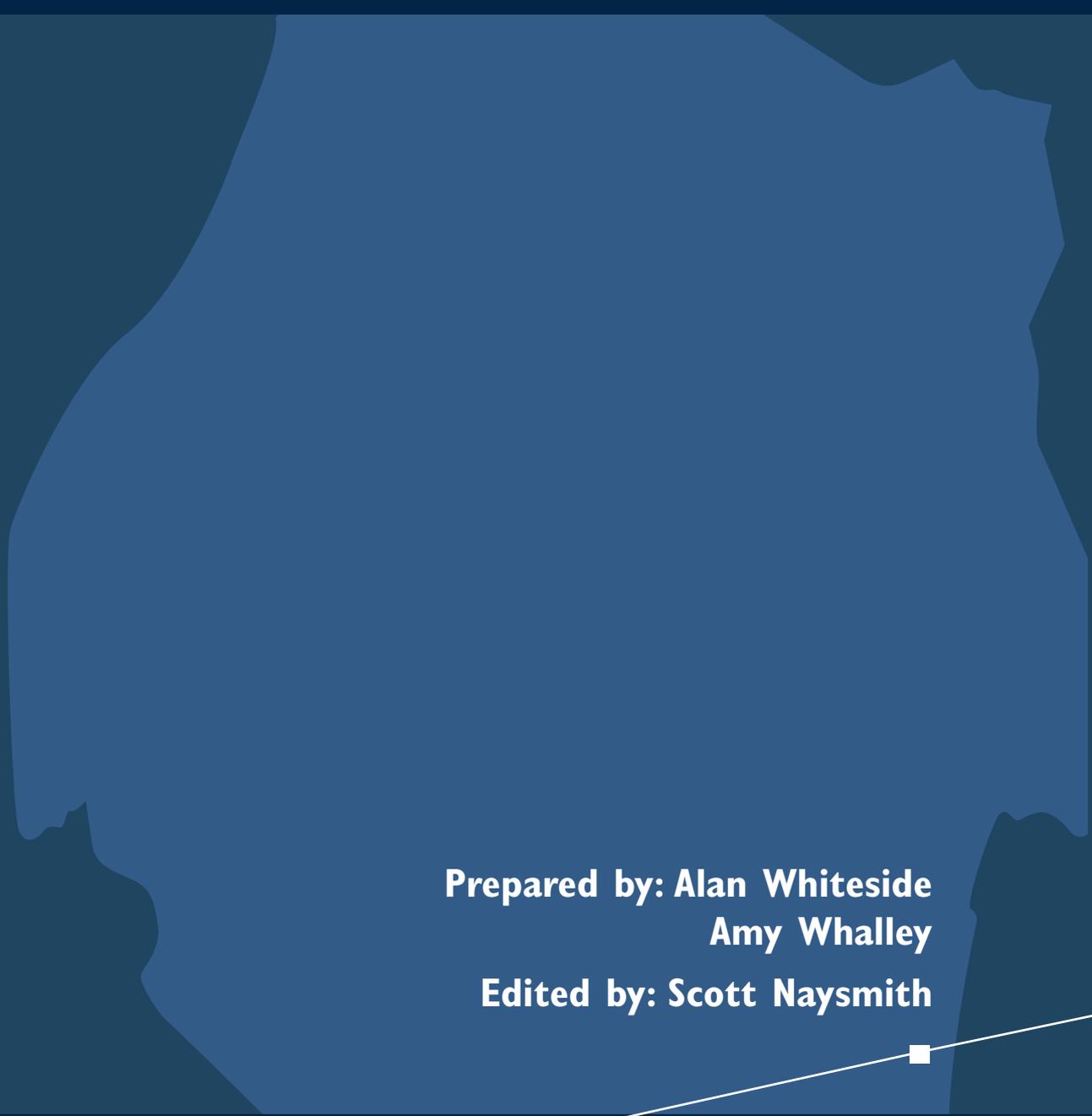


Reviewing 'Emergencies' for Swaziland

Shifting the Paradigm in a New Era



**Prepared by: Alan Whiteside
Amy Whalley**
Edited by: Scott Naysmith



2007

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Foreword

The HIV/AIDS pandemic poses parts of the world with an unimaginable catastrophe. Worldwide 2.8 million people died from AIDS in 2005 - the equivalent of 7,671 people per day. Currently 38.6 million people are living with HIV and 15.2 million children have already been orphaned due to the disease. These figures are devastating, but are now so big that in some countries they begin to lose their meaning. What does it mean to have over 7,000 people die every day as a result of one disease? How does a society cope with the thousands of children who are left behind?

It is these questions that are being addressed in southern Africa. Interventions in this part of the world are beginning to take effect. But given the depth to which many of the hardest hit countries have fallen, with death rates still rising, it has become a case of too little too late.

Over the years we have watched the situation in Swaziland deteriorate significantly. During the early years of the epidemic when Derek von Wissell was the Minister of Health, he said AIDS “is not a Ministry of Health problem, it is a problem of the whole nation. It is a looming national crisis...AIDS sufferers will need assistance from families, communities and churches...orphans and elderly will have to be cared for. The question is how will the country cope?” (1994) (Prevalence was then about 4% among pregnant women at ante-natal clinics).

Alan Whiteside, the Director of the Health Economics and HIV/AIDS Research Division of the University of KwaZulu-Natal, grew up in Swaziland. He began working on HIV/AIDS in 1987 and became concerned about the potential for the epidemic to hit Swaziland in 1990. In 1993 he carried out (with Greg Wood) the first study on HIV/AIDS and its potential impact in Swaziland. This report, the ‘Socio-Economic Impact of HIV/AIDS in Swaziland’, was published by the Ministry of Economic Planning and Development for the Government in 1994. Subsequent studies included a 2003 study (with Alison Hickey, Jane Tomlinson and Nkosinathi Ngcobo), ‘What is Driving the HIV/AIDS Epidemic in Swaziland? And what more can we do about it?’, a report prepared for the National Emergency Response Committee on HIV/AIDS and UNAIDS, and the 2006 ‘The Socio-Economic Impact of HIV/AIDS in Swaziland’ report with Catarina Andrade and Themba Ginindza of NERCHA, Solomon Dlamini of UNISWA, and Lisa Arrehag and Anokhi Parikh of HEARD. Since HEARD was established in 1998 at the University of Natal (now the University of KwaZulu-Natal) there have been close links with Swaziland and NERCHA. HEARD has been involved in a range of projects in Swaziland.

Since 1992, HIV prevalence has risen steadily in Swaziland until by 2004 it

had the highest prevalence ever recorded anywhere in the world. At the same time, the number of illnesses and deaths rose, as has the number of orphans and vulnerable children.

While, in many ways, Swaziland's response has been admirable and unique, it is clear that the HIV prevention programmes have not worked thus far, and more importantly, that the social and economic implications of the epidemic have not been adequately thought through. Examples of good responses are the inclusion of HIV/AIDS in the National Development Plan in the early 1990's - the first country in the world to do this; the establishment of NERCHA, and more recently the innovative 'Young Hero's' project.

This paper was originally conceived by a group of likeminded individuals concerned with the situation in Swaziland and the fact that it does not have the priority it deserves or needs in the global community. The country is additionally handicapped because the economic success of the 1980s and early 1990s mean it is categorised as a middle income country and thus, can not access the support that low income countries receive from the international donor community.

This paper argues that conditions are deteriorating rapidly within Swaziland and that responses from both within the country and internationally are insufficient in addressing the scale of the crisis. Despite the implementation of many mitigation and prevention programmes, the growing impact and the inability of these initiatives to respond to overall need has become apparent. To the National AIDS Council, responsible for the implementation of the multi-sectoral response to the crisis in Swaziland, and the National Emergency Council on HIV/AIDS (NERCHA), this inadequacy is clear.

With the death rate still rising, the dire situation in many highly affected countries requires that international policies consider the unique context of these epidemics. As a small country, Swaziland's plight is often overlooked on the global stage. Meanwhile, its people are crying out for help. We hope this paper will influence thinking around disasters and HIV/AIDS generally, and will focus attention on Swaziland in particular.

Derek von Wissell
Director NERCHA

Alan Whiteside
Director HEARD

Executive Summary

The world's highest HIV prevalence and the increasing number of deaths due to AIDS is having unprecedented impact on Swaziland. Worryingly, with a generation of orphans and rapidly escalating poverty, this desperate situation is being accepted as 'normal'. HIV/AIDS in Swaziland has been characterized by a slow onset of impacts that have failed to command an emergency response. With insufficient resource allocation and a lack of capacity, slow onset events can become emergencies. The absence of an agreed definition of "disaster" or "emergency" has helped to sustain this characterisation. The nature of these terms is changing. The case of Swaziland emphasizes that they can be long-term, complex, widespread events that evolve over years.

Swaziland is experiencing a generalized epidemic. National sero-sentinel surveillance prevalence increased from 3.9% in 1992 to 42.6% in 2004 (MOHSW, 2006). HIV prevalence is estimated at 19% among the entire population and 26% among productive adults (CSO, 2007). Currently, there are around 220,000 people living with HIV. At similar prevalence rates, this would equate to 56 million and 92 million infected individuals in the USA and EU respectively. Prevalence is similar in rural and urban areas, and all districts. Unless the trajectory changes, AIDS may claim the lives of two thirds of all 15 year olds (UNAIDS, 2000).

HIV/AIDS is different from past diseases. Previous epidemics were short-term and worked their way through society or were treated and eliminated. HIV/AIDS is a long-term event. Rising HIV prevalence predates intensified impact. The multidimensional impact of infections will last generations. Negative effects on families become embedded within Swazi society, altering the future development path of the country. Although dramatic, the estimates cited in this paper are conservative. Effective interventions will require an emergency response aimed at building capacity for long-term programmes founded on the realities driving Swaziland's epidemic.

HIV/AIDS is permanently altering the structure of Swazi society. By 2025 there will be a thinning of the older age groups and the very young. Deaths among productive age groups are increasing the dependency ratio, constraining coping mechanisms and economic growth. Life expectancy fell from 60 years in 1997 to 31.3 years in 2004 - the world's lowest. Mortality has risen significantly across the entire population over the past fifteen years. Infant mortality increased from 79 per 1,000 births in 1992 to 108 in 2004. Maternal mortality has increased from 230 per 100,000 births in 2000 to 370 in 2004. The crude death rate has doubled from 11 deaths per 1,000 people in the early 1990s to 21.2 in 2004. Recent analysis show

deaths rates in all regions in Swaziland now exceed emergency thresholds.

HIV/AIDS is negatively impacting Swaziland's health systems, as rising morbidity increases the patient loads at all levels. While demand for services increase, there is a parallel reduction in the capacity to supply them. Rising TB prevalence is compounding this public health disaster. The provision of ART is placing significant strain on current public health systems.

Hospitals are working beyond capacity. Since the late 1990's there has been a rapid increase in the demand for beds. HIV/AIDS patients are more susceptible to opportunistic infections, thus complicating medical treatment they must receive. The demand for services over the next ten years will grow. This increased demand will place additional strain on staff, effectively 'crowding out' other health and support services. This will further foster demoralization among remaining staff and contribute to the migration of health workers from Swaziland.

In addition, TB prevalence rose from 263 cases per 10,000 in 1990 to 1262 in 2005. Increases of this magnitude and a low treatment completion rate raise the risk of MDR and XDR TB outbreaks. As TB can infect the general population, it has the potential to turn the HIV epidemic into a wider public health emergency.

ART roll-out could avert many deaths and reduce impacts across society. Currently, only 28% of those in need are receiving treatment. More resources dedicated to building capacity are required to ensure the success of treatment programmes.

HIV affected households become further impoverished as income-earning adults die. In 2001, 69% of the population - 80% in rural areas - were living below the poverty line. It is likely that this has increased further. Swaziland's Human Development Index (HDI) ranking has fallen sharply since 2000, reflecting an overall fall in socio-economic conditions. This is despite a per capita GDP ranking that is 3 times higher than what is considered 'low human development'. The impact of HIV/AIDS has reduced Swaziland's social indicators (for example: life expectancy and crude death rate) to the point where the country is only slightly above the lowest HDI category.

There are 130,000 orphans and vulnerable children (OVC) in Swaziland - 31.3% of all children. This number is projected to increase to 200,000 by 2010. The impact of this on community and household structures cannot be overstated, as 43.4% of households are hosting orphans (Swazi VAC, 2006). At present, grandparents are masking the true extent of the orphan problem. However, as these elder caregivers die, this vulnerable population will be left without a support network. Inadequate socialisation of a large group of orphans may result in the creation of a dysfunctional generation of Swazi citizens. Increasingly, Swazi society

has come to see the OVC status of one-third of all children as 'normal'. This abnormal 'normality' is reflective of a desperate society that has run out of options.

Swazi households are forced to use drastic coping strategies in order to survive. The number of people reducing meal sizes fell between 2006 and 2007, but those not eating for an entire day or selling assets for food increased. Households are no longer vulnerable to, but rather suffer from, livelihood failure (Swazi VAC, 2004). In turn, this has created a societal exhaustion that decreases individuals ability to care for those in need or plan for the uncertainty of their future.

There has been a downturn in the Swazi economy over the past ten years. A reduction in annual growth rates from 6% in the 1990's to a current level of around 2% has resulted in negative per capita growth. The average loss in GDP growth attributable to HIV/AIDS is around 1.6% per year (Muwanga, 2004). However, this estimate is from the early 1990's when prevalence rates had not reached the levels seen in the past four years. Current figures may starkly highlight the negative impact of HIV/AIDS on economic growth.

Swaziland has experienced a significant reduction in agricultural production. Bad weather exacerbated by climate change is in part to blame. The multi-dimensional impacts of HIV/AIDS are also responsible. AIDS affected households experience a 54.2% reduction in maize production and a 34.2% reduction in the area of land cultivated. The national cattle population is estimated to have fallen by 11% between 2000 and 2002. Reductions in agricultural output and livestock ownership have led to increasing vulnerability and food insecurity. In 2007, over 400,000 people in Swaziland required food aid - approximately 40% of the entire population.

Redefining Swaziland's Long-Wave Emergency

An emergency can be thought of as an event affecting a group of people, causing a social, infrastructural or health impact which places the population under an excessive amount of stress and exceeds their coping capacity. However, definitions by humanitarian actors fail to provide clear guidelines as to when an event is severe enough to be declared an emergency. They also fail to recognise change in the nature of disasters. Humanitarian assistance tends to focus on development as a linear progression. Disasters occur as a temporary setback on this path creating a dire short-term need. Humanitarian aid is seen as both *the* response to 'bolt-from-the-blue' events that are impossible to plan for, and as a tool to move affected states back onto their normal path to development.

Traditional humanitarian thinking focuses on the short-term, and is often

aimed at returning affected populations to 'normality'. HIV/AIDS in Swaziland has been characterized by a slow onset of impacts that have failed to command an emergency response. With insufficient resource allocation and a lack of capacity, slow onset events can become emergencies. This characterisation is supported by the lack of an agreed definition of a "disaster" or an "emergency". The nature of these terms is changing. The case of Swaziland emphasizes that emergencies can be long-term, complex, widespread events that evolve over years.

The situation in Swaziland has deteriorated since the beginning of the 1990's. While HIV/AIDS is not solely to blame for the reduction in living standards and life expectancy, it has compounded the effects of other events such as drought and falling foreign direct investment (FDI). Swazi society is in distress - overwhelming sickness, an increasing dependency ratio and thousands of OVC are placing households and communities under extreme duress. In Swaziland, HIV/AIDS is creating a chronic emergency that is permanently altering development. This demonstrates a 'new' disaster that exceeds emergency thresholds and requires a new style of holistic response.

Shifting the Paradigm

Allocating humanitarian funding according to need is important. The current paradigm of emergencies is inadequate for assessing situations that develop slowly and quietly. There is broad agreement within humanitarianism that reflects a concern with reducing suffering and preserving human dignity. The changes described in this report require a new approach to defining disasters. Humanitarian interventions aimed at mitigating the spread and impact of HIV/AIDS must distinguish between rapid onset 'traditional' disasters and complex, long-term, multi-dimensional emergencies. The latter describes Swaziland's current plight.

While the traditional threshold approach remains useful for classifying 'traditional' disasters, a new framework of analysis is needed for HIV/AIDS. This could take the form of an index system or a series of thresholds. Within this it is crucial that the indicators measured are considered over time, with a sustained fall being the prime indication of an emergency. The element of 'time' has been missing from the debate surrounding humanitarian response.

Over the past fifteen years, Swaziland has become characterized by a decline in economic growth, an increase in poverty, and a rise in mortality and morbidity rates. Current death rates now exceed the daily mortality thresholds used by agencies as an indicator of a disaster. Such impacts have reversed the concept of 'normality' with that of 'abnormality'. A new, comprehensive response, led by the Government of Swaziland and funded, in part by the donor community, is essential to address the devastation of the HIV/AIDS epidemic in Swaziland.

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Acronyms Used

AIDS	Acquired Immune Deficiency Syndrome
ADB	African Development Bank
ANC	Ante Natal Clinic
ART	Anti Retroviral Therapy
ARV	Anti Retroviral
CDR	Crude Death Rate
CMR	Crude Mortality Rate
CSO	Central Statistics Office (Swaziland)
DFID	UK Department for International Development
ECHO	European Directorate General for Humanitarian Aid
EU	European Union
FAO	Food and Agriculture Organisation
FDI	Foreign Direct Investment
FCA	Forgotten Crisis Assessment
GDP	Gross Domestic Product
GHD	Good Humanitarian Donorship
GNA	Global Needs Assessment
HDI	Human Development Index
HIV	Human Immuno- Deficiency Virus
IDA	International Development Assistance
IFRC	International Federation of the Red Cross
ILO	International Labour Organisation
JICA	Japanese International Co-operation Agency
MDG	Millennium Development Goals
MDR TB	Multi-Drug Resistant Tuberculosis
MOHSW	Ministry of Health and Social Welfare (Swaziland)
ODA	Overseas Development Assistance
OECD	Organisation of Economic Cooperation and Development

OFDA	Office of U.S. Foreign Disaster Assistance
OVC	Orphaned and Vulnerable Children
PHC	Primary Health Care
PMTCT	Prevention of Mother to Child Transmission
PPP	Purchasing Power Parity
RHM	Rural Health Motivator
SARS	Severe Acute Respiratory Syndrome
SNAP	Swaziland National AIDS Programme
TB	Tuberculosis
U5MR	Under 5 Mortality Rate
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV and AIDS
UNDAC	United Nations Disaster Assessment and Coordination Team
UNDP	United Nations Development Programme
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations Children's Fund
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
USAID	United States Agency for International Development
VAC	Vulnerability Assessment Committee
WFP	World Food Organisation
WHO	World Health Organisation
XDR TB	Extensively Drug Resistant Tuberculosis

I. Introduction

This paper emerged out of a growing concern with the situation in Swaziland. Over the past ten years, there has been a systematic decline in the quality of life which is echoing the rise in the prevalence of Human Immuno-Deficiency Virus (HIV). Average life expectancy has dropped from approximately 60 years in 1997, to (the world's lowest), 31.4 years in 2004 (UNDP, 2006). Crude death rates in all regions are now in excess of the standard emergency threshold of 1 death per 10,000 people per day. There are also an estimated 130,000 orphaned and vulnerable children (OVC). This number is projected to increase to almost 200,000 by 2010 (Government of Swaziland, 2006).

High HIV prevalence and an increasing number of deaths due to Acquired Immune Deficiency Syndrome (AIDS), is having an unprecedented impact on Swazi society. Worryingly, with a generation of orphans and rapidly escalating poverty, this desperate situation is being accepted as 'normal'.

By shifting individual's short-term perceptions and long-term expectations of normality, the epidemic has altered the economic growth and social development of Swaziland.

The mandate of humanitarian assistance is broadly based on two main principles. First, it is a response to unexpected disasters. Second, it is designed for short-term relief, filling a resource gap for the period of the shock, in countries with insufficient means of coping.

HIV/AIDS has been viewed by both international actors and affected governments as a medical humanitarian disaster. The result has been a focus on short-term projects aimed at returning affected populations to 'normality' so that development can proceed. This way of thinking, however, fails to consider the multidimensional character of contemporary disasters.

The HIV/AIDS epidemic is a long-term event that is characterized by periods of acute dire need. HIV/AIDS does not suddenly impact society. The manifestation of infection evolves over years and is exacerbated by socio-economic deprivation and a slow deterioration of conditions. The impacts of the virus are systematically reducing the resources available for planning and response. HIV/AIDS in Swaziland has been a slow, developing emergency.

There is a need to reassess the traditional definition of a disaster. New conceptions must take account of changes in socio-economic conditions over time.

**Without
adequate
resources and
capacity, slow
onset events
can become
emergencies**

This has particular relevance for Swaziland. Having adequate resources is essential for slowing and reversing the impact of these events. If there is an insufficient response, Swaziland stands to lose the next generation of human capacity through a lack of investment in human capital, health and the continued low moral that affects workers in such contexts. In this case, the decline in living standards and human development now seen will be the start of a longer term, more difficult problem.

This report examines the prevailing situation in Swaziland, which is currently classified as a low-middle income country. The comparison countries are Malawi and Zambia which are both low income countries. This includes an assessment of socio-economic conditions, including demographic, health, economic, agriculture and OVC indicators. The current definitions of a disaster are examined and assessed, based on how they influence 'new' emergencies, such as HIV/AIDS.

In reading this report several points should be borne in mind. First, all of the data examined is affected by a time lag. This data provides a retrospective analysis of the situation in Swaziland. Second, some of the individual data sets are shocking when considered individually. However, when considered together, an overall picture emerges that is significant and convincing of a society in distress. Third, all of the trends observed within the data sets could change. The big unknown is the impact(s) of ART. However, any positive outcome will require the necessary resources to continue ensuring their provision. Without these resources, the impact of ART will be severely compromised. Finally, this paper highlights the need to respond to the humanitarian situation as a separate issue from those of governance. The poor have little control over these broader issues.

2. Swaziland

2.1 Context

The Kingdom of Swaziland is the smallest country in Southern Africa, covering approximately 17,000 square kilometres with approximately 1.1 million inhabitants. It is landlocked and bordered by South Africa, to the north, west and south, and Mozambique to the east. In the 1980's Swaziland experienced a significant upturn in investment and growth, benefiting from a regional advantage due to the war in Mozambique and apartheid in South Africa. This comparative advantage, combined with political stability, sound macroeconomic policies, and a cheap and productive workforce led to FDI worth on average 7% of gross domestic product (GDP). This contributed to an average growth rate of 6% between 1985 and 1999 (Basu & Srinivasan, 2002). Significant and consistent economic growth helped to drive development in the 1990's leading to it being classified as a 'low-middle income country' by the World Bank, and a 'medium human development country' by the United Nations Development Programme (UNDP). These classifications have had several impacts. First, they restrict the potential external funding available. Second, they alter the perception of the country in donor and international eyes away from a 'poor' country to one able to support itself. This view is also perpetuated internally and provides the impression that Swaziland is economically more secure than low income countries. These indicators also painted a positive picture in terms of health care and social well-being, showing life expectancy as approximately 60 years in 1998, a crude death rate (CDR) of 11 deaths per 1,000 people per year and an infant mortality of 79 per 1,000 births in 1992, as well as an under five mortality of 89 per 1,000 births. The school enrolment ratio was approximately 83% in 1991. Table 1 compares indicators in Swaziland in 1993.

Table 1: Comparison of indicators, Swaziland and Sub-Saharan Africa: 1993

Indicator	Swaziland	Sub Saharan Africa (average)	All developing countries (average)
Life Expectancy	57.8	50.9	61.5
Combined Enrolment ratio ¹ (%)	68%	43%	55%
GDP (per capita PPP \$)	2,940	1,288	2,696
Human Development Index Value	0.586	0.379	0.563

Source: UNDP (1996)

1. This ratio considers enrolment in primary, secondary and tertiary education. It gives a rough estimate of the level of education amongst the population and is calculated by dividing the number of pupils enrolled at each level of education by the number who should be enrolled in each year group.

These gains are being reversed through the devastating impact of HIV/AIDS. This is working in combination with other factors such as falling economic growth and poor agricultural outputs, which are themselves affected by HIV/AIDS, creating a circular, mutually reinforcing relationship.

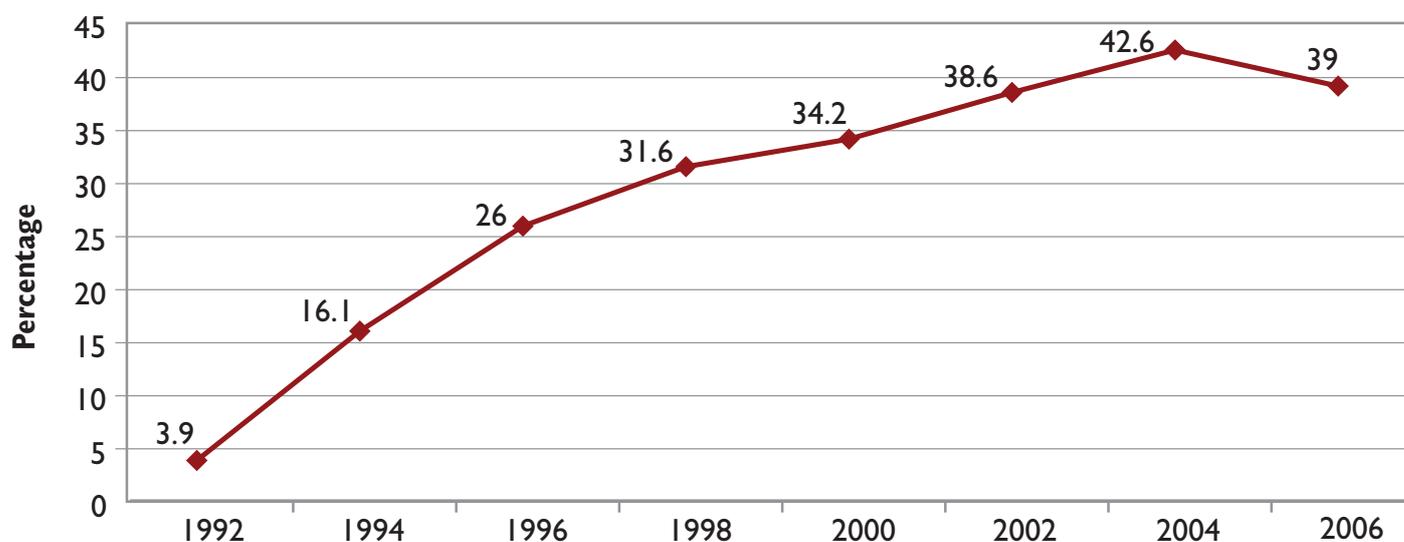
Swaziland holds the unenviable distinction as having the highest HIV prevalence in the world (UNAIDS, 2006). The consequences are slowly becoming apparent and are reflected in deteriorating socio-economic indicators. This situation has unfolded slowly and quietly since the early 1990's. It is now reversing all of the gains that the country had made, more importantly, it threatens to destroy Swazi society.

2.2 HIV/AIDS

Since the identification of the first case of HIV infection in 1986 and the diagnosis of the first AIDS case in 1987, the number of people living with HIV in Swaziland has increased dramatically. The Government responded by establishing the AIDS Task Force in 1987, which grew into the Swaziland National AIDS Programme (SNAP) in 1990. A Crisis Management and Technical Committee was formed in 1998. This subsequently disbanded and in 2001 the National Emergency Response Council was launched in its place (Government of Swaziland, 2006). In addition to these structures, the King declared the disease a national disaster in 1999.

Figure 1 shows that HIV prevalence, as measured by national sero-sentinel surveillance surveys, has increased rapidly from 3.9% in 1992 to 42.6% in 2004 and declined slightly to 39.2% in 2006.

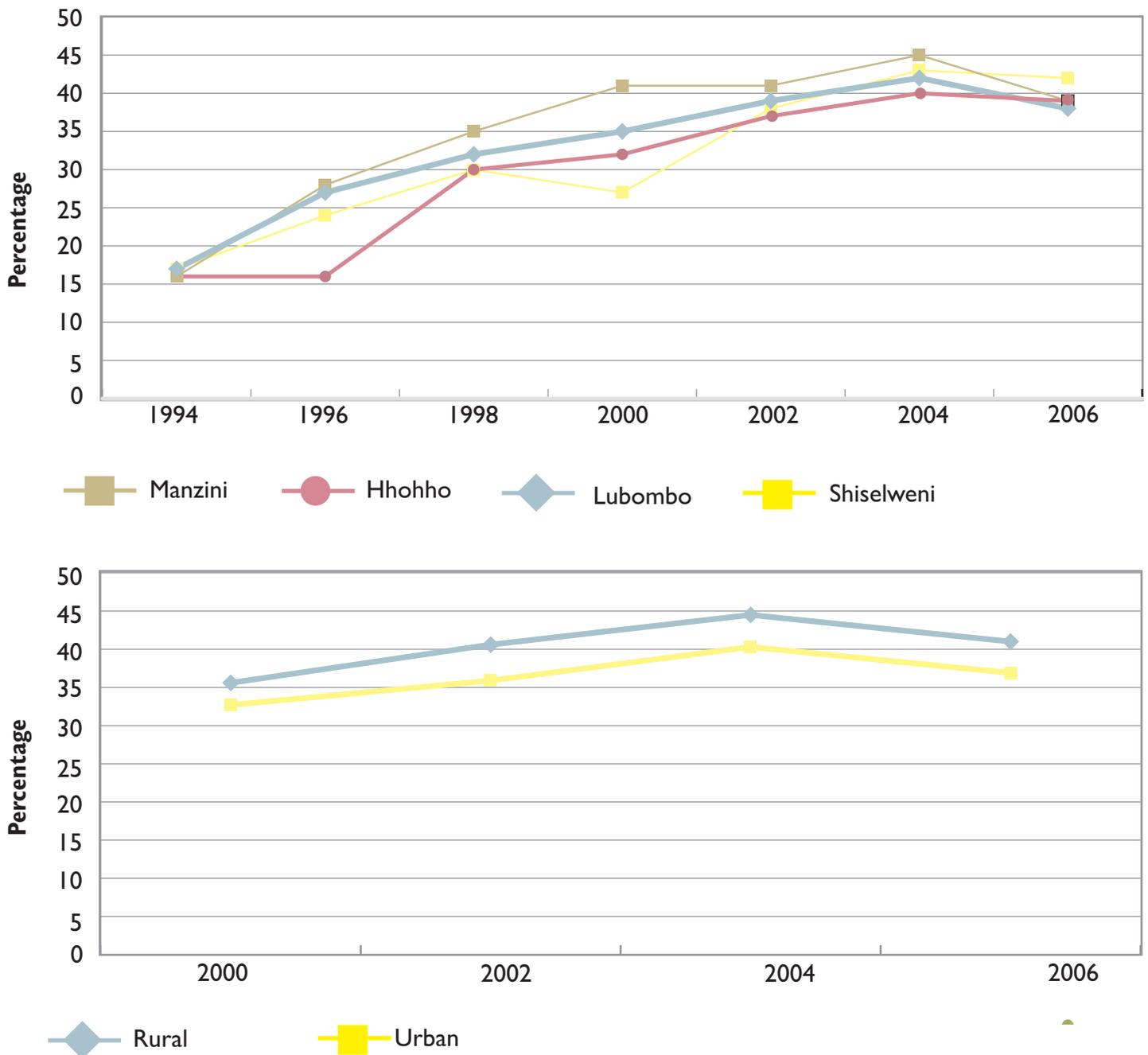
Figure 1: Trends in Antenatal HIV Prevalence in Swaziland



Source: Ministry of Health and Social Welfare (2006)

Figure 2 shows increases in prevalence across all regions, with rates in rural areas mirroring urban areas. This indicates the entrenched and generalised nature of the epidemic. These findings were confirmed by the recent demographic health survey which estimates current HIV population prevalence at 18.8% and 26% among the 15-49 age group (CSO, 2007).

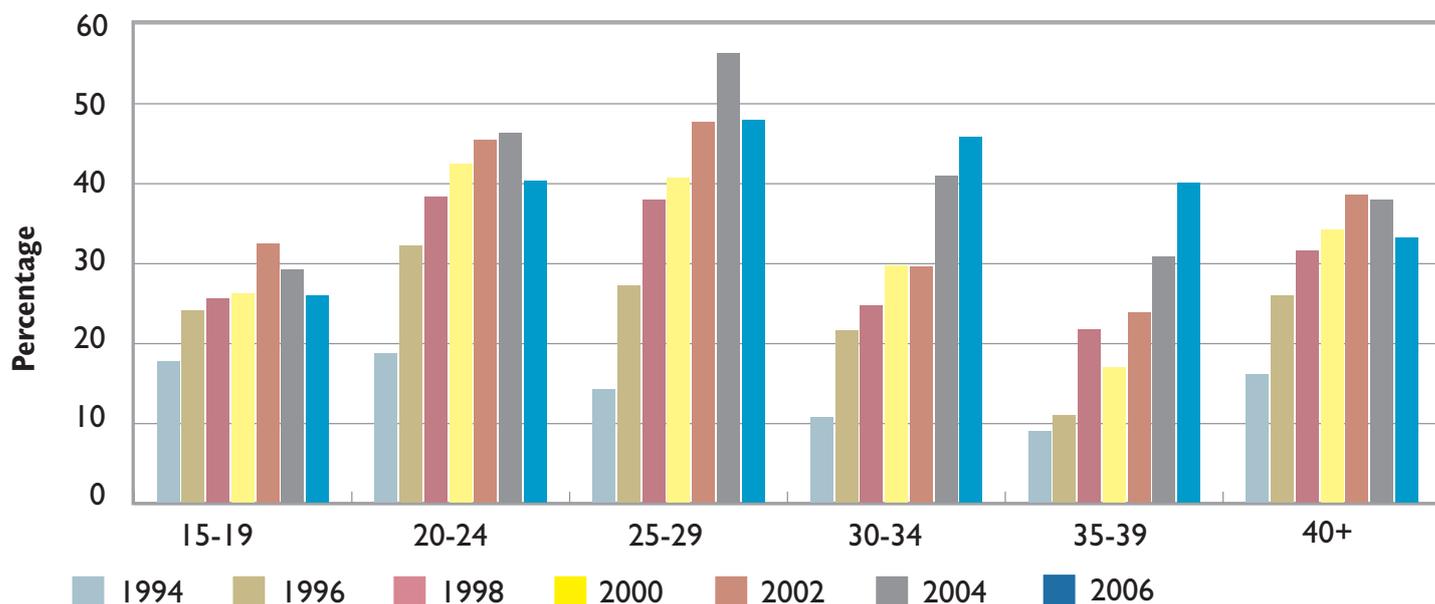
Figure 2: HIV Prevalence by Region, 1994 - 2006 and Area, 2000 - 2006



Source: Ministry of Health and Social Welfare (2006)

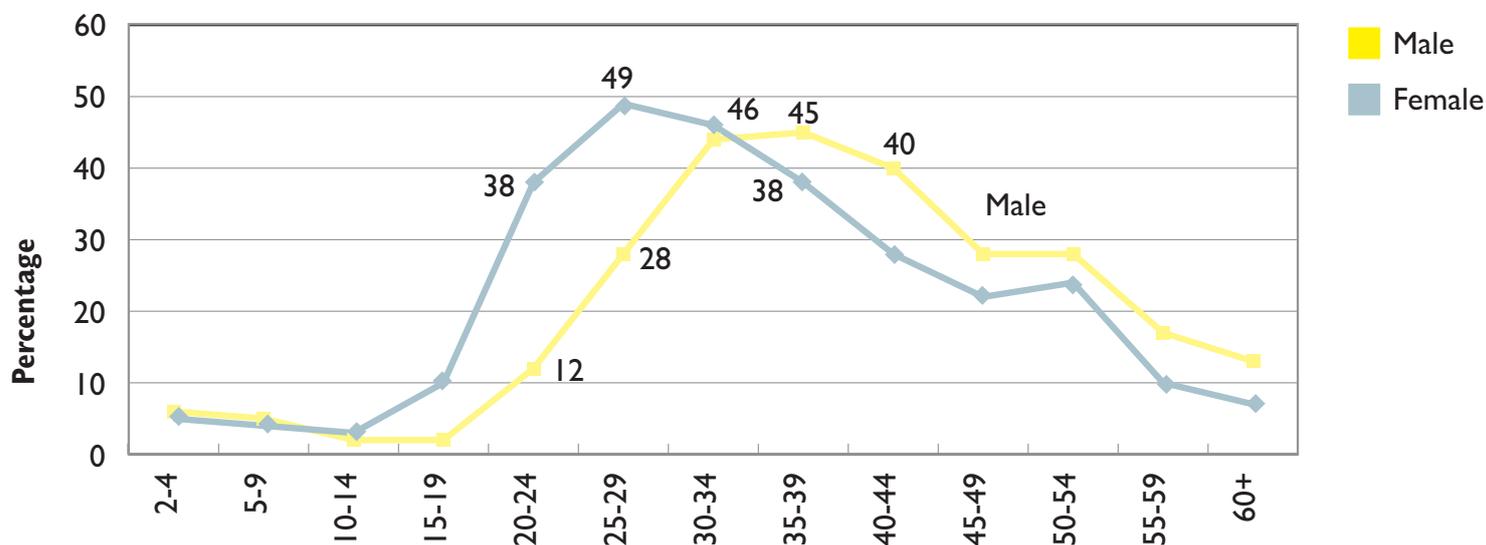
Increases in prevalence have been seen in all age groups with the largest increases among 25-29 year olds. There is, however, a sign of hope in the levelling off, and recent dropping, of prevalence rates among the 15-19 and 20-24 year age groups. This indicates a fall in the number of new infections, and may lead to decreasing prevalence in the future. However, rates among older age groups continue to rise, with the largest increase being noted among 35-39 year olds. These rates cannot be accounted for by the cohort effect of aging of infected persons, especially since there is increased mortality in this group.

Figure 3: Antenatal HIV Prevalence by Age Group, 1994 - 1996



Source: Ministry of Health and Social Welfare (2006)

Figure 4: HIV Prevalence by Age and Sex (2007)

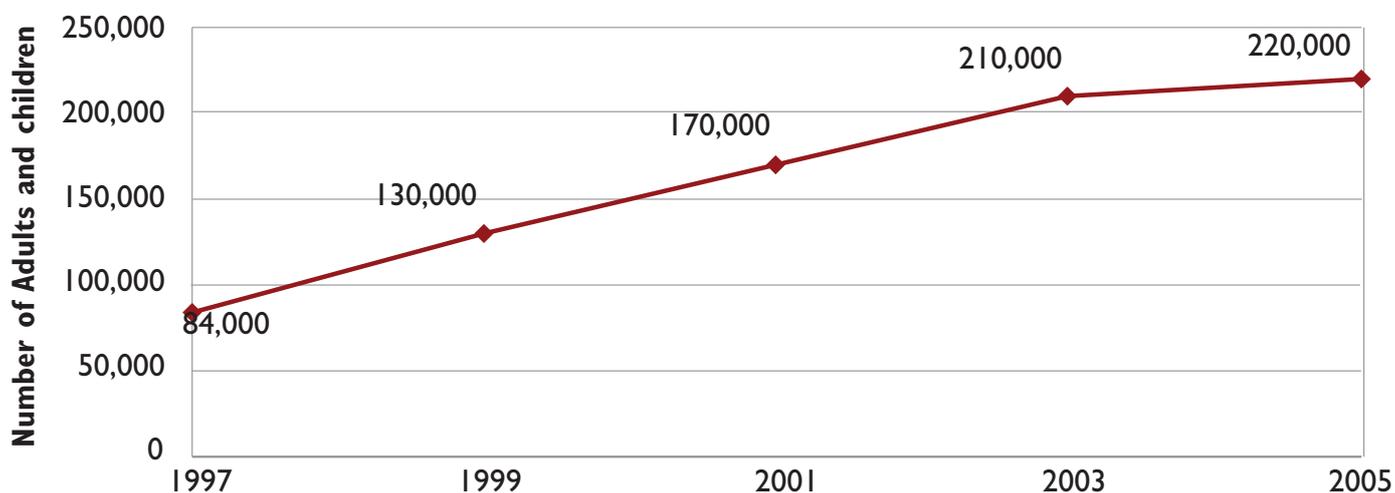


Source: CSO (2007)

The age distribution of HIV infections from the recent DHS (CSO, 2007) is shown in Figure 4. The different HIV prevalence rates by age and gender reflect the gendered dimension of the epidemic. Women become infected earlier in life with a sharp increase in prevalence from 10% to 38% between 15 and 24 years. Approximately half of all women in the 25-29 age range are HIV positive. The children of women in this category have a high probability of being orphaned at a young age. Rates among men rise substantially in the 30-34 year age group, where 45% are HIV positive.

High prevalence is more worrying when analysed in light of the lifetime risk concept (UNAIDS, 2000). This examines the likelihood of an individual becoming infected with HIV throughout their lifetimes. Among older age groups incidence rates may continue to rise. The chances of becoming infected are cumulative throughout an individual's lifetime. UNAIDS (2000) suggest that in countries such as South Africa and Zimbabwe where a quarter of the adult population is infected, AIDS will claim the lives of around half of all 15 year olds. This increases to two-thirds of all 15 year olds in countries with higher prevalence, such as Swaziland. This poses worrying questions for undertaking comprehensive interventions to contain the spread and impact of the epidemic.

Figure 5: Number of People Living with HIV/AIDS



Source: UNAIDS (2000, 2002, 2004, 2006)

UNAIDS (2006) estimate that there are currently 220,000 people living with HIV/AIDS in Swaziland (Figure 5). This has led to an increase in the need for care, treatment and support services. Of the total people living with HIV, 33% are estimated to need ARV therapy. This will increase to over 100,000 adults and children by 2011²

Table 2 demonstrates the severity of the situation facing Swaziland, using Swazi prevalence rates to estimate the equivalent burden in other countries. These numbers raise an important question: would other countries have the capacity to respond adequately to a similar situation?

Table 2: Comparison of Swazi HIV infection rates to other countries

Country	Population ³	No of people living with HIV/AIDS given an 18.8% prevalence rate ⁴
Swaziland	1,200,000	225,600
USA	301,140,000	56,614,320
UK	60,776,000	11,425,888
EU	492,964,000	92,677,000
India	1,130,000,000	212,440,000
China	1,322,000,000	248,536,000

HIV/AIDS is significantly different to past diseases. Typical epidemics either worked their way through society or were treated and eliminated. These were short-term. People were generally struck down at a similar time and illness resulted in either death or survival, with recovery to previous levels of activity within a relatively short period. However, the co-epidemic of HIV/AIDS and tuberculosis (TB) does not mirror earlier patterns of disease. People infected with HIV remain infected for many years and may live for a long period before dying from AIDS. Following infection, there is an incubation period. The full manifestation of infection may take years to develop. Traditional epidemics with relatively shorter incubation periods create shocks, but do not tip an entire economic system into disarray.

There are 3 different, but related epidemics occurring: a HIV epidemic; followed by an AIDS epidemic; which in turn leads to an impact epidemic. As

2. ART needs for Swaziland are taken from Spectrum projections calculated at a UNAIDS/WHO Spectrum Projection workshop with the Ministry of Health and Social Welfare and NERCHA in March 2007.

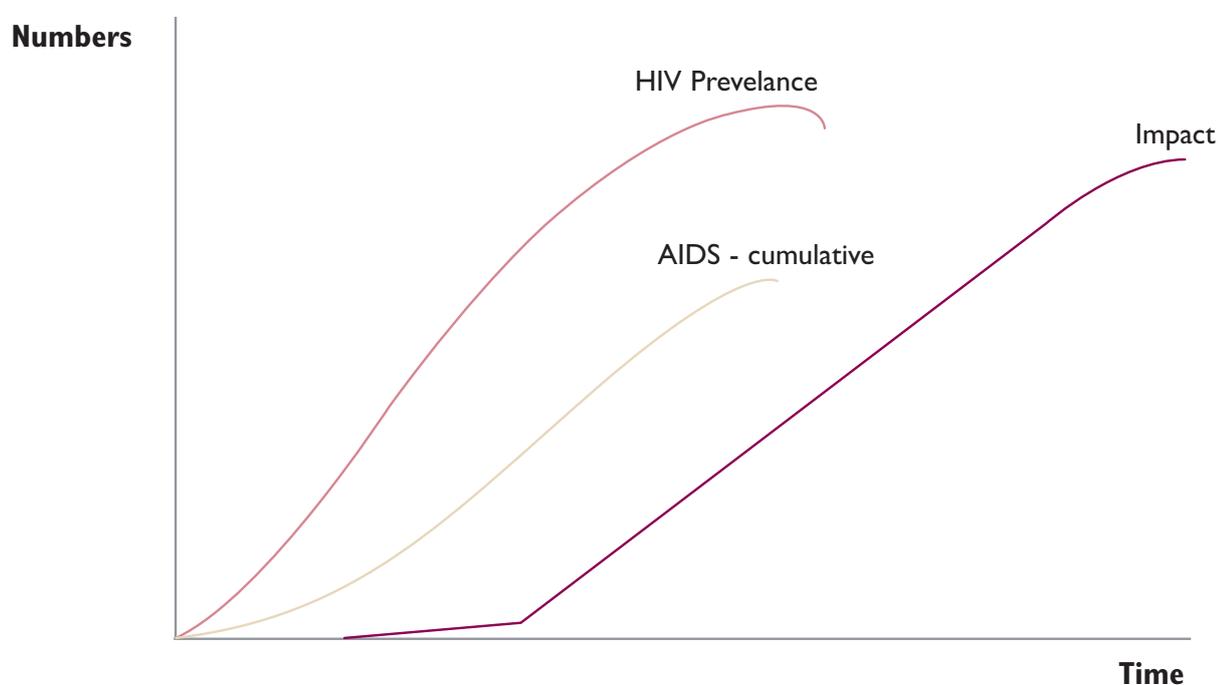
3. Current figures taken from the US Census Bureau, (US Census Bureau, 2007).

4. The Swaziland DHS estimated HIV prevalence among all age groups at 18.8%.

prevalence rates have now been at high levels for 10 years, impacts are being seen. Figure 6 shows increases in HIV prevalence and AIDS cases occurring over a relatively short period of time. The fallout from this will be long-term, forever altering the future development paths of these countries. HIV/AIDS must be viewed as an emergency.

The separation of the two terms, 'emergency' and 'disaster', which are often confused and used interchangeably, allows for a redefinition of a 'disaster' as a short-term event which can cause a long wave emergency. This is a recognition of the severity of long-run, deteriorating slow onset situations. This time frame must be borne in mind when developing effective responses to HIV/AIDS.

Figure 6: Epidemic curves: HIV, AIDS and impact



Source: Whiteside (2007b)

The dynamics of the HIV/AIDS epidemic is explained in Table 3, which proposes six stages of impact. Swaziland is currently in stage 5 with unusual levels of death beginning to create increasing numbers of orphans, and TB emerging as a major killer.

Table 3: Dynamics of the Stages of the HIV/AIDS epidemic

Stages	Epidemiology and Prevention	Impact and Response
<p>STAGE 1</p> <p>No one with AIDS identified, some HIV infections.</p>	<p>HIV prevalence >0.5% in high risk groups, targeted prevention.</p>	<p>Planning only required.</p>
<p>STAGE 2</p> <p>A few cases of AIDS seen by medical services, more people are infected with HIV</p>	<p>HIV prevalence <5% in high risk groups, targeted prevention.</p>	<p>Impact on medical demand and use of facilities, need to plan for this.</p>
<p>STAGE 3</p> <p>Medical services see many with AIDS. Some policy makers aware of HIV infection and AIDS. The incidence of reported TB cases increases.</p>	<p>Prevalence >5% in high risk populations. Targeted prevention but general information.</p>	<p>Impact still mainly medical but need to begin human resource planning and targeted mitigation especially for most vulnerable groups, institutions and sectors.</p>
<p>STAGE 4</p> <p>AIDS cases threaten to overwhelm the health services. Widespread general population awareness of HIV/AIDS.</p>	<p>Prevalence >5% in ANC women. Information available to all, continuing targeting of high risk groups.</p>	<p>Impact now broader - need to start looking at education sector and all government activities. Private sector plans for impact.</p>
<p>STAGE 5</p> <p>Unusual levels of severe illness and death in the 15-50 age group produce coping problems, large numbers of orphans, loss of key household and community members. TB is a major killer.</p>	<p>Prevalence >20% in ANC clinic attendees and has been so for 5 years. Full battery of prevention according to resources.</p>	<p>Impact at all levels. Responses need to be equally diverse. They may include targeted relief or targeted ART.</p>
<p>STAGE 6</p> <p>Loss of human resources in specialised roles in production and economic and social reproduction decreases the ability of households, communities and enterprises and districts to govern, manage and/ or provision themselves effectively. Responses range from creative and innovative ways of coping to failure of social and economic entities.</p>	<p>Prevalence >15% in 15-49 age group and has been so for 5 years. Most now needs to be focused on key groups and interventions. Efforts to reach those below age 15 and for over-15's there should be an emphasis on voluntary counselling and testing.</p>	<p>This impact requires massive intervention at all levels. The emphasis should be on children in crisis including orphans. Local programmes should be scaled up and made sustainable, perhaps with donor money.</p>

Source: Barnett & Whiteside (2002)

Current impacts are from prevalence rates of 7 years and more ago. The impact in Swaziland has not yet reached its peak. It will worsen. Because prevalence rates remain high, the impacts on society will increase into the long-term in the absence of mitigation efforts. Indeed, these impacts may be compounded rather than cumulative. It is crucial that HIV/AIDS be recognised as a humanitarian emergency causing psychological and physical harm to individuals over both the short and long-term. The next section considers the idea of HIV/AIDS as an emergency in more detail.

2.3 Indicators

2.3.1 Demographic Changes

In order to demonstrate the scale of the emergency facing Swaziland, we compare the situation with Malawi and Zambia. Both are Southern African countries with high prevalence rates. Swaziland leads the world in infection levels; Zambia is seventh and Malawi is ninth (Swazi VAC, 2006). However, Malawi and Zambia are both classified as low-income countries and are eligible for overseas development aid (ODA) from OECD countries, international development assistance (IDA), grants from the World Bank, and concessional-lending. As a low-middle income country Swaziland is only eligible for lending at non-concessional rates (World Bank, 2007).

Table 4: Situational Analysis: Swaziland, Malawi and Zambia⁵

Country	GDP per capita (US\$)	Percentage of population living in poverty	Inequality (Gini index ⁶)	HIV prevalence among the 15-49 year age group
Swaziland	2140	69	60.9	26%
Malawi	149	41.7	50.3	14.1%
Zambia	471	75.8	42.1	175

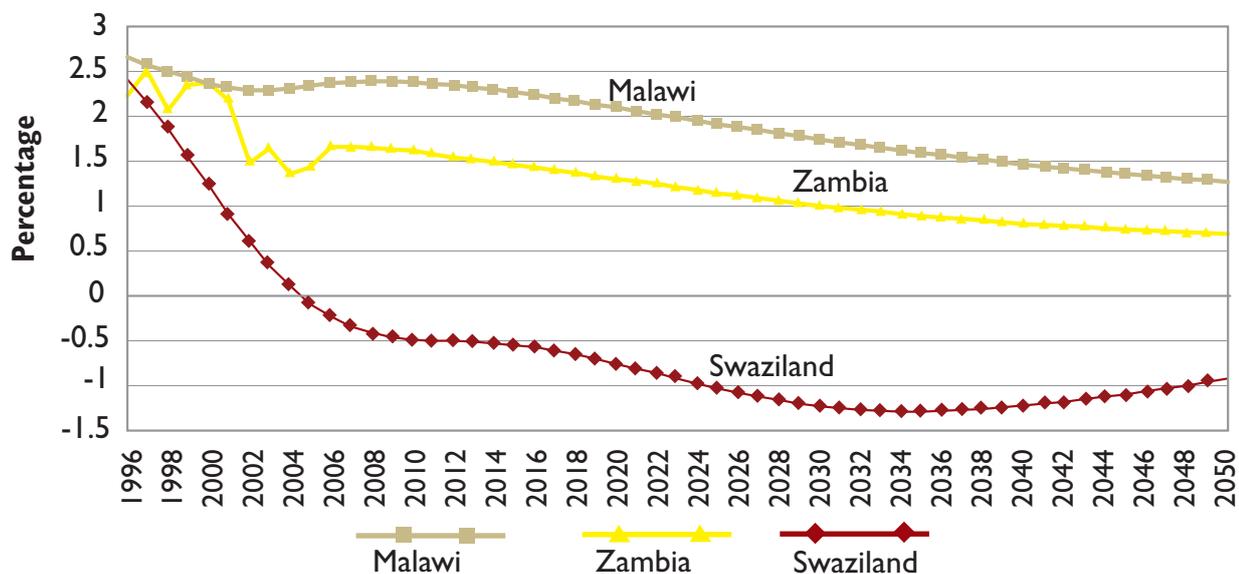
Table 4 shows selected indicators. While Swaziland has a comparatively high GDP per capita, this income is heavily skewed, with 69% of the population living in poverty. Malawi and Zambia have much lower GDP per capita. Malawi also has a lower poverty rate and HIV prevalence than both Swaziland and Zambia.

5. Sources: GDP per capita, inequality and Malawi and Zambia poverty data - (UNDP, 2006), Swaziland poverty data- (Ministry of Economic Planning and Development, 2006), HIV prevalence data - (UNAIDS, 2006) and (CSO, 2007).

6. A score of 0 indicates perfect equality of income distribution, while a score of 100 indicates perfect inequality.

HIV/AIDS is altering the structure of society. Figure 7 shows that all three countries are experiencing falling population growth. This is projected to continue to fall over the next fifty years. Malawi and Zambia are both expected to experience gradual falls in population growth. Swaziland meanwhile has a sudden drop into negative figures over two years.

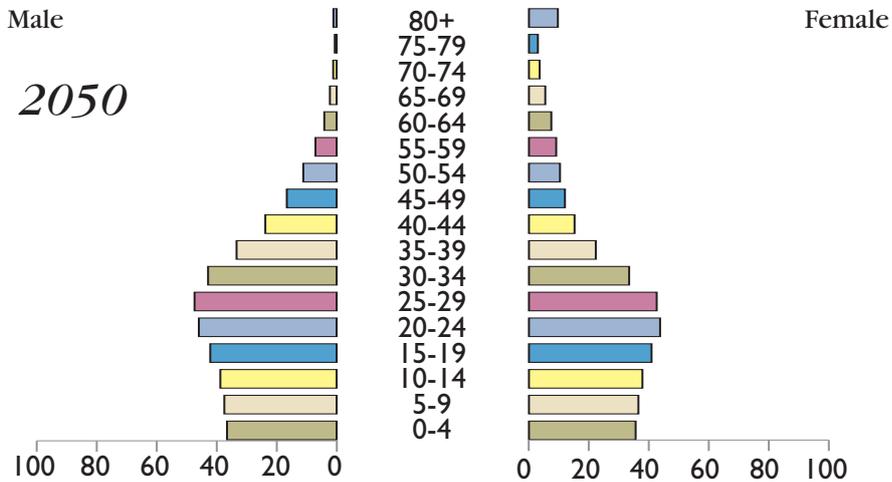
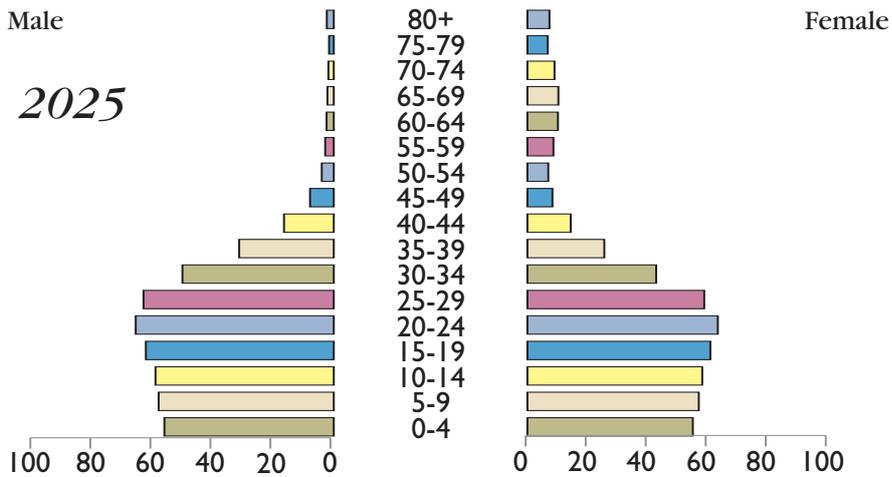
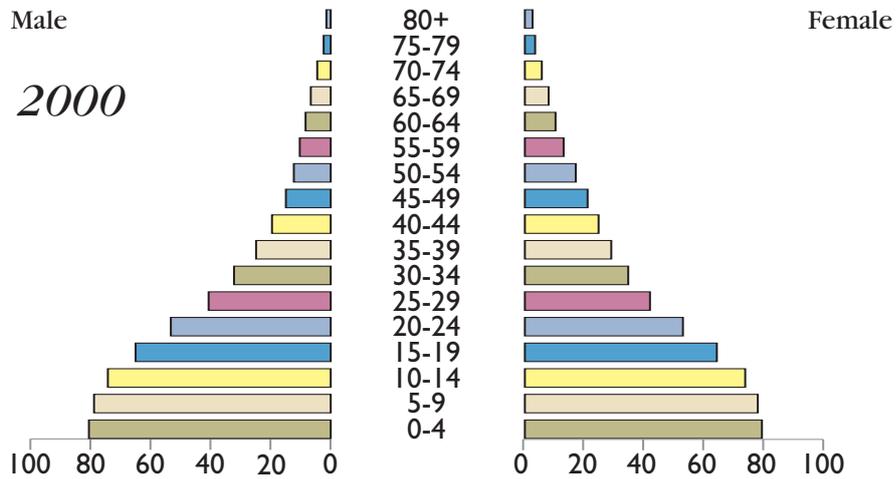
Figure 7: Comparison of Population Growth Rates, Swaziland, Malawi and Zambia: 1996-2050



Source: US Census Bureau (2007)

This is permanently altering the demographic structure of society. As the population pyramids of Figure 8 make clear, the structure of the Swazi population will change dramatically. By 2025 there is expected to be a thinning of both the older age groups and the very young. By 2050 an overall drop in population is anticipated. A recent vulnerability assessment found deaths are concentrated among 16-35 year olds. These accounted for around 45% of all deaths, a significant departure from the norm, where death rates remain low until people age. (Swazi VAC, 2006).

Figure 8: Swaziland Population Pyramids: 2000, 2025 and 2050

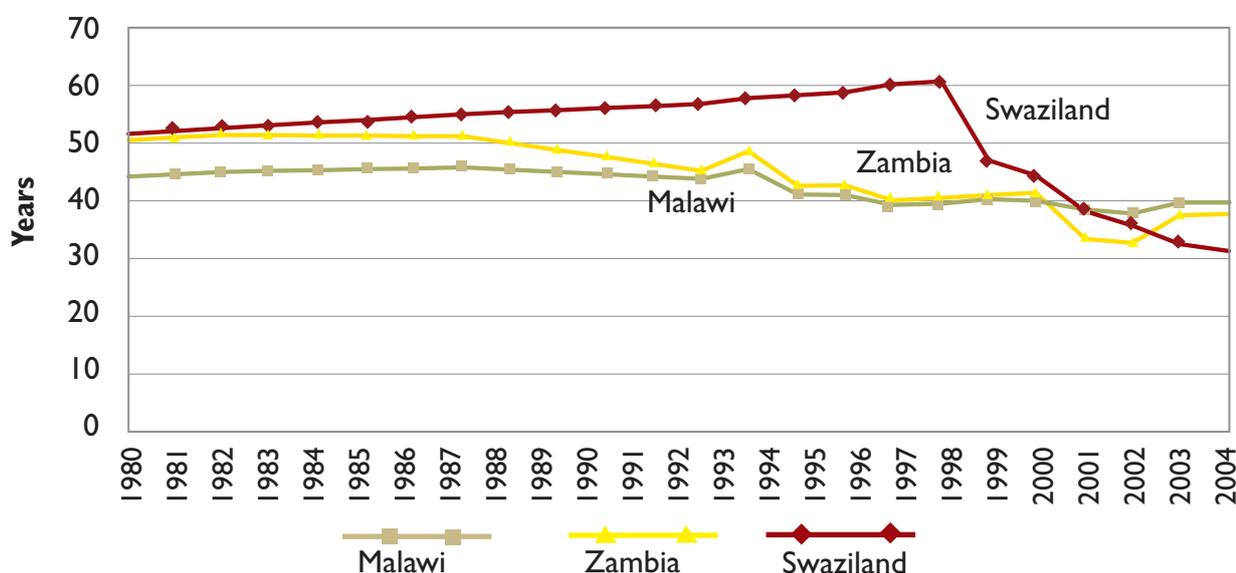


Source: US Census Bureau (2007)

The hollowing out of the productive age groups leads to an increasing dependency ratio. This ratio highlights the relationship between the number of people who are economically active (15-64 years) compared to those either too young or too old to work. The higher the ratio of economically dependent people per economically active person, the more resources are diverted from future use to care for dependents. Gladwell (2006) states that declines in dependency ratios are crucial for the promotion of economic growth. Above average deaths in productive groups will worsen this ratio. Swaziland currently has a dependency ratio of 0.8 children to each working adult, compared to a global average of 0.4 (Global Health Facts, 2004). A Government of Swaziland study (2004) shows that the actual dependency rate was improved due to falling fertility. However, the 'effective' dependency ratio, which factors in levels of chronic illness, has increased substantially.

Figure 9 shows the overwhelming impact of AIDS on life expectancy. Throughout the 1980s, this indicator was generally stagnant or increasing in all three focus countries. However, these gains have now been reversed with all countries witnessing a reduction in life expectancy at birth.

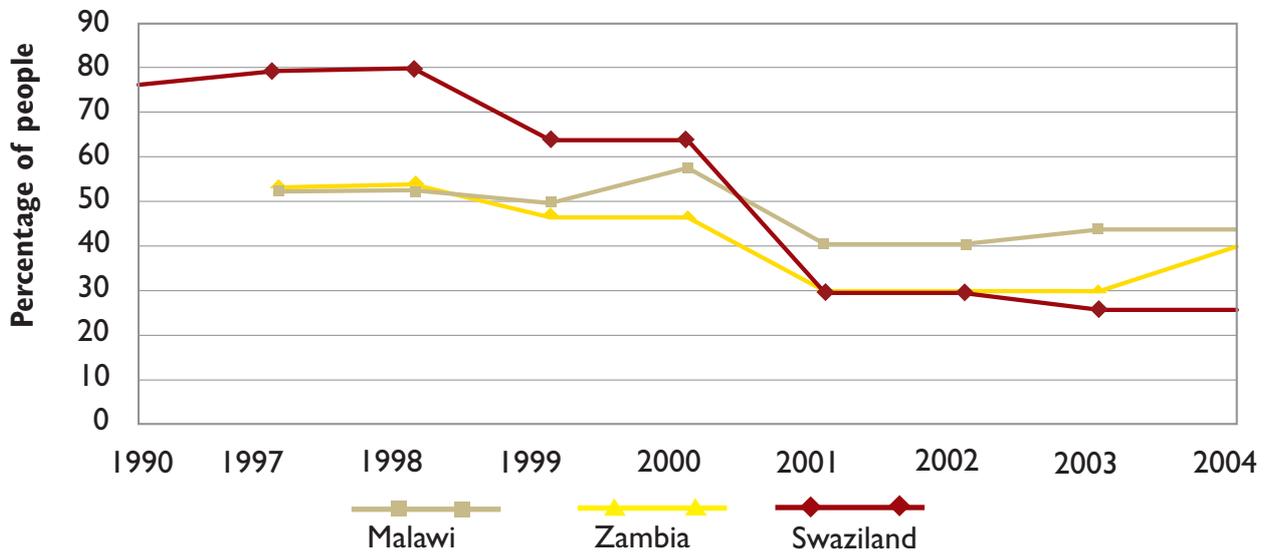
Figure 9: Life Expectancy Swaziland, Malawi and Zambia: 1980-2004



Source: ADB (2003); UNDP (1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006)⁷

7. ADB data 1980-1992, UNDP data 1993 onwards

Figure 10: Likelihood of reaching 40, Swaziland, Malawi and Zambia: 1990-2004



Source: UNDP (1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006)

This fall has been most pronounced in Swaziland, from a high of 60 years in 1998 to 31.3 years in 2004, the lowest life expectancy in the world (UNDP, 2006). While there have also been reductions in Malawi and Zambia, these are beginning to be reversed. Rates in Swaziland, however, show no sign of improving, although this does not take into consideration the possible impact of increasing ART uptake. As can be seen in Figure 10, only 1 in 4 people are now expected to reach their 40th birthday.

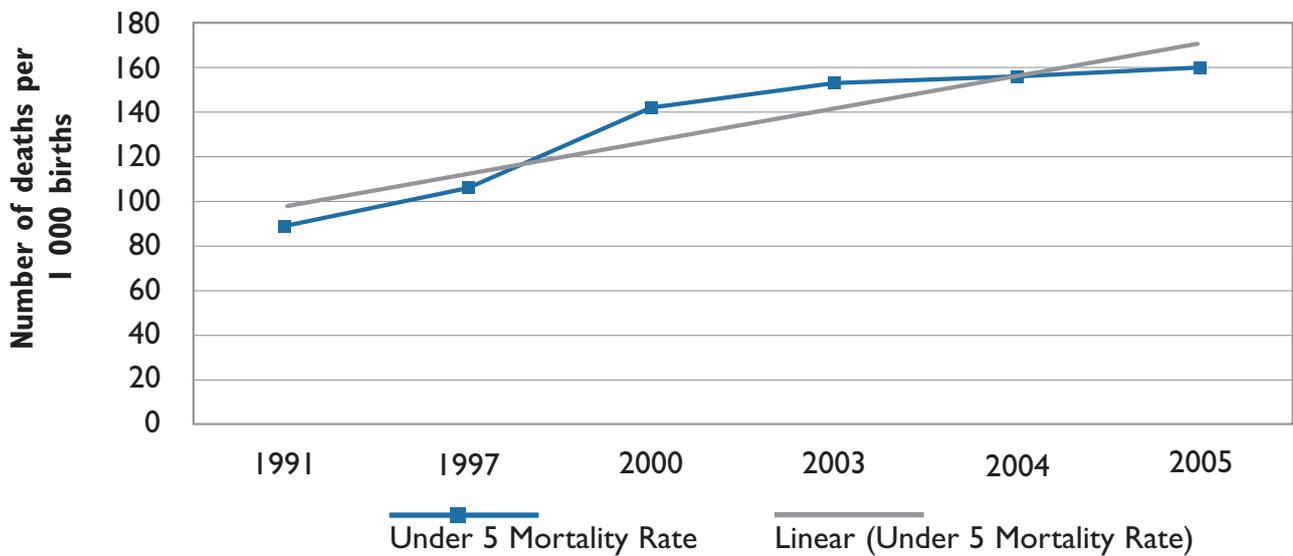
Individuals act in accordance with their expectations. A reduction in the number of years one expects to live therefore rationally changes one's expectations and willingness to invest in one's future. This creates problems for development. In economic terms, individuals will have an increased discount rate which favours short-term investment. This increases short-term consumption and expenditure, decreasing long-term savings and investment in both physical and human capital accumulation. The latter are generally considered central tenets of economic growth.

The extent to which people are changing their economic behaviour requires further research. There is anecdotal evidence that this is occurring in Swaziland. At this stage, however, it is impossible to attribute how much of this is due to AIDS.

Falling life expectancy has occurred together with increasing mortality. Figure 11 and 12 show both infant mortality and under-5 mortality rate (U5MR) increasing over the past fifteen years. The HIV epidemic has also changed the nature of mortality in children. While common childhood illnesses have been

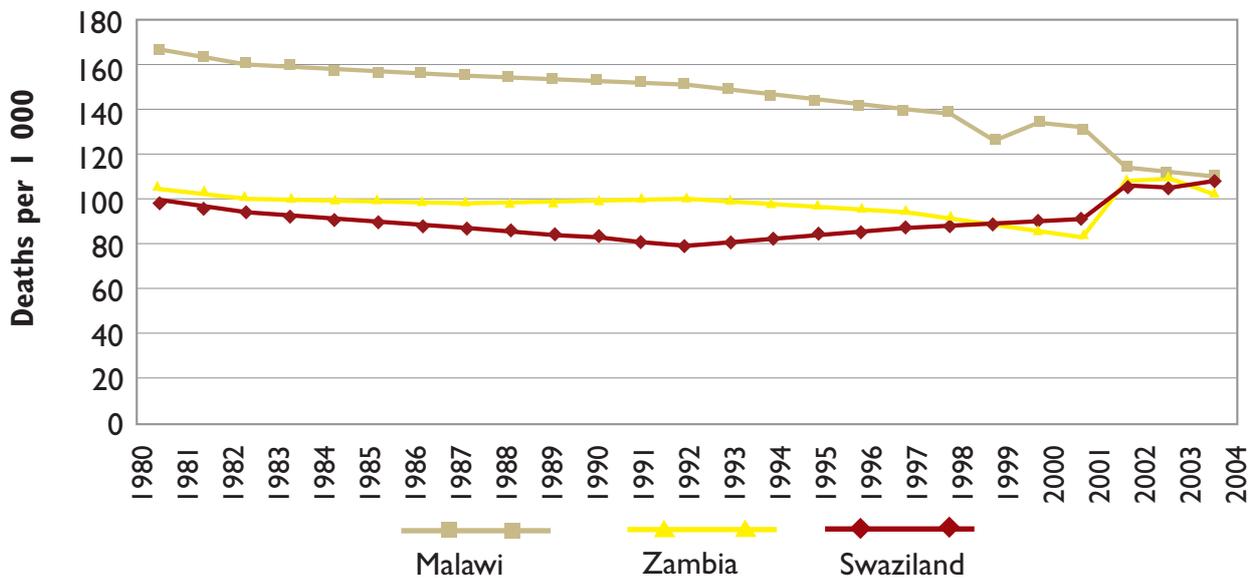
successfully controlled, more children are dying as a result of AIDS. As Figure 13 demonstrates 47% of all under-5 deaths are now due to HIV/AIDS.

Figure 11: Swaziland Under 5 Mortality Rate: 1991-2005



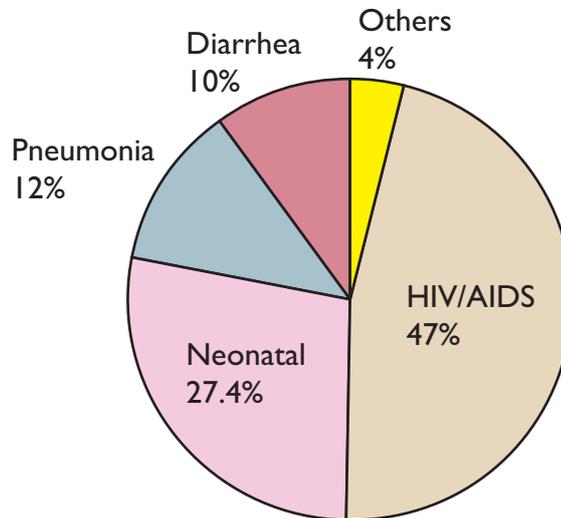
Source: CSO (2007) and WHO (2007)

Figure 12: Infant Mortality Rates: Swaziland, Malawi and Zambia 1980-2001



Source: ADB (2003), UNDP (2004, 2005, 2006)

Figure 13: Causes of U5 Mortality, Swaziland

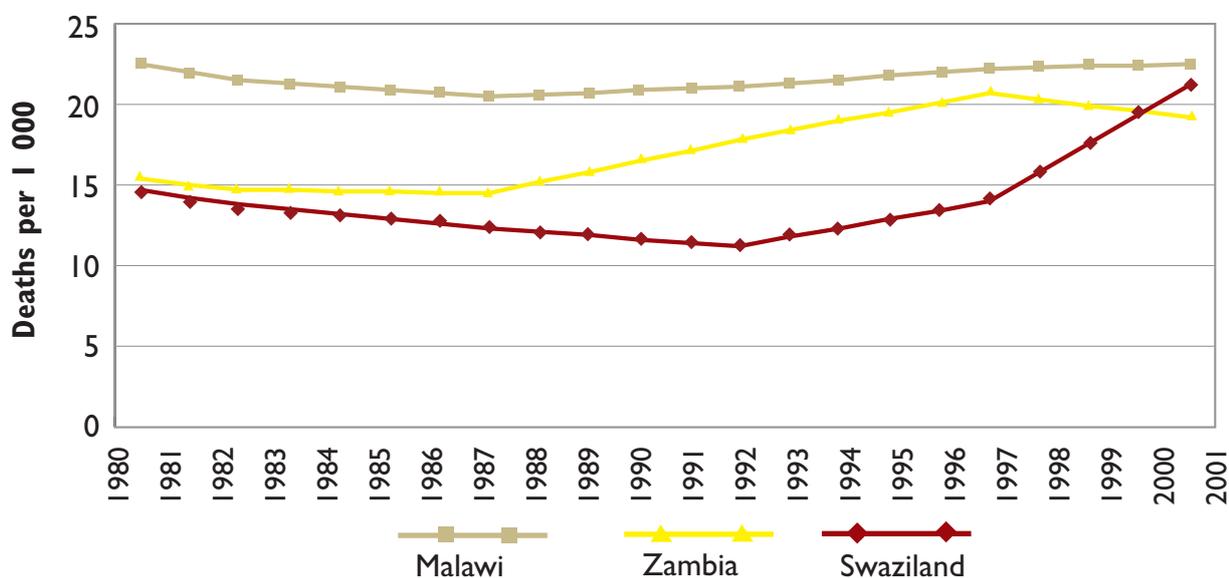


Source: Child Health Group, Lancet 2006

In contrast to this, both Malawi and Zambia have shown general downward trends in these fields. Jumps in both areas in 2001 can be attributed to the change in the data source. The increases in Swaziland, consistent across both sets of data, are indicative of how international targets, such as the Millennium Development Goals (MDG's), are becoming increasingly elusive because of the impact of HIV/AIDS. This is also observed in trends in maternal mortality. Rates have increased from 230 deaths per 100,000 births in 1999, to 370 in 2004 (UNDP, 2001, 2006). This is in comparison to average rates of below 10 deaths per 100,000 live births in most developed countries and around 100 deaths in middle income countries.

In addition to the increases in child, infant and maternal mortality, there has also been a substantial increase in the CDR. Figure 14 demonstrates the increase in the number of deaths being experienced in Swaziland, Malawi and Zambia since 1990.

Figure 14: Crude Death Rate Swaziland, Malawi and Zambia: 1980-2001



Source: ADB (2003)

Increases have been most notable in Swaziland and Zambia. Since the late 1990's, rates have once again been falling in Zambia and are levelling off in Malawi. In Swaziland the CDR continues to rise. Although increasing uptake of ART should help stabilise this rate, the longer term impact is unknown. The impact of interventions is dependent upon sustained funding and adherence by patients. Swaziland began the 1990's with a CDR lower than most low income countries. Alarming, its rate is now higher than Zambia, and it is likely to overtake Malawi.

2.3.2 Emergency Thresholds

The concept of emergency thresholds is a simple and effective means used by many humanitarian organisations to measure the severity of situations. As the most immediate goal of humanitarian relief is to prevent excess suffering and death, the use of mortality as the ultimate measure of how a situation is developing is supported by a broad consensus (Checchi & Roberts, 2005). Mortality indicators demonstrate the number of people negatively affected by a situation. Above certain thresholds, a response is justified as being in excess of 'normality'. The rates used by a variety of international organisations are outlined in Table 5. The two most commonly used indicators are the daily crude mortality rate (CMR) and the U5MR. An emergency represents an unusual and unacceptable increase in death rates.

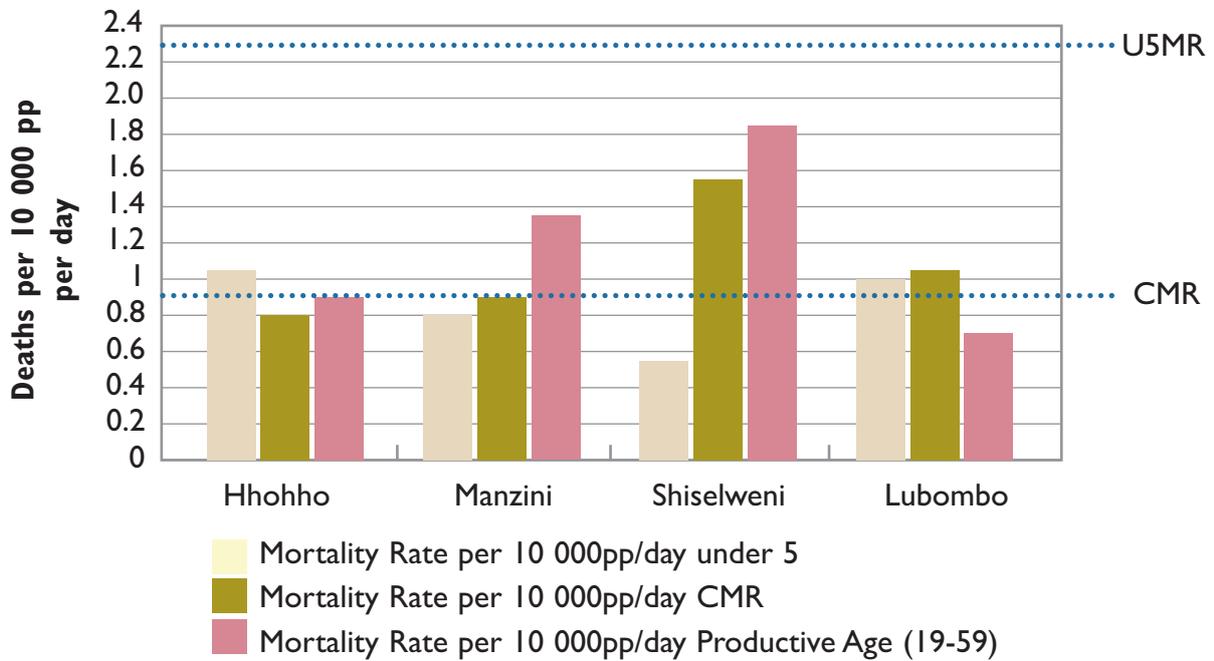
Table 5: Mortality Thresholds of major humanitarian agencies

Agencies	Assumed Baseline	Emergency Thresholds
Centres for Disease Control, Médecines Sans Frontières, Epicentre, Academia	Fixed at: CMR: 0.5 per 10,000 per day U5MR: 1 per 10,000 per day	Emergency is: CMR: 1 per 10,000 per day U5MR: 2 per 10,000 per day
UNHCR	Fixed at: CMR: 0.5 per 10,000 per day U5MR: 1 per 10,000 per day	CMR > 1 per 10,000 per day: 'very serious' CMR > 2 per 10,000 per day: 'out of control' CMR > 5 per 10,000 per day: 'major catastrophe' (double for U5MR thresholds)
Sphere Project Note if baseline is not known Sphere goal is CMR 1 per 10,000 per day	Context specific CMR (U5MR): Sub-Saharan Africa: 0.44 (1.14) Latin America: 0.16 (0.19) South Asia: 0.25 (0.59) Eastern Europe, Former Soviet Union: 0.30 (0.20)	Emergency if CMR (U5MR): Sub-Saharan Africa: 0.9 (2.3) Latin America: 0.3 (0.4) South Asia: 0.5 (1.2) Eastern Europe, former Soviet Union: 0.6 (0.4)
UNDAC Handbook	CMR: < 1 per 10,000 per day U5MR: 1 per 10,000 per day	CMR (deaths per 10,000 per day): >1 = Serious condition >2 = Out of control >3 = Major catastrophe U5MR (deaths per 10,000 per day) <1 = Emergency phase: under control >2 = Emergency phase: in serious trouble >3 = Emergency phase: out of control

Source: Checchi & Roberts (2005); UNDAC (2000)

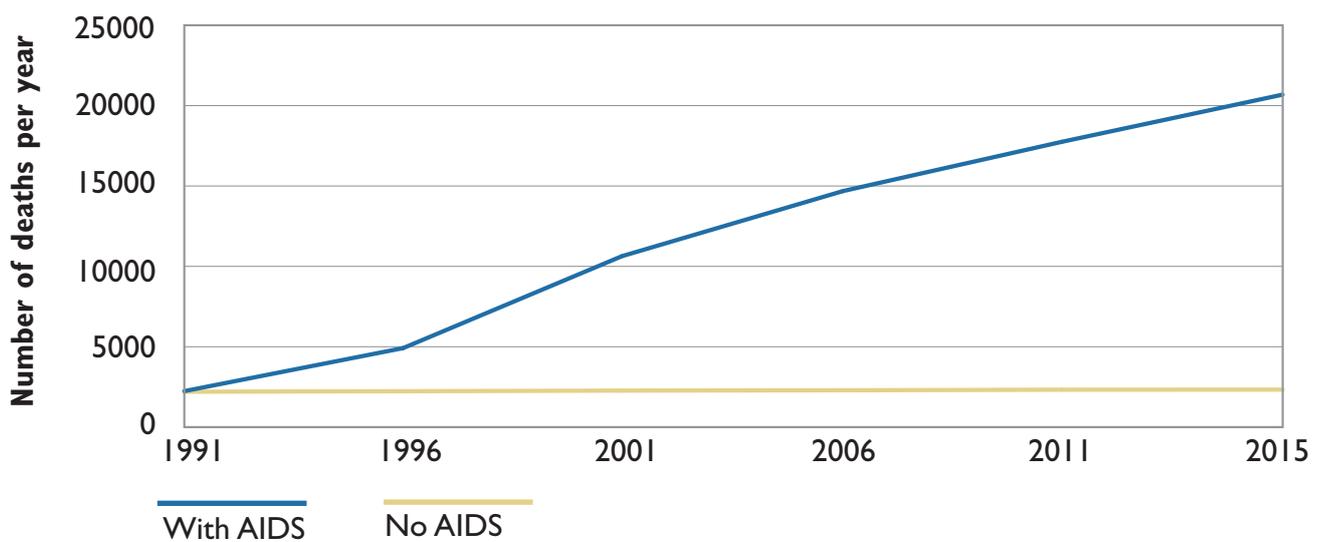
According to recent analysis by the National Vulnerability Assessment Committee (2006) (Figure 15), the situation in all regions now exceeds the threshold of 1 death per 10,000 persons per day. AIDS is responsible for Swaziland's increasing CDR. The rate for 15-49 year olds is significantly higher than the U5MR and exceeds the threshold in three regions.

Figure 15: Mortality Rates in Swaziland compared to Emergency Thresholds



Source: Swaziland National Vulnerability Assessment Committee (2006)

Figure 16: Mortality Impact of AIDS, 1991-2015



Source: World Bank (2001)

In the absence of AIDS, death rates would have remained constant at around 2,300 deaths per year (Figure 16). However, with AIDS, this rate increased exponentially to 15,000 deaths per year in 2006, and is estimated at 20,000 per year by 2015 (equivalent to 2% of the population per year). The increased mortality will reduce the size of the population, especially those of working age, and leave thousands of orphans. Rollout of ART could change this.

2.3.3 Health

Basic health indicators, such as under-5 and maternal mortality, and the CDR are all worsening in Swaziland. Increasing mortality and morbidity is indicative of a health sector in crisis. Immunisation coverage indicators are also falling (Table 6) in contrast to other countries and international targets.

Table 6: Immunisation Coverage (Percentage), Swaziland, Malawi and Zambia: 2004-2005

	2004	2005
Measles		
Swaziland	70	60
Malawi	80	82
Zambia	84	84
Diphtheria - Polio - Tetanus (DPT)		
Swaziland	83	71
Malawi	89	93
Zambia	80	80

Source: WHO, 2007

Swaziland has a highly decentralized health system and good area coverage, with 80% of the population living within 8km of a health facility. There are three delivery levels within the primary health care approach: nurse-run community based care from 162 clinics and 187 outreach sites; 5 referral level health centres and 8 public health units, 5 regional referral hospitals (2 of which are mission facilities receiving Government subsidies) and 1 national referral hospital.

There are also 73 other mission facilities including: health centres, clinics and outreach services, 22 industry-supported centres, 53 private clinics and 4 NGOs providing health care. In addition, there are two specialized facilities for TB and psychiatric patients, and a stand-alone facility for the blood transfusion service (MOHSW, 2007). Hospital beds have an urban bias, with 90% of approximately 2000 beds located in towns - despite the rural bias of the population.

In 2006 the sector was serviced by a workforce of 184 doctors, 3070 nurses, 275 nurse assistants, 46 pharmacists and a number of allied health professionals, whose work is supplemented by 4,000 rural health motivators. There are also 13 medical laboratory technologists, 15 laboratory technicians and 17 laboratory assistants. Table 7 shows the distribution of doctors by sector and highlights both the falling number of professionals within the country as well as the low proportion who work in the public sector.

**Bed needs
already
exceed bed
capacity by
1000 per
year.**

(Quoted in : HDA;
JTK Associates,
2005)

Table 7: Distribution of Doctors by Sector in Swaziland: 2001-2003

	Government		Mission		Private		Industry		Total	
	2001	2003	2001	2003	2001	2003	2001	2003	2001	2003
General Practitioners	46	43	20	17	53	48	10	9	129	117
Specialists	21	16	9	7	20	20	1	1	55	43
TOTAL	67	59	29	24	73	68	11	10	184	160
% of total doctors in year	36%	37%	16%	15%	40%	43%	6%	6%	100%	100%

Patient numbers increased from 50,000 in 2002 to 56,000 in 2006 (MOHSW, 2006). Inpatient statistics, however, are thought to have large inaccuracies and could be undercounting actual inpatients by up to 50%. Thus, these figures should be treated as low estimates (HDA and JTK Associates, 2005).

Increased 'demand' for care

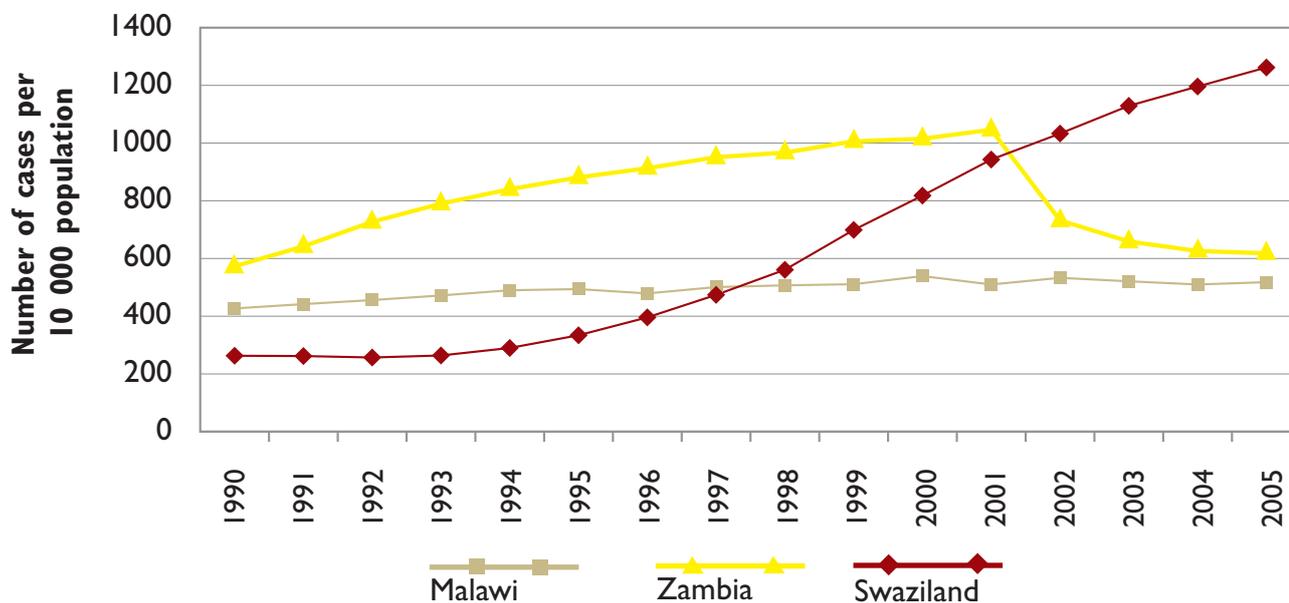
The health sector is responsible for taking the lead in both preventing the further spread of the disease and providing care and treatment services to those already infected. To date, effective demand has fallen short of need, and the perceived reduced hope of recovery has led many people not to attend regular health services. This adds to the hidden health burden on families who care for sick household members at home. With the rollout of ART, this burden could be reduced, as a level of hope is restored and effective demand for health services increases.

Hospitals regularly work beyond capacity. Since the late 1990's there has been an increased need for beds. A 1998 study suggested 50% of inpatients were HIV positive, and this was expected to increase to 70% by 2007 (SNAP, 1998). In 2006, over 40% of admissions⁸ at the largest public hospital were as a result of conditions closely associated with HIV/AIDS (TB, AIDS, non-infective gastroenteritis and pneumonia) (MOHSW, 2006). Between half and three-quarters of all outpatient cases have HIV/AIDS related complaints. AIDS does not only lead to increasing numbers of patients; AIDS patients also tend to be more vulnerable to complications. Analysis by HDA and JTK Associates (2005) suggests that there will be a further increase in the demand for services over the next ten years as new HIV infections reach maturity.

A significant portion of the increased demand for services is due to the rising prevalence of TB. This has increased substantially in contrast to Malawi and Zambia. 80% of TB cases are HIV positive (90% among 30-45 year olds), and co-infection is driving total increases (Ministry of Health and Social Welfare, 2006).

8. Excluding admissions for childbirth which remain the reason for the most hospital admissions.

Figure 17: TB Prevalence, 1990-2005



Source: World Bank (2007)

It should be noted, however, that it is difficult to explain the trends in TB prevalence in both Malawi and Zambia. Zambia, for example, shows a massive drop in rates in 2001 that is unaccounted for. It is also difficult to explain the slow rate of increase in Malawi given HIV infection rates and the quality of their health services. Analysis by HDA and JTK Associates (2005) suggests that TB will remain a huge challenge in the future and that cases in Swaziland could increase to up to 50% above those seen in 2004⁹.

In addition to increases in treatment needs, there is also a growing call for ART. In 2006, 63,722 people were in need of ART, increasing to 101,669 by 2011¹⁰; 17,842 individuals were enrolled in the programme in 2006. Universal access targets aim to provide 55% coverage by 2011. This will require a tripling of current provision and will still fail to cover 45% of those in need.

Capacity is already over-stretched, and further increases in demand will strain this further. Given the already strained public budget and constraints on spending it is unlikely that Government can provide adequate additional infrastructure and equipment to respond to increased demand, even without considering the staffing constraints.

9. This number only reflects a 50% increase in cases among HIV positive individuals - it does not include TB positive, HIV negative people. The overall increase in cases could therefore be higher than the 50%.

10. ART needs for Swaziland are taken from Spectrum projections calculated at a UNAIDS/WHO Spectrum Projection workshop with the Ministry of Health and Social Welfare and NERCHA in March 2007.

Reduced supply of services

The ability of the health sector to respond to the increase in demand is compromised by the negative effect of HIV/AIDS on the supply of services. Only around half of health posts in the country are in the public sector, yet as HIV and illness disproportionately strike the poorer sections of society, it is this sector that is dealing with the bulk of the increase in demand. As such, the public sector is working beyond capacity, particularly in technical positions. Compounding this is the direct effect of the epidemic on human resources. Prevalence rates seen in the general population are also present among health sector staff and their families. Death rates amongst health care workers have risen to 4% annually, and with migration, is the main reason for staff loss (HDA and JTK Associates, 2005). Migration has increased, driven by the offer of better pay and conditions overseas and in the private sector. Institutional knowledge and experience which is lost is difficult and costly to replace. Within Swaziland, there is no institution for training doctors and nurse training capacity remains too low to replace all lost staff. Many posts therefore remain vacant in the public sector as the pool of qualified professionals is small, and further affected by migration (WHO and MOHSW, 2004). In 2005 almost 12% of nursing posts and 33% of medical professional posts were vacant (HDA and JTK Associates, 2005). In some rural hospitals, vacancy levels range between 29% and 45% of total posts (WHO and MOHSW, 2004).

The increased morbidity across the population is also evident among health care workers and their families, with absenteeism a growing problem. An increasing amount of time is being taken off by staff due to illness, compassionate leave and caring for sickness in their families. In smaller facilities, this can mean the stoppage of certain services as there is often only one worker able to perform them. This can cause substantial breakdowns in both service provision and quality, especially in essential support services e.g. laboratory testing (HDA and JTK Associates, 2005). Long-term absenteeism is especially damaging to supply as absent staff remain on the payroll, and cannot officially be replaced.

The attrition rate amongst health care workers now stands at around 7.9% annually. Combined with rising absenteeism - and the accompanying decline in performance - this is putting increasing strain on remaining staff. According to the 2005 study, HIV/AIDS has affected performance by decreasing morale and increasing stress levels (HDA and JTK Associates, 2005). This is demoralising staff and heightening the chance of 'burn-out', further compromising the quality of service provision and promoting migration.

In addition to severe human resource constraints, a lack of medical equipment undermines the health sector's ability to provide services. Wards in some hospitals are closed due to a lack of personnel, machinery and equipment. As a case in point, several wards at Mankayane hospital have been closed for over a year. In addition to pressure at facility level, there is also increasing strain on management systems for effective budgeting, procurement and supply as they find they are no longer managing a familiar situation.

3. Tuberculosis

Most diseases that affect people with HIV do not affect the wider population. TB, however, does have broader impacts and the potential to cause a public health emergency. The WHO suggests that the two are so closely connected that the terms 'co-epidemic' or 'dual epidemic' can be used. Each disease speeds up the progress of the other. Although most TB remains treatable, it becomes more costly and problematic in co-infected individuals. Several strains of TB are now appearing that are very complex and expensive to treat. Multi-Drug Resistant (MDR) TB is becoming an increasing risk across the world with up to 50 million people now thought to be infected (Whiteside, 2007a). In addition, cases of Extensively Drug Resistant (XDR) TB have been reported in 17 countries. This strain is extremely difficult to treat. A 2006 outbreak in South Africa resulted in 52 of the 53 infected patients dying within weeks of being identified.

Swaziland's TB treatment success rate rose from 36% in 2001 to 50% in 2004 (compared to 71% in Malawi and 83% in Zambia) (WHO, 2007). This remains significantly lower than the 85% required for effective control of the disease. High rates of co-infection and low treatment success means that although Swaziland has not seen XDR TB, this remains a growing concern¹¹.

TB is recognised by the WHO as a public health issue and increased prevalence raises important questions for the increased risk among the general population. The Swazi Government is currently building a dedicated TB hospital. This will allow for their isolation and relieve demands on other hospitals. However, progress has been slow. Immediate action is required to gain effective control over TB and to prevent a wider outbreak, as it has the potential to turn the HIV/AIDS epidemic into a public health emergency.

Anti-Retroviral Therapy (ART)

The percentage of those who require treatment and who are currently receiving ART stands at 28%. The rollout of this has been a success with the number of facilities offering free ART increasing from 8 in 2004 to 17 in 2005 (Whiteside

There is currently no facility for the isolation of infectious TB patients in Swaziland. A new TB Hospital is under construction.

et al, 2006). ART plays a vital role in the fight against HIV/AIDS and will help to slow the death rate and delay the premature death of thousands of productive adults. Further rollout is essential to mitigating the social and economic impacts laid out in this report.

ART provides hope to HIV infected individuals, who previously viewed their infection as a death sentence. The increase in optimism can be expected to augment the demand for health services further. This is expected to occur both in the provision of the drugs, which themselves require a massive scale-up of services, and also in the treatment of opportunistic infections. Meeting this demand in addition to other demands, in light of the reduced capacity in the health sector, is a core challenge for the country over the next 5 years.

In the absence of a successful expansion of the ART programme, death rates will continue to increase. A study shows the potential for a positive impact of ART in the health sector (HDA and JTK Associates, 2005). Without treatment, 1 in 20 Ministry of Health and Social Welfare staff could die annually by 2009. With ART, between 180 and 460 deaths could be averted by 2010. This is equivalent to between 2 and 4 years worth of nursing college graduates (if all nurses who were trained in Swaziland worked in the public sector). This highlights the importance of ART in mitigating the impacts both in averting deaths and in reducing the costs related to productivity loss and training expenses.

The impact of HIV/AIDS is already being deeply felt in the health sector through the dual effects of increasing demand for care and the decreasing ability to provide care. With substantial increases in the demand for care expected and staff attrition, these threaten to destabilise the health system in the long run. The capacity of the health system to cope with this situation will determine the impacts of AIDS on the economy and society.

2.3.4 Social Indicators

In 1995, 65% of the population - 80% of people in rural areas - were estimated to be living below the poverty line, with 48% living in extreme poverty. By 2001, the percentage living in poverty had increased to 69% of the population (Ministry of Economic Planning and Development, 2006; ILO, 2005). While there is no definite data to confirm further increases, it is expected that given the recent reduction in employment opportunities, poor agricultural conditions and an increase in the dependency ratio, this situation has worsened since data was last compiled. Increasing poverty worsens the impact of HIV/AIDS, increasing the population's vulnerability to it, and undermining the effectiveness of care and support initiatives as ART is less effective when patients have insufficient

“We have a lot of patients who are simply starving”

Some patients refuse treatment as they have no food to take with the medicines and no money for transport. Death of breadwinners has made a lot of families much poorer.

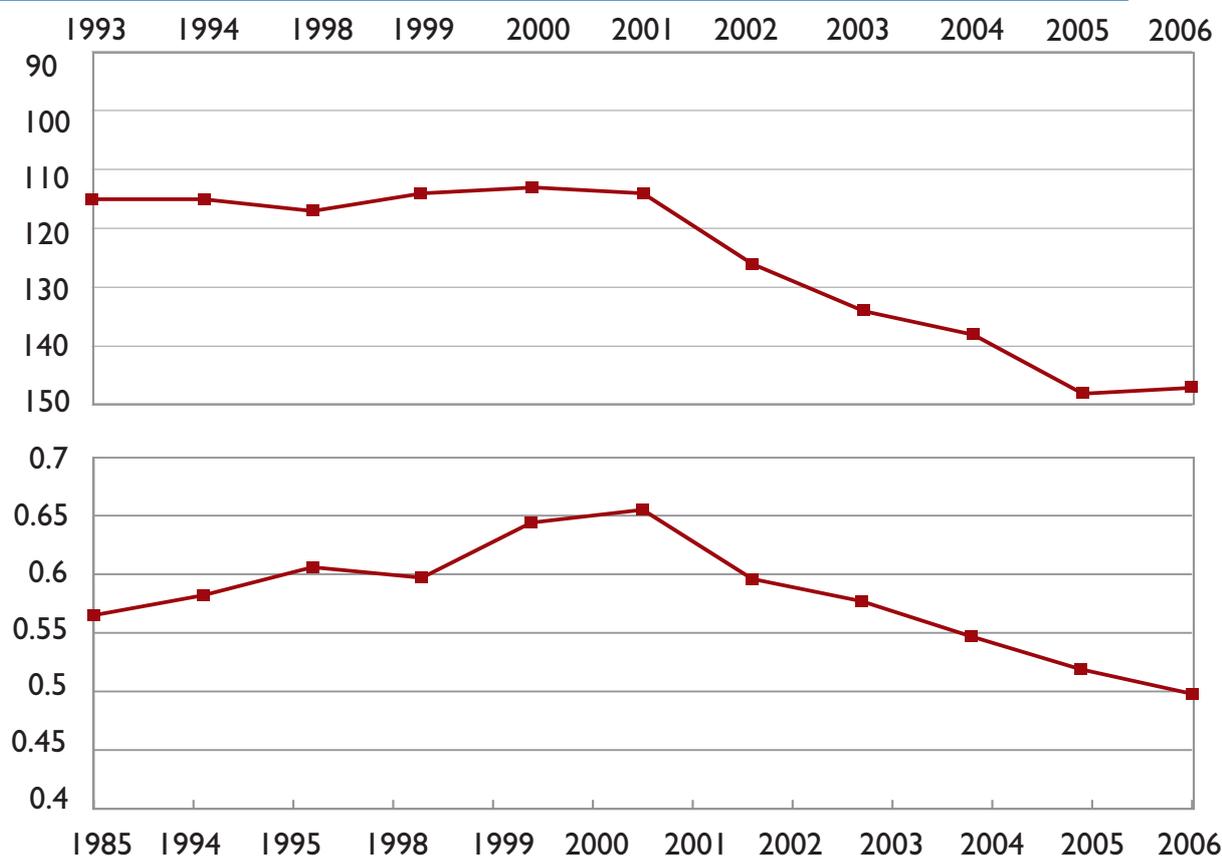
(Quoted in : HDA: JTK Associates, 2005

food. At a more general level, when starvation is an issue, individuals are less concerned about reducing risky behaviours that may have an impact on them in 5-10 years, but get them a meal today.

The UN suggests that impoverishment is amplified in HIV-affected households. As adults die, the remaining household is often led by a child or an elderly adult (High Level Committee on Programmes, 2003). These members are less able to earn income and ensure food security, reinforcing the poverty spiral. This further increases the likelihood of members becoming HIV infected, perpetuating the negative impacts of the epidemic for future generations.

This increase in poverty and the deterioration in social circumstances is evidenced by Swaziland's decline in the Human Development Index (HDI). The basic objective of development is to create an enabling environment for people to live long, healthy and fulfilled lives. This index measures the average achievements of a country in the three basic dimensions of human development: a long and healthy life, as measured by life expectancy at birth; knowledge, measured by the adult literacy rate and combined gross enrolment ratio for schools; and a decent standard of living as measured by GDP per capita (UNDP, 2006).

Figure 18: Changes in Swaziland's HDI Index and Ranking 1993-2006



Source: UNDP (2006)

As Figure 18 illustrates, Swaziland's HDI value and ranking has been falling since 2000. This downward trend reached its nadir in 2006. It is likely that, given the continued deterioration in life expectancy, and a negative growth rate, this slightly upward movement is attributable to improvements in access to education. Over the past few years the Government of Swaziland has been implementing an OVC bursary scheme that seeks to avoid the high dropout rates that were beginning to manifest themselves. This has been a huge success, with over 90,000 OVC back in school.

Despite this success, the upward trend in human development has been minimal. Swaziland is now ranked as 146 out of 177 countries; only 1 country above those ranked as 'low' in terms of human development. This is in spite of a much higher GDP per capita and its middle income status. A comparison between Swaziland's indicators and the average rates for sub-Saharan Africa and middle and low income countries is shown in Table 8.

Table 8: Comparison of Human Development Indicators

	Human Development Index Value	Life Expectancy at Birth (Years)	GDP per capita (PPP US\$)
Swaziland	0.5	31.3	5,638
Sub-Saharan Africa (average)	0.472	46.1	1,946
Middle Income Countries (worldwide average)	0.768	70.3	6,756
Low Income Countries (worldwide average)	0.556	58.7	2,297

Source: UNDP (2006)

Swaziland's HDI value is close to low income countries. While the GDP in Swaziland is three times above average in sub-Saharan Africa, life expectancy is substantially lower than the sub-Saharan African average. AIDS has caused deterioration in social indicators to the point where Swaziland now more closely resembles a low income country rather than a middle income country.

2.3.5 Orphans

A major social impact of HIV/AIDS is the increase in the number of OVC¹². Orphaning is one of the most visible and extensive impact of AIDS. Caring for affected children requires a massive increase in resources. As a joint report by UNAIDS, UNICEF and USAID (2004) states, orphaned children have a greater need for stability, care and protection after losing parents and caregivers. There are an estimated 130,000 OVC in Swaziland, projected to increase to almost 200,000 by 2010 (Government of Swaziland, 2006). The DHS found that 23.3% of all children are orphans¹³ and 11.7% of children are classified as vulnerable¹⁴. (CSO, 2007). This means 31.3% of all children are now classified as OVC. Despite this, it has been suggested that Swaziland is still relatively early in the OVC epidemic (HDA and JTK Associates, 2005). The impact on the community and household structures cannot be overstated. These children are currently being absorbed either by family members or communities. A report by Save the Children in one community found that 54% of the poorest households were hosting orphans, falling to 29% in non-poor households (Seaman, Petty, & Narangui, 2005). The recent vulnerability assessment concluded that 43.4% of all households are now caring for orphans, rising to over 50% in the hard hit Shiselweni region (Swazi VAC, 2006). Similar rates of orphaning would result in over 18.5 million and 25.7 million orphans in the USA and EU respectively, demonstrating the scale of the problem facing Swaziland in providing care and support.

Most OVC are cared for by grandparents or other elderly relatives (Seaman, Petty & Narangui, 2005). The strain of this increases the likelihood of these households descending into poverty. Many grandparents do not have the ability to work and have no income to support these children. An effective response therefore needs to provide direct and substantial support to the families who are continuing to absorb OVC (UNAIDS, UNICEF, USAID, 2004). The impact today is shocking. Grandparents are masking the true extent of the OVC problem. In the long-term, the death of grandparents will leave thousands of children with no support structures.

This is a 70-year old woman. Time has taken her husband. AIDS has claimed all of her children. Drought has destroyed her livelihood. Now she is left with a young girl to feed, clothe and bring up into adulthood. In your country, there would be help for her. In her country, there's only Young Heroes.

Advert for Young Heroes

12. An orphan is defined as a child (less than 18 years) who has lost one or both parents. A vulnerable child is a child under the age of 18 years who satisfies one or more of the following criteria:

1. Parents or guardians are incapable of caring for him/her 2. Physically challenged 3. Staying alone or with poor elderly grandparents 4. Lives in a poor sibling headed household 5. Has no fixed place of abode 6. Lacks access to health care, education, food, clothing, psychosocial care, has no shelter to protect them from the elements and/or is exposed to sexual or physical abuse including child labour. (Government of Swaziland, 2006)

13. Defined as a child with one or both parents deceased.

14. Defined as children whose parent(s) are very sick or who live in a household where an adult has been very sick or died in the last 12 months.

Child-headed households are beginning to be seen throughout the country. These are often the last surviving members of a household and have no means to support themselves, often living in dire poverty. The long-term impact on human capital accumulation and the psychological wellness of parentless children cannot be overlooked. The inadequate socialisation of this large cohort may create a dysfunctional societal group in the future. The sheer number of OVC and the coping mechanisms that are being used to absorb them are increasingly becoming viewed as 'normal' (Von Wissell, 2007). This abnormal 'normality' is reflective of a society running out of options.

Sifiso's mother died, and then last year his father followed, along with his older brother. Sifiso and his younger sister moved in with their grandmother, but soon after, she died of AIDS. They were shuffled off to their last surviving relative, an aunt, and now she is dying as well, and is too ill to care for them. The aunt was too sick to plant corn in the family plot, so there is no food. She cannot buy clothes, so the younger sister's only dress is a school uniform so tattered, it shows her underwear.

To preserve what she calls her dress, she takes it off when she gets home from school and puts on her only other bit of clothing: a pair of shorts, with no shirt. That would be too scandalous to wear to church, so she does not go.

The children gather the firewood and water, and they wash their own clothes - as well as caring for their aunt. And soon the two orphans will be left to bury their aunt and then try to survive all alone.

Source: Young Heroes, 2007

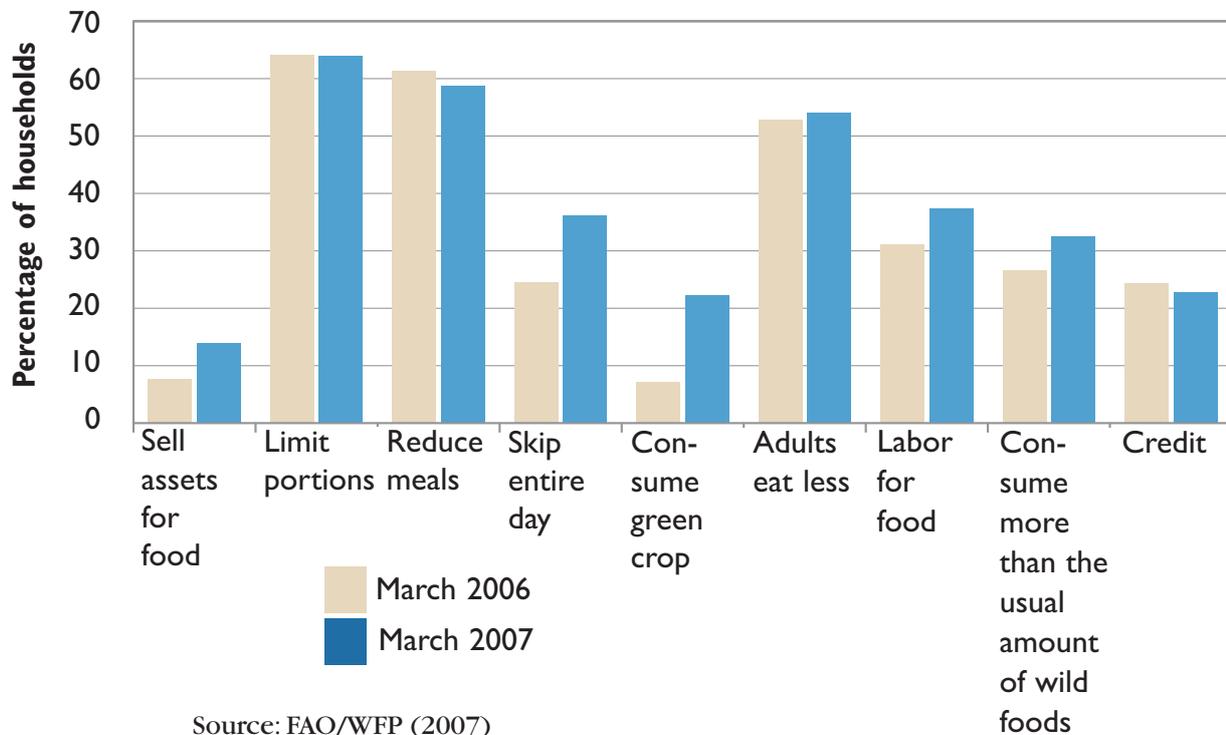
2.3.6 Coping Mechanisms

HIV/AIDS undercuts the resilience of households and communities by causing long-term sickness and death among the productive adults who would be the ones to assist the household during a crisis. Illness in the family leads to increased expenditure on health care and a reduction of household income, as family members are unable to work or are diverted from work to provide care.

Households employ a variety of mechanisms to cope and protect income during periods of difficulty. These can include asset depletion, borrowing, informal insurance networks, increasing paid labour and a reduction in investment in human capital.

Figure 19 demonstrates that Swazi households are increasingly using these strategies in order to survive. The number of people reducing meal sizes or limiting portions fell between 2006 and 2007, those not eating for an entire day or consuming a green crop increased. There has also been an increase in sales of assets which reduces potential earnings.

Figure 19: Comparison of Household Coping Strategies in Swaziland, 2006-2007



Source: FAO/WFP (2007)

These findings are supported by the 2006 vulnerability assessment which states that 42% of households experiencing shocks are using changes in diet to cope, and another 42% are primarily engaged in selling assets to cope (Swazi VAC, 2006). A community study discovered that all households that had experienced an HIV related death had experienced some negative effects, with almost half of them experiencing a drop in income large enough to move them to a lower income group. Others have less access to land, higher levels of unemployment and lower paid employment (Seaman, Petty & Narangui, 2005). A recent VAC assessment notes that there is a statistically significant relationship between HIV in a household and a higher level of coping necessity. These households are also less food secure and are more likely to be hosting orphans (Swazi VAC, 2006). As coping mechanisms have become strained vulnerable populations have become further impoverished (Swazi VAC, 2004).

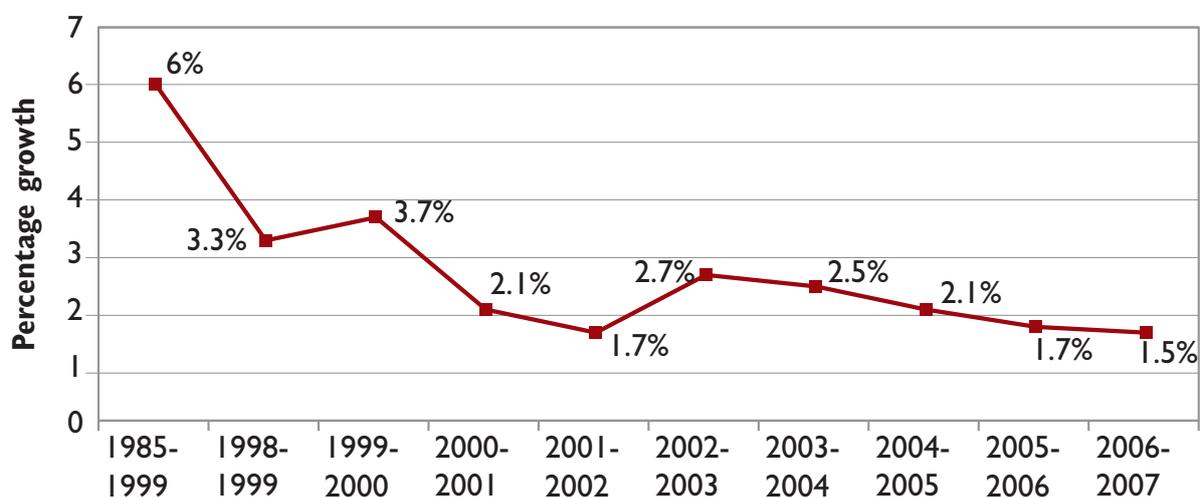
Traditionally, communities in Africa act as an additional livelihood asset for households. These too are at risk of collapse, or as Muwanga (2004) states, 'decimation' from increasing morbidity and mortality.

In Swaziland, unfavourable farming conditions, drought and reduction in employment opportunities have led to an overall increase in vulnerability across society. HIV/AIDS is weakening communities throughout Swaziland. The UN suggests that, just as HIV/AIDS affected households may ultimately disintegrate, so too might HIV affected communities, through the loss of significant numbers of people, economic collapse and social breakdown (High Level Committee on Programmes, 2003).

2.3.7 Economic Growth and Investment

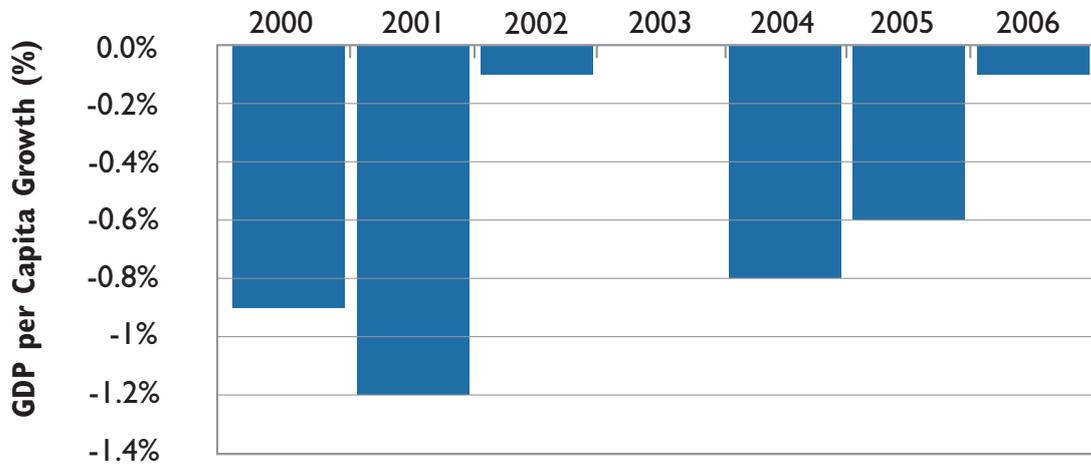
AIDS may have a negative impact on economic growth. Some models suggest that it causes a reduction in growth of between 0.6% to 2.6% a year (ILO, 2004; Muwanga, 2004; Haacker, 2002). There have been significant falls in economic growth in Swaziland, providing support to these modelled estimates. Figure 20 shows a reduction in annual growth from a high of 6% a year in the 1990's to a current level of around 2%. Since a small upturn in 2002/2003, the drop has been sustained. This low rate of economic growth is resulting in negative growth per capita.

Figure 20: Trends in GDP Growth, 1998-2007



Source: Government of Swaziland (2007) and Basu & Srinivasan (2002)

Figure 21: Real GDP Growth per Capita: 2002-2006



Source: (Ministry of Finance, 2007)

Figure 21 illustrates negative growth rate per capita over a six year period. While the extent of this drop has varied and seems to be less detrimental in recent years, this may be due to a fall in population rather than any increase in per capita income. This is supported by observations from the Central Bank who describe the growth rate in recent years as ‘unimpressive’ (Central Bank, 2006).

The impacts of HIV/AIDS on business are coming to light (Munwanga, 2004). Companies are beginning to note an increase in absenteeism among staff, thus leading to reduced productivity and profitability. These problems are compounded by drought, declining terms of trade and a falling regional advantage.

Swaziland has also experienced a significant reduction in foreign direct investment. FDI as a percentage of GDP has fallen from an average of 7.4% between 1987 and 1990, to 4% from 1991 to 1994, and further to a low of 1.53% in 1995-1999 (Basu & Srinivasan, 2002). This has severely restricted economic growth, which is heavily reliant upon foreign investment. High HIV prevalence is contributing to this reduction. Isaksen et al. (2002) discuss how a Taiwanese textile firm chose to establish its 5000 worker factory in Lesotho instead of Swaziland due to the latter’s high HIV prevalence. They were concerned about the replacement cost of workers who would fall sick and die.

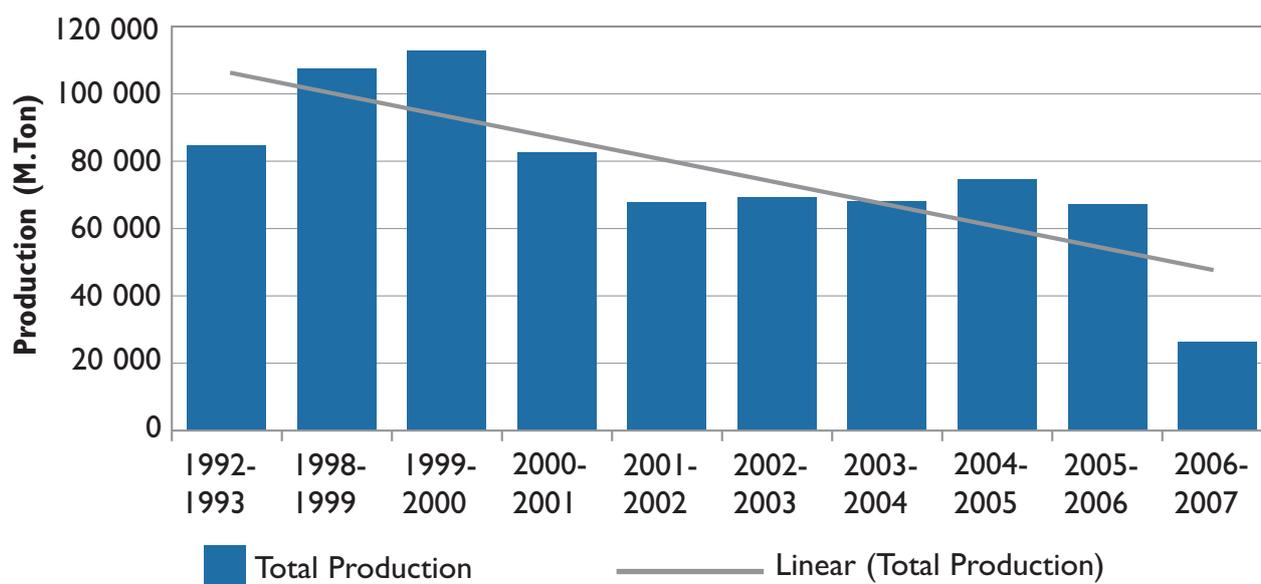
This reduction in growth can in part be attributed to altered economic behaviour of both individuals and companies who have already incorporated a

shift in the long-term equilibrium created by the crisis (Casale & Whiteside, 2006). This suggests a shift of the long-term notion and expectation of ‘normality’ in heavily infected and affected countries. As growth relies heavily upon both stability and predictability, the shifting of these notions has altered growth and development paths. AIDS has the potential to transform society and lead to a progressive collapse of the economy (Bell, Devarajan, & Gersbach, 2004).

2.3.8 Agriculture

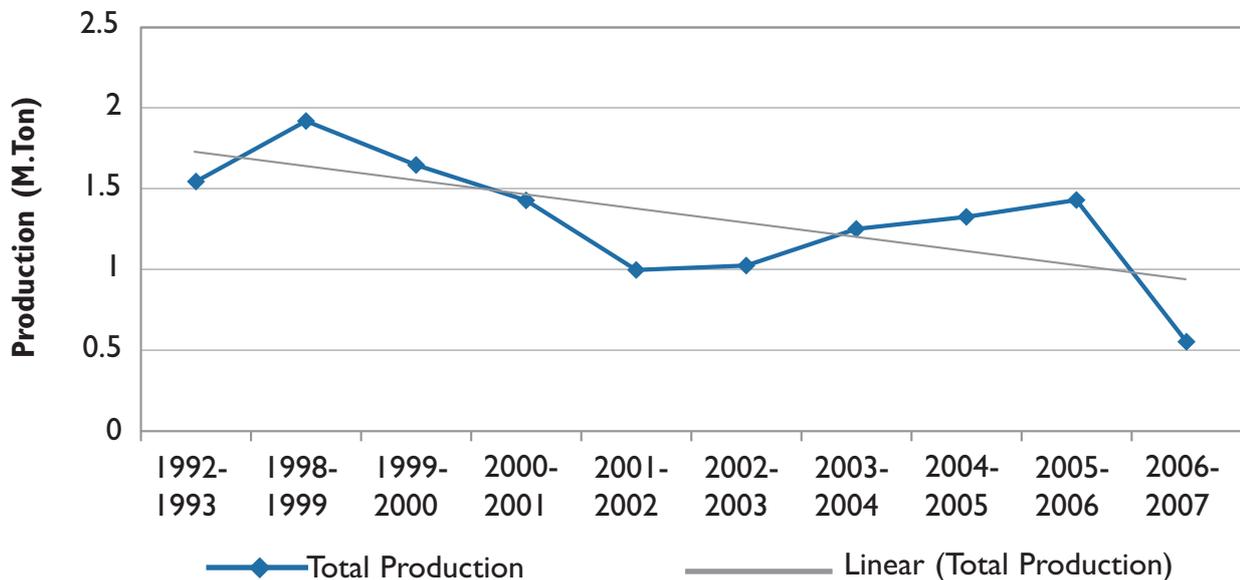
Along with a downturn in the wider economy, Swaziland has also experienced several successive years of below average agricultural production. This sector is crucial for the rural population, where subsistence agriculture is estimated to employ over 80% of the population. Maize remains the dominant crop and staple food, and accounts for about 85% of planted land area (Swazi VAC, 2006). However Figure 22 and Figure 23 both show that maize yields and output have declined dramatically over the past ten years. The 2006-2007 harvest is expected to be the worst on record, with over 400,000 people requiring food aid to meet basic food requirements (FAO/WFP, 2007). This decline is partly attributable to decreased rainfall and a reduction in the area farmed.

Figure 22: Maize Production, 1992-2007



Source: CSO (1993, 1999, 2000, 2001 and 2002) and FAO/WFP (2007)

Figure 23: Maize Yields, 1992-2007



Whiteside et al. (2006) list impacts of HIV/AIDS on subsistence farming systems as:

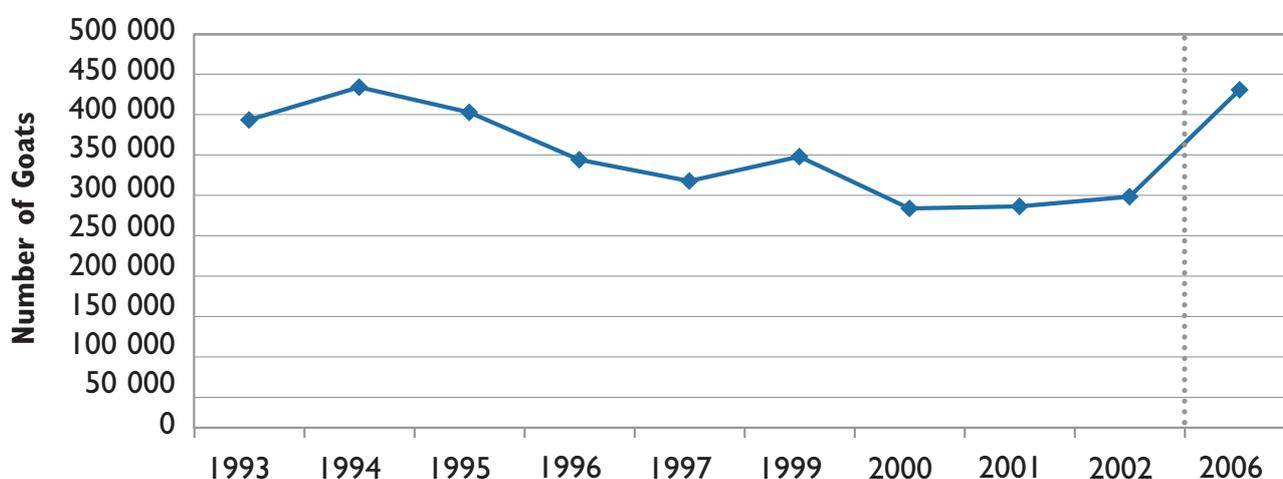
- Reduced available household income: to purchase farming inputs and hired labour, which are essential in areas with erratic rainfall and poor soils.
- Reduced labour: both within the household, as members fall sick and are no longer able to work, and from hired labour.
- Loss of institutional memory: household heads die leaving an increasing number of female-headed households and orphans without the knowledge vital for sustaining and maximising production.

These effects resulted in a 54.2% reduction in production of maize and a 34.2% reduction in the area of land cultivated in households affected by AIDS. This is supported further by Muwanga (2004) who calculates that HIV affected households are 7 times more likely to have reduced the amount of land they cultivate. Furthermore, they are 5 times more likely to have experienced a drop in crop yields on land they do plant.

Livestock plays an important role in the livelihoods of small hold farmers who traditionally own cattle, goats and fowl. Livestock numbers in Swaziland have been falling since the 1990s. The national cattle population is estimated to have fallen 11% between 2000 and 2002 (FAO/WFP, 2007). Households experiencing an AIDS death saw a 29.6% reduction in herd sizes (Whiteside et al. 2006). Goat ownership dropped steadily throughout the 1990's (see Figure 24).

This may be more indicative of livestock being sold as a coping strategy: cattle are still perceived to be a store of wealth and are used in the payment of bride price (*lobola*). Goats, however, do not hold the same place in society and, as such, are easier to part with in times of need. However, the increase in 2006 shows the importance of monitoring all types of livestock. It is a positive development and might be explained by changes in climate, as goats are more hardy and able to survive in drought conditions, or donor driven projects.

Figure 24: Goat Population Estimates, 1993-2002



Source: Swazi VAC (2004)

Reductions in agricultural output and ownership of livestock have led to increasing vulnerability and food insecurity. This, along with rising poverty, increases the impact of HIV/AIDS. There is a close link between nutrition and HIV. Malnourished people are more susceptible to infection and once infected are more likely to progress faster to AIDS. Individuals with HIV are more likely to be malnourished. HIV positive individuals require higher daily protein and calorific requirements to stay healthy. Moreover, ART is not as effective for malnourished people. In Swaziland, households are no longer described as being 'at risk' or 'vulnerable' to food insecurity, but are observed as being 'chronically' food insecure and destitute (Swazi VAC, 2004).

2.4 Foreign Assistance

Once the traditional coping mechanisms at household and community level begin to breakdown, the role of the state becomes crucial. A country's ability to plan and respond to a disaster or emergency is related to resources that include both domestic and foreign funding.

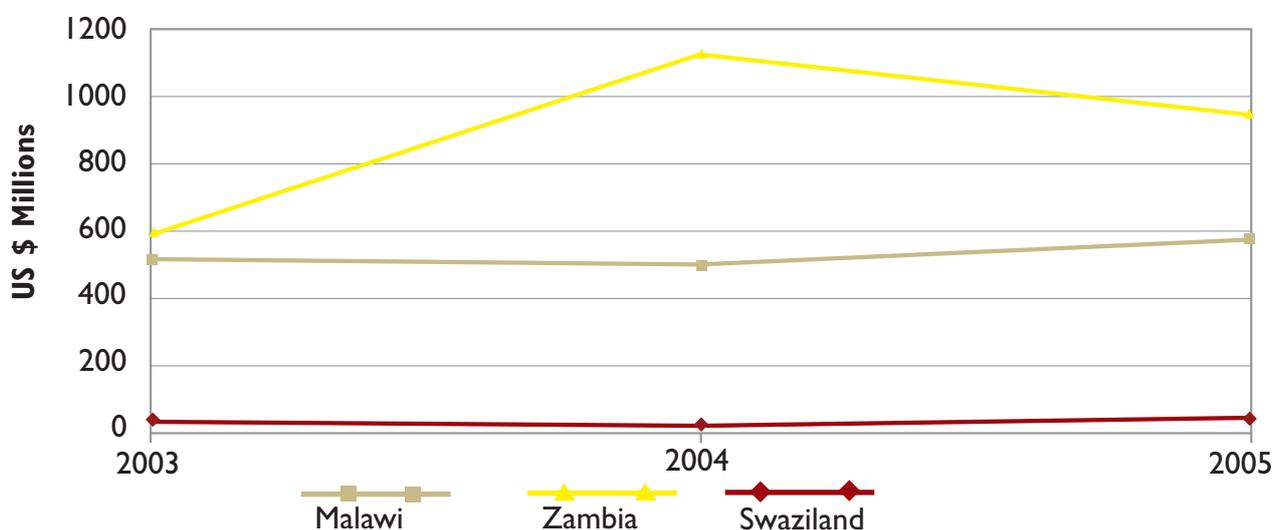
One of the major problems currently facing the public sector's response to HIV/AIDS is an unsustainable government budget. A number of fiscal strategies and reforms have been put in place to address the worsening situation. These have been unsuccessful in comprehensively addressing the current situation.

These strategies include a zero growth human resource strategy aimed to reduce the proportion of the budget dedicated to personnel costs. While this is effective in reducing recurrent costs, it has negative effects on the response to the HIV epidemic, which requires a massive scaling up of personnel. In addition, HIV/AIDS is viewed as only one of many differing responsibilities of Government; programmes have to compete with education, infrastructure and other public functions for a fixed amount of both human and financial resources (Lewis, 2005).

Resources are clearly insufficient for addressing the scale of the problem. Despite the drop in economic growth, Swaziland remains classified as a low-middle income country by the World Bank and as such is unable to access crucial external funding to allow an adequate response.

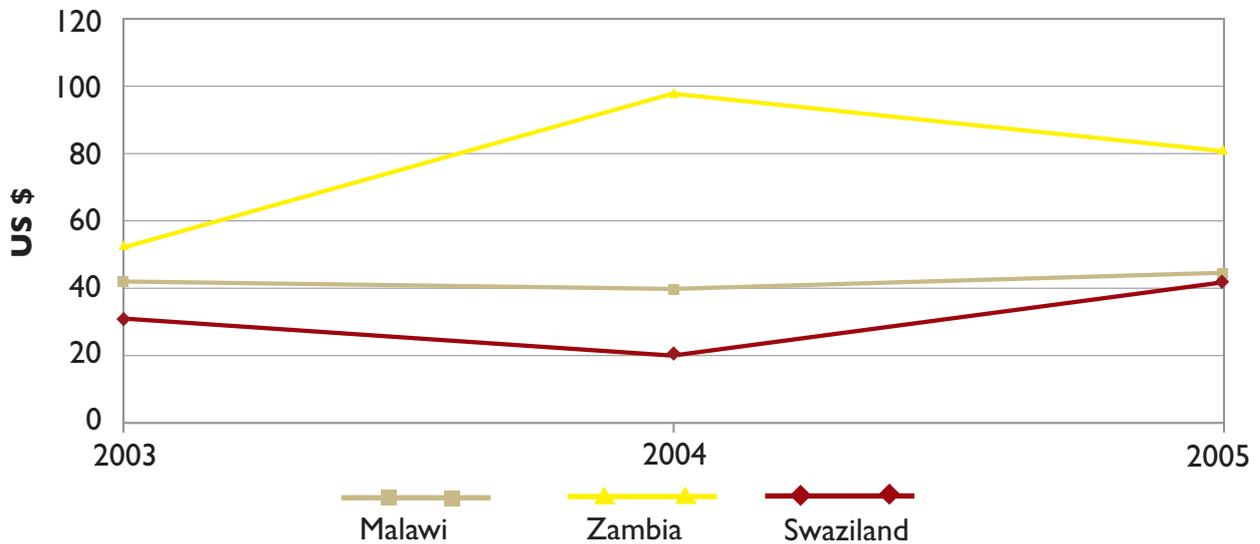
Figure 25 and 26 present the net ODA given to Swaziland, Malawi and Zambia. Although the amount of funding received by Swaziland has been increasing, in terms of net aid it is the lowest among these three countries.

Figure 25: Net ODA for Swaziland, Malawi and Zambia: 2003-2005



Source: OECD-DAC (2007)

Figure 26: Net ODA per Capita for Swaziland, Malawi and Zambia: 2003-2005



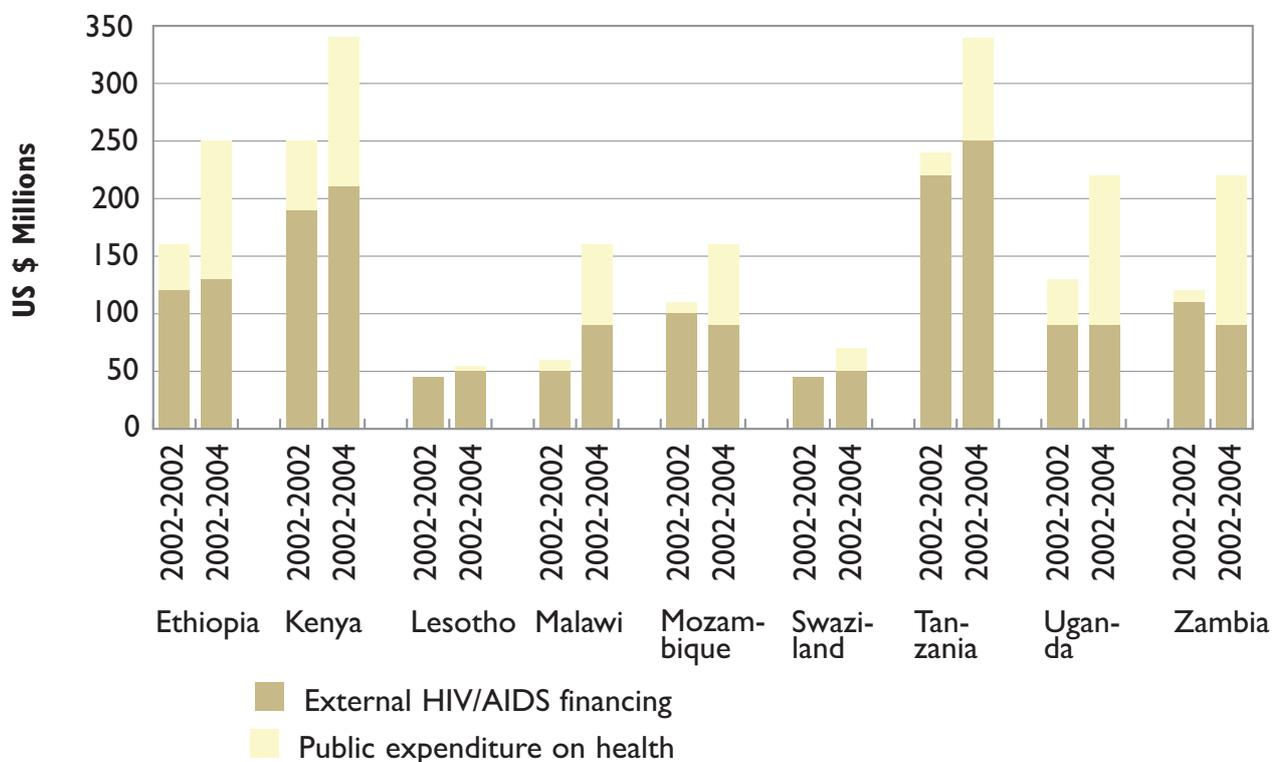
Source: OECD-DAC (2007)

When ODA is analysed per capita, Zambia and Malawi receive more assistance per head than Swaziland. Ironically, an increase in per-capita aid could occur due to increased mortality. Lewis (2005) narrows this analysis and examines ODA received by various countries directly dedicated to HIV/AIDS activities (see Figure 27). While she accepts that resources have increased dramatically in recent years, it is also clear that funding is heavily concentrated in a small number of countries. Figure 27 shows Swaziland receives significantly lower levels of aid specifically for HIV/AIDS. While external resources increased by 951% in Swaziland between 2000 and 2004, this remains a small amount compared to domestic funding and is reflective of low aid levels prior to 2000. In Malawi and Zambia, meanwhile, external funding exceeds domestic resources.

In the 1990's there were eight permanent foreign missions in Swaziland: USA, UK, EU, Israel, Korea, South Africa, Taiwan, Mozambique.

Over recent years this has fallen to just five: USA, EU, South Africa, Taiwan and Mozambique.

Figure 27: Trends in Domestic Health Funding and External Financing for HIV/AIDS: 2002-2004



Source: Lewis (2005)

Low levels of funding means Swaziland is restricted in the programmes it can implement. As a consequence, the impact of the epidemic is continuing to grow. This is in direct contrast to the situation in other countries where indicators, despite earlier drops, are now beginning to improve.

There are additional problems with regard to funding for HIV/AIDS. In Swaziland, most of the funding for HIV related programmes comes through donors. Funding commitments are generally (at most) guaranteed for five year intervals. Demand for funding programmes will rise over the long-term. While Swaziland is now well into the disaster phase, in terms of increased HIV prevalence and AIDS deaths, the emergency phase of increasing impact is only just beginning. This can be minimised with sufficient resources. If no action is taken now, impacts will continue to grow and Swaziland will lose the next generation of capacity through a lack of investment in human capital and possible non-socialisation of the masses of OVC.

2.5 Human Capacity

Adequate financing is one facet of the capacity to respond to a disaster situation. Equally important is having sufficient people to undertake the necessary activities. AIDS is unique in its disproportionate impact which affects the most productive age groups. Lewis (2005) suggests that 'collateral' domestic resources, such as the labour to rapidly scale-up services, become major concerns as these are typically limited in the short-term.

HIV/AIDS influences human capital in two ways. Firstly, it reduces the number of people available (through absenteeism and mortality) to prepare and respond to the disaster. Secondly, it affects human capital accumulation in the long-term, with the early death of parents leaving a cohort of children who have a lower chance of attending school and who do not benefit from inter-generational knowledge transfers. This increases the likelihood of them living in poverty and becoming infected themselves.

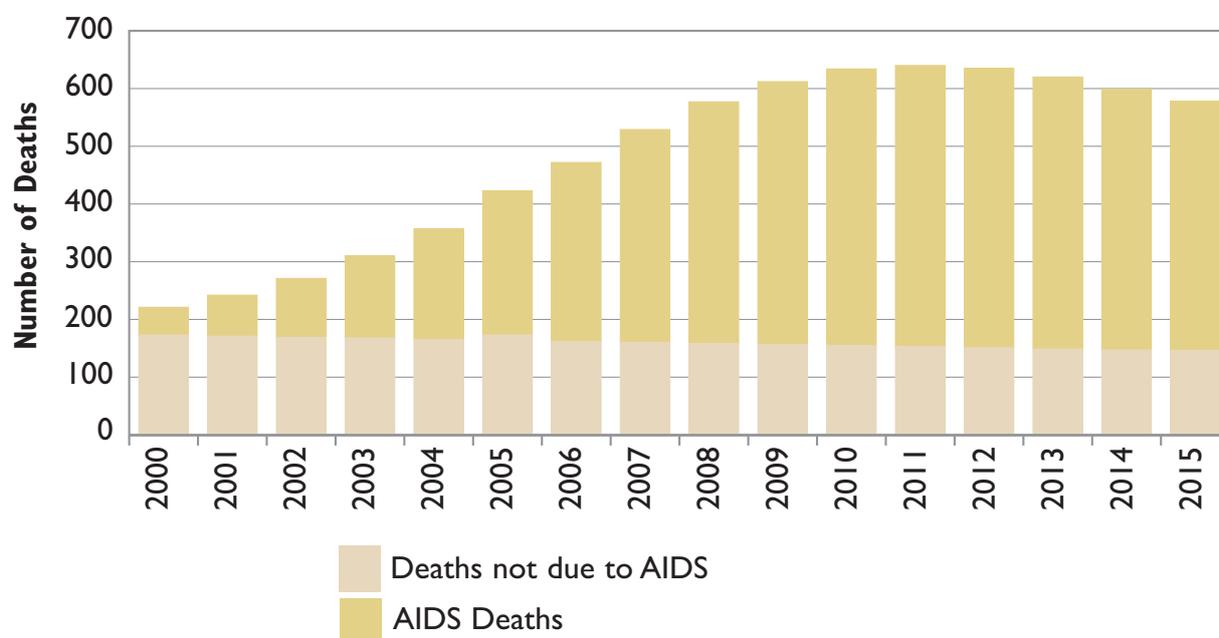
This section will concentrate on the first aspect of the impact on human capital, as this is relevant in the short- to medium-term and is directly affecting Swaziland's capacity to respond to the emergency. However, the long-term impacts demonstrate the long wave nature of the epidemic and the importance of minimising enduring inter-generational impacts.

Muwanga (2004) calculates an average HIV-related loss of 2.97 days per employee per year. This increases to 4.93 days per employee in manufacturing and 3.66 days on private small holder farms. It is likely that similar levels of absenteeism are also being experienced in other sectors.

With around 28,000 employees, the public sector is the largest employer in Swaziland. HIV prevalence in the sector is expected to be equivalent to rates across society, with 1 in 4 infected. The World Bank (2001) estimated that AIDS was contributing to an increasing death rate among public sector workers (Figure 28). While the number of AIDS deaths as a percentage of the total workforce is quite low, at around 2% annually, the cumulative effect of this over 10 years will reduce public service staffing by over 30%. The ramifications of infections in this sector are felt throughout Swazi society. For example, evidence from Zambia shows that the court system is less effective due to AIDS deaths; a class full of children who lose a month's teaching can never have this replaced.

Public sector workers are in society's top income band, and so are generally responsible for multiple dependents. They are also essential to implementing mitigation efforts. When an individual falls ill, the impact is felt beyond the immediate family. Prevention and treatment programmes are reliant on an efficient civil service. Donors require frequent and onerous reporting from government. Absenteeism has risen due to personal illness and because care has to be provided for family members. This is increasing inefficiencies and reducing service provision.

Figure 28: Impact of HIV/AIDS on Deaths in the Public Sector: 2000-2015



Source: World Bank (2001)

In the absence of a comprehensive recruitment and training policy, this will have a debilitating impact on both planning and responsive capacity, with respect to the emergency and the provision of basic public services. None of these estimates take into consideration the impact of ART and while it will have a large impact on reducing mortality, it will not remove it completely.

The health sector is critical in the response against the epidemic. A reduction in the capacity of this sector will seriously compromise the ability of the country to mitigate and reverse the ongoing negative impacts. Most health care workers are in relatively high risk age groups, with a high proportion of nurses between 25 and 40 years old. HDA and JTK Associates (2005) suggest that 2.6% of all Ministry of Health and Social Welfare staff died in 2004, with an overall attrition rate of 7.9% (reduced from 11.2% in 2003). Mortality within the 20-45 year age group was 4.9%.

There is no facility in Swaziland for training doctors. Once trained overseas, many Swazi doctors do not return home.

Figure 29: Estimated Impact of HIV/AIDS Attrition on the Health Sector¹⁵

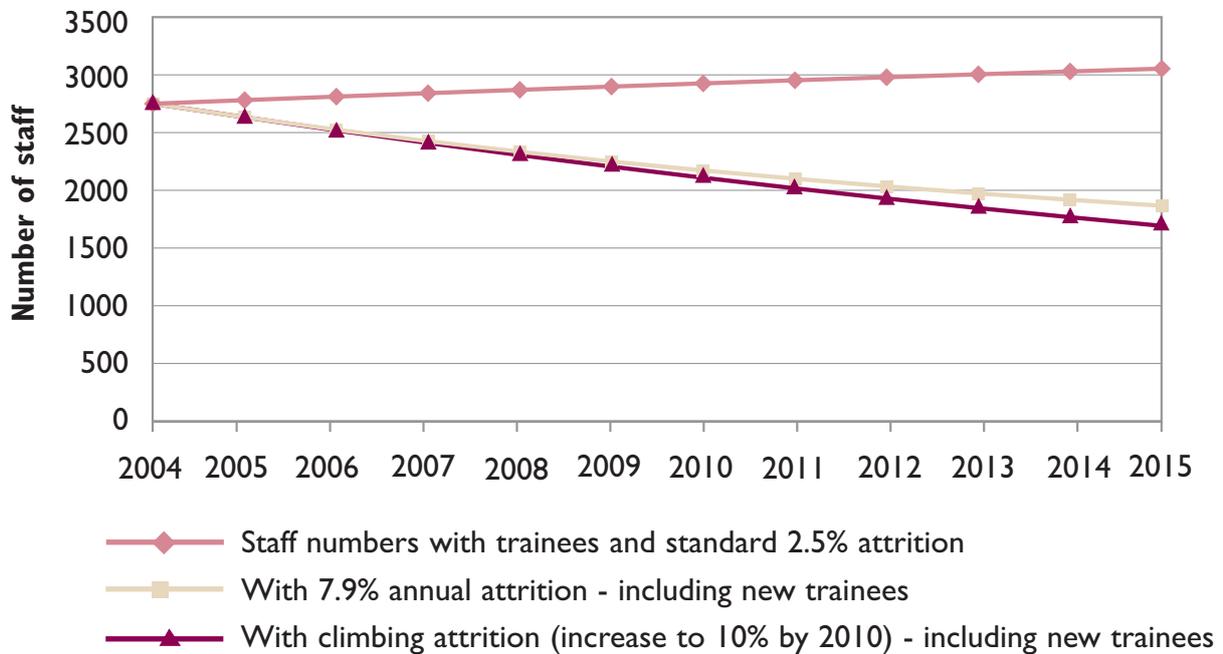


Figure 29 demonstrates the growing capacity gap within the health service, with a gap of over 1000 staff by 2015. At current training levels, the number of health care workers will decline.

Loss of staff is a significant problem affecting all levels of the health system, with the death of senior management level staff leading to particular difficulties. There has also been a noticeable increase in prolonged absenteeism. This is attributed to burnout, family sickness and funeral attendance, and is a major problem in smaller facilities. These facilities often only have one member able to perform certain support services, such as laboratory tests, and when they are absent, this service ceases to be available (HDA and JTK Associates, 2005). Rising absenteeism worsens already existing skill shortages. All these problems have exacerbated a pre-existing problem in human resources within the health sector.

The nursing complement in one regional hospital dropped from over 100 in 1998 to just 57 in 2005. (Quoted in: HDA and JTK Associates, 2005)

15. Current health sector staff and expected attrition rates are taken from (HDA; JTK Associates, 2005).

The importance of rolling out ART to all workers is evident from the impact it is estimated to have in the health sector. Without ART, 1 in 20 staff could die every year from AIDS by 2009. ART could avert half of these, equivalent to between 180 and 460 deaths (HDA and JTK Associates, 2005). These estimates are reliant upon good uptake and adherence, but demonstrate the massive impact ART could have on helping to reduce the human capacity problems faced by Swaziland. However, ART rollout requires resources that are currently not available.

All of the outlined impacts are underestimates. Most of the data employed are from the late 1990s and early 2000s, at which time impacts were only just beginning to be felt. Earlier estimates, as to the probable reduction in life expectancy, have been found conservative¹⁶. It can therefore be expected that observed trends will continue their downward progression, making the case for increased resources all the more pertinent. Although countries can plan how best to respond to disasters, those countries that suffer from the burden of HIV/AIDS are losing the human capital necessary to develop comprehensive mitigation strategies.

The situation in Swaziland has deteriorated since the beginning of the 1990's. While HIV/AIDS is not solely responsible for the reduction in living standards and life expectancy, it has worked to compound the effects of other events. The picture is one of a society in distress - overwhelming sickness, an increasing dependency ratio and thousands of OVC. Resources to respond to this have been lacking in both financial and human terms. This demonstrates a 'new' kind of disaster. Indicators have fallen gradually over an extended period to where daily death rates now exceed emergency thresholds.

The nature of HIV/AIDS and its impacts in Swaziland demonstrates a wider change in the nature of emergencies. This will require a review of the current paradigm that characterizes humanitarian assistance.

3. Defining a Disaster

Emergencies and disasters are defined in a myriad of ways¹⁷. Different authors have offered various views over the past fifty years. Auf Der Heide (1989) argued that it is a situation that affects an area of human development, has a considerable effect on a population, and requires a responsive capacity that exceeds the ability of internal systems to respond. Quarentelli and Dynes (1977) state that disasters are a form of collective stress situation. Kent (1983) suggests that they are events in which lives are directly threatened by a disaster agent, either natural (earthquakes, floods, droughts), man-made (civil strife), or technological (chemical poisoning, plutonium leaks) and causes suffering on a scale sufficient to warrant external intervention. These descriptions are further complemented with the following definitions (UN, 2005):

- **Complex Emergency (man-made):** A humanitarian crisis which occurs in a country, region or society where there is a total or considerable breakdown of authority resulting from civil conflict and/or foreign aggression; which requires an international response and which goes beyond the mandate or the capacity of any single agency.

- **Major Emergency (natural disaster):** A situation threatening a large number of people or a large percentage of a population, and often requiring multi-sectoral assistance.

These definitions only examine an emergency in general terms and fail to provide clear, quantitative guidelines as to when an event is severe enough to be an emergency. This has resulted in donors using vague funding mechanisms based on qualitative and historical traditions instead of quantitative assessment.

The ethics behind humanitarianism are enshrined in international humanitarian law and are inherently different from those behind developmentalism. The idea of development centres on a linear progression from underdeveloped to the desired 'developed' state. This teleological progression sometimes involves the assistance of others to improve standards of living, reduce poverty and increase prosperity. Disasters occur as a temporary setback on this path creating a immediate short-term need. The legitimacy of humanitarian funding is based on a belief of the shared entitlement to assistance and protection in circumstances of dire need by all human beings (Macrae, et al., 2002).

Within this framework, humanitarian aid is seen as the response to two different occurrences:

1. As a response to 'bolt-from-the-blue' events that are inherently impossible to plan for.

Note that the terms disaster and emergency are often used interchangeably. However, the focus is on events that require the disbursement of humanitarian assistance.

2. As a tool to move states affected by these events back onto their normal path to development.

Thus, it enables populations undergoing crises to survive and return to normality, at which point, 'development' can resume (Macrae, et al., 2002; DFID, 2006).

These definitions are so general as to result in a lack of system-wide frameworks for judging the relative severity of situations (Darcy & Hoffman, 2003). This has led to many different approaches based on the diverse mandates and capabilities of humanitarian actors (Sphere, 2004). Nonetheless, there is substantial similarity in the way donors distribute assistance. A review of humanitarian policies and reports shows that funds are most often dedicated to natural disasters, conflict affected areas, and famines and epidemics¹⁸.

3.1 A Paradigm Out of Step with Society

The current paradigm relies on traditional thinking, focusing on short-term, rapid onset events and a desire to return populations to normality. This thinking fails to reflect the changes occurring in the wider world, where an increasing number of long-term events are leading to entrenched emergency situations.

Over the past ten years, the thinking around development has undergone radical changes with an increased reliance upon transparency, accountability and targeting assistance effectively. Yet, for the most part, these changes have evaded humanitarianism. This has resulted in a system that confronts today's problems with a cold war rhetoric, the continued inclusion of political factors in funding decisions and a system that is weakly articulated, ad hoc and uncoordinated (Cahill, 1999, USAID, 2006, Harmer, Cotterrell, & Stoddard, 2004).

3.1.1 Planning for Vulnerabilities

'Bolt-from-the-blue' thinking suggests that emergencies are inherently unpredictable and cannot be planned for, as they are 'unforeseen catastrophes'. However, as technology and knowledge progresses, this assertion grows weaker. It is now well known which areas are vulnerable to natural disasters and as such, plans can be formulated well in advance of many emergencies. Examples include building codes in earthquake zones and the tsunami early warning system in the Pacific Ocean. It has also been argued that while hazards are natural, disasters are not (Hilhorst & Bankoff, 2004).

18. Donors reviewed include, the UK - Department for International Development (DFID), the EU - European Commission Humanitarian Office (ECHO), the USA - United States Agency for International Development, through their Office for Foreign Disaster Assistance (OFDA), Japan - Japanese International Cooperation Agency (JICA), the UN - Office for the Coordination of Humanitarian Affairs (UNOCHA), the International Federation of the Red Cross and Red Crescent Societies (IFRC) and Care International. See (DFID, 2006), (UNOCHA, 2006) (ECHO, 2006), (USAID, 2006), (MOFA, 2007)

The ability to plan, or 'disaster preparedness', is now recognised as a responsibility of each donor. A UN declaration states that the international community should adequately assist countries in strengthening capacity for disaster prevention and mitigation (UN, 1991). As such, a definition of a disaster cannot take the ability to plan into account, as all vulnerabilities can be planned for and mitigated against.

Nevertheless, while it remains true that all emergencies can be planned for, prevention and planning are related to having adequate resources to undertake this effectively, which is itself related to development. For example, an earthquake in the USA will not cause the same damage as an earthquake in India, as all buildings have been built along guidelines reducing their vulnerability. This would not prevent the building of unplanned, shanty settlements in developing countries by households living in poverty, without the resources to afford the relevant prevention measures. As Benson (2004) suggests, vulnerability is integrally related to the prevailing socio-economic and environmental conditions and at later stages of development, vulnerability to disasters declines. Thus, given that the greatest vulnerability to emergencies exists where there is the least capacity, it is difficult to apply any criteria of 'self-help' (Kent, 1983).

The ability of countries to plan is also restrained by the overall increase in the number of disasters. Between the periods 1995-1999 and 2000-2004, the number of disasters experienced worldwide increased by a third, and in Africa they doubled (DFID, 2006). In countries with insufficient resources and capacity, no event can be planned for and responded to adequately, and even foreseeable, slow onset events can become emergencies.

3.1.2 Changing Nature of Emergencies

Over the past twenty years the nature of emergencies has changed. In 1995, the CIA in their review of disasters noted that disasters were becoming more complex, more frequent and widespread, longer lasting and more dangerous (CIA, 1995). It was hypothesized that the world would increasingly be faced with more and more 'mega disasters' with increasing complexity (Kent, 1983), stretching capacity and requiring a more organised and substantial international response.

Traditional humanitarian thinking focuses on dealing with a 'crisis' phase and returning populations to normality. However, events are increasingly complex and chronic. Changes in climate and disease have led to an overall increase in vulnerability which, compounded by consistent underdevelopment, has created limited coping mechanisms both at the individual and household level as well as the

macro- societal level. This trend shows no sign of changing, with climate change expected to affect disproportionately the poorest countries, which are already the most vulnerable to shocks (ILRI, 2006).

Kent (1983) suggests that emergencies have a much longer incubation period than has been traditionally assumed, and that they are generated by forces far more complicated than previously thought. Increases in vulnerability from a myriad web of events and impacts are combining and becoming so entrenched that they can no longer be seen as short-term deviations. Instead, the chronic emergency state is permanently altering countries' normal paths to development, rendering the goal of returning people to their normal lives largely irrelevant, with normality itself being shifted.

For example, the drought over the past five years in Southern Africa has resulted in massive food insecurity for thousands of people. This cannot be classified as a short-term event. Furthermore, it shows no sign of abating, with over 4 million people estimated to need food assistance in 2007 (RIASC, 2007). This scale of need is reflective of more deeply rooted food insecurity, which is a consequence of many other factors, including the high prevalence of HIV/AIDS.

Long-run disasters have emerged from the new and changing threats that are facing society, such as pandemic disease, along with climate change, environmental degradation and major demographic changes (DFID, 2006). As was outlined in section 2.2, in the past, diseases came into a country and then either worked through society or were treated and eliminated. These were short-term and people were able to resume normal life within a relatively short period of time.

HIV/AIDS (and TB) presents a very different type of epidemic (Table 9). Lengthy incubation periods result in the slow accumulation of impacts and effects that ingrain themselves into households and society. The massive increases in the number of HIV infected individuals and the connected rise in TB cases leads to the possibility of the HIV/AIDS epidemic becoming a public health TB emergency. Action to address this must therefore address the inter-linkages between the two diseases.

Diseases change over time. Viruses are masters of transformation and mutation. Thus the changing nature of epidemics reflects a change in the nature of disease. Nonetheless, organisations are maintaining the use of definitions used to classify old diseases in this changed world. For example, UNOCHA has a pandemic influenza contingency support team, but no unit dedicated to HIV/AIDS or TB.

As discussed in this paper, AIDS is a unique disaster for many reasons. Unlike other epidemic diseases, HIV/AIDS alone has long incubation period, permanent infection for its victims, a treatment that lasts a lifetime, and a specific age group that is most likely to be infected. With most diseases, there is a clear distinction between those who are ill and those who are not.

Table 9: Summary Characteristics of Selected Infectious Diseases Linked to Epidemics

Diseases	Period of Epidemic	Source of infection	Form of Transmission	Disease Nature and Speed of Transmission
SARS	2002/03 epidemic	Corona virus	Through respiratory contact with infected animals or humans	Symptoms; occur within 4-5 days Death: depends on individual, but can occur within 48 hours, especially if elderly. Case fatality rate: 10-15%
HIV/AIDS	Virus identified: 1980's Ongoing epidemic	Virus	Through sexual contact contact with blood, sharing of hypodermic needles of infected individuals	Symptoms: 8-10 years delay; transmit infection with asymptomatic. Mortality: Average 7 years from diagnosis without treatment; undetermined with anti-retroviral treatment
Influenza	1918-1919	Virus	Aerosole: airborne particles, through close human contact	Symptoms: within 48 hours of contact Mortality: Within a few days
Bubonic Plague	14thC Europe	Bacteria	Through flea bites from infected carriers (usually rodents); can be airborne, transmitted human droplets	Symptoms: manifested in bubo death occurs in 3-4 days Rapid transmission in densely populated areas. Average mortality: 60-70%

Source: Bell & Lewis (2004)

Emergencies are also becoming more complex. Multiple concurrent threats are working together to create new patterns of vulnerability and suffering. A holistic approach is needed in order to be effective. Saving people from starvation is ineffective if they then die from waterborne diseases (DFID, 2006). Likewise, in countries with high HIV prevalence, feeding people is insufficient if society is collapsing under the multiple impacts of the epidemic (UNAIDS, 2006; UN, 2004).

The current paradigm for thinking about emergencies is inadequate for two reasons. First, it is now possible to plan for emergencies through early warning systems and disaster preparedness programmes. Second, the new nature of threats is changing our conception of normality. HIV/AIDS, as well as other looming issues such as climate change, are bringing longer lasting entrenched problems to vulnerable societies. These events are not presenting rapidly rising mortality rates, or mass numbers of displaced people. Instead they are causing irreparable damage at the household level, by destroying the social and economic pillars of society.

4. Conclusion

4.1 New Framework

In light of the devastating impacts of HIV/AIDS in Swaziland, it is clear that the idea of an emergency should be redefined. Falling economic growth, increasing poverty, mortality and morbidity, and associated changes in the demographic structure of society have developed slowly over the past fifteen years. Worryingly, the desperate situation facing Swaziland is being accepted as 'normal'.

While there is no shared definition of what constitutes an 'emergency', there is broad agreement reflecting concern with reducing suffering and preserving human dignity (Darcy et al, 2003). There is a need to broaden this definition to include long-wave emergencies.

Reform of the humanitarian sector is the subject of international debate. There is a renewed focus on impartiality and the allocation of resources on the basis of need. While this is necessary to provide immediate assistance, it still fails to specify conditions where it will be given and focuses on the crisis nature of emergencies instead of the nature of need (Harmer, Cotterrell, & Stoddard, 2004). A wider debate focussing on redefining the types of events considered emergencies is required to respond to slow onset situations, such as HIV/AIDS.

The UN argues (2004) that responses require adjustment to consider the triple threat of a lethal epidemic, deepening food insecurity and a hollowing out of government capacity. This is a new type of crisis requiring a re-tooling of the response (High Level Committee on Programmes, 2003).

If negative trends were noticed earlier in Swaziland, some wider shocks may have been preventable. This highlights the importance of assessing changes in socio-economic indicators over time in response to the changing nature of emergencies. A framework assessing social and income indicators, and mixing the short-term needs of a stressed country with their long-run capacity needs is essential. There is therefore a need to establish a quantitative and comprehensive framework to measure need, regardless of other factors, to prevent oversights based on existing paradigms.

There are currently two main analytical frameworks used for assessing emergencies. The first of these is the threshold approach which assesses public health indicators such as the daily CMR. This provides a clear and easy method of analysis. However, it does not allow comparisons over time and only indicates when a situation is critical, rather than when an intervention is necessary (Darcy & Hoffman, 2003). It retains a use in measuring rapid onset events and traditional disasters, but fails to assess generalised, entrenched disasters. A second approach is used by the European

Commission, through its Directorate General for Humanitarian Aid (DG - ECHO), who focus on protracted crises and forgotten emergencies (Willitts-King, 2006, Development Initiatives, 2006). Responses are guided by a quantitative framework, the Global Needs Assessment (GNA) that assesses and ranks the humanitarian situation in different countries. This consists of crisis and vulnerability indices (ECHO, 2006). The vulnerability index uses indicators to capture the relative susceptibility of states and their ability to cope on the basis that exposure to disasters increases with higher levels in the selected indicators. Highlighting the ECHO's priority area of supporting uprooted people, the crisis index assesses whether a state is experiencing a crisis, or has recently experienced a crisis. Each of the categories in both indices are rated on a scale of one to three (3 being the maximum score), and those countries with the highest scores in both areas are highlighted as priority areas for funding.

Table 10: Vulnerability Index Indicators

Category 1: General Situation in the country	Category 2: Uprooted People	Category 3: Health of Children under Five	Category 4: Other Vulnerability Factors
Indicator 1: Human Development Index	Indicator 3: Refugees received, displaced persons and recent returnees	Indicator 4: Malnutrition	Indicator 6: Access to Health Care
Indicator 2: Human Poverty Index		Indicator 5: Mortality	Indicator 7: Prevalence of HIV/AIDS, TB and malaria
			Indicator 8: Gender specific human development index
			Indicator 9 Gini index

Table 11: Crisis Index Indicators

Indicator 1: Ongoing or recently resolved conflict
Indicator 2: Recent natural disaster
Indicator 3: Large number of uprooted people (refugees and/or internally displaced people)

Source: ECHO, Technical Note: Assessment of humanitarian needs and identification of "forgotten crises" (2006)

Despite the analytical nature of the GNA it is made clear by ECHO that there are significant problems with these due to data constraints. However, they are useful in directing attention and funding to the right areas. The use of indices to assess need is a useful tool in assessing vulnerability, allowing for changes to be measured over time. It also considers socio-economic factors that are crucial in 'new' emergencies.

The changes described in this report require a new approach to defining disasters. There is a need for a separation within the humanitarian agenda between rapid onset 'traditional' disasters and new long-wave emergencies. While the traditional threshold approach remains useful for classifying the first type of disaster, a new framework is needed for assessing disasters like HIV/AIDS. This could take the form of an index system or a series of thresholds. It is crucial that the indicators measured within any framework are considered over time (see Table 12 for suggested indicators), with a sustained fall being the prime indication of an emergency. This introduction of a time element has been starkly missing from the debate around humanitarian assistance.

Table 12: Suggested Indicators to assess new emergencies

Dimension of Vulnerability	Suggested Indicator
Financial Resources	GDP growth per capita Income inequality
Human Capacity	Demographic indicators - focus on changes in the productive age groups Life expectancy Crude death rate Effective dependency ratio
Food Security (Household vulnerability)	Agricultural outputs
Social Conditions	Poverty Rate Maternal Mortality Changes in the HDI
Health / Wellness of Society	HIV/AIDS prevalence TB prevalence

4.2 Hopes for the Future

The Dlamini Family of Nkwene is caring for eleven children on the homestead, two of which have lost both parents. The two double orphans taken in are with Gogo and Mkhulu, so it is very important that there is some income to help feed these extra mouths. This family now receives sponsorship through Young Heroes to assist the family in paying for food and clothing and lessens the burden of the double orphans living on their homestead.

Source: Young Heroes, 2007

There is beginning to be a growing acceptance within the international community that HIV/AIDS is a new type of epidemic that will have long-term ramifications. The severe impacts described in this report are a reality in Swaziland. There are, however, a few glimmers of hope within this dismal picture.

Most of the estimates presented here do not fully take into account the potential positive impact of ART. The rollout began in Swaziland in 2003 and 12, 806 people (around 28% of total need) are currently on treatment. This scale-up from almost zero to over 10,000 people in only a few years is a significant achievement. If uptake and roll-out continue, and reach the targets envisaged within the Universal Access Report for Swaziland, then over 55% of those in need will be receiving ART by 2011 (Bovin, 2007). Complementing the roll-out of ART are several programmes aimed at relieving the situation of OVC. In 2001 the Government commenced a bursary scheme aimed at getting OVC back into schools. This has been a success with around 90, 000 children now attending school who otherwise would not be able to afford it. The scheme is a vital ingredient in ensuring that the next generation is socialised and able to contribute positively to Swazi society. Another initiative is providing destitute households, headed by grandparents, family members and children with financial support provided by individual donations. This has been useful in identifying households most in need.

A Young Hero shines at school!

A year ago Mukelo Motsa, a Young Hero, was enrolled into the program and is receiving a full sponsorship. This has not only lightened the load on the Maphalala family but has given Mukelo hope for a brighter future. To show her appreciation for all the contributions she has had from her caretaker (also her aunt) and Young Heroes sponsor, she has excelled in all her subjects at the Mlindazwe Primary School. She has been the top student in her class for two years now. She says, "When I grow up I want to be a doctor so that I can take care of gogo and aunt".

Source: Young Heroes, 2007

All of the above programmes are positive. However, each of them suffers from a lack of resources. In reality, these projects cannot possibly mitigate the overall impacts of HIV/AIDS in Swaziland. Swaziland now fulfils several of the past criteria of a humanitarian emergency. Daily mortality rates are now over the threshold of 1 per 10,000 people per day. This situation cannot be viewed as 'normal'.

Unless there is a massive shift in the policies of all actors, Swaziland will fall to low income status. Development gains are being reversed. If both national and international states are serious about relieving suffering from HIV/AIDS, responding to 'new' emergencies should be made a priority. HIV/AIDS is reducing the capacity of Swaziland to both govern and grow. A shift in the paradigm for viewing emergency is essential to address comprehensively the multidimensional impacts of the epidemic.

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Appendix - Terms of Reference

Project titled: 'Reviewing Emergencies'

1. The project aims to examine the grounds in which an 'emergency' could be declared, using current literature and events to further refine its definition in light of current events within Swaziland and other middle-income countries.
2. This definition will then be used to examine whether Swaziland would be eligible under the new emergency definition to access assistance that normally excludes middle-income countries.
3. The Consultant will conduct a literature review of the current thinking and develop an outline specification as to what constitutes an emergency by developing the current definition.
4. This specification will be developed further through interviews and consultation of stakeholders.
5. The Consultant will then undertake a scoping exercise to consider whether Swaziland falls into the new definition of an emergency.
6. The Consultant will then write up the results of the research and analysis and submit for review.