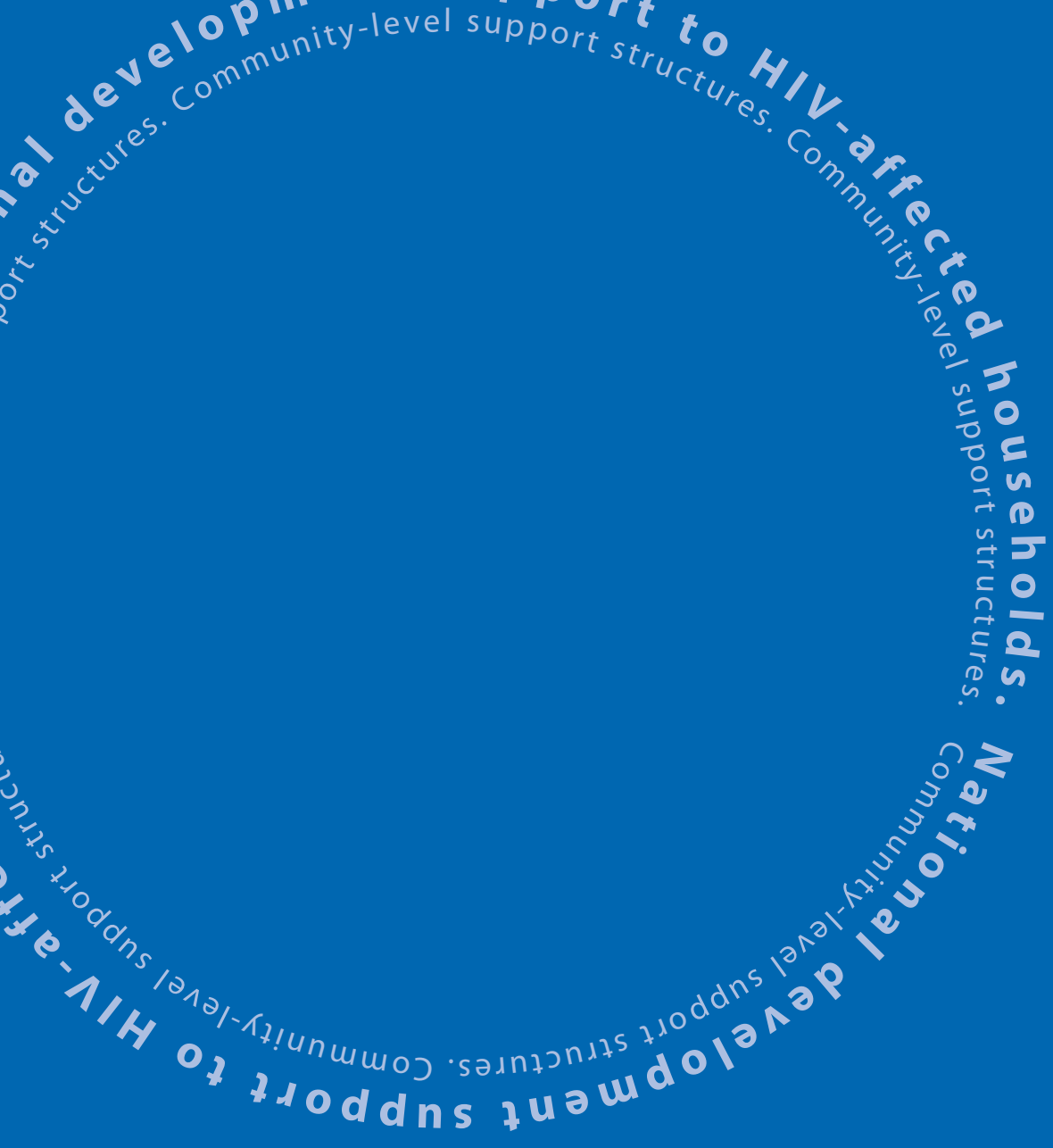
Zambia Human Development Reports

2007: Enhancing Household Capacity to Respond to HIV and AIDS. **2003:** The Reduction of Poverty and Hunger in Zambia: An Agenda for Enhancing the Achievement of the Millennium Development Goals. **1999/2000:** Employment and Sustainable Livelihoods. **1998:** Provision of Basic Services. **1997:** Poverty. These reports and other UNDP Zambia publications are available online on *www.undp.org.zm*.

National Human Development Reports - the concept

National Human Development Reports (NHDRs) are advocacy tools for promoting human development through national focus on critical development issues within a country. They are also used to facilitate debate and dialogue on critical development issues, provide independent policy advice, primarily to government, on how to address such challenges, and also help to build consensus around a shared vision for the broadening human choices. Furthermore, in line with their people-centered approach and the capacity to monitor both progress and challenges in Human Development, NHDRs are important advocacy tools, at the country level, to track progress in the attainment of the Millennium Development Goals. NHDRs from all over the world are accessible on *http://hdr.undp.org*.

United Nations Development Programme
Zambia Country Office
P.O. Box 31966 Lusaka, Zambia
tel: +260-1-250 800
e-mail: registry.zm@undp.org
web: *www.undp.org.zm*



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2007 ZAMBIA
Human Development Report

Enhancing household capacity to respond to HIV and AIDS

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Team for the preparation of
2007 Zambia Human Development Report

UNDP Zambia team: Abdoulie Sireh-Jallow, Senior Economist; Elda Chirwa, National Economist; Veera Virmasalo, Communication Officer; Angelah Kumwembe, Administrative Assistant

Team of independent consultants: Dennis Chiwele, Nakando Luo, Augustus Kapungwe

Review team: Akashambatwa Lewanika, National Economic Advisory Council; Alex Simwanza, National AIDS council; Andre' Loosekoot, Embassy of the Netherlands; Anthony Tambatamba, Young Men's Christian Association; Ben Chirwa, National AIDS Council; Bonaventure Mutale, Ministry of Labour and Social Security; Chieftainess Chiyaba, House of Chiefs; Chris Petrouskis, Jesuit Centre for Theological Reflection; Christine Kaseba, Medical Women Association of Zambia; Clement Mufuzi, Network of People Living with AIDS; Cosmas Musumali, Economic Association of Zambia; E. Kafwembe, Tropical Disease Research Centre; Eato Aall, Kenneth Kaunda Children of Africa Fund; Elfridah Chulu, Central Statistical Office; Engware Mwale, Non-Governmental Organization Coordination Committee; Flint Zulu, Civil Society for Poverty Reduction; Grace Mtonga, Ministry of Labour and Social Security; Howard Armistead, PATH (A Catalyst for Global Health); J.E.K. Phiri, Cabinet Office-Gender in Development Division; John Milimo, Participatory Poverty Assessment Group; K.V. Masupu, National AIDS Council; Kenneth Mwansa, Alliance of Mayors Initiative to Combat AIDS at the Local Level; Leah D. Mitaba, Non-Governmental Organization Coordination Committee; M. Banda, Central Statistics Office; Millica Mwela, Zambia Association for Research & Development; Mubanga Mishimba, Ministry of Agriculture and Cooperatives; Munda Mwila, Ministry of Energy and Water Development; Muyunda Mwanalushi, Copperbelt University; Ndrew Bowden, German Technical Cooperation; P. Ndubani, Institute of Economic & Social Research; P. Njobvu, Zambia Medical Association; Patrick H. Choolwe, Ministry of Finance and National Planning; Peter Henriot, Jesuit Centre for Theological Reflection; R. Sikamanu, Zambia Business Coalition on HIV/AIDS; Rana Ahluwalta, Kenneth Kaunda Children of Africa Fund; Rhoda M. Mwiinga, Cabinet Office-Gender in Development Division; Rodwell Vongo, Traditional Health Practitioners Association of Zambia; Ronah K. Lubinda, Royal Danish Embassy; Rosario Fundanga, Global Compact; S. Chibangula, Traditional Health Practitioners Association of Zambia; Simon Nkunika, National Malaria Control Centre; Susan C. Mulenga, Council Churches of Zambia; Taziowa M. Banda, Cabinet Office-Gender in Development Division; Thomas M.C Mambwe, Zambia Open University; V. Ncube, Zambia Institute of Chartered Accountants; Victor Chabala, Young Men's Christian Association; W.S. Mweenda, Law Association of Zambia; Waza Kaunda, Kenneth Kaunda Children of Africa Fund; William Muyaka, Central Statistics Office; Yussuf Ayami, Zambia Interfaith NGO Network

Peer reviewers: Alex Zinanga, UNDP Zimbabwe; Sennye Obuseng, UNDP Botswana

UN system readers: Barbara Barungi, RBA, UNDP; Catherine Sozi, UNAIDS; Golden Mulilo, UNFPA; Josefina Halme, UNDP; Lamin Manneh, RBA, UNDP; Rosemary Kumwenda, UNDP; Saskia Husken, FAO; Yolaine Michaud, RBA, UNDP

Message from the Government

HIV and AIDS is one of the major development challenges facing Zambia. The epidemic has affected every fabric of human existence. It has become the major cause of illness and death among the young and middle aged Zambians, who are the most productive age group. Consequently, it has deprived households and society of a critical human resource base. Further, it is reversing the social and economic gains the country is striving to attain. It has also continued to diminish the chances of alleviating poverty and hunger, achieving universal primary education, promoting gender equality, reducing child and maternal mortality and ensuring environmental sustainability. In effect, HIV and AIDS is among the factors limiting the achievement of the MDGs.

In view of the foregoing, the Zambian Government has declared HIV and AIDS as a national disaster and emergency requiring concerted efforts for all relevant stakeholders. While there have been major advancement in HIV and AIDS prevention, treatment and care in Zambia, efforts to significantly scale up responses to HIV and AIDS have been inadequate.

In view of the above, it is clear that HIV and AIDS is a huge challenge to development and therefore, there should be no business as usual. In trying to respond to this challenge, I urge all our cooperating partners to consider coming up with strategies that will help to prevent new infections; designing programmes that address specific problems brought about by HIV and AIDS such as taking care of children orphaned by the disease; and mitigating the effects of HIV and AIDS on poverty.

Furthermore, a more systematic approach is needed to build local capacity to manage a comprehensive response to the epidemic. To this end, the focus of the Report on enhancing household capacity to respond to HIV and AIDS is very appropriate and timely. Therefore, I would like to encourage all our development partners to read this Report and consider how they can adopt some of the ideas in the Report.

Ng'andu P. Magande, M.P.
Minister of Finance and National Planning

Foreword

The 2007 Zambia Human Development Report (ZHDR) focuses on the sixth Millennium Development Goal (MDG), which is combating HIV and AIDS, malaria and other diseases. It particularly emphasises enhancing household capacity to respond to HIV and AIDS. It is the fifth in a series of bi-annual Reports that have been produced since 1997. The topics addressed since then have included poverty, provision of basic social services, employment and sustainable livelihoods, and eradication of extreme poverty and hunger.

The Report places households at the centre of Zambia's efforts to respond to HIV and AIDS because the immediate impact is felt at the household level. The effects are felt through various ways, which by aggregation adversely affect socio-economic sectors in varying degrees at the macro level. Focusing on the households gives a better opportunity to understand the many facets of HIV and AIDS and how the epidemic can be holistically addressed.

The Report pursues the theme of the household's capacity to respond to HIV and AIDS from three key inter-related and mutually reinforcing aspects. Firstly, the relationship between HIV and AIDS and human development. The Report shows that HIV and AIDS undermines all the tenets that constitute human development as can be seen in falling life expectancy, low educational attainment and standards of living. Secondly, the impact of HIV and AIDS on achievement of the MDGs. The 2007 MDG Progress Report states that Zambia is on track to achieving all the MDGs, except for maternal mortality and environmental sustainability. However, there is a real danger that this progress will be undone if the response to HIV and AIDS is not intensified and won. Thirdly, enhancing household capacity to respond to HIV and AIDS. The household where the negative impacts of the epidemic are first felt needs to be recognised as the first and central line of action against HIV and AIDS.

The Report recommends that for households to be effectively involved in responding to HIV and AIDS, the development process should be made more supportive to HIV affected households. Macro-level institutions should be strengthened so that HIV and AIDS do not unravel their capacity to deliver on their mandates. Adaptive structures at the district level, which are closer to households and communities, should be allowed to flourish. HIV-affected households should be helped to rebuild capital asset base.

This Report was formulated through a consultative and participatory process, which involved all the relevant national stakeholders and external reviewers from the UNDP Bureau for Development Policy and other Country Offices. The preparation process was guided by the NHDR National Advisory Committee. I hope that it will be a useful policy tool for the Government and its development partners in the collective fight against HIV and AIDS in Zambia. I commend the analysis and recommendations contained therein to a wide readership and welcome any comments on how to improve its value.

Aeneas C. Chuma
UNDP Resident Representative

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Balance sheet of Human development in Zambia

PROGRESS	CHALLENGES
Income and poverty	
▪ Extreme poverty in rural areas has declined from 71 percent in 1998 to 53 percent in 2004 ▪ Per capita GDP has grown from K234,933 in 1998 to K276,416 in 2004 ▪ Poverty reduction and broad-based economic growth has been prioritised in the Fifth National Development Plan	▪ Overall extreme poverty at 68 percent is still too high ▪ Extreme poverty in urban areas reduced only marginally - from 36 percent in 1998 to 34 percent in 2004 ▪ Only marginal reductions in the proportion of stunted children - 53 percent in 1998 to 50 percent in 2004 - malnutrition is still too high ▪ Growing GDP consistently, at over 7 percent for 25 years, to make significant impact on poverty is a big challenge
Education	
▪ Net enrolment in primary education increased from 66 percent in 2000 to 78 percent in 2004 ▪ The proportion of pupils who reach grade 7 increased from 64 percent in 1990 to 82 percent in 2004	▪ Youth literacy rate (ages 15-24) reduced from 74.9 percent in 1990 to 70.1 percent in 2000
Gender equality	
▪ Percentage of women in formal employment rose from 25.2 percent in 2002 to 27.3 percent in 2004 ▪ Proportion of seats held by women in the National Parliament increased from 6 percent in 1990 to 12 percent in 2004	▪ Ratio of girls to boys in primary school reduced from 0.98 in 1990 to 0.95 in 2005 ▪ Ratio of girls to boys in secondary school dropped from 0.92 in 1990 to 0.83 in 2005
Child mortality	
▪ PMTCT services have been integrated into routine reproductive health services ▪ Under-five mortality ratio reduced from 197 in 1996 to 168 in 2002 ▪ Infant mortality ratio reduced from 109 in 1996 to 95 in 2002 ▪ Child mortality ratio reduced from 98 in 1996 to 81 in 2002	▪ The proportion of wasted children increased from 5 percent in 1998 to 6 percent in 2002 ▪ The proportion of children who were immunised against measles reduced from 91 percent in 1998 to 86.2 percent in 2004
Maternal mortality	
▪ A reproductive health policy has been drafted and is under consideration ▪ Pregnant women, alongside children and the aged (64 years and above), have been exempted from paying user fees ▪ Government is implementing prevention of malaria in pregnancy strategies	▪ Maternal mortality rate increased from 649 in 1996 to 729 in 2002 ▪ Percentage of births attended to by skilled personnel dropped from 51 percent in 1992 to 45 percent in 2002
HIV and AIDS, malaria and other diseases	
▪ Progress has been made in reversing the HIV prevalence ▪ The cure rate for TB has been improving for all provinces except for Eastern and Southern provinces ▪ Malaria incidence rate per 1,000 fell from 400 in 2000 to 200 in 2004	▪ Unprotected sex continues to be a problem ▪ VCT uptake is low. Only 11 percent of men and 15 percent of women went for VCT in 2005 ▪ The number of children orphaned by AIDS reached 1,197,867 in 2005, two thirds of the total number of orphans

PROGRESS	CHALLENGES
...HIV and AIDS, malaria and other diseases	
	▪ The incidence rates of TB and malaria at 512 per 100,000 persons in 2000 and at 200 per 1,000 persons in 2004, respectively are too high
Water and sanitation	
▪ Percentage of people without toilet facilities reduced from 16 percent in 1998 to 14 percent in 2004 ▪ Progress has been made in reducing unaccounted for water	▪ Percentage of people without access to safe water in the dry season remained almost stagnant at 43 percent in 1998 and 42.8 percent in 2004
Equity	
▪ There has been a reduction in income inequality. The Gini coefficient declined from 0.66 in 1998 to 0.57 in 2004 ▪ Whereas the last 20 percent of households accounted for 67.8 percent of the total income in 1996, this dropped to 44.9 percent in 2004	▪ Despite improvement, income inequality remains extremely high ▪ Economic growth in recent years has not been broad-based enough. This is mostly due to underperformance of the agriculture sector where the majority of Zambians earn a living
Employment and sustainable livelihoods	
▪ Overall unemployment rates dropped from 12 percent in 1998 to 9 percent in 2004 ▪ Urban unemployment rates declined from 27 percent in 1998 to 21 percent in 2004 ▪ Male unemployment rate fail from 25 percent in 1998 to 18 percent in 2004	▪ Slow reduction of female urban unemployment rate - from 29 percent in 1998 to 26 percent in 2004
Environmental sustainability	
▪ Percentage of households using electricity as cooking energy rose slightly from 15 percent in 1998 to 16.2 percent in 2004 ▪ The Natural Resources Consultative Forum was established to facilitate dialogue on contentious environmental issues ▪ Environmental Council of Zambia established additional offices in Southern and Copperbelt provinces	▪ Large percentage of Zambia's households (83.4 percent in 2004) relies on firewood and charcoal as cooking energy. This is a threat to the forests ▪ Species efficacious in the cure of many diseases are being depleted at a fast rate
Politics, governance and human rights	
▪ 2002-2006 National Parliament was more balanced with a sizeable number of opposition members ▪ Task Force on Corruption was created in 2002. ▪ Draft Constitution, with more progressive provisions, was presented to government	▪ The number of reported incidents of gender-based violence is still very high ▪ The process of constitutional and electoral reforms still to be concluded ▪ Little progress made on decentralisation ▪ The justice delivery system continues to be slow and inefficient to guarantee the rights of the majority of Zambians

"Shaking hands is not a problem"*

People today have stopped greeting each other because they believe that they might get HIV through shaking hands. You can't get HIV/AIDS through shaking hands or greeting each other; you can get HIV/AIDS through having sex without using a condom.

Photographer: Kelvin Chembo

** All photographs in this report were taken with disposable cameras by children and youths participating in the Kuwala project under a Lusaka NGO called Back to School. Photos are accompanied with a caption where the photographer describes in his or her own words what the photo is about. More information about the photographs on p. 2.*

Overview: Enhancing household capacity to respond to HIV and AIDS

Zambia has made great strides to respond to HIV and AIDS since the first HIV-case was identified in the country during the mid-1980s. A number of initiatives started in Zambia are now practiced throughout the developing world, including home-based care, tackling psychosocial impact of HIV and AIDS and the public declaration of people living with HIV and AIDS to fight stigma. At an institutional level, Zambia has been one of the champions in coordinated, multisectoral national response.

There is, however, a growing concern that the efforts and resources are not matching the results. This suggests that programmes may not have been efficient enough in focusing the effort where it matters most. The rallying call of the 2007 Zambia Human Development Report (ZHDR) is therefore the need to place the household at the centre of Zambia's HIV and AIDS response. Several reasons exist for this appeal:

- Placing the household at the centre would make the response more effective. The immediate impacts of HIV and AIDS are at the household level. These impacts are remitted by various transmission mechanisms and then by aggregation adversely affect sectors and the macro level. Therefore, responses must be rooted in household realities if they are to be effective.

- As already recognized, households are the primary units for coping with HIV and AIDS and its consequences. They carry the greatest burden of the disease and need to be empowered to take action against it.

- Focusing on the smallest social unit in society, the household, gives us a better opportunity to understand the many facets of HIV and AIDS. This will help different players, from national level to the grassroots, identify their specific strengths in responding to the pandemic. It will also give insights to how diverse efforts can be coordinated for maximum impact.

- Analysing the way HIV and AIDS affects the household can also help overcome the challenges the pandemic poses for institutions, such as sector ministries and non-governmental organisations as they work to achieve their mandates.

- Focusing on the household helps us to isolate the impacts of various initiatives and measure them.

HIV and AIDS situation in Zambia

High prevalence rates

There are signs that the HIV prevalence rate in Zambia is stabilising. However, this stability is occurring at very high prevalence levels and the epidemic will continue to destroy Zambia's national fabric in more ways than one.

The high levels of infections are of great concern. In 2002, when a sample survey - Zambia Demographic and Health Survey (ZDHS) - involving HIV test was conducted on a large scale, nearly 16 percent of the population aged 15 to 49 years was found to be HIV positive.

The epidemic is most prevalent among the most productive age group. This has negative implications for economic growth

The photographs in this report

All photographs in this report were taken with disposable cameras by children and youths participating in the *Kuwala* project under a Lusaka NGO called Back to School. Kuwala is Chewa, one of the about twenty distinct languages in Zambia, and means to shine or to stand out. The aim of the project is to provide children and youths with skills to conceptualize their life and problems through photography. In particular, the project helps them to deal with problems related to HIV and AIDS.

Kuwala team leader Petter Bolme says that the project tried to bring out children's own perspective to HIV and AIDS. "All that the kids had been told was that they were going to learn how to take photos. The idea was that, before talking to them about the pandemic, we wanted to learn how they would illustrate it themselves. Just before they left to go out and shoot we told them to take pictures also related to HIV and AIDS," Bolme says.

As a result, some photos in the first batch from the field illustrated HIV and AIDS. One showed a 3-year old orphan, another a 14-year old prostitute, and yet another told a story about alcohol and unprotected sex.

When the project staff discussed the photos with the kids during a session on sexual and reproductive rights, it came out clearly that the kids were at risk of contracting HIV. Before the Kuwala kids met Back to School, they had dropped out of school because their parents, if they have parents, could not afford to keep them there. Most of them were just hanging out at the local shopping centre, begging for money. At least three of the kids had already had a sexually transmitted infection. Only the youngest, under 14-year olds, had not had sex. The rest had had sex without protection.

For their next assignment, the kids were asked to illustrate HIV and AIDS from various perspectives: the effects the pandemic has on their community; how to prevent oneself from being infected; how it is to live with HIV and AIDS; how neighbourhoods are working to combat HIV and AIDS. The children worked in groups and each one had tackled the assignment in quite different ways.

Some of the best Kuwala photos were selected to illustrate this report. The pictures include images of HIV and AIDS, poverty and despair but also images of play and happiness. All photos are accompanied with a caption where the photographer describes in his or her own words what the photo is about. In return for the photos, UNDP Zambia is supporting Back to School in paying the children's school fees.

Kuwala is a non-profit project by Back to School (Zambia), Youth Vision (Zambia) and Global Reporting (Sweden). The children and youths are participating in the project with consent from their parents or guardians. Likewise, all people in the photographs have given their consent for the photos to be published.

and provision of essential services such as health and education. HIV is also undermining the future prosperity of the nation. About 39.5 percent of babies born to HIV positive mothers are infected with HIV and are likely to die within a few years.

Worsening gender divide

HIV prevalence is not gender neutral. During the survey quoted above (ZDHS), more women (18 percent) than men (13 percent) were found to be HIV positive. Overall, women accounted for more than half of the adults estimated to be HIV infected. Young women are the hardest hit by the epidemic, with those aged 15 to 19 years being five times more likely to be infected compared to their male peers. This is mainly due to early involvement in sexual activity among girls. In most cases, these sexual encounters are with older men who may already be infected.

The disproportionate prevalence rates reflect a deeper rooted problem. The unequal power relations between men and women due to socialisation, cultural beliefs and lack of economic empowerment of women are to a great extent fuelling the spread of HIV. This is a society which is tolerant to male infidelity and the woman has little power to negotiate safer sex, even when it is clear that she may be at risk of acquiring the HIV infection.

There are other ways in which AIDS is worsening gender inequalities. Already prevailing inequalities mean that the quality of female human capital is much lower than that of men - women are less educated and are locked away from prospects of skills development that would improve their livelihood.

Women also have less access to productive assets such as land and livestock. When the man in the home dies, the widow and her dependents are often rendered destitute. This is because her asset base is already weak. This is reinforced by property grabbing by the late husband's relatives. Some widows have turned to sex work to survive. Women, compared to men, bear a greater burden of the epidemic even when they are not infected because they are the prime caregivers of the chronically ill and orphans in the home.

Rural and urban

Prevalence rates differ across geographical location. The rates were found to be much higher in urban districts along the line of rail than rural districts. The urban district with the highest prevalence rate was Livingstone at 30.9 percent compared to 5.2 percent in some rural districts of Northern Province. Overall, HIV prevalence in urban areas (23 percent) is more than twice the prevalence in rural areas (11 percent). There are, however, signs that urban prevalence rates may be stabilising while they are projected to rise in rural areas.

Poverty reinforces the spread of HIV and vice versa. Although affecting the whole country, poverty is predominantly rural thereby increasing the prospects of higher HIV prevalence in rural areas. This should be viewed with great apprehension as fragile societies of rural Zambia, already staggering under the great weight of poverty, will face a bleak future unless something is done to reverse the trend.

Impacts of HIV and AIDS

Life expectancy and mortality

HIV and AIDS is reversing many of the developmental gains Zambia would have achieved. Zambia's life expectancy at birth in 2000 was four years less, due to HIV and AIDS. According to the 2000 Census Report (see Chapter 5) life expectancy stood at 50 years. This reduced Zambia's human development index (HDI) from 0.491 to 0.462 in 2004 or by 5.9 percent. Furthermore, by 2010, HIV is projected to reduce life expectancy by eight years.

The child and infant mortality rate that had started to take a declining trend (109 in 1996 and 95 in 2002) is now worsening. Diseases like tuberculosis which had been contained are now some of the major public health problems in the country. The impact of the loss of health workers and teachers is not only immediate but also threatens the foundation for future growth, as the health status of the country gets further eroded and children leave school not adequately prepared to play their future developmental roles.

Economic growth and decent standards of living

HIV and AIDS is undermining Zambia's strides to provide decent standards of living for the citizenry. Although the economic impact of HIV and AIDS has not been modelled for Zambia, other countries that have carried out this exercise have found that the impact of HIV and AIDS would reduce gross domestic product (GDP) by as much as 1 percent. If this was to hold for Zambia, it would be a huge reversal for a country where GDP growth in the last seven years, the longest uninterrupted growth the country has achieved, has averaged only 4.2 percent. Zambia's national economy needs to grow consistently at over 7 percent to make sufficient inroads into widespread poverty reduction and improve the welfare of the people.

Agriculture

The performance of agriculture, considered as the mainstay of economic development, is under serious threat. HIV and AIDS affected households are reducing their area under cultivation as they face serious labour constraints related to death, care of chronically ill patients and attending funerals. Yields are falling because the most productive farmers are dying. Many extension workers who are expected to train farmers are also dying or are too sick to work effectively. Farming households are too labour-constrained to manage their farmsteads properly and they may not afford the cost of fertilizers or improved seeds because they have to spend money on medicines and burying their dead. Over time, farming households are reverting back to subsistence agriculture and in most cases, cannot secure full household food security.

Orphans

AIDS has led to an increase in the number of orphans. The number of children orphaned by AIDS was projected to reach 1,197,867 in 2005, two-thirds of the total number of orphans in that year. Without AIDS, the number would have been 598,934. This has been costly socially and economically.

For a country with no well-developed social security system, kinship relationships are the only safety nets that families in need fall back on. The burgeoning numbers of children orphaned by AIDS and needing support and care are overloading the caring capacity of Zambia's traditional extended family system. The system has performed heroically given the scale of the problem.

However, the emergence of child-headed households, where children as young as eight years old are taking on the role of household heads including providing care for other children, seems to suggest that the extended family system's capacity has been seriously eroded. The fact that the HIV epidemic coincided with sharp rises in poverty meant that the system was already at its weakest point to take on this extra burden.

Many of the children whose parents have died lack, not only parental care and guidance, but also cultural, social and familial ties and life skills that are usually passed on from generation to generation. They are deprived of their childhood and many of them lose the opportunity to go to school. These children tend to be attracted to big cities and towns thereby increasing the number of street children. Economic hardships lead them to look for means of sur-

vival that increase their vulnerability to HIV infection. These include substance abuse, child labour, prostitution and delinquent behaviour.

Millennium Development Goals

Perhaps what sums up these effects is that the recent progress made in meeting the Millennium Development Goals is unlikely to accelerate, unless the response to HIV and AIDS begins to produce good results soon. A goal by goal assessment in Chapter 1 indicates that HIV and AIDS is undermining each of the goals in multiple ways.

A twin problem of poverty and HIV and AIDS

Zambia has one of the highest incidences of poverty in the world with 68 percent of population living in poverty in 2004. HIV and AIDS is making it much more difficult for Zambia to fight these high levels of poverty. It is undermining the capacity of households to accumulate or make adequate use of assets at their disposal to pursue viable livelihood strategies.

Both the quality and quantity of human capital in households are diminishing due to deaths, illness or children dropping out of school because they are orphans or need to help out in providing for the household. This impacts negatively on the foundation of households' capacities to get beneficial livelihood outcomes and also reinforces the already widespread poverty.

HIV and AIDS have been known to deplete other assets as well. For example, households cannot afford farm inputs because of the escalating medical costs associated with increased morbidity and mortality. The accumulation of productive assets such as livestock and land is being negatively affected due to distress selling and property grabbing that often follows the death of a spouse.

Ecological balance is also under attack. Households are losing the capacity to exploit natural resources in a sustainable manner. Indigenous natural resource management skills are being lost due to AIDS-related deaths while over exploitation of certain natural resources is becoming rampant because households have little else to turn to for provision of their needs. Ultimately, the natural resource base is becoming less supportive to HIV-affected households.

Perhaps the most telling sign of worse things to come concerns how HIV and AIDS has changed the vulnerability context. Shocks to which households were once resilient are causing unimaginable devastation. For example, droughts are not a recent phenomenon to this country. In fact long term rainfall patterns show that the amount of rainfall at the beginning of the 20th century was not any different from that at the end of the 20th and the beginning of the 21st centuries. Communities recovered after a short while without food aid.

This resilience has to a large extent disappeared because of the mutually reinforcing problems of AIDS and poverty. At the national level, this is leading to chronic dependency on food imports, which in turn negatively affect the agriculture sector as food relief depresses agriculture prices, further undermining the sustainability of livelihoods and reinforcing poverty in a country where 67 percent of the population depends on agriculture.

Defining households with capacity to respond to HIV and AIDS

Households can be powerful allies in HIV and AIDS response. However, they can only assume this role if they themselves have capacity to respond to the pandemic. A household will be considered to have capacity to respond to HIV and AIDS when it - without undermining its ability to obtain beneficial livelihood outcomes - can summon its resources and deploy them at the three globally accepted strands for tak-

ing action against HIV and AIDS. The three strands are: prevention, treatment and care, and impact mitigation.

- *Prevention.* Household members should be able to access information about HIV and AIDS and take measures to prevent themselves and others against HIV infection. This is not as easy as it appears. Eroded human capital, high levels of poverty and lack of empowerment of women prevent households from accessing and processing information properly and at times also force them to make decisions that put them at risk of HIV infection.

- *Treatment and care.* An HIV-affected household should be able to access treatment for its members with AIDS-related illnesses and provide care to them, without compromising the prospects of its livelihood outcomes. HIV-affected households, particularly if under the crushing weight of extreme poverty, face a multiplicity of factors that throw the livelihood in a total dilemma. These households have problems to access and adhere to treatment. Although they may heroically do their best to look after sick members, this comes at a high cost such as suspending activities essential for achieving beneficial livelihood outcomes.

- *Impact mitigation.* Households should be able to make successful adjustments to respond to the challenges caused by the pandemic. This is difficult even at the best of times but made worse by the widespread poverty, changing vulnerability context and the fact that HIV and AIDS erodes the core assets with which the household would manage a recovery.

Required steps

If households are going to be involved in taking action against HIV and AIDS, a supportive environment should be created. In this regard, actions are required in five main areas listed below.

1. Reforming the development process to make it more supportive to HIV-affected households

The development process should be more inclusive so that the weak in society can participate in it. HIV and AIDS should focus our thinking on removing the fault lines in our tools of development which, more often than not, exclude the majority of the country's population. Policies and laws should promote and protect the livelihood security of HIV-affected households and create an environment in which a future is assured for such households.

2. Strengthening macro and meso level institutions so that HIV and AIDS does not unravel their capacity to deliver on their mandates

Organisations must respond to the external and internal risks posed by HIV and AIDS in fulfilling their mandates. The current multisectoral approach has correctly emphasised all these. However, more needs to be done by helping organisations to refine their instruments to ensure that they are more supportive to households faced with HIV and AIDS.

3. Promoting an environment that allows adaptive structures to flourish

District and sub-district level structures which are closer to households and communities than macro and meso level organisations must be allowed to be in the frontline in enhancing household capacities to respond to HIV and AIDS. However, overcentralisation of the governance system has undermined their effectiveness, and democratic decentralisation should therefore be accorded high priority. At the core is the need to make government more accountable to the people, expand opportunities for people's participation and increase the chances of decisions taken to match as much as possible the aspirations of the

people themselves. Alongside this should be measures to strengthen local authorities which have undergone serious dilapidation over the years.

4. Revitalising structures and processes

The social, institutional, and organisational environment at community level should be addressed and made more supportive to HIV-affected households. This implies identifying, strengthening and promoting the positive elements within communities that could help HIV-affected households to make successful adjustments to the situation. Cultural norms and traditional structures based on social solidarity must be made to thrive once again.

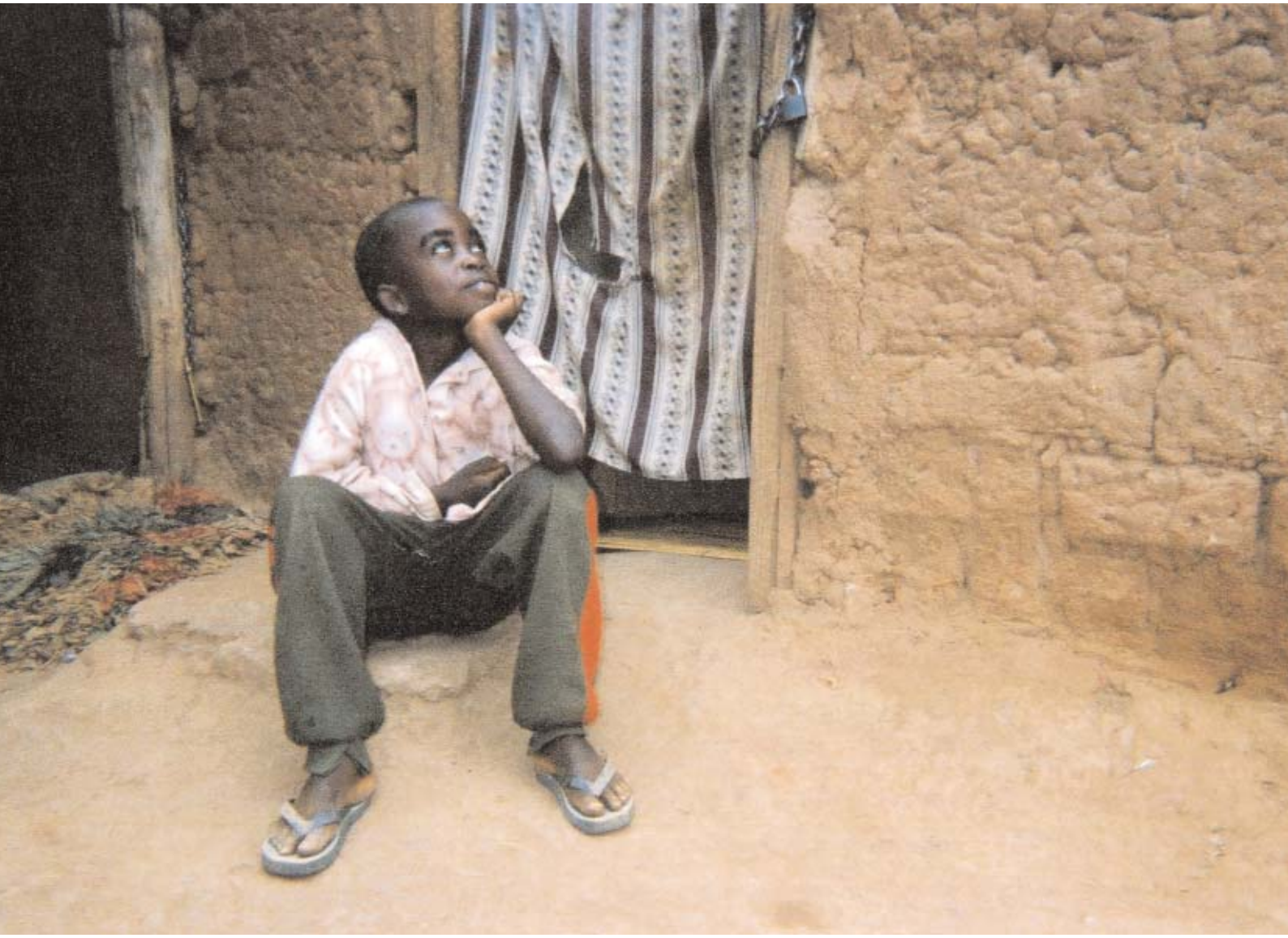
Secondly, the negative elements within these structures and processes that are inhibitors to a successful adjustment of HIV-affected households should be addressed. Examples are many but would include such negative practices as sexual cleansing and property grabbing.

5. Help HIV-affected households rebuild their asset base

Livelihood assets - human capital, financial capital, physical capital, social capital, and natural capital - are key for households to respond to HIV and AIDS. Measures must be taken to protect and promote each of the five asset groups. Only with this will HIV-affected households be able to obtain beneficial livelihood outcomes.

Reforming the institutional framework

Zambia has been among the champions in coordinated, multisectoral response to HIV and AIDS. In terms of institutional framework, Zambia responded to the epidemic by, among other things, establishing the National HIV/AIDS/STI/TB Council (NAC), to champion and coordinate the national response to HIV and AIDS. At the core to the institutional framework is the multisectoral approach, which Zambia has again helped to internationally champion. The approach is founded on the fact that HIV has many dimensions with respect to transmission, treatment, care and social impacts. The focus on the household is, however, currently inadequate because the institutional framework is not yet fully oriented to that effect. The institutional framework must be reformed to help put the household at the centre of responding to HIV and AIDS.



"Mabvuto"

This boy stays with his mother but the mother doesn't work. Mabvuto was not going to school because the mother had no money to pay. Now he has started going to school at the age of 10. He is in grade two.

Photographer: Kennedy Kamanga

1 ~ HIV and AIDS and human development

The first case of HIV, the virus that causes AIDS, in Zambia was diagnosed in 1984. By the end of 2005, 489,330 people were estimated to have died of AIDS-related illnesses while 914,691 were said to be living with the virus. There were 44,329 new infections in 2005, compared to 629 in 1985. The epidemic has created an unprecedented orphanhood situation. By the end of 2005, there were 801,420 children orphaned by AIDS. This figure accounted for two-thirds of the total number of orphans. The medical and clinical implications of HIV and AIDS have been devastating.

In Zambia, like many other countries, HIV has emerged as a human catastrophe of unprecedented scale. The effects are more than clinical, affecting individuals, households, communities and nations in multiple ways. Every Zambian knows a relative, friend or an associate who has died of an AIDS-related illness. The adage "we are all either infected or affected" accurately portrays the situation as it exists today.

The immediate impacts of HIV and AIDS are at the household level. Households are losing human capital through death or due to the rising burden of caring for the chronically ill. When a household member falls ill, the financial cost of care can be colossal. With productivity and production undermined, households are resorting to distress sale of their physical assets, further undermining their resilience against shocks. The social networks that have supported households, such as the extended family system, are now under severe stress and are failing to cope with the impacts of the epidemic.

These impacts are remitted through various transmission mechanisms and are by aggregation adversely affecting society. Although the instruments for understanding the national economic impacts of HIV and AIDS are still being refined, emerging evidence suggests that when the direct and indirect effects are taken together, adverse impacts on development are significant.

This Report demonstrates that we are only beginning to understand the scale of the impact of HIV and AIDS. One thing is, however, already clear - Zambia and the international community cannot afford to assume a 'business as usual' approach. Fortunately, this has been recognised and there is now a growing international alliance rallied to respond to this epidemic.

Some of the responses by the international community include the Millennium Declaration of September 2000 adopted at the United Nations (UN) Summit of heads of states, the Declaration of Commitment to fight HIV and AIDS of June 2001 adopted during the UN General Assembly Special Summit, the Global Fund to fight HIV and AIDS, Tuberculosis and Malaria and the President's Emergency Plan for AIDS Relief by the United States Government.

In Zambia too, many players have rallied to act against this epidemic. Parliament passed a National HIV and AIDS Bill in November 2002 that mandated the National HIV/AIDS/STD/TB Council (NAC) to coordinate the national response. National, sector, district and community based initiatives have since followed and they are supported by the Government of the Republic of Zambia, donors, non-governmental organisations, community-based organisations, faith-based organisations and the business sector.

Generally, the will and determination to actively respond to HIV and AIDS is grow-

ing. However, when HIV was first diagnosed it was shrouded in stigma and denial, which means that much ground has already been lost.

The delayed response means that we need to do much more to halt and reverse the spread of the infection. HIV and AIDS must be brought to the centre of the national development agenda much more strongly than has been the case so far. This requires an urgent response, focusing on household level, by all stakeholders.

2007 Zambia Human Development Report

The 2007 Zambia Human Development Report (ZHDR) pursues the central theme of the household's capacity to respond to HIV and AIDS. The Report looks at the theme from three key inter-related and mutually reinforcing aspects.

The first is the relationship between HIV and AIDS and human development. As shown in this Chapter, HIV and AIDS threatens all the tenets that constitute human development. Threat on longevity has been perhaps the most visible, as seen in falling life expectancy.

Educational attainment is also being adversely affected as the epidemic reduces the number of teachers the country is able to deploy. In addition, children are withdrawn from school to provide labour at home to help make ends meet. Furthermore, the psychosocial consequences of the trauma of seeing a parent die after prolonged illness diminishes children's ability to learn.

This Report shows that HIV and AIDS reinforces poverty while poverty in turn makes people susceptible to HIV and AIDS. The pandemic is undermining the achievement of decent standards of living while poverty in turn makes the tackling of HIV and AIDS difficult. The 2007 ZHDR advocates that responding to HIV and AIDS is fundamental to Zambia to make progress in human development.

The second angle (pp. 20-24) is an examination of how HIV and AIDS is

Box 1.1: National Human Development Reports in Zambia

The 1997 ZHDR tackled the theme of poverty. It presented the state and trends in Zambia's human development and poverty since the mid-1970s. It also discussed trends in factors with a close bearing on human development: health, education, employment, security, equity, environment and participation.

The 1998 ZHDR focused on the provision of basic social services. It advanced the thesis that poverty reduction entails empowerment of the people, especially of those who suffer deep deprivation. The provision of and ready access to basic social services constitutes one of the major sources of such empowerment.

The 1999/2000 ZHDR tackled the theme of employment and sustainable livelihoods. The report concluded that various resources (human, physical, social and natural) were available within Zambia which, with improved strategies, could be used to build people's livelihoods and help promote human development.

The 2003 ZHDR addressed the eradication of extreme poverty and hunger.

The preparation of National Human Development Reports is guided by corporate principles that include national ownership, independent analysis and participatory and inclusive preparation. Each theme is selected following a process of consultation with representative stakeholders and is picked for its merit to provide the country an opportunity to reflect and hold dialogue over an issue that touches on the well-being of the majority of Zambians.

affecting the achievement of the Millennium Development Goals (MDGs). As the economic environment improves and development policies begin to focus more strongly on people, Zambia is beginning to make some progress in achieving the MDGs. Nevertheless, there is a real danger that this progress will be undone if the response to HIV and AIDS is not intensified and won. HIV and AIDS is a threat to each of the eight MDGs and reversing its spread forms a central platform for Zambia to achieve the goals.

The third angle (Chapter 3) is the main focus of the ZHDR as it presents information on household capacity to respond to HIV and AIDS. The HIV and AIDS epidemic is re-shaping Zambian households in fundamental ways including those not hosting persons living with the virus as they adjust to its various consequences.

The household must be recognised as the first and central line of action against HIV and AIDS. If this is to happen, we need to understand better the manifold ways in which the epidemic affects households, how it is shaping their vulnerability context, what their coping strategies are and whether these point to areas we should be seeking to build upon and what the impact on livelihood outcomes has been.

The 2007 ZHDR aims, as was the case with the previous reports (see Box 1.1), to serve as an advocacy tool and a source of information in the ongoing debate and dialogue on the critically important national issue, while also providing the basis for some specificity with regard to the implementation of strategies outlined in national development plans.

Human development, HIV and AIDS interface

We should be concerned about HIV and AIDS because it is a serious blow to human development. The annual global UNDP Human Development Report (HDR), first published in 1990, advocates a human development approach to development that puts the well-being of people at the centre. Human development is defined as a process of expanding choices for people to live the kind of life they value. The range of choices is potentially unlimited and varies from individual to individual.

Nevertheless, there is consensus that four fundamental choices are essential for people to find fulfillment - to lead a long and healthy life, to be knowledgeable, to have access to the resources needed to have a decent standard of living and to participate in the life of the community. There are many other choices besides these four. It is, however, agreed that these four choices, and when taken together, are a necessary gateway to other choices.

On the following pages, this Report provides a definition of each of the choices as well as a discussion on how HIV and AIDS undermines each of them.*

HIV and AIDS is undermining the choice to longevity

To lead a long and healthy life is considered a common choice as people would like to avoid dying young as long as the long life that they lead is healthy. A long healthy life to be achieved must be supported by good nutrition, a clean and hygienic environment, access to good housing, clean and safe water, access to information, and access to health facilities.

The impact of HIV and AIDS is most obvious here as it results in higher morbidity. Chapter 5 provides evidence of how HIV is undermining the choice to longevity by leading to higher infant and child mortality, maternal mortality and deaths from opportunistic infections. An evident way in which HIV and AIDS is negatively affecting human development is by diminishing access to health services. The epidemic places a demand on health services, affecting the extent to which other health needs can be met by the sector. For example, an

** For detailed explanation of the human development concept and how its different measures are calculated, please refer to the technical annex on pp. 94-100.*

increasing share of hospital beds - currently estimated at 50 percent - is being allocated to AIDS-related illnesses. Medical personnel have also been hit hard, depleting further their already low staffing levels.

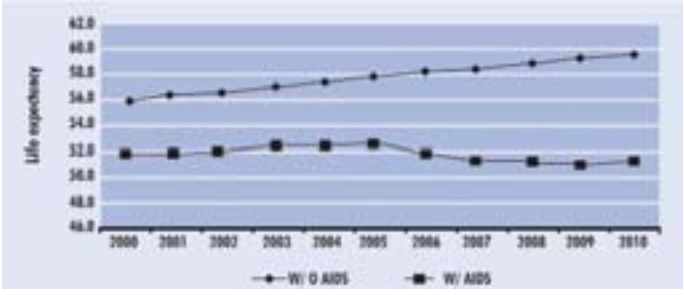
As captured by life expectancy projections, HIV and AIDS was estimated to have had lessened life expectancy in Zambia by about 4 years in 2000, and the figure is projected to rise to about 8 years by 2010 (see Figure 1.1).

HIV and AIDS is undermining the choice to be knowledgeable

To be knowledgeable is another common choice to mankind. No one chooses ignorance and to be cut out from the world of information. There are many ways through which this choice is acquired.

Fundamentally, people must learn and acquire the capacity to access and make use of available information. Formal education imparts knowledge and also builds people's capacity to acquire the knowledge they can apply in the pursuit of other fundamental choices of life. It is an important means of fulfilling this choice. We should not, however, discount the informal learning taking place through human interaction in the household, community and broader society including at the workplace. Intergenerational transfer of knowledge and skills in the family and society, access to an unfettered media and indigenous ways of teaching and learning are also important in fulfilling the choice to be knowledgeable.

Figure 1.1: Projected life expectancy with and without HIV and AIDS, 2000-2010



GRZ, 2003: Population Projections Report

According to evidence in chapters 3 and 5, HIV and AIDS is indeed an affront to the choice of being knowledgeable. It is diminishing opportunities to a sound formal education. Through increased deaths of teachers, class sizes are increasing to the point that children do not get adequate attention. Educational prospects of children orphaned by AIDS deaths are also adversely affected. Children in such situations suffer from many conditions that make effective learning difficult. The psychosocial impact of seeing a parent ill for a prolonged period, sometimes even being forced to take care of a terminally ill parent, undermines the ability of these children to learn even before they are orphaned. There is also evidence that children with parents at an advanced stage of HIV infection are stigmatised at school, affecting their effective learning.

HIV and AIDS is robbing the new generation of knowledge and skills that are passed on from one generation to another. Children are losing parents at tender ages, where they cannot be expected to have had any meaningful knowledge and skills passed on to them from their parents. Other children are growing among fellow children, in the absence of elders to pass intergenerational knowledge and skills to them.

HIV and AIDS is undermining decent standards of living

To enjoy a decent standard of living as a human development choice constitutes freedom from poverty and the ability to acquire the material necessities of life to support an acceptable lifestyle. A decent level of income is needed to support this choice. Having a job that earns one, and one's household, a decent living is fundamental. This choice is intricately linked to the other choices as it opens a window to access other human development supporting choices such as food, education, health, housing, clean water and sanitation. Improvements in per capita income seen in chapters

2 and 5 indicate that the economic environment is becoming more supportive to a decent standard of living for Zambians. However, household level evidence points to the fact that HIV and AIDS is undermining efforts to have the benefits of economic improvements become broad-based. The epidemic is feeding poverty as it devastates people's livelihoods. The epidemic has infused new dynamics into the vulnerability context of Zambian households and communities. It is devastating all the assets (human, financial, natural, economic and social) that households use in pursuit of livelihood outcomes. At the same time, the capacity of institutions to support households to upgrade their standards of living is being devalued in various ways, chief of which is the loss of labour due to death and absenteeism.

HIV and AIDS is undermining the choice to participate in the life of the community

Freedom to feel appreciated by the society to which one belongs is a fundamental choice constituting one's well-being. It is supported by many aspects. First is the freedom of association and to belong to any grouping promoting legitimate interests of the society. Second is its twin freedom of expression as long as this does not take away from the rights of others or society at large. Third is the choice to be useful to the community by contributing to its collective advancement. Fourth is to be accorded dignity and respect in the community. Fifth is the right to feel protected against arbitrary interference in one's course of life by the more powerful in the society.

Regrettably, HIV is endangering these aspects that enable people to participate in the community in a number of ways. The stigma associated with HIV and AIDS is a serious encroachment on people's dignity and self-respect. The psychosocial adverse effects it brings about make it difficult for people to meaningfully participate in and enjoy the life of the community. People living with HIV and AIDS face physical and social isolation from family, friends, and community (Nybade, et al, 2003). In the process they lose some of their rights and access to resources and livelihoods. As they internalise these experiences, they consequently feel guilty, ashamed and inferior. In extreme cases, they isolate themselves and lose hope. The poverty induced by HIV and AIDS also undermines the dignity and self-respect of HIV infected people and their close relations. They tend to forfeit essential ingredients for feeling at ease with oneself and being confident to pursue meaningful relationships with others. Some times HIV-affected households, being preoccupied with survival, tend to have little time left to participate in the various aspects of the life of their community even if they wished.

Putting the household at the centre of the HIV and AIDS response

Many HIV and AIDS initiatives recognise the importance of the household. However, very few have placed the household clearly at the centre although the household is widely recognised as the frontline unit for care giving and psychosocial support.

Zambia was one of the first countries to recognise the weaknesses of established health institutions in providing long term care to people with AIDS-related illnesses. Zambia championed the concept of home-based care, which is now internationally accepted as an important model in meeting some of the challenges of HIV and AIDS, particularly as the pandemic threatens to overwhelm the already weak health care institutions.

In initiatives focused on dealing with orphans and other vulnerable children, the household is recognised as playing a key role and special focus is placed there. In particular, over time there has been a growing view that institutionalised care is perhaps not the best option and that the

household is better placed to play this role. However, most initiatives that recognise the household as the centre of the HIV and AIDS response are often driven by individual organisations and lack a national character. Their efforts are often on a small scale, isolated and disconnected. They are also without a framework that reflects the multidimensional nature of not only the problem of HIV and AIDS but also the household that they wish to support.

The multisectoral approach to respond to HIV and AIDS, of which Zambia is playing a championing role in promoting and refining, recognises the multidimensional nature of HIV and AIDS. The approach has been spearheaded by NAC and a number of major funding organisations and agencies have bought into it. It is an attempt to coordinate different ministries and other agencies providing services to the Zambian population so that efforts to respond to HIV and AIDS are integrated and holistic. Zambia is a frontrunner on the continent in this regard.

There is, however, a growing view that the multisectoral approach so far has focused mostly on sector level institutions and is doing little to deal with micro level institutions, of which the household is part. It is true that strengthening the capacity of sector institutions to respond to HIV and AIDS will help them deal better with households and other organisations at the micro level. This assumption is undermined by the centralised Zambian governance system, where sector level institutions are not accountable to people at the grassroots. There is little effort to engage stakeholders and devise workable approaches with them that would strengthen households' capacity to halt the spread of HIV and AIDS and mitigate its impacts.

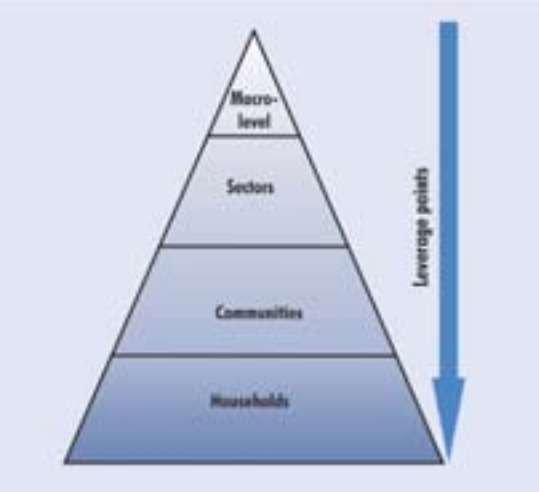
There are a number of merits to focusing on the household. The most obvious is that, as already recognised, the immediate impacts of HIV and AIDS are at the household level. These impacts are remitted through various transmission mechanisms and then by aggregation adversely affect sectors and the macro level. To meaningfully mitigate impacts of HIV and AIDS, the greatest leverage points are at the household level (see Figure 1.2). For responses to HIV and AIDS to have greater effect, they must be rooted in the realities found at household level.

Understanding these household level impacts would force us to think and respond holistically to what is obviously a multidimensional crisis. Although not always easy, looking at the household provides us with insights into the multidimensional nature of the epidemic and the various ways in which it should be dealt with. The needs of a household transcend sectoral boundaries. For initiatives to be effective, they would need to be dimensional. Looking at HIV and AIDS from household perspective would illumine the roles of different players and how the diverse efforts could be coordinated and contribute to defeating a common problem. We do not need to dismantle the institutions already playing their role but to reorient the effort by giving it a framework that pulls the different strengths together. The household is the easiest point around which such a framework can be built.

There is an additional problem that a focus on the household helps us to resolve: It has often been difficult to know the impacts of various initiatives. The call to take a fresh look at the household as the entry point in tackling HIV and AIDS arises from the growing disquiet that progress made so far is not measuring to the effort and amount of resources poured into the response to the epidemic. Perhaps the problem is just too immense and we are actually not doing enough. Most likely we are not being efficient enough in focusing the effort where it matters most. Focusing on households helps us to isolate the impacts of the initiatives better and measure them. Related to this is that sector level

institutions are able to understand better the vicious cycle between HIV and AIDS and the attainment of their sector mandates only by looking at household level impacts of HIV and AIDS. This should help to identify the necessary entry points for various sectors. An example of how HIV and AIDS can adversely affect the achievement of sector goals from the household's perspective is provided in Figure 1.3 on p. 16. Household level responses to HIV and AIDS should focus on turning the vicious cycle to a virtuous cycle.

Figure 1.2: Leverage points by level



Governance system that supports accountability and participation

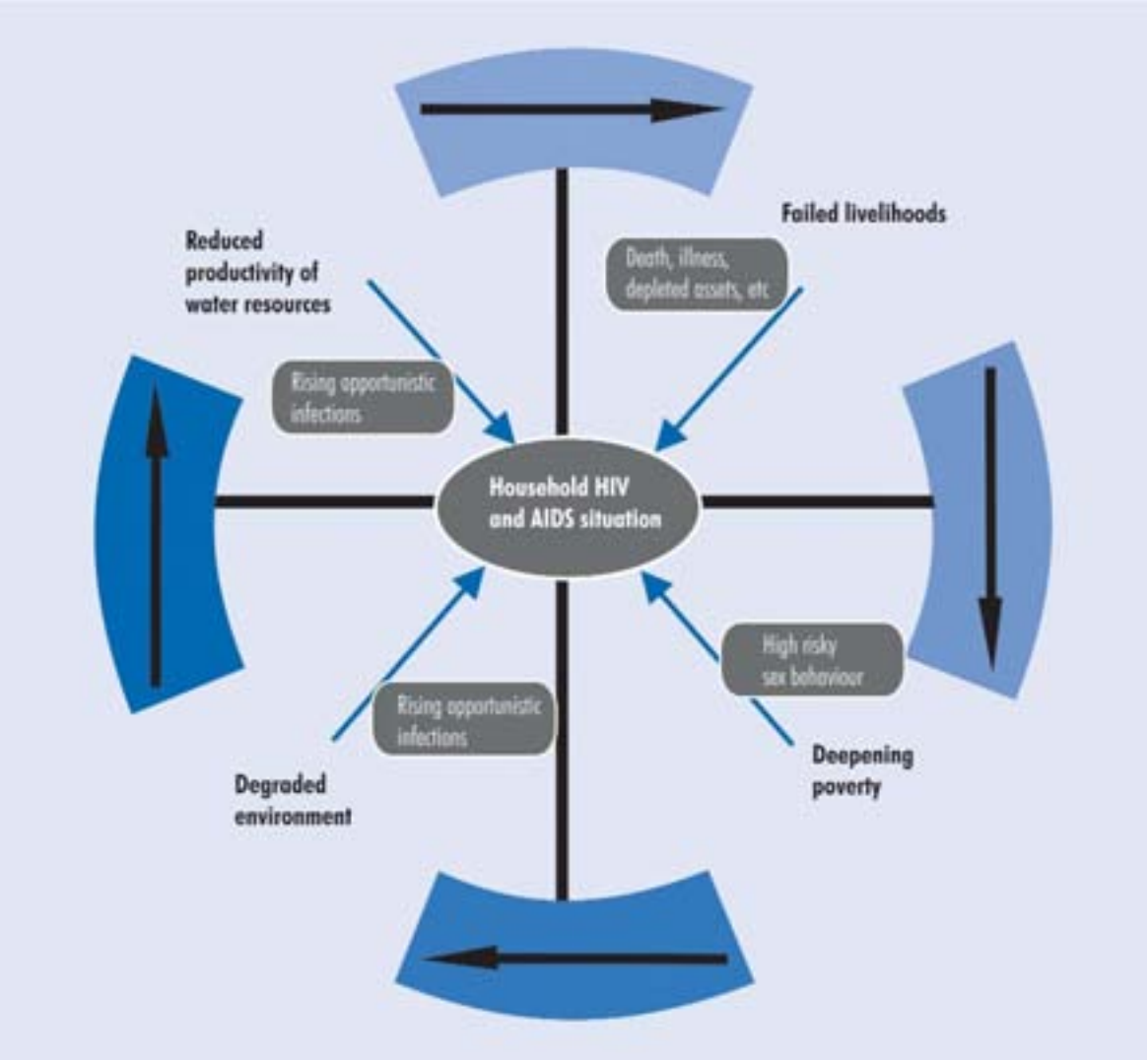
If households are to be placed at the centre of the response to HIV and AIDS, there is a need to reconstitute Zambia's governance system. This is currently highly centralised, which creates significant gaps in the service delivery capacity of structures closest to households. Local authorities which are supposed to provide a framework for development coordination at sub-national levels have over the years been undermined by successive administrations. In turn this has undermined effective participation of local people in shaping the nature of development in their area. District and sub-district officials are largely unaccountable to the people on the ground.

The dual structure of Zambia's governance system at district level does not favour accountability and participation. Each district has a devolved local elected government with powers and functions defined by the Local Government Act of 1991 and as amended in 1996. But there are also sector ministries accountable to central government through their headquarters in Lusaka. A District Development Co-ordinating Committee (DDCC) has been put in place in an attempt to co-ordinate activities of the two structures. At first these were chaired by the district secretary before the appointment of district administrators, later renamed district commissioners. The District Secretary now merely represents the Council (elected body of councilors) on the DDCC which no longer has power to override any decision passed by the Council. The Council has no legal or administrative power over the line ministries.

Most of the development work is carried out by line ministries because they are more resourced than councils. However, the Local Government Act has given local authorities the responsibility to undertake wide-ranging development interventions in the districts. Local authorities, however, face serious resource constraints to fulfill their developmental responsibilities due to: (i) The erosion of the local governments asset base through various actions by the central government over the years; (ii) The declining and erratic disbursements of grants from central government; and, (iii) The poor macroeconomic situation that has undermined the capacity of the Zambian population to pay for services provided by local authorities.

Participation of the people in shaping their affairs is limited by absence of elected or delegated local government bodies at sub-district level. Wards are used for only electing councilors. Combined with the fact that local governments have little resources for meaningful development, local citizens

Figure 1.3: HIV and AIDS and water resources - vicious cycle



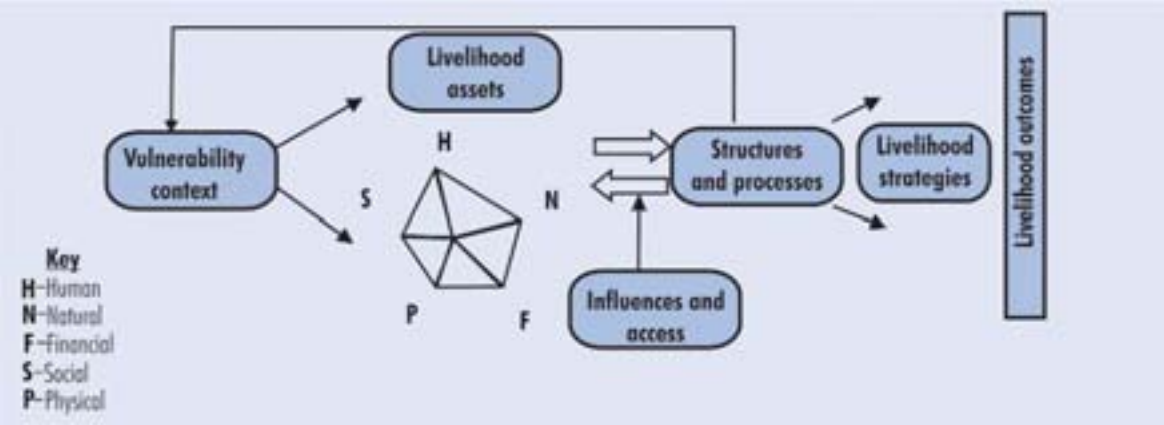
are generally apathetic to the politics and affairs of local authorities. They are at the same time not in a position to hold officials of the line ministries accountable.

Given the above inadequacies in service delivery, participation and accountability, efforts have been made to bridge the gap in two main ways. First, line ministries have been building structures at district and sub-district levels that allow for more accountability of officials and participation of the people. Second, some ministries, such as health, education and to a certain extent agriculture, are having some of their functions devolved to the local authorities.

Various donors have given their support to the decentralisation process. The community and district level structures created by NAC have been adopted to help the identified gaps in responding to HIV and AIDS. Non-governmental organizations have also built their own participatory structures at the district and sub-district levels for the same reasons.

Inadequacies in the current governance system with respect to how it facilitates development at the local level have been broadly acknowledged. To that effect, the Zambian Government in 2002 adopted a National Decentralisation Policy that intends to end the presence of most sector ministries at the district level. They will instead have their functions integrated in local government structures. However, con-

Figure 1.4: Sustainable livelihoods framework



cern has been expressed at the slow pace at which decentralisation is being implemented. Some sectors are stating that there is little political will to push such an aggressive agenda forward. The Draft Constitution of 2006 has included democratic decentralisation as a major aspect of the modified governance system. This came about after many submissions to the Constitution Review Commission that demanded for democratic decentralisation, meaning that there is an overwhelming support by the people themselves for such a governance system. Such a governance system will help attempts to bring households at the centre in the response to HIV and AIDS.

Framework for building household capacity to respond to HIV and AIDS

In searching for a framework that helps to expose the various impacts of HIV and AIDS on the household and identify entry points for helping households deal better with the epidemic, we can rely on the sustainable livelihoods approach (SLA) discussed extensively in the 2000 ZHDR.

The SLA framework opens a window of seeing how the epidemic is devastating the capacity of households to cope with shocks. The sustainable livelihoods framework is provided in Figure 1.4 above and the meaning of its various terms in Box 1.2 on p. 18.

In summary, this framework states that households need to access and utilise assets in order to achieve beneficial livelihood outcomes - increased household food security, higher incomes, well-being and reduced vulnerability to shocks such as natural disasters. In this sense, the SLA amplifies upon the basic needs approach, a development approach that has been used to define the minimum requirements of people to gain a dignified existence. These assets gain their value through the prevailing social, institutional and organisational environment (structures and processes) that influences and shapes the livelihood strategies (ways of combining assets) adopted in pursuit of beneficial livelihood outcomes.

All these aspects exist together in a vulnerability context which is defined by shocks such as natural calamities, long-term trends including economic decline and seasonal effects like annual food availability. The vulnerability context determines the extent to which households can actually obtain beneficial livelihood outcomes.

Using the SLA, we are able to expose the many dimensions that enable households and communities achieve the kind of livelihood outcomes they desire and how HIV is affecting them. From the evidence provided in Chapter 3, all the assets at the disposal of households are being seriously devastated by the epidemic. The asset pentagon in the SLA is the heart for gaining

beneficial livelihood outcomes for households. Regrettably, structures and processes as well have become less supportive to households in accumulating and applying these assets. This is deepening household vulnerability, making them less able to cope with shocks. Therefore, whereas in the past households recovered from crises such as droughts, they are now less capable to do so mainly because the vulnerability context has worsened.

Defining an HIV and AIDS affected household

The effects of HIV and AIDS on livelihoods vary from household to household. Not every HIV and AIDS affected household is vulnerable as some are able to cope with shocks even better than some non-affected households.

A number of household-specific factors can alter the way HIV and AIDS shapes the vulnerability context of a household. In

Box 1.2: Terms related to the sustainable livelihoods approach

Livelihoods: Livelihoods are defined as the activities (jobs, work) that people do to earn a living. The freedom to pursue livelihoods that people choose is dependent on people's capabilities which in turn are dependent on the assets at their disposal. There are five livelihood categories:

1. Human: the skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives
2. Social: the social resources upon which people draw in pursuit of their livelihood objectives, including networks, membership of formal and informal groups, and relationships of trust and reciprocity
3. Natural: the natural resource stocks from which resource flows and services useful for livelihoods are derived (e.g. land, trees, water sources)
4. Physical: comprises the basic infrastructure and producer goods needed to support livelihoods (e.g. buildings, roads/ transport, water supply, communications)
5. Financial: the financial resources that people use to achieve their livelihood objectives, including stocks (savings, convertible assets, including livestock) and flows of income

Livelihood strategies: Livelihood strategies are ways in which households combine activities, assets and entitlements in order to obtain desired livelihood outcomes such as increased household food security, higher income, reduced vulnerability to shocks and sustainable use of natural resources.

Sustainability of livelihoods: Sustainability of livelihoods is a key concept in the sustainable livelihoods approach and refers to specific characteristics and values in relation to the way people carry out activities as well as utilise capital and entitlements. There are five characteristics and values constituting sustainability:

1. Resiliency - the ability to cope with and recover from shocks and stresses.
2. Economic efficiency - the use of minimal inputs to generate a given amount of outputs.
3. Ecological integrity - ensuring that livelihood activities do not irreversibly degrade natural resources within a given ecosystem.
4. Social equity - which suggests that promotion of livelihood opportunities for one group should not foreclose options for other groups, either now or in the future.
5. Adaptive governance systems in relation to power dynamics, dispute resolution, devolutionary decision making on entitlement and resource management.

Sustainable livelihoods, therefore, occur where activities and assets of a population are combined in a way that maximises resilience, economic efficiency, ecological integrity, and social equity. This definition takes on specific and operational meaning mainly at the household or community level.

ZHDR 1999/2000

theory there is an infinite array of permutations of these factors. It is nevertheless possible to isolate four factors: (i) the specific nature of the HIV and AIDS situation the household is having to respond to; (ii) the livelihood systems pursued by the household; (iii) the location of the household; and, (iv) the quantity and quality of assets at the disposal of the household.

Household HIV and AIDS situations differ and so do the effects. Some examples include a household hosting a chronically ill patient, a household experiencing an AIDS-related death and a household hosting orphans. During chronic illness, the main effects are loss of labour due to illness or increased caring and increased requirements for spending on health care. Death leads to an immediate loss of labour, but can lead to other changes in household composition that can positively or negatively affect labour availability. There can be changes in livelihood patterns as remaining members try to optimise their available assets. This can lead to successful coping, or - following a period of unsustainable response (e.g. by selling productive assets) - this could ultimately result in the dissolution of the household. The economic effect of taking in an orphan depends on the composition of the household and on the age, gender and skills of the incoming orphan, which determines the net contribution of the orphan to the household.

HIV and AIDS impacts will differ between households in different livelihood systems. It matters whether household members, especially the head, are in formal or informal employment or not. This may predispose the extent of the social security benefits entitlements. As workplace HIV and AIDS policies become more widespread, households in formal employment are likely to have the impacts of the epidemic mitigated in a way that is not possible for households in the informal sector.

Households in agriculture-based livelihoods can quickly descend in a downward spiral as labour shortages are intensified. Within agriculture, however, households that depend mainly on livestock rearing may cope better with the effects of the pandemic as these activities tend to be less labour-intensive.

Fishing households, given the migratory nature of their livelihood system and the level of interaction with fish traders from urban areas, have been known to be highly susceptible to the epidemic. Indeed location by predisposing the chances of one being infected and the nature of livelihood opportunities available is an important variable producing the differential impacts of HIV and AIDS on households. HIV and AIDS will affect households in urban and rural areas differently.

The other important factor determining how HIV and AIDS will affect households is the quantity and quality of assets at the disposal of a household. These can enable survivors in a household sustain or fail to sustain themselves.

Also, depending on who has an AIDS-related illness or who has died due to the infection, households may adjust successfully if other household members can take up their roles. This is difficult when it is one or both of the parents who succumb to AIDS-related illness. Zambian households have a very high dependency ratio. The other household members are likely to be at a stage in life whereby stepping out to ameliorate the effects is likely to come at a high price. It could principally affect adversely the education prospects of the young household members.

Adjustment costs may be minimised by drawing down on savings. This is not, however, an option for many Zambian households in a country where 68 percent of the population lives below the poverty line. In any case, this is only likely to be a short term solution and not sustainable in the medium to long term.

In devising programmes that address household level impacts, analysis should not

be over-generalised. Detailed differentiation of households in varying situations is needed to design appropriate responses. Perhaps this reinforces the need to work with adaptive governance structures existing within the communities themselves who are able to recognise the varying situations between households. One solution will not fit all.

HIV and AIDS and the attainment of MDGs

A comparison between the Millennium Development Goals Report (MDGR) for 2003 and 2005 shows that Zambia is making some progress in attaining the MDGs. The MDGR 2003 reported that Zambia was unlikely to meet the targets on halving the proportion of people living in extreme poverty and hunger. However, the MDGR 2005 reported that Zambia was likely to attain these targets. The prospects for the attainment of universal primary education, gender equality and women empowerment, and halting and reversing the spread of HIV and AIDS also improved from "potentially" to "likely". Out of the ten targets reviewed in the MDGR, Zambia in 2005 had five targets that were likely to be attained compared to none in 2003. Nevertheless, there was also deterioration in the prospects for attaining two targets, i.e. reduction in maternal mortality and environmental sustainability. The prospects for the other three targets remained unchanged.

The prospects for attaining the MDGs are perceived to have improved. The MDGR 2005 attributes this to improvement in the state of national support. There is reason for more optimism as developments in 2005 that strengthened the potential for better national support, not taken into account at the time of preparing the MDGR 2005 start to bear fruit. This is mainly the attainment of the HIPC completion point in April 2005, the substantial debt forgiveness the country has received as a result and rising economic prospects riding at the back of soaring copper prices and production. It is clear from a goal by goal assessment that responding to HIV and AIDS is an essential strategy for attaining MDGs by 2015 because the epidemic undermines each of the goals in a multiplicity of ways.

Millennium Development Goal 1: Eradicate extreme poverty and hunger

The goal is to eradicate extreme poverty and hunger. In terms of quantitative targets, this entails reducing by half, between 1990 and 2015, the proportion of people living in extreme poverty and the proportion of people who suffer from hunger. In 2004, 53 percent of Zambians lived in extreme poverty, a small drop from the 58 percent recorded in 1998. The target, which is to reduce this proportion to 29.1 percent by 2015, is still a long way off. This is because poverty deteriorated in the 1990s over the 1990 base year figure. Also 23 percent of children less than five years old were underweight in 2004, dropping from 28 percent in 1998. According to the global standard, the target is to reduce this figure to 13 percent by 2015. This is potentially achievable if Zambia has successive good harvests for even five years.

HIV and AIDS is related to poverty and hunger in a vicious cycle and tend to reinforce each other. This happens through many channels. As Chapter 3 demonstrates, poverty is one of the factors driving the spread of HIV because it sets the scene for greater susceptibility to infections. The feminisation of poverty, driven by discrimination against women in access to and control of resources for their pursuit of viable livelihoods, means that women are more susceptible in this regard. Once infection occurs, affected people's livelihoods are ravaged, thus festering poverty. The widening vulnerability context due to HIV and AIDS means that people are finding it far more difficult to cope with and recover from shocks such as droughts, floods and sudden increases in food prices. What this means is

that any gain in the fight against poverty will be transitory if there are no substantial gains in responding to HIV and AIDS.

An important aspect that should be considered is the impact of good nutrition in the efficacy of the roll out of anti-retroviral therapy for people living with HIV and AIDS (PLWHA). Even without HIV and AIDS, people's immune functions are undermined by malnutrition. However, malnutrition is a much more complex state for people living with HIV because of the added stress placed on an already weakened immune system and may complicate treatment. Deficiencies in micronutrients are common in PLWHA, a situation that accelerates the death of immune cells and increases the replication of HIV. Good nutrition improves body weight and body cell mass and CD4 cell counts. This reduces the incidence of opportunistic infections and increases survival in adults. Therefore, PLWHA need to maintain an optimal nutritional status at the time when their immune system is being undermined by the virus. Without good nutrition, weight loss and other complications are bound to follow.

Moreover, good nutrition is important for the efficacy of medication as it reduces side effects, improves tolerance to treatment and reduces some obstacles to adherence (M. Fenton and S.A. Meyer, 1998). It delays the progression of HIV and thus reduces the cost of medical care. Good nutrition thus allows the PLWHA to remain productive as they pursue their livelihoods. For all these reasons, nutritional therapy for people living with HIV is believed by many as a critical supportive co-treatment for HIV and AIDS. Some people have suggested that "clinical standards of care that include nutritional services will soon be the foundation for HIV disease management" (S.A. Meyer, 2000).

Millennium Development Goal 2: Achieve universal primary education

Goal 2 is to ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary

Table 1.1: Trends in MDG indicators

Millennium Development Goal indicator	Baseline value 1990	2003 MDGR	2005 MDGR	2015 target
Proportion of people living in extreme poverty (percent)	58.2	58.0	53¤	29.1
Underweight children (percent)	25.0	28.0	20.1¤	12.5
Stunted children (percent)	40.0	47.0	50.0¤	20.0
Wasted children (percent)	5.0	5.0	6.0¤	2.5
Net enrolments in primary education (percent)	80.0	76.0	78.0	100
Proportion of pupils starting grade 1 reaching grade 5 (percent)	64.0	73.0	82.0	100
Literacy rate of 15-24 year olds (percent)	79.0	75.0	70.0	100
Ratio of literate females to males	0.98	0.98	0.95	*
Share of women in wage formal employment (percent)	39.0	35.0	35.0	*
Infant mortality rate	107.0	95.0	*	36.0
Maternal mortality rate	649.0	729.0	*	162
ESS trends of HIV infection among ANC (percent)	20.0	19.1	*	20.0
ZDHS HIV prevalence	*	16.0	*	*
New cases of malaria per 1,000	121	377	*	121
Malaria fatality rate per 1,000	11	48	*	11

Zambia Millennium Development Goals Reports 2003 and 2005

Notes: ¤ Updated with the 2004 LCMS data * No data presented in the MDG Reports.

schooling. According to the localised targets for this MDG, Zambia should increase the net enrolment ratio to 100 percent for both sexes between 1990 and 2015 from 80 percent, the proportion of pupils starting grade 1 who reach grade 7. There has been an upward trend in the indicators in the new millennium unlike the downward trend seen in the 1990s. This is laying a good ground for improvements in literacy levels in the 15 - 24 years old age group, which deteriorated from 75 percent in 1990 to 70 percent in 2000.

By negatively affecting both the supply (less school teachers as a result of deaths and absenteeism and the burgeoning school classes) and the demand (dropping enrolment and survival rates of HIV-affected pupils), HIV and AIDS is obviously complicating efforts to attain universal primary education by 2015 in Zambia.

By undermining educational attainment, the spread of the epidemic is also being fuelled further. The term "education vaccine" was coined in 2000 by some researchers (Vandemoortele and Delamonica, 2005) because it was seen as the most potent tool available for halting the spread of HIV. Sadly, this was seen to go against available evidence because the epidemic was as prevalent among the educated as those less educated.

In some cases as in Zambia, some categories that represent the educated of the nation such as teachers and medical workers appeared to be the worst affected. However, this applied mostly to the initial stage of the epidemic (see Figure 1.5). This is because the main channel through which HIV and AIDS spreads initially exposes the elite who are likely to be more mobile and living in urban areas. After some time, as they receive better information about the virus, they are more likely to take steps to lessen risky behaviour than communities less exposed to information.

HIV and AIDS is linked to education in a vicious cycle to the attainment of universal primary education. Stopping the spread of the virus will help to achieve MDG 2. In turn, the achievement of MDG 2 is a potent tool for stopping the spread of HIV. The mainstreaming of HIV and AIDS concerns in the education sector should thus take this into consideration.

Millennium Development Goal 3: Promote gender equality and empower women

MDG 3 is to promote gender equality and empower women, with particular emphasis on the elimination of gender disparity in education. The specific targets are bringing the ratio of boys to girls in primary and secondary school to 1 by 2015. The other target is to raise the ratio of literate females (aged 15-24 years) to males to 1.

Elimination of society entrenched discrimination against women should lead to raising the proportion of seats held by women in Parliament to 30 percent in 2015 from 6 percent in 1990.

HIV and AIDS undermines educational attainment in general, but this attribute is even much more aggressive against the educational attainment of girls, making progress in MDG 3 even more difficult.

The prevalence rate and the resulting impact of the epidemic are not gender neutral. As evidence provided in Chapter 3 indicates, girls aged 15-19 years are more likely to be infected by HIV than boys. This is attributable to the early onset of sexual activity among girls than boys, unfortunately often with older men (the so called sugar daddy syndrome) who may already be infected. It is also due to the prevalence of sexual abuse of girls by older men who are often well known to the girls. This is shrouded in silence and denial by those around. Girls are also more disadvantaged from the resulting consequences of the epidemic than boys. They are more likely to drop out of school to help relieve the labour shortages in the home due to the death or chronic illness of an adult. Even where they continue, they are likely to

attend school more intermittently than boys on account of this.

Millennium Development Goal 4: Reduce child mortality

The quantitative target under MDG 4 is to reduce by two thirds, between 1990 and 2015, the under-five mortality rate. The localised targets are to reduce under-five mortality ratio from 191 per 1,000 live births in 1992 to 63 in 2015 and infant mortality ratio from 107 per 1,000 live births to 36 respectively. Zambia has one of the highest child mortality rates in the world. To make progress in human development, the country should make serious effort to bring child mortality down.

HIV and AIDS is complicating the attainment of the MDG on child mortality. Firstly, babies born to HIV-positive mothers risk getting infected through mother-to-child transmission. It is estimated that about 40 percent of children born to HIV-infected mothers get infected with the virus. Most of these children are likely to die before the age of five. HIV and AIDS threatens the survival of children also in other ways. HIV and AIDS, when linked to poverty and hunger in a vicious cycle as seen above, undermines the capacity of households to provide adequate nutrition to children. This makes children susceptible to many diseases and increases the likelihood of dying before the age of five.

The health seeking behaviour of parents, infected with HIV or experiencing AIDS-related illnesses, for their children is low. This is again attributable to rising poverty in the household linked to HIV and AIDS, loss of strength on the part of parents to access health facilities especially where they have to cover long distances and have to wait for long hours before obtaining the service, competing demands in a situation where labour constraints have been accentuated by chronic illness and adverse psychosocial effects whereby such parents lose hope about themselves and their children and are not motivated enough to live. The diminishing capacity of the health system to provide quality health service due to HIV and AIDS is also threatening the survival of children.

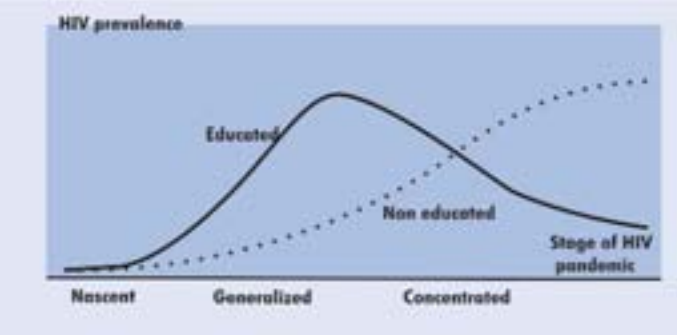
Millennium Development Goal 5: Improve maternal health

This is one of the two MDGs unlikely to be attained by the 2015. The target is to reduce maternal mortality ratio by three-quarters, between 1990 and 2015. This translates into reducing to 162 maternal deaths per every 100,000 live births in 2015 from 649 in 1996. However, the maternal mortality ratio rose to 729 deaths per every 100,000 live births in 2002. There are many factors contributing to these declining prospects. These include inadequate access to health facilities that forces many women, especially in rural areas, to deliver at home. HIV and AIDS should be ranked as one of the leading factors. Where a woman is infected, her health during pregnancy is compromised raising the chances that she might die during childbirth.

Millennium Development Goal 6: Combat HIV and AIDS, malaria and other diseases

Besides halting and beginning to reverse the spread of HIV, the MDG 6 also requires that countries should have halted by 2015, and begun to reverse the incidence of

Figure 1.5: HIV diffusion by level of education and stage of the pandemic



GRZ, 2003: Population Projections Report

malaria and other major diseases. The 2005 MDGR lists the target on HIV and AIDS as one of those likely to be achieved given the effort that has gone into containing the epidemic. It also indicates that there is potential to achieve the target on malaria and other major diseases. Besides malaria, the incidence of tuberculosis is taken as an indicator for other diseases.

The link between HIV and AIDS and other diseases is obvious because HIV and AIDS suppresses the body's immune system, thereby rendering it susceptible to opportunistic infections. Therefore, the presence of the high HIV prevalence is escalating the incidence of so many other diseases. A key example is the rising incidence of tuberculosis. More than 60 percent of tuberculosis cases in Zambia are related to HIV infection.

Despite the improved prospects for responding to HIV and AIDS, the ancillary consequences are likely to continue to increase and cause more pressure on Zambia's social fabric. Challenges to effective response include a lack of a vaccine and cure, early sexual activity, low condom use, low uptake of voluntary counseling and testing and the harsh stigma associated with being HIV positive, which prevents people to talk openly about their status.

Millennium Development Goal 7: Ensure environmental sustainability

Goal 7 has three targets. Firstly, this MDG requires that Zambia and other countries integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources. The second target is to halve the proportion of people that do not have sustainable access to safe drinking water, by 2015. The third target is to attain significant improvement in lives of at least 100 million slum dwellers.

Zambia has a rich biodiversity but this is under threat from poor management. The HIV and AIDS epidemic is also inducing a number of negative impacts on environment. These negative impacts include:

1. The loss to death, as a result of AIDS, is adversely affecting the intergenerational transfer of capacity, skills and knowledge in natural resources management, accumulated by communities over many years. The loss of traditional knowledge of natural resource management is leading to more inappropriate ways of using these resources.

2. There is increased reliance on natural resource use due to chronic illness and death in families affected by HIV and AIDS. The loss of income and labour means that households have little alternative sources of livelihood other than the exploitation of natural resources such as bush meat, medicinal plants and charcoal burning. The rise in charcoal burning as a safety net, for example, has been contributing to deforestation and threatening headwaters, causing loss of topsoil along the river banks and silting water channels.

3. Property grabbing and gender inequality in traditional land tenure systems is leading to a rise in demand for new land as families are forced to resettle after the death of the husband putting further pressure on the environment.

4. Institutions important for the management of natural resources at both local (traditional) and higher levels are losing their capacity at a fast rate due to death and illnesses induced by HIV and AIDS. The epidemic is resulting in increased absenteeism, lower productivity, a rise in personnel costs related to recruitment and training and loss of skills and accumulated experience.

Effective natural resource management is indispensable to Zambia's strive to mitigat-

ing HIV and AIDS. This can be seen from at least four ways:

1. Natural resources are key to the building of sustainable livelihoods and to the reduction of widespread poverty in the country. This is important to the reduction of risky behaviour such as sex work, which increases susceptibility to infection.

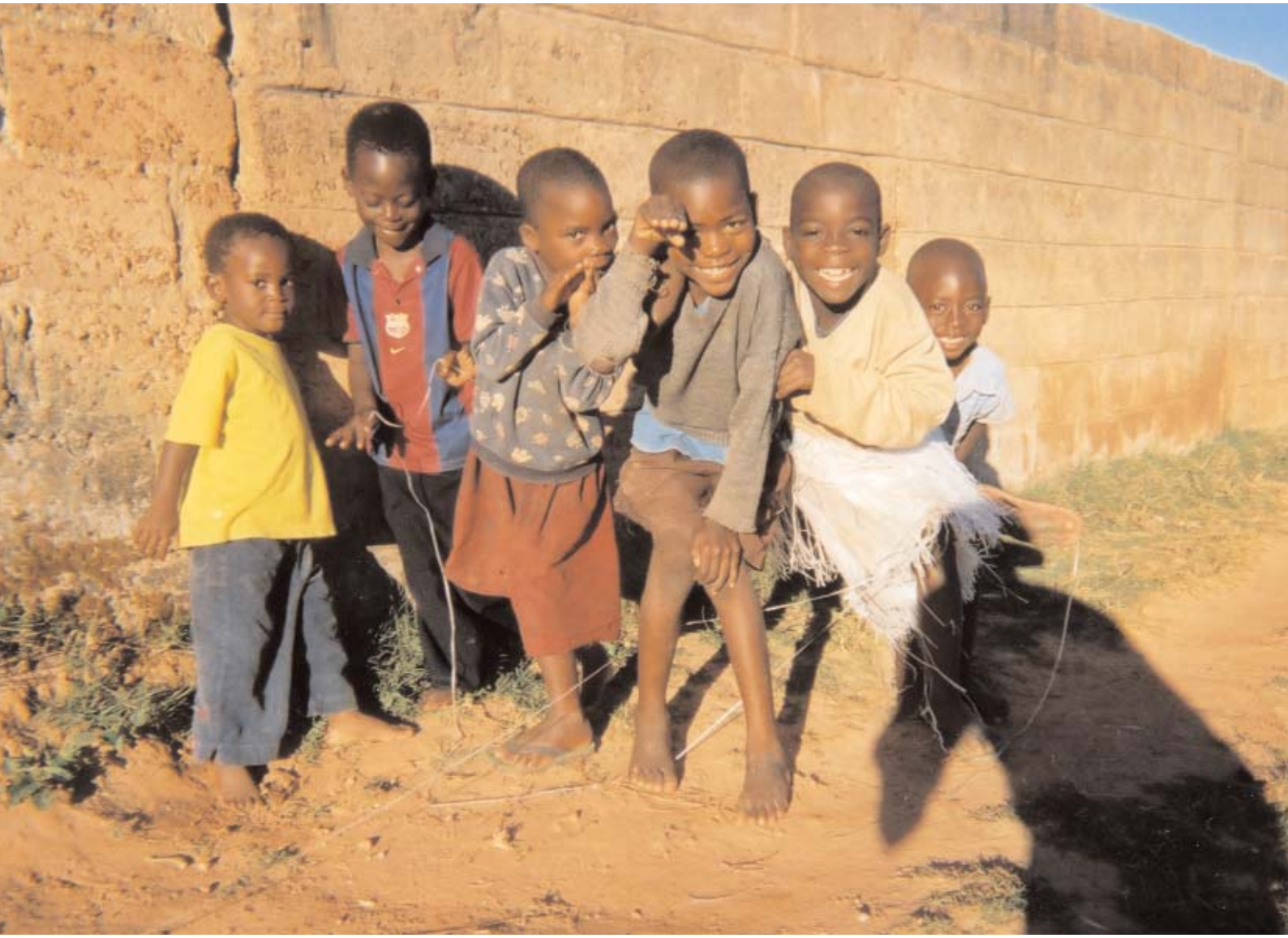
2. With reduced poverty and increased food security, the on going rolling out of anti-retroviral therapy (ART) is likely to have better results. Patients on ART are likely to have better health outcomes as measured by the body mass index (BMI) and the CD4 cells, seen from reduced opportunistic infections.

3. A clean environment is key to hygiene which in turn reduces opportunistic infections and helps people with AIDS-related illnesses to lead a more healthy life and lessen the social and economic consequences of the epidemic.

4. Women are intricately linked to natural resource use. They face a higher risk to HIV infection and bare a greater burden of the consequences of the epidemic. Good natural resources management offers a good opportunity to empower women with the capacity to respond to HIV and AIDS and cope with its adverse impacts in the household.

Conclusions

A critical analysis shows that HIV and AIDS is a major human crisis Zambia has to cope with. It has a devastating effect on all aspects of human well-being whether viewed from the fundamental choices for a kind of life that people would value or livelihoods of their own choice. HIV and AIDS is complicating Zambia's efforts to meet the Millennium Development Goals. At the household level, this translates into reduced capacity to overcome and cope with the epidemic and indeed make progress in welfare. It is thus impossible to envisage meaningful development if HIV and AIDS is not tackled aggressively. In tackling HIV and AIDS, the household must be brought under very sharp focus as the central unit for responding to the epidemic.



"Kids in Kalikiliki"

We met these children when we were walking around taking photos one early morning. They were happy when we took their photo. We were happy too.

Photographers: Julius and Richard Zulu

2 ~ Zambia's policy environment

HIV and AIDS is a major development challenge facing Zambia and other developing countries. In the past, the epidemic was viewed mostly from a medical perspective, but it is now agreed that its impacts permeate the entire development fabric of societies. Wealth and health are intricately and unquestionably related (Hamoudi and Sachs, 1999, Bloom et al, 2000). Improved health promotes economic growth while poor health and poverty are mutually reinforcing.

The ability of Zambia to respond to HIV and AIDS is both supported and constrained by global and national trends. For example, developments in the global economy; the extent to which the benefits of globalisation are shared; and the extent to which both developed and developing countries deliver on international commitments. All of the above are important factors in the response to HIV and AIDS.

The greater burden however, is on a country itself to ensure macroeconomic stability, economic growth and the enhancing of participation of the poor in development. This is to lay the proper foundation for responding to the epidemic. Countries need to adopt sensible policy frameworks which should facilitate both broad development as well as the response to the spread of HIV and AIDS. Further, the policy frameworks should aim at enhancing the capacity of households to contribute effectively to the response to HIV and AIDS.

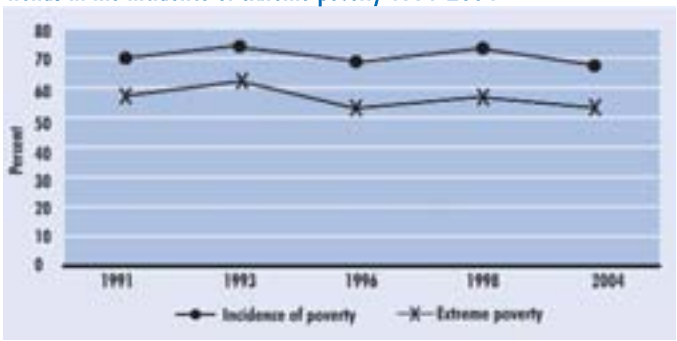
This Chapter sets the development and policy context for addressing HIV and AIDS issues. The question it explores is whether international and domestic environments are supportive to the country's response to HIV and AIDS. It provides an overview of the developmental challenges Zambia faces, and how the HIV and AIDS epidemic complicates the scenario further. Feeding the development challenges faced by Zambia in recent years, is the global economy whose recent developments are also discussed in the Chapter. The implications these circumstances have had for Zambia's development are also analysed. The Chapter further discusses the international and the national HIV and AIDS response. Finally suggestions have been made on how the policy environment could further be improved, to make the response to HIV and AIDS more effective.

Trends in Zambia's post-independence development

If it is admitted that poor health and poverty are mutually reinforcing, then there is little doubt that Zambia faces a huge challenge in halting and reversing the spread of HIV. More than thirty years of marginal economic growth has led to a human development crisis in almost every area of well-being. As shown in Table 1.1 on p. 21, nearly all the indicators that measure progress in attaining the Millennium Development Goals reflected very minimal improvements when compared to the base year of 1990.

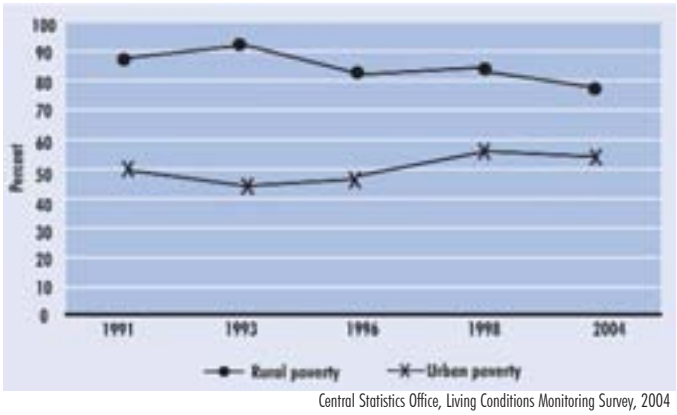
Further, according to UNDP Human Development Reports, the fall in Zambia's human development index (HDI) has been the sharpest among the developing countries (see Figure 5.1 on p. 71). Up to 1985, Zambia's HDI continued to rise despite the fact that the economy had been in decline since 1975 when copper prices collapsed. The adverse impact was cushioned by food subsidies and free social services. The HDI started to fall in 1990 such that by 1995, Zambia's HDI value was lower than it was

Figure 2.1: Poverty and trends in the incidence of extreme poverty 1991-2004



Central Statistics Office, Living Conditions Monitoring Survey, 2004

Figure 2.2: Rural and urban poverty 1991-2004



Central Statistics Office, Living Conditions Monitoring Survey, 2004

Table 2.1: Trends in extreme poverty, 1991-2004

	1991	1993	1996	1998	2004
All Zambia	58	61	53	58	53
Rural/urban					
Rural	81	84	68	71	53
Urban	32	24	27	36	34
Province					
Central	56	71	59	63	63
Copperbelt	44	28	33	47	38
Eastern	76	81	70	66	57
Luapula	73	79	64	69	64
Lusaka	19	24	22	35	29
Northern	76	72	69	66	60
North Western	65	76	65	64	61
Southern	69	76	59	59	54
Western	76	84	74	78	73

GRZ, 2005: Living Conditions Monitoring Survey, Table 12.8

in 1975. Zambia is the only country to experience such a reversal in the world.

Poverty is perhaps the most immediate factor that undermines household capacity to respond to HIV and AIDS (see Chapter 4). In Zambia poverty is extremely high, even though it was slightly lower in 2004 compared to its 1998 level (see Figure 2.1). Poverty levels have been consistently higher in rural areas than in urban areas. However, as depicted in Figure 2.2, the gap in poverty levels narrowed from 37 percent in 1993 to 27 percent in 2004. Urban poverty increased much more sharply than rural poverty. The two most urbanised provinces, Lusaka and Copperbelt, have the lowest poverty levels in Zambia. Extreme poverty peaked in 1993 in rural areas at 84 percent (see Table 2.1). By 2004, it had reduced to 53 percent. Extreme poverty levels had gone up in urban areas from 24 percent in 1993 to 34 percent in 2004. Obviously the economic downturn starting in the mid-1970s and the structural adjustment efforts of the 1980s and 1990s took a much sharper toll on the urban population. Unemployment escalated and real wages tumbled. Urban households also faced higher levels of the HIV and AIDS epidemic. Even though this was the case, rural communities continued to bear a greater poverty burden.

When the first HIV case was diagnosed in Zambia in 1984, the country's capacity to respond effectively was already seriously eroded by the declining economy. Zambia's economy has performed poorly since the mid-1970s leading to the human crisis and high poverty levels as reflected in Table 2.1. The sharp drop in the prices of copper in 1975 was the catalyst for the economic meltdown that followed. The main underlying cause seems to have been the poor economic management. In the first ten years of independence, Zambia had poor fiscal management. This resulted in chronic budget deficits due to high public spending on a wide range of subsidies. For political expedience, the Government failed to remove

Table 2.2: Selected macroeconomic indicators

Year	2000	2001	2002	2003	2004	2005	Avg.
Real GDP at 1994 prices (K billion)	2,499	2,621	2,708	2,847	2,989	3,141	2,800
Real GDP growth rate (percent)	3.6	4.9	3.3	5.1	5.4	5.1	4.6
Inflation rate (percent)	30.1	18.7	26.7	17.2	17.5	16.8	20.0
Interest rates (percent)	37.5	45.8	45.3	40.4	30.7	28.0	39.9

Central Statistical Office and Bank of Zambia

the subsidies when the mineral boom ended in 1975. The adoption of inward-looking policies made the country uncompetitive and inefficient

The Zambian Government for some time remained optimistic regarding the recovery of copper prices. However, by the beginning of the 1980s, it had become plain that the fall in copper prices was not a short-term development. In any case, the fall in copper prices had already devastated the Zambian economy that was overly dependent on copper exports.

Steps to reform the economy were initiated in 1981. Efforts were made to gain macroeconomic stability, through a more prudent management of public expenditure and infusion of economic efficiency. Market-based incentives were initiated with the sponsorship of the World Bank and the International Monetary Fund (IMF).

However, throughout the 1980s, there was little domestic consensus on reforms. They were seen as externally imposed. In May 1987, for example, the IMF programme was suspended after food riots linked to opposition to removal of food subsidies. The programme was restarted in 1989 when it became obvious that the economy sank further into crisis without external help.

With the change of government in 1991 and the abolition of the one-party governance system, a more radical reform agenda was adopted by the new government. The aim was to regain macroeconomic stability. Tight fiscal and monetary policy, liberalisation of financial markets, elimination of chronic budget deficits, a complete liberalisation of the exchange rate regime and the elimination of import controls were among the key measures that were embarked on. Sector reforms were also adopted through a sector-wide approach in agriculture, health, education, environment and roads.

The new government also embarked on a serious agenda to privatise state enterprises. The immediate impact of these reforms, however, appeared to sink the economy further into crisis. High rise in inflation and interest rates as well as the rapid depreciation of the Kwacha characterised the economy of the nation. The economy stagnated with GDP growth averaging about 1 percent in the 1990s. The incidence of poverty worsened between 1991 and 1998 (see Figure 2.1).

Better prospects have emerged in recent years. These have yielded good results and brightened the environment for tackling the spread of HIV and AIDS. In particular, Zambia has posited uninterrupted economic growth for seven years since 1999, the longest uninterrupted growth period since Independence (see Table 2.2). Between 2000 and 2005, the economy grew at an average annual rate of 4.6 percent.

The growth in 2000 and 2002 was slow at 3.6 and 3.3, respectively. This was attributed to enduring negative factors of the 1990s. The factors included the mishandling of the privatisation process, especially of the mines. Other factors related to low copper prices and production, poor macroeconomic management and public service corruption. In 2002, the slow growth rate was largely due to the effects of the drought the country suffered in that year.

Since 2003, the economy has grown at over 5 percent every year. Agriculture has also posted positive growth rates. The rates were above 5 percent in both 2003 and 2004, though only 2.8 percent in 2005 due to a partial drought. Projections for 2006 indicate that the economy might grow above 7 percent, the highest rate of growth reached since the 1960s.

There has been a drop in inflation between 2000 and 2005. From an annual average of 30.1 percent in 2000, inflation declined to 16.8 percent in 2005. This declined further to 8.2 percent in August 2006. Interest rates, however, have not fallen at the same pace averaging 28 percent in 2005 and hovering around 20 percent in August 2006. Prospects for sustaining the single digit inflation rate were high in 2006 given the good harvest, expected to continue having downward pressure on food prices. Food prices have the biggest weight in the country's consumer price index. The exchange rate has been volatile, which after some time of stability between 2002 and 2004 appreciated rapidly in 2005 by about 30 percent. GDP growth has only averaged 4.6 percent between 2000 and 2005, less than the 7 percent needed to make a significant impact on poverty reduction. Nevertheless, the macroeconomic development discussed above have brought renewed hope that full macroeconomic stability is now possible and Zambia may soon return to a sustainable growth path.

In terms of poverty reduction, these macroeconomic developments will not favour the poor. The recent Kwacha appreciation in particular, by threatening the growth of the non-traditional exports which tend to be labour intensive, will lead to a rise in unemployment. Small farmers who grow export crops such as cotton, paprika and tobacco have been adversely affected. The overall impact of the macroeconomic environment on agriculture which absorbs most of the poor people is anticipated to be negative.

Zambia and the global economy

The global policy and economic environment pose challenges to Zambia's effort in responding to the spread of HIV. The unfavourable trade environment continues to disadvantage developing countries. Heavy agriculture subsidies in developed countries undermine the ability of the developing countries to compete favourably in agriculture trade. Subsidies are hurting development prospects of the developing countries and their effort to reduce poverty and respond to calamities such as HIV and AIDS. Trade in services and manufacturing is also heavily tilted towards developed countries. The lack of a more favourable outcome at the previously held World Trade Organisation ministerial conference was a big blow to Zambia's aspirations.

An improved trade regime will not, however, automatically raise market access for Zambia. This is due to a number of reasons. First and foremost, Zambia is a landlocked country. The nearest functioning sea port is over 2,200 kilometers away from the capital, which entails that exports are uncompetitive on the basis of transportation costs alone. This is worsened by the poor road infrastructure especially in rural areas, an inefficient railway system and inadequate airfreight services.

The stringent sanitary and related requirements for agriculture exports in developed countries and the inadequate capacity in Zambia to meet such requirements is another serious obstacle to market access. Other constraints, such as lack of finances and the high cost of production, means that Zambia is unable to produce the right amount of quantities and standards to consistently assure importers abroad.

A number of opportunities have, nevertheless, emerged in the last five years. These may have a positive impact on Zambia's development effort. The first is the relatively better global economic performance in the last few years, which in turn started to have positive effects on Zambia's domestic

economy. After a sluggish start at the beginning of the new millennium, the global economy weathered the 2001 September 11 attack on the World Trade Centre in New York. It began to pick up in 2002 with GDP continuing to grow through 2005. From 2003 to 2005, the rate of growth rose at an average of 4.5 percent compared to 2.1 percent in 2000 to 2002.

Noteworthy is the widespread nature of this growth, with Western Europe alone recording sluggish performance. The 4.4 percent average growth of the sub-Saharan Africa economy was a breath of fresh air given past chronic underperformance. After about a decade of sluggish economic performance, the Japanese economy saw an upturn, growing at an average rate of 3.8 percent and was an important factor in the upswing of the global economy.

The Chinese and Indian economies, which grew at an average rate of 9 percent and 7 percent between 2003 and 2005 respectively, were also an important factor in the upswing of the global economy. The significant rise in world trade was the main driver of the good performance recorded in the world economy. World trade grew at an average rate of 8.5 percent, about twice the rate of growth of the world economy.

Growth has also been anchored by global economic stability seen in subdued rates of inflation, with the average hovering around 2 percent.

World economic growth, particularly in China and India, has spurred high demand for oil and non-oil minerals with prices rising to record high. Oil prices rose by 28.9 percent in 2004 and by August 2005 oil prices had risen by 60 percent, reaching US$70 per barrel. Although not as dramatic, non-oil mineral prices also rose by 16.8 percent in 2004 and further by 27 percent in 2005.

In 2005, there were price increases of industrial metals, such as iron ore (up by 72 percent), zinc (up by 38 percent), and copper (up by 21 percent). Of major interest to Zambia has been the rise in copper prices (see Figure 2.3). After falling from an average of 91.5 US cents per pound between 1995 and 1999, the price of copper declined further to 66.7 US cents in 2002 before starting to rise again. Copper prices reached 207.4 US cents per pound in December 2005.

The impact on Zambia of these global economic trends is direct. With rising copper prices, there has been a rise in new investments in the copper mines. This has boosted copper revenues from US$423.7 million in 2001 to US$1,616 million in 2005. This is complimented by the rise in non-traditional exports from US$249 million in 2001 to US$545 million in 2005. The ratio of total merchandise exports to GDP has increased from 23.6 percent in 2000 to 33.2 percent in 2004. The share of non-traditional exports in total exports, after rising to 38.5 percent, declined again to 25.2 percent in 2005 due to the resurgence in mineral exports.

Despite the good performance, the global economy remains fragile. High on the list of factors threatening growth is the high oil prices. There are concerns that oil prices will rise further given the volatile political environment in the Gulf region and the constant disruptions to oil supply in Nigeria. The fiscal deficits in the United States (US) economy, which have led to low US saving rates and current account deficits on one hand and the high current surpluses in Asian economies, particularly in China, threaten global financial markets.

Figure 2.3: London Metal Exchange copper prices 1991-2005 (US cent/lb)

GRZ, Macroeconomic Indicators, various issues

In April 2005 Zambia attained the Heavily Indebted Poor Country completion point. This saw her external debt stock reducing from US$7.2 billion to US$3.5 billion. Further, debt write-off under the G8 Gleneagles Initiative and the Multilateral Debt Relief Initiative have reduced the debt stock to less than US$600 million. Reduced debt servicing requirements, significant rise in copper prices, a jump in copper production, rise in foreign direct investment and the increase in non-traditional exports led to the appreciation of the Zambian Kwacha by about 35 percent in 2005.

It is clear that Zambia must take advantage of the positive outcomes in the global economy to lay a solid foundation, which will help the country withstand the external shocks when they come. Improvements in market access are required if Zambia is to turn the positive global developments into beneficial outcomes for her domestic eco-

Box 2.1: National policies and action against HIV and AIDS

Since the first case of HIV and AIDS was reported in 1984, the Government of the Republic of Zambia has put in place a national HIV and AIDS policy and various prevention programmes. The programme started in 1986 with the establishment of the National HIV and AIDS Prevention and Control programme, which formulated short and medium term plans that set priority operational areas. In 1999, the National HIV and AIDS Council (NAC) was created. This semi-autonomous, multisectoral body developed a National HIV/AIDS/STI/TB Strategic Intervention Plan (2002-2005) and also facilitated the formulation of the HIV and AIDS policy. The plan incorporates a mechanism for multisectoral co-ordination and collaboration that provide many interventions on prevention, treatment and care.

The epidemic has been mainstreamed by all sectors including public, private, non-governmental, religious and traditional groups as well as civil society. Thus, there are also specific sector policies on HIV and AIDS. These various HIV and AIDS activities have also been supported by appropriate budget-lines. Such have included programmes on HIV and AIDS at workplaces. In addition, the country has developed care and management guidelines on HIV and AIDS and operationalisation of the system. The political leadership has continued to respond to the epidemic in various ways, notably through regular references to the social, economic, and health impact.

Other efforts in addressing the epidemic have included: the Zambian Parliament passing the NAC Act in 2002; establishing a Cabinet committee on HIV and AIDS; mainstreaming HIV and AIDS in the Poverty Reduction Strategy Paper, the Transitional National Development Plan and the Fifth National Development Plan; establishing HIV and AIDS sub-committees (task forces) under the Provincial and District Development Co-ordinating Committees; providing antiretroviral therapy in public hospitals. Most recently the Government has moved to decentralise the free distribution of ARVs to district levels. The Government has also endorsed the global World Health Organisation *3 by 5* strategy. Other positive measures in addressing HIV and AIDS are the establishment and expansion of voluntary counseling and testing and prevention of mother-to child transmission of HIV programmes to district levels, support to home-based care programmes, incorporation of nutritional programmes as part of care and support of people living with HIV and AIDS and the provision of condoms and drugs for sexually transmitted infections. There are also currently drives to support local remedies.

Other strategies worth noting are establishment of bottom-up planning process in all the districts; building community competencies by all stakeholders and fostering co-ordination efforts at national and community levels; youth involvement in HIV and AIDS programmes; establishing resource mobilisation strategies; initiatives by the transit communities (such as truckers, farmers and sex workers; malaria supportive programmes for people living with HIV and AIDS; and existence of monitoring and evaluation plan to track the response. Such plans also come in the form of annual review programmes.

UNDP/MFNP, 2005: Millennium Development Goals, Zambia Status Report, 2005

nomic development. Zambia should work with other least developed countries to pressure developed nations to open their markets especially in agriculture trade.

It is also imperative that Zambia makes serious investments to build capacity in trade. Prudent macroeconomic management of low inflation and a stable currency should be given high priority. For example, the sudden appreciation of the Kwacha in 2005 arising from some of the positive global economic trends hurt exporters of non-traditional exports, who in the first place mitigated the slump in the country's copper export revenues of the 1980s and 1990s. This has not been helped by swings in 2006 of the Kwacha, which is making it difficult for both importers and exporters to plan for their business.

The global policy environment

The relatively good performance of the global economy analysed above has been complimented by efforts to create an international alliance to help developing countries halt the spread of major diseases. A number of international conferences have adopted commitments to this end.

Millennium Declaration and the MDGs

The first of these commitments is the Millennium Declaration adopted in September 2000 by 147 heads of State and Government and 44 representatives at the UN Millennium Summit in New York. The Declaration outlined the intent of the international community to take aggressive steps to tackle the problems of poverty and major diseases, afflicting a big part of the world's population. A central challenge of turning globalisation into a positive force for all the people of the world was recognised. Thus, based on six fundamental values that need to characterize the 21st Century - freedom, equality, solidarity, tolerance, respect for nature and, shared responsibility - the world leaders committed themselves to freeing the more than one billion people of the world facing abject poverty

The Millennium Declaration adopted a set of inter-connected and mutually reinforcing development goals. Follow-up action by the United Nations Development Group in collaboration with the OECD, World Bank and the International Monetary Fund connected these to other internationally agreed goals and set targets and indicators for each goal. This framework of eight development goals was then designated "Millennium Development Goals" (MDGs).

The sixth MDG, the theme of this report, focuses on tackling HIV and AIDS, malaria and other major diseases. The seventh target commits national governments, including Zambia to "have halted by 2015, and begun to reverse, the spread of HIV and AIDS".

International conferences

The second part of the 1980s was characterised with dramatic years altering international diplomacy. The period saw the end of the Union of Soviet Socialist Republics, the fall of the Berlin Wall leading to the unification of East and West Germany and the end of the cold war. The resulting peace dividend was now expected to free the attention of world leaders and increase their commitment to uplifting the welfare of people in poor nations without the disruptions of cold war politics.

With this opportunity presented, a number of international conferences that helped to galvanise the spirit of co-operation on development have been convened since the 1990s. The 1990 World Summit for Children pioneered the holding of international conferences at the heads of State and Government level.

Taken together, the conferences have helped to shape world thinking on key issues of development - environment, gender, social development, human rights, food, housing, and HIV and AIDS - and put them at the top of the global agenda.

Although there is no universal prescription for successful development, the conferences reflect the growing convergence of views that democracy, development and respect for human rights, including the right to development, are interdependent and mutually reinforcing. By the mid-1990s, these views had been sufficiently espoused and a general consensus had emerged.

A number of international meetings have been held in the current decade since the Millennium Declaration to entrench MDGs even further. In June 2001 the UN General Assembly Special Session adopted a Declaration of Commitment to take action against HIV and AIDS. The Declaration of Commitment is considered a roadmap for achieving the Millennium Development Goal of halting and reversing the HIV and AIDS pandemic by 2015. It sets out specific commitments participating Governments will work to fulfil. This includes prevention campaigns, reducing stigma, building infrastructure, providing necessary resources, and ensuring treatment, care and respect for people living with HIV and AIDS.

Efforts to make the global economic environment fairer to least developed countries (LDCs) have also continued. At the Third UN Conference on LDCs, held in Brussels in May 2001, 193 participating governments committed themselves to end the marginalisation of the poorest countries of the world and improving the quality of lives of the more than 600 million people who live in the LDCs, by beneficially integrating them into the global economy.

This was followed by the International Conference on Financing for Development in March 2002 in Monterrey, Mexico, which explored ways of mobilising domestic and international resources to finance the development challenges mapped by previous conferences. The Monterrey Consensus tackled six themes important to the increase of resource flows in developing countries: i) Domestic financial resources; ii) foreign direct investment and other private flows; (iii) international trade; (iv) international financial and technical co-operation; (v) debt relief; and (vi) systemic issues that focused on reforming the international architecture.

The Paris Declaration on Aid Effectiveness

In March 2005, the Organisation for Economic Cooperation and Development (OECD) countries adopted the Paris Declaration meant to improve aid effectiveness in developing countries. The Declaration adopted 12 indicators and targets to be achieved by 2010 by OECD countries in five areas of aid - ownership, alignment, harmonisation, management and mutual accountability.

In Zambia, donors had started to make progress on these issues, particularly on harmonisation, already before the adoption of the Declaration. Seven like-minded donors - the United Kingdom, Netherlands, Ireland, Sweden, Denmark, Finland and Norway - signed a memorandum of understanding (MoU), with the Government of the Republic of Zambia on aid harmonisation in March 2004. Several other donors, including Germany, the UN system and the World Bank, have since then appended their signatures to the MoU which focuses on issues such as the need to adopt similar financial disbursement modalities and reporting and monitoring arrangements. This development is important for aid management in general and HIV and AIDS resources in particular.

Specifically, the MoU requires that: (i) Reporting and monitoring systems should be country owned and led; (ii) Donors should rely on a single reporting system within a given supported sector for similar activities; (iii) Donors should work towards reaching consensus with the Government on common formats, content and frequency for periodic reporting; (iv) Scaling down the "mission" approach to reporting and monitoring; (v) Building Government

capacity for reporting and monitoring; and, (vi) Donors to rely on Zambia's financial reporting system.

Debt relief

Some of the outcomes of the policy developments discussed above have benefited Zambia immensely. In particular, debt relief and commitment of the leaders of industrialised nations pronounced at the G8 Summit have answered to the concerns voiced at the UN conferences. This development is important for Zambia as it means that resources previously spent on debt servicing could now be deployed to the response to HIV and AIDS and other urgent developmental needs. The UN conferences particularly helped to galvanise world opinion in favour of total debt cancellation and increased aid, as seen from the pressure mounted by Band Aid that signalled the concern of ordinary people in developed countries.

Debt relief at the time when copper prices are soaring is expected to give some boost to the Zambian economy. However, the levels of poverty, at 68 percent in 2004, are so high that the Fifth National Development Plan suggests that the country's economy must grow consistently for the next 25 years, at more than 7 percent for poverty to significantly drop. This will also depend on the nature of growth. If it is driven by mining alone it will not be broad based enough. Majority of the Zambians will be bypassed by this growth. Therefore, the global developments recounted above must be augmented by pro-poor policies if they are to benefit the majority of Zambian households.

The challenge of development in the context of HIV and AIDS

The challenge of development in Zambia has always been daunting and now HIV and AIDS is immensely complicating the situation. The epidemic affects every fabric of human existence and economic development. Various studies provide evidence on the high economic costs of HIV and AIDS.

Regrettably, the techniques for estimating the economic cost of the epidemic have not yet been refined because evidence for the nature of the impact at different levels is not yet fully established. However, there have been attempts to map the mechanisms through which the the economic and social impacts of HIV and AIDS are transmitted from households to sectors and macro level in general.

Transmission mechanisms

HIV infection in an individual is the epicentre, the starting point of a chain of impacts. There are key relationships before infection that predispose certain categories of the population to susceptibility. Two examples illustrate the point.

First, poverty - by driving some people into risky behaviour such as sex work - is a key factor in the spread of HIV. Secondly, more women than men are infected with HIV. This is due to unequal social and economic power in society (see Chapter 3). Therefore, addressing poverty and existing gender disparities are important responses in arresting the spread of HIV even though not the only ones.

After infection, HIV and AIDS induces another chain of key relationships that defines the individual's or household's vulnerability and resilience. Most immediate impacts of the disease are at household and community levels. Families face immediate loss in income earnings due to increasing health care costs because of the sickness. AIDS-related death, if the family member was a breadwinner or contributed to income generation, leads to further and permanent loss in income.

The AIDS epidemic is deepening the vulnerability context of Zambia's societies. Households often have to divert resources (time, finances and productive assets due to distress selling) in order to care for the

chronically sick foregoing productivity in the process. Therefore, societies that once coped well with droughts and other natural shocks are now easily thrown into destitution because resilience against shocks has been seriously undermined by the epidemic. Social safety nets, such as the extended family system, have been regarded as Africa's first line of defense and resilience against shocks. These safety nets have now been overstretched and seriously weakened by the pandemic.

The impacts of HIV and AIDS at household level are not gender neutral as it is women that often have to bear a bigger burden such as caring for the sick and the rising number of orphans (see Chapter 3).

Impacts on the health sector

Zambia's health systems, the very frontline in the action against the HIV and AIDS pandemic are clearly overburdened by the epidemic with the quality of health care being compromised in the process (University of Zambia, 2005a). For example, the health system can no longer afford to isolate tuberculosis (TB) patients because the number of cases has increased drastically due to HIV and AIDS, outstripping available facilities. This has necessitated the need for innovative approaches in the treatment of TB, placing emphasis on household supervision to enhance adherence to treatment. AIDS-related diseases are clearly diverting resources from other diseases. As much as 65 percent of hospital space in some cases is allocated to HIV and AIDS related cases.

Impacts on the education sector

There have been immense direct and indirect costs on education. Studies seem to indicate that this is probably the most hit sector (University of Zambia, 2005b). Teachers are dying at an unprecedented rate. In 1998, 1,300 teachers died mostly due to HIV and AIDS, two thirds of all newly trained teachers. This is complicating progress in lowering class sizes as the number of teachers is declining.

Children are being taken out of school to look after sick parents or help with income generation. There have been enormous psychosocial effects even for the children that remain in school but are having to cope with the impacts of HIV and AIDS at home while sometimes facing stigma in the school (Kelly, 2000). The quantity and quality of services, skills and personnel are being lost at a very critical point.

Impacts on the agriculture sector

The sector impacts of HIV and AIDS on agriculture are more directly connected to the household for most people in the rural areas. The Poverty Reduction Strategy Paper 2002-2004 declared agriculture as the engine of growth and key to Zambia's development as well as the reduction of wide spread poverty. It absorbs 67 percent of the country's labour force and is the main source of income for the majority of the Zambian people. Primary agriculture production contributed on average 16 percent to GDP between 1994 and 2005. Value added from agro-processing industries will add another 8 percent to GDP to raise the average to 24 percent.

Agro-processing industries which directly depend on agriculture constitute 75 percent of Zambia's manufacturing. Agriculture is therefore very important to urban employment as well. As a result of the phenomenal increase in agricultural exports, the contribution of agriculture to balance of payments is on the increase.

It is well documented that the potential for agriculture to grow and spur economic development in the country is huge. However, agriculture performance is under threat by HIV and AIDS from a number of angles. The loss of labour as a result of death or chronic illness and the labour tied to care is leading to reduction in the area under cultivation (University of Zambia, 2005c). There are also declines in yields.

There is further evidence that livestock accumulation is being affected, due to distress sales. In addition, the loss of extension workers is negatively affecting the provision of information to farmers. Farmers are also faced with a limitation of receiving and passing on information at household level. Often when the head of the household dies, this equates to the loss of the most knowledgeable and experienced farmer in the family, affecting negatively the inter-generational transmission of skills.

A change in cropping patterns to the less labour intensive crops (mainly food rather than cash crops) is also being observed. Households are reverting back to subsistence farming. Overall, the ability to recover from natural shocks such as drought and floods is seriously being eroded. At the national level, this is leading to chronic dependency on food imports, which in turn affect negatively the agriculture sector in the way relief food depresses prices of agriculture commodities.

Impacts on the business sector

The Zambian business sector has not been spared by the epidemic. HIV and AIDS is increasing expenditure for business as well as reducing revenue.

One study found that the main causes of ill health at workplaces were those often associated with the HIV and AIDS pandemic, with TB accounting for 46.8 percent and diarrhea 12.9 percent (Garbus, 2003). Employers incurred an average of US$13 per episode of illness. Other HIV and AIDS related costs included productivity losses, paid sick leave, cost of replacing labour and absenteeism.

It is not known yet how industries have responded but it is assumed that as reliability of labour becomes more uncertain while its costs shoot up, employers will change their techniques of production to become more capital intensive. This will lead to a reduction in the ability of the Zambian economy to create employment.

Conclusions

It is clear from the foregoing that HIV and AIDS is a huge challenge to development. There can be no business as usual. In seeking to respond to this challenge, the following need to be considered:

1) Come up with strategies to prevent new infections.
2) Design development projects appropriately taking into account the constraints the epidemic imposes on effectiveness.
3) Design programmes to address specific problems brought about by HIV and AIDS including the need to take care of children orphaned by AIDS as well as those that are vulnerable.
4) Mitigate the effects of HIV and AIDS on poverty.

3 ~ HIV and AIDS and households

HIV and AIDS is arguably the most devastating disease facing humanity at present. Discovered in 1981, the epidemic now threatens to decimate entire populations, cripple national economies and reverse developmental gains. It has caused unprecedented havoc on mankind, more pronounced at community and household level. This Chapter analyses how HIV and AIDS is affecting Zambian households. HIV and AIDS affected households have been defined as those meeting any of the three criteria:

1) Hosting a person with an AIDS-related disease
2) Hosting a child orphaned by AIDS
3) Having experienced an AIDS-related death.

The Chapter provides evidence of how each of the above three aspects qualifies a household to be known as HIV and AIDS affected. Furthermore, it also highlights the social ramifications of HIV and AIDS and the importance of putting the household at the centre of the response to the epidemic.

The Chapter also emphasises that designing initiatives that are long-term, sustainable and targeting households is a significant strategy. It has the potential of reducing the spread of HIV, reducing its impact on various sectors of the country's economy and achieving the Millennium Develop-ment Goals (MDGs).

Global HIV and AIDS situation

Data on HIV and AIDS highlight the epidemic as a global problem of a great magnitude. A total of 40.3 million people were living with HIV by the end of 2005. Since 1981, more than 25 million people have died of AIDS-related illnesses. In 2005 alone, 3.1 million people died of AIDS, out of which 570,000 were children. Close to five million people were also newly infected with HIV in 2005 (UNAIDS, 2005).

Sub-Saharan Africa has been the hardest hit by the pandemic. It is accounting for huge reversals in human development on the continent. Nothing else has ever reversed developmental gains so profoundly as the HIV and AIDS epidemic in some parts of sub-Saharan Africa. This will have critical long-term impact on human development, economic growth and stability, on society, culture, governance and national capacity, for decades to come (Barnett and Whiteside, 2002).

The epidemic reached countries at different times and the risk factors differ from one country to the other. As a result, HIV seems to spread faster in some countries of the same region than in others. Even within a country several epidemic patterns can be observed - low, intermediate and high prevalence epidemics.

HIV and AIDS situation in Zambia

The high HIV prevalence rates in Zambia should be considered within the regional context. Zambia is among the seven countries most affected by HIV and AIDS in sub-Saharan Africa. The other countries are Botswana, Lesotho, Namibia, South Africa, Swaziland, and Zimbabwe (see Map 3.1 on p. 41). These are all Southern African countries where HIV prevalence ranges between 16 and 35 percent. Currently in Zambia, AIDS-related deaths have overtaken malaria and other diseases especially amongst the 15 to 49 age group.

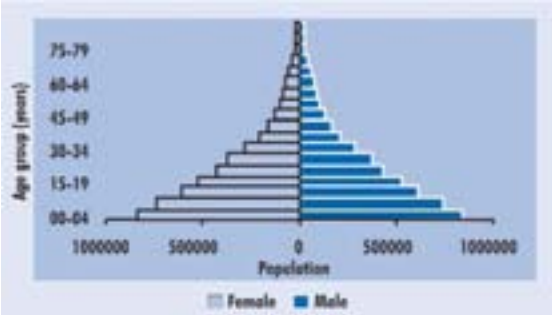
"She just looked at me sad"

She is all alone. Felix mother told me this girls mother and father died of AIDS. I asked how old she was but she didn't answer. I asked if I could take a picture and the older woman said yes. I feel sorry for her.

Photographer: Margaret Chitono

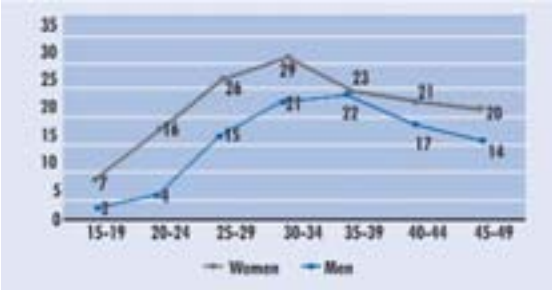
CHAPTER 3

Figure 3.1: Age - sex composition, Zambia 2000



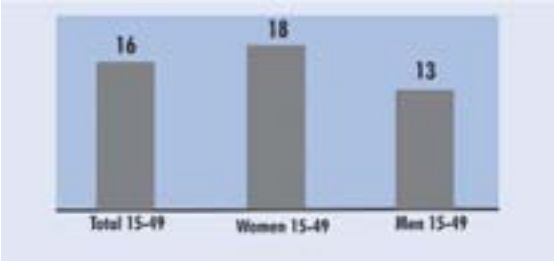
Central Statistical Office, 2003

Figure 3.2: Percentage of HIV positive by age



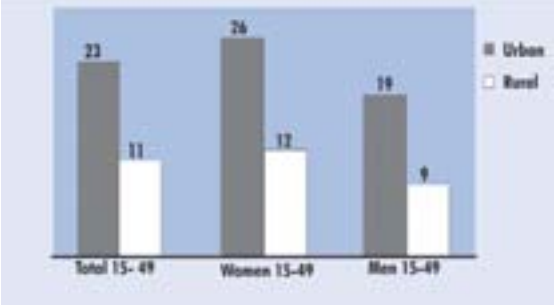
Central Statistical Office, 2005

Figure 3.3: Percentage of HIV positive



Central Statistical Office, 2005

Figure 3.4: Percentage of HIV positive by residence



Central Statistical Office, 2005

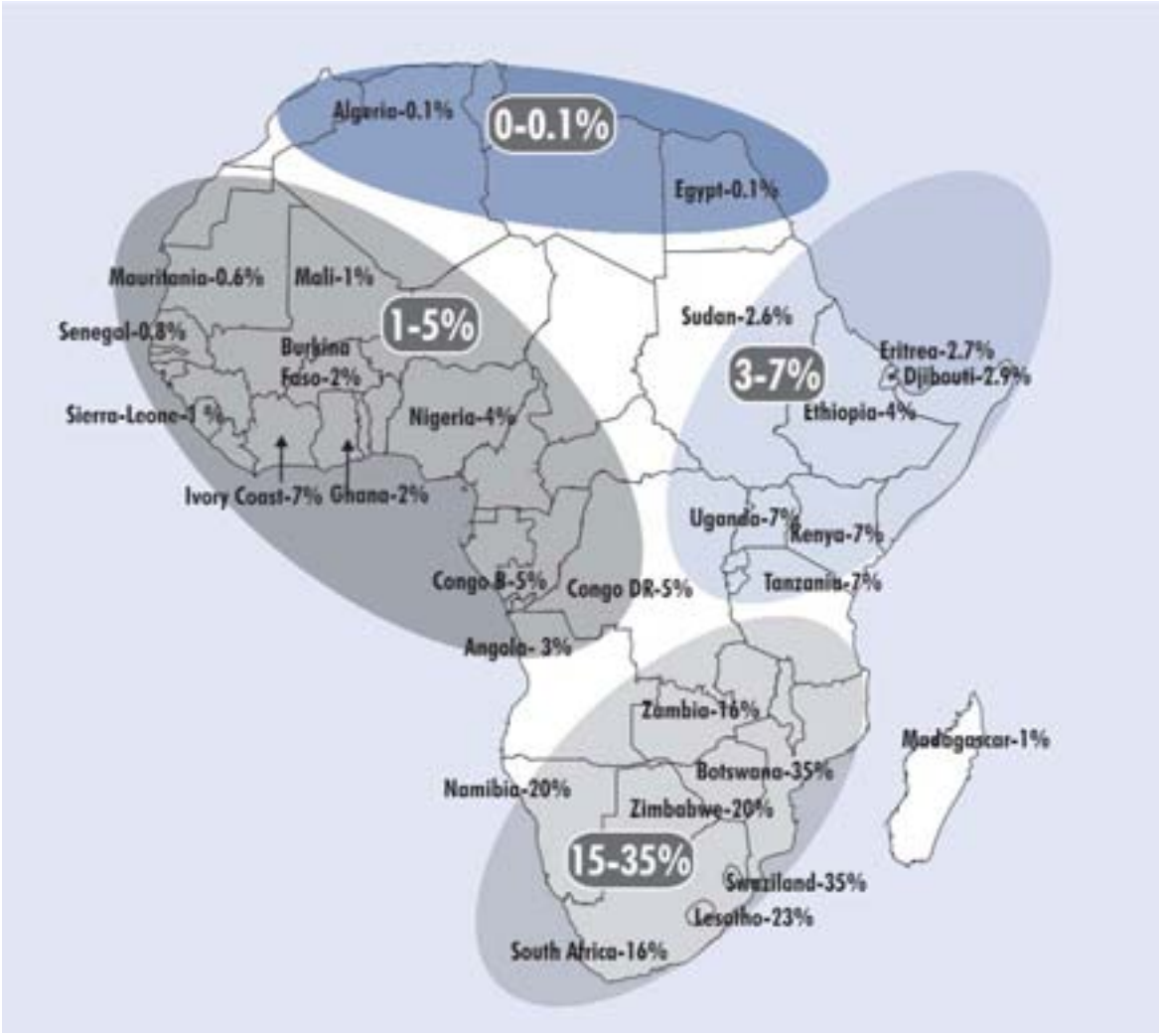
According to the 2001/2002 Zambia Demographic and Health Survey (ZDHS) about 16 percent of the adult population in Zambia is HIV-positive. In addition, approximately 39.5 percent of babies born from HIV-positive mothers are infected with HIV. One of the major problems associated with the HIV and AIDS epidemic is that it mainly attacks the productive age group, peaking at between 30 and 39 years (see Figure 3.2).

There are more women living with HIV (18 percent) than men (13 percent). This is even worse among young women aged 15 to 19 years who are five times more likely to be infected than males in the same age group (Figure 3.2). However, there are more men than women infected with HIV in the 35-45 years age category. The HIV infection gender disparity is as a result of more young women being more susceptible to infection than their male peers.

Regionally, infection rates range from about 21 percent in Lusaka to 15 percent in the urban provinces along the line of rail and between 8 percent in Northern Province to 13 percent in Eastern Province (see Map 3.2 and Figure 3.5 on p. 42). In general, HIV prevalence is more than twice higher in urban areas than in rural areas (23 percent and 11 percent respectively, Figure 3.4). More urban dwellers are likely to die earlier, especially those living in unplanned sites with no access to sanitation and water. They tend to be more susceptible to opportunistic infections. In urban areas, when there is a death of a breadwinner, households adjust to shock by developing quick fix survival strategies. Such include begging on the street, brewing alcohol for sale and/or sex work.

Intra-provincial variations in HIV prevalence are also evident. The range can be seen in the differences between districts in the same province (see Map 3.3 on p. 43). The range can be as wide as between 7.5 and 30.9 percent, like for Southern Province. This is a difference of 23.4 per-

Map 3.1: HIV prevalence in Zambia and other African countries



UNAIDS 2004 estimates used (unless where recent national population-based HIV survey available)

centage range. Others can be as low as between 5.2 and 12.6 percent, like is the case for Northern Province. In general, districts that are predominantly urban have higher prevalence rates than those that are mostly rural. Livingstone had the highest prevalence rate of 30.9 percent in 2004 followed by Ndola at 26.6 percent. Kaputa, Mungwi and Mporokoso in Northern Province had the lowest prevalence rate at 5.2 percent (see Map 3.3 on p. 43).

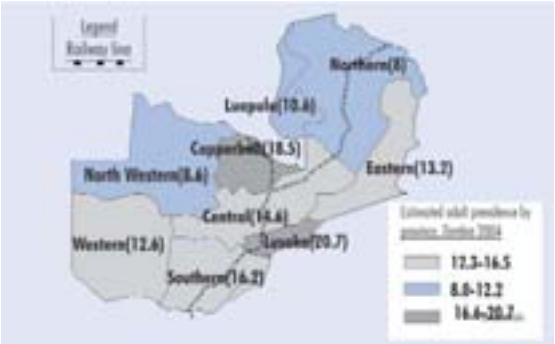
AIDS is also causing an orphanhood crisis. At the end of 2005, Zambia had 1,197,867 orphans Out of these, 845,546 were orphaned by AIDS. (The total population was 10.3 million.)

Future outlook of Zambia's HIV and AIDS situation

The epidemiological projections for Zambia are quite optimistic. It is estimated that 917,718 people were infected with HIV in 2004 of which 411,181 were males and 506,537 females. By 2010, the number is projected to decline to 881,143, with 393,233 males and 483,910 females. The prevalence rate is projected to come down from the estimated 14.4 percent in 2004 to about 11.9 percent in 2010. By 2010 the prevalence would decline to 17.1 percent in Lusaka, 15.5 percent on the Copperbelt, 13.3 percent in Southern, 12.2 percent in Central and 6.7 percent in Northern Province.

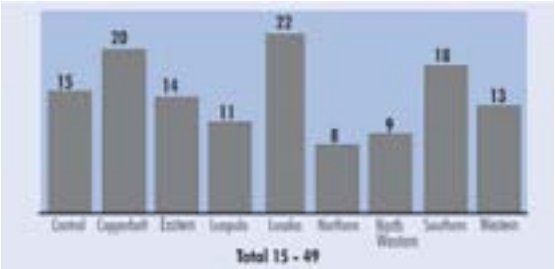
CHAPTER 3

Map 3.2: HIV prevalence by province



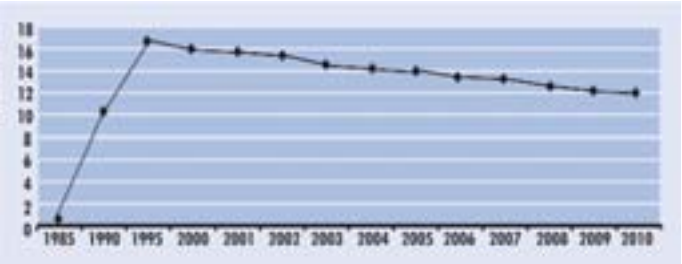
Central Statistical Office, 2005

Figure 3.5: HIV prevalence by province



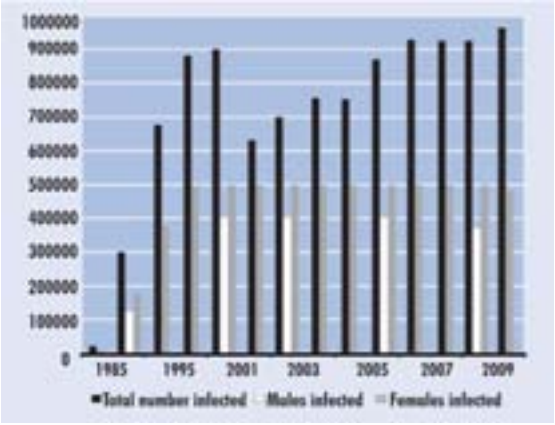
Central Statistical Office, 2005

Figure 3.6: Projected HIV prevalence, 1985-2010



Central Statistical Office, 2005

Figure 3.7: Projected number infected with HIV, 1985-2010



Central Statistical Office, 2005

Despite the projected decline in the prevalence rate, the incidence of new HIV cases and annual deaths from AIDS-related illnesses will continue to rise and only start to fall around 2008 (Figures 3.6 and 3.7). This decline would be facilitated by an increase in condom use, voluntary counseling and testing uptake, more women seeking prevention of mother-to-child trans-mission HIV and the success of the ART programme.

More women than men will continue to be infected with HIV and die. Between 2005 and 2010, more than half of all adults living with HIV will be females. A similar pattern is evident with regards to new HIV infections and related deaths.

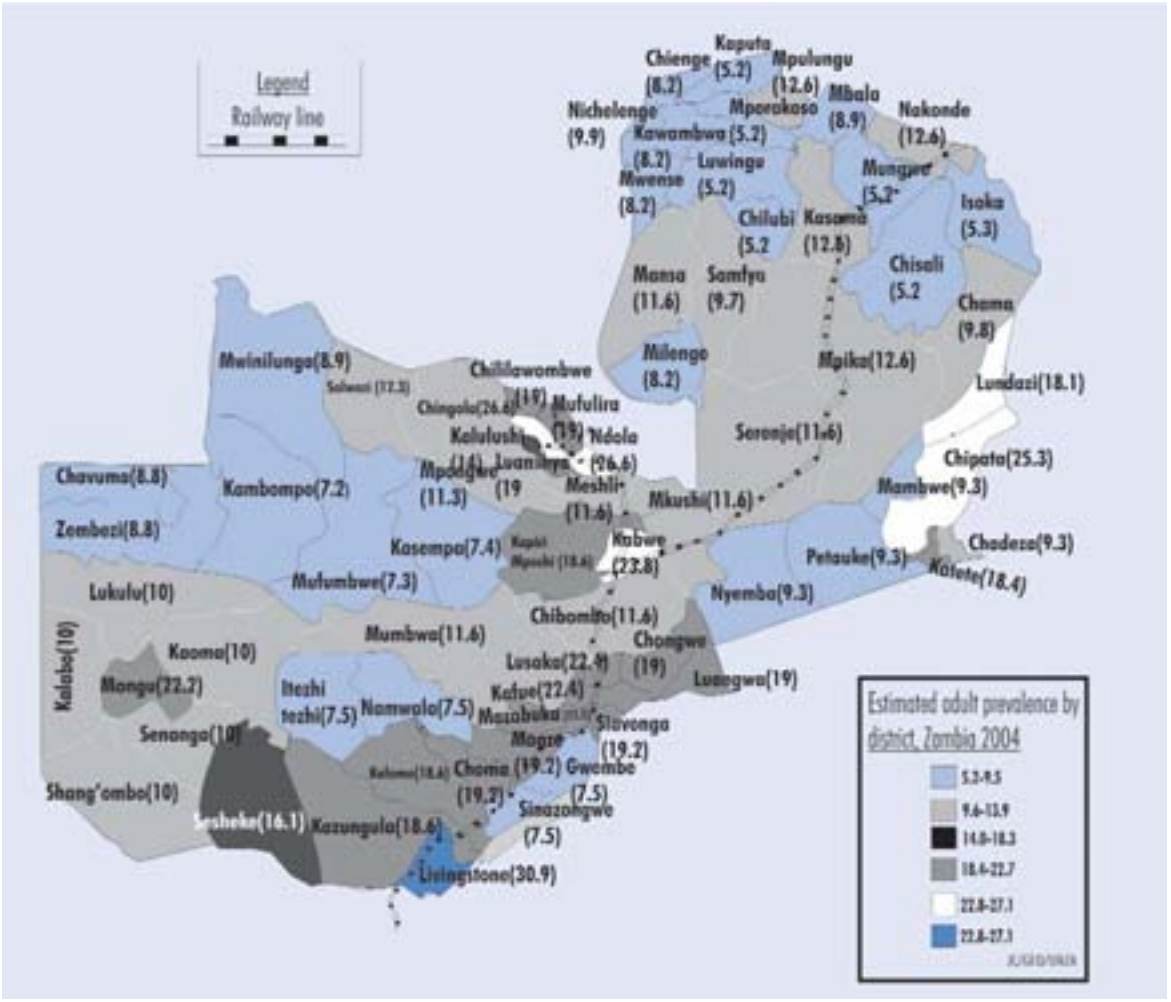
With regards to orphans, the projections are pessimistic. The total number of orphans is expected to increase by about 16 percent to 1,328,000 in 2010. Of these, 42 percent are expected to be maternal orphans, 45 percent paternal orphans and 13 percent dual orphans (see Figure 3.9 on p. 44). Implications of such a large number of orphaned children on society and families have recently been well studied in Zambia and are highlighted below.

Drivers of HIV prevalence in Zambia

There are many drivers of the spread of HIV in Zambia. The primary driver is the sexual activity itself, as HIV infection in Zambia is principally through heterosexual intercourse.

Whether sex occurs for procreation, pleasure, exchange, ritual purposes or experimentation, it will carry with it the risk of infection of HIV and other sexually transmitted infections. This risk can, however, be reduced by changing on the sexual behaviour of the persons involved. What becomes of a critical importance is awareness of basic facts about HIV and AIDS and whether people use this information to take actions to protect themselves and others from HIV infection.

Map 3.3: HIV prevalence by district



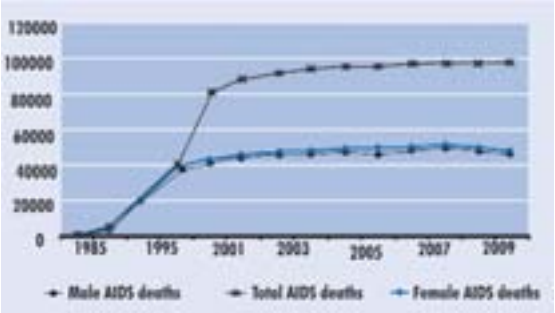
Central Statistical Office, 2005

General awareness of HIV and AIDS is nearly universal among both men and women of reproductive age in Zambia. According to the Zambia Sexual Behaviour Survey (ZSBS) 2005, 97 percent of both men and women and 96 percent of the rural dwellers are aware about HIV and AIDS. This awareness has been on the rise. The proportion of respondents who knew that HIV can be avoided increased to 91 percent in 2005 from 78 percent in 1998 among females and to 94 percent from 84 percent among males. Among females, 89 percent knew that a healthy looking person could be carrying HIV. This was 93 percent for males.

Despite this near universality of HIV and AIDS awareness, only 15.1 percent of respondents in the ZSBS 2005 were reported to have gone for voluntary counseling and testing. The reasons for avoiding VCT were many, including fear of results, which was associated with apprehensions concerning stigma and discrimination. Stigma is still a big issue despite the efforts directed at eradicating the problem. The ZSBS 2005 found that 36 percent of the respondents believed that one's HIV status should be kept a secret. 20 percent reported to know someone who had suffered stigma and discrimination as a result of their status. An even higher proportion (27 percent) believed HIV positive people should be ashamed of themselves.

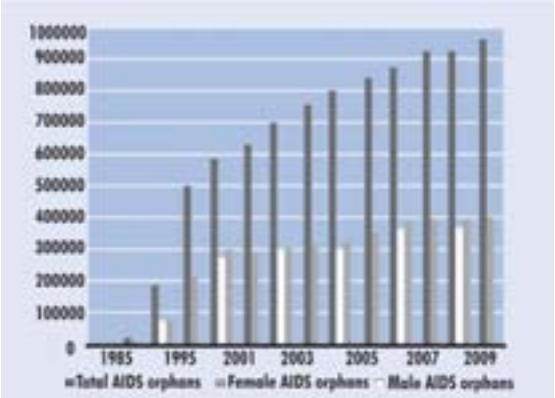
Although there is near universal awareness about HIV and AIDS, sexual behaviour still remains a matter of great concern. According to the ZSBS 2005, condom use

Figure 3.8: Projected total, male and female AIDS deaths



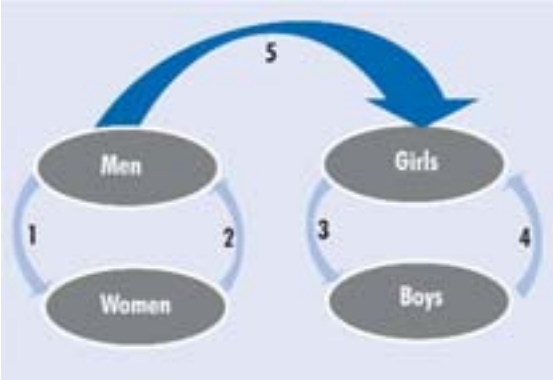
Central Statistical Office, 2005

Figure 3.9: Children orphaned by AIDS by 2010



Central Statistical Office, 2005

Figure 3.10: Direction of sexual relationships



Patrick Chilumba, 2006

among married couples is very low and has declined slightly from 7.9 percent in 2003 to 5.5 percent in 2005. This is worrying in a generalised HIV prevalence context. Of further concern is that a significant proportion of sexually active respondents reported having sex with a non-regular partner (non-marital or non-co-habiting) in the previous 12 months. This was 27.6 percent for males and 15.8 percent for females which averaged at 29 percent for urban respondents compared to 18.5 percent in rural areas.

Although condom use among non-regular sexual partners is higher (48 percent for urban and 25.9 percent for rural), this is still too low in light of the scale of the AIDS epidemic. It is even more worrying that this dropped from 55 percent in 2003 to 50 percent in 2005 among urban males and 26 percent to 16 percent among rural females. Even among men who reported to have had sex with a sex worker, only 53.1 percent used a condom.

There is also the issue of forced sex perpetrated mainly by husbands in marital relationships or other men well known to the victims. In the ZSBS 2005, 15.1 percent of sexually active females reported forced sex. Considering the likelihood of underreporting on this matter, this is a very significant proportion. A double tragedy of this is that condom use is very unlikely.

Some of the reasons for high infection rates among women include socioeconomic problems, social norms, biological reasons, behavioural reasons, the social status of women and their inability to negotiate for safer sex. Young women also more susceptible than their peers because they are more likely to have sex with older men already exposed to HIV (see Figure 3.10). Early marriages and sexual cleansing are the other risk factors. When a household comes under stress due to poverty, at times induced by HIV and AIDS itself as livelihoods fail, there is pressure on girls to engage in prostitution or even occasional sex to buy some form of support.

Box 3.1: Stigma and discrimination

"There is no help that comes from my friends. We do not get on well with my friends, because they always laugh at me. They say we are sick and advise their family members not to interact with my family. When they laugh, they make fun of us, "look the way that person has lost weight. They are so sick of AIDS." But we do not take it to heart, because everyone is certainly affected with the pandemic; just ignore the people, no matter what they say. Only God understands." *42-year-old HIV-positive male, married, Lusaka*

"When I go even to the bus stop, women start singing, "that man is sick". These are situations you experience every other day. Stigma is still a very big problem. I always forgive these people because I think they are ignorant. It never angers me personally but there are those who take it even deeper." *PLWHA, 2006*

"Some people in the community treat households affected by HIV/AIDS with stigma and discrimination. It [HIV and AIDS] also robs one of self esteem. You just find that certain people just start isolating themselves, even from peers, church members and start living a closed life." *Kapiri Mposhi, key informant 2006*

"There isn't actually a home that has not lost a loved one to HIV and AIDS. However, this is still being kept behind closed doors. People do not want to admit that HIV is now in every corner." *Kapiri Mposhi, key informant*

Urbanisation is another strong driver of HIV infection. Zambia is one of the most urbanised countries in Africa, with urban migration characterised by movement from smaller towns to bigger cities. This mobility is of direct relevance to the HIV prevalence. The higher population density in urban areas* means that there is more human interaction and consequently sexual activity. The urban population also has more liberal attitudes towards sex.

The vast majority of people living with HIV in Zambia do not have access to treatment. Of the 153,000 people estimated to be in need of antiretroviral therapy, only an estimated 26,000 to 30,000 (14 to 18 percent) were receiving treatment as of June 2005. This makes Zambia one of the countries defined by the World Health Organisation as having unmet need for antiretroviral treatment.

The low voluntary counseling and testing uptake combined with low condom use suggests that HIV infection rates will remain high in Zambia in spite of the optimistic projections of the prevalence rates (presented on p. 41).

There is enough evidence that suggests that a lot of people, especially the young, deal with socioeconomic problems, society pressures and problems related to poverty by resorting to alcohol. A rapid assessment carried out in Zambia to assess the linkage of alcohol to HIV and AIDS revealed that there is a very strong link between alcohol and the spread of HIV and that young people, especially the orphaned, are the most affected. (STI Situation Analysis, 2004).

Most people living with HIV and AIDS (PLWHA) cited alcohol as being responsible for their HIV infection. Participants in focus group discussions with PLWHA in Lusaka, young people in Solwezi and sex workers at the Tasintha Programme agreed that alcohol impairs judgment and often leads young people to engage in sex with a sex worker and get exposed to HIV. The sex workers said alcohol and substance abuse gives them the courage to have sex with strangers (Luo and Morris 2006).

** For example, Lusaka Province had a population density of 63.5 people per square kilometers compared to 13.1 people per square kilometers for Zambia as a whole.*

HIV and AIDS in the household

HIV and AIDS has put enormous economic stress on households as they care for the sick family members, experience the loss of productive adults or absorb orphans.

A household usually goes through formation when two people start living together. The people could be siblings or spouses, who could start having children. The children later mature into adults. A household goes through dissolution as children grow up and start leaving home. In some cultures the children may not leave home but may be joined by their spouses and children in their households. When the parents become too old, they then die. There are, however, other reasons for dissolution of households now and these include HIV and AIDS.

The demographic impact of HIV and AIDS on a household, comprising a family unit, affects its ability to reproduce itself. Households where adult females are infected with HIV experience lower birth rates and higher infant and child mortality rates. Therefore, in cases where a female parent is HIV-positive, fewer children will be born and out of these, some will die in infancy or early childhood.

These gaps may not be filled. Thus what has been seen from epidemiological evidence provided above, that there are more women infected with HIV than men, has obvious implications for the continuity of households. Even more important is that high infection rates amongst women have far-reaching implications for the household coping capacities given their traditional roles as caregivers, breadwinners and providers of food. The loss of so many women will negatively impact the capacities of Zambian households.

A number of things happen as a result of AIDS-related death, especially in cases of the loss of a breadwinner. Family members may be separated and forced to join other households. Sometimes the children left behind are sent to live in another household, in some cases from urban to rural areas. In certain instances children leave home in search of means of food and/or employment. Although loss of a household reduces the size of the household, this is usually temporary, as one or more new members (orphans) may be added to the household.

In the recent past, the family structures have changed due to considerable number of children orphaned by AIDS and other vulnerable children. Worse still, a household affected by AIDS may disintegrate. Heads of households have been reported to comprise of grandparents, women and children themselves. Evidence is available that suggests that child headed households are vulnerable to exploitation and this can take any form such as sexual and child labour.

Although grandparents are now looking after orphans, they are usually too old to work and adequately care for the children. The older orphans may assume the role of looking for food, caring for the sick and sometimes begging on the street (street children). Sex work is not an uncommon social consequence. Tasintha, a programme that targets sex workers has established a linkage between loss of parents and sex work. Girls usually engage in sex work as a means of survival. Sex work in turn may expose these girls to sexually transmitted infections including HIV (OVC Situation Analysis, 2004).

Impact of HIV and AIDS on the household

Zambian families are usually very large and loss of one or both parents has very serious consequences on the remaining household members. Some of the challenges include added costs, the impact on women and children and the need to assist the "survivors". Families and communities coping with HIV and AIDS related illnesses and death shoulder most of the burden. The epidemic has taken the heaviest toll at the household level and in particular women (Over, 1998).

Some of the major characteristics of the HIV epidemic are the silent nature of the infection, disease progression and eventually death. Its impacts vary with time and from household to household, ranging from immediate and severe shock to complex, gradual and long-term changes. An example of immediate and sharp shock is where the primary breadwinner dies. The living conditions of such a household are immediately affected. Children may find themselves being sent to live in a different place, removed from a good school or withdrawn from school completely (see Box 3.2).

HIV and AIDS has a great bearing on the household. Its effects depend on a number of factors which may include:

- *The number of people infected in the household:* Up to one in five households are looking after someone who is chronically ill (Population Council and RuralNet Associates Limited, 2006). An individual infected with HIV usually requires frequent hospitalisation and may be unable to work, may require treatment of opportunistic infections and/or antiretroviral drugs. As a result of these commitments, household income may decline to such low levels that it becomes difficult to retain the same lifestyle even before the sick members of the household die.

- *The status in the household of the individuals who die:* There is a big difference whether they were parents or not and the contribution they made to the family. The impact is almost immediate if one or both parents become too sick to work effectively. The other members of the family who have to spend time looking after the sick also may lose out on their income generation activities. In cases where the breadwinner is not able to work and there is loss of income, the lifestyle and structure of this household

Box 3.2: The plight of a widow and the family after the death of a spouse

Mr. Kaindu was the only educated person in his family. He was a bank manager and lived in a beautiful one storey house in Kabulonga, an up market residential area in Lusaka. When he died his wife was also not in good health. Worse still, his brothers and sisters grabbed the property the family owned, shared his terminal benefits and his life savings.

The wife died a year later. After the funeral the four children left behind were told that they would be going to live with their grandmother in a village in Mbabala. They are now in a village school and they have learnt to fetch water from the stream like other children. They have very little access to food. They sleep on the floor and have to share the few blankets available with other children in the house. The children talked about how life had become a nightmare.

Box 3.3: The aftermath of property grabbing

Mr. Mulenga was diagnosed HIV-positive in 1991 in Kitwe. He presented to the hospital with recurrent fevers. Shortly afterwards he was hospitalised suffering from pneumonia. The home was crowded with family members who had come to help the wife nurse him due to frequent hospitalisation. Mrs. Mulenga was unemployed and depended on his husband's salary for medical bills, school requirements for the children and food at home. At the time of his death they had used up all his savings. Although his employers bought the coffin and gave a small funeral grant, the major bills had to be paid by the family.

After burial Mr. Mulenga's family members demanded for his bank book, car keys, divided the household assets and his clothes, without any consideration for the children and wife. Today Mrs. Mulenga and children are struggling to survive and have been forced to live with her old parents in Kasama, Northern Province.

Society for Women and AIDS in Zambia, Kasama, Northern Province

is likely to change. Usually the loss of income leads to poor food security, poor access to health services and school children may be withdrawn from school.

- *The asset base of the household and what is left for surviving members:* In households where there is a patient suffering from an AIDS-related illness, family assets may be sold as a source of income when livelihood opportunities diminish, because of high expenditures on medical bills, procurement of food, transport costs and purchase of washing powder. Usually such households become very poor. The situation may become even worse in the event of death as family members may grab all the family assets (see Box 3.3 on p. 47).

- *The capacity and attitudes of extended family members, community members, non-governmental organisations, faith-based organisations and community based*

Table 3.1: Impacts of HIV and AIDS on livelihood assets

Human assets	▪ More frequent incidences of illness and death ▪ Increased expenditure on health and diminishing expenditure on other important areas such as food, clothing and school ▪ Changed household size and composition ▪ Loss of labour and intra-household reallocation of labour ▪ Increasing numbers of affected households are headed by elderly people ▪ Higher dependency ratios for households that keep orphans and foster children ▪ Female headed households take care of greater numbers of orphans and have the highest proportion of total orphans ▪ Increased numbers of school drop-outs ▪ More girls than boys drop out of school ▪ More children in affected households assist in farming/domestic activities ▪ Inter-generational knowledge and skills gap created
Social assets	▪ Emotional stress due to loss of members of the family especially the heads of households ▪ Affected female-headed households participate less in CBOs ▪ HIV and AIDS entrenches gender inequality ▪ Stigma, discrimination and sometimes rejection ▪ Few affected households are members of co-operatives ▪ Affected households have very limited access to community-based support ▪ Lessened reciprocal relationships ▪ Weakens institutional capacity to deliver services ▪ Pressure on the stability and relationships within extended families ▪ Reduced linkages to formal and informal organisations ▪ Emergence of informal non-traditional organisations ▪ Emergence of street children and an increase in sex workers
Natural assets	▪ Affected female-headed households have much smaller portions of agricultural land ▪ Soil fertility decline owing to decreased availability of farm inputs and cattle manure ▪ Increased exploitation of fuel wood and wild foods leading to deforestation and declining wild food resources
Physical assets	▪ Loss of intergenerational knowledge and skills in traditional natural resources conservation and management ▪ Liquidation of assets to meet costs for food, gifts during care and funeral and medical care ▪ Many households own fewer physical assets due to high incidence of property grabbing ▪ Less access to improved farming technologies

organisations to help the affected household.

The sum total of these impacts are summarised in Table 3.1. The table groups the effects according to the different components of the sustainable livelihoods framework introduced in Chapter 1.

The asset pentagon which is the heart of the sustainable livelihoods approach is brought under very serious threat as each of the assets at the disposal of a household is eroded by AIDS. Coping mechanisms discussed in Chapter 4 are usually not only inadequate but also escalate the medium to long term impacts of the disease.

There are reports that people living with HIV may be discriminated or stigmatised by their friends, at work, in the community or by members of their families. A baseline survey for RAPIDS revealed that stigma varied from community to community. While some communities may report stigma and discrimination, others reported a reduction in stigma and discrimination with the recent access to drugs, other services such as voluntary counceling and testing, prevention of mother-to-child-transmission and care (Population Council and RuralNet Associates Limited, 2006).

Changing household structures

The very essence and social fabric upon which Zambian communities are founded are being denuded and destroyed as a result of the HIV and AIDS.

Cultural and social bonds and ties that have developed over many generations have come under massive pressure and trial from the epidemic. They are being challenged in ways that have no historical precedence and are likely to yield to the expediencies of dealing with and responding to HIV and AIDS (OVC Situation Analysis, 2004).

In some cases where children have lost one or both parents, they have been forced to live with members of the extended fami-

Box 3.4: Impact of HIV and AIDS on the family

"As the effects of AIDS starts showing, financial pressure occurs in varying degrees. The person starts to get sick and is suffering from opportunistic infections. This leads to frequent hospitalisation. The patient then gets too sick and is bedridden either in the home or hospital. Eventually the patient dies leaving behind orphans who will need care and support." *Kapiri Mposhi, Key Informant, 2006*

"As a result of an HIV-positive person having more frequent attacks of opportunistic infections, production in anything is reduced." *Kapiri Mposhi, Key Informant, 2006*

Box 3.5: HIV and AIDS and the extended family system

"In Zambia, our family system has been eroded. Before, we had the extended family system. We deemed our brother's child as our own child. Now we have terminologies where one's brother's child is a nephew. It all boils down to a level where you start looking at your family as being only your wife and your own children and all this comes about because we are failing to even provide what is supposed to be a good standard of living for our own children. If you cannot provide for your own children, providing for the next family is an impossible undertaking. Zambians have been pushed against the wall. They would like to do something, but they don't have the capacity". *Person living With HIV, Lusaka.*

"Zambia has always had a culture of the extended family, but now your brother is either sick or absent because of death. You find that the household has no resources and the family unit falls to pieces and there is no one to take care of orphans". *Person living With HIV, Lusaka.*

Box 3.6: An orphan's quest for school

"I was living with my step brother for the past four years. I was doing very well at school and told my teachers that I shall be a doctor when I grow up. One morning my step brother informed me that he would be sending me to live in one of the remotest parts of Zambia, Kaputa, because his own brother had died and would therefore have the responsibility of looking after the children he had left behind.

My dreams were immediately shattered. The next day I was on my way to Kaputa to live with grandparents whom I had never met or known, leaving my friends and family members I had lived with for several years. This all happened within a few days. I left by bus to Kasama, slept at the bus stop and the next day I was on a van to Mporokoso. I spent a few days in Mporokoso at the bus stop with nothing to eat, until a truck going to Kaputa carried me.

On arrival in Kaputa, my grandparents welcomed my desire to continue with school. Unfortunately the school wanted a transfer letter from my previous school, which I had not brought with me. My grandparents had no money to support my travel back to collect the transfer letter. All they had was a bicycle.

I told my grandparents that I would cycle back to Mbala to collect the transfer letter. The journey took two weeks. I cycled through the forest, stopped at any village overnight and depended on their generosity for shelter and food."

'Mwaba" in OVC Situation Analysis in Northern Province, 2004
(The time Mwaba met the NHDR team he had been accepted at Kaputa Secondary School.)

ly or become street children (Box 3.6). They may also live in orphanages. Some children drop out of school, get abused, lack social guidance, live with neighbours or be left on their own. In situations where children are left on their own, the oldest child is expected to look after the young ones. This phenomenon is known as the child-headed household. (OVC study 2003.)

Even as the family units are being destroyed, the social security system continues to be extremely weak. Community social structures and support systems which existed to support households during illnesses and bereavements are breaking down as they fail to cope with the number of sick people and deaths.

As a result of the impact of HIV and AIDS, new forms of households have emerged in Zambia (OVC Situation Analysis, 2004). These include:

- Elderly/grandparent headed household
- Child-headed household
- Single parent (mother, father) headed household
- Cluster foster care; A group of children cared for formally or informally by neighbouring adult household
- Children in subservient, exploited or abused fostering relationships
- Itinerant, displaced or homeless children
- Neglected, displaced children in gangs or groups

These changing structures may not fully match the support that a regular household was able to provide to its member. For example, in a grandparent-headed household, many children drop out of school, the nutrition of the children is affected, children have poor access to health services and are usually very poor. Grandparents may be too old to walk long distances to health institutions, work and produce for the family (OVC Situation Analysis, 2004 and OVC Situation Analysis in Northern Province, 2003).

In a household that comprises the young and elderly, dependency on others increases because they are not able to contribute to any productive activity. In house-

Box 3.7: Voice of a sex worker

"My parents died when I was eleven years old. We had very little to eat because my grandparents were too old to work and provide for me, my young sisters and brothers who were younger. I left for the city for survival.

On arrival I joined the gangs of thieves and I was arrested the very first night of attempted aggravated robbery. I was jailed at the Mukobeko Maximum prison. During my stay there I was abused sexually by the prison wardens.

When I was released from prison, I joined a group of sex workers up to the time I was recruited to the Tasintha programme. Life on the street was rough. A lot of my friends were killed and we contracted a lot of diseases but we had no choice, as money earned on the street was our only means of survival." *Reformed sex worker, Tasintha 2006*

holds where the children are older, they play the role of the parent, such as providing for their siblings. In rural areas they till the land and grow food for the family, cook, collect firewood and water. In the urban cities the children resort to selling or begging on the street.

Overall, the coping mechanisms of households have been weakened by the HIV and AIDS pandemic and the available support networks may be unable to cope with the new situation.

Orphans

Zambia has one of the highest proportions of children orphaned by AIDS in the world. The number of such orphans rose from 842 in 1985 to 845,546 in 2006. This is projected to rise to 936,167 in 2010. A study conducted in Northern Province showed that more widows and grandmothers are taking care of orphans. Sample data from participatory livelihood analysis showed that female-headed households maintained three times more orphans than

Box 3.8: HIV and AIDS: a consequence of poverty

"HIV has increased because people are failing to meet food requirements in their homes. We have become very 'movious' to manage to feed those at home. Some even end up not using a condom so as to get more money. In the process one gets HIV infected." *Woman in focus group discussion, Kapiri Mposhi, 2005*

"Most of the time in this community the men do not work and the women do not have any money for business. So most of the times, the women would like to sleep with a man who can just give them some money to buy a small packet of mealie meal for home. And usually the money given to these women is about K10, 000. Therefore, HIV keeps increasing. So poverty is causing HIV to increase." *Lusaka women focus group discussion, 2005*

"In some households in this community people cannot afford a number of things like a bag of mealie meal, a bar of soap or a bag of charcoal. They can only buy small packets (Pamela). Most men do not work. As a result of husbands not working, women are forced to sleep with other men, whose HIV status they may not even know. All this is just done so that they do not sleep hungry. They do not even think of VCT." *Lusaka women focus group discussion, 2005*

"When I'm looking after a patient with an AIDS-related illness, at the same time looking after children and I'm not working but I would wish that the children eat adequately, I would end up throwing myself at men so that they can assist me." *Kapiri woman in a focus group discussion, 2005*

male-headed households. The female-headed households also bore the brunt of looking after the orphans. (FAO, 2004). Orphanhood is not a new phenomenon in Zambia. What is different is that the traditional Zambian society had systems in place that took care of children who lost parents for one reason or another. One such system has been the extended family system. The recent unprecedented increases in mortality rates due to AIDS-related illnesses, coupled with widespread poverty brought about by prevailing poor economic conditions, has weakened the extended family system.

The burgeoning numbers of children orphaned by AIDS needing support and care are overloading the caring capacity of the traditional extended family systems. By deepening poverty due to partial loss or disappearance of adult labour and the costs associated with caring for the chronically sick and funerals, HIV and AIDS is stretching the capacities of households and other traditional community safety nets beyond their limits.

Many of the children whose parents have died may lack not only parental care and guidance, but also cultural, social and family ties and life skills that are usually passed on from generation to generation. Most of these children are deprived of their childhood and the opportunity to go to school.

When life becomes difficult, orphans and other vulnerable children tend to be attracted to big cities and towns. Economic hardships lead them to look for means and some of the choices of survival, such as migration to big cities, increase their vulnerability to HIV infection. In big cities, children may be exposed to alcohol and substance abuse, child labour, sex work and delinquent behaviour. Alcohol and substance abuse lead to impaired judgment and may thus lead children to engage in casual and indiscriminate sex. This leads to exposure to sexually transmitted infections, including HIV.

In an increasing number of situations, children orphaned by AIDS when rejected, opt to stay together instead of living with relatives. Child-headed households are becoming increasingly common. Children as young as eight years old act as heads of households and take on responsibilities normally carried out by parents, including providing care to other children.

Child-headed households face a wide range of problems that include grief, stigma, discrimination and inadequate support from the community. The most pressing and immediate need of child-headed households relate to survival needs in the midst of poverty.

The creation and existence of child-headed households in Zambia is evidence that the extended family system and indeed other traditional support systems are unable to cope with the challenges created by HIV and AIDS.

Poverty and HIV and AIDS interface

The linkages between HIV and AIDS and poverty or its proxy, food insecurity, are bi-directional. AIDS is a determining factor of poverty as well as a consequence of it. The epidemic is compounding pre-existing problems of chronic poverty thereby presenting a major obstacle to Zambia's developmental agenda (Salinas, IMF, 2006).

HIV and AIDS is an underlying cause of vulnerability to poverty, food insecurity and other shocks. The pandemic fuels poverty by adversely affecting human, social, natural, physical and financial assets essential to household livelihood strategies. Using these assets and capabilities, households are able to develop coping strategies to deal with the physical, social, economic and political environments.

The vulnerability context of households has deteriorated due HIV and AIDS (see Table 3.2) and other factors such as economic decline and widespread failure of the country's service delivery system. House-

Table 3.2: Impacts of HIV and AIDS on the sustainability of livelihoods

Resilience	▪ Livelihood failures as assets are degraded and social structures become less supportive. ▪ Difficulties to recover from shocks, seasonal factors and long-term adverse trends.
Ecological integrity	▪ Rising morbidity adversely affecting intergenerational transfer of capacity. ▪ Increased reliance on natural resources as livelihoods fail. ▪ Property grabbing and gender inequality in traditional land tenure systems. ▪ Institutions important for the management of natural resources at both local (traditional) and higher levels losing capacity at a fast rate.
Social equity	▪ Intensifying poverty widening social inequality in society. ▪ Widening gender disparities as women shoulder greater burden in caring for the sick and orphans. Female rate of infection is also higher.
Adaptive governance systems	▪ Weakening of the extended family system and less able to act as a social safety net. ▪ Capacity of local institutions negatively affected.

hold ability to cope with factors that diminish the opportunities for beneficial livelihood outcomes is also diminishing as a result. Widespread poverty is the face of the widening vulnerability context.

Mapping the vulnerability context itself is a complex matter because of the interplay of so many factors. However, at the root of a deteriorating vulnerability context for Zambian households are failing livelihood systems. This is where AIDS has been very vicious. AIDS is known to turn relatively well-off households into a situation of high vulnerability. Households quickly lose labour due to chronic illness, looking after patients and attending funerals.

Studies (e.g. De Waal and Tumushabe, 2003) have found a strong relationship between the deepening household food insecurity in Zambia and other Southern African countries and HIV and AIDS. This was well illustrated by the 2001-2002 drought and the consequent food shortages in Zambia.

Drought-stricken households had sufficient resilience through use of coping strategies. However, AIDS-affected households could not cope in the same way. Effects were much more for them because

Box 3.9: Observations on nutrition and AIDS

"In the past years, the Red Cross used to assist. They used to give mealie meal to AIDS patients. These used to recover and look well. Even the number of deaths in the community reduced. The patients also used to receive beans, cooking oil and washing soap. Patients used to feel happy about this. They also received blankets and towels. This was good. But since they left, deaths have also increased." *Kapiri women focus group discussion*

Box 3.10: Do not give us fish, teach us how to fish

"It is not enough to be receiving food at all times. It is better that people affected by HIV and AIDS are assisted in income generating activities. So, instead of bringing Kapenta that will only finish in two days, it is better someone brings income generating activities that will sustain our lives. We can help ourselves by keeping some animals like goats and when we are given something, we should contribute our labour. For example, if you give me beans, I should contribute by planting." *40 year old widow living with HIV, Chikankata*

of a number of factors. First of all, the loss of household labour - both quality and quantity - to illness, caring for the sick, funerals, protracted nature of illness, psychological impacts of the illness and loss of skills and experience.

Second is the reduction in available cash income and asset base. This results in reduction in food consumption, erosion of asset base to finance health needs, inability to hire labour and buy inputs, sale of productive assets, consumption of seeds, sale of land, loss of land through dispossession, loss of remittance if affected person was the source and limited access to credit.

Third is the declining capacity of the social environment to offer support to AIDS-affected households. The traditional extended family and non-formal networks are changing as their capacity declines, demand increases, and a reversal of roles between urban and rural areas occurs. There is also the loss of knowledge of agricultural practices and skills, as women (less exposed to agriculture knowledge for cash crops due to gender discrimination) and children take over agricultural tasks.

There are other ways in which HIV and AIDS is entrenching poverty and creating ground for its spread. For example, once individuals live in abject poverty, they may engage in lifestyles that expose them to HIV infection. There are women who have taken up beer brewing for survival once widowed as a result of AIDS. Once drunk, their patrons may end up having sex with them or their girl children. Furthermore, girl children may become sex workers as a means of survival, a vice which puts them at risk of HIV and other sexually transmitted infections.

In poor or food insecure households, individuals, especially women, are poorly motivated to take precautionary steps to protect themselves against HIV infection and engage in unprotected sex. In many cases this may be the only means of providing for one's family.

Malnutrition is another aspect which is not only a consequence of HIV and AIDS but in turn reinforces its devastating impacts. According to the Food and Agriculture Organisation in households affected by AIDS, the food consumption of all members frequently declines, resulting in malnutrition. This results from the factors that undermine food security in AIDS-affected households already discussed above. AIDS, therefore, threatens the nutritional security of HIV-positive individuals and their families. Due to an increased susceptibility to opportunistic infections, poverty-induced malnutrition is likely to lead to an early onset of AIDS. Poor nutrition enhances the progression of AIDS. Community members are aware of the link between nutrition and progression of AIDS (see Box 3.10 on p. 53)

AIDS is not the sole factor that is worsening the vulnerability context for households in Zambia. However, it is deepening this context to levels that make it difficult to recover from shocks and seasonality factors when they occur. Therefore, actions against HIV and AIDS must be at the centre of any strategy that seeks to lessen the vulnerability context for households.

HIV and AIDS and the feminisation of poverty

Even before the advent of HIV and AIDS, in development circles, there was a lot of discussion on feminisation of poverty. This was closely linked to the economic crisis in the country, the social status of women and an increase in female-headed households. HIV and AIDS has however worsened gender-based differences in access to land and other productive resources like labour, technology, credit and water.

In situations where a wife survives the death of her husband from an AIDS-related illness, the weak position of women and the stigma attached to the disease contribute to excessive stripping or grabbing,

by family members, of productive assets from the surviving widow and her children. The widow and the children may sink into more poverty and this forces women into activities that may expose them and their girl children to sexual abuse and sex work. They may even have limitations of access to knowledge about how to protect themselves (UNDP, 2002).

Results from a qualitative study in Northern Province of Zambia (FAO, DCI and GRZ 2004) provide more insights on the disproportionate negative impact of HIV and AIDS on the various livelihood assets of female headed households. Main findings of the study are summarized in Table 3.4 on p. 56.

The negative impact of HIV and AIDS is quite intense in female-headed households. Box 3.12 gives a glimpse into their plight through the story of a 40-year-old widow "M" with only seven years of formal education.

Conclusions

The HIV and AIDS pandemic is a crisis of unequalled proportions in Zambia and in other developing countries as well as at the global level. This is clearly seen in its immense negative effects on the Zambian households described in this Chapter.

The best chance to respond to HIV and AIDS is at the household level because that is where the velocity of its negative impacts is most directed. The household is under attack from different dimensions as captured by the sustainable livelihoods framework (pp. 17-18).

HIV and AIDS is widening the vulnerability context of Zambian households. At the time when households should take measures to protect themselves from the spread of HIV and respond to the negative effects and be able to pursue livelihood strategies of their own choice, they are increasingly finding their capacity seriously eroded by the epidemic itself. It is clear

Box 3.12: A female-headed household

Currently, M is head of a household of seven people, four daughters, one son and her 75 years old father. The children are aged between nine and twenty years. She became head of the household when her husband died about two years ago. The house they live in belongs to her father whose wife died sometime back. The household has very little in terms of assets because when M's husband died almost everything they owned, including beds, was grabbed by her husband's relatives. Now even the children sleep on the floor. Three children share one room while the father has his own room.

The household grows some maize. Sometime back, they used to grow groundnuts but because of M's ill health and the age of the father they cannot manage. They also used to have chickens but a certain disease killed them all.

According to M, she has experienced a lot of problems since her husband died. These include finding food for the children and sending them to school. Most of the time, the household survives on only nshima and vegetables, which she considers inadequate. At the time of the interview, the household had no food and the storage was empty. Sometimes the household receives some food rations from the church but this is irregular and when it comes, it is not enough. The house is in disrepair because they cannot manage to cut the grass or get money to buy grass in order to repair the roof. There is no help from neighbors, government, relatives, or other family members because, according to M, the entire community lives in abject poverty. However, some local non-governmental organizations and support groups provide basic support like beddings and some food like sorghum once in a while.

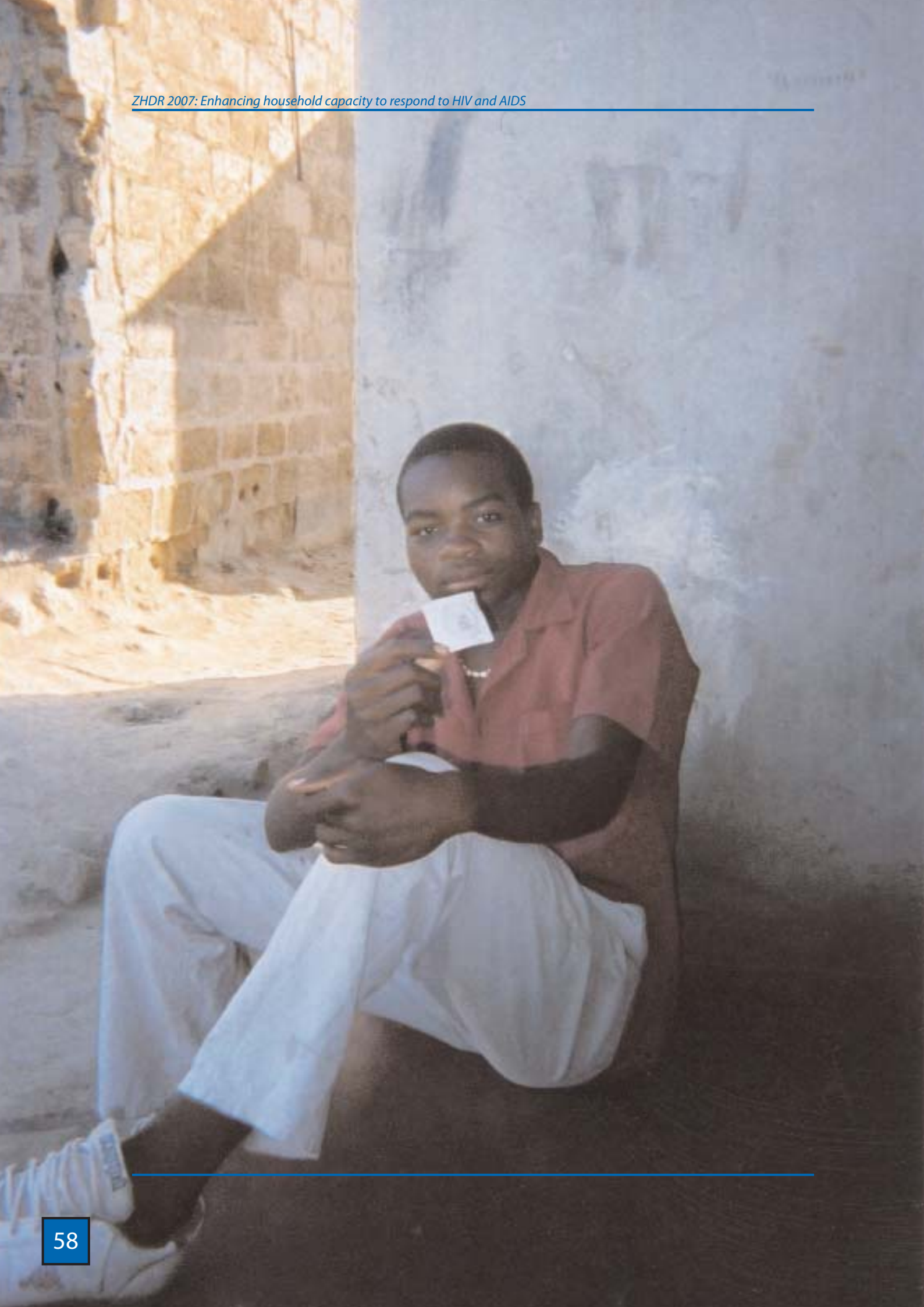
Every day, M asks herself what she is going to give the family to eat. As for the future, her main concern is if the family is suffering now when she is still alive, what will happen to them when she is dead. She prays that she continues receiving ARV treatment from the hospital.

Table 3.3: HIV and AIDS affects female-headed households disproportionately

Female-headed households keep about three times as many orphans as male-headed households. In particular, female-headed households taking care of people living with HIV (PLHIV) bear the brunt of looking after orphans, supporting an average of about 3.6 orphans each.
Female-headed households taking care of PLHIV have few income sources and rely mainly on sales of crops and beer to obtain cash.
Only a few female-headed households with orphans are members of cooperatives, owing to lack of time and financial constraints.
Only few female-headed households looking after PLHIV and/or orphans participate in the community-level area satellite committees.
Female-headed households, particularly those taking care of PLHIV, own fewer physical assets such as axes, shovels and radios owing to distress sale and property grabbing.
Female-headed households taking care of PLHIV and/or orphans use less fertilizer and fewer improved varieties and chemicals than male-headed households. They lack the financial resources to purchase these inputs.
Female-headed households with PLHIV own very few ruminants compared with other household types, owing to constant selling in order to meet immediate cash needs.
Female-headed households experience more property grabbing than male-headed ones. Property grabbing is particularly high among female-headed households taking care of PLHIV.
Female-headed households taking care of PLHIV spend most of their financial resources on purchasing food and on medical expenses, leaving fewer resources for paying school fees and investing in agricultural production.
Female-headed households taking care of orphans, especially those headed by grandmothers, decreased the areas they cultivated owing to competing demands on their time and the inability to purchase farm inputs.

FAO, Development Cooperation Ireland and the Government of Zambia, 2004

from the discussion in this Chapter that to engage the household as an effective partner in responding to HIV and AIDS would require doing so from several angles. The household must be provided with capacity to protect itself against infection and infecting others. It must also be assisted to mitigate the negative impacts of the epidemic. The two are related and are mutually reinforcing.



4 ~ The HIV and AIDS response

At this stage of the epidemic HIV and AIDS requires a well coordinated and sustained action, incorporating lessons learned over two decades of AIDS and the wisdom of communities.

(UNGASS, 2001)

This Chapter provides a brief summary of HIV and AIDS response at global, national and household levels. While a great deal of human, financial and other resources have been spent on HIV and AIDS response, the resources have largely by-passed the household, where much of the effort should be focused. In the absence of a strong, institutionalised support, the households themselves have responded to the pandemic through various coping strategies. These provide valuable lessons learned as to what works and what we should be building upon in national and global response. Some household coping strategies are unfortunately, however, unsustainable short-term measures and have serious negative long-term implications.

Global response

Two years after its first appearance in 1981, HIV had spread to 60 countries (Merson, 2005). Since then, it has spread worldwide and to date, over 25 million people have died. Clearly, a global crisis of this magnitude demanded a truly global response to bring together resources, political power and technological capacity. However, up until 1987, HIV and AIDS was treated just like any other disease (a cure could be found in due course). It took the World Health Organisation in the UN system to respond to the reality that millions of people had been infected with HIV on all continents and hence the need to set a Global Programme on AIDS (WHO, 1987). A few years later, the Programme was disbanded and replaced with the Joint United Nations Programme on AIDS (UNAIDS) which was going to be coordinating AIDS-targeted programming by the UN system, including the World Bank.

Regrettably, global HIV and AIDS response has suffered setbacks due to, in some cases, hostile political environments, poorly designed and targeted programmes, misapplication of resources and lack of consideration of household needs. The debate over HIV prevention has injected controversy because of moral politics associated with the dominant mode of transmission. Further, institutional infighting together with a reluctant political leadership have hampered the emergence of a coordinated response.

The solemn challenge for effective global response has been that of sustained sources of funding. For most low and medium income countries, the action against HIV and AIDS has for a long time been dependant on external funds, and this has over the years increased the vulnerability and complicated abilities to respond (Kates, 2004).

The first new major funding came in 2002 with the setting up of the Global Fund to fight AIDS, Malaria, and Tuberculosis proposed by the United Nations. Shortly after this initiative, President Bush announced the President's Emergency Plan for AIDS Relief (PEPFAR), a five year $15 billion programme for 15 countries with 80 percent AIDS cases. In addition, the World Bank also stepped up AIDS funding through the Multi-Country HIV and AIDS Programme. With these new initiatives, it is estimated that the world committed a total

"Prevention is better than cure!"

Use a condom before having sex. So prevention is needed all the time. Isack is 18 years old and is encouraging people to use a condom before having sex. No condom no sex.

Photographer: Kelvin Chembo

Box 4.1: The *3 by 1* initiative

The *Three by Five* initiative, launched by UNAIDS and WHO in 2003, was a global target to provide antiretroviral treatment to three million people living with HIV and AIDS in low- and middle-income countries with life-prolonging antiretroviral treatment by the end of 2005. The objective was not met. However, the number of people receiving ART in the target countries more than tripled to 1.3 million in 2005 from 400,000 in 2003 and the campaign provided valuable lessons for achieving universal access by 2010.

In Zambia, the number of treatment sites increased from only three to over 110 facilities in just two years. The number of people receiving ART in December 2005 was estimated between 45,000 and 52,000.

WHO and UNAIDS, 2006.

Box 4.2: The *Three Ones* principles

On 25 April 2004, UNAIDS, the United Kingdom and the United States co-hosted a high-level meeting at which key donors reaffirmed their commitment to strengthening national AIDS responses led by the affected countries themselves.

They endorsed the *Three Ones* principles, to achieve the most effective and efficient use of resources, and to ensure rapid action and results-based management:

- *One agreed HIV and AIDS action framework*
- *One national AIDS coordinating authority*
- *One agreed monitoring and evaluation system*

Zambia is a good example of a heavily affected country with a great number of partners providing resources for HIV and AIDS response and implementing their own programmes. Without the application of the Three Ones, there would be duplication of efforts while some important intervention and geographic areas would remain under funded.

of almost $8 billion on HIV and AIDS response in 2005. This is 30 times the amount spent ten years ago (UNAIDS, 2006).

As many recipient countries and institutions do not have structures to effectively ensure that HIV and AIDS funds reach the intended beneficiaries, disbursement has been limited. The big question is how to structure programmes and systems that will help translate global efforts into reality at country and household level.

The biggest impediment to the global HIV and AIDS response, however, is poor donor coordination, duplication and competition. For example, in some cases, Global Fund and PEPFAR get caught up in overlapping goals. This entangles receiving countries and it becomes extremely difficult to achieve the desired targets in the country. The 2004 "Three Ones Principles" (Box 4.2) has attempted to harmonise the various global AIDS institutions.

National HIV and AIDS response from 1985 to 2006

When HIV was first reported to the Ministry of Health by a team of medical experts in the mid 1980s, a national surveillance committee was set up. The membership was drawn from medical experts, Ministry of Health officials and researchers from various research institutions. The major activities of this committee were monitoring and surveillance of the epidemic throughout the country.

In 1987 an emergency Short Term Plan was put in place, which saw the establishment of 33 blood-screening centres all over the country to ensure the provision of safe blood and blood products. This programme was strengthened further and developed into a National Blood Transfusion Service. The laboratories were also reorganised and upgraded, two reference laboratories were established at the University Teaching Hospital and Tropical Diseases Research

Centre and a state of the art virology laboratory was constructed.

From 1988 to 1992 the first Medium Term Plan was developed with the following operational areas: information, education and communication, counselling, laboratory support, epidemiology, STD/clinical management and home-based care.

It was later recognised that the national response to the HIV and AIDS up to 1993 was inadequate and should have looked beyond medical issues. Consultations made within the Second Medium Term Plan for 1993 to 1998 found that:

- The medium term plans had a blanket approach and were not tailored for different populations.
- There was no mechanism to evaluate the implementation or impact of the plans.
- Collaboration with government was highly fragmented.
- There was no high-level political commitment or advocacy and no management of programmes at central level.

These shortfalls consolidated the need to respond to the HIV and AIDS problem through a multisectoral approach. In this regard, HIV and AIDS, STIs, TB and leprosy programmes were consolidated into one programme. The Second Medium Term Plan was implemented from 1994 to 1998. This plan's major strength was intersectoral coordination and collaboration.

In addition, the non-governmental organisations and faith-based organisations worked tirelessly to complement Government's efforts. The Chikankata AIDS programme developed and initiated the home-based care concept. The Churches Health Association of Zambia then established this model of care in most of its institutions. Government also adopted home-based care as an alternative model of care for patients with AIDS-related illnesses. This has since been adopted globally as an effective option in fragile environments where institutional care is unable to cope with the scale of the epidemic.

Kara Counselling developed and initiated counselling, including training for lay persons. People living with HIV came out in the open and established a network of people living with HIV and AIDS. Issues affecting women were also brought to the fore by the Society for Women and AIDS in Zambia and sex workers were mobilised through the Tasintha programme.

As the problem of orphans became apparent, Children in Need was established to coordinate all activities on orphans and vulnerable children. Health education activities were spearheaded by the Copperbelt Health Education Project.

Through these different structures and initiatives by non-governmental organizations and faith-based organizations outlined above, Zambia has implemented various programmes aimed at reducing HIV prevalence and mitigating the impact of HIV and AIDS. However, in spite of the so many HIV and AIDS initiatives and programmes, the epidemic has been spreading silently and rapidly in the population. Although it is stabilising, this stability is occurring at very high seroprevalence levels.

In addition, earlier on in the evolvement of the epidemic, certain pronouncements by political players contributed to the silent spread of HIV in Zambia. For example, there used to be an unwritten rule not to discuss the presence of HIV and AIDS in Zambia, so as not to discourage tourism (The Panos Institute, 1988, Aids and the Third World).

Today, many people are infected with HIV and there are many patients with HIV and AIDS related illnesses in hospitals across the country. To cushion the impact of HIV and AIDS on hospitals, home-based and community care of patients with AIDS-related illnesses has been adopted as an alternative way of patient care. It has also been argued that such patients prefer to die at home amongst their loved ones.

The public announcements by a few Zambians about their HIV positive status, and the formation of the Network of Zambian People Living with HIV (NZP+), made many people realise that one could be HIV positive and yet look very healthy. People also learnt that living positively could help an infected person live longer.

Government further recognised the increasing number of children who were being born with HIV infection. To respond to the situation, the prevention of mother-to-child transmission of HIV (PMTCT) programme was established. The programme was aimed at enabling HIV positive mothers to have HIV negative babies.

In order to attract more people to know their HIV status and benefit from programmes such as PMTCT and others, voluntary counseling and testing (VCT) programmes were rolled out the same year. In addition Government appointed working groups to spearhead various activities such as PMTCT, VCT, vaccines, ART, traditional remedies, epidemiology, counselling and referral. VCT, unfortunately, is primarily delivered in health institutions up to date and access is very limited. It was only in 2006 that mobile VCT services were launched in one part of Lusaka.

In order to improve coordination and collaboration of the different players in HIV and AIDS response and monitor the activities, the National AIDS Council (NAC) was created in 2000. Although the Council was functioning from the time it was set up in 2000, the Act of Parliament was only passed in 2002. At present, NAC is the single high-level institution responsible for coordinating the actions of all segments of all stakeholders in the response to HIV and AIDS.

Initiatives at household level

Evidence available shows that although households may be overburdened and do not have adequate resources, they continue to be the primary support system for the vulnerable, such as children and the elderly (Luo et al, Situation analysis of OVCs in Northern Province, 2004).

Although Zambia has developed a lot of innovative programmes in the health sector, especially in the area of prevention, care and support, very little effort has been directed at addressing social issues and in particular, mitigating the impact of HIV and AIDS on households and communities, who are mostly affected by not only HIV and AIDS but the social ramifications of the epidemic. This gap is surprising because households have always been the most important support system in the various communities of Zambia.

Public sector

The Social Welfare Department in the Ministry of Community Development and Social Services, in partnership with the Department for International Development and the Germany Technical Aid to Zambia, has established a mechanism to provide foster-parent household allowances for orphans and vulnerable children (OVC). This is being piloted in Southern and Eastern provinces. It involves cash transfers of 40,000 to 50,000 Kwacha to vulnerable households. In Eastern Province the support is from UNDP in form of a soft loan of 500,000 Kwacha for income generation activities. The results of these initiatives are yet to be disseminated (DFID, 2005). In addition, the introduction of community schools has been a mitigating strategy for OVCs affected by HIV and AIDS. In 2002 alone, the Ministry of Education recorded in excess of 176,629 OVCs as having enrolled in community schools.

Although the challenge is enormous, it is a step in the right direction as the country continues bracing itself to taking action against HIV and AIDS. However, on the whole, the National Social Welfare Policy although recently developed, is not geared to comprehensively cater for the aged and

Figure 4.1: Conceptual framework for coordination of the multisectoral response

Source: GRZ and NAC, 2006

huge numbers of orphans, who are increasingly dropping out of school, have very little access to health services, are abused and are street children.

Private sector

Private companies and public institutions have also been major players in responding to the challenges of HIV and AIDS. In relation to the private sector, several companies have been very instrumental in responding to the epidemic. They have developed workplace programmes for HIV and AIDS in the interest of their employees and family members. For example, Chloride Batteries, Barclays Bank, Bank of Zambia, Chilanga Cement, Zambia National Commercial Bank and Konkola Copper Mines have developed programmes aimed at sensitising members of staff on HIV and encouraging them to undergo voluntary counselling and testing (VCT).

Chloride Batteries, with about 42 employees, has a workplace policy that encourages HIV positive employees to go for monthly CD-4 count paid for by the company. However these initiatives do not target or benefit the households. They benefit individual employees of the company.

On the other hand, the policies and workplace programmes for Assets Holding Company - Mining Municipal Services and Phoenix Contractor target not only the employees, but also communities where these employees reside. As a result household members have not only benefited but

have been leaders in responding to the social ramifications of HIV and AIDS, such as the support to OVCs.

Non-governmental organisations and faith-based organisations

In the recent past, there has been a dramatic rise in the number of communities with people offering care and support to PLWHA. The major players at this level are non-governmental organisations (NGOs) and faith-based organisations (FBOs).

Some of the NGOs and FBOs that have been making a difference at household level include: Churches Health Association of Zambia (ZHAZ), Copperbelt Health Education Project (CHEP), Society for Women Against AIDS in Zambia (SWAAZ), and Catholic Archdiocese of Ndola, Lusaka, Mpika and Mbala, Extended Hand Community Foundation, The Tasintha Programme, Youth Alive, Youth of Roan, Kara Counselling, Kwashamukwenu, FLAME, Zambia Inter-Faith Working Group (ZINGO), the Network of Zambian People Living with HIV/AIDS (NZP+), Community Youth Concern, Society for Family Health, World Vision etc.

Required response to empower households

HIV and AIDS programmes being offered at all levels in Zambia have been tremendous and encouraging. However, most of these programmes are short-term, not holistic by design with no inbuilt sustainability and have not taken into account all the needs and issues affecting households.

For example, households requiring support are overwhelmed with high numbers of orphans, requiring not only educational support but other forms of support, including psychosocial. Most of these households are impoverished and therefore require support that target poverty reduction. Poverty, as a result of HIV and AIDS, at the household level, is a serious problem. Part of the problem has been an absence of a developmental framework to help gain a holistic understanding of the HIV and AIDS impacts on the household and an agreement on what ought to be the minimum package that should be provided to an AIDS-affected household. NAC in its programming activities, review and strategic planning for a long time did not have a framework to help it target initiatives at household level.

Prior to the adoption of a new strategic framework in May 2006, NAC was supported by eight standing technical committees: (i) Promotion of safer sex practices; (ii) Prevention of mother-to-child transmission of HIV; (iii) Safe blood, blood products and body parts and adoption of infection control measures; (iv) Improvement of the health status of HIV-positive people with symptoms; (v) Promotion of positive living and prevention of opportunistic infections among people living with HIV; (vi) Improvement of care for orphans and vulnerable children; (vii) HIV and AIDS information network and monitoring system; and, (viii) Coordination.

This structure could not help NAC clearly target households and take into account the changing dynamics of the epidemic at the household level.

Realising this, NAC has made revisions to its institutional framework in its National HIV and AIDS Strategic Framework 2006-2010. Six new working groups have been created around the following themes: (i) Intensifying prevention of HIV; (ii) Expanding treatment, care and support for people affected by HIV and AIDS; (iii) Mitigating the socioeconomic impact of HIV and AIDS; (iv) Strengthening the decentralised response and mainstreaming HIV and AIDS; (v) Improving the monitoring of multisectoral response; and, (vi) Integrating advocacy and coordination of the multisectoral response. The revised strategic framework is supposed to be coordinated as shown in Figure 4.1. on p. 63.

It should be pointed out that the framework has been evolving over the years as NAC responded to some of the challenges not specifically addressed in its previous strategic framework.

The establishment of sub-national structures - specifically provincial, district and community AIDS task forces - have been supported by donors including the United Nations Development Programme and Development Cooperation Ireland. These have been integrated as sub-committees on HIV and AIDS in Provincial and District Development Coordinating Committees. It is hoped that a similar arrangement would be made at sub-district level once decentralised structures are consolidated under the National Decentralisation Policy.

These revisions answer much of the concerns expressed in this document. However, there is still need to sharpen further the focus on households which is assumed in the new framework but not explicitly stated. Chapter 6 highlights a number of ways in which this should be done.

Household coping strategies

Due to the limited programmes and formal structures focusing on the households, households have developed their own strategies and coping mechanisms which include (Population Council and RuralNet Associates Limited, 2006):

- A heavy dependency on beer brewing and petty trading as an economic activity, in both rural and urban households.
- Many orphans, widows and family members engaging in piece work.
- Girl children, especially orphans, getting involved in sex work as a way of earning a living.
- Young girls getting pregnant, hoping that their boyfriends or man friends will take care of them. In most cases, unfortu-

Box 4.3: Coping strategies

"Our parents died several years ago leaving the eight of us.

I have five thousand Kwacha which I use to buy charcoal to resell at the market. My profit is five hundred Kwacha and I use it to buy vegetables at the end of each day.

My brother has ten thousand kwacha and he buys paraffin which he resells in the village door to door. The profit of one thousand kwacha he buys one kg of mealie meal. This is how we survive.

I met a freelance prisoner who promised to marry me. When he was freed he abandoned me leaving me pregnant. I have since delivered a set of twins." *Lwingu 2004*

Box 4.4: Prostitution and the orphanhood crisis, the link

In some households you find that both mother and father are chronically ill and they cannot even get up. There is no one to care for the children to check if they have gone to school or if they have eaten.

And when these parents die, the children are left homeless because they have no base; the house was for rent so they are chased. Hence they become street children.

In this community, the problem of orphans is big because if you count these houses you find that there is no house without orphans. Worse still, those who are caring for them do not work and also those cared for by grandparents are even more disadvantaged.

So if these children grow up, they too will not do anything in terms of work and will end up doing prostitution. *Lusaka women focus group discussion*

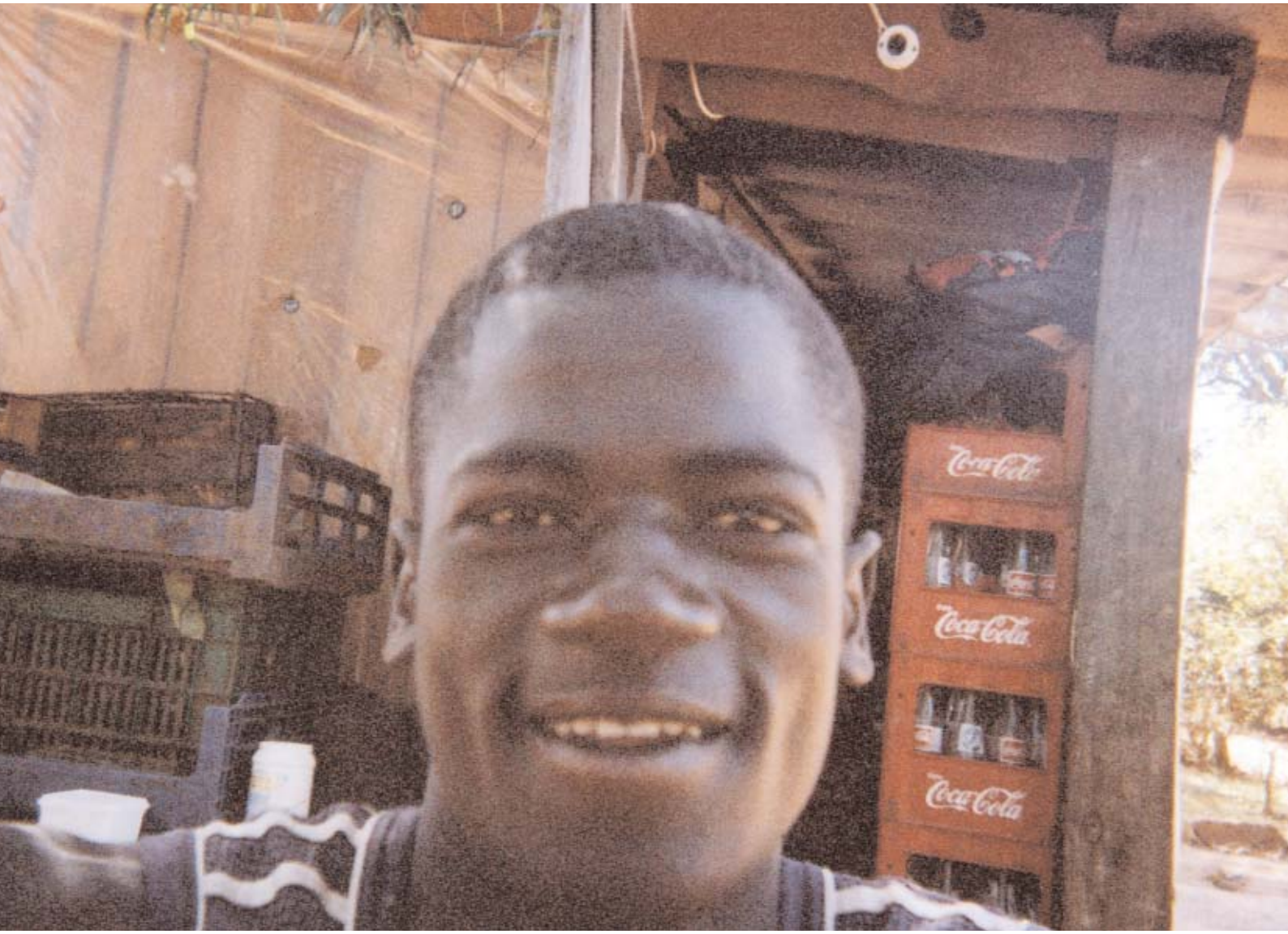
nately, these young girls end up being abandoned by these men, ending up with the additional burden bringing up babies.
- Young girls being forced to enter into early marriages in order to get support from the men. While some of them may end up being happy, the majority are sexually, physically and psychologically abused.
- Boys and sometimes young girls stealing and may be involved in other criminal activities.
- Children sleeping by the fire to keep warm, as most households lack basic necessities such as blankets.
- Families consulting traditional healers when there is sickness, as they cannot access health services due to distances or cost of transport and services.
- Some households engaging in agricultural activities to ensure food security. Most of them depend on the rain or may put up vegetable gardens along the riverbanks. This therefore is a seasonal and not meaningful activity.

Overall, coping strategies adopted by households are not sustainable and usually have not yielded much success or made an impact. The Tasintha programme, which is focusing on support to sex workers, has documented the association between orphaned children and sex work. The programme has showed that when these women or children are supported with life saving skills and entrepreneurship they do stop sex work, flourish and reintegrate back in society.

Conclusions

Like many countries in Africa, Zambia will have to find innovative, pragmatic solutions to increase household capacities to cope with the social ramifications of HIV and AIDS. It is clear from the evidence provided both in Chapters 3 and 4 that traditional kinship relations and the classical institutional solutions are currently not adequate to deal with this new phenomenon. HIV and AIDS is a major human crisis that Zambian households have to cope with and their capacities to prevent its spread and mitigate the impacts are inadequate. Little can be achieved in terms of improved human development if households are not provided with the capacity to respond to the epidemic.

Recent revisions to the strategic framework of the National AIDS Council give hope that these issues would start to be addressed. However, the household focus in the new framework is not sharp enough and there is need for the National AIDS Council to take steps urgently to revise this.



"Self-portrait"
I "work" outside Melissa in Kabulonga. I don't go to school. That life is bad. It is better to go school because you have a better life.

Photographer: James Sokos

5 ~ The state of human development in Zambia

In this Chapter, we present developments in Zambia's human development index (HDI) between 2000, the last reference year made in the 2003 ZNHDR, and 2004, the reference year made in this report.

The concept of human development seeks to capture the process of expanding choices and opportunities for a kind of life people highly value. The HDI attempts to capture the outcome of this process by looking at three key areas of people's aspirations - education attainment, a healthy and long life and material well-being. The HDI is therefore a composite index representing these three outcomes. HIV, through various transmission mechanisms discussed in previous chapters, undermines these capabilities and opportunities.

Long-term trends in Zambia's HDI

This section provides an update of the 2003 NHDR that compared Zambia's long-term trends in HDI with that of eight other countries whose HDI in 1975 (the first year for which HDI was calculated) fell within the range of 0.4 and 0.5 and could thus be considered as having a similar HDI as Zambia's of 0.468. Figure 5.1 on p. 71 thus provides trends in HDI for these nine countries for nearly thirty years. All the nine countries made progress in the HDI between 1975 and 1985. However, only three - Morocco, Ghana, and Papua New Guinea - maintained a steady increase in their index value up to 2000. Of these three, only Morocco has maintained a steady increase in HDI as that of Ghana and Papua New Guinea experienced a small decline between 2000 and 2003.

Zambia in nearly 30 years has performed worse than the other eight countries. It can be seen from Figure 5.1 that seeds for dismal performance were present even before 1985.

Zambia's HDI grew at a slower rate compared to the other eight countries up to 1985. From then the HDI value declined sharply such that by 1995 Zambia's HDI was lower than its 1975 value. The global Human Development Reports have noted that no other country among the 79 countries with data to allow the calculation of HDI, since 1975, has experienced that kind of reversal. This has happened in a country that has experienced peace since independence in 1964 and still boasts of great development potential given her abundant natural resources and good climate.

Nevertheless, a turn around in the HDI value has taken place in recent years (see Figure 5.2 on p. 71). Zambia's HDI has been rising steadily since 1994, much sharper between 2000 and 2004 from 0.451 to 0.462 respectively. Therefore, the 2004 HDI value narrowly misses the medium HDI mark of 0.500. Of the eight other countries represented in Figure 5.1, only Morocco has performed better than Zambia. The reasons for this performance have been explained in the sections below. They include the sustained growth in the country's economy since 1999, achievements in health reforms and particularly the multisectoral response to HIV and other diseases such as malaria, tuberculosis and diarrhea and gains in education enrolment.

Comparisons of the human development index

HDI values for Zambia and the provinces based on national statistics are presented in Table 5.1 on p. 71*. It is seen that Zambia's

** All the data used are from national statistical sources. The HDI obtained is thus not comparable with that from the global HDR. In particular, whereas the global HDR uses GDP based on purchasing power parity, this is not available for Zambia below the national level. Instead the income per capita from the LCMS has been used as a proxy.*

HDI rose from 0.391 in 2000 to 0.462 in 2004. This is in line with the trends discussed above. All the nine provinces have shown improvements in the HDI. An examination of provincial HDI values and rankings in Table 5.1 reveals a number of things.

1. *The line of rail provinces (Copperbelt, Central, Lusaka and Southern) continue to occupy the first ranks of HDI values. These are the most urbanised provinces.* The outcome is also in line with expectations that HDI is lowest in rural areas which have a much higher incidence of poverty. If we exclude the new districts along the line of rail - Mpongwe, Chibombo, Masaiti, Lufwanyama and Kazungula - line of rail districts all fall within the first twenty-one ranks. These new districts are much more rural than the rest of the districts along the line of rail some of which do not even have a proper administration centre. Mpongwe, Masaiti and Lufwanyama formed Ndola Rural before they were split into three. Within the Copperbelt Province they occupy the last three ranks out of ten districts. Chibombo was Kabwe Rural while Kazungula was the rural part of Livingstone.

2. *Among the districts occupying the first twenty-one ranks are seven rural districts some in very remote areas. Mporokoso with HDI of 0.527 occupies the fifth rank followed by Namwala with HDI of 0.519 at seventh rank.* Although Mporokoso has a higher GDP index than the national average, the main factor driving high HDI in these districts is their life expectancy at birth which is higher than the national average, ranging from 53.6 to 62.6 years compared to 52.4 years for Zambia as a whole. Namwala and Itezhi-tezhi, which were once one district, had respectively the highest life expectancy at birth of 62.5 and 62.6 years projected for 2004. This in turn is due to the low HIV prevalence rates of between 5.2 percent and 7.5 percent compared to the national average of 15.6 percent. This confirms the point made below that HIV is an important factor in determining a district's HDI status.

3. *The largest rise in HDI has been in two rural provinces of the country, that is, North Western and Western provinces, rising by 0.103 and 0.086 respectively.* As a result, Western Province HDI ranking improved from ninth to seventh but ranking remained unchanged for North Western at 5. The least rise in HDI was in Central and Luapula provinces at 0.043 and 0.059, respectively.

4. *Although not providing the whole picture, these trends are in line with recent poverty figures*, which indicate that extreme poverty fell sharply in rural areas from 71 percent in 1998 to 53 percent in 2004 compared to a decline of only two percentage points in urban areas (see Chapter 2).

Explaining developments in human development status

What factors explain these developments in Zambia's HDI? This is a difficult question given the multidimensional nature of the human development concept. To help unravel the factors behind developments in human development as represented by the HDI, it is necessary to examine the changes in variables that constitute the index, i.e. life expectancy and education achievement. Given the theme of this report, it is also necessary to look at how HIV and AIDS may be proving a debilitating factor in each of the variables that constitute the HDI. Realising that human development cannot be narrowly confined to the HDI, this report also provides insights on other factors that are not captured in the HDI but

greatly determine the country's human development path. Of particular interest is unraveling how HIV and AIDS may be complicating Zambia's efforts to improve her human development.

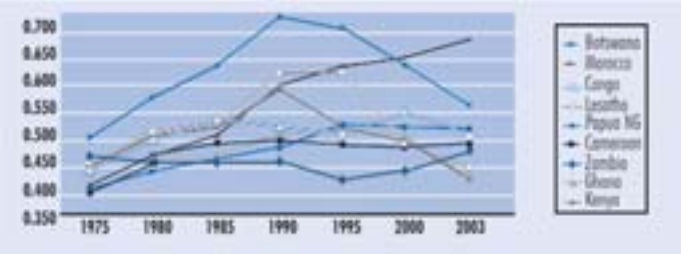
Adult life expectancy

The 2000 Census Report indicates that life expectancy in Zambia rose from 47 years in 1990 to 50 years in 2000. The census projections, which took HIV and AIDS into account, also indicated that life expectancy would improve to 52.7 years in 2004. Without HIV, life expectancy was projected to increase to 57.5 years. The calculation of the HDI utilised the projected life expectancy with HIV in Zambia for 2004. The HDI value would rise if the projected life expectancy without HIV and AIDS was used. Table 5.2 has provided calculations of HDI based on both life expectancy with and without HIV and AIDS.

What comes out is that, without HIV and AIDS Zambia would have an HDI value of 0.491. Therefore, HIV has reduced the HDI by 0.029 or by 5.9 percent. With respect to provincial rankings, the first five ranks are occupied by the same provinces as in the case of HDI with HIV and AIDS. The biggest changes in ranks are Eastern and Northern provinces, which swap ranks of 6 and 9. Lusaka's loss of the first rank to the Copperbelt was due to the fact that Lusaka had a higher HIV prevalence, a factor that reduced its estimated life expectancy when HIV and AIDS is taken into account.

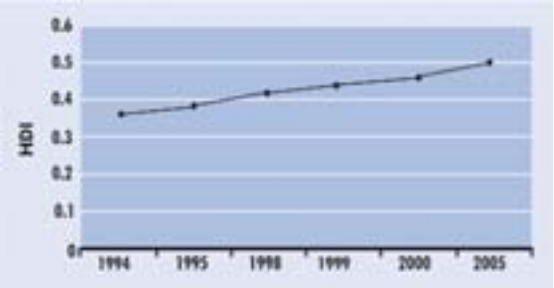
It is also seen that the greatest beneficiaries from a without HIV and AIDS scenario are the line of rail districts which now would occupy the first 13 ranks (see Appendix Tables 1 and 2 on pp. 102-105). As a sign of how the situation would change, Mporokoso which had the fifth rank now drops to 15 - still very respectable for a remote district. The biggest rises in HDI, if the impact of HIV and AIDS on

Figure 5.1: Long-term HDI trends in Zambia and other countries with similar HDI value in 1975



UNDP Database, www.hdr.undp.org/statistics/data/indicators

Figure 5.2: Trends in human development in recent years in Zambia



UNDP, Human Development Reports

Table 5.1: HDI values for Zambia and provinces, 2000 and 2004

	HDI 2000	2000 rank	HDI 2004	2004 rank	2004-2000 HDI difference
Zambia	0.391		0.462		0.071
Central	0.415	3	0.458	4	0.043
Copperbelt	0.481	1	0.552	1	0.071
Eastern	0.340	6	0.406	6	0.066
Luapula	0.326	7	0.385	8	0.059
Lusaka	0.445	2	0.513	2	0.068
Northen	0.310	8	0.384	9	0.074
North Western	0.350	5	0.453	5	0.103
Southern	0.391	4	0.469	3	0.078
Western	0.300	9	0.386	7	0.086

Appendix Table 1

life expectancy is discounted, are in Northern, Southern and Lusaka in that order. North Western would have the least change.

Changes in HDI taking HIV and AIDS into account have only done so from the perspective of life expectancy. However, this is not the whole picture as HIV and AIDS affects human development in various other ways including education attainment and the standard of living as measured by GDP per capita.

In the last three years, controversy has surrounded the estimation of life expectancy. Estimates provided by international organisations such as the USA Bureau of Statistics indicate life expectancy as low as 33 years. The 2005 UNDP HDR used a life expectancy figure of 37.5 years at birth. However, the Central Statistical Office provides much higher life expectancy of 52.7 years with HIV and 57.5 years without HIV. Without entering into this controversy, this report adopts the CSO estimates so as to be consistent with the principle of relying on official statistics in the production of National Human Development Reports. It is also the only way sub-national HDI values could be calculated which is the main added value of National Human Development Reports to global Human Development Reports.

Developments in recent years indicate that progress is being made in areas that have a bearing on the country's life expectancy. There has been a decline in the incidence of the top six diseases since 2001. This is as a result of the response to health reforms and a change in the treatment regime of these diseases (see Figure 5.3). This has been helped by achievements being scored in halting the spread of HIV and the increased access to antiretroviral treatment, both helping to deal effectively with opportunistic infections.

The multisectoral response, by the government in collaboration with other partners, has helped in improving the institutional environment for mitigating HIV and AIDS. Despite the advances made in responding to the epidemic and its impact on affected households, the epidemic remains a big challenge for Zambia.

A slightly more detailed look at two top diseases - malaria and tuberculosis (one of the non-pneumonia respiratory infections) - provides further evidence of some improvement of well being captured in the HDI. Malaria continued to be Zambia's major cause of morbidity and mortality between 2000 and 2004. However, Figure 5.3 shows that the malaria incidence rate per 1,000 fell from 400 in 2000 to just above 200 in 2004. In addition, deaths caused by Malaria reduced from 9,367 in 2001 to 4,765 in 2004. This progress is attributed mainly to the shift in the malaria treatment policy from Chloroquine to more effective arteminisin-based therapy (Coartem) and improvements in the laboratory services. Additional interventions that have contributed to the decline in Malaria include the integrated vector management system, using insecticide treated nets, indoor-residual spraying, package to prevent malaria in pregnancy and the Malaria in School Health Strategy.

Even though this achievement is impressive, the incidence of malaria and morbidity related to malaria are still too high. The situation has been complicated by the high prevalence of HIV, which by compromising the immunity of those infected makes them much more susceptible to malaria. Provision of health services, specifically malaria control programmes (such as the Roll Back Malaria), should receive higher consideration in the delivery of health care through a multisectoral response.

Some progress has also been recorded regarding the treatment of tuberculosis, a disease that has been worsened by the advent of HIV and AIDS. In 2000, the prevalence rate was estimated at 512 per 100,000 (UNDP/MoFNP, 2005). Nevertheless, the cure rate has been

improving with the introduction of a new treatment regime called directly observed treatment (DOTs) and drug compliance (see Figure 5.4). As a result, TB cure rates have improved for all provinces except Luapula and Southern.

By April 2005, all provinces except North Western recorded cure rates beyond 50 percent. Besides DOTs other factors include the rise in treatment seeking behaviour and improved access to diagnosis and treatment centres. There was also improved supply of TB drugs through the Okinawa Infectious Disease Project, in which Japan provided a continuous supply of TB drugs to last up to the end of 2004.

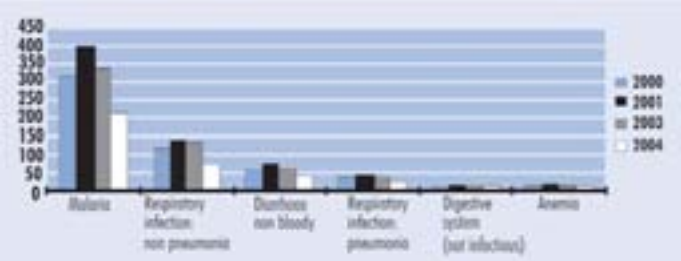
Literacy and education

The rise in the HDI noted above has been helped by improved education achievements. The education attainment index rose to 0.720 in 2004 from 0.620 in 1998 and 0.590 in 2000. An increase in access to education in basic and secondary education is evident (See Figures 5.5 and 5.6 on p. 74). The net enrolment ratio, which was on the decline since 1998, rose from 69.9 percent in 2000 to 76.2 percent in 2003. At the same time, enrolments at secondary schools (grades 8-12) increased from 165,435 in 2000 to 210,061 in 2003 or by 21.2 percent.

These improvements are attributed to policies that have created a positive environment for education, including the successes scored by the Basic Education Sector Investment Programme that ended in 2002 and the adoption of the Free Primary Education Policy in 2002. Funding to the education sector has been on the rise. Thus education has been allocated 27 percent of the total discretionary budget in the 2006 budget compared to 21.7 percent in 2003.

The upgrading of many primary schools to basic schools, i.e. to include grades 8 and 9 classes has helped to push up enrolment in secondary education. As a result, the gross secondary enrolment ratio rose from

Figure 5.3: Incidence of top diseases in Zambia between 2000 and 2004



Ministry of Finance and National Planning. Economic Report, 2004

Figure 5.4: TB cure rates in Zambia, 2005

CBoH, 2005. Report on National TB Meeting, April 2005.

Table 5.2: HDI values with and without HIV and AIDS, 2004

	With HIV and AIDS		Without HIV and AIDS		Difference (percent)
		Rank		Rank	
Zambia	0.462		0.491		5.9
Central	0.458	4	0.490	4	6.5
Copperbelt	0.552	1	0.583	1	5.3
Eastern	0.367	6	0.393	9	6.6
Luapula	0.385	7	0.405	8	4.9
Lusaka	0.513	2	0.560	2	8.3
Northern	0.384	9	0.441	6	13.0
North Western	0.453	5	0.470	5	3.7
Southern	0.469	3	0.512	3	8.4
Western	0.386	8	0.410	7	5.9

Appendix Tables 1 and 2.

25 percent in 2000 to 50 percent in 2004. Much of this was accounted for by the increase in the gross attendance rate in grades 8 and 9 from 44 percent in 2000 to 74 in 2004.

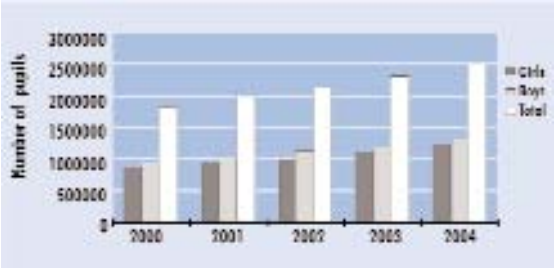
Between 2000 and 2004, the number of basic schools rose from 4,378 in 2000 to 6,728 in 2004, an increase of 54 percent. The introduction of Academic Production Unit classes, supported by the construction of more schools and construction of new classrooms has also been favourable to the increase in enrolment rates in both primary and secondary education.

In both primary and secondary schools, an impressive development has been the rising trend in girls' access to education. The gross enrolment ratio for girls in primary education caught up with that of boys at 90 percent in 2002. The higher enrolment figures for girls have been achieved because of the implementation of the Programme for the Advancement of Girls Education. Results have been most impressive in Lusaka which has seen the proportion of girls (50.7 percent) outstrip that of boys in 2004. Even though a 50:50 boy/girl ratio has been reached at primary school enrolments and to a lesser extent up to grade 8 and 9 in basic schools, areas of concern still remain. Some observers suggest that the quality of education has continued to decline. In many upgraded schools, adequate and well-qualified teachers have not been recruited while overcrowding in classrooms and inadequate supplies of school reading materials have also led to the deterioration of the quality of education. Zambia's quest to reach the HIPC completion point and the cap that was put on public sector recruitments made it difficult to make headway in reducing the pupil-teacher ratio which rose from 38 pupils per teacher in 1996 to 60.7 pupils per teacher in 2004.

HIV and AIDS have not spared the education sector either. The effects have manifested in the decline of the number of teachers. Part of the deterioration in the pupil-teacher ratio has been attributed to AIDS-related deaths. As many as 1,300 teachers died in 1998 due to AIDS-related illnesses. This was about two thirds of all new recruitments. The demand for education is also going down. Children from HIV and AIDS affected households are being withdrawn to help cope with the loss of labour in the home. Where they are not withdrawn altogether, they only attend school intermittently. Their capacity to learn is also affected because they are often tired or are having to deal with negative psychosocial impacts.

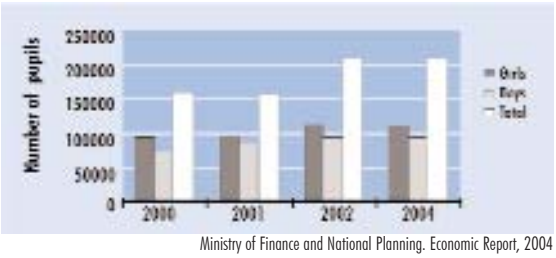
There has been a rapid expansion of the tertiary education sector in recent years. This is mainly due to the success scored in the technical education and vocation training system. According to the Technical Education, Vocational and Entrepreneurship Training Authority and the Ministry of Science, Technology and Vocational Training, the number of approved institutions offering tertiary education, other than universities, rose from 151 in 2000 to 319 in

Figure 5.5: Enrolment in basic schools (grades 1-9) in Zambia, 2000-2004



Ministry of Finance and National Planning. Economic Report, 2004

Figure 5.6: Enrolment in secondary schools (grades 10-12) in Zambia, 2000-2003



Ministry of Finance and National Planning. Economic Report, 2004

2004. In the same period, the number of students increased by 159 percent from 9,660 in 2000 to 32,841 in 2004. Correspondingly, the proportion of female students has increased slightly to 44 percent in 2004 from 41 percent in 2000.

GDP per capita

The rise in Zambia's human development index has benefited from the economic turnaround the country has experienced in the last few years. The economy for the first time since the first years of independence grew for seven years in a row between 1999 and 2005. As a result, GDP per capita rose by 18.9 percent between 1999 and 2005. The rebound in economic growth has been driven by growth in construction, wholesale and retail trading and mining. The agriculture sector has also grown every year except in 2001 and 2004 when there were droughts. Most impressive has been the growth on non-traditional exports mostly driven by agriculture. The mining sector has seen some new investments resulting in a 60 percent increase in copper output from 256,884 metric tonnes (MT) in 2000 to 410,971 MT in 2004. In the same period, cobalt production increased by 80 percent from 3,538 in 2000 to 6,390 in 2004 (MoFNP, 2003 and 2004).

Despite the overall rise in GDP per capita, it has only translated in an average annual increase of 2.7 percent. Therefore, although the economy has been growing, in per capita terms, given the country's population growth rates, it is not very significant. It is thus not surprising that poverty between 1998 and 2004 dropped only slightly from 73 percent to 68 percent despite this growth. It has thus been suggested that for a significant impact on poverty, the Zambian economy needs to grow constantly at a rate higher than 7 percent (GRZ, 2006).

As seen in Chapter 3, the good economic performance is under threat due to the negative effects of HIV and AIDS but particularly through decreased productivity, loss of labour due to death and absenteeism, high turnover of employees and increased replacement and training costs as well as the varied but specific impacts on different sectors and households

Fortunately for Zambia, although there is still a long way to go, the national response has been encouraging. Many stakeholders have advocated for the establishment of HIV and AIDS workplace policies and some companies have already developed and started to implement them while many others have been sensitised to develop such policies. However, at current prevalence levels, the epidemic remains a threat to the growth of the economy.

Human poverty index (HPI) in Zambia

The Human Development Report 1997 inaugurated the concept of human poverty - also called the poverty of lives and opportunities - in an attempt to portray the many faces of poverty. Being analogous to human development, human poverty focuses on deprivations in the three essential areas. Human poverty indices were calculated for 1996 and 1998 in the 1997 and 2000 National Human Development Reports, respectively. HPI was not calculated for 2000 in the 2003 ZHDR due to lack of new LCMS data. To allow strict comparison, the 1996 and 1998 HPI for Zambia and the provinces has been recalculated in this report ensuring that the variables being used are the same. For 2004, data could allow the calculation of HPI for districts as well (Appendix tables 4 and 5 on pp. 108-111). A number of observations arise from the trend in the HPI since 1996.

- The HPI for Zambia improved slightly from 31.4 in 1996 to 29.8 in 1998 and to a further 27.0 in 2004.This reflects a slight lessening in the deprivation of the population in access to critical areas to

support human well-being. The HPI looks at deprivation in a number of things that constitute a desirable living standard - lack of access to safe water, health facilities and food, through the proxy of under-five children who are underweight - as opposed to the incidence of poverty that only takes into account expenditure on food to meet the necessary nutrition and other basic needs.

- The modest improvement in the HPI between 1996 and 2004 is disappointing. It means that, despite the many programmes undertaken since the late 1990s to improve access to facilities that could improve people's lives, there has been no progress made. However, a more detailed look at the different components that constitute the HPI suggests that this is mainly due to worsening deprivation in knowledge, as adult illiteracy rose from 21 percent in 1998 to 32.8 percent in 2004. All the other variables have improved although they remain a source of concern, requiring further progress.

Table 5.3: Growth rates of key economic variables, 2000-2004

Item / sector	Growth rates (%)					
Year	2000	2001	2002	2003	2004	2005
GDP	3.6	4.9	3.3	5.1	5.4	5.2
Population	3.0	2.9	2.9	2.9	2.9	2.8
Mining	0.1	14.0	16.4	3.4	13.9	7.9
Manufacturing	3.6	4.2	5.7	7.6	4.7	2.9
Agriculture	1.0	-6.0	-6.3	8.0	6.1	-4.0
Construction	6.5	11.5	17.4	21.6	20.5	21.2
Wholesale and trading	2.3	5.4	5.0	6.1	5.0	2.4
Non-traditional exports	-10.1	21.2	18.6	-1.5	13.0	19.1

MoFNP, Economic Report 2004 and Macroeconomic Indicators December 2005

- The rise in the percentage of the population that is illiterate is a build up of many school drop outs in both primary and secondary schools after the abolishment of the free basic education policy in the 1980s. The policy was re-introduced in 2002 but its long term benefits from a literacy point of view are yet to be felt. It is also hoped that the increase in enrolments discussed above in recent years will pave way for a more literate society. However, this can only be after some time. The lesson is that gains made in the social sectors need to be protected because their reversal can take place very quickly with serious long term implications.

Table 5.4: Human poverty index for Zambia and provinces, 1996, 1998, 2004

Region	1996	Rank	1998	Rank	2004	Rank
Zambia	31.44		29.80		27.0	
Central	30.63	3	30.04	4	28.0	4
Copperbelt	27.73	2	28.11	3	15.9	2
Eastern	32.74	4	32.92	5	38.5	9
Luapula	41.78	9	44.93	9	34.3	5
Lusaka	19.59	1	19.20	1	15.2	1
Northern	40.77	8	41.90	8	34.8	6
North Western	34.83	5	41.01	7	37.7	8
Southern	37.20	6	26.78	2	23.2	3
Western	38.62	7	37.16	6	35.4	7

Appendix Table 3

- Provinces along the line of rail have had lower HPI than provinces away from the line of rail which consistently occupied the first four ranks as in the case of HDI. However, this excludes Southern Province, which in 1996 occupied the sixth rank. This was as a result of the high proportion of people without access to safe water because of the severe droughts in the 1990s. As expected, deprivation is more prevalent in rural areas.

- Luapula Province had the most deprived population in 1996 and 1998 on account

of the high under-five child mortality, underweight children and proportion of people without safe water. However, Luapula made a significant improvement in the HPI from 44.9 in 1998 to 34.3 in 2004. In Eastern Province HPI deteriorated sharply from 32.9 in 1998 to 38.5 in 2004. This is mainly accounted for by the drastic rise in adult illiteracy from 29.6 percent in 1998 to 52.4 percent in 2004 compared to the rise in the national average from 21 percent to 32.8 percent respectively.

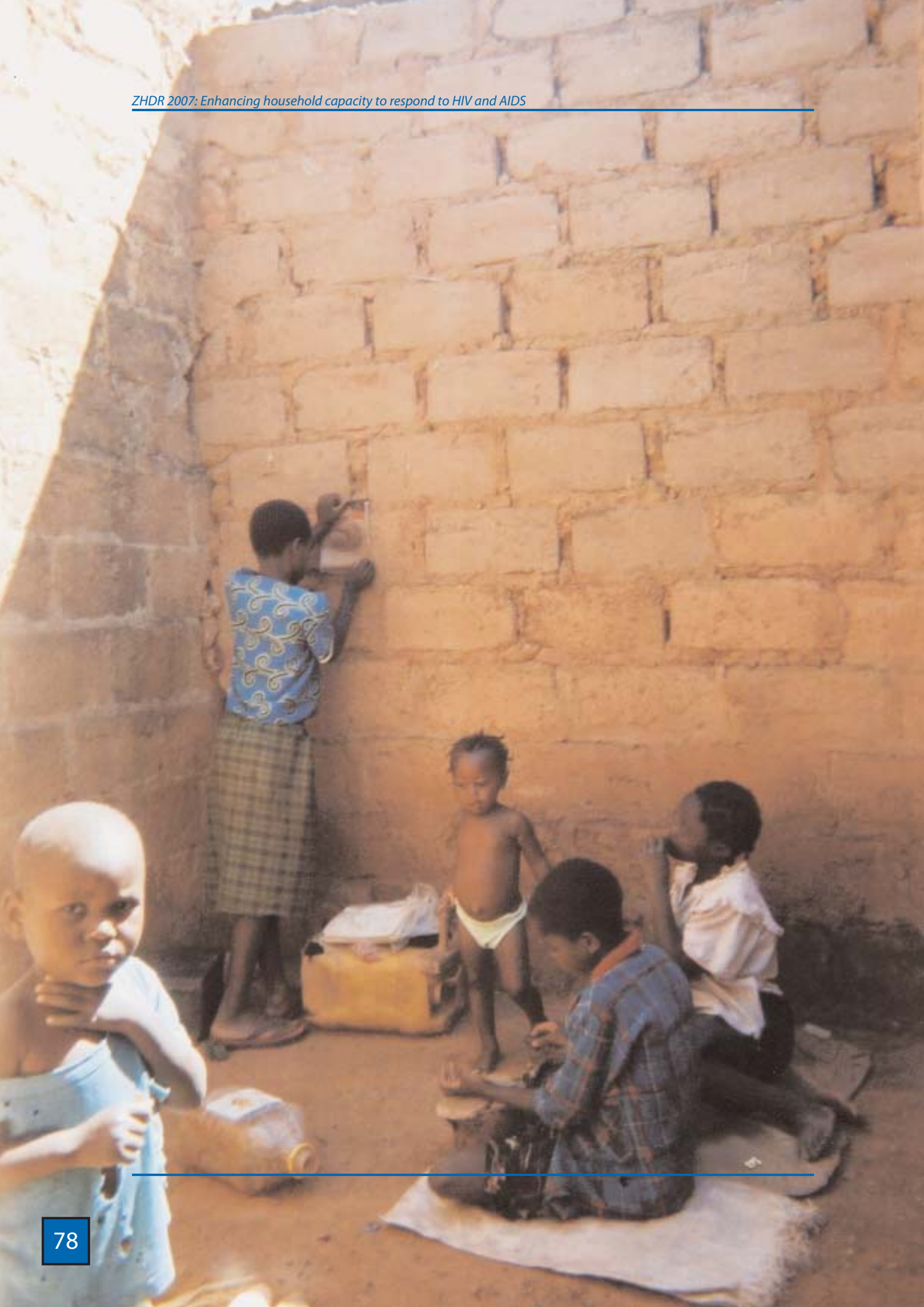
Conclusions

The discussion on the human development status indicates that Zambia may have started to emerge out of its deep human development crisis compounded by HIV and AIDS in the recent past. However, with some improvement in HDI in the last five years, deprivation to longevity of life, decent standard of living and knowledge all remain sources of great concern. Therefore, the HPI improved only slightly between 1998 and 2004.

As the calculation of HDI and HPI for districts has been done for the first time in this report, it is obvious that further effort is required to improve the data for more meaningful analysis to emerge. The HDI values from some rural districts appear too high compared to the general information known about them. It is nevertheless difficult to verify this without a full validation of each of the variables constituting HDI. Such a validation can only be carried out with the help of the Central Statistical Office. There is potential that district based HDI could be adopted as a criteria for spatial planning and resource allocation aimed at upgrading people's well being.

In order for the country to record improvements in the HDI, a number of challenges have to be overcome. These include: improving adult life expectancy through good health programmes; ensuring household food security; improving the enrolment and especially the progression of females to secondary schools and tertiary levels whilst ensuring that the quality of education in currently overcrowded schools is improved; and, ensuring that the real per capita income continues to increase through continuous growth of the economy while focusing on broad based economic growth.

HIV and AIDS has compounded these problems by stretching the little resources households have and reduced productivity which have led to increased food insecurity and poverty.



6 ~ An agenda for enhancing household capacity to respond to HIV and AIDS

As presented in Chapter 3, despite the projected decline in the HIV prevalence, the incidences of new HIV cases and annual AIDS-related deaths in Zambia will remain relatively high for some time to come. This is mainly due to many HIV-infected persons survive for a number of years before eventually developing full-blown AIDS and passing away. Households, being the primary units for coping with the disease and its consequences, will continue to bear most of the burden. They absorb the immediate impact of the HIV and AIDS epidemic. For this reason, efforts to respond to HIV and AIDS in Zambia should focus on enhancing the capacity of the household.

HIV and AIDS initiatives being implemented in Zambia (Chapter 4) have been tremendous and encouraging. However, most of these programmes are short-term, not holistic by design, have not taken into account all the needs and issues affecting households and are without inbuilt sustainability. For example, many households looking after orphans are overwhelmed with the multiple needs confronting them. Most of these households are impoverished and therefore require support that target poverty reduction and improve their capacity to obtain beneficial livelihood outcomes, which include improved incomes and food security. Poverty as a result of HIV and AIDS at the household level is a very serious problem as it has even impacted negatively on household food security.

The bi-directional nature of the relationship between HIV and AIDS and household poverty or food insecurity requires understanding. There is need for measures that: (i) prevent HIV and AIDS affected households from sliding into destitution and risk of starvation; and, (ii) prevent poverty stricken households from engaging in behaviour that puts them at risk of getting HIV infected and transmitting it to others.

In coming up with suggestions on how to comprehensively deal with HIV and AIDS, this chapter relies on the sustainable livelihoods approach (SLA) which has the advantage of amplifying the crucial elements that need to be tackled in successful HIV and AIDS initiatives focused at the household. The impacts of HIV and AIDS on the separate elements of the SLA have been discussed in Chapter 1 with evidence provided in Chapter 3. The sections that follow suggest responses to address HIV and AIDS impacts at household level for each of the elements in the SLA.

Although this is not a proposal for a programme, it nevertheless provides an outline of the framework that will coordinate the actions of various players as they deal with HIV and AIDS with a view to help households adjust successfully to the HIV and AIDS situation.

Goal and immediate objectives

The overall goal of the framework suggested by this Report is to create an inclusive society in which both the strong and the weak can thrive and prosper. This recognises that HIV and AIDS is a key obstacle for creating such a society. Projections are bright that Zambia will experience economic growth in the next few years. However, there is a high possibility that this prosperity will bypass the majority because they have little means to share in it. High levels and widespread poverty have disempowered the majority of Zambia's population to participate meaningfully in the country's devel-

"Playing School"

These kids werre playing school outside their home. One of the girls goes to my class. She is the one we see with the back to us. She is playing the teacher. I liked the way they were playing. It makes me happy.

Photographer: Margaret Chitono

opmental process. AIDS is complicating this situation as it deepens poverty and erodes assets at people's disposal. HIV-affected households risk being excluded from the anticipated economic prosperity. Conversely, they also pose a risk to putting a break on the anticipated economic growth, unless they are made part of the process.

The immediate objective of actions suggested below is to assist HIV and AIDS affected households to adjust successfully to the HIV and AIDS situation within the household and obtain beneficial livelihood outcomes. There is an unlimited range of what each household considers beneficial livelihood outcomes. Universally accepted outcomes include improved household incomes, adequate access to food throughout the year, resilience to shocks and a more sustainable use of natural resources. The sum of these is improvements in a households' human development as outlined in Chapter 1.

For AIDS-affected households to attain this, they must be assisted to adopt viable livelihood strategies. This can be done by strengthening the assets at their disposal and by revitalising the support structures within communities that exist to help the weak. This means addressing the downward spiral of human development into which HIV and AIDS has negatively locked AIDS-affected households.

Strengthening household capacity in the response to HIV and AIDS requires that households are provided with the means to deal with the threats of HIV and AIDS on assets and viable livelihood strategies. No single institution is able to do this. Rather, each institution can contribute something to this process. Fortunately, there is a lot that different institutions can do without duplicating efforts. What is important is to know the unique strengths of different organisations and arrange their effort in such a way that the different dimensions shaping the vulnerability context created by HIV and AIDS are addressed. This requires a well thought through framework.

Expected outcomes and required actions

1 Response to HIV and AIDS at household level

For a household to be deemed as having the capacity to respond to HIV and AIDS, it must be able to tackle the epidemic from three angles: Awareness and prevention, treatment and care and the ability to adopt viable livelihood strategies, despite the impacts of the epidemic.

Awareness and prevention

Household members should be able to access information about HIV and AIDS and take measures to prevent themselves and others against HIV infection. They must have the ability to receive the information, process it and take necessary actions against being infected or infecting others. Instead of stigmatising household members living with HIV, knowledgeable households would commit themselves to providing the sick with care and support.

This outcome faces many challenges. To start with, information must be made available through appropriate channels. Then the quality of human capital in the household is crucially important as educated members are more likely to access this information and act on it. Society's gender discrimination that makes women economically dependent on men makes it difficult for many women to negotiate for safe sex even where their spouse's infidelity is obvious. In most cases, even where women are economically strong, socialisation places women at a disadvantage in avoiding being infected, making it imperative to address society's structures and processes in the response against HIV and AIDS.

Poverty is another big obstacle. Viable livelihoods are an important component in

helping households to take preventive measures. Safer sex is not without cost. Spending money regularly on a condom is actually not an easy option for many poor households. Further, some household members may be forced to sell sex as a means to survive their excruciating poverty. Therefore, even at the level of prevention, the asset base is a critical aspect.

Treatment and care

An AIDS-affected household should be able to access treatment for its members with HIV-related illnesses and provide care to them without harming the prospects of its livelihood outcomes.

Accessing treatment is dependent on the functioning of the country's health system that must be strengthened to cope with the epidemic. From the household's point of view, this is dependent not only on whether treatment is available at a designated health centre but also whether household members can get there. This is a big challenge in a country where many people have to walk for more than five kilometers to the nearest health centre.

The extreme poor, 53 percent of Zambia's population in 2004, have little access to even intermediate means of transportation and such distances are a major constraint in their accessing treatment. If such poor people are put on antiretroviral therapy, adherence on account of transportation difficulties alone will be a big challenge.

The efficacy of antiretroviral treatment is also dependent on the nutritional status of patients, another big challenge in a country with widespread malnutrition. Therefore, strategies that move people out of biting poverty and improve their food security will help them to both access treatment and make better use of it.

When it comes to care, this should not foreclose the household's pursuit of livelihood outcomes of its own choice. However, this is often the case. By adjusting to less labour-intensive but reasonably profitable activities, households may be able to prevent this. The problem is that people already in extreme poverty have few options remaining for obtaining beneficial livelihood outcomes.

Ability to adopt viable livelihood outcomes.

An HIV and AIDS affected household should be able to make successful adjustments to the HIV and AIDS situation, without irretrievably damaging its livelihood outcomes. The three scenarios for HIV and AIDS affected households stated above must be borne in mind. Even at the best of times adjusting successfully to these situations will come at a very high cost. This is even more remote for poor households. Household-focused initiatives must therefore aim at promoting livelihoods security for households being made even more vulnerable by HIV and AIDS. HIV and AIDS affected households should be helped to secure the assets at their disposal. Support systems within each community should render a helping hand and must therefore be revitalised.

Having defined what constitutes household capacity for responding to HIV and AIDS, the SLA framework can be used to propose broad areas that need tackling with a view to build and strengthen this capacity. Three broad action areas are proposed: (i) amending the country's development process so that it becomes more supportive to HIV and AIDS affected households; (ii) revitalising support structures at community level; and, (iii) enhancing household assets.

2 Make development supportive to HIV and AIDS affected households

Measures are required to reform the general economic and policy environment so that it is more supportive to households as they make adjustments to HIV and AIDS. Measures that promote broad-based economic growth, if they are successful in

eradicating the unacceptably high levels of poverty, help to build capacities in households to respond to HIV and AIDS.

Poverty is a chief enemy in the response to the HIV and AIDS pandemic and tackling it must be given due priority in all development initiatives.

The AIDS epidemic is highlighting the fault lines of development initiatives that have existed all along, particularly their limited inclusiveness. This is because they tend to leave out the weak and vulnerable in society. In one sense therefore, the crisis offers us an opportunity to reform our development processes to make them more inclusive. In fact, what is good in responding to HIV and AIDS tends to also be good for poverty eradication and gender empowerment.

Promoting a conducive environment for empowering households to respond to HIV and AIDS besides reforming the overall development process requires a number of specific things to be put in place including:

Strengthening macro and meso level agencies so that HIV and AIDS does not unravel their capacity to deliver on their mandates. Each organisation must become a learning organisation that responds to the risks posed by HIV and AIDS to its mandate and altering internal and external environments of the organisation as a result of the epidemic. Organisations must strengthen their internal capacity to carry on their work in an even more challenging environment. The current multisectoral approach has correctly emphasised all these. However, more needs to be done by helping organisations to refine their instruments to ensure that they are more supportive to households faced with HIV and AIDS.

Adoption of policies and laws that improve the environment for responding to HIV and AIDS and empower households. A reform in the policy and legal framework is required to protect the PLWHA to enjoy the same freedoms and liberties and to be able to access the same level of economic provisioning that is due to everyone else. This should be seen in conjunction with the above point on strengthening macro and meso organisations. Not only should the policies and laws be correct, but there should also be a capacity to enforce them. For example, the passing of the Inheritance Act has moved things in the right direction. However, in a country where the legal system is both costly and inefficient, widows have little recourse to the law when their rights are infringed upon.

Promoting an environment that allows adaptive structures to flourish. District and sub-district level structures - such as local authorities, traditional rulers, faith-based organisations and community-based organisations - are closer to households than are macro and meso level organisations. They must therefore be in the frontline in enhancing household capacities to respond to HIV and AIDS. The centralised nature of Zambia's governance system makes it difficult for these institutions to thrive and be as helpful as they should be to households in difficult circumstances. The capacity to execute effective action seems to exist only at the centre. The first necessary step is reforming this system through democratic decentralisation. A decentralisation policy was adopted in 2002 but steps towards this have only been tentative so far. There is urgent need to quicken the pace both for the HIV and AIDS situation and inclusive development. Secondly, there must be a deliberate focus to strengthen district and sub-district level institutions to attain the needed capacity to promote the well being of citizens they serve at their level.

3 Revitalise support structures at community level

The social, institutional and organisational environment at community level should be

addressed so that it remains supportive to HIV and AIDS affected households as they struggle to make adjustments. Initiatives related to this will have two aspects: identifying positive elements that are supportive to successful adjustment and taking measures to strengthen them. Each community has ways and means to support AIDS-affected households in awareness and prevention, treatment and care and mitigation of the adverse impacts.

HIV and AIDS pandemic weakens the functioning of community support systems. It erodes societal norms of social solidarity with the vulnerable, as local structures are stretched to the limit by the consequences of the crisis.

In seeking to address this, some institutions have sought to support community caregivers, an approach which actually buys into Zambia's cultural norms of this solidarity. This may mean supporting and strengthening structures that are closest to households. Traditional leaders and their structures can be very effective in mobilising societies to help households to adjust to the HIV and AIDS situation and thus their role should be enhanced. The effectiveness of utilising community based organisations in addressing HIV and AIDS affected households is now well recognised and should be further supported.

The second aspect is identifying negative elements within existing structures and processes that are inhibitors to a successful adjustment of HIV and AIDS affected households. This is beginning to be recognised although there is still a long way to go. For example, practices such as sexual cleansing or spouse inheritance are now being widely discouraged. There are also steps to discourage property grabbing though this still remains firmly entrenched in most societies in Zambia.

There is wide discrimination against women in Zambian cultures with respect to access to productive assets. It is difficult for women to obtain land or accumulate livestock as ownership is mostly through the male members of the household. Gender discrimination often means that the quality of female human capital is low because they are less educated and are kept away from processes that impart essential knowledge and skills for higher productivity. Women, therefore, face a sudden downward spiral after the death of their husbands because they lack the basis for pursuing beneficial livelihood outcomes.

4 Enhance household assets

Measures need to be taken to strengthen each of the five elements of the asset pentagon in the sustainable livelihoods approach (see Figure 1.4 on p. 17). Suggestions are provided below.

The main idea is to turn the vicious cycle between livelihoods and HIV and AIDS into a virtuous cycle. An example is provided from the cycle between livelihoods, HIV and AIDS and water resource management and utilisation in Figure 1.3 on p. 16 in Chapter 1.

Human capital

Human capital is often the immediate casualty the household is confronted with when it faces the effects of losing a household member, looking after a chronically ill patient or hosting an orphan. The most pervasive impacts are the depletion of labour that could otherwise be put at the disposal of pursuing beneficial livelihoods outcomes, the degrading of the quality of this labour both in the short and long term and the psychosocial effects that tend to paralyse the potential of household members to pursue viable livelihood strategies. Therefore, the first tool in the initiatives for acting against HIV and AIDS is enhanced human capital. The success of all other initiatives depends on whether households can overcome the erosions to human capital and employ what remains to obtain beneficial livelihoods outcomes. Some of the

measures in this include the following: **Promotion of labour-saving production practices**. In rural areas this would include the promotion of the adoption of conservation farming practices, small livestock such as goats and chickens and household based agro-processing implements that reduce on household labour demands.

Education support schemes for children from AIDS-affected households. Thus far, such schemes have focused on households hosting orphans. This should be widened to cover all types of AIDS-affected households. Although it may be difficult to identify the households due to stigma, proxy indicators could be utilised instead, such as targeting households hosting any chronically ill patient. Apart from helping to meet education costs, cash transfer schemes to vulnerable households reduce the need for children in these households to be withdrawn from school to help the household cope with reduced labour. School feeding programmes have proved effective in keeping children from vulnerable households in school while helping to create a happier environment for learning.

The school place must be made more supportive to children affected by HIV and AIDS. This may require provision of psychosocial support to such children and tackling stigma in schools.

The school curricula should be revised to offer practical skills. The aim is to help orphans enter the labour market from a stronger base. In addition, orphans and other vulnerable children forced to start work early must be offered opportunities to upgrade their educational attainment while working, so that they are not locked in a cycle of low education and poverty.

Financial capital

The varied financial implications of being an HIV-affected household require specific initiatives. The aim is to help these households meet the extra financial burden they face when looking after a chronically ill household member and meeting funeral expenses. It is also meant to help cushion the financial impact of loss of income as a result of death and when a household enlarges as orphans are taken in. In general, initiatives that help poor people expand or protect their financial base are also good for helping HIV-affected households:

Promotion of small livestock such as goats and chickens that can be easily converted into cash at any time of the year. Currently the Agriculture Support Programme is experimenting with a model which encourages poor households to acquire a few chickens and multiply them. The chickens can be sold to raise cash at critical times of the farming season to acquire inputs, pay for labour during cultivation, weeding and harvesting. Some of the cash is used to buy more chickens and the cycle is allowed to continue. For an HIV-affected household, the model is a good way to obtain the extra cash required to cushion the losses it suffers.

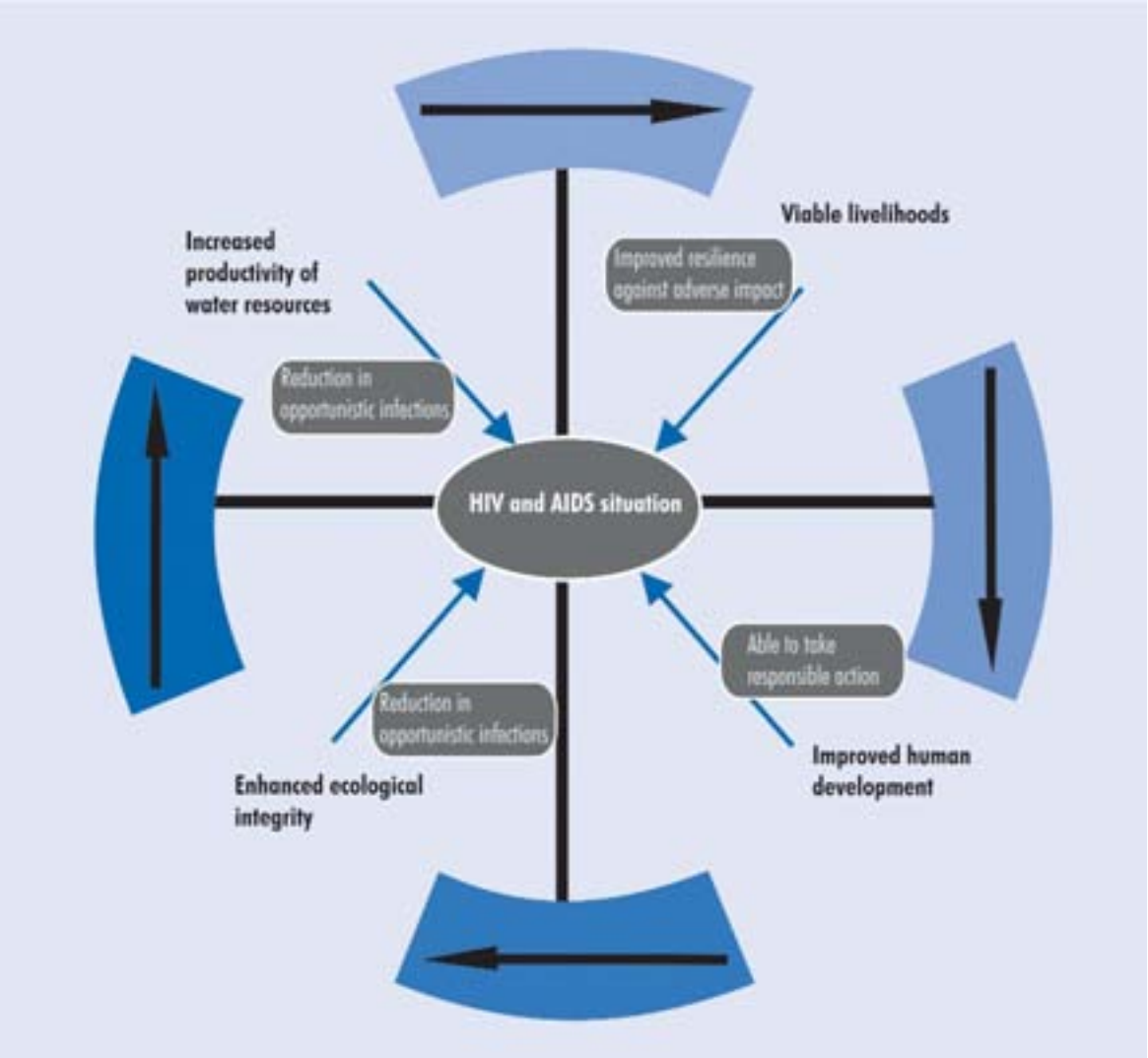
Promotion of pro-poor savings and credit schemes. Accumulated savings and credit associations, such as are being advocated for under the Rural Financial Programme, have the potential of allowing the poorest access cash in critical situations.

Widening the direct cash transfer and other safety nets. The Kalomo Cash Transfer supported by GTZ as a pilot project yielded very good results and must be scaled up. Some HIV-affected households should be helped to meet costs for health, education, food and farm inputs.

Physical capital

Physical assets are depleted due to distress selling, as the household is faced with extra financial obligations. If a household's human and financial capital can be protected, there is good chance that the physical capital will be protected as well. However, additional actions to protect and expand physical assets in HIV and AIDS affected households are required as well:

Figure 6.1: From vicious cycle to virtuous cycle: HIV and AIDS and water management



Livestock multiplication and re-stocking initiatives. This should in particular target households whose livestock has been depleted due to distress selling or property grabbing. This should be backed by strong support services such as livestock extension and provision of veterinary services.

Strong enforcement of the Inheritance Act. This should be aimed at ensuring that property is not grabbed by relatives in the event of one's death.

Ensuring greater access to productive assets by women. Even if property is not grabbed following the death of the husband, women face problems in protecting and expanding these assets because of the ongoing gender discrimination. If a woman has to relocate, for example, from the urban to the rural area, she would face serious difficulties to obtain agricultural land. Women also face problems in accessing credit for acquiring productive assets.

Social capital

The aim is to strengthen the social networks that households in distress first call upon for support. This recognises that whereas AIDS magnifies the need for these networks, it also erodes the capacity for their effective response due to its overburdening nature. It is thus necessary that social capital be rebuilt. However, not much is known with respect to how this social capital works, as this varies from one socie-

ty to another. More in-depth analysis is required before devising specific initiatives. However, some broad principles can be suggested:

Tap into and strengthen the social solidarity to identify with the weak that exist in Zambia's societies. This should start with sensitisation and allowing communities to suggest ways in which they can help households falling in distress.

Encourage the formation of interest groups that are sensitive to AIDS-affected households. These households find it difficult to belong to groups in the first place. Innovative ways are thus required to encourage their participation so that they are part of the ongoing life in the community and make it much easier to be helped.

Support faith and community based organisations that are supporting the vulnerable in the community by strengthening their organisations and capacity to meet the mandates they set out to do.

Natural capital

Natural assets are being depleted due to the negative impacts of poverty in general and AIDS in particular. However, it is also becoming more difficult for households to make good use of these resources because of loss of household capacity. Initiatives in this area should thus aim both at promoting sustainable natural resource exploitation and management and enhancing the capacity for HIV and AIDS affected households to exploit the available natural resources to get beneficial livelihood outcomes. The following measures are important:

Mainstream HIV and AIDS in community-based natural resource management schemes. Zambia has many such schemes such as in forestry, wildlife, fish and water resources. The schemes need to be made more sensitive to AIDS-affected households both from management and utilisation view point.

Promote the adoption of gender-friendly land tenure in communities and at national level. Women should be able to acquire land in their own right so that they are not thrown into destitution when their spouse dies.

Natural resource management groups to pay attention to passing on of skills and knowledge to the younger generation including to some of those who may have lost one or both parents and have little opportunity to acquire such skills from home.

Institutional arrangements

The sustainable livelihoods framework, as discussed earlier in the Chapter, has potential for a comprehensive and holistic response to the problem of HIV and AIDS. As pointed out in Chapter 4, a lot is already being done that answers various aspects of the different elements of the framework. However, these tend to be patchy, uncoordinated and with little inbuilt sustainability. The value of the framework is to enumerate clearly the different dimensions in which HIV and AIDS affect households and therefore point to ways in which a holistic response can be mounted. It is possible to come up with a minimum package of support to HIV and AIDS affected households that is comprehensive enough to help them deal with the often downward spiral in well being and allow them the opportunity to attain beneficial livelihood outcomes.

For the framework to work, it needs to be championed and coordinated. It requires effective structures. However, rather than build new structures, it is proposed that this framework be imbedded in the existing structure under the National HIV/AIDS/STD/TB Council (NAC), which is coordinating the response to HIV and AIDS using a multisectoral approach. The new strategic framework is much more amenable to creating a household focus. For example, under the third theme, one of the strategic objectives is: Promote programmes of food security and income/livelihood generation

for PLWHA and their caregivers or families. NAC can utilise the SLA framework in pursuing this strategic objective.

However, although the new strategic framework has taken steps in the right direction, the household focus is not as explicit as it should be given the importance for targeted actions at that level. There is need to mainstream the household in all the themes and strategic objectives in the National HIV and AIDS Strategic Framework 2006-2010. Examples of some of the issues that need to be added under each theme are provided below.

Intensifying prevention. To make prevention specifically relevant to households, there is need to find ways and means of how prevention can focus on the household. Issues of access to information, affordability of prevention methods being promoted and social and cultural aspects that make prevention difficult at household level, including gender discrimination, should be specifically addressed. Issues of prevention should be linked to promotion of beneficial livelihood outcomes because it has been shown that awareness alone will not translate into prevention if households live in abject poverty.

Expanding treatment, care and support. There are two main issues in treatment, care and support for a household focus. The first is how AIDS-affected households could access treatment more readily and on a sustainable basis. Issues of livelihoods are again key to access and adherence to treatment. The second is the ability of households to care for their members with HIV-related illnesses without compromising their pursuit of beneficial livelihood outcomes. These issues have not been made explicit under this theme.

Mitigation of socioeconomic impact. Mitigation of socioeconomic impacts has been addressed in the preceding chapters. The only call is to utilise the SLA Framework to help enumerate the various ways in which the epidemic is affecting households and then come up with a comprehensive response.

Strengthening the decentralised response and mainstreaming HIV and AIDS. Although one of the strategic objectives is to mainstream HIV and AIDS into district level development policies, strategies, plans and budgets, it is not clearly stated that lower level structures are going to be strengthened so that they are more supportive to AIDS-affected households. There is need for a clear focus on revitalising community structures that would support AIDS-affected households.

Improving the monitoring of the response. NAC needs to put in place participatory monitoring systems that allow community members to contribute to the provision of information and tracking indicators.

Integrating advocacy and coordination of the multisectoral response. There is a need to advocate for a development process that is more supportive of HIV and AIDS affected and other vulnerable households. The issues that should be addressed with this inclusion have been elaborated above.

Table 6.1: Required actions to enhance the capacity of households to respond to HIV and AIDS

REQUIRED ACTIONS AND MAIN PLAYER	TIME FRAME*
GOVERNMENT	
Make the nation's development process more supportive to HIV and AIDS affected households	MT/LT
Intensify external and internal financial resource mobilisation and put in place mechanisms to ensure that funds reach intended beneficiaries (households)	ST/MT
Mainstream a household focus in the current strategic framework of the NAC	ST
Review Zambia's social security system and make it more amenable to AIDS-affected households	ST/MT
Improve the health services especially in rural areas and make treatment more accessible to those with AIDS-related illnesses	MT/LT
Take stock of successful initiatives targeted at households and communities and take steps to scale up these initiatives	ST/MT
Promote gender equality by: (i) Reviewing, strengthening and enforcing ownership and inheritance laws (ii) Promoting awareness, at the community level, of the impact of gender inequality on HIV-affected households (iii) Supporting women's organisations already campaigning for improved access to land, property ownership and inheritance rights (iv) Supporting self-help and support groups (v) Supporting strategies designed to increase women's financial independence, such as micro-credit schemes	MT/LT
Put in place a cadre of extension officers in the health sector to link health institutions with the household	MT/LT
Provide direct cash or support to vulnerable households	ST/MT
Develop policies that create an enabling environment for partnership with other service providers	MT/LT
Develop indicators and mechanisms to monitor and evaluate the effectiveness of activities and initiatives to respond to HIV/AIDS at the household level	MT/LT
Scale up VCT, PMTCT, condom promotion and treatment of opportunistic infections and provision of ARVs	ST/MT
Develop a policy to provide psychosocial support to children affected by HIV and AIDS especially in schools	ST/MT
Re-introduce school health in all schools with a focus on basic hygiene and nutrition	MT
Revise school curricula to offer practical skills	MT/LT
Put in place structures up to village level that will monitor support to households	ST/LT
Provide strong support services such as livestock extension and provision of veterinary services	MT/LT
Provide nutritional care and support to people living with HIV to prevent or forestall nutritional depletion	ST/MT
Mainstream traditional authorities in the governance system and budgetary process	MT
NON-GOVERNMENTAL ORGANIZATIONS	
Participatory tools for monitoring actions to support HIV-affected households	MT
Promote labour-saving production practices	MT/LT
Broker partnership with Government and be the vehicle for providing direct support to households in need	MT/LT
Develop and implement programmes that build capacities for members of the households so that they are able to cope with the impact of HIV and AIDS	ST/MT
Provide psychosocial support to children affected by HIV and AIDS	ST/MT
Provide care and support to members of households living with HIV	ST/MT
Develop and implement sustainable programmes for household food security	MT/LT

** Short term (ST), Medium term (MT) and Long term (LT)*

...Table 6.1: Required Actions to Enhance the Capacity of Households to Respond to HIV and AIDS

REQUIRED ACTIONS AND MAIN PLAYER	TIME FRAME
...NON-GOVERNMENTAL ORGANIZATIONS	
Train households in self-esteem, assertiveness, income generation skills, entrepreneurship and marketing skills	ST/MT
Carry out a mapping exercise of vulnerable households	ST/MT
Promote pro-poor savings and credit schemes	MT
Introduce/scale up direct cash transfer and other safety nets for vulnerable households	ST/MT
Encourage livestock multiplication and re-stocking initiatives	ST/MT/LT
Encourage the formation of interest groups that are sensitive to HIV and AIDS-affected households	ST/MT
Mainstream HIV and AIDS in community-based natural resource management schemes	MT/LT
Promote the adoption of gender-friendly land tenure in communities and at national level	MT/LT
Sensitise communities about cultural/traditional practices (e.g. sexual cleansing, spouse inheritance, property grabbing and discrimination against women) that facilitate the spread of HIV	ST/MT
Identify positive elements in community support structures that help households adjust to the HIV and AIDS situation and sensitise people about them	MT/LT
Provide accurate information to correct misleading information and misconceptions surrounding HIV and AIDS in order to eliminate or reduce stigma and discrimination	MT/LT
TRADITIONAL AUTHORITIES	
Map all households in their jurisdiction	ST
Account for all births and deaths in each household in the community	ST
Mobilise local resources available to support vulnerable households	MT/LT
Find innovative ways of preparing and preserving local foods to ensure that households without food have enough to eat	MT/LT
Ensure that each household has a granary and discourage households from selling and exchanging all the food grown	MT/LT
Encourage/strengthen positive elements in community support structures in order to help households adjust to the HIV and AIDS situation	MT/LT
Discourage traditional/cultural practices (e.g. sexual cleansing, spouse inheritance, property grabbing, and discrimination against women) that facilitate the spread of HIV	MT/LT
Promote small livestock production that can easily be converted into cash at any time of the year	ST/MT/LT
HOUSEHOLDS	
Engage in income generating activities that improve beneficial livelihood outcomes	ST/MT/L
Stop early marriages of girls	MT/LT
Socialise children using approaches that take into account the AIDS epidemic	MT/LT
Rekindle the support systems that existed in various communities to respond to disasters such as HIV and AIDS	MT

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Technical annex

The human development concept

The Human Development concept is an attempt at coming up with a holistic representation of human well-being. It was introduced in 1990 with the first publication of the Human Development Report. Since then, the concept has been refined in subsequent Human Development Reports. Well-being is the ability to meet choices of life that one highly values. Human development is, therefore, the process of expanding these choices. Although these choices are in theory unlimited, certain choices are regarded as very fundamental such that once deprived, one's well being is seriously jeopardised. There is consensus that four of these choices are very essential.

- *A long and healthy life.* To lead a long and healthy life is considered a fundamental choice as people in general would like to avoid dying young as long as their life is healthy. This choice is interrelated to the other choices because, to be fulfilled, it must be supported, for example, by good nutrition, living in a clean and hygienic environment by accessing good housing and clean and safe water, access to information, and access to health facilities.

- *Acquire knowledge.* This choice constitutes learning, becoming literate and attaining the capacity to access and process information for making other individual choices. It is a common choice to mankind because no one ordinarily chooses ignorance and to be cut out from the world of information. There are many ways through which this choice is acquired. Formal education from kindergarten to higher education imparts knowledge. It also builds people's capacity to acquire the knowledge they seek and apply it in the pursuit of other fundamental choices of life. It is an important means of fulfilling this choice. Informal ways of learning such as that which takes place through the normal course of human interaction in the household, community and broader society including at the workplace is also another means. Intergenerational transfer of knowledge and skills in the family and society, access to an unfettered media and other ways of teaching and learning are also important in fulfilling this choice.

- *Enjoy a decent standard of living.* To enjoy a decent standard of living as a human development choice constitutes freedom from poverty and the ability to acquire the material necessities of life to support an acceptable lifestyle. A decent level of income is needed to support the choice of a decent standard of living. Having a job or work that earns one a decent living together with their household is fundamental to the fulfilment of this choice. This choice is intricately linked to the other choices identified as it opens a window of access to other human development supporting choices such as food, education, health, housing and clean water and sanitation. Admittedly, income plays a critical role in helping to expand these choices. At the minimum, people should have enough income for a specified amount of food. Beyond this, people should have enough to access capability-enhancing facilities or services such as for health and education.

- *Freedom to Participate in the Life of the Community.* Freedom to feel appreciated by the society to which one belongs is a fundamental choice constituting one's well-being. It is supported by many

aspects. First is the freedom of association and to belong to any grouping promoting legitimate interests of the society. Second is its twin freedom of expression as long as this does not take away from the rights of others or society at large. Third is the choice to be useful to the community by contributing to its collective advancement. Fourth is to be accorded dignity and respect in the community. Fifth is the right to feel protected against arbitrary interference in one's course of life by the more powerful in the society.

Full human development goes beyond the four essential choices described above. There are other choices ranging from "political, economic and social freedom to opportunities for being creative and productive and enjoying self-respect and guaranteed human rights" (HDR, 1997, p.14). It also takes into account the various ingredients necessary for people to attain dignity and self-respect. The choices described above, help people attain a rightful place in society without being ashamed.

The freedom to make choices of life presumes people's capabilities that enable them to function. Skills, level of education and the health status of people play an important role in building the necessary capabilities. With these, people are better able to make and pursue the choices of life. The availability of opportunities over which the choices are made is also a necessary ingredient. For example, choices with respect to education, health and jobs are achievable only if they are available. A principle objective of policy is therefore to build an environment in which these opportunities could be created and meaningfully pursued.

For human development to have meaning, the process of expanding people's choices must be sustainable. They must be expanded both for the present as well as future generations. Inter-generational equity requires that choices for the present generation should not be expanded at the expense of choices for future generations. It is a holistic concept and encompasses environmental, institutional, cultural, social and political aspects.

The human poverty concept

With such a multi-faceted view of what constitutes human development, the HDRs have also presented poverty as a multi-dimensional phenomenon. Poverty is not only a deprivation of material gain necessary for a decent standard of living. Rather, poverty is presented as a denial of opportunities and choices most basic to human development. Poverty is therefore deprivations in human development.

The Human Development Report 1997 inaugurated the concept of human poverty- also called the poverty of lives and opportunities- in an attempt to portray the many faces of poverty.

Being analogous to human development, human poverty focuses on deprivations in the three essential choices of human development, longevity, knowledge and standard of living.

The human poverty concept also recognises many other deprivations undermining the quality of life that people live. Some of these deprivations are lack of human rights and political freedom, "inability to participate in decision-making, lack of personal security, inability to participate in the life of a community and threats to sustainability and intergenerational equity" (HDR, 1997).

Measures of human development

To capture the features promulgated in the various concepts of human development, a number of indices have been formulated since 1990. These are briefly described below.

The human development index, HDI

The overall concept of human development is measured by the human development index or HDI. First inaugurated in the Human Development Report 1990, it seeks to provide a quantitative representation of the three essential choices of life noted above, a long and healthy life, knowledge and a decent standard of living.

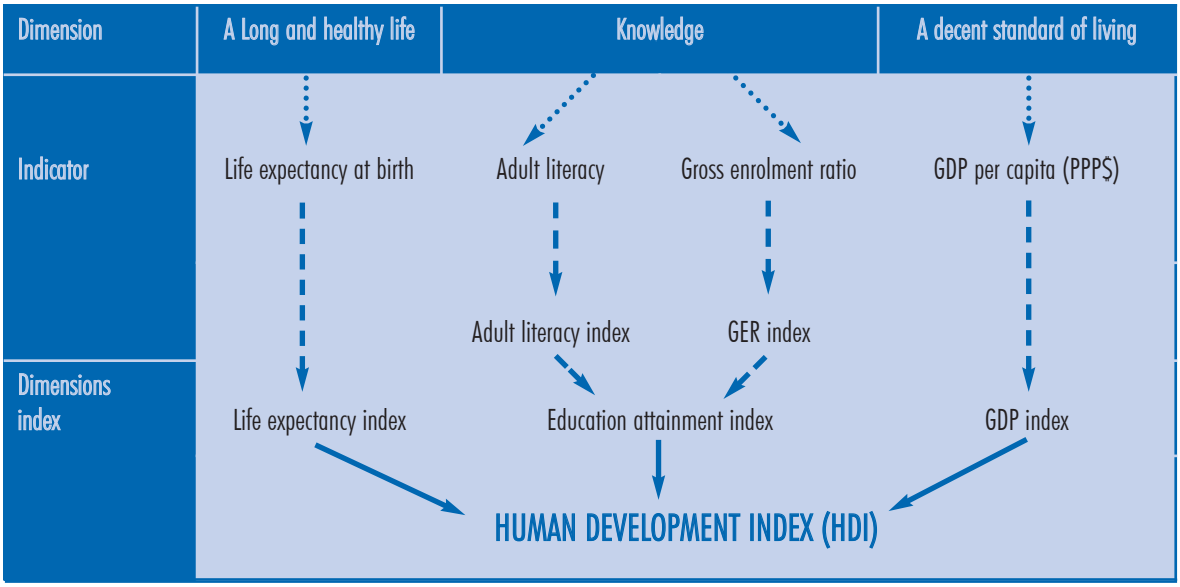
Each of these choices have been assigned corresponding quantitative indicators: a long and health life is measured by life expectancy at birth; educational attainment (representing knowledge) by a weighted average of the adult literacy rate and combined primary, secondary and tertiary enrolment ratios; and decent standard of living by real GDP per capita (PPP$). Therefore, the HDI is a composite index of three indices, the life expectancy index, the educational attainment index and the adjusted real GDP per capita (PPP$) index. It is a simple average of the three indices derived by dividing their sum by 3.

The HDI thus puts all the three basic indicators on a common measuring rod, the minimum and maximum value of each variable range between 0 and 1. The range corresponds to established actual values that depict the defined goal that needs to be attained in each variable.

The immensity of what constitutes human well-being makes the concept of human development too complex to be collapsed into simple measure. However, there is always need to simplify reality this way to practically assess performance and make comparisons. The HDI value for a country shows the distance it has already travelled towards the maximum possible value of 1 and also allows inter-country comparisons.

Over the decade since its first formulation, the HDI has undergone several improvements. However, in 1999, it was significantly refined on the basis of a thorough review of its concept and formulation. Two major changes were effected. The first were methodological changes. The second were the use of new and improved data series. On account of these changes, the HDI values contained in the HDR after the 1998 issue are not comparable with those in reports of the previous years.

The composition of the HDI is represented below.



For each indicator, the maximum and minimum goal posts have been established as shown below:

Indicator	Minimum value	Maximum value
Life expectancy	25 years	85 years
Adult literacy	0%	100%
Gross Enrolment	0%	100%
GDP per capita	US$100	US$40, 000

Except the GDP Index, each of the above three index is calculated using the following formula:

$$Index = \frac{Actual\ value - Minimum\ value}{Maximum\ value - Minimum\ value}$$

The life expectancy, adult literacy, gross enrolment, and the GDP indices are then calculated for Zambia to derive the 2003 and 2004 HDI using the values of the four parameters given below:

Year	Values of the parameters			
	Life expectancy at birth (years)	Adult literacy rate (% age 15 and above)	Combined gross enrolment ratio (%)	GDP per capita (PPP US$)
1998	40.5	76.3	43	719
2000	50	67.2	45	780
2004	52.7	67.2	62.5	882.96

The 2004 human development index has been calculated from the following indices:

1. Life expectancy index

$$= \frac{52.7-25}{85-25} = \frac{25}{60} = 0.462$$

2. The education index is a composite of the adult literacy and the gross enrolment indices with two-third weight given to literacy.

$$= \frac{2}{3}\left[\frac{67-0}{100-0}\right] + \frac{1}{3}\left[\frac{62.5-0}{100-0}\right] = 0.66$$

3. Increases in income are assumed to have a greater impact at lower values because achieving a respectable level of Human Development does not require unlimited income. Therefore, to derive the needed adjustment, the logarithm of income is used.

$$= \frac{Log\ 882.96 - Log100}{Log40000 - Log100} = 0.364$$

4. After calculating the dimension indices (above), the human development index (HDI) is taken as a simple average of the three indices.

$$= \frac{0.462 + 0.66 + 0.364}{3} = 0.495$$

The human poverty Index, HPI

To depict private income, the percentage of malnourished children under five is used as the indicator. Besides the ease of measurement and availability of data, it rationalised that a very high proportion of private income is spent on food and nourishment. Public services provisioning is represented by the percentage of people with access to health services and to safe water.

In the Human Development Report 1998 the need to have different HPI measures for developing and for industrial countries was advanced. The idea is that although deprivation exists in both, different indicators are needed to reflect the way it is manifested in the two country categories. Accordingly, the HPI introduced in the HDR 1997 was designated as presenting deprivation in developing countries and now termed HPI-1. The HPI for the industrial countries was formulated as HPI-2.

Together with the formulation of the human poverty concept discussed above, the HDR 1998 also inaugurated the human poverty index (HPI). This is also a composite index based on indices that represent

deprivation in three choices depicted in the human development concept.

The human poverty index for developing countries (HPI-1) concentrates on deprivations in three essential dimensions of human life already reflected in the HDI which are longevity, knowledge, and a decent standard of living. The first deprivation relates to survival - vulnerability to death at a relatively early age. The second relates to knowledge- being excluded from the world of reading and communication. The third relates to a decent living standard in terms of overall economic provisioning.

In constructing the HPI, the deprivation in longevity is represented by the percentage of people not expected to survive to the age 40 (P_1), and the deprivation in knowledge is represented by percentage of adults who are illiterate (P_2). The deprivation in living standards is represented by a composite (P_3) of three variables- the percentage of people without access to safe water (P_{31}), the percentage of people without access to health services (P_{32}), and the percentage of moderately and severely underweight children under five (P_{33}).

The composite variable P_3 is constructed by taking a simple average of the three variables P_{31}, P_{32}, and P_{33}. Thus

$$P_3 = \frac{P_{31} + P_{32} + P_{33}}{3}$$

Computing the HPI for Zambia in 2004

Country	P_1 (%)	P_2 (%)	P_{31} (%)	P_{32} (%)	P_{33} (%)
Zambia	15	32.8	3	44.56	20

Step one;

$$P_3 = \frac{43 + 44.56 + 20}{3} = 35.85$$

Step two;
Constructing the HPI

$$\begin{aligned} HPI &= [1/3\ (15^3 + 32.8^3 + 35.85^3)]^{1/3} \\ &= [1/3\ (3375+35287.6+46075.23)]^{1/3} \\ &= [1/3\ (84737.83)]^{1/3} \\ &= [28245.94]^{1/3} \\ &= 30.25 \end{aligned}$$

Gender-related development index, GDI and gender empowerment measure, GEM

The Human Development Report 1995 introduced two indices: the gender development index, GDI and the gender empowerment measure, GEM. This recognised that disparities between men and women are a significant manifestation of the deprivations that the world faces. As all the Human Development Reports have shown, "gender inequality is strongly associated with human poverty" (HDR 1997, p.39). Therefore, a treatment of human development or human poverty will not be complete without bringing out this inequality.

The GDI tries to capture progress in the same essential variables in the HDI, i.e. longevity, educational attainment and income. These variables are nevertheless adjusted for gender inequality. It is thus an indicator of gender inequality in basic human capabilities.

The GEM on the other hand measures gender inequality in key areas of economic and political participation. It covers four variables: earned income share of women, percentage of professional and technical female workers, percentage of women administrators and managers and share of parliamentary seats held by women.

Basically, the HDI, GDI, HPI-1 and HPI-2 involve the same dimensions but provide different perspectives through different measurements. Thus the HDI measures progress in the dimensions of longevity, knowledge and overall economic provi-

sioning for a decent standard of living. The GDI measures progress in the same dimensions after adjusting for gender differences. The HPI-1 and HPI-2 measure deprivation in respect of those dimensions that exist in developing and industrial countries respectively. A synoptic picture of these similarities and differences is provided in the table below.

Sources of data used in the construction of the HDI and HPI

This National Human Development Report for Zambia relied heavily on the Living Conditions Monitoring Surveys, conducted every two years by the CSO, to calculate the human development and human poverty indices. Particularly, data on most variables used to calculate the HDIs and the HPIs was obtained from the 2004 Living Conditions Living Monitoring Survey report. The advantages of using this source were two fold. Firstly, it was the only report that had the latest data after the 2000 census and the 2001-2002 Zambia Demogrraphic and Health Survey (ZDHS) Report whose statistics were captured in the NHDR for 2003. Secondly, the data collection methodology of the 2004 Living Conditions and Monitoring Survey was similar to the 1998 and the 1996 Living Conditions Monitoring Surveys.

Therefore, it was possible to compare the computed HDIs and HPIs in this report to those calculated in the 2003 using the end of decade survey sponsored by the International Labour Organisation (ILO) and Central Statistical Office's (CSO) demographic projections 1990-2015, and those calculated in the 1999/2000 NHDR which used the 1998 and 1996 Living Conditions Monitoring Surveys Reports. For data that could not be found in the 2004 Living Conditions Monitoring Survey Report, this NHDR used the 2001-2002 ZDHS Report and the Central Statistical Office's Projection Reports.

HDI, GDI, HPI-1 & HPI-2- same dimensions, different measurements

Index	Longevity	Knowledge	Decent standard of living	Participation or exclusion
HDI	Life expectancy at birth	1. Adult literacy rate 2. Enrolment ratio	Per capita income in PPP$	
GDI	Female and male life expectancy at birth	1. Female and male adult literacy rate 2. Female and male enrolment ratio	Adjusted per capita income in PP$ based on female and male income shares	
HPI-1	Percent of population not expected to survive to age 40	Adult illiteracy rate	1. Percent of people without accessto safe water 2. Percent of people without access to health services 3. Percent of underweight children under 5	
HPI-2	Percent of population not expected to survive to age 60	Adult functional illiteracy	Percentage of people living below poverty line (50 percent of median personal disposable income)	Long-term unemployment rate (12 months or more)

UNDP: Human Development Report 1999, p127. Table 1.

This NHDR never obtained information from the 2002-2003 Living Conditions and Monitoring Survey because it used a different methodology from all other similar surveys used in previous NHDR as detailed above because for the first time, data was collected from the respondents for a the whole year. Details on the data used in the construction of the HDIs and HPI in the 2003 and 1999/2000 NHDRs have been provided in the technical annexes. Therefore, the explanation given in this report is for the data used in the computations of the HDIs and HPIs for 2004.

There were lags for a few variables in the published data and this was particularly the case for the adult literacy rates and life expectancy at birth whose data were based on the Central Statistical Office's 2000 Census Population Projection Report, respectively. This source was also used to obtain projected Under-5 mortality rates used as a proxy variable for deprivation to surviving to 40 years (P1) in the development of the HPIs.

The following are the data used to calculate the 2004 HDIs:

Life expectancy at birth: This is based on the CSO's 2000 Census Projection Report estimates. The projected data used in the calculation of the HDIs are those that were projected while considering HIV and AIDS at national and provincial levels in 2004.

Adult literacy rate: This is based on the 2000 Census as found in the provincial reports.

Gross enrolment ratio: The national and provincial gross enrolment ratios were computed from the gross enrolment ratios for many age groups representing primary, secondary and tertiary education levels in Zambia published in the 2004 LCMS.

Income per capita as proxy for purchase power parity (PPP) per capita GDP (US$): This was obtained from the LCMS 2004.
In order to facilitate comparisons between the HPIs computed in the 1999/2000 NHDR, the procedure followed in calculating the HPIs for 2004 was similar to the one used in the earlier reports. Details on the source of data for the variables that went into the calculation of the HPIs in 2004 are as follows:

The deprivation in longevity (P_1): This is based on the under five mortality rate (U5MR) for 2004 obtained from the CSO's 2000 Census Population Projection Report. This data was used to match the procedure used in the calculation of the 1998 HPIs and there was also no data on the percentage of people not expected to survive up to the age of 40. Thus U5MR were used as a proxy-variable in the calculation of the 1998 and 2004 HPIs.

The deprivation in knowledge (P_2): This is derived from the adult literacy rate and these data were obtained from the 2001-2002 ZDHS Report.

The deprivation to a decent living standard (P_3): was calculated as a composite of the following data.

The percentage of people without access to safe water (P_{31}): This is derived from the 2004 LCMS Report.

The percentage of people without access to health services (P_{32}): This is derived from the 2004 LCMS Report.

The percentage of moderately and severely underweight children (P_{33}): This is derived from the 2004 LCMS Report.

Appendix table 1: Human development index by HDI rank

		Per capita income (US$)	Combined gross attendance rate (%)	Life expectancy without AIDS	Life expectancy with AIDS	Literacy rate	Income index	Education attainment index	Life expectancy with AIDS index	Life expectancy without AIDS index	HDI with AIDS	HDI without AIDS
1	Livingstone	687.4	107.24	62.30	53.00	89.30	0.322	0.953	0.467	0.622	0.580	0.632
2	Chililabombwe	468.9	107.34	63.50	53.00	83.00	0.258	0.911	0.467	0.642	0.545	0.604
3	Kalulushi	434.1	119.83	58.60	50.80	82.90	0.245	0.952	0.430	0.560	0.542	0.586
4	Mufulira	451.5	95.45	58.60	53.40	86.90	0.252	0.898	0.473	0.560	0.541	0.570
5	Mporokoso	372.4	102.12	61.00	58.10	70.30	0.219	0.809	0.552	0.600	0.527	0.543
6	Luanshya	360.9	103.33	56.90	52.30	84.70	0.214	0.909	0.455	0.532	0.526	0.552
7	Namwala	288.6	81.08	66.20	62.50	72.90	0.177	0.756	0.625	0.687	0.519	0.540
8	Kitwe	489.8	99.39	62.40	47.80	87.20	0.265	0.913	0.380	0.623	0.519	0.600
9	Lusaka	649.0	92.98	60.10	47.40	84.10	0.312	0.871	0.373	0.585	0.519	0.589
10	Kasempa	342.7	96.69	63.20	59.60	63.60	0.206	0.746	0.577	0.637	0.510	0.530
11	Mumbwa	334.9	86.89	65.50	59.10	70.30	0.202	0.758	0.568	0.675	0.509	0.545
12	Itezhi-tezhi	288.6	82.57	66.20	62.60	64.50	0.177	0.705	0.627	0.687	0.503	0.523
13	Mufumbwe	343.1	97.76	62.70	59.10	61.10	0.206	0.733	0.568	0.628	0.502	0.522
14	Choma	438.8	92.38	61.00	53.00	72.60	0.247	0.792	0.467	0.600	0.502	0.546
15	Chingola	334.9	93.58	60.10	49.80	84.70	0.202	0.877	0.413	0.585	0.497	0.554
16	Ndola	410.4	95.72	58.60	46.20	83.20	0.236	0.874	0.353	0.560	0.488	0.556
17	Kafue	362.6	99.33	62.30	49.70	74.70	0.215	0.829	0.412	0.622	0.485	0.555
18	Monze	330.3	79.87	61.50	53.60	77.00	0.199	0.780	0.477	0.608	0.485	0.529
19	Kabompo	168.6	129.77	63.50	59.90	52.30	0.087	0.781	0.582	0.642	0.483	0.503
20	Kabwe	374.9	94.50	57.00	46.30	83.20	0.221	0.870	0.355	0.533	0.482	0.541
21	Mazabuka	328.1	83.39	62.40	54.40	70.50	0.198	0.748	0.490	0.623	0.479	0.523
22	Mpika	276.7	103.97	61.50	55.00	62.80	0.170	0.765	0.500	0.608	0.478	0.514
23	Mpongwe	461.0	84.09	63.30	51.60	66.30	0.255	0.722	0.443	0.638	0.474	0.539
24	Sinazongwe	330.3	95.88	60.20	57.00	54.30	0.199	0.682	0.533	0.587	0.471	0.489
25	Zambezi	228.7	112.72	63.70	59.40	48.40	0.138	0.698	0.573	0.645	0.470	0.494
26	Mkushi	323.0	69.12	63.20	57.00	63.50	0.196	0.654	0.533	0.637	0.461	0.495
27	Kasama	268.3	87.77	56.80	51.80	69.50	0.165	0.756	0.447	0.530	0.456	0.484
28	Chongwe	341.9	84.77	62.30	51.70	63.30	0.205	0.705	0.445	0.622	0.452	0.510
29	Kaoma	328.9	89.88	56.90	52.50	57.30	0.199	0.682	0.458	0.532	0.446	0.471
30	Luangwa	380.8	96.68	58.40	48.70	57.30	0.223	0.704	0.395	0.557	0.441	0.495
31	Kawambwa	307.4	77.73	55.00	50.00	68.30	0.187	0.714	0.417	0.500	0.440	0.467
32	Mwinilunga	262.8	87.75	61.50	57.40	46.60	0.161	0.603	0.540	0.608	0.435	0.458
33	Chibombo	227.7	64.71	62.10	56.20	64.60	0.137	0.646	0.520	0.618	0.435	0.467
34	Solwezi	279.0	87.67	57.40	52.10	57.00	0.171	0.672	0.452	0.540	0.432	0.461
35	Chavuma	219.2	91.47	63.70	59.50	42.60	0.131	0.589	0.575	0.645	0.432	0.455
36	Sesheke	182.4	93.72	56.60	49.20	71.70	0.100	0.790	0.403	0.527	0.431	0.472
37	Gwembe	269.6	64.11	62.80	59.50	48.90	0.166	0.540	0.575	0.630	0.427	0.445
38	Masaiti	278.3	61.38	56.90	51.70	67.10	0.171	0.652	0.445	0.532	0.423	0.451
39	Lufwanyama	247.6	74.80	56.90	51.70	61.90	0.151	0.662	0.445	0.532	0.419	0.448
40	Isoka	232.9	79.12	53.30	51.10	61.90	0.141	0.676	0.435	0.472	0.418	0.430
41	Kazungula	328.7	64.23	56.10	49.10	65.20	0.199	0.649	0.402	0.518	0.416	0.455

Central Statistical Office, Living Conditions Monitoring Survey 2004, unpublished data

APPENDIX TABLE 1

... Appendix table 1: Human development index by HDI rank

		Per capita income (US$)	Combined gross attendance rate (%)	Life expectancy without AIDS	Life expectancy with AIDS	Literacy rate	Income index	Education attainment index	Life expectancy with AIDS index	Life expectancy without AIDS index	HDI with AIDS	HDI without AIDS
42	Kapiri Mposhi	272.7	55.82	62.10	53.10	63.60	0.167	0.610	0.468	0.618	0.415	0.465
43	Mambwe	294.0	91.83	51.30	47.70	57.00	0.180	0.686	0.378	0.438	0.415	0.435
44	Chinsali	264.5	52.82	54.70	52.20	65.40	0.162	0.612	0.453	0.495	0.409	0.423
45	Kalomo	228.0	72.84	56.10	48.90	67.30	0.138	0.691	0.398	0.518	0.409	0.449
46	Mungwi	236.3	70.12	56.80	54.20	53.80	0.144	0.592	0.487	0.530	0.408	0.422
47	Luwingu	216.3	76.90	56.40	52.20	57.10	0.129	0.637	0.453	0.523	0.406	0.430
48	Nakonde	395.5	67.99	51.70	46.30	60.00	0.229	0.627	0.355	0.445	0.404	0.434
49	Mongu	208.1	92.55	51.50	42.90	71.10	0.122	0.783	0.298	0.442	0.401	0.449
50	Siavonga	289.9	74.36	56.00	51.00	50.90	0.178	0.587	0.433	0.517	0.399	0.427
51	Mansa	255.8	72.55	52.00	45.40	67.90	0.157	0.694	0.340	0.450	0.397	0.434
52	Serenje	236.9	52.73	56.90	51.10	63.40	0.144	0.598	0.435	0.532	0.392	0.425
53	Petauke	273.2	76.28	55.00	51.30	43.60	0.168	0.545	0.438	0.500	0.384	0.404
54	Lukulu	214.0	74.82	52.20	48.20	55.50	0.127	0.619	0.387	0.453	0.378	0.400
55	Mpulungu	316.2	58.01	53.10	47.60	53.40	0.192	0.549	0.377	0.468	0.373	0.403
56	Nchelenge	265.1	71.68	47.70	42.60	63.10	0.163	0.660	0.293	0.378	0.372	0.400
57	Mbala	237.5	51.46	53.20	50.90	53.80	0.144	0.530	0.432	0.470	0.369	0.382
58	Chadiza	416.6	68.63	51.10	47.50	39.10	0.238	0.489	0.375	0.435	0.368	0.388
59	Kaputa	253.5	59.52	48.50	47.00	54.50	0.155	0.562	0.367	0.392	0.361	0.370
60	Mwense	211.1	61.85	48.30	44.00	64.90	0.125	0.639	0.317	0.388	0.360	0.384
61	Kalabo	176.4	80.83	48.20	44.10	54.60	0.095	0.633	0.318	0.387	0.349	0.372
62	Milenge	162.8	62.28	52.00	47.40	55.80	0.081	0.580	0.373	0.450	0.345	0.370
63	Katete	229.2	71.84	56.40	48.80	37.10	0.138	0.487	0.397	0.523	0.341	0.383
64	Senanga	126.2	74.59	48.10	44.50	59.80	0.039	0.647	0.325	0.385	0.337	0.357
65	Chipata	332.8	72.83	51.30	37.00	54.90	0.201	0.609	0.200	0.438	0.336	0.416
66	Samfya	221.4	58.24	44.50	43.10	53.60	0.133	0.551	0.302	0.325	0.329	0.336
67	Nyimba	165.0	45.12	55.00	51.20	46.90	0.084	0.463	0.437	0.500	0.328	0.349
68	Chama	251.0	77.71	42.30	39.40	46.90	0.154	0.572	0.240	0.288	0.322	0.338
69	Lundazi	419.6	48.85	43.70	38.30	49.90	0.239	0.495	0.222	0.312	0.319	0.349
70	Chienge	217.9	42.97	48.00	44.00	50.30	0.130	0.479	0.317	0.383	0.308	0.331
71	Chilubi	168.2	53.49	50.50	45.50	46.20	0.087	0.486	0.342	0.425	0.305	0.333
72	Shangombo	158.0	55.95	51.60	47.60	33.60	0.076	0.410	0.377	0.443	0.288	0.310
Zambia		**347.4**	**84.70**	**57.50**	**52.40**	**66.00**	**0.208**	**0.722**	**0.457**	**0.542**	**0.462**	**0.491**
1	Central P.	271.6	74.79	60.80	55.00	68.50	0.167	0.706	0.500	0.597	0.458	0.490
2	Copperbelt P.	414.5	98.00	63.20	57.60	82.40	0.237	0.876	0.543	0.637	0.552	0.583
3	Eastern P.	311.8	70.42	51.70	47.00	46.40	0.190	0.544	0.367	0.445	0.367	0.393
4	Luapula P.	243.1	66.22	51.20	47.50	61.50	0.148	0.631	0.375	0.437	0.385	0.405
5	Lusaka P.	588.6	93.04	62.50	54.10	67.20	0.296	0.758	0.485	0.625	0.513	0.560
6	Northern P.	265.7	76.06	55.80	45.50	59.10	0.163	0.648	0.342	0.513	0.384	0.441
7	North W. P.	263.7	99.38	58.70	55.60	53.40	0.162	0.687	0.510	0.562	0.453	0.470
8	Southern P.	362.8	84.55	59.20	51.60	70.20	0.215	0.750	0.443	0.570	0.469	0.512
9	Western P.	210.2	84.11	52.60	48.20	54.90	0.124	0.646	0.387	0.460	0.386	0.410

Appendix table 2: Human development index in Zambia, by province and district

	Per capita income (US$)	Combined gross attendance rate (%)	Life expectancy without AIDS	Life expectancy with AIDS	Literacy rate	Income index	Education attainment index	Life expectancy with AIDS index	Life expectancy without AIDS index	HDI with AIDS	HDI without AIDS
Zambia	**347.43**	**84.7**	**57.5**	**52.4**	**66**	**0.21**	**0.72**	**0.46**	**0.54**	**0.462**	**0.491**
Central P.	**271.59**	**74.7**	**60.8**	**55**	**68.5**	**0.17**	**0.71**	**0.50**	**0.60**	**0.458**	**0.490**
Chibombo	227.71	64.7	62.1	56.2	64.6	0.14	0.65	0.52	0.62	0.435	0.467
Kabwe	374.85	94.5	57.0	46.3	83.2	0.22	0.87	0.36	0.53	0.482	0.541
Kapiri Mposhi	272.66	55.8	62.1	53.1	63.6	0.17	0.61	0.47	0.62	0.415	0.465
Mkushi	322.96	69.1	63.2	57	63.5	0.20	0.65	0.53	0.64	0.461	0.495
Mumbwa	334.89	86.9	65.5	59.1	70.3	0.20	0.76	0.57	0.68	0.509	0.545
Serenje	236.90	52.7	56.9	51.1	63.4	0.14	0.60	0.44	0.53	0.392	0.425
Copperbelt P.	**414.47**	**98.0**	**63.2**	**57.6**	**82.4**	**0.24**	**0.88**	**0.54**	**0.64**	**0.552**	**0.583**
Chililabombwe	468.87	107.3	63.5	53	83	0.26	0.91	0.47	0.64	0.545	0.604
Chingola	334.89	93.6	60.1	49.8	84.7	0.20	0.88	0.41	0.59	0.497	0.554
Kalulushi	434.14	119.8	58.6	50.8	82.9	0.25	0.95	0.43	0.56	0.542	0.586
Kitwe	489.84	99.4	62.4	47.8	87.2	0.27	0.91	0.38	0.62	0.519	0.600
Luanshya	360.88	103.3	56.9	52.3	84.7	0.21	0.91	0.46	0.53	0.526	0.552
Lufwanyama	247.55	74.8	56.9	51.7	61.9	0.15	0.66	0.45	0.53	0.419	0.448
Masaiti	278.26	61.4	56.9	51.7	67.1	0.17	0.65	0.45	0.53	0.423	0.451
Mpongwe	460.95	84.1	63.3	51.6	66.3	0.26	0.72	0.44	0.64	0.474	0.539
Mufulira	451.51	95.5	58.6	53.4	86.9	0.25	0.90	0.47	0.56	0.541	0.570
Ndola	410.44	95.7	58.6	46.2	83.2	0.24	0.87	0.35	0.56	0.488	0.556
Eastern P.	**311.82**	**70.4**	**51.7**	**47.0**	**46.4**	**0.19**	**0.54**	**0.37**	**0.45**	**0.367**	**0.393**
Chadiza	416.59	68.6	51.1	47.5	39.1	0.24	0.49	0.38	0.44	0.368	0.388
Chama	251.01	77.7	42.3	39.4	46.9	0.15	0.57	0.24	0.29	0.322	0.338
Chipata	332.76	72.8	51.3	37.0	54.9	0.20	0.61	0.20	0.44	0.336	0.416
Katete	229.24	71.8	56.4	48.8	37.1	0.14	0.49	0.40	0.52	0.341	0.383
Mambwe	293.99	91.8	51.3	47.7	57	0.18	0.69	0.38	0.44	0.415	0.435
Nyimba	164.98	45.1	55.0	51.2	46.9	0.08	0.46	0.44	0.50	0.328	0.349
Petauke	273.18	76.3	55.0	51.3	43.6	0.17	0.54	0.44	0.50	0.384	0.404
Luapula P.	**243.10**	**66.2**	**51.2**	**47.5**	**61.5**	**0.15**	**0.63**	**0.38**	**0.44**	**0.385**	**0.405**
Chienge	217.89	43.0	48.0	44.0	50.3	0.13	0.48	0.32	0.38	0.308	0.331
Kawambwa	307.35	77.7	55.0	50.0	68.3	0.19	0.71	0.42	0.50	0.440	0.467
Mansa	255.83	72.5	52.0	45.4	67.9	0.16	0.69	0.34	0.45	0.397	0.434
Milenge	162.75	62.3	52.0	47.4	55.8	0.08	0.58	0.37	0.45	0.345	0.370
Mwense	211.11	61.8	48.3	44.0	64.9	0.12	0.64	0.32	0.39	0.360	0.384
Nchelenge	265.14	71.7	47.7	42.6	63.1	0.16	0.66	0.29	0.38	0.372	0.400
Samfya	221.38	58.2	44.5	43.1	53.6	0.13	0.55	0.30	0.33	0.329	0.336
Lusaka P.	**588.59**	**93.0**	**62.5**	**54.1**	**67.2**	**0.30**	**0.76**	**0.49**	**0.63**	**0.513**	**0.560**
Chongwe	341.89	84.8	62.3	51.7	63.3	0.21	0.70	0.45	0.62	0.452	0.510
Kafue	362.56	99.3	62.3	49.7	74.7	0.21	0.83	0.41	0.62	0.485	0.555
Luangwa	380.78	96.7	58.4	48.7	57.3	0.22	0.70	0.40	0.56	0.441	0.495
Lusaka	648.99	93.0	60.1	47.4	84.1	0.31	0.87	0.37	0.59	0.519	0.589

Central Statistical Office, Living Conditions Monitoring Survey 2004, unpublished data

APPENDIX TABLE 2

... Appendix table 2: Human development index in Zambia, by province and district

	Per capita income (US$)	Combined gross attendance rate (%)	Life expectancy without AIDS	Life expectancy with AIDS	Literacy rate	Income index	Education attainment index	Life expectancy with AIDS index	Life expectancy without AIDS index	HDI with AIDS	HDI without AIDS
Northern P.	**265.70**	**76.1**	**55.8**	**45.5**	**59.1**	**0.16**	**0.65**	**0.34**	**0.51**	**0.384**	**0.441**
Chilubi	168.22	53.5	50.5	45.5	46.2	0.09	0.49	0.34	0.43	0.305	0.333
Chinsali	264.52	52.8	54.7	52.2	65.4	0.16	0.61	0.45	0.50	0.409	0.423
Isoka	232.92	79.1	53.3	51.1	61.9	0.14	0.68	0.44	0.47	0.418	0.430
Kaputa	253.50	59.5	48.5	47.0	54.5	0.16	0.56	0.37	0.39	0.361	0.370
Kasama	268.33	87.8	56.8	51.8	69.5	0.16	0.76	0.45	0.53	0.456	0.484
Luwingu	216.26	76.9	56.4	52.2	57.1	0.13	0.64	0.45	0.52	0.406	0.430
Mbala	237.52	51.5	53.2	50.9	53.8	0.14	0.53	0.43	0.47	0.369	0.382
Mpika	276.71	104.0	61.5	55.0	62.8	0.17	0.77	0.50	0.61	0.478	0.514
Mporokoso	372.36	102.1	61.0	58.1	70.3	0.22	0.81	0.55	0.60	0.527	0.543
Mpulungu	316.23	58.0	53.1	47.6	53.4	0.19	0.55	0.38	0.47	0.373	0.403
Mungwi	236.28	70.1	56.8	54.2	53.8	0.14	0.59	0.49	0.53	0.408	0.422
Nakonde	395.48	68.0	51.7	46.3	60	0.23	0.63	0.36	0.45	0.404	0.434
North W. P.	**263.71**	**99.4**	**58.7**	**55.6**	**53.4**	**0.16**	**0.69**	**0.51**	**0.56**	**0.453**	**0.470**
Chavuma	219.17	91.5	63.7	59.5	42.6	0.13	0.59	0.58	0.65	0.432	0.455
Kabompo	168.64	129.8	63.5	59.9	52.3	0.09	0.78	0.58	0.64	0.483	0.503
Kasempa	342.74	96.7	63.2	59.6	63.6	0.21	0.75	0.58	0.64	0.510	0.530
Mufumbwe	343.07	97.8	62.7	59.1	61.1	0.21	0.73	0.57	0.63	0.502	0.522
Mwinilunga	262.80	87.8	61.5	57.4	46.6	0.16	0.60	0.54	0.61	0.435	0.458
Solwezi	278.98	87.7	57.4	52.1	57	0.17	0.67	0.45	0.54	0.432	0.461
Zambezi	228.72	112.7	63.7	59.4	48.4	0.14	0.70	0.57	0.65	0.470	0.494
Southern P.	**362.76**	**84.6**	**59.2**	**51.6**	**70.2**	**0.22**	**0.75**	**0.44**	**0.57**	**0.469**	**0.512**
Choma	438.80	92.4	61.0	53.0	72.6	0.25	0.79	0.47	0.60	0.502	0.546
Gwembe	269.60	64.1	62.8	59.5	48.9	0.17	0.54	0.58	0.63	0.427	0.445
Itezhi-tezhi	288.64	82.6	66.2	62.6	64.5	0.18	0.71	0.63	0.69	0.503	0.523
Kalomo	227.96	72.8	56.1	48.9	67.3	0.14	0.69	0.40	0.52	0.409	0.449
Kazungula	328.66	64.2	56.1	49.1	65.2	0.20	0.65	0.40	0.52	0.416	0.455
Livingstone	687.38	107.2	62.3	53.0	89.3	0.32	0.95	0.47	0.62	0.580	0.632
Mazabuka	328.14	83.4	62.4	54.4	70.5	0.20	0.75	0.49	0.62	0.479	0.523
Monze	330.32	79.9	61.5	53.6	77	0.20	0.78	0.48	0.61	0.485	0.529
Namwala	288.62	81.1	66.2	62.5	72.9	0.18	0.76	0.63	0.69	0.519	0.540
Siavonga	289.93	74.4	56.0	51.0	50.9	0.18	0.59	0.43	0.52	0.399	0.427
Sinazongwe	330.31	95.9	60.2	57.0	54.3	0.20	0.68	0.53	0.59	0.471	0.489
Western P.	**210.22**	**84.1**	**52.6**	**48.2**	**54.9**	**0.12**	**0.65**	**0.39**	**0.46**	**0.386**	**0.410**
Kalabo	176.40	80.8	48.2	44.1	54.6	0.09	0.63	0.32	0.39	0.349	0.372
Kaoma	328.95	89.9	56.9	52.5	57.3	0.20	0.68	0.46	0.53	0.446	0.471
Lukulu	213.99	74.8	52.2	48.2	55.5	0.13	0.62	0.39	0.45	0.378	0.400
Mongu	208.13	92.6	51.5	42.9	71.1	0.12	0.78	0.30	0.44	0.401	0.449
Senanga	126.22	74.6	48.1	44.5	59.8	0.04	0.65	0.33	0.39	0.337	0.357
Sesheke	182.37	93.7	56.6	49.2	71.7	0.10	0.79	0.40	0.53	0.431	0.472
Shangombo	157.96	55.9	51.6	47.6	33.6	0.08	0.41	0.38	0.44	0.288	0.310

Appendix Table 3: Human poverty index by HPI rank

		HPI	Under-5 mortality per 100 live births	Adult illiteracy rate	The simple average of the three variables: P_{31}, P_{32} and P_{33}	Percentage of population without access to safe water (P_{31})	Percentage of population without access to health services(P_{32})	Percentage of moderately and severely underweight children under five (P_{33})
1	Shangombo	48.2	18.3	34.0	24.0	42.8	9.0	20.1
2	Chilubi	44.3	16.7	32.8	29.6	50.0	17.0	21.7
3	Katete	44.1	13.7	35.4	32.2	53.0	19.0	24.5
4	Chadiza	43.4	15.5	16.8	14.1	20.0	2.0	20.4
5	Mwinilunga	42.2	17.7	36.4	34.7	66.0	24.0	14.2
6	Chavuma	41.9	19.5	36.5	33.5	56.0	25.0	19.4
7	Chiengi	41.6	15.5	29.7	19.1	30.0	6.0	21.2
8	Petauke	40.1	20.6	36.6	46.0	77.0	30.0	31.1
9	Chama	38.6	14.9	17.9	14.6	25.0	3.0	15.7
10	Nyimba	38.3	12.4	15.3	5.8	11.0	0.0	6.3
11	Lundazi	38.3	15.6	17.1	10.1	14.0	2.0	14.3
12	Samfya	38.1	14.8	12.8	16.7	36.0	1.0	13.0
13	Mungwi	37.7	15.2	15.3	8.1	9.0	4.0	11.4
14	Zambezi	37.6	16.6	32.9	32.4	69.0	7.0	21.1
15	Kalabo	37.4	11.3	33.7	21.2	32.0	7.0	24.7
16	Serenje	37.3	14.8	13.1	18.1	29.0	0.0	25.3
17	Kaputa	36.8	15.1	16.8	9.5	5.0	12.0	11.6
18	Mbala	36.7	19.6	53.6	21.3	36.0	8.0	19.8
19	Gwembe	36.6	18.8	60.9	23.5	36.0	12.0	22.4
20	Isoka	36.4	23.1	53.1	21.8	36.0	11.0	18.5
21	Chinsali	36.3	18.0	45.1	20.2	28.0	9.0	23.6
22	Milenge	36.1	16.6	62.9	15.1	28.0	1.0	16.4
23	Kabompo	35.9	23.6	50.1	31.0	61.0	13.0	19.0
24	Luwingu	35.6	17.7	43.0	16.4	17.0	10.0	22.1
25	Senanga	35.4	19.1	56.4	19.1	34.0	7.0	16.2
26	Kaoma	35.0	23.3	38.7	36.9	81.0	3.0	26.8
27	Mpulungu	34.6	18.7	31.7	36.6	72.0	7.0	30.7
28	Siavonga	34.5	20.2	32.1	37.6	89.0	2.0	21.7
29	Lukulu	34.1	25.4	35.1	38.0	81.0	3.0	30.1
30	Mwense	33.7	23.1	36.9	31.7	71.0	0.0	24.2
31	Solwezi	33.3	26.2	46.4	36.3	78.0	2.0	28.9
32	Chipata	32.8	14.2	19.3	7.7	4.0	2.0	17.0
33	Sinazongwe	32.5	16.5	36.7	16.7	29.0	6.0	15.2
34	Nakonde	32.2	13.7	25.3	13.4	15.0	8.0	17.3
35	Kasama	31.9	20.2	42.7	9.8	19.0	0.0	10.4
36	Kapiri Mposhi	31.7	13.9	15.9	5.8	0.0	0.0	17.3
37	Nchelenge	31.6	22.0	40.9	36.2	65.0	18.0	25.7
38	Mansa	31.6	33.6	53.8	40.8	83.0	9.0	30.4
39	Mkushi	31.5	22.9	34.6	44.7	82.0	13.0	39.2
40	Mpika	31.1	20.1	38.1	43.3	60.0	41.0	28.9
41	Mambwe	31.0	28.8	45.5	31.5	57.0	10.0	27.6
42	Kawambwa	30.8	19.5	30.5	39.4	69.0	20.0	29.2
43	Luangwa	30.7	20.8	42.9	36.3	69.0	12.0	27.8

Central Statistical Office, Living Conditions Monitoring Survey 2004, unpublished data

APPENDIX TABLE 3

... Appendix table 3: Human poverty index by HPI rank

	HPI	Under-5 mortality per 100 live births	Adult illiteracy rate	The simple average of the three variables: P_{31}, P_{32} and P_{33}	Percentage of population without access to safe water (P_{31})	Percentage of population without access to health services (P_{32})	Percentage of moderately and severely under-weight children under five (P_{33})
44 Lufwanyama	30.4	19.8	46.2	34.9	66.0	25.0	13.6
45 Chibombo	29.9	17.2	37.2	32.3	61.0	15.0	20.8
46 Masaiti	29.1	14.8	29.7	32.4	64.0	12.0	21.3
47 Mufumbwe	28.2	25.3	46.6	19.5	38.0	5.0	15.5
48 Mporokoso	27.7	25.6	40.0	26.9	55.0	13.0	12.6
49 Zambia	27.0	13.5	50.8	29.9	59.0	12.0	18.6
50 Chongwe	26.9	11.0	57.4	31.0	72.0	14.0	7.1
51 Kazungula	26.0	13.5	47.7	30.4	62.0	13.0	16.1
52 Itezhi-tezhi	25.9	12.8	36.4	10.7	22.0	2.0	8.2
53 Kasempa	25.8	15.8	38.9	16.3	34.0	1.0	13.8
54 Mpongwe	25.4	12.5	53.4	41.4	68.0	18.0	38.3
55 Sesheke	25.3	12.5	43.0	30.9	62.0	17.0	13.7
56 Kalomo	25.0	13.4	51.6	26.9	65.0	1.0	14.6
57 Mongu	24.5	15.5	31.4	14.3	21.0	6.0	16.0
58 Mumbwa	23.1	14.6	51.1	21.7	25.0	18.0	22.2
59 Choma	22.2	15.8	35.5	15.5	26.0	3.0	17.4
60 Namwala	22.0	18.6	32.7	17.5	25.0	18.0	9.6
61 Mazabuka	21.3	16.8	34.8	18.2	32.0	9.0	13.7
62 Chililabombwe	19.6	15.8	10.7	7.0	0.0	4.0	17.0
63 Kafue	19.2	12.8	29.5	10.8	13.0	1.0	18.5
64 Monze	17.8	14.3	23.0	12.2	15.0	10.0	11.7
65 Mufulira	15.6	15.2	49.1	10.3	20.0	3.0	7.8
66 Kabwe	15.6	18.1	45.7	11.7	7.0	7.0	21.0
67 Kitwe	14.9	27.5	45.4	35.1	71.0	13.0	21.2
68 Kalulushi	14.9	24.2	42.7	33.3	58.0	11.0	31.0
69 Ndola	14.4	20.7	44.5	28.0	63.0	4.0	17.0
70 Luanshya	13.7	19.8	28.9	23.2	50.0	1.0	18.6
71 Lusaka	13.2	23.9	40.2	37.8	82.0	16.0	15.4
72 Chingola	12.4	22.4	28.3	24.4	26.0	35.0	12.1
73 Livingstone	12.2	23.5	66.4	30.9	57.0	16.0	19.7
Zambia	**27.0**	**18.3**	**34.0**	**24.0**	**42.8**	**9.0**	**20.1**
1 Central P.	28.0	16.7	32.8	29.6	50.0	17.0	21.7
2 Copperbelt P.	15.9	14.9	17.9	14.6	25.0	3.0	15.7
3 Eastern P.	38.5	19.6	53.6	21.3	36.0	8.0	19.8
4 Luapula P.	34.3	23.3	38.7	36.9	81.0	3.0	26.8
5 Lusaka P.	15.2	14.2	19.3	7.7	4.0	2.0	17.0
6 Northern P.	34.8	22.0	40.9	36.2	65.0	18.0	25.7
7 North W. P.	37.7	13.5	50.8	29.9	59.0	12.0	18.6
8 Southern P.	23.2	15.5	31.4	14.3	21.0	6.0	16.0
9 Western P.	35.4	23.3	45.1	30.5	60.0	11.0	20.5

Appendix table 4: Human poverty index in Zambia, by province and district

	HPI	Under-5 mortality per 100 live births	Adult illiteracy rate	The simple average of the three variables: P_{31}, P_{32} and P_{33}	Percentage of population without access to safe water (P_{31})	Percentage of population without access to health services(P_{32})	Percentage of moderately and severely under-weight children under five (P_{33})
Zambia	27.02	18.3	34	23.97	42.8	9.0	20.1
Central Province	27.99	16.7	32.8	29.57	50.0	17.0	21.7
Chibombo	29.90	13.7	35.4	32.17	53.0	19.0	24.5
Kabwe	15.55	15.5	16.8	14.13	20.0	2.0	20.4
Kapiri Mposhi	31.71	17.7	36.4	34.73	66.0	24.0	14.2
Mkushi	31.47	19.5	36.5	33.47	56.0	25.0	19.4
Mumbwa	23.07	15.5	29.7	19.07	30.0	6.0	21.2
Serenje	37.27	20.6	36.6	46.03	77.0	30.0	31.1
Copperbelt P.	15.93	14.9	17.9	14.57	25.0	3.0	15.7
Chililabombwe	19.59	11.9	17	25.17	20.0	35.0	20.5
Chingola	12.37	12.4	15.3	5.77	11.0	0.0	6.3
Kalulushi	14.85	15.6	17.1	10.10	14.0	2.0	14.3
Kitwe	14.92	14.8	12.8	16.67	36.0	1.0	13.0
Luanshya	13.65	15.2	15.3	8.13	9.0	4.0	11.4
Lufwanyama	30.37	18.8	38.1	28.07	53.0	4.0	27.2
Masaiti	29.12	16.6	32.9	32.37	69.0	7.0	21.1
Mpongwe	25.42	11.3	33.7	21.23	32.0	7.0	24.7
Mufulira	15.61	14.8	13.1	18.10	29.0	0.0	25.3
Ndola	14.45	15.1	16.8	9.53	5.0	12.0	11.6
Eastern Province	38.50	19.6	53.6	21.27	36.0	8.0	19.8
Chadiza	43.41	18.8	60.9	23.47	36.0	12.0	22.4
Chama	38.59	23.1	53.1	21.83	36.0	11.0	18.5
Chipata	32.79	18	45.1	20.20	28.0	9.0	23.6
Katete	44.08	16.6	62.9	15.13	28.0	1.0	16.4
Lundazi	38.31	23.6	50.1	31.00	61.0	13.0	19.0
Mambwe	31.01	17.7	43	16.37	17.0	10.0	22.1
Nyimba	38.33	20.4	53.1	22.03	40.0	4.0	22.1
Petauke	40.09	19.1	56.4	19.07	34.0	7.0	16.2
Luapula P.	34.29	23.3	38.7	36.93	81.0	3.0	26.8
Chiengi	41.59	27.2	49.7	41.77	87.0	9.0	29.3
Kawambwa	30.76	18.7	31.7	36.57	72.0	7.0	30.7
Mansa	31.56	20.2	32.1	37.57	89.0	2.0	21.7
Milenge	36.08	22.8	44.2	34.97	79.0	8.0	17.9
Mwense	33.68	25.4	35.1	38.03	81.0	3.0	30.1
Nchelenge	31.58	23.1	36.9	31.73	71.0	0.0	24.2
Samfya	38.08	26.2	46.4	36.30	78.0	2.0	28.9
Lusaka Province	15.18	14.2	19.3	7.67	4.0	2.0	17.0
Chongwe	26.93	16.5	36.7	16.73	29.0	6.0	15.2
Kafue	19.19	13.7	25.3	13.43	15.0	8.0	17.3
Luangwa	30.73	20.2	42.7	9.80	19.0	0.0	10.4
Lusaka	13.20	13.9	15.9	5.77	0.0	0.0	17.3

Central Statistical Office, Living Conditions Monitoring Survey 2004, unpublished data

... Appendix table 4: Human poverty index in Zambia, by province and district

	HPI	Under-5 mortality per 100 live births	Adult illiteracy rate	The simple average of the three variables: P_{31}, P_{32} and P_{33}	Percentage of population without access to safe water (P_{31})	Percentage of population without access to health services(P_{32})	Percentage of moderately and severely under-weight children under five (P_{33})
Northern P.	**34.82**	**22**	**40.9**	**36.23**	**65.0**	**18.0**	**25.7**
Chilubi	44.34	33.6	53.8	40.80	83.0	9.0	30.4
Chinsali	36.25	22.9	34.6	44.73	82.0	13.0	39.2
Isoka	36.39	20.1	38.1	43.30	60.0	41.0	28.9
Kaputa	36.79	28.8	45.5	31.53	57.0	10.0	27.6
Kasama	31.85	19.5	30.5	39.40	69.0	20.0	29.2
Luwingu	35.63	20.8	42.9	36.27	69.0	12.0	27.8
Mbala	36.74	19.8	46.2	34.87	66.0	25.0	13.6
Mpika	31.09	17.2	37.2	32.27	61.0	15.0	20.8
Mporokoso	27.67	14.8	29.7	32.43	64.0	12.0	21.3
Mpulungu	34.65	25.3	46.6	19.50	38.0	5.0	15.5
Mungwi	37.74	21.1	46.2	37.63	56.0	27.0	29.9
Nakonde	32.20	25.6	40	26.87	55.0	13.0	12.6
North Western P.	**37.66**	**13.5**	**50.8**	**29.87**	**59.0**	**12.0**	**18.6**
Chavuma	41.88	11	57.4	31.03	72.0	14.0	7.1
Kabompo	35.92	13.5	47.7	30.37	62.0	13.0	16.1
Kasempa	25.81	12.8	36.4	10.73	22.0	2.0	8.2
Mufumbwe	28.18	15.8	38.9	16.27	34.0	1.0	13.8
Mwinilunga	42.19	12.5	53.4	41.43	68.0	18.0	38.3
Solwezi	33.32	12.5	43	30.90	62.0	17.0	13.7
Zambezi	37.58	13.4	51.6	26.87	65.0	1.0	14.6
Southern P.	**23.23**	**15.5**	**31.4**	**14.33**	**21.0**	**6.0**	**16.0**
Choma	22.24	13.7	27.4	21.43	38.0	1.0	25.3
Gwembe	36.58	14.6	51.1	21.73	25.0	18.0	22.2
Itezhi-tezhi	25.94	15.8	35.5	15.47	26.0	3.0	17.4
Kalomo	24.99	18.6	32.7	17.53	25.0	18.0	9.6
Kazungula	26.04	16.8	34.8	18.23	32.0	9.0	13.7
Livingstone	12.25	15.8	10.7	7.00	0.0	4.0	17.0
Mazabuka	21.31	12.8	29.5	10.83	13.0	1.0	18.5
Monze	17.80	14.3	23	12.23	15.0	10.0	11.7
Namwala	22.02	19.9	27.1	16.20	32.0	2.0	14.6
Siavonga	34.48	15.2	49.1	10.27	20.0	3.0	7.8
Sinazongwe	32.50	18.1	45.7	11.67	7.0	7.0	21.0
Western P.	**35.37**	**23.3**	**45.1**	**30.50**	**60.0**	**11.0**	**20.5**
Kalabo	37.44	27.5	45.4	35.07	71.0	13.0	21.2
Kaoma	35.04	24.2	42.7	33.33	58.0	11.0	31.0
Lukulu	34.10	20.7	44.5	28.00	63.0	4.0	17.0
Mongu	24.55	19.8	28.9	23.20	50.0	1.0	18.6
Senanga	35.36	23.9	40.2	37.80	82.0	16.0	15.4
Sesheke	25.26	22.4	28.3	24.37	26.0	35.0	12.1
Shangombo	48.17	23.5	66.4	30.90	57.0	16.0	19.7

Appendix table 5: Estimated HIV and AIDS prevalence 2004

	HIV prevalence	Number infected with HIV	New AIDS cases	Annual AIDS deaths	Number of cumulative AIDS deaths
Zambia	14.4	917,718	94,815	93,670	837,184
Central Province	14.8	7,435	8,789	8,399	60,231
Chibombo	11.6	5,387	1,474	1,508	10,815
Kabwe	23.8	4,939	2,398	2,288	16,406
Kapiri Mposhi	18.5	1,063	2,120	2,020	14,495
Mkushi	11.6	7,171	744	712	5,107
Mumbwa	11.6	0,239	1,046	1,001	7,183
Serenje	11.6	8,636	906	870	6,224
Copperbelt Province	18.4	70,525	27,770	27,609	300,021
Chililabombwe	19.0	0,287	1,084	1,078	11,711
Chingola	26.6	5,982	3,720	3,698	40,187
Kalulushi	19.0	1,025	1,132	1,124	12,212
Kitwe	26.6	7,066	7,840	7,794	84,693
Luanshya	19.0	21,632	2,204	2,189	23,785
Lufwanyama	11.3	4,744	503	502	5,453
Masaiti	11.3	7,149	753	751	8,165
Mpongwe	11.3	4,940	527	526	5,720
Mufulira	19.0	1,367	2,200	2,185	23,743
Ndola	26.6	76,334	7,808	7,762	84,353
Eastern Province	13.2	1,785	8,485	9,319	68,145
Chadiza	9.8	2,891	313	344	2,516
Chama	9.8	2,466	261	286	2,094
Chipata	26.3	35,884	3,706	4,037	29,528
Katete	18.1	6,687	1,724	1,872	13,694
Lundazi	18.1	3,089	1,362	1,481	10,830
Mambwe	9.8	1,509	161	176	1,290
Nyimba	9.3	2,266	241	265	1,936
Petauke	9.3	6,993	718	858	6,257
Luapula Province	10.6	9,462	5,162	4,995	37,148
Chiengi	8.2	5,362	551	533	3,966
Kawambwa	8.2	6,707	706	683	5,078
Mansa	11.6	7,822	1,848	1,779	13,235
Milenge	8.2	1,758	183	177	1,320
Mwense	8.2	6,724	722	699	5,201
Nchelenge	9.8	8,814	914	882	6,562
Samfya	9.7	2,275	237	241	1,785
Lusaka Province	20.7	57,997	16,686	16,274	212,742
Chongwe	19.0	3,411	1,370	1,427	10,686
Kafue	22.4	7,489	1,737	1,813	13,570
Luangwa	19.0	1,888	202	210	1,572
Lusaka	22.4	25,209	13,377	12,824	95,913

Central Statistical Office, 2005. HIV/AIDS Epidemiological Projections 1985-2010. Central Statistical Office, Lusaka.

APPENDIX TABLE 5

...Appendix table 5: Estimated HIV and AIDS prevalence 2004

	HIV prevalence	Number infected with HIV	New AIDS cases	Annual AIDS deaths	Number of cumulative AIDS deaths
Northern Province	8.0	63,812	6,392	6,103	41,555
Chilubi	5.2	1,538	165	162	1,104
Chinsali	5.4	3,110	327	320	2,179
Isoka	5.3	2,247	230	227	1,541
Kaputa	5.2	2,029	207	204	1,388
Kasama	12.6	14,941	1,451	1,370	9,327
Luwingu	5.2	1,813	186	183	1,245
Mbala	8.9	8,487	852	810	5,513
Mpika	12.6	2,941	1,293	1,222	8,326
Mporokoso	5.2	1,765	191	188	1,279
Mpulungu	12.6	5,877	574	543	3,695
Mungwi	5.2	2,624	278	274	1,861
Nakonde	12.6	6,441	636	602	4,096
North Western Province	8.6	7,587	2,802	2,684	18,506
Chavuma	8.8	1,228	125	119	822
Kabompo	7.2	2,246	235	228	1,572
Kasempa	7.4	1,721	177	171	1,179
Mufumbwe	7.3	1,439	150	146	1,004
Mwinilunga	8.8	5,010	518	497	3,429
Solwezi	12.3	3,250	1,321	1,258	8,674
Zambezi	8.8	2,694	276	265	1,826
Southern Province	16.2	20,768	12,719	12,524	146,080
Choma	19.2	9,918	2,034	1,989	23,193
Gwembe	7.5	1,103	120	120	1,397
Itezhi-tezhi	7.5	1,415	156	155	1,810
Kalomo	18.6	7,003	1,869	1,833	21,377
Kazungula	18.6	6,713	730	715	8,334
Livingstone	30.9	9,184	1,911	1,921	22,410
Mazabuka	22.5	5,024	2,655	2,602	30,346
Monze	19.2	6,879	1,809	1,769	20,636
Namwala	7.5	2,802	316	314	3,664
Siavonga	19.2	8,044	821	810	9,458
Sinazongwe	7.5	2,684	298	296	3,454
Western Province	12.6	8,347	6,010	5,763	42,476
Kalabo	10.0	6,174	657	639	4,680
Kaoma	10.0	9,036	934	898	6,618
Lukulu	10.0	3,881	406	390	2,873
Mongu	22.2	2,236	2,259	2,155	15,904
Senanga	10.0	5,798	599	576	4,247
Sesheke	16.1	7,485	762	728	5,371
Shangombo	10.0	3,736	392	378	2,783

APPENDIX TABLE 6

	Total population ('000)				Annual pop. growth rates (%)			Area (sq.km)	Population density				% Rural of population
	1969	1980	1990	2000	1969-1980	1980-1990	1990-2000		1969	1980	1990	2000	2000
Zambia	4,057	5,662	7,759	9,886	3.1	2.7	2.5	52,612	5.4	7.5	10.3	13.1	
Central P.	358.6	511.9	771.8	1,012	3.3	3.5	2.8	94,394	3.8	5.4	8.2	10.7	76.0
Chibombo	.	.	158.3	241.6	.	.	.	13,423	.	.	11.8	8.0	98.4
Kabwe	65.9	136.0	169.0	176.7	6.8	1.7	1.7	1,572	42.0	86.5	107.5	112.4	.
Kapiri Mposhi	.	.	110.7	194.7	.	.	.	17,219	.	.	6.4	11.3	86.0
Mkushi	56.9	72.1	76.7	107.4	2.2	4.2	4.2	17,726	2.5	3.2	4.3	6.1	90.1
Mumbwa	60.1	83.9	148.9	158.8	3.1	4.3	4.3	1,103	2.8	4.0	7.1	7.5	90.0
Serenje	52.9	73.4	107.9	132.8	3.0	3.5	3.5	23,351	2.3	3.1	4.6	5.7	93.5
Copperbelt P.	816.3	1,251.2	1,458.5	1,581.2	3.9	1.3	0.8	31,323	26.1	39.9	46.6	50.5	22.1
Chililabombwe	44.8	62.1	65.2	67.5	3.0	0.1	0.4	1,026	43.7	60.5	63.6	65.8	19.3
Chingola	103.2	145.9	168.9	172.0	3.2	1.0	0.2	1,678	61.6	87.1	100.7	102.6	14.3
Kalulushi	32.2	59.2	69.5	75.8	5.7	1.4	0.9	725	44.5	81.7	96.0	104.6	30.4
Kitwe	199.8	320.3	347.0	376.1	4.4	0.8	0.8	777	257.1	412.2	446.6	484.1	3.3
Luanshya	96.3	129.6	144.8	147.9	2.7	0.9	0.2	811	118.7	159.8	178.6	182.4	21.9
Lufwanyama	.	.	51.7	63.2	.	.	2.0	9,849	.	.	.	77.9	100.0
Masaiti	.	.	84.8	95.6	.	.	1.2	5,383	.	.	.	9.7	100.0
Mpongwe	.	.	.37.7	64.4	.	.	5.2	8,339	.	.	.	12.0	100.0
Mufulira	107.8	150.1	152.7	143.9	3.1	(0.2)	(0.6)	1,637	65.8	91.7	93.3	87.9	15.0
Ndola	159.8	281.3	334.8	374.8	5.3	1.7	1.1	1,103	144.9	255.1	303.5	19.6	.
Eastern P.	509.5	650.9	1,004.7	1,306.2	2.3	4.0	2.7	69.1 06	7.4	9.4	14.5	17.8	91.1
Chadiza	32.2	44.9	66.7	79.2	3.1	3.5	2.3	2 ,574	12.5	17.4	25.9	30.8	96.0
Chama	30.9	35.4	55.2	69.3	1.2	3.9	3.1	7,630	1.8	2.0	3.1	3.9	95.0
Chipata	148.4	204.7	261.1	342.9	3.0	3.6	3.5	6,692	12.4	17.1	39.0	28.6	80.0
Katete	80.5	94.2	143.9	179.7	1.5	3.9	2.8	3,989	20.2	23.6	36.1	45.1	94.4
Lundazi	92.2	114.6	179.4	221.9	2.0	4.1	2.8	14,058	6.6	8.2	12.8	15.8	96.0
Mambwe	.	.	60.0	44.8	.	.	2.2	10,509	.	.	11.8	8.5	100.0
Nyimba	.	.	38.3	65.5	.	.	1.6	10,509	.	.	3.6	6.2	98.3
Petauke	125.3	157.0	200.0	223.3	2.1	4.7	1.7	8,359	6.6	9.3	23.9	11.9	93.7
Luapula P.	335.6	420.9	564.4	775.3	2.1	2.2	3.2	0,567	6.6	8.3	11.6	15.3	87.0
Chiengi	.	.	47.2	83.8	.	.	5.9	3,965	.	.	11.9	21.1	100.0
Kawambwa	54.7	63.3	85.3	102.5	1.3	2.7	1.9	9,303	2.8	3.3	9.2	11.0	82.5
Mansa	80.3	111.4	132.5	179.7	3.0	2.5	3.1	9,900	5.0	6.9	13.4	18.2	77.2
Milenge	.	.	20.0	28.7	.	.	3.7	6,261	.	.	3.2	4.6	100.0
Mwense	52.9	65.5	86.3	105.8	2.0	2.1	2.1	6,718	7.9	9.8	12.8	15.7	96.4
Nchelenge	56.8	80.2	72.7	111.1	3.2	3.4	4.3	4,090	7.1	10.0	17.8	27.2	81.4
Samfya	90.8	100.4	120.3	163.6	0.9	0.7	3.1	10,329	8.8	9.7	11.6	15.8	89.2
Lusaka P.	354.0	691.0	991.2	1,391.3	6.3	3.6	3.2	21,896	16.2	31.6	45.3	63.5	18.2
Chongwe	.	.	95.7	137.5	.	.	3.7	8,669	.	.	10.0	15.9	96.2
Kafue	.	.	117.3	150.2	.	.	2.5	9,396	.	.	10.0	15.9	69.1
Luangwa	7.9	11.5	17.1	18.9	3.4	3.5	1.1	360	2.3	3.3	4.9	5.5	86.0
Lusaka	83.6	5,358.0	761.1	1,084.7	18.4	3.7	3.6	1,896	16.2	31.6	45.3	63.5	.

Central Statistical Office, 2005: Census of Population 2000, Analytical Provincial Reports, Central Statistical Office, Lusaka

... Appendix table 6: Demographic trends in Zambia by province and district

	Total population ('000)				Total population ('000)			Area (sq.km)	Population density				% Rural of population
	1969	1980	1990	2000	1969-1980	1980-1990	1990-2000		1969	1980	1990	2000	2000
Northern P.	545.1	674.7	925.9	1,258.7	2.2	2.4	3.1	47,826	3.7	4.6	6.3	7.9	85.9
Chilubi	.	66.1	44.3	66.3	.	(4.9)	4.1	4,648	.	7.2	9.5	3.8	94.7
Chinsali	58.0	94.0	89.8	128.6	4.9	(1.2)	3.7	15,395	3.8	4.3	5.8	4.1	91.1
Isoka	77.7	44.7	82.6	99.3	(5.4)	10.5	1.9	9,225	5.6	6.8	8.9	5.4	88.4
Kaputa	.	147.6	53.4	87.2	.	(10.3)	5.0	13,004	.	3.4	4.1	6.4	97.3
Kasama	107.8	52.6	125.5	170.9	(6.9)	13.7	3.1	10,788	5.2	7.2	11.6	6.5	56.6
Luwingu	79.2	113.9	72.2	80.8	3.7	(5.2)	1.1	8,892	8.9	5.9	8.1	13.0	93.3
Mbala	95.6	81.3	110.9	149.6	(1.6)	5.3	3.0	8,343	5.2	6.2	13.3	14.9	88.7
Mpika	59.4	41.1	123.1	146.2	(3.6)	10.8	1.7	40,935	1.4	2.0	3.0	15.2	82.3
Mporokoso	67.4	33.2	54.9	73.9	(6.8)	4.7	3.0	12,043	5.6	3.4	4.6	16.7	96.0
Mpulungu	.	.	44.5	67.6	.	.	4.3	9,865	.	.	4.5	16.9	88.9
Mungwi	.	.	74.7	112.9	.	.	4.2	9,766	.	.	7.7	26.0	94.7
Nakonde	.	.	49.9	75.1	.	.	4.2	4,621	.	.	10.8	30.8	87.6
North W. P.	231.7	302.7	438.2	583.3	2.0	2.4	2.9	125,826	1.8	2.4	3.5	4.6	87.7
Chavuma	.	.	27.9	29.9	.	.	0.7	4,280	.	.	6.5	7.0	100.0
Kabompo	33.4	40.3	60.1	71.2	1.9	2.8	1.7	14,532	2.3	2.8	4.1	4.9	91.9
Kasempa	32.7	30.6	42.3	51.9	(0.6)	1.9	2.1	20,821	1.6	1.5	2.0	2.5	90.5
Mufumbwe	.	9.3	25.1	44.0	.	9.5	5.8	20,756	.	0.5	1.2	2.1	87.7
Mwinilunga	51.4	68.8	93.9	117.5	3.0	1.7	2.3	21,116	2.4	3.3	4.4	5.6	90.9
Solwezi	52.9	92.8	137.7	203.8	5.8	3.0	4.0	30,261	1.8	3.1	4.6	6.7	81.3
Zambezi	61.3	60.8	51.0	64.9	(0.1)	1.2	2.4	14,060	3.3	3.3	3.6	4.6	89.7
Southern P.	496.0	671.9	965.6	1,212.1	2.8	3.0	2.3	85,283	5.8	7.9	11.3	14.4	78.8
Choma	91.9	130.4	170.7	204.9	2.9	2.3	1.8	7,296	13.4	17.9	23.4	28.1	80.3
Gwembe	76.4	20.7	39.9	34.1	(12.3)	5.5	1.8	3,879	6.1	4.1	10.3	8.8	94.6
Itezhi-tezhi	.	.	31.4	43.1	.	.	3.2	16,064	.	.	2.0	2.7	84.1
Kalomo	76.6	97.2	127.8	169.5	2.4	5.3	2.9	15,000	3.5	3.1	8.5	11.3	93.5
Kazungula	.	.	45.1	68.3	.	.	4.2	16,835	.	.	2.7	4.1	100.0
Livingstone	49.1	71.5	83.7	1.3.2	3.8	1.5	2.1	695	34.4	50.1	120.5	148.6	5.6
Mazabuka	159.4	112.3	162.3	203.2	(3.4)	3.3	2.3	6,242	23.3	16.4	26.0	32.6	76.8
Monze	.	110.4	133.7	163.6	.	1.3	2.0	4,854	.	22.8	27.5	33.7	85.0
Namwala	36.6	56.1	61.8	82.9	4.4	4.0	3.0	5,687	1.7	2.6	10.9	14.6	95.1
Siavonga	.	29.6	37.5	58.8	.	3.8	1.2	3,871	.	11.3	9.7	15.2	77.8
Sinazongwe	.	43.8	71.7	80.5	.	3.8	1.2	4,860	.	8.8	14.7	16.6	87.1
Western P.	410.0	486.5	638.7	765.1	1.6	2.2	1.8	126,385	3.2	3.8	5.1	6.1	88.0
Kalabo	105.9	98.5	103.9	114.8	(0.7)	(0.1)	10.0	17,526	6.0	5.6	5.9	6.6	93.4
Kaoma	56.4	70.0	116.6	162.6	2.0	4.8	3.4	23,315	2.4	3.0	5.0	7.0	92.4
Lukulu	.	44.8	54.1	68.4	.	1.5	2.4	16	-	2.7	3.3	4.2	95.5
Mongu	110.1	114.4	150.1	162.0	0.3	2.2	0.8	10,075	10.9	11.4	14.9	16.1	72.6
Senanga	88.6	101.9	98.8	109.1	1.3	3.1	1.0	15,537	5.7	6.6	6.4	7.0	91.6
Sesheke	49.0	56.7	68.4	78.2	1.3	1.4	1.3	29,272	1.7	1.9	2.3	2.7	82.2
Shangombo	.	.	46,852.0	0,049.0	.	.	4.1	14	-	-	3.3	4.9	97.6

APPENDIX TABLE 6

Appendix table 7: Estimated number of orphans, 2004

	Total orphans	Total paternal orphans	Total maternal orphans	Total double orphans	Total children orphaned by AIDS	AIDS paternal orphans	AIDS maternal orphans	AIDS double orphans	Children orphaned by AIDS, % of all orphans
Zambia	1,147,614	515,563	488,189	143,862	750,504	299600	323066	127838	65.4
Central P.	93,754	45,262	39,016	9,476	59,248	25958	25044	8246	63.2
Chibombo	7,896	9,767	8,071	1,568	11,313	5,874	4748	1302	63.2
Kabwe	20,968	7,929	7,462	2,505	12,655	5,754	5222	2277	60.4
Kapiri Mposhi	10,622	9,864	8,688	2,416	14,857	7,221	6180	2207	139.9
Mkushi	12,351	5,581	4,128	903	6,225	3,194	2594	769	50.4
Mumbwa	12,511	6,262	5,133	956	7,762	4,035	3317	830	62.0
Serenje	19,406	5,859	5,535	1,117	6,435	2,893	2982	861	33.2
Copperbelt P.	339,777	145,649	140,615	53,513	267,536	104726	111852	50958	78.7
Chililabombwe	15,427	6,830	6,508	2,089	12,149	4,948	5214	1987	78.8
Chingola	44,313	18,184	17,374	7,755	37,516	14,322	15649	7545	84.7
Kalulushi	14,129	6,387	5,828	1,913	10,802	4,366	4630	1806	76.5
Kitwe	88,072	36,500	36,218	15,354	71,637	27,374	29522	14741	81.3
Luanshya	26,990	11,954	11,419	3,618	20,857	8,410	9024	3423	77.3
Lufwanyama	9,183	4,497	3,774	912	5,325	2,293	2270	762	58.0
Masaiti	13,094	6,421	5,389	1,283	7,675	3,335	3262	1079	58.6
Mpongwe	9,586	4,681	3,961	943	5,654	2,465	2394	794	59.0
Mufulira	28,615	12,649	12,139	3,827	22,405	9,050	9719	3636	78.3
Ndola	90,369	37,546	37,005	15,819	73,515	28162	30169	15185	81.3
Eastern P	99,164	45,916	43,763	9,485	51,103	20724	22,953	7426	51.5
Chadiza	5,461	2,688	2,417	356	1,923	827	883	213	35.2
Chama	5,533	2,724	2,363	446	1,505	638	648	219	27.2
Chipata	33,730	14,505	15,082	4,143	22,141	8,590	9894	3657	65.6
Katete	13,700	6,258	6,213	1,230	8,281	3,410	3824	1047	60.4
Lundazi	20,387	9,671	8,659	2,057	9,513	3,935	4082	1496	46.7
Mambwe	2,876	1,430	1,256	190	1,006	432	461	113	35.0
Nyimba	4,076	2,016	1,808	252	1,570	671	738	161	38.5
Petauke	13,400	6,624	5,965	811	5,164	2221	2423	520	38.5
Luapula P.	78,238	39,168	31,696	7,374	38,286	17452	15256	5578	48.9
Chiengi	8,227	4,150	3,289	787	3,810	1736	1498	576	46.3
Kawambwa	10,315	5,180	4,252	883	5,627	2617	2303	708	54.6
Mansa	22,017	10,615	8,994	2,408	13,611	6122	5435	2054	61.8
Milenge	2,593	1,299	10,714	224	1,342	626	541	175	51.8
Mwense	11,888	5,986	4,777	1,124	5,777	2692	2243	841	48.6
Nchelenge	12,397	6,146	4,933	1,218	6,548	2970	2540	1038	52.8
Samfya	10,800	5,791	4,379	630	1,572	688	697	186	14.6
Lusaka Province	149,718	65,003	63,122	21,593	107,850	41582	46402	19866	72.0
Chongwe	17,485	7,651	7,546	2,288	12,637	4921	5609	2107	72.3
Kafue	17,968	7,566	7,791	2,611	13,462	5029	5995	2439	74.9
Luangwa	3,262	1,478	1,320	464	2,265	933	913	419	69.4
Lusaka	111,003	48,309	46,465	16,230	79,486	30700	33886	14901	71.6

Central Statistical Office, 2005. HIV/AIDS Epidemiological Projections 1985-2010. Central Statistical Office, Lusaka.

... Appendix table 7: Estimated number of orphans, 2004

	Total orphans	Total paternal orphans	Total maternal orphans	Total double orphans	Total children orphaned by AIDS	AIDS paternal orphans	AIDS maternal orphans	AIDS double orphans	Children orphaned by AIDS, % of all orphans
Northern P.	**102,505**	**49,641**	**45,717**	**7,147**	**43,250**	**17501**	**20781**	**4968**	**42.2**
Chilubi	5,535	2,805	2,412	318	1,284	1284	615	139	23.2
Chinsali	8,924	4,518	3,939	467	2,496	2496	1228	239	28.0
Isoka	6,516	3,296	2,867	353	1,612	1612	793	164	24.7
Kaputa	6,527	3,339	2,791	396	1,382	1382	672	165	21.2
Kasama	16,729	7,726	7,558	1,445	9,783	8483	4602	1201	58.5
Luwingu	4,733	2,419	2,083	232	1,320	1145	661	119	27.9
Mbala	13,760	6,637	6,103	1,019	6,119	5306	2850	723	44.5
Mpika	11,774	5,286	5,589	900	7,194	6236	3669	770	61.1
Mporokoso	5,023	2,556	2,244	223	1,685	1462	859	131	33.5
Mpulungu	7,007	3,271	3,094	641	3,803	3297	1749	512	54.3
Mungwi	7,820	3,999	3,428	393	2,215	1921	1105	203	28.3
Nakonde	8,158	3,788	3,610	761	4,358	3779	1978	600	53.4
North W. P.	**42,908**	**22,559**	**16,907**	**3,442**	**20,563**	**10714**	**7311**	**2538**	**47.9**
Chavuma	1,848	996	724	128	905	486	324	95	49.0
Kabompo	4,740	2,563	1,885	293	1,993	1079	719	195	42.0
Kasempa	3,215	1,743	1,273	199	1,355	722	500	134	42.1
Mufumbwe	2,872	1,529	1,161	182	1,176	617	440	119	40.9
Mwinilunga	8,775	4,612	3,515	648	1,090	2162	1462	466	12.4
Solwezi	17,252	8,863	6,694	1,696	8,952	4531	3116	1306	51.9
Zambezi	4,206	2,254	1,656	296	2,092	1117	751	223	49.7
Southern P.	**168,727**	**71,411**	**74,888**	**22,428**	**24,982**	**49134**	**54942**	**20906**	**74.1**
Choma	21,625	8,679	8,650	2,602	16,706	6171	7061	2449	77.3
Gwembe	2,569	1,265	1,063	170	1,284	573	652	131	50.0
Itezhi-tezhi	3,434	1,758	1,404	222	1,909	882	951	182	55.6
Kalomo	33,628	13,126	12,592	44,235	25,186	8980	9798	3893	74.9
Kazungula	13,145	5,216	4,821	1,680	9,782	3515	3745	1539	74.4
Livingstone	15,251	5,932	6,173	2,877	12,634	4626	5372	2774	82.8
Mazabuka	32,622	14,462	20,650	5,295	25,840	11089	12584	5086	79.2
Monze	27,651	11,127	10,885	3,488	21,896	8231	9013	3306	79.2
Namwala	6,873	3,523	2,869	431	3,921	1906	1935	358	57.0
Siavonga	4,760	2,770	2,883	914	2,433	1611	2148	806	51.1
Sinazongwe	7,168	3,553	2,898	513	3,391	1552	1682	382	47.3
Western P.	**72,823**	**30,954**	**32,465**	**9,404**	**37,686**	**11809**	**18525**	**7352**	**51.8**
Kalabo	9,969	4,297	4,544	1,128	3,903	943	2230	730	39.2
Kaoma	12,872	5,836	5,775	1,262	6,135	2103	3099	933	47.7
Lukulu	6,351	2,883	2,789	678	2,748	945	1333	469	43.3
Mongu	21,513	8,127	9,624	3,762	14,385	4375	6688	3322	66.9
Senanga	9,183	4,201	3,973	1,010	3,637	1255	1724	658	39.6
Sesheke	7,282	2,990	3,313	979	4,530	1412	2276	843	62.2
Shangombo	5,653	2,620	2,447	586	2,348	776	1174	397	41.5

Appendix table 8: Average distance to selected facilities (km), 2004

	Food market	Post office	Community school	Low basic school (1-4)	Middle basic school (1-7)	Upper basic school (1-9)	High school	Secondary school	Health facility	Hammer mill	Input market	Police station/ police post	Bank	Public transport	Public phone
Zambia	9	18	5	6	4	5	24	21	6	5	19	15	25	5	16
Central P.	8	17	4	5	5	6	25	21	10	5	19	13	23	6	14
Chibombo	7	26	2	4	4	5	19	16	10	3	6	13	29	6	28
Kabwe	3	5	2	3	3	2	5	5	2	1	8	3	6	2	6
Kapiri Mposhi	11	12	5	5	6	9	20	18	14	7	25	10	19	4	7
Mkushi	14	20	5	10	9	10	62	27	12	8	21	10	30	11	12
Mumbwa	7	15	2	6	5	4	22	24	7	3	18	16	24	4	12
Serenje	14	32	8	8	5	15	50	48	14	9	36	31	45	10	38
Copperbelt P.	4	7	3	3	3	4	7	6	4	3	7	5	9	3	3
Chililabombwe	36	33	14	6	32	34	10	45	34	35	14	35	23	34	18
Chingola	1	8	2	0	1	1	6	3	1	1	8	2	8	0	2
Kalulushi	1	2	0	0	2	2	5	3	3	3	2	4	21	0	1
Kitwe	1	5	1	1	1	2	5	3	2	1	5	1	7	0	1
Luanshya	4	5	3	3	5	6	7	6	4	4	9	5	12	7	8
Lufwanyama	9	43	14	7	3	6	27	29	6	3	27	33	60	7	42
Masaiti	8	14	3	4	4	4	9	10	6	4	13	9	26	6	7
Mpongwe	4	18	4	2	4	5	22	7	5	3	11	14	19	36	10
Mufulira	5	6	7	9	4	4	7	5	4	3	7	4	7	4	6
Ndola	0	2	0	1	1	1	1	3	1	0	2	1	6	0	0
Eastern P.	11	17	5	3	4	5	33	20	7	4	16	16	24	7	14
Chadiza	13	16	2	1	2	7	41	16	8	14	15	10	16	7	8
Chama	14	14	12	3	3	4	8	14	8	5	13	11	11	8	10
Chipata	20	5	8	5	5	5	26	27	7	5	22	23	27	7	16
Katete	9	17	3	3	4	4	37	16	5	7	12	15	27	4	12
Lundazi	10	28	7	2	4	6	39	20	11	2	15	18	5	9	31
Mambwe	13	8	5	3	3	3	31	25	6	3	10	6	10	5	9
Nyimba	14	19	2	6	6	8	22	30	7	2	16	17	53	10	17
Petauke	8	12	5	1	2	8	39	13	5	2	12	11	18	5	12
Luapula P.	11	24	11	16	3	5	42	26	4	6	25	22	38	4	31
Chiengi	7	16	0	4	5	8	37	53	6	4	25	22	78	4	73
Kawambwa	8	12	11	2	3	3	48	17	4	3	10	12	29	5	13
Mansa	13	27	8	6	3	3	31	26	5	6	28	24	28	4	28
Milenge	35	34	6	4	5	7	49	54	7	7	41	28	67	20	59
Mwense	9	18	2	71	4	6	64	16	4	5	26	18	67	9	30
Nchelenge	6	13	2	0	1	2	72	13	2	2	11	8	15	0	13
Samfya	16	38	30	34	2	5	49	24	4	11	39	35	48	2	46
Lusaka P.	2	8	1	2	2	2	9	6	2	1	11	3	6	1	4
Chongwe	9	19	2	13	6	4	23	14	5	1	16	12	21	2	17
Kafue	5	10	2	3	3	4	19	6	6	2	8	5	9	5	6
Luangwa	15	42	3	1	1	1	26	32	1	1	5	10	.	1	44
Lusaka	1	4	1	1	1	1	3	3	1	1	10	1	2	0	0

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APPENDIX TABLE 8

... Appendix table 8: Average distance to selected facilities (km), 2004

	Food market	Post office	Community school	Low basic school (1-4)	Middle basic school (1-7)	Upper basic school (1-9)	High school	Secondary school	Health facility	Hammer mill	Input market	Police station/ police post	Bank	Public transport	Public phone
Northern P.	16	27	9	6	5	9	35	36	11	7	22	23	37	11	30
Chilubi	8	26	5	2	4	8	27	41	8	7	8	22	91	6	90
Chinsali	26	44	20	6	4	10	47	34	11	7	37	26	49	17	35
Isoka	10	15	0	4	3	4	15	21	12	5	13	21	18	10	3
Kaputa	10	13	3	2	3	4	27	84	7	8	10	17	91	2	4
Kasama	15	18	8	29	20	12	20	20	18	13	18	20	19	12	19
Luwingu	37	41	4	5	6	10	48	54	16	10	29	48	84	22	34
Mbala	28	32	3	2	3	12	44	39	14	3	18	32	31	17	27
Mpika	14	29	16	7	3	8	44	39	14	3	18	32	35	11	33
Mporokoso	16	24	17	7	6	11	41	36	7	7	25	24	35	11	22
Mpulungu	14	19	5	4	3	6	29	36	6	3	23	16	18	6	13
Mungwi	6	34	6	3	2	9	50	58	10	7	22	12	62	7	57
Nakonde	3	15	14	3	2	2	16	17	5	2	10	5	12	2	18
North W. P.	14	23	12	19	10	10	31	34	9	6	29	29	37	10	26
Chavuma	9	14	.	6	2	8	23	12	9	6	41	15	85	3	88
Kabompo	33	40	8	6	9	5	35	72	6	5	41	54	55	9	25
Kasempa	7	15	6	2	6	5	12	19	3	3	6	15	15	6	8
Mufumbwe	5	21	3	0	2	4	12	20	4	3	8	18	.	8	10
Mwinilunga	13	18	2	4	4	13	20	19	14	12	13	29	21	13	15
Solwezi	10	24	22	33	17	16	47	43	12	6	49	28	40	8	36
Zambezi	20	20	1	2	5	2	16	29	2	2	9	28	29	17	12
Southern P.	7	21	6	6	4	4	23	27	6	3	26	20	31	3	16
Choma	11	23	11	15	3	4	23	32	4	3	43	22	41	3	19
Gwembe	20	37	6	12	10	10	32	32	14	9	16	24	44	8	35
Itezhi-tezhi	7	10	3	13	4	3	47	44	3	1	8	10	44	2	4
Kalomo	14	23	22	43	5	5	33	36	10	4	29	30	37	5	30
Kazungula	10	49	9	4	5	12	67	52	7	4	58	30	51	7	33
Livingstone	3	9	4	5	5	5	5	9	5	6	6	5	9	1	5
Mazabuka	5	22	4	3	2	4	14	23	5	2	26	21	41	3	8
Monze	6	18	2	0	3	2	19	18	4	3	11	16	23	2	18
Namwala	5	43	3	4	5	5	40	43	6	4	26	38	40	3	33
Siavonga	6	12	1	2	8	3	15	13	4	2	16	8	13	3	2
Sinazongwe	5	10	2	3	3	3	19	20	5	3	13	8	22	5	11
Western P.	18	23	5	5	8	7	29	31	8	8	25	18	38	10	23
Kalabo	32	42	17	4	20	7	45	44	6	6	46	25	55	15	10
Kaoma	10	19	4	2	4	4	11	41	6	5	26	12	36	8	31
Lukulu	29	31	7	6	4	14	28	36	6	11	28	29	92	19	8
Mongu	6	7	1	5	3	2	14	7	4	3	9	5	8	3	8
Senanga	33	35	10	8	13	10	41	41	18	16	34	31	79	22	29
Sesheke	30	29	36	7	4	12	33	36	12	7	36	30	35	4	31
Shangombo	15	47	9	1	5	12	67	43	7	13	20	19	75	14	83

Appendix table 9: Proportion of population within given distance to health facility, 2004

	Within 0-5 km	Within 6-10 km	Within 11-16 km	More than 16 km
Zambia	71	14	6	9
Central Province	58	15	10	17
Chibombo	47	21	13	19
Kabwe	91	2	5	2
Kapiri Mposhi	49	20	7	24
Mkushi	45	13	17	25
Mumbwa	65	23	5	6
Serenje	44	11	15	30
Copperbelt Province	90	5	2	3
Chililabombwe	64	1	.	35
Chingola	99	1	.	.
Kalulushi	98	.	.	2
Kitwe	99	.	.	1
Luanshya	93	2	1	4
Lufwanyama	59	31	5	4
Masaiti	58	27	14	.
Mpongwe	74	12	7	7
Mufulira	85	8	.	7
Ndola	100	.	.	0
Eastern Province	59	26	7	8
Chadiza	50	32	6	12
Chama	60	19	10	11
Chipata	66	16	8	9
Katete	51	46	2	1
Lundazi	40	35	11	13
Mambwe	68	21	1	10
Nyimba	46	33	18	4
Petauke	73	15	5	7
Luapula Province	73	19	4	3
Chiengi	59	24	9	9
Kawambwa	74	19	1	7
Mansa	69	17	12	2
Milenge	61	28	3	8
Mwense	87	9	1	3
Nchelenge	92	8	.	0
Samfya	68	30	1	2
Lusaka Province	94	4	1	2
Chongwe	74	14	6	6
Kafue	74	15	2	8
Luangwa	98	.	2	.
Lusaka	99	1	.	.
Northern Province	49	18	15	18
Chilubi	43	47	0	9
Chinsali	40	27	20	13
Isoka	43	5	10	41
Kaputa	54	26	10	10
Kasama	40	20	20	20
Luwingu	36	27	25	12
Mbala	33	22	20	25

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APPENDIX TABLE 9

... Appendix table 9: Proportion of population within given distance to health facility, 2004

	Within 0-5 km	Within 6-10 km	Within 11-16 km	More than 16 km
Mpika	58	7	20	15
Mporokoso	61	9	18	12
Mpulungu	72	17	6	5
Mungwi	53	8	12	27
Nakonde	84	2	.	13
North Western Province	**75**	**10**	**3**	**12**
Chavuma	72	9	5	14
Kabompo	82	3	1	13
Kasempa	90	8	1	2
Mufumbwe	70	22	7	1
Mwinilunga	60	14	8	18
Solwezi	74	9	0	17
Zambezi	90	9	.	1
Southern Province	**73**	**16**	**5**	**6**
Choma	79	10	11	1
Gwembe	62	7	13	18
Itezhi-tezhi	77	18	1	3
Kalomo	41	34	7	18
Kazungula	71	18	1	9
Livingstone	93	0	3	4
Mazabuka	74	23	2	1
Monze	81	9	1	10
Namwala	63	28	7	2
Siavonga	82	12	3	3
Sinazongwe	78	13	2	7
Western Province	**62**	**20**	**7**	**11**
Kalabo	74	9	4	13
Kaoma	60	23	5	11
Lukulu	61	25	10	4
Mongu	74	20	5	1
Senanga	43	27	14	16
Sesheke	45	20	0	35
Shangombo	64	8	12	16

Appendix table 10: Child health and nutrition, 2004

	Proportion of children aged below five who are stunted	Proportion of children aged below five who are wasted	Proportion of children aged below five who are underweight	Infant mortality rate (2000)	Child mortality rate (2000)	Under five mortality rate (2000)
Zambia	49.8	6.0	20.1	110	82	183
Central Province	8.2	7.5	21.7	102	73	167
Chibombo	5.7	7.5	24.5	86	57	137
Kabwe	78.0	5.1	20.4	95	66	155
Kapiri Mposhi	6.0	5.7	14.2	107	79	177
Mkushi	1.1	11.9	19.4	117	89	195
Mumbwa	8.1	4.7	21.2	93	64	151
Serenje	2.5	11.1	31.1	123	95	206
Copperbelt Province	3.9	3.8	15.7	92	63	149
Chililabombwe	8.6	6.2	20.5	75	47	119
Chingola	6.6	3.9	6.3	78	50	124
Kalulushi	7.1	8.0	14.3	95	66	156
Kitwe	3.9	1.5	13.0	91	62	148
Luanshya	3.7	4.0	11.4	94	65	152
Lufwanyama	53.4	4.1	24.2	113	85	188
Masaiti	65.1	3.2	27.2	101	72	166
Mpongwe	31.8	12.9	24.7	72	44	113
Mufulira	44.8	4.3	25.3	91	62	148
Ndola	37.2	3.5	11.6	93	64	151
Eastern Province	59.0	5.0	20.0	129	100	196
Chadiza	59.3	22.4	2.3	119	92	188
Chama	55.1	18.5	15.1	127	76	231
Chipata	66.5	23.6	4.2	111	90	180
Katete	48.2	16.4	4.0	99	78	166
Lundazi	58.2	19.0	6.2	137	133	236
Mambwe	46.8	22.1	5.9	100	77	177
Nyimba	41.7	22.1	7.3	128	101	204
Petauke	68.4	16.2	2.0	120	104	191
Luapula Province	64.3	4.2	26.8	138	110	233
Chiengi	73.9	3.1	29.3	161	132	272
Kawambwa	63.9	8.4	30.7	112	84	187
Mansa	65.7	3.1	21.7	120	93	202
Milenge	61.8	1.7	17.9	135	108	228
Mwense	62.9	2.0	30.1	150	122	254
Nchelenge	8.6	6.5	24.2	136	109	231
Samfya	64.4	3.5	28.9	155	127	262
Lusaka Province	40.3	8.7	17.0	88	82	142
Chongwe	36.9	0	15.2	101	72	165
Kafue	39.8	3.5	17.3	85	57	137
Luangwa	19.3	2.6	10.4	120	93	202
Lusaka	44.2	9.7	17.3	87	58	139
Northern Province	55.8	5.6	25.7	130	103	220
Chilubi	70.1	30.4	1.7	201	169	336
Chinsali	73.2	39.2	7.2	136	108	229
Isoka	48.4	28.9	7.5	120	92	201
Kaputa	51.0	27.6	6.4	171	141	288

Central Statistical Office, Living Conditions Monitoring Survey 2004, unpublished data

APPENDIX TABLE 10

... Appendix table 10: Child health and nutrition, 2004

	Proportion of children aged below five who are stunted	Proportion of children aged below five who are wasted	Proportion of children aged below five who are underweight	Infant mortality rate (2000)	Child mortality rate (2000)	Under five mortality rate (2000)
Kasama	50.8	29.2	4.5	116	89	195
Luwingu	51.4	27.8	6.5	123	96	208
Mbala	55.1	13.6	0.4	118	90	198
Mpika	49.9	20.8	5.1	104	75	172
Mporokoso	55.5	21.3	6.8	91	62	148
Mpulungu	58.9	15.5	5.4	150	121	253
Mungwi	57.4	29.9	7.5	125	98	211
Nakonde	50.3	12.6	9.2	151	123	256
North-Western Province	48.0	9.3	18.6	83.0	56.0	135.0
Chavuma	64.3	6.0	7.1	70	43	110
Kabompo	46.9	4.9	16.1	84	55	135
Kasempa	46.5	1.7	8.2	81	52	128
Mufumbwe	59.0	4.0	13.8	97	68	158
Mwinilunga	39.1	21.7	38.3	79	50	125
Solwezi	51.2	4.5	13.7	79	50	125
Zambezi	41.0	18.9	14.6	84	55	134
Southern Province	39	6	16	95	66	155
Choma	50.4	4.7	25.3	85	57	137
Gwembe	39.2	6.1	22.2	90	61	146
Itezhi-tezhi	31.9	1.2	17.4	97	68	158
Kalomo	17.5	13.1	9.6	112	84	186
Kazungula	49.0	1.7	13.7	102	73	168
Livingstone	36.9	4.5	17.0	97	68	158
Mazabuka	55.4	5.2	18.5	80	52	128
Monze	41.0	4.8	11.7	89	60	143
Namwala	30.4	3.7	14.6	118	60	199
Siavonga	36.9	5.7	7.8	94	91	152
Sinazongwe	44.2	4.4	21.0	109	65	181
Western Province	45.0	6.1	20.5	138.0	81.0	233.0
Kalabo	43.4	9.6	21.2	163	134	275
Kaoma	47.6	7.7	31.0	143	115	242
Lukulu	45.7	3.3	17.0	123	96	207
Mongu	44.7	6.2	18.6	118	90	198
Senanga	56.7	3.8	15.4	141	114	239
Sesheke	23.9	3.4	12.1	132	105	224
Shangombo	42.9	5.4	19.7	139	112	235

Acronyms

AIDS	Acquired immuno-deficiency syndrome
ART	Antiretroviral treatment
APU	Academic Production Unit
BMI	Body mass index
CBOs	Community-based organisations
CHEP	Copperbelt Health Education Project
CHIN	Children in Need
CPI	Consumer price index
CSO	Central Statistical Office
DCI	Development Cooperation Ireland
DDCC	District Development Coordinating Committee
DFID	UK Department for International Development
DOT	Directly observed treatment
FBOs	Faith-based organisations
FAO	Food and Agriculture Organisation
FDI	Foreign direct investment
FNDP	Fifth National Development Plan
GDP	Gross domestic product
GPA	Global Programme on AIDS
GRZ	Government of the Republic of Zambia
GTZ	Germany Technical Aid to Zambia
HDI	Human development index
HDR	Human Development Report
HIV	Human immunodeficiency virus
HPI	Human poverty index
HIPC	Heavily indebted poor countries
LDC	Least developed country
IMF	International Monetary Fund
MDGR	Millennium Development Goals Report
MDGs	Millennium Development Goals
MFNP	Ministry of Finance and National Planning
MoE	Ministry of Education
MoU	Memorandum of Understanding
MTP	Medium Term Plan
NGOs	Non-governmental organisations
NAC	National HIV/AIDS/STD/TB Council
NAPC	National AIDS Prevention and Control Programme
NBTS	National Blood Transfusion Services
NHDR	National Human Development report
NTEs	Non-traditional exports
NZP+	Network of Zambian People Living with HIV and AIDS
OECD	Organisation for Economic Cooperation and Development
OVC	Orphans and vulnerable children
PAGE	Programme for the Advancement of Girls Education
PDCC	Provincial Development Coordinating Committee
PEPFAR	President's Emergency Plan for AIDS Relief
PLHIV	People living with HIV
PLWHA	People living with HIV and AIDS
PMTCT	Prevention of mother-to-child-transmission
PRSP	Poverty Reduction Strategy Paper
RAPIDS	Reaching AIDS Affected People with Integrated Development and Support
RBA	Regional Bureau for Africa (UNDP)
SLA	Sustainable livelihoods approach
STI	Sexually transmitted infection
STP	Short Term Plan
SWAP	Sector-wide approach
SWAAZ	Society for Women and AIDS in Zambia
TB	Tuberculosis
TNDP	Transitional National Development Plan
UNAIDS	Joint United Nations Programme on AIDS
UN	United Nations
UNDG	United Nations Development Group
UNDP	United Nations Development Programme
UNGASS	United Nations General Assembly Special Session on AIDS
US	United States
UTH	University Teaching Hospital
VCT	Voluntary counseling and testing
WHO	World Health Organisation
WTO	World Trade Organisation
ZDHS	Zambia Demographic and Health Survey
ZHDR	Zambia Human Development Report
ZSBS	Zambia Sexual Behaviour Survey

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National Human Development Reports - the concept

National Human Development Reports (NHDRs) are advocacy tools for promoting human development through national focus on critical development issues within a country. They are also used to facilitate debate and dialogue on critical development issues, provide independent policy advice, primarily to government, on how to address such challenges, and also help to build consensus around a shared vision for the broadening human choices. Furthermore, in line with their people-centered approach and the capacity to monitor both progress and challenges in Human Development, NHDRs are important advocacy tools, at the country level, to track progress in the attainment of the Millennium Development Goals. NHDRs from all over the world are accessible on *http://hdr.undp.org*.

United Nations Development Programme
Zambia Country Office
P.O. Box 31966 Lusaka, Zambia
tel: +260-1-250 800
e-mail: registry.zm@undp.org
web: *www.undp.org.zm*