

# MOZAMBIQUE

National Human Development Report 2007

Challenges and Opportunities  
**The Response to  
HIV and AIDS**



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## Preface

*“Mozambican men and women: We are dying!”* It was with these direct and clear words that, in his 2006 end of year message, the President of the Republic, Armando Emílio Guebuza, once again issued a warning to the nation, about the deadly HIV and AIDS pandemic, which now has reached the level of a true national emergency.

Despite the reinvigorated efforts by the government, civil society organisations, the private sector, and international partners, including the United Nations System, the number of people who become infected every day remains extremely high – there are an estimated 500 new adult HIV infections every 24 hours.

The national HIV prevalence rate has risen from 13.3% in 2002 to 16.3% in 2004 among those aged between 15 and 49 years. This means that the pandemic is striking at the most economically active age group of the population, with tragic economic, social and cultural consequences for the development and viability of Mozambique as a nation.

While HIV prevalence rates are generally high in all three regions (north, centre and south) of the country, it is the central region, covering the provinces of Sofala, Manica, Tete and Zambézia, which is the most severely infected and affected, with an average rate of 20.4%, compared with 18.1% in the southern provinces, and 9.3% on the north.

It is under this scenario that the current report makes an in-depth analysis of the HIV and AIDS phenomenon in Mozambique and its effects on the various dimensions of human development, including the capacity of people to lead long and healthy lives, to enjoy access to knowledge, and to maintain a decent living standard.

The Millennium Development Goals (MDGs) deal with vital aspects of human development, advocating the eradication of poverty and hunger; the achievement of universal primary education; gender equity and the empowerment of women; the reduction of child mortality; the improvement of maternal health; the response to HIV and AIDS, malaria and other diseases; and environmental sustainability, all by 2015, as well as a global partnership for development.

The impact of HIV and AIDS is a serious threat to the MDGs. It is now affecting negatively the development of Mozambique, exacerbating problems of poverty, malnutrition, poor school attendance and results, and gender disparities. Indeed, the estimates indicate that HIV and AIDS in Mozambique could reduce *per capita* economic growth by between 0.3 and 1.0% per year. As a result, the reduction in poverty rates will be slower because of weaker economic growth.

HIV and AIDS is a worldwide phenomenon; but sub-Saharan Africa, with only 10% of the world's population, has over two-thirds of the people living with HIV (25 million people). Almost 2.8 million people became infected in 2006, and 70% of the two million deaths due to AIDS in the world have occurred in Africa.

Southern Africa, where Mozambique is located, is the epicentre of the pandemic, with a third of the total number of HIV-positive people, and a third of all AIDS deaths.

According to the UNAIDS annual report 2006, the countries of this region have the highest rates of HIV prevalence in the world. In Zimbabwe, about 20% of the population is infected, according to the World Health Organisation, and the numbers are over 20% in Botswana, Lesotho and Namibia. In South Africa some 5.5 million people (UNAIDS 2006) including 240,000 children younger than 15 years were living with HIV in 2005. In Zambia a slight decline in HIV infection levels – from 28% in 1994 to 25% in 2004 – has been observed, especially in urban areas among pregnant women aged 15-39 years (Ministry of Health Zambia, 2005). The Kingdom of Swaziland, which also borders on Mozambique, has the highest rate in the world with a level of adult infection that reaches more than one-third of the population.

This scenario of a regional disaster impacts directly upon the rate of spread of the epidemic in Mozambique, a country that is also marked by serious internal weaknesses and vulnerabilities, including infrastructural ones, and complex socio-cultural contexts. Here the health network covers only about 50% of the population.

Based on the literature available about the epidemic in Mozambique, this report brings an independent intellectual discussion about the disease in the country, as a phenomenon spreading in a generalised way among the various segments of the population.

The report notes that, while the primary effects of the disease are devastating, at the individual, family, community and national levels, its secondary effects are equally serious, including the need to guarantee the survival and education of orphaned and vulnerable children, a reality that is a heavy burden for the present and future of Mozambique. The most recent studies show that 800,000 people may die from the disease between 2004 and 2010, with a significant increase in the number of orphans.

The stigma associated with people living with, or affected by HIV and AIDS has led to still greater isolation and human suffering. The losses in productivity caused by deaths and prolonged periods of illness associated with the virus that provokes AIDS constitute a real threat to development and to governance, since

the indices of HIV prevalence in the public sector, including in the health and education services, in agriculture and in the police, reach 17% of the qualified technical staff.

Mozambique is a signatory to the Declaration of the Millennium Development Goals as well as other international pledges, including the undertaking adopted by the Special Session of the United Nations General Assembly on HIV and AIDS (UNGASS) and the Abuja Declaration, both of 2001, which lay down measurable targets and objectives to reverse the spread of the pandemic, and call for the allocation of more robust resources in response to the disease.

These objectives have been fully appropriated nationally, in the government's Five Year Programme, made operational by PARPA II (2006-2009).

The present report examines both the positive results achieved so far, and the prevailing constraints, in the context of the overall national response to HIV and AIDS. It presents serious recommendations, based on profound analyses of all the information available. Among the recommendations presented, the following stand out:

- Continued reinforcement of the government's strong political commitment at the highest level, and of an efficient and systematic leadership, seeking to ensure the integration of HIV and AIDS into the strategic plans of all sectors, including the private sector and civil society organisations, in a multi-sector perspective, coordinated by the National AIDS Council (CNCS);
- Continued promotion of voluntary testing and counselling as the way to ensure the provision of care and support, and the reduction in stigma and discrimination;
- Continued expansion of access to anti-retroviral treatment, under conditions of adequate technical and medical safety, and with the minimum nutritional levels required of patients;

- Implementation of an effective, knowledge-based communications strategy, which is integrated into the socio-cultural diversity of Mozambican communities;
- Mitigation of the impact of the epidemic, by ensuring programmes to protect and support orphans and other children who are vulnerable, due to the diseases associated with AIDS, and expanding the possibilities of preventing parental transmission of HIV;
- Promotion of home and community-based care, and of social support systems.

To implement these recommendations, it is essential to follow strictly the objectives laid down by PARPA and the MDGs, including strengthening the budgetary provision. In order for the National AIDS Council to perform to the full its tasks as the body coordinating the multi-sector strategy for responses, its authorities, powers and resources must also be strengthened.

Like the previous National Human Development Reports produced in Mozambique since 1998, the present document was written by a team of eminent consultants and advisors, under a dynamic partnership between the Higher Institute of International Relations (ISRI) and the Southern African Research and Documentation Centre (SARDC) in Maputo, in close collaboration with the National Statistics Institute (INE), the body responsible for the country's official statistics.

The institutions involved in preparing this report recognize the important collaboration and support of the United Nations Development Programme (UNDP) at all levels, in particular the important contribution and support of the UNDP Resident Representative in Mozambique, Mr Ndolamb Ngokwey. Comments and suggestions received from other UN agencies, including from outside Mozambique, have also contributed to enriching the final document.

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# Foreword

by the UN Resident Coordinator

## Keeping open the window of hope

National Human Development Reports are a major pillar of UNDP's analytical and policy work. The principal objective is to raise public awareness and trigger action on critical human development concerns. The NHDRs also contribute significantly to strengthening national statistical and analytical capacity.

This is the sixth NHDR produced since 1998. The theme of the 2007 edition is the HIV and AIDS pandemic. The report looks carefully at the general status of HIV and AIDS in Mozambique, its different facets and causes, its historical evolution, how it is regarded by society and its potential impact on the public and private sectors.

The underlying argument is that efforts to accelerate development in Mozambique, to achieve local development aspirations as reflected in national development frameworks including the PARPA and Agenda 2025 as well as the MDGs would be undermined unless the state and society at large further expand and strengthen the national, coordinated response to curb the devastating spread of the disease.

The report finds that HIV and AIDS are exacerbating the problems of poverty, malnutrition, low educational levels and gender disparities, thus threatening the attainment of the MDGs as well as slowing growth and development.

Through various indices the report assesses the nation's level of human development, an attempt to measure the standard of living and well-being of its people – effectively their ability to lead lives that are

economically productive and personally fulfilling, and that benefit the community and the nation as a whole.

The Government of Mozambique has given priority to HIV and AIDS in its national agenda, with extensive evidence of political commitment. HIV and AIDS has also been mainstreamed into the national development framework and programmes. The PARPA (the country's PRSP) identifies the response to the HIV and AIDS pandemic as one of the key areas for reducing poverty.

UNDP and other UN agencies, especially UNICEF and UNAIDS, and the UN Theme Group on HIV and AIDS have provided technical assistance to the independent team of national consultants who drafted the present report, under a process lead by a dynamic partnership of the Higher Institute of International Relations (ISRI), the National Institute of Statistics, and the Southern African Research and Documentation Centre (SARDC) in Mozambique.

UNDP is pleased to have provided its technical assistance for the implementation of the reporting process, and expresses the hope that the report will help to further raise public awareness and foster the national coordinated response to the pandemic, thus keeping the country's window of hope open for its present and future generations.

Ndolamb Ngokwey  
UN Resident Coordinator  
UNDP Resident Representative  
Maputo, September 2007



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## Acronyms

AIDS	Acquired Immune Deficiency Syndrome	MPF	Ministry of Planning and Finance
AMETRAMO	Association of Mozambican Traditional Healers	MSF	Medicins Sans Frontiers
AMODEFA	Mozambican Association for the Defence of the Family	NGO	Non Governmental Organisation
ARV	Anti-Retroviral	OE	State Budget
ART	Anti-Retroviral Treatment	OVC	Orphaned and Vulnerable Children
CNCS	National AIDS Council	PARPA	Action Plan for the Reduction of Absolute Poverty
DNS	National Health Directorate	PEN	National Strategic Plan
DOT	Directly Observed Treatment	PES	Economic and Social Plan
FDC	Community Development Foundation	PIWA	People Living with HIV and AIDS
GATV	Counselling and Voluntary Testing Office	PMT	Practitioners of Traditional Medicine
GDI	Gender-adjusted Development Index	PNS	National AIDS Plan
GDP	Gross Domestic Product	PNCIL	National Programme for the Control of Tuberculosis
HAI	Health Alliance International	PQG	Government Five-Year Plan
HDD	Day Hospital	PVT	Prevention of Vertical Transmission
HDI	Human Development Index	SARDC	Southern African Research and Documentation Centre
HIV	Human Immunodeficiency Virus	SETSAN	Technical Secretariat for Food and Nutritional Security
ILO	International Labour Organization	SNS	National Health Service
INE	National Statistics Institute	STI	Sexually Transmitted Infections
INJAD	National Survey of Young People and Adolescents	TB	Tuberculosis
ISRI	Higher Institute of International Relations	UEM	Eduardo Mondlane University
KAP	Knowledge, Attitudes and Practices	UNAIDS	Joint United Nations Programme on HIV/AIDS
MADER	Ministry of Agriculture and Rural Development	UNDP	United Nations Development Program
MISAU	Ministry of Health	UNICEF	United Nations Children's Fund
MMAS	Ministry of Women's Affairs and Social Action	US	Health Unit
		WHO	World Health Organisation

# Chapter 1

## Human Development, HIV and AIDS in Mozambique

### The concept of Human Development

Human development has to do, first and foremost, with the possibility of people living the kind of life that they choose – and with the provision of instruments and opportunities so that they can make their choices (UNDP, 2004). This statement expresses a new way of conceiving the scientific thought that guides the problem of development today, centring it on human beings. It is the meeting place for the currents of thought and theories which, in the last half of the 20th century, dominated economic thought and the human sciences.

Indeed, the theme of development has long attracted the attention of academics, politicians, activists, workers and members of civil society in general. This attention has led to countless studies and debates and even the establishment of institutions specialised in development studies and research.

Arising out of the search for sustainable and adequate means for achieving development, there appeared several currents and trends of thought around the concept and how to approach the theme. The field of development economics, for example, as that which has been most prominent in dealing with the theme, has a history which, from the 1950s to today, falls into three distinct periods:

- the era of economic growth and modernisation of the 1950s and 60s, when development was largely defined in terms of the average growth of per capita income;
- the period of growth with equity as from the 1970s, when the concerns of many economists about development expanded, and came to include the distribution of income, employment and nutrition; and,
- the era of economic growth and policy reform of the 1980s (Staatz and Eicher, 1990).

During these various phases in the evolution of the approach to development, critical voices were raised and, by around the 1970s, there was universal

recognition that aggregate economic growth did not necessarily lead to the elimination of poverty. This finding led to the formulation of the basic needs approach which was adopted by the International Labour Organisation (ILO) in 1976. At that time the ILO defined basic needs as adequate food, shelter and clothing, as well as some domestic requirements, including social services provided to individuals and communities, namely drinking water, sanitation, public transport, health and education.

This approach began to orient the development problematic towards meeting the needs of human beings. In this context, one should mention the meeting at Cocoyoc, Mexico in 1974, the declaration of which strengthened the orientation towards meeting people's needs, pointing out that growth that did not lead to the attainment of basic human needs was a parody of development. This declaration went beyond basic needs, and brought to the surface concepts of freedom of expression and self-realisation at work (Burkey, 1996).

Today the concerns of development activists to satisfy people's needs has led and influenced the problem of development towards the search for responses to immediate and not-so-immediate human needs. Development is thus being understood within a perspective which recognises that economic growth is a necessary condition, but also that it should be based on equity and on the participation of individuals in designing, implementing and evaluating development programmes.

Thus development now wears a human face, shifting from its statistical and numerical identity, and coming to encourage the welfare of the individual, bringing together his or her material and immaterial needs, namely access to clean drinking water, an adequate and balanced diet, physical and emotional security, physical, mental and spiritual peace, as well as cohabiting in sustainable systems of sexual reproduction, systems of social education grounded on cultural preservation and continuity, and political

systems with transparent leadership and decision making processes, etc. (Burkey, 1996).

This perspective, which began to achieve some expression after the launch of the first human development report by the United Nations Development Programme (UNDP) in 1990, introduced the new approach to development at the human scale, which is being used to measure the level of satisfaction of human needs, in order to improve the lives of individuals and create freedoms that they may enjoy. Besides, in order to fulfil its human and humanist mission, development should provide opportunities that allow people to lead long and healthy lives, to be recognised, to have access to the resources necessary for a decent standard of living, and to be capable of participating in the life of their communities (UNDP, 2001).

This approach, although recognised and exercised increasingly in today's world, faces a series of adversities such as high indices of poverty, economic and social constraints, high maternal and child mortality rates, and the probability of morbidity and mortality (the condition of being ill and the rate of deaths among the population respectively) caused by HIV and AIDS and associated diseases, such as tuberculosis and malaria.

Meanwhile, the recognition of a world evolution dictated by globalisation and an accelerated erosion of the terms of trade for the countries of the periphery, dependent on exports of primary products, cannot pass unnoticed in the building of the material premises for human achievement. Furthermore, the challenges imposed by natural disasters and endemic diseases, imposing diversion of resources that would otherwise be invested in the promotion of development and social well-being, are issues that dominate the agenda in the development problematic.

The combination of these issues demand a committed and sufficiently open universal mentality to find solutions that seek not only to mitigate the effects of adversities, but also promote a development model that confronts the challenges faced by the majority of people today.

### **Evolution and measurement of human development**

Development is much more than the simple measurement of economic growth. Indeed, the indicators on aggregate income of countries (GDP and per capita income), show that between the years 1960

and 2000 the world recorded advances in the sphere of human development, which were expressed in the rise in life expectancy in developing countries from 46 to 63 years, and the reduction in infant mortality rates by more than half. In that period there was also a qualitative and quantitative jump in school attendance and particularly in adult literacy. In fact, between 1975 and 2000, the number of illiterate people fell by almost half (UNDP, 2004).

This progress, however, is still faced with a series of human deprivations, including the chronic hunger from which many people still suffer throughout the world, children of school age – particularly girls – who have not yet entered school, lack of access to clean drinking water or to basic sanitation, the violation of individual, political, democratic and civic freedoms, among other constraints to real human development.

Despite this, knowledge of the performance of countries in satisfying the material and spiritual needs of their citizens and in promoting sustainable human development has been accepted as a requirement for redirecting development strategies. To obtain this knowledge, several human development measuring instruments have been used at particular stages of nations' lives.

For the same purposes, the UNDP has used the Human Development Index (HDI), which is based on three indicators, namely:

- longevity, measured by life expectancy at birth;
- the level of knowledge acquired in the area of education, measured through a combination of adult literacy (with a weight of two-thirds), and the combined school enrolment rate at primary, secondary and tertiary levels; and,
- standard of living, measured by real per capita GDP.

The measurement of human development thus takes into account the three indicators described above. This fact, however, does not exhaust the importance of other indicators in weighing the satisfaction of desires and needs that allow citizens to enjoy their rights of citizenship. For example, in an era when freedom both of expression and of participation are taken for granted as gains and unequivocal forms of democracy, the measure of participation in the decisions and destinies of a country, analysed by gender, is an important determinant for assessing to what extent citizens of both sexes enjoy the same rights enshrined in the Constitutions of particular countries.

However, the limitations that the Human Development Index contains should be stressed. These can be mitigated by exploring other, to some extent alternative, indicators such as the Human Poverty Index, which expresses the proportion of people living below the threshold in basic dimensions of human development, as well as the Gender-adjusted Development Index, which catches the differences in achievement between men and women in the same country, among others.

### The expansion of choice

Human development thus assumes the creation of an environment in which people can develop their full potential, and lead productive and creative lives, in accordance with their needs and interests. This fact implies the creation of favourable conditions in various spheres of social and economic life so that people may find opportunities for involvement and to contribute with their knowledge and work, participating in development and achieving their expectations.

The creation of a favourable environment for the active involvement of the individual in his or her own development process assumes expanding the choices people have to lead the lives that give them value (UNDP, 2001).

The underlying assumption here for the understanding of choices includes a discussion that faces two important data, namely:

- the premise of willingness and need, and
- the premise of supply and availability, or the duty of provision.

This leads us back to an old problem, that of the definition of the poverty (or wealth) of a country, which Nurks (1989) summarized in the following terms: a country is poor because it is poor. To this acceptance, there followed other propositions resulting from the experiences of decades of development studies, which argued that the poverty of countries was much more than the express absence of natural attributes or resources, and thus required an approach that should look at the development policies and options adopted, that is, poverty linked with poor policies.

That said, it might be concluded that choices, in a given society, are conditioned by the production of goods and services, and by the accessible and equitable distribution of social wealth among the members of that same society.

Thus the expansion of choices assumes, among other factors, promoting and sustaining continual economic development that can generate public resources for education and health services, and raising the income of individuals such that they may enjoy a decent standard of living, and improve various aspects inherent to their daily lives.

As a result, the human development perspective is intrinsically linked to economic growth, from which a contribution is expected that may pull people out of the conditions of deprivation in which they live.

### Human development, HIV and AIDS, malaria and tuberculosis

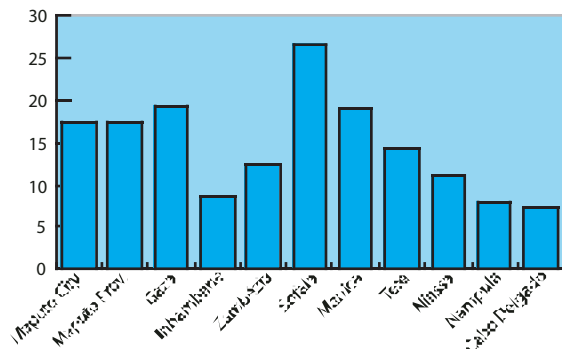
Development has an influence on people's ability to protect themselves from infection with HIV, malaria and tuberculosis, and on the vulnerability of individuals and society to the consequences of these diseases. This is a basic assumption for understanding why the effects of these endemic diseases in developed countries are not on the same scale as that felt in developing countries. In the latter, HIV and AIDS, malaria and tuberculosis will have adverse impacts on development, visibly reflected in key indicators such as life expectancy at birth, and school attendance and literacy achievements, as well as on household incomes.

This is why one of the Millennium Development Goals – Goal 6 – is “combat HIV and AIDS, malaria and other diseases”, with which tuberculosis is necessarily linked. Thus, the continual increase in the impact of these transmissible endemic diseases, linked to poverty, conditions the socio-economic level and health status of the public. The latest epidemiological surveillance round showed that HIV prevalence has increased from 13.6% in 2002 to 16.2% in 2004.

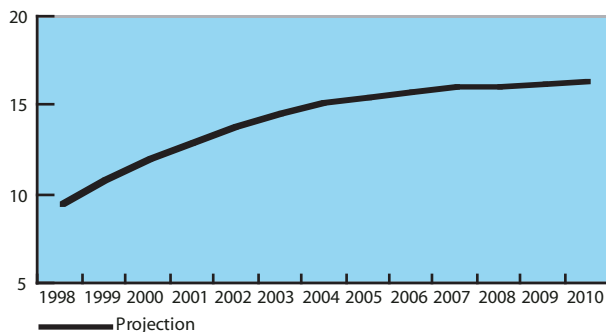
This prevalence is not uniform and varies between 9.3%, 20.4% and 18.1% in the northern, central and southern regions respectively (MISAU, PNC STI/HIV-AIDS, 2005). This puts Mozambique among the countries of the world and of the sub-Saharan region with the highest prevalence rates.

The cumulative effects of the combination of the three endemic diseases has adverse implications for the population structure and for the age pyramids, revealing at once serious consequences for multiple variables in society, from the economic sphere (production and productivity) to the social arena (social and cultural capital) and even those in the political sphere (governance capacity).

**Graph 1.1 HIV prevalence rates (%) in 2004**



**Graph 1.2 Projection of HIV prevalence rates (%)**



As with HIV and AIDS, Mozambique is among the countries most affected by tuberculosis, following the revision of the estimated incidence of this disease in 1999. Tuberculosis is the third largest cause of hospitalisation, after acute respiratory infections and malaria. There are estimated to be around 21,000 cases of tuberculosis in the country. (MISAU, PNC STI/HIV/AIDS 2004-2008)

In populations with an average HIV and AIDS prevalence of around 10%, it is estimated that about 40% of tuberculosis cases can be attributed to HIV infection. Likewise, it has been reported that in most sub-Saharan African countries, 50% of HIV-positive people will develop tuberculosis in the course of their lives.

In Mozambique, the average of HIV-positive among patients suffering from tuberculosis has increased from 32% in 2002 to 48% in 2004 (Box 1.1). The figure varies between 2% and 53% in different regions of the country.

In many referral hospitals, where the HIV and AIDS test is administered on patients hospitalised suffering from diseases related with internal medicine,

40-50% of the tests show that the patient is HIV-positive. Furthermore, over 75% of the patients hospitalised in referral hospitals suffering from tuberculosis are HIV-positive (MISAU, PNC, idem).

The increase in AIDS cases is a dramatic humanitarian situation in terms of public and individual health within the National Health Service. In health units, such as, for example, the Maputo and Beira central hospitals, and the Tete and Manica provincial hospitals, in the medical wards, 60%-80% of the patients have diseases related to AIDS.

These figures show the already well-known and baleful combination between HIV and AIDS and tuberculosis, as one of the main opportunist infections – but that which is largely curable, if strategic interventions based on DOT (Directly Observed Treatment), and guidelines for the patients to observe strictly the drug regime, are properly supported and adequately funded.

Meanwhile, malaria, which has a high incidence in the country, is the main cause of hospitalisation and mortality. Children under five and pregnant women are among the groups most vulnerable to this disease. Malaria contributes to about 40% of all outpatient consultations, and 60% of all paediatric admissions in the rural and general hospitals. It is the top cause of mortality among patients admitted and hospitalized in Mozambican paediatric wards.

Malaria and the anaemia associated with it contribute to the high degree of maternal mortality recorded in the country (1,500 per 100,000 live births). Due to the anaemia, and the haemorrhagic complications associated with it, it becomes the foremost cause of the low weight at birth recorded among new-born infants.

According to the IDS (see Chapter 2) for 2004, the proportion of children under 15 in the population is 44.5%, with a degree of dependence of about 90%. Because HIV and AIDS mostly affects people who are economically active, the degree of dependence will be worsened by the collateral effects of the epidemic, such as an increase in the number of orphans, an increase in the number of households headed by children, or by elderly people who are themselves dependent. This list of effects of HIV and AIDS will directly affect the other parameters used in calculating the HDI, such as the level of school attendance and the purchasing power of individuals and households.



**Box 1.1**

Tuberculosis (TB) remains one of the most serious global threats to public health. In March 2006 Tuberculosis was declared a national emergency in Mozambique. Mozambique is among the 22 countries in the world most affected by TB (the HBC), with an estimated 91,000 cases in 2006 and an incidence of 460 per 100,000 inhabitants in 2004.

The incidence of TB has been growing rapidly in the last 10 years, due, above all, to its association with HIV. In 1998, HIV prevalence among adult tuberculosis patients (aged 15-49) was 32% (that is, one out of every three tuberculosis patients was HIV-positive).

In 2004, the HIV prevalence among adult tuberculosis patients was 48% (that is, one out of every two tuberculosis patients). Due to this association, and because tuberculosis is the opportunist disease most associated with AIDS, mortality among tuberculosis patients has been increasing. The most dramatic situations are in Manica, Sofala and Gaza.

Tuberculosis is not distributed equally across the country. The association of tuberculosis with HIV is very serious in the central provinces, particularly in Manica and Sofala, followed by Gaza, Maputo Province and Maputo City.

For example, data from studies held in the central city of Beira in 2003 and 2004 show that almost 3,200 new cases of TB were recorded per year, which is an incidence of 566 per 100,000 people.

The patho-physiological link between TB and HIV is extremely deadly, since co-infection with HIV significantly increases the possibility of activating latent TB or a greater risk of re-infection, due to the low immunity. Furthermore, the immunological stimulus caused by TB can also increase the HIV viral load, the rate of progression of HIV and lead to higher mortality.

It is this link between HIV and TB which has led to the appearance of the terms "co-epidemic" or "double epidemic" to describe the lethal marriage between the two illnesses in the same patient.

Due to the great number of patients living with TB and HIV, the World Health Organisation (WHO) has, since 2000, recommended and encouraged the strengthening of an integrated approach between the programmes controlling the two epidemics in sub-Saharan Africa.

**HIV and Tuberculosis: Double epidemic**

This integrated approach could facilitate, to a great extent, the rapid and efficient diagnosis of dual HIV-TB infection, and provide beneficial interventions such as chemoprophylaxis with cotrimoxazol, reducing mortality among patients with dual HIV-TB infection, and leading to a effective coordination of tuberculosis treatment and the concomitant administration of anti-retrovirals.

The National Tuberculosis Control Programme, set up in 1977, has used supervised treatment since 1984. Later, when WHO re-established the Global Tuberculosis Programme in 1991, Mozambique contributed with its experience to the world launch of the strategy of the Directly Observed Treatment Short Course (DOTS). Under the current conditions of coverage by the national health network, the number of cases detected is still well below the recommended level. DOTS now covers about 40% of the population.

The targets set by the WHO's Global Tuberculosis Programme stipulate detection of 70% of the infectious cases (that is, the pulmonary ones, since it is these that spread the disease) and the cure of 85% of them. The data presented by the National Tuberculosis Control Programme (PNCTL) for 2005, indicate a detection rate of 48% and a cure rate of 80%.

The coordinated efforts of the sector, including with foreign partners, seeks to extend the coverage of the TB Programme to identifying 70% of cases, with a success rate of at least 85%, by 2010.

The treatment of tuberculosis is the only way of reducing the sources of infection in a community. Thus detecting and treating these cases is the priority for any tuberculosis programme in the world. One case of infectious (pulmonary) tuberculosis can infect 10 to 20 people per year.

Tuberculosis is curable and in Mozambique its treatment is free of charge, as is Cotrimoxazol for chemoprophylaxy for tuberculosis patients with AIDS.

Between 1995 and 2004, about 22 million patients were treated by the DOTS strategy across the world. Internationally, 183 (of 192) countries were implementing the DOTS strategy in late 2004.

The Millennium Development Goals include targets for containing the prevalence of and deaths from TB by 2015.



## Chapter 2

# Updating Human Development in Mozambique

### Introduction

The chapter analyses the human development dimension together with human development indicators, which provides an assessment of the achievements of Mozambique in general and of the country's administrative regions in particular, in the various areas of human endeavour, in the period 2001 to 2006.

The chapter is divided into two main parts. The first summarises the evolution of human development in Mozambique covering the 2001-2006 period, based on the behaviour of the main indicators for measuring the concept, and resorting to official statistics and methodologies that make it possible to compare Mozambique's level of human development to that of other countries.

The second part of the chapter analyses the evolution of human development and its components in the regions of Mozambique. The difference between this and the previous section lies in the fact that the first adopts scrupulously the methodology of the Global Human Development Reports (GHDR), which allows the resulting indicators to be comparable with those of other countries and the figures published in the GHDR.

The second section resorts to an adaptation and adjustment of the methodology to allow comparison between the various administrative regions within Mozambique.

It is important always to bear in mind the difference between the two methodologies used in calculating the indicators, since this implies that, in practical terms, the final figures for the Human Development Index (HDI) calculated in the two sections are not comparable.

The main difference in methodology lies in the use, in the first case, of real per capita Gross Domestic Product (GDP) converted into dollars PPP,

**Table 2.1**

### Human Development Index for Mozambique, 2001-2006

Basic Data <sup>a</sup>	2001	2002	2003	2004	2005	2006*
Life expectancy at birth	45.0	45.6	46.3	46.7	47.1	47.4
Adult literacy rate (%)	44.4	46.4	46.4	47.2	47.2	48.0
Combined gross enrolment rate (%)	34.5	40.6	42.8	47.1	50.3	52.5
Real GDP per capita (PPP dollars) <sup>b</sup>	1471.8	1537.8	1607.7	1749.8	1839.5	2088.9
<b>Calculation of the HDI</b>						
<b>Life expectancy at birth index</b>	0.333	0.343	0.355	0.362	0.368	0.373
<b>Educational index</b>	0.411	0.445	0.452	0.472	0.482	0.485
Adult literacy index	0.444	0.464	0.464	0.472	0.472	0.480
Combined primary, secondary and higher education enrolment index	0.345	0.408	0.428	0.471	0.503	0.525
<b>Real per capita GDP index (\$PPP)</b>	0.449	0.456	0.464	0.478	0.485	0.507
<b>Human Development Index</b>	0.398	0.415	0.424	0.437	0.448	0.458

a) Maximum and minimum values: see Technical Note II

b) Estimates based on the PPP conversion rate of the World Bank, *World Development Report*

\* Estimates of the GDP and of the literacy rate subject to change in later editions

which makes it possible to compare the level of human development in Mozambique with that of other countries. The HDI for the interior of Mozambique uses real per capita GDP in nominal meticaís, applying a deflator which allows comparison between years along the series under analysis.<sup>1</sup>

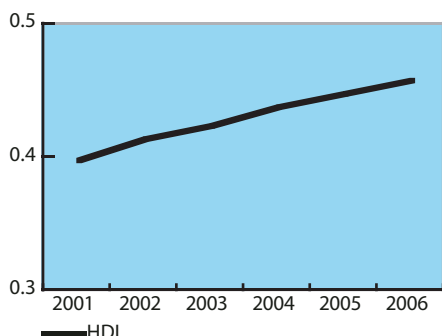
### Human Development in Mozambique 2001-2006

The HDI is a composite measure which analyses the average achievement of a country in three basic areas of human development:

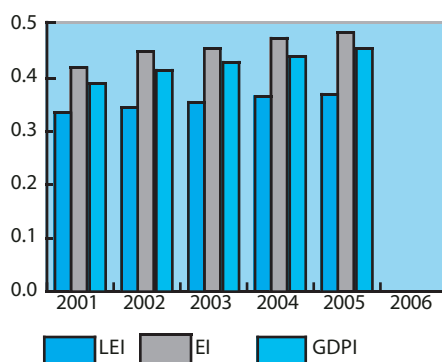
- A long and healthy life, as measured by life expectancy at birth;
- Knowledge, measured by the adult literacy rate (with a weighting of two-thirds), and by the

<sup>1</sup> We draw the reader's attention in particular to the importance of this key aspect to avoid the habitual misunderstanding of, on the one hand, comparing the two figures obtained with the two methodologies and, on the other, of comparing the figures for the regions with those for other countries.

**Graph 2.1 Evolution of the HDI in Mozambique, 2001-2006**

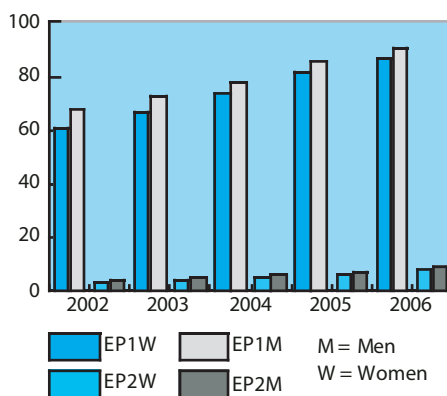


**Graph 2.2 Evolution of the components of the HDI, 2001-2006**



LEI = Life Expectancy Index  
 EI = Educational Index  
 GDPI = Real GDP per capita Index

**Graph 2.3 Evolution of net EP1 and EP2 enrolment rate by sex**



combined primary, secondary and higher education enrolment rate (with a weighting of one-third);

- A decent living standard, measured by GDP per capita (in US\$ PPP).
- The performance of the HDI is expressed as a figure between 0 and 1. A figure for the HDI near to 1 shows a better level of attaining human development than an HDI near to 0. The methodology for calculating the HDI is shown in Technical Note II appended to this report.

Graph 2.1 illustrates the trend for increase in the HDI and its main indicators, while showing that Mozambique still has a long path ahead to realize the capacities of its citizens.

In Table 2.1 it is estimated that the HDI has evolved from 0.398 in 2001 to 0.458 in 2006, equivalent to an annual average growth of about 3%, which expresses a positive evolution, during the period under analysis, of one or all components of the HDI. Indeed, during this period:

- The GDP grew on average by 8.7% a year, which expresses substantial economic gains for a decent standard of living.
- The adult literacy rate advanced from 43.3% in 2000 to 46.4% in 2003, according to the National Institute of Statistics (INE), and it is believed that this rate will continue to grow, due to an increase in those attending literacy classes across the country of about 55.7%, when compared with 2005, is envisaged (PES, 2006).
- The gross combined primary, secondary and tertiary school attendance rate also had an average annual growth of about 8.9% between 2001 and 2006, which expresses a greater capacity to absorb pupils through the expansion of both the public and the private school network.
- There is also a modest average gain of 1.02% in longevity, measured by life expectancy at birth, due fundamentally to interventions in the health sector and improved nutritional status, despite the pressures imposed by the HIV and AIDS epidemic.

Graph 2.2 strengthens the previous analysis and shows clearly that all components of the HDI, during the period under analysis, had a positive evolution, even though the variables that form the indicators used in the index are, by their very nature, not subject to substantial variations in a short period of time.

In disaggregated terms, the most dynamic indicators have normally been the GDP index, which reflects recent economic gains; and the joint school attendance rate, which expresses the gradual, but substantial, increase in the number of places in the country's educational network, particularly as from 1995 (NHDR, 2001).

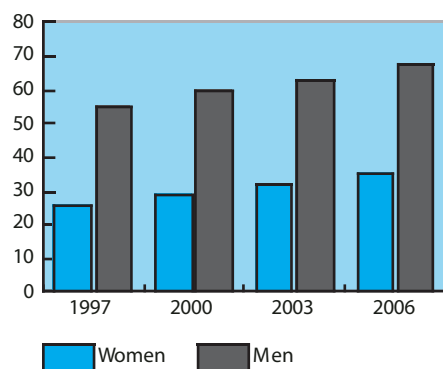
It is estimated that about 3.8 million pupils attended EP1 in 2006, which is an increase of about 6.0% when compared with 2005. In the same period, the number of EP2 pupils grew by 9.5% compared with 2005 (PES, 2006). Thus the trend towards strong growth in this level of education, noted since the 1995 school year, and particularly as from 2000, is being maintained.

Obviously all this represents a trend induced by the increased supply in the education system. To illustrate this perception, it is enough to note, by way of example, the school coverage forecasts, namely that the net EP1 attendance rate rose from 83.4% in 2005 to 88.3% in 2006, and that the gross admission rate increased by 1.2%, rising from 160.6% in 2005 to 162.5% in 2006 (PES 2006).

These results revive the hope that, although there is still a long way to go, Mozambique is, in relative terms, taking an important step in reducing the deprivations of its population (UNDP, 2001).

Graph 2.4 illustrates the growth in the literacy rate among adult women, compared with men, over the period 1997 to 2006.

**Graph 2.4** Comparative evolution of the literacy rate, 1997-2006



### The GDI of Mozambique

The Gender-adjusted Development Index (GDI) is a composite index that measures average attainment in the three basic dimensions captured in the HDI – a long and healthy life, knowledge, and a decent standard of living – adjusted to reflect the inequalities between men and women. That is, the GDI adjusts average attainment to reflect inequalities between men and women in the three dimensions of human development.

Like the HDI, the GDI is expressed as a figure between 0 and 1. When the GDI is equal to 1, it reflects maximum attainment in the basic capacities with perfect equality between men and women (though no country has ever achieved this figure). On the other hand, a GDI approaching zero reflects a larger gulf between the development attainments of women and of men. The methodology used in calculating the GDI is shown in Technical Note III appended to this report.

The first finding on analysing the data in Table 2.2 and Graph 2.5 is the existence of disparities in attainment between women and men, as the historic figures for the GDI over the 2001-2006 period show. The figure for the GDI in 2006, still well below 0.5, shows the long journey that must be travelled towards reducing the disparities in attainment between the two sexes.

Graph 2.6, in showing the comparative evolution between the HDI and the GDI between 2001 and 2006, confirms the trend to parallel evolution between the two indicators of human development, which does at least suggest that the gap in the levels of attainment between men and women has not widened (NHDR, 2001). Indeed, while the HDI recorded an average annual growth of 3.2% between 2001 and 2006, for the same period, there was an average annual growth of 3.5% in the GDI.

The conclusion that may be drawn from this result is that, since the disparities between men and women are not increasing, the policies intended to promote the advancement of women, particularly as regards access to education, health and other social services, are making steps towards reducing the gap between the development attainments of the two sexes. Graph 2.7 shows the evolution of the gap between the human development attainments of men and women.

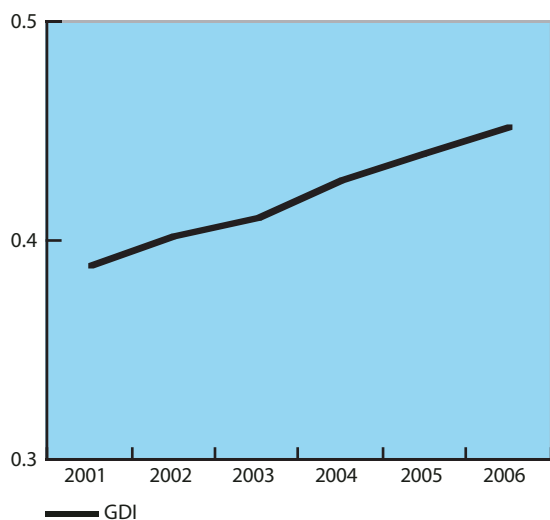
**Table 2.2**

**Gender-adjusted Development Index for Mozambique, 2001-2006**

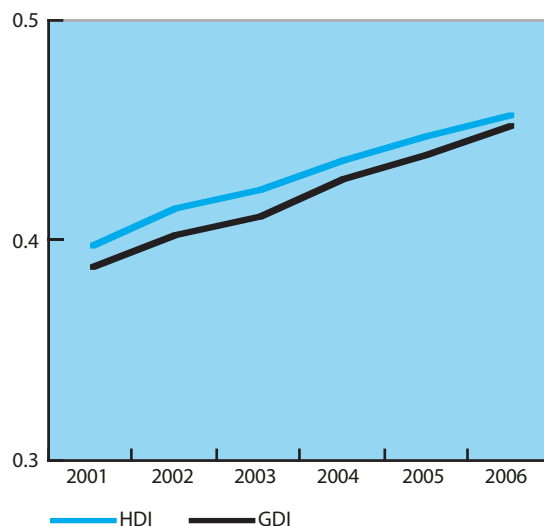
Basic Data <sup>a</sup>	2001	2002	2003	2004	2005	2006*
Life expectancy at birth	45.0	45.6	46.3	46.7	47.1	47.4
Women	46.8	47.5	48.2	48.6	49.0	49.3
Men	43.2	43.8	44.4	44.8	45.2	45.5
Adult literacy rate (%)	44.4	46.4	46.4	47.2	47.2	48.0
Women	30.1	32.0	32.0	33.8	33.8	35.5
Men	59.8	63.3	63.3	65.6	65.6	67.9
Combined Gross Enrolment Rate (%)	34.5	40.6	42.8	47.1	50.3	52.5
Women	33.0	35.4	37.9	42.3	45.5	48.1
Men	44.0	45.9	47.8	52.4	55.0	57.0
Real GDP per capita (PPP dollars) <sup>b</sup>	1471.8	1537.8	1607.7	1749.8	1939.5	2088.9
Women	1301.9	1361.3	1424.4	1551.5	1721.1	1855.3
Men	1655.3	1728.0	1805.1	1962.8	2173.7	2339.2
<b>Calculation of GDI</b>						
<b>Life expectancy at birth</b>	0.333	0.343	0.355	0.362	0.368	0.373
Women	0.322	0.333	0.345	0.352	0.359	0.364
Men	0.345	0.355	0.365	0.372	0.378	0.383
Equally distributed life expectancy index	0.332	0.343	0.354	0.361	0.368	0.372
<b>Educational index</b>	0.411	0.445	0.432	0.472	0.482	0.495
Women	0.311	0.331	0.340	0.366	0.377	0.397
Men	0.545	0.575	0.581	0.612	0.620	0.642
Equally distributed educational index	0.388	0.412	0.421	0.450	0.461	0.483
<b>Real adjusted per capita GDP index (\$PPP)</b>	0.449	0.456	0.454	0.478	0.495	0.507
Women	0.428	0.436	0.443	0.458	0.475	0.487
Men	0.468	0.476	0.483	0.497	0.514	0.526
Equally distributed real per capita GDP index	0.446	0.453	0.461	0.475	0.492	0.505
<b>Gender-adjusted Development Index</b>	0.389	0.403	0.412	0.429	0.440	0.453

a) Maximum and Minimum Values: see technical note  
 b) Estimates based on the PPP conversion rate of the World Bank: World Development Report 2000/2001  
 \* Estimates of the GDP and of the literacy rate subject to alteration in later editions

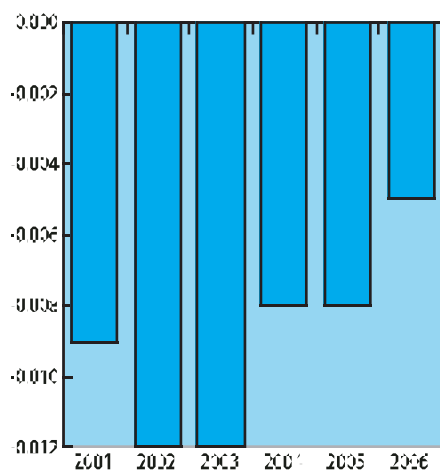
**Graph 2.5 Evolution of the GDI, 2001-2006**



**Graph 2.6 Comparative evolution of the HDI and GDI, 2001-2006**



**Graph 2.7** Gap between the HDI and GDI, 2001-2006



### Human development in the regions of Mozambique

#### Estimated GDP disaggregated by province

One of the innovations of the Mozambique NHDRs is the possibility of showing the HDI broken down by provinces and by regions, which allows us to evaluate the performance of the economic and social indicators in the various administrative regions of the country, using the instruments that measure human development. A fundamental step in reaching this goal is the disaggregation of the GDP by provinces and regions. This section analyses the economic indicators within Mozambique, more specifically the GDP by provinces and regions.

The assessment of human development in the provinces took as its starting point the methodology adopted in the previous National Human Development Reports to estimate the contribution made by each of the 11 administrative regions to the economy.<sup>2</sup> The methodology used which made it possible to break down the GDP for 2001-2006 by provinces is shown in Technical Note I, appended to this report.

In general, the estimates of economic activity show that the performance of the provinces has not evolved in a uniform fashion. The results in Table 2.3 show that the average annual rate of real growth of the GDP in the 2001-2006 period varies

between 5.4% (Gaza province) and 12.0% (Maputo province). However, although all provinces show noteworthy real growth, only five of them (Niassa, Cabo Delgado, Tete, Inhambane and Maputo province) are above the national average of about 8.7%.

The strong average growth of the economy in Maputo and Inhambane provinces in the period under analysis can be attributed to the construction sector, because of the expansion of the aluminium smelter (Mozal II), and the building of the pipeline that links Inhambane province to South Africa, and later to the manufacturing industry sector, because of the increase in Mozal's productive capacity resulting from the take-off of the second phase of aluminium production, and the start of the exploitation of gas at Temane in the first quarter of 2004.

In regional terms, the results of the economic performance over the period under analysis continue to show heavy economic concentration in the southern region of the country, with an average of about 44% of real production. The central zone follows, with a contribution of 34%, and finally, the northern zone with 22% of national production. The contribution by region is summarized in Graph 2.8.

Sofala and Zambezia provinces in the centre, and Nampula in the north lead in their respective zones, with average contributions of 11.5%, 11.7% and 13.7% respectively. Maputo City and Maputo

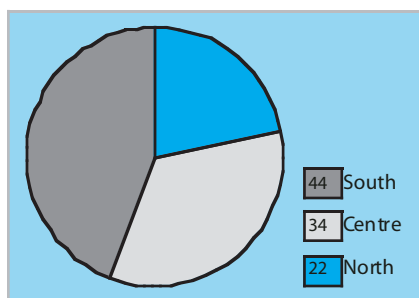
**Table 2.3** Evolution of the GDP by provinces, regions and the country, 2001-2006

Regions/Provinces	Growth rate (%)						Average
	2001	2002	2003	2004	2005	2006*	
<b>North</b>	8.7	10.1	9.0	7.0	8.6	8.9	8.7
Niassa	11.2	11.7	7.9	16.7	10.0	9.7	11.2
Cabo Delgado	10.3	10.4	9.7	7.1	7.8	10.9	9.4
Nampula	7.6	9.7	9.0	4.9	8.5	8.0	8.0
<b>Centre</b>	10.7	9.2	6.9	5.4	8.6	7.0	8.0
Zambézia	10.4	9.9	6.0	1.9	9.6	6.1	7.3
Tete	10.1	11.0	8.6	11.3	11.5	9.0	10.2
Manica	11.5	9.1	7.4	4.3	6.1	7.2	7.6
Sofala	11.0	7.7	6.5	6.6	7.0	6.8	7.6
<b>South</b>	15.3	8.8	5.0	10.2	8.2	8.2	9.3
Inhambane	6.0	12.1	5.9	16.5	13.0	12.4	11.0
Gaza	7.8	6.9	6.7	5.6	5.1	7.0	6.5
Maputo Prov	30.2	12.3	4.6	13.5	3.3	7.9	12.0
Maputo City	10.3	5.9	4.6	7.0	11.4	7.5	7.8
<b>Mozambique</b>	12.3	9.2	6.5	7.9	8.4	8.0	8.7

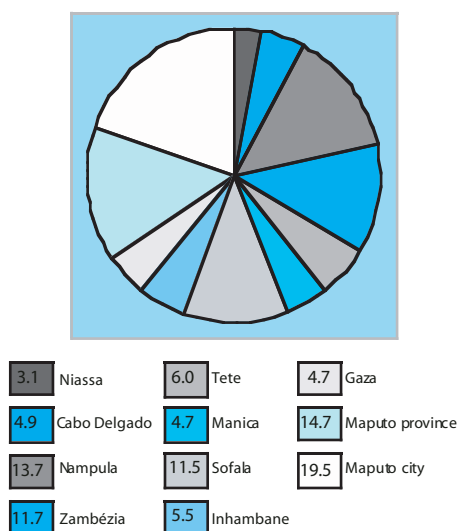
\* Preliminary estimates

<sup>2</sup> Note that the base year of the estimates presented in this report has changed from 1996 to 2005. As a result, the estimates will differ from those of previous NHDR and they are not, therefore, directly comparable. The estimates for 2006 are preliminaries and therefore subject to revision in the next publications.

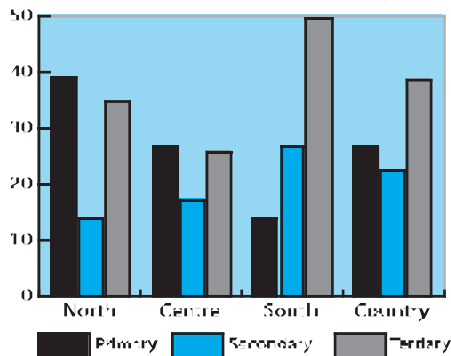
**Graph 2.8** Average contribution to GDP by regions at constant prices, 2001-2006



**Graph 2.9** Average contribution to GDP by provinces, 2001-2006



**Graph 2.10** Contribution of the sectors to GDP, 2006



Province lead the south region with an average contribution in the total GDP of 19.4% and 14.7% respectively. The remaining provinces contribute between 3.1% (Niassa) and 6.0% (Tete). The contribution of each province is shown in Graph 2.9.

Aside from the information depicted in Graph 2.9, the contribution of each region and province to the country's economy is influenced by the respective real growth rates.

The southern region shows the highest average growth rate of the three regions of Mozambique, with 9.3%, which is 0.6% above the national average. The provinces of Inhambane and Maputo contributed with rates of average annual growth of 11.0% and 12.0% respectively. The northern and central zones also had noteworthy growth rates, of 8.7% and 8.0% respectively, even though the latter was below the national average.

Among the sectors which contributed most to the real average growth rate of 9.3% in the southern zone in the period under analysis, the construction and manufacturing industries stand out, thanks to the contribution of the Pande/Temane natural gas and Mozal II aluminium smelter mega-projects.

From the perspective of showing the degree of specialization, estimates allow us to note that agriculture remains the activity with the greatest weight in the economy, both at national and provincial levels. But its share is declining, in favour of other sectors, mainly manufacturing industry and trade, thanks to the contribution of the mega-projects, which already have a visible impact on the manufacturing industry and, as from 2004, on the extractive industry.

At regional level, Graph 2.10 shows the dominance of the primary sector in the northern region with a contribution of about 39.0%, slightly higher than in the central region (35.0%), but three times higher than the contribution of this sector to the GDP of the southern zone (13.8%). The south is mostly dominated by the tertiary sector with a contribution that is 10.9% higher than the national average, and almost 2 times the contribution of this sector in the central region.

#### GDP per capita by province

In terms of real GDP per capita, Maputo City shows average figures that are three times higher than the national average, and four times higher than the GDP per capita of Niassa, Cabo Delgado, Nampula, Zambezia, Manica and Gaza. As Graph 2.11 shows,



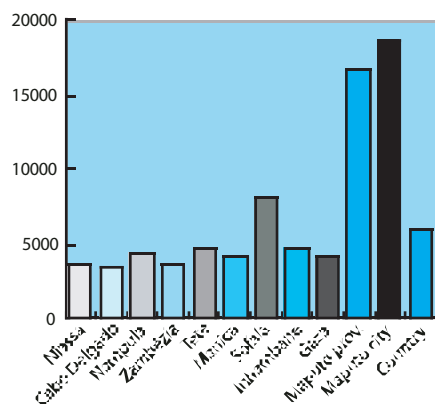
**Table 2.4** Contribution of industries within the sectors in 2006

Sectors	North	Centre	South	Country
<b>Primary</b>	35.5	27.0	13.8	26.6
Agriculture	35.1	24.6	11.7	23.8
Fishing	3.1	1.6	0.9	1.8
<b>Secondary</b>	13.8	17.2	27.0	22.5
Industry	8.0	7.8	20.2	14.0
Electricity	3.9	8.6	1.6	5.3
<b>Tertiary</b>	35.0	25.7	49.3	38.4
Trade	9.7	6.8	13.2	10.9
Transport and Communications	7.2	6.3	10.3	9.3

2006, only two of them (Cabo Delgado and Zambezia) had growth rates higher than the national average, with Zambezia showing the greatest rates of growth for both HDI and GDI (34% and 34.5% respectively). Graph 2.12 shows the evolution of the cumulative growth rates of the HDI and the GDI of the 11 administrative regions in the period 2001-2006.

A further note worth stressing is the fact that the two provinces whose rates of growth, both of the HDI and of the GDI, are above the national average, are located in the central and northern zones. Particular note should be taken of Zambezia in the centre, with growth rates of 34% and 34.5% respectively, and of Cabo Delgado in the north with 27.5% and 29.2%. This growth is attributed to efforts made in education (both public and private), in the expansion of access to education and improved quality of schooling.

**Graph 2.11** Average real per capita GDP by provinces and the country, 2001-2006



Maputo province and Sofala province also show real per capita GDP that is higher than the national average – but Maputo Province has a per capita GDP that is twice as high as that of Sofala.

### Evolution of the HDI and the GDI

The data from the period under analysis allow us to note that the level of human development, both national and in the administrative regions, is continuing to rise gradually, as a result of economic and social performance, which has been expressed in the positive evolution of both the HDI and the GDI (Table 2.5).

In fact, the national HDI grew by about 17.3% between 2001 and 2006. Over the same period, the GDI experienced parallel behaviour, with growth of about 22.5%. Though all provinces underwent noteworthy growth rates in their GDIs between 2001 and

**Graph 2.12** Accumulated variation of the HDI and GDI, 2001-2006

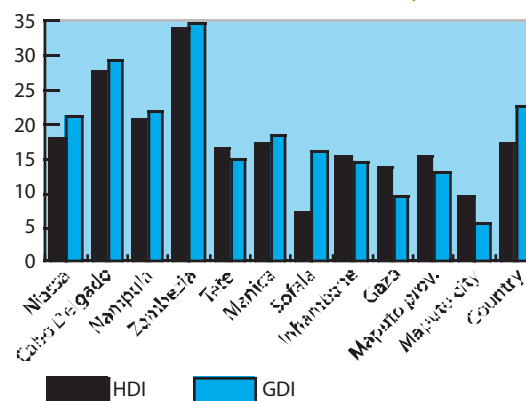


Table 2.5

HDI and GDI growth rates, 2001-2006

Region/Province	Growth Rate (%) HDI							Growth Rate (%) GDI						
	2001	2002	2003	2004	2005	2006	Cumulative	2001	2002	2003	2004	2005	2006	Cumulative
<b>North</b>	4.1	3.9	2.4	2.8	4.0	2.1	20.9	3.7	5.5	2.5	3.4	3.0	2.6	22.7
Niassa	4.4	2.6	1.3	4.1	2.5	2.0	18.0	3.6	3.8	2.5	4.7	2.6	2.5	21.3
Cabo Delgado	4.6	5.7	4.5	2.9	5.0	2.2	27.5	4.5	9.3	3.4	3.5	2.9	2.7	29.2
Nampula	4.1	3.9	2.1	2.6	4.2	2.3	20.8	3.9	4.3	2.3	3.3	3.5	2.7	21.8
<b>Centre</b>	4.2	4.0	2.5	2.5	2.7	2.0	19.3	1.7	4.0	3.4	3.2	2.1	2.6	18.4
Zambézia	6.7	9.2	6.8	2.2	3.1	2.2	34.0	6.6	11.7	4.5	2.7	2.6	2.6	34.5
Tete	3.3	2.4	1.5	3.5	2.2	2.4	16.3	0.2	1.8	2.3	4.2	2.6	2.9	14.8
Manica	3.9	3.3	1.9	2.5	2.2	2.1	17.0	3.3	4.3	2.0	3.1	1.7	2.8	18.5
Sofala	-2.9	2.4	0.6	2.5	3.1	1.6	7.3	2.8	3.5	1.9	3.2	1.8	2.1	16.2
<b>South</b>	3.2	1.7	0.4	2.1	3.1	1.5	12.8	5.4	2.5	0.9	2.3	1.3	0.9	13.8
Inhambane	2.8	1.9	0.2	3.3	4.0	1.9	15.1	1.1	4.0	1.3	3.5	2.2	1.7	14.6
Gaza	3.7	1.9	1.0	2.0	2.8	1.7	13.7	1.9	0.9	1.4	2.2	1.4	1.2	9.3
Maputo Prov.	4.4	1.3	1.8	1.9	3.0	1.9	15.2	3.7	3.8	0.9	2.6	0.6	0.8	13.0
Maputo City	1.8	1.2	0.3	1.6	3.2	1.0	9.4	0.1	1.8	0.5	1.5	1.2	0.3	5.5
<b>Mozambique</b>	4.4	3.9	1.6	2.7	2.0	1.8	17.3	5.1	3.7	2.2	4.0	2.7	2.9	22.5

## Chapter 3

# Roots of the Pandemic and its Determining Factors in Mozambique

### Brief historical summary

The first diagnosed case of HIV and AIDS in Mozambique occurred in 1986, and the person in question was a foreign citizen resident in the country.

During 1987 the first five clinical cases in Mozambican citizens were notified. In the following period, up to 1989, the number of cases doubled every year, and in July 1989 reached the total of 41. The age group worst hit was from 20 to 29 years old, as happens in other parts of the world. Children also featured significantly, with 5 cases in this total. At this time, it was known that these figures were far from expressing the real situation in the country.

To the north and west, Mozambique borders on six countries, including some of those most affected by the pandemic, with current HIV prevalence rates equal to or higher than the Mozambican national average, which, as mentioned earlier, was around 16.3% in 2004. In the 1990s, when the epidemic was in its incipient phase in Mozambique, these countries had the highest prevalence rates in the region.

Almost immediately after independence in 1975 until 1992, Mozambique lived through a war that caused mass displacement of entire populations in search of refuge and safety, both in other parts of the country, and in neighbouring countries. These population displacements ensured that the disease spread very rapidly, particularly in central Mozambique.

Resulting from the General Peace Agreement, new population movements took place, this time of people returning to the country and their zones of origin. The first consequence of this was to make even more visible the image of generalized absolute poverty. In this period, the priority to guarantee the success of peace was given to population resettlement, to demining the territory, and to providing food and basic health care for millions of people who had formerly been internally displaced persons and refugees. Meanwhile, the indices of the spread of HIV and AIDS were growing very rapidly, but as yet without surveillance systems and appropriate and directed prevention campaigns.

Along the national frontiers there is also intensive local and cross-border trade. Along the trading corridors that connect the countries of the hinterland to the Mozambican ports of Beira, Nacala and Maputo, on the Indian Ocean, there are major movements of people and of trade. This movement is supported by rail and road networks that bear the most intensive traffic in the country. In some places, such as the area connecting Tete and Manica provinces, at the times of peak activity there can be 1,000 trucks and cars a day.

While recognising their weight in the initial phase of the epidemic in Mozambique, the factors portrayed above are not sufficient in themselves to explain the rapidity with which the HIV and AIDS epidemic has grown, and has reached the current prevalence and spread, with a trend to worsen. Other factors that favour the rapid expansion of the epidemic should be studied in order to identify the most effective ways of containing and controlling the disease.

The country's low health coverage should be put in a central position; according to information from the Ministry of Health, the National Health Service offers care to between 40-50% of the population. Which means that the other 50%, even when they are able to identify a health problem, cannot go to any health unit, because one does not exist near them.

### Accessibility of health services and the weight of traditional medicine

Accessibility to health services includes aspects of the structure of health services or health facilities that enhance the ability of people to reach a health care practitioner, in terms of location, time, cost and ease of approach (WHO).

Accessibility cannot therefore be seen solely in physical terms, but also in terms of the existence of qualified staff capable of making diagnoses and giving the correct treatment, and of identifying and

referring clinically complex cases to a nearby health unit that has better human, technical and treatment resources.

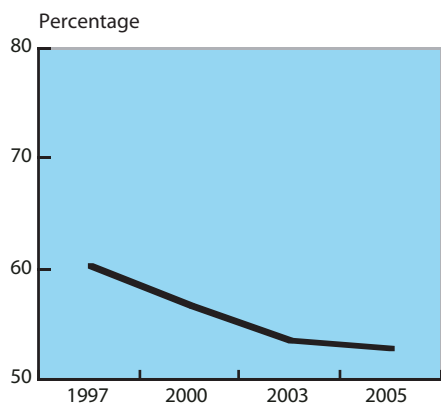
This transfer is only possible when there are material resources, transport and roads, which are still scarce, and are in a generally precarious condition throughout the country.

Strong and diversified beliefs and habits among the rural communities have also contributed to health units not being the first, let alone the only, option to deal with illness. In fact, the majority of Mozambicans first seek out the traditional medicine system. This system shares common explanatory models for the health/sickness dualism, which often do not fall within the scientific/biological models expressed in terms such as Virus, Immune Deficiency, Syndrome, Infection, HIV and AIDS.

A further relevant factor in this analysis is the high degree of illiteracy. Indeed, illiteracy greatly reduces the possibility of the public taking advantage of educational and information opportunities in order to use health services better. Despite an 11% reduction in a three-year period (1999-2003), the illiteracy rate remains slightly above 50%, with greater incidence among women.

Furthermore, in a country characterised by broad linguistic diversity, the lack of mastery of Portuguese as the official language among potential users of the health facility and the lack of health staff who speak local languages limits open and effective communication between health workers and the community they serve, and this is a huge constraint.

**Graph 3.1** Illiteracy rate



Source: General Population and Housing Census (INE, Census 97) 1997  
 Questionnaire of Basic Indicators of Well-Being (QUIBB), 2000-2001  
 Household Survey on the Family Budget (IAF) 2002-2003

### Conformism and loss of confidence

Conformism, loss of confidence, hope and self-esteem, and the habit of living with fatalities, are attitudes that have very serious consequences in people's lives. Fatalism leads many people to neglect adopting systematic and effective measures of prevention, in a long-term perspective for their lives, against the pressure of urgent and serious problems to be solved at once. This is the context in which we should look at commercial sex, seen as a means of survival. The need for immediate subsistence (money to buy food) is prioritised above the danger of death from AIDS in the long term.

At the same time, frequent illnesses and deaths in the communities also ensure that people begin to look at deaths from avoidable diseases as a matter of fate. Attending one funeral after another of people they know also ends up diminishing the strong emotional charge that should result from such events.

This behaviour has two explanations. One is the reflex of a defence mechanism in which, unconsciously, people protect themselves from suffering. A further explanation lies in an undesirable state of spirit, in which death appears as a banal phenomenon, a matter of fate, with which one can live from day to day without provoking serious concern. The attempts, very common in communities, to try to connect death to supernatural forces also ends up weakening the struggle against HIV and AIDS, particularly in the countryside.

### For a stronger civic movement

In many countries affected by AIDS, there have been very strong movements of solidarity among people living with HIV and AIDS, regardless of the social strata, race, religious creed, and sexual or political orientation of the persons in question. The entire world is currently benefiting from the work of these people living with HIV and AIDS, and who always demanded that societies and governments should provide them with better opportunities of access to means of prevention and treatment. This struggle in part galvanised access to the medicines and other rights which are now recognised and granted.

In the Mozambican experience, just a very few people have had the courage to appear in public and declare that they are HIV-positive, bearing witness to how they have been living positively with HIV and AIDS. Even so, they are generally unknown people, or people who are not necessarily models for most of

**Box 3.1**

Confidentiality around HIV and AIDS has become a theme for sharp debates that divide opinions. From the start, confidentiality is among the series of norms proper to the medical ethics followed by health-care professionals.

Faced with a specific situation of positive diagnosis of HIV in an individual in the socio-economic, political and cultural conditions that currently characterise Mozambique, is it legitimate to think about authorising that knowledge of this fact be placed in the public domain, or should secrecy be pre-eminent?

At present, in the context of health care for people who test positive for HIV, not a few voices defend lifting the confidentiality and secrecy that surround AIDS. The reason for this position is that if the result is communicated publicly, then society is protected, particularly the partners with whom the individual in question is intimate. It is also added that such a measure would gradually eliminate stigma and discrimination, dissipating the fear of breaking the silence and demystifying the disease.

This is indeed a matter that involves several complex considerations. These cross various areas, from that of human rights, to ethical and moral questions, and to some extent flows into juridico-legal questions, not forgetting the essence of medical ethics, which from the start advises medical secrecy as an extremely important right of patients and an ethical obligation on the doctor (Rueff, 2004).

But why should this question be a burning issue in the sphere of AIDS? It is because this is a disease, which, in the case of Mozambique, is mostly spread through unprotected sexual relations between individuals at least one of whom is HIV-positive. HIV-positive status among adults has generalised negative connotations. The social interpretation is that this status results from misconduct, promiscuity, etc.

Since sexuality is a social construct still surrounded by taboos, it is to be expected that HIV-positive status will be linked to stigma and discrimination, two evils that are an assault on the preservation of the life of someone who already has to resist the virus inside his or her body. Such people are thrust towards “a social death that precedes physical death” (Sontag, 1998).

The right to life is primary, and under these circumstances it precedes all other rights that an individual may possess. This being the case, when circumstances lead to the hypothesis of contaminating third parties, thus endangering their health, then protecting them from this danger becomes an imperative and moral duty of those who know the truth.

But since there is no consensus on the matter, it is important to look into the other aspects of this question.

**Voluntary disclosure**

It is important to mention that to a large extent what contributes to the secrecy surrounding HIV and AIDS infection is the generalized ostracism that the individual in question may eventually suffer. Discrimination because of disease is not a new phenomenon and is not limited to HIV and AIDS. Indeed, in the history of the diseases that have most marked humanity, there are records of discriminatory behaviour that accompanied their evolution and the way in which patients were viewed and treated. Leprosy and tuberculosis are two of the clearest and closest cases; at times, the impact they caused reached the scale of generalized alarm, because of ignorance about how to

**Confidentiality and AIDS: An open debate**

face the disease and prevent its spread. This knowledge came later.

As for HIV and AIDS, since it was diagnosed and typified in 1981, the imperative of not unleashing generalised alarm, that might lead to panic and social instability, has accompanied the positions not only of scientists, but also of politicians and defenders of human rights. It is important to mention that this is a pandemic with special characteristics and still without a cure.

Thus in the early years following the scientific diagnosis and typification of AIDS, there was lobbying to ensure respect for certain principles that would, on the one hand, contribute to reducing the possible panic that might be generated within the community in general, and, on the other, to encourage individuals to take the test of their own free will, and to make the much-mentioned break in the silence.

It is worth adding that the fact that the first HIV tests took place in individuals belonging to marginalised groups may, to some extent, have contributed to strengthening the secrecy which since then has characterised the treatment of this public health problem (Glum, 2002). Indeed, the first expressions of what would come to be known as Acquired Immune Deficiency Syndrome (AIDS) were found among groups of homosexuals and drug users who injected. They already suffered stigmatisation and discrimination because of their social and, particularly, sexual behaviour, regarded as a perversion.

Thus the principles that shaped the lobbying agenda for observing the rights of the individual in the HIV and AIDS context were summarised into what are today the main human rights reference points, particularly for people living with AIDS, namely:

- Anonymous and confidential testing;
- Voluntary testing, preceded by counselling;
- Special rights at the workplaces;
- Banning of compulsory tests; and
- Condemnation of all forms of discrimination and stigma caused by HIV and AIDS.

The social expectations of these principles was that implementing them might really lead to generalised awareness, through prevention and counselling, and consequently to taking the voluntary test, and particularly to publicly breaking the silence in order to repress the taboos that surround the infection, and the stigma that accompanies it. This expectation, although it is beginning to gain ground, has yet to be fully realised.

Contrary to this expectation, citizens’ voices are beginning to be heard, publicly questioning the confidentiality surrounding HIV and AIDS, and asking why the results of the individuals who test positively under medical examination are not publicly announced. It is wondered: is not this procedure one which, far from controlling the virus and the disease, helps to spread them?

Meanwhile, there are not a few cases of couples where one of the partners, although knowing that he or she is HIV-positive, keeps this secret and continues to have unprotected sexual relations with his/her partner.

Thus, the question of HIV and AIDS confidentiality, apart from dealing with matters of a juridical and legal nature, is above all an ethical and moral issue. It seems to us that, in the case men-

### Box 3.1 continued

tioned above, where silence about a situation which endangers the life of somebody else and which, in the event of pregnancy, may also endanger the health of the unborn child, the question cannot be limited to the patient-doctor relation, or to the rigid context of confidentiality. To us it seems a matter that merits wider treatment, at least at the level of the family, and of the circles that have emotional and amorous relations with the person concerned.

The HIV and AIDS situation is generalised in Africa, where the main route of transmission is unprotected sexual relations in which one partner is HIV-positive and the other is not. Its preva-

lence is spread across all age groups, but particularly among those aged 15 to 49, regarded as the group of sexually active people.

On the other hand, as mentioned in some studies from other parts of the world, the violation of secrecy runs the risk of discrimination, and may lead to abandoning the health system – because it is not respecting the principle of confidence and secrecy (Rueff, 2004). It is general knowledge in the literature on sexual and reproductive health that marginalized and ostracized groups of citizens rarely seek health services or medical advice (United Nations, 2005).

those who know them. This fact has reduced the impact of their testimony.

Fear of stigma and discrimination are other important factors that have a negative influence on Mozambican attitudes, preventing them from seeing HIV and AIDS as a disease, like many other chronic diseases, and which should be treated as such. These attitudes show a lack of preparation in society to accept that HIV and AIDS are a national problem that affects everybody.

#### Biological determinants of the pandemic

The biological determinants or factors that influence the transmission of HIV in Mozambique are partly similar to those already identified in other countries. On this theme there exists internally a large and varied amount of documentation, amongst which we may mention the First HIV and AIDS Strategic Plan for 2000-2002, and the Second HIV and AIDS Strategic Plan 2005-2009, drawn up by the National AIDS Council (CNCS).

This work describes, with recognised scientific rigour, sex between different generations, casual unprotected sexual activity, multiple sexual partners or frequent change of sexual partners, sexually transmitted infections, the start of sexual activity at an early age, particularly for girls, as some of the factors involved. However, there are other factors not frequently discussed and relate to certain practices which cause lesions on the skin of the genitals. The use of plants and various other substances to contract the vagina during sex, or the rituals to “purify” widows following the death of their husbands are some of the factors identified that facilitate HIV transmission.

Heterosexual relations remain the most common form of transmitting HIV in the country. More than 90% of HIV infections occur through sexual relations between an infected individual and one who is not

infected. It does not necessarily have to be sexual activity with many partners. However, having several concurrent sexual partners increases the likelihood of infection and re-infection by HIV and other sexually transmitted diseases. This pattern is most common among sex workers who have a very high rate of changing partners.

#### Sexually transmitted infections, stigma and gender inequality

Several studies have shown that Sexually Transmitted Infections (STI) are an important factor in HIV transmission. The STIs inflame the genitals, which facilitate HIV infection, particularly among women. The anatomical configuration of the female genitalia provides an extensive surface for contact with infectious agents, which makes women more vulnerable to STIs and to the risk of HIV infection. The complexity of their anatomical structure means that many sexually transmitted infections are not visible, and occur without symptoms, which makes it difficult to diagnose them.

The early start to sexual activity facilitates the sexual transmission of HIV, particularly among younger women. The fact that their genital organs are still developing makes them more vulnerable to the transmission of disease.

A further factor to bear in mind is that the surrounding, social, economic and political environment, in which people interact, also has a determinant role in the pace of spread of the infection. Involved in this are factors such as poverty, discrimination, oppression, illiteracy, mobility or migration of people, the status of women, levels of urbanisation, levels of violence, access to health care, and the distribution of wealth, among others.

Among the factors mentioned above, poverty, with an index in Mozambique of around 54% (INE,

2004), deserves special mention since it contributes to vulnerability among individuals, households and communities, and it heavily influences the spread of HIV. In turn, the impacts of the epidemic severely affect the environments less endowed with economic and social resources, worsening poverty, weakening the economic and food security systems and increasing the number of poor people at risk of contracting the infection.

Indeed, the determinant variables of poverty, such as acute hunger, malnutrition, low level of schooling, poor access to information, and particularly to health services, among others, are associated with the conditions that increase social vulnerability to the epidemic.

Women, particularly in the countryside, are still at a strong disadvantage in the economic, legal, cultural and social spheres, which increases their vulnerability to HIV infection, and to the epidemic's impact. There are still a large number of girls of school age without access to education and women have few, if any, property rights or security of land tenure, or even inheritance rights, given the rule of the patriarchal structure that influences customary law, used in many communities to settle disputes locally.

Meanwhile, many of these women have been exposed to the risk of sexual assault or rape or other forms of violence. Coercive sex, for instance, expressed through non-consensual sexual activity, has been mentioned as a common practice resting on unequal power relations between men and women. This is an act that happens both domestically and outside the home, and the victims are children, youths and adult women. All forms of coercive sex can significantly increase the likelihood of HIV transmission.

The groups at high risk of HIV infection are generally those who suffer from stigma and discrimination. Stigma increases vulnerability in several ways. Afraid of being discriminated against, individuals at high risk of contracting the infection decline to seek information concerned with their sexual and reproductive health or other forms of disease prevention.

#### **Migration, urbanisation, commercial sex, and the prison population**

A further factor contributing to the rapid spread of HIV in Mozambique is the high level of mobility. The continual degradation of living conditions in the countryside, where young people and adults alike

have no work, and the decline in agricultural yields (due to constant climatic changes) have been factors encouraging migration from the countryside to the cities, particularly after the end of the war in 1992.

Concentrated in disorganised urban areas, where the traditional degraded neighbourhoods are spreading, these migrants increase, and rapidly, the risks of spread of the HIV virus. Generally, people emigrate from a rural area of low HIV prevalence to urban centres, where the prevalence rates are high and risky behaviour more frequent.

Furthermore, urbanisation can favour inter-personal contacts and encourage the search for unconventional alternatives for survival. The option of many women for commercial sex has been common in the urban fabric. The fact that right from the start the sexual transaction occurs in a negotiating framework that favours the man means that it is he who determines the nature and the conditions under which the act should occur. The women are potentially more vulnerable to infection.

Additionally, the rate of change of partners, the competing partners, the sexual practices, and the use or not of condoms during the sex act are factors to take into account in determining the levels of vulnerability or exposure to infection under these conditions.

As for the prisons, they are generally places where infectious diseases such as HIV and AIDS, tuberculosis and hepatitis are spread. In general, the prison population comes from the poorest population segments of society, who are at a high risk of HIV infection. The rates of infection among the prison population are generally higher than among the population at large.

#### **Vulnerability and vulnerable groups to the pandemic**

In dealing with the content of this part, two concepts deserve attention, namely that of susceptibility and that of vulnerability. Susceptibility to the pandemic is characterised by a series of factors that determines the rate at which the disease spreads. It is thus easy to explain in the Mozambican case the reasons why areas contiguous to the great transit systems – the development corridors – have relatively high prevalence rates. They are in fact converted into “inter-cultural” poles where people from various parts of the country and from neighbouring states cross paths. Commercial sex is common in these social interactions.

It's worthwhile to note, however, that this concept tends to gain a new dimension every time there is a generalised epidemic (average sero-prevalence above 5%). A most common form with which the epidemic propagates itself is the establishment of relations with multiple and competing partners. This means that certain people simultaneously keep going a web of generally permanent sexual partners apart from the official partner through wedding ties.

At a time when multiple sexual partners driven by a tenacious search for survival groups together different social strata, brings together sexually different ages and throws social mores and indecent exposure to the dustbin it is natural that susceptibility to infection has gained new forms, with hardly any difference in indicating between corridor areas, hinterland and urban areas, where the practice abounds.

On the other hand, vulnerability describes certain characteristics of society, and of social and economic institutions or processes, which make it probable that the morbidity and mortality associated with the pandemic will have negative impacts.

Vulnerability increases in social strata severely affected by poverty, by natural disasters, or inversely, when factors that drive and stimulate the national economy take place in areas of extreme poverty, and where commercial sex is common, as is sex between people of different ages, generally older men with girls in the flower of their adolescence or youth.

These two concepts explain to us why not all the members of a community will be affected by the epidemic in the same way. The effects will have differential repercussions according to the levels of poverty and wealth among households, social cohesion, the

level of development of social capital, and also according to the availability of health information, and a series of services providing care, both of public origin and from civil society.

In the period following the discovery of the disease, the perception of vulnerabilities and susceptibilities was aimed at specific risk groups. This may be explained by the fact that HIV-positive diagnoses had been common among homosexual men and people who had received blood transfusions. Currently, the epidemic has taken on wider dimensions, and is effectively generalized among almost all the age pyramids. This generalization shows that the disease is among us, and requires cross-cutting interventions in all population segments.

Despite this fact, the concept of vulnerable groups which is being applied to the Mozambican case, according to the situation analysis preceding the formulation of the National Strategy for the Struggle against HIV and AIDS, is expressed in groups of individuals who, by their characteristics, show a potential to contract, transmit, or suffer directly or indirectly the consequences of HIV and AIDS.

This concept aggregates sex workers, long distance truck drivers, miners and migrant workers in general, workers in brigades away from home, soldiers in barracks or military units, commercial travellers, certain professional categories connected to the entertainment and tourism industries, the prison population, informal vendors and workers on their stalls, women in polygamous families, wives of miners and truck drivers, widows and women in general in the framework of traditional society, PLWHA, OVCs, and street children (PEN 2005-09).



## Chapter 4

# The Demographic Impact of HIV and AIDS in Mozambique

### Epidemiological surveillance

In Mozambique, there are two forms of notification of Sexually Transmitted Infections (STI) and Acquired Immune Deficiency Syndrome (AIDS), namely: passive (in health units), and active (Sentinel Surveillance of HIV in Pregnant Women) (MISAU-PNC STD/AIDS, 2001).

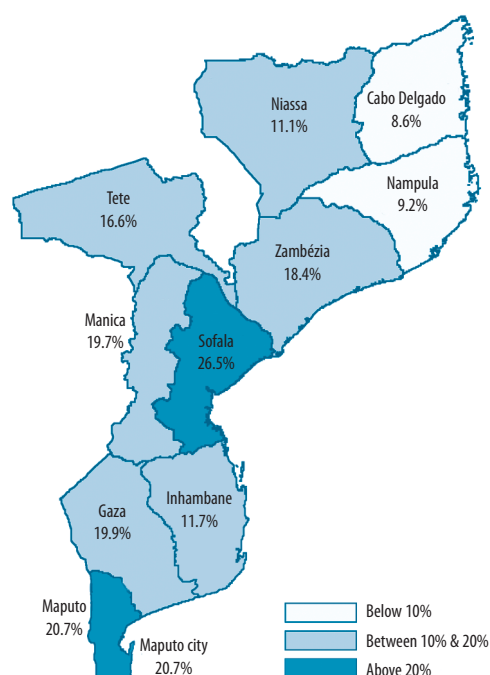
In the passive form, all health units should notify, every month, cases of STI/AIDS to district level. The district notifies to the provincial level, which finally reports to the PNC-STD/AIDS in Maputo. (Barreto et al, 2002). However, comparing the total number of AIDS cases notified this way, with the total expected, according to estimates obtained through the active form, one notes that the system of passive notification catches less than 20% of the real number of AIDS cases.

For this reason, for programmatic purposes, the prevalence estimates obtained through the active means are used. This data is gathered from pregnant women who present themselves consecutively for their first ante-natal consultation. These rates are considered as representative of the adult population aged 15-49, and are thus used as a basis to estimate the provincial and national HIV prevalence rates, and the demographic impact of HIV and AIDS on the country.

In the 2001, 2002 and 2004 rounds, the Epidemiological Surveillance (EV) system operated with 36 sentinel sites. Table 4.1 and Map 4.1 show the evolution of the provincial, regional and national weighted HIV prevalence rates over the period 2001-2004. As can be observed, in general the southern and northern regions show a rising trend of the epidemic, although differences may be noted in the pace of growth between the various provinces. In the south the sharpest growth was observed in Maputo city and province; the weighted rate in Inhambane also grew, due to the increase

Map 4.1

HIV prevalence rate 2004, 15-49 years



Source: Report on revision of the HIV epidemiological surveillance data-round, 2004 (INE/MISAU)

Table 4.1

Comparison of provincial, regional and national weighted HIV prevalence rates, 2001-2004 (%)

Province	2001	2002	2004	Region	2001	2002	2004
Maputo city	15.5	17.3	20.7	South	14.4	14.8	18.1
Maputo province	14.9	17.4	20.7				
Gaza	19.4	16.4	19.9				
Inhambane	7.9	8.6	11.7	Centre	16.8	16.7	20.4
Zambézia	15.4	12.5	18.4				
Sofala	18.7	26.5	26.5				
Manica	18.8	19.0	19.7				
Tete	16.7	14.2	16.6	North	6.8	8.4	9.3
Niassa	5.9	11.1	11.1				
Nampula	7.9	8.1	9.2				
Cabo Delgado	5.0	7.5	8.6				
National					13.0	13.6	16.2

observed in Maxixe. In the northern region, the provinces with the sharpest growth were Nampula and Cabo Delgado.

Sofala province has the highest percentage of HIV infections. In this province, HIV infects one in four people aged between 14 and 49. In Inhambane, Cabo Delgado and Nampula the situation is at its least serious. In these provinces the virus that causes AIDS infects less than one person in ten.

#### HIV prevalence rate among the adult population (15- 49 years)

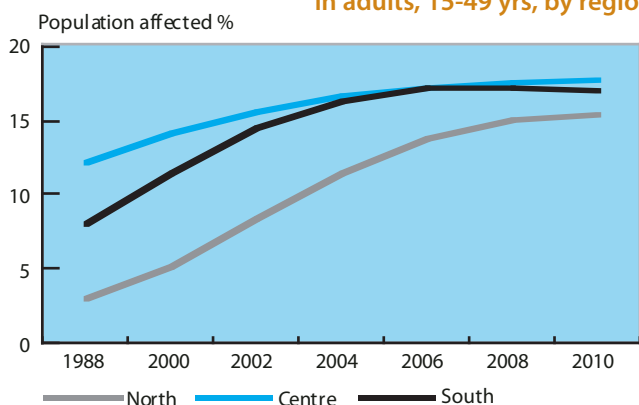
It is estimated that in 2004 there were about 1.5 million people living with HIV and AIDS in Mozambique, 60% of them women, and the remaining 40%, men.

Projections of the evolution of the HIV and AIDS epidemic in Mozambique indicate that, if the historic pattern of evolution is maintained, without immediate and effective intervention, then the epidemic will continue to grow until 2009, when it will be stabilized at around 17%, as a result of reaching a balance between HIV infections and mortality from AIDS; that is, when the number of deaths per day is equal to the number of new daily infections.

At regional level,<sup>1</sup> the projections show different patterns of growth, as illustrated in Graph 4.1

As shown in Graph 4.1, the central region as a whole has been experiencing a rapid growth in the epidemic, and it is forecast that as from 2005 or 2006 it will reach the phase of maturity or stability at around 17 or 18%, particularly in Tete province, if effective measures to prevent the transmission of HIV in this region are not implemented and/or strengthened.

**Graph 4.1** Projection of HIV prevalence in adults, 15-49 yrs, by regions



<sup>1</sup> Because of scarcity of data on the epidemic's historical evolution, and because it has not yet reached its mature phase in most of the country's provinces, provincial projections would produce results that are not very reliable. For this reason, the projections are made by region, namely the South (Maputo Province and City, Gaza and Inhambane), the Centre (Sofala, Manica, Tete and Zambézia) and finally the North (Nampula, Cabo Delgado and Niassa).

A more detailed analysis of the evolution of prevalence at the Sentinel Sites of this region suggests a mosaic of trends in the pandemic, with some provinces showing a pattern compatible with the mature phase of the epidemic, some requiring more time for observation, and finally one, Zambezia, where the disease still seems to be growing sharply.

Finally, the northern region, with little historical information prior to the year 2000, shows the lowest level of prevalence in the country. But likewise, unless effective preventive measures are implemented, it is forecast that the epidemic in this region will continue to grow rapidly, until around 2009-2010, when it will tend to reach its mature phase at about 15%. It should be noted that the projections for prevalence in this region could undergo variations in the future as more information becomes available, though it is expected that in the coming years they will remain lower than those for the south and centre.

In conclusion, the projections presented here are only valid in the current context.

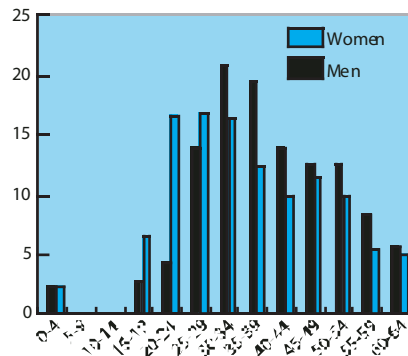
As more data are collected over the years, and should the preventive and therapeutic (ARV) measures be effectively implemented, the projections for the pandemic's evolution could undergo significant change in the coming years. For example, in some provinces, particularly in the north and in Inhambane, the opportunity is still there to prevent the spread of the epidemic from reaching the same speed as observed in most of the provinces south of the Zambezi River.

It is also possible to "anticipate" the mature phases of some provincial micro-epidemics, so that they may be reached at levels lower than those forecast for most of the provinces south of the Zambezi.

#### Estimate of HIV prevalence by sex and age

As may be seen from Graph 4.2, most children who become infected in the peri-natal period die before they are 5 years old, and few survive to their 10th birthday. More than half of the children living with HIV and AIDS in Mozambique are estimated to die before their second birthday. After this age, there opens the so-called "window of hope", in which children are seen to be virtually free of infection until the age of 14.

**Graph 4.2 HIV prevalence by age groups and sex, 2004**



As from the 15-19 year age group, the time when people begin sexual activity, (Wanderer & Radel, 1986) HIV prevalence begins to rise rapidly in both sexes, particularly among women (Graph 4.2). Indeed, as from this phase, the differences in HIV prevalence rates between the two sexes are so marked, that the rate among girls reaches about three times that among boys of the same age. This trend to higher prevalence rates among women lasts to the age of 30, when it is reversed (as a result of the higher mortality from AIDS among the female population, and possibly an increase in sexual activity among men of this age). From then on, the higher prevalence rates are among men.

There may be several explanations for this pattern of acquiring the infection, including:

- the high speed at which sperm is injected into the uterus (45 kms an hour, through the external orifice of the neck of the uterus);
- the mucous membrane of which is less resistant to infection than that of the vagina;
- the woman's greater length of time in contact with the sexual fluids of her partner, (semen deposited in the vagina);
- the difficulty of diagnosing and treating some STIs in women; as well as,
- the rather earlier onset of sexual activity among girls, particularly in the Mozambican countryside, worsened by the fact that their partners are usually several years older (as shall be seen below) with levels of HIV infection that are already high.

It should be mentioned that this pattern of the distribution of HIV and AIDS prevalence by sex and age is in perfect accordance with the pattern of dis-

tribution of confirmed cases of AIDS, by sex and age, generated by the AIDS notification system in the country's health units (HIV/AIDS Multi Sector Technical Unit, 2002).

The absence of AIDS cases in the 10-14 year age group, shown in this graph, is explained by the simple fact that the adolescents who contract the infection in this age group take time to become AIDS cases.

This gender and age pattern in acquiring HIV infection, which seems decisive for the distribution of HIV and AIDS and its consequences at later ages, suggests that strategies to control the endemic should not neglect the age and sex factor, and should include concrete recommendations tending to encourage the adoption of safe sexual practices in the first sexual relationship and the subsequent period.

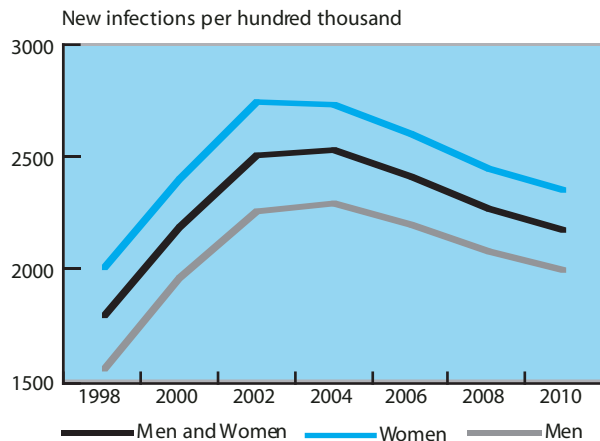
**Incidence of HIV infection in Mozambique**

Given the difficulty of measuring the HIV incidence in the population directly and easily, this measure has been estimated indirectly through the prevalence data.

The estimates of HIV incidence among adults show that this has remained stable at high levels, of about 500 new infections a day, since 2000 (MISAU-PEN of STI/AIDS 2004-2008). However, the evolution of incidence varies by province and region, age and sex.

Vertical transmission of HIV has been responsible for about 18% of these new daily infections. Again, the central provinces contribute more frequently to this form of transmission, with 60%, while the north and the south share the remaining 40% equally. Graph 4.3 shows that women have been consistently showing a higher incidence than men.

**Graph 4.3 HIV incidence in adults of 15-49 years, by sex, in each 100,000 inhabitants**



**Box 4.1**

**Estimates of HIV and AIDS prevalence: Epidemiological Surveillance versus Sero-prevalence Survey**

It has been 25 years since the HIV virus was reported as the cause of the AIDS disease.

Several countries affected by the AIDS pandemic have undertaken praiseworthy efforts to establish methods of gathering statistical information for the purposes mentioned above. As from the 1980s, many countries introduced epidemiological surveillance systems to gather HIV data among pregnant women. This method is based on the assumption that pregnant women are a sexually active, easily identified, accessible and stable population group. Thus HIV prevalence in the total population has been estimated based on data from this group.

Very recently, in order to complement the information obtained by the method mentioned above, population surveys (men, women and children) have also been used to estimate the level of HIV prevalence, through blood and/or saliva samples. Among the African countries that have already carried out this kind of survey are South Africa, Burkina Faso, Cameroon, Ghana, Kenya, Mali, Rwanda, Senegal, Tanzania, Uganda and Zambia.

**Methodology currently used in Mozambique**

The Ministry of Health has set up an HIV Epidemiological Surveillance system, through Sentinel Sites located in selected health units throughout the country. The system began in 1988 with just 4 sentinel sites located in urban areas. This number was gradually increased to include rural areas and strengthen the urban ones, so as to obtain increasingly representative prevalence rates. As from 2001, the gathering of data has been undertaken in 36 sentinel sites. The technical staff linked to the matter has recommended not expanding the number in future.

The data are gathered in a maximum period of 3 months. At each site 300 pregnant women aged between 15 and 49 who present themselves consecutively for their first ante-natal consultation are selected. As is practice in other countries, this information serves as the basis to estimate the HIV prevalence and the demographic impact of HIV and AIDS for the total population.

Calculating the provincial prevalence rates is undertaken by weighting the prevalence rate observed by the adult population (15-49 years) of the district, the regional rates by weighting the provincial rates by the adult population of the province; and the national rate by weighting the regional rates by the respective adult population of the region.

Only a quarter of the 144 districts in Mozambique possess Sentinel Sites. To obtain prevalence rates for all districts, some assumptions have been made:

- It is assumed that in the districts with Sentinel Sites, the prevalence rate observed is representative of the entire district;
- To each district without a Sentinel site is attributed, as a reference, the prevalence rate from another with a Sentinel site, in accordance with established criteria of similarity.

**Added value of the new methodology**

Although the results of HIV prevalence obtained via samples of pregnant women are broadly acceptable, there remain some uncertainties and scepticism. The first concerns the **representative** nature of the samples used, as pregnant women with a high level of education are generally under-represented. Furthermore the high rate of pregnancy and births among HIV-negative women, compared with HIV-positive ones, is another factor which generates some polemic.

The second, which flows from the first, concerns the criteria used to **extrapolate** from the HIV prevalence of the pregnant women to the total population and different geographical levels. It is thought that that the combination of these two limitations may introduce distortions into the estimates of the dynamic of the HIV epidemic among the population.

The introduction of the new methodology should not be seen as replacing the previous one, but as complementing it. The literature on the subject indicates that there is no single method that forecasts better estimates of HIV prevalence. The two methods under analysis are mutually complementary, since epidemiological surveillance seeks to estimate the **trend**, while population surveys contribute to improving the calculation of the **levels** of the epidemic. Thus, the results of the surveys are used to calibrate (adjust) those obtained from epidemiological surveillance.

To corroborate the above, recent studies show that HIV estimates based on results from the two methods in general show no significant differences.

Finally, the survey may also contribute to examining the determinants of regional differences in relating information on the sexual behaviour of the interviewees with HIV prevalence. For the survey to be relevant, in the current debate, its sample must be representative not only at national, but also at provincial level. Otherwise a rare opportunity to consolidate estimates on the prevalence of the epidemic will be wasted.

**Impact of HIV and AIDS on individuals and families**

Understanding the impact of the HIV and AIDS pandemic presupposes understanding the transformations in the socio-cultural and economic environment that it creates with its immediate effect in terms of human morbidity and mortality. Without the HIV and AIDS pandemic any country in southern Africa would currently display a different population structure and composition.

In Mozambique, the impact of the disease on individuals, families and communities has not been

well studied. References to work oriented towards better understanding this dynamic and directing the development of sectors in the light of the scenarios that the epidemic presents are limited to a few isolated cases of sector analyses of limited coverage. Thus generalizing from them is not recommended. What is certain, however, is that as the epidemic spreads longitudinally, it becomes difficult to predict, qualify or quantify what its impact might be.

Meanwhile, in low income countries, where poverty is the common denominator, studies have

shown a chain of impacts. According to these studies, the curve of infection is followed by the curve of sickness and death, which in turn determine the third curve – that of the impact (Benett and Whiteside, 2002). Individuals, by families and by communities, will feel the impact in different ways.

Regardless of the social responsibility of the individual, whether within the household or in other areas of civic life, the consequences of HIV infection will be immediate and severe, varying, however, in accordance with age and sex. The impact on the individual begins with his/her awareness of his/her HIV-positive status. However, if the individual obtains in due time appropriate counselling on how to organise his/her life as from that moment, the magnitude of the impact may be lessened.

In the absence of treatment, the infected individual may experience periods of illness, which is likely to reduce productivity and income, and to increase expenditures for travel costs, laboratory tests and medicines. Some individuals may, depending on their life style combined with good nutrition and other factors, hold back the disease and may even never experience it. However, anybody in this state will be faced with his/her health status and also, very frequently, with the resources he/she possesses.

Where there are support systems, or free medical care, it is expected that the individual impacts become less serious.

Access to free antiretroviral treatment, as is currently being called up in Mozambique, impacts on HIV infected individuals in two ways: it improves their life expectancy and quality of life; and at the same time it creates a lifelong dependence on antiretroviral medicines and the interventions related to it (regular medical check ups, for example).

The level of social cohesion, solidarity and experiences of the past with regard to epidemics or similar scenarios also influence the impacts on the individual. Where the level of tolerance and the balance of social togetherness are high, and also where acceptance of the disease and community mobilisation are sufficiently strong to provide support to those who are suffering, then levels of stigma and discrimination will tend to be low, thus minimizing the psychological pressure on the individual. The reverse will form the premise for worsening the consequences on the individual, and it is expected that the effect of these will surpass the individual dimension, and hit the family of which the individual is a member.

The impact of HIV and AIDS on the family household will be conditioned by a series of factors which determine the place of the infected individual within the household. If the epidemic mainly affects productive adults with a determinant influence in the household's economic and social affairs, with sickness or death, the consequences will become evident. These impacts will be expressed in the household's increased poverty, through the loss of income and consequent reduction in standards of nutrition, and evidently by children becoming orphans.

When children lose their parents and guardians at a tender age, this has consequences in several spheres of their lives. In the economic field, these consequences may be reflected in the loss of income to sustain the household, guaranteeing food, school attendance for the children, clothing and housing, among others. In the legal field, the consequences will be expressed in the context of inheritance based on customary systems.

These consequences may also be visible as regards the social construction of personality, in inculcating values and norms of civic life, assimilating which depends on individual reference points during childhood. HIV and AIDS also increases long term insecurity, arising from emotional suffering, deprivation and mourning.

Since in most families, the task of caring for sick family members is a woman's task, it is women in particular who bear the burden of caring for people with HIV or AIDS. When family members receive ART, the task shifts from taking care of a sick person to making sure that the children or male family members take their medication in the prescribed way and adhere to their treatment.

While with illness the household's economic reserves are called upon to pay for hospital care, with death these reserves are used for the funeral, which in the final analysis reduces the household's income. To mitigate the erosion of the household economy arising from the effects of HIV and AIDS, women and children will be called upon to redouble their efforts in domestic work. Often this compromises the future of the children, particularly the girls, since in the first instance they are called on to interrupt their schooling.

The risks of stigma, isolation and rejection are always present, depending however on the level of cohesion and solidarity within the community. The

immediate consequences of HIV and AIDS are those that speed up family instability arising from mutual accusations about the genesis of the infection within the household. It may to some extent undermine trust between family members and evolve to situations that run out of control, often leading to separations and with this to a greater vulnerability of the dependents.

### **The impact on key social and economic sectors**

HIV and AIDS has unpredictable implications for economic and social sectors. Indeed, this epidemic is mainly concentrated on the active population, from 15 to 49 years of age. It thus has a disproportionate weight on the age groups that play a key role in the development of the economy and of the country's social sectors. AIDS does not only cause sickness, incapacity or death of workers, and severe emotional and economic upheavals for families – it also increases the cost of doing business (UNAIDS, 1998).

Analyses of the sector impact of HIV and AIDS have advanced predictions of economic catastrophe. These predictions have produced some light for a more objective and thorough interpretation of the probable impacts of the pandemic on the economy, as they have also assisted in designing policies and strategies in order to confront this scenario.

Analyses of the behaviour of HIV and AIDS in the sectors also explain the size and scale of the impact, as well as the differential vulnerability in accordance with the nature of the sector. The impacts have proved that economic and social development in countries with high rates of HIV and AIDS prevalence will be adversely affected, given that both the illness and the deaths that eventually occur will cause enormous losses among the work force (ILO, 2002).

In Mozambique, the impact studies carried out in some sectors of the state have corroborated the projections made and, to some extent, have sounded the alert for what might become a generalized institutional crisis, if the combined efforts to halt the spread of the infection among the work force, or to mitigate its adverse impact, prove ineffective.

### **Macro-economic impact**

In May 2002, the sole macro-economic study on the impact of HIV and AIDS in Mozambique (Channing, 2002) was already confirming in its projections what had been indicated as probable trends in the evolution of the epidemic in the sectors, namely a negative

association between HIV prevalence in adults and the growth of per capita GDP.

The explanation for this lies in the fact that with HIV and AIDS, the growth in productivity will be reduced, for the following reasons:

- A sharp decline in (or interruption of) productive activities, due to the morbidity related with AIDS and deaths at all levels of the work force;
- Break or reduction in the efficiency in the provision of key government services;
- A younger and inexperienced work force, with significantly limited capacities that must be advised/trained on the job;
- A generalised decline in the health status of the population, even for those not carrying the virus, in that the care associated with AIDS overburdens the resources of the health care system;
- Reduced incentives for investment in training due to people's shortened life expectancy;
- Great uncertainty associated with the establishment of long-term contractual arrangements; and
- The need to deal with the ramifications of the pandemic outside of the work place, such as attending funerals and seeking more appropriate mechanisms for the care to be given to orphans and to people suffering from AIDS, which will inevitably dilapidate capacities that would otherwise be invested in improving productivity at work.

The study that was based on a simulation of two scenarios (one with HIV and AIDS, and one without), projecting the implications to 2010, concluded that HIV and AIDS could have a wide-ranging economic impact, with a visible reduction in the growth of per capita GDP. Factors contributing to this include: reduction in the growth of productivity, the reduction in population growth and the accumulation of human capital, and reduced accumulation of physical capital. Of these three significant factors, the most important would be the effect on productivity.

### **Impact on the education sector**

The impact on education also points to critical scenarios, particularly considering the evidence in some of the literature for a strong positive association between levels of education and the growth of productivity.

The association between education and agricultural productivity has already been demonstrated in countries such as Ethiopia, Kenya and Tanzania, just

to mention a few, where positive returns were documented in this context, including the effect of educational “externalities”, which proved that illiterate neighbours of more educated producers who tended increasingly to innovate, obtained benefits simply by observing and imitating what the others were doing.

In the provision of educational services, up to 2010, the projection points to a loss of about 17% of the key staff. In terms of deaths at all levels, the forecast is that 9,200 teachers, and about 123 senior managers, planners and administrative staff will die (Verde Azul Consultant, 2000). Cumulatively, about 18 months of productive work are estimated as the time lost before these deaths occur.

The area of the supply of education services shows the most severe impacts, which may also be reflected adversely on other sectors, considering the overall needs to replace and renew skilled labour. To mitigate this weight, the study projects that the teacher training centres (IMAPs, etc.), for example, will have to expand the number of trainees for the system because of AIDS. To replace teachers with university degrees who die because of AIDS, the expansion of training should be for an additional 28%, compared to the scenario without AIDS.

HIV and AIDS will thus lead to increased demand on the teacher training institutions. However, meeting this demand will face serious problems of quality, bearing in mind that trained and experienced teachers who die will often be replaced by recruiting individuals for these positions without the due training and educational experience.

As for the costs that HIV and AIDS will imply for the sector, taking into account the costs of sick people and other benefits, the expansion of teacher training, the costs associated with system inefficiency, such as increased numbers of pupils dropping out or repeating years, the development of preventive and mitigation activities in the sector, among other significant events, an increase of about 6.9% is estimated. This percentage corresponds to estimated losses to the system due to the impact of HIV and AIDS of about US\$110 million during the period in question (2000-2010).

### **Impact on the health sector**

Health workers are, like many other Mozambicans, exposed on the one hand to infection sexually. But on

the other hand, in a situation that is very specific to this sector, they are exposed to risks of other forms of contracting HIV, such as contact with blood and other body fluids of infected patients.

The impact of AIDS on the health sector still requires deeper analysis and treatment, so as to ensure a more careful reading of the situation. The preliminary assessment of the impact undertaken in 2002, although recognising that it brought to the surface weak or incipient evidence of the impact of AIDS on workers in the national health system, is a valid starting point for estimating and pondering what could become a situation difficult to control.

In fact, estimates of prevalence undertaken in this sector in 2002, pointed to an HIV and AIDS prevalence of 17% out of 15,101 workers registered, 59% of them men and 41% women (Francisco, A et al, 2004). The age group most affected is those aged between 35 and 39, since that is the one containing most workers. There were 172 recorded cases of AIDS in the national health system, 103 men and 69 women.

An attentive reading of the results of this sector impact study clearly shows the difficulties that the sector will face in responding to the growing demand for its services by the public throughout the country. In fact, for several years the entry into the system of higher level health professionals has declined. By way of reference, it is worth noting that the proportion of doctors, and higher and mid-level health technical staff, has fallen from 69% in 1994, to 39% in 2002. Meanwhile, the proportion of losses through illness in 2002, for the staff of services not directly related to health was 54%, against 32% for higher and mid-level technical staff, and 15% for health auxiliaries (Francisco, A et al, 2004).

The impact of HIV and AIDS on the health sector will influence its level of response to the public demand for health services in general and particularly to the care and treatment for HIV and AIDS and associated infection. For 2004 the national statistics pointed to an average HIV prevalence of 16.2% among the public at large, with a cumulative figure of 1.5 million HIV-positive people, 110,000 of whom developed AIDS during the year, and 218,000 of whom required treatment with ARVs (PEN STI/HIV/AIDS 2004-2008). These figures mean additional costs for the health service in a country in which only half of the population has access to it.

In Mozambique the ratio of health workers to

population is 1/4000, which is one of the lowest internationally and in the region. Even more abysmal is the ratio of doctors to the public: there is just one doctor per 30,000 inhabitants. The figure reaches one doctor to more than 100,000 inhabitants in the poorest areas in the interior of the country.

In recent years, these indicators were undergoing rapid development, but now they are beginning to come under threat due to the advance of the disease. HIV and AIDS is also killing nurses, doctors, laboratory staff, pharmacists, dentists. In some health units, there are sectors which sometimes stop functioning because the sole technician died of AIDS. This situation is much worse under Mozambican conditions, where a very considerable number of the peripheral health units function with a single health technician.

This situation will require redoubled efforts to step up the training of doctors, nurses and other health technicians to deal better with this problematic of AIDS, in terms of the provision of care, treatment of opportunist infections, antiretroviral treatment and other activities concerning the normal operation of the sector such as tuberculosis, malaria and other diseases.

The increase in AIDS cases is a dramatic humanitarian situation in terms of public and individual health within the National Health Service. In health units, such as, for example, the Maputo and Beira Central hospitals, and the Tete and Manica provincial hospitals, in the medical wards, 60%-80% of the patients have diseases related to AIDS.

In this phase, without adequate drugs, increasingly lengthy absences from work begin, as do successive and also increasingly lengthy periods in hospital. From the hospital's point of view there is a growing overload of work, due to the increase in the number of people seeking health care. This fact in turn means increased expenditure due to the long and repeated treatments that these patients need, on the one hand, and to the increased consumption of more expensive drugs on the other, because these patients need special drugs to fight off infections. These situations are experienced today in most of the country's health units.

It is estimated that the general cost of caring for an AIDS patient is about US\$30 (thirty dollars) a year, without including treatment with anti-retroviral. The per capita budget for health in 2004 was US\$12. If we take into account that the cost of treatment with antiretroviral varies from around US\$200 to USD\$3,000 US\$ per person per year, it can be clear-

ly understood that AIDS, given the costs it represents, could monopolise all extra funding in health.

Since the budget is limited, other activities with a less visible but equally strong impact on public health in general, such as vaccinations, control of malaria and of other chronic and childhood diseases, may be compromised.

With the increase of availability of antiretroviral treatment and ARV prophylaxis for prevention of mother-to-child transmission, the impact of the epidemic on the health sector is shifting from an acute illness to a chronic disease. At present, the country is facing these two situations simultaneously. The availability of antiretroviral has increased the need for training and refresher training of large numbers of staff and has created the need for the rehabilitation of health services to be able to ensure confidentiality and quality treatment for the eligible patients.

Until a few years ago, the typical epidemiological picture of Mozambique was characterised by a predominance of acute infectious and contagious diseases such as malaria, diarrhoeal diseases and others that could be resolved immediately. The advent of HIV and AIDS and the increase in tuberculosis and other chronic diseases bring other needs to the system in structural and organizational terms, and in terms of adequate resources that can allow appropriate and sustained response to the new demands.

### *Impact on agriculture*

Like the other sectors documented above, the agricultural sector is showing some instability in its human resources deriving from the impact that HIV and AIDS is beginning to cause. However, preliminary conclusions, although they suggest that the additional costs due to HIV and AIDS might be significant, do not forecast a catastrophic decline in services, *because there is a response capacity on the part of the institutions concerned* – the study infers (MADER/Verde Azul Consult Lda, 2005).

This scenario, however, has to be seen and analysed in the context of the human resource management of an institution that facilitates the development of services among the producers. It is thus not indicative of the context and environment that HIV and AIDS engenders among producers of the family, semi-commercial or industrial sectors.

In a projection from 2004 to 2010, the Agriculture Sector (the Agriculture Ministry and its Provincial and District Directorates) may lose



through death around 1,700 staff at various levels. AIDS will account for about 84% of these deaths. Thus, in a time span of seven years, the sector may lose 25% of its total work force. Of the 1,700 it is estimated that about 881 deaths may occur among basic, mid-level and high technical staff. Of these, between 175 and 184 may be from the agricultural extension area (MADER, Verde Azul Consultant, 2005).

### Conclusion

From the data presented, it is clear that all sectors show that they will, over time, suffer serious reductions in their labour force, including skilled and experienced technical staff of various levels and specialisations, which will have various implications for production and productivity. The conclusions that can be drawn are the following:

- Without strong and sustained HIV and AIDS prevention programmes at the workplace, labour costs may increase significantly;
- A significant part of the revenue or income from undertakings may be used to pay for the expenses arising from the above scenario, which may be expressed in reduced productivity or changes in policies on social benefits and staff management;
- Many of these costs will be associated with health care, absenteeism and training;
- The sectors that make intensive use of highly skilled labour tend to be strongly affected, while those that make intensive use of unskilled labour tend to have less severe impacts;
- The sectors that provide capital goods, such as construction and manufacturing are those that will suffer most from the effects of the epidemic;
- To mitigate these impacts and sustain the economy as a whole, strong policies and strategies in the areas of prevention, care and treatment, as well as at the level of impact mitigation, will have to be considered.



## Chapter 5

### HIV, AIDS and Gender

#### **The Social Construction of Sexuality**

HIV and AIDS, apart from a medical and epidemiological question, are also a phenomenon with a socio-cultural dimension, and a development question. They therefore require an approach and understanding that should include their social and cultural dimension, the institutionalised patterns of behaviour, the symbolic systems, the structures of production and distribution of goods and services, and the relations of power.

The progression of the epidemic is deeply connected to the sexuality of individuals, as well as to the sexual behaviour they adopt. Indeed, the way in which individuals construct and express their sexuality is influenced, not only by processes of an individual nature, but also ones that are social, cultural, psychological, economic and political. Phenomena such as initiation rites, polygamous and traditional marriages, rites of passage, taboos, traditional medicine, among others, are strongly threaded by components of sexuality (PEN II 2005-2009).

#### **The concept of sexuality**

The treatment of matters dealing with sex and sexuality cannot be dissociated from the body and from individual instincts and emotions. These elements often belong to the language of intimacy and/or of symbolism constructed in the mind, but it is very embarrassing for many people to talk about it.

For many Mozambican social strata, sex and sexuality lie in the realm of taboo, and thus are remitted to an area of shame and of the forbidden. Since sexuality is one of the pillars of traditional family moralities, mastery of its language is still an enormous challenge, because it is different from day-to-day languages, and imposes a psychological order beyond the contexts in which our socialisation evolves.

In a multicultural and multilingual mosaic such as Mozambique, sexuality and its expressions occur within the pattern of values that guide the way in

which each community unit is structured and defined.

The structure of social organisation and the symbolic conventions that determine cultural order and identity conceive of the man as the one who takes the sexual initiative. It is he who has the right to pleasure, while the woman has the duty to bear children and to satisfy the male biological instinct. This behavioural order, which is learnt at various moments of socialisation, whether through initiation rites, or through languages and rituals that are ever present in the family and community, determines the social expectations of both men and women in the sphere of sexuality.

Thus, in strongly patriarchal societies, socialisation brings the language that instigates and encourages men to be “macho”, with their minds turned towards risk and to the use of social and sexual power. It is common that they express their masculinity through scattered relations with multiple sexual partners. Meanwhile, the same patterns of sexual socialisation tend to inhibit women from taking care of their sexual health, particularly in contexts where their economic power and psychological influence is reduced or nil. Thus sexuality is a resource of power and of force.

The symbolism that clothes the social construction of sexuality is the result of knowledge of traditional routine, which goes beyond considerations about sex, and brings to the surface ideas and interpretations about diseases that are conventionally associated with sexuality.

It is thus interesting to note, for example, that tuberculosis is often interpreted as resulting from the violation of certain norms, including failure to “purify” the widow whose husband has just died.

Furthermore, and particularly in the sphere of painful practices, the same interpretation of sexuality has been used as a factor to cure particular diseases or in the pursuit of easy enrichment. Thus in some societies children or virgins are still physically

attacked or raped, in the belief that this will lead to the cure of sexually transmitted infection, or to success in business, or to greater productivity from the man's fields.

This social construction is strongly rooted in variables that determine the male and female being. Their representation, and how they are learnt, rest on values designed to provide norms for social and sexual relations. These values are transmissible through a knowledge where the school is fundamentally that of popular belief, and invested in individuals endowed with particular qualities and mastery, which allows them to impose behaviour on others, and particularly on the younger generation.

This organisation imposes rules to be followed in general by members of the social or community group, and responsibilities in accordance with age structure at the various phases of the individual's development. Thus in the sphere of sexuality, these rules find an expression in the initiation rites to which young people are submitted as soon as they show the first signs of puberty.

With appropriate and varied messages in line with their sexual determinant, these rituals converge on the fact that, as a rule, they must take place before marriage. Indeed these are the conditions under which young men are trained to handle with virility their future sexual life – the expression and exercise of dominance and power, which flourish in the context of socialisation. That is, if we are talking about men: for in the case of women, the purpose of the socialisation is that they should respond docilely and passively, and objectively with the purpose of pleasing their partner.

### **Gender inequalities and their relationship with the spread of the epidemic**

The gender dimension with regard to HIV and AIDS is increasingly evident. Indeed, the evidence shows that women are biologically more vulnerable than men to HIV and AIDS, since they have a larger surface area of mucous membranes exposed to the virus during sexual relations.

Girls are more vulnerable since their membranes are not yet fully developed, and are easily penetrated. Linked to this is the evidence that girls tend to begin regular sexual relations earlier than boys, increasing the risk of transmission.

These differences are sharpened by gender inequalities and social norms deeply rooted in the

routine of the past, which demand that women, and particularly girls, be passive and ignorant with regard to sex, and submit to men's desire in decisions about their sexual lives.

Coerced or forced sex and sexual violence exacerbate women's biological and social vulnerabilities to infection, and multiply their propensity to contract the virus in situations beyond their control.

Thus women account for more than half of the adults living with HIV and AIDS. In Mozambique, about 57% of those infected are women (INE/MISA, 2005). This disproportion is very sharp in the 15-to-24 year age groups, where twice as many women as men are HIV-positive. Increasingly high infection rates among women and adolescents express their greater vulnerability, due to both biological and social factors.

Inequalities based on sex and the dominance exercised by men in sexual relations may increase the risk of infection among women and limit their capacity to negotiate the use of condoms.

Linked with this, the lowly socio-economic status of women, poverty, the levels of schooling which remain low among women and are worse in rural areas, subordination, particularly in decisions on sex and sexuality, as well as their traditional roles in the family and community, all expose the female sex to greater risk of infection.

This exposure or propensity to risk of infection is worsened by traditional practices such as the "inheritance" of one man's wife by another man (in the case of widows) and particularly within the same family, as well as the "purification" of the woman following the death of her husband.

The denial of women's basic rights, as well as the low level of opportunities with regard to means of subsistence, of access to legal protection, of access to information on health care, and to opportunities and meaning of treatment, denial of the right to inherit property in the customary system, and indeed frequent cases in which women are stripped of property, as well as the stigma attached to widows in the countryside, all significantly add to women's poverty.

### ***HIV and AIDS and their dual burden on women***

The feminisation of the epidemic is also worsening women's traditional roles as managers of the household, and as those mainly responsible for caring for household members infected by the disease.

## Box 5.1

## Condom use among secondary school students in Maputo

HIV and AIDS is currently a pertinent health and social problem in Mozambican society. Most of the people infected are between 15 and 49 years old, but the peak of infection occurs among individuals who are under 20 years old (INE 2000). The fact that young people aged between 15 and 20 belong to the group where there is the highest number of HIV and AIDS infections ensured that this study would look at the responses to the epidemic from secondary school students.

There are signs that among Mozambicans in general condoms are not widely used. Maputo, the Mozambican capital, is no exception.

Demographic research (INE 1998) suggests that there are some 509,364 sexually active individuals in Maputo – that is, individuals aged 15 or above, since the average age for the start of sexual activity in Mozambique is 15.7 years (INE 2001).

A recent study on the distribution of condoms shows that Maputo has 862 outlets (including pharmacies, shops, bars and others) that sell condoms. Each of them sells an average of 50 condoms a week (PSI 2000). Based on this data, we can conclude that about 43,000 condoms are sold per week, which suggests a substantial deficit between the demand for and use of one of the main means of preventing HIV and AIDS.

In this context, the objective of the present study was to identify obstacles to the use of condoms among young people in Maputo. It was of particular interest to find out how urban youth understand and handle their sexual behaviour. The study also tried to identify social and cultural values that contradict the dynamic of “safe sex”, and particularly condom use.

One of the fundamental aspects of the research was the prevailing belief among young people in Maputo that there is no need to use condoms in intimate relations based on love and trust. Such ideas have been strengthened by the stereotypical images of high-risk groups (e.g., sex workers, gay men, people who inject drugs) presented in the media, and with whom few youths identify. These factors, associated with what may be described as the “attitude of blaming the others” (Joffe 1999), ensures that many young people do not use condoms. Their position drew strength from the governmental discourse in the anti-HIV and AIDS campaigning of the late 1980s and the 1990s, which advocated the use of condoms with “casual sexual partners”, but not with regular partners.

Data was gathered in 2002 using a combination of four different methods: questionnaires, discussions in focal groups, semi-structured individual interviews, and informal conversations. Each of these methods was used for specific purposes. The methods were designed so as to complement each other.

As a result of the study it was possible to identify six main themes that form the major obstacles that students face in using condoms in their sexual liaisons. The themes are interconnected, and they mutually strengthen each other.

#### **Young love and trust**

In general, the respondents felt that they did not need to use condoms in stable and solid relationships normally associated with love, such as relations with a steady girl/boyfriend – for they were in love, and partners in these relationships trusted each others and were not sexually involved with other young people.

Relations of courtship and trust were seen as very important.

[A] boyfriend is someone who is with you for a time. Sometimes he doesn't stay for a long time, but you treat him with consideration and respect. It varies...for example you can have been with him for just 3 months, but if you've been in his house many times, or if you've had a very intensive relationship ... [the situation] has all the responsibilities of courtship (Paula, 18).

My girlfriend goes out with me, she comes to my house, my parents know her. I don't like my friends talking to her in inappropriate ways. What happens between us stays between us. We have a more mature relationship (Orlando, 17).

Precisely because of the powerful ideal of faithfulness in relations of courtship, many youths felt no need to use condoms because they trusted their partner. For the youths in this study, trust means believing in one's partner, and feeling safe and comfortable. Paradoxically, trust becomes an obstacle to the use of condoms, since the young people concerned believed that their partner would never infect them, because he/she would not cheat on them. But these same youths reported that they often changed partners, and with each new partner established a relation of courtship in which they did not use condoms.

#### **The power of trust and natural sex**

A partner with whom there is no promise of fidelity, who is not a regular companion, and where there is no public recognition of the relationship is called a *pito* or *pita*. In sexual relations with a *pito/a*, condoms are more likely to be used, because the partners feel they have no guarantees about each other's sexual past. The rules that guide relations with a *pito/a*, are substantially different from those that operate in relations of courtship, where trust is the rule. As 17-year-old Júlio explained:

“...With a *pita* things are different. With her it's like this...I was with her today, I manage to achieve a sexual fantasy, I did something different, and later I told my friends, and we all talked about it. I think this is bad, but it's what happens... we don't walk hand in hand, we don't take her home...ok, maybe when nobody else is at home.”

But on the other hand, in relations of courtship, there is a reluctance to use condoms, because they imply accusations of infidelity and lack of trust. Requests to use condoms may result in suspicion and arguments between partners, as 18-year-old Paula explained:

“...My boyfriend says he doesn't want to use condoms with me because he trusts me, and he has never cheated on me. Every time I suggest that we use a condom, he gets very annoyed with me. He starts asking me what I've done, or if I suspect him. Now I'd rather not suggest condoms, because otherwise he'll stop talking to me. The question of condoms only spoils our day.”

Explanations for the difficulties young people have in using condoms in relations of courtship are based both on the social construction of love and on the way condoms have been promoted in campaigns to prevent HIV and AIDS. Love is constructed so as to stress intimacy, fidelity, trust and tenderness. Thus in loving relations, trust and fidelity offer protection. The existing socio-sexual constructions simply do not associate the use of condoms with love.

**Box 5.1 continued**

***Official speeches and casual sex***

The initial campaigns against HIV and AIDS in Mozambique are largely responsible for promoting such misunderstandings. At the start of the epidemic, a moralising narrative, which implied that young people should simply not be sexually active, guided many of the national campaigns coordinated by the Ministry of Health. The main target group for these HIV and AIDS prevention campaigns was married couples, or couples living as man and wife. Slogans such as the following were used:

Be faithful to your partner.... use condoms in all *casual* sexual relations (author's emphasis).

In retrospect, this campaign had worrying consequences, because fidelity is not something that people practice all the time, and when people have casual sexual liaisons, they do not always use condoms. A further problem of the campaign derives from its primary focus on married couples, and similar unions. As a result, young people who frequently change their partners are forced to work with models designed for married couples, a type of relation completely different from the relations in which these youths are involved.

***Decent women and male regard***

A further contributory factor to students not using condoms was gender inequality linked to the common social acceptance that men have more power in sexual negotiation. From girls, it is normally expected that they should be obedient, behave decently, and have the lowest number of partners possible in order to become good wives and mothers. On the other hands, boys are socialized to be adventurous, to be men of success, to enjoy themselves, and to be sexually free (Osório 1998).

Because of this double standard of socialisation, women find it difficult to negotiate the use of condoms with their partners. When a girl suggests using a condom, this denotes that she is not a decent woman, not only because she is not obedient, but also because she suggested the use of something that only women with multiple partners use.

The dominant sexual standard adopted by the women was also influenced by male expectations and by what may be

described as male regard. For example, the idea that men are unable to control their sexual urges is rooted among women to such an extent that they forgive their partners when they cheat on them, because such behaviour "is normal for men" (Paula, 18).

Another factor with a negative impact on condom use concerns sexual pleasure. Boys often used the argument that they felt less pleasure when they used condoms and thus did not like using them. In a significant way, friends encouraged and respected those who showed off their masculinity by not using condoms and letting their semen penetrate and moisten the woman.

There is a further contradiction here. The boys said they feel less pleasure when they use condoms, but they also argue that they would always use a condom if they had sex with a prostitute. So it seems that condoms only dampen pleasure in intimate and loving relationships, and not with people regarded as more likely to be infected with HIV. This contradiction brings to the surface something of the complexity of the social construction of pleasure, at least in this context.

***Local ideas and beliefs***

Finally, the young people interviewed lack adequate factual information on sexual matters. The students said they had received little information on sex and sexuality either at school or at home. They stated that during the school year they received occasional visits by governmental and non-governmental organisations, which included lectures on HIV and AIDS prevention and the promotion of condoms. Even so, they felt they needed much more information.

Many of these youngsters complained of a distance at home between themselves and their parents. This distance did not allow them to talk with their parents about questions concerning relationships and sexuality. Many preferred not to talk about these matters with their parents because they would be misunderstood or ignored. Thus friends become the greatest source of information, and in turn these play an important role in students taking sexual decisions.

In the traditional concept of the household, a dominant role is reserved for the man. The woman has a passive role, particularly when it comes to taking decisions on various matters of family and conjugal life. This disproportionate position bears with it the idea or expectation that the man knows more and is better prepared to lead or determine the fate of both of them. However, the traditional role of women – expressed in their maternal and reproductive responsibilities – conditions the weight of their responsibility as regards providing care and domestic help to those household members who are physically weak.

It is curious to note, however, that, despite this responsibility, when the health of a household mem-

ber deteriorates, it is the man, or someone who can stand in for him in these conditions, who takes the decision as to whether and when to resort to a hospital consultation or to a traditional healer.

Furthermore the seriousness of the illness and the amount of attention needed in caring for the patient lead to decisions that not only weigh upon the female sphere, but also impact negatively on women's development and social progress, particularly in those situations where cuts in social expenditure lead to increased pressure on women and girls to play the role of caring for the sick people in the household, while at the same time ensuring the continuity of other household reproductive and domestic management activities.

HIV and AIDS thus sharpens gender inequalities and challenges the whole concept of approaching gender based on equality of rights between men and women.

Among the themes that shape the gender equality agenda, there stands out the urgency of dealing with the conjunctural and structural questions that make women vulnerable to HIV and AIDS. Policies and programmes to reduce women's vulnerability must deal forcibly with the socio-cultural and economic factors facing women's empowerment, such as the sexual behaviour of men, power relations between women and men, poverty, structural adjustment programmes and oppressive cultural practices.

Paradigmatic changes are still necessary, starting from the assumptions that have made the approach of women in development a visible theme in modern thought. In the past the interpretation of the gender perspective was that of feminisation, in which women were the first and only focus. Thus women were given information and services, including access to micro-credit, to return it in many cases to the same unjust and discriminatory structures that generated their subordination.

The urgency and emergency of the response to HIV and AIDS, particularly bearing in mind that gender inequalities are behind the levels of contamination noted, impel us to deal proactively with the causes or roots of the problem.

Bearing in mind the influence and power that men exert over women in relations between the two genders, and because men's sexual behaviour has a direct impact on the exposure of women to the risk of infection, it is evident that men must be at the centre of interventions against HIV and AIDS from a gender perspective.

The suave approach of treating matters concerning women's sexual and reproductive health, which promotes men's participation and their responsibility in family planning, should, in light of the battle against HIV and AIDS, open paths towards more daring initiatives that deal with sexual and reproductive health, as well as the sexual rights of men, in a more holistic and wide-ranging fashion.

The current approach of getting men to use condoms, while maintaining the status quo, in terms of the dynamics of the sexual relations with women, contributes to treating symptoms and not causes. It would be treating the obvious.

It is necessary to understand clearly the factors that lead men to embark upon unhealthy sexual behaviour – multiple partners, infidelity, sexual abuse of women and girls etc. – and to take decisions to attack those factors. “Empowering” men to adopt healthy sexual behaviour (not just the use of condoms) will help attenuate the vulnerability of women to HIV and AIDS and to other sexually transmitted infections.

### Preventing parental transmission of HIV

The parental transmission of HIV means passing on the HIV infection from a pregnant HIV-positive woman to her baby. One of the most dramatic impacts of the growth of HIV and AIDS among adults is the increase in cases of infection among children. The literature describes that, in the absence of any intervention to reduce the risk of transmitting the HIV virus from mother to child, about 15-30% of children born to HIV-positive mothers can be infected during pregnancy and birth, and 10-20% from being fed on breast milk during a two year period.

Based on the national projections for the increase of infection among adults, the number of HIV infections in children under five years old has been rising in recent years. In 2006 it was estimated that about 99,000 children aged 0-14 were infected (Impacto Demográfico do HIV e SIDA). Among these, the vast majority (78,658) are estimated to be less than 5 years old and the second largest group are the 5-9 year olds (19,639).

The numbers among those aged between 10 and 14 are very low (372). This leads to considering this group of children, the only one currently free of HIV and AIDS, as the “window of hope” for controlling HIV and AIDS in Mozambique (Impacto Demográfico do HIV e SIDA, INE/MISAU 2002).

In 2006, throughout the country, the numbers rose to an estimated average of 100 HIV infections a day through vertical transmission.

With the aim of reducing the impact of HIV and AIDS on women and children, the Mozambican government, through the Health Ministry's National Programme against HIV and AIDS, set up the Programme to Prevent Vertical Transmission (PTV) in 2002.

The general goal of the PTV is to reduce the transmission of HIV from mother to child, providing follow-up and prophylactic treatment to the mothers

during the whole period of pregnancy and birth, as well as to the children until they are 18 months old.

This programme has as its specific objectives:

- To disseminate information on mother-to-child vertical transmission, promoting people to join the PTV programme in the communities, and to undertake advocacy inside and outside the health institutions;
- To improve the quality of care in the mother-and-child health services so that they can integrate the PTV;
- To ensure the integration of PTV into the other HIV and AIDS services so as to guarantee that pregnant women and their partners receive counselling, treatment and follow-up on STI/HIV/AIDS;
- To ensure liaison between the health units and the community HIV and AIDS programmes.

#### **State of programme implementation**

The strategies for implementing this programme are very wide-ranging, bearing in mind that information about vertical transmission must be disseminated so as to prevent, on the one hand, people of reproductive age from becoming infected and, on the other, to allow access to the information and to the programme by those who know that they are HIV-positive. Effective implementation of this programme demands improving the knowledge of health workers, the quality of services provided, and total integration of these services into the overall package of care for pregnant women at birth and after birth.

Since it began in 2002 up to December 2006, the programme to prevent parental transmission was implemented in 222 health units across the country. During this period, 371,717 women were counseled and tested, 24,152 received ART prophylaxis. Of this total, 12,510 were tested in 2006, against the Ministry of Health's target of 16,000. With a total of 146,245 pregnant women estimated to be HIV positive in 2006, the percentage of those who received ART prophylaxis represents only 8.3% of total.

As for the children, by mid 2006, 16,092 children in this group received nevirapine and 1,321 HIV exposed children were tested at the age of 18 months and 141 (10.7%) of them tested positive. Despite various difficulties on the ground, the programme has improved considerably. In 2002, the programme targeted 5,685 pregnant women in their first antenatal control, in only three provincial capitals. But by end 2005, there was a qualitative advance and this number was increased to 158,273 women throughout the country, of whom 102,116 received counselling and testing (National Programme against STI/HIV/AIDS, MISAU, 2006).

All the components of the National Programme against HIV and AIDS are undertaken in partnerships established between the Ministry of Health and other institutions, such as national and international NGOs, UN agencies and bilateral cooperation agencies.

These activities show the concern of all the actors to reduce HIV infections and their impact. These efforts are far from covering all those in need. According to the projections, in 2005 there were 140,072 HIV-positive pregnant women. But during that year only 7,690 pregnant women received ARV prophylaxis to prevent mother-to-child transmission, which is 5.5%.

Despite the efforts undertaken, many children are still born HIV-positive. Of those born HIV-negative, some become HIV-positive through drinking their mothers' milk. This is a real dilemma for people living in poverty. It is not sufficient to make drugs available to prevent infection, because there are other problems that should be looked at in a more over-arching fashion, such as health service coverage, health workers, and the existence of support services. The presence of these conditions will determine whether the state of the children's health improves.

The probability of a child born with HIV in Mozambique surviving does not depend solely on the biological conditions of the parents, but also on whether he was born near or far from a health unit, as well as the socio-economic conditions of the parents.



## Chapter 6

# The General Threat posed by HIV and AIDS to the Country's Future

### Introduction

The rapid spread of HIV infection in Mozambique and the increasing generalisation of the pandemic situation threaten to open fissures in the structure of the national community, including in traditional social structures, particularly affecting collective memory sustained on the basis of popular knowledge acquired through shared experience.

These fissures have the specificity that they may come to determine new forms of community social and cultural organisation, as well as new habits of material and spiritual production. The consequences arising from this will be expressed in serious psychological, social and economic problems, judging by the legacy that the mortality caused by AIDS is beginning to leave within households and entire communities throughout the country.

The complex effects of HIV and AIDS will also be reflected in critical areas of the country's machinery of government and on professional groups such as teachers, health staff and others, including those who guarantee public security and stability in general, as well as those who sustain the operations of the revenue collection system to fund government programmes.

Scenarios on the magnitude of the effects that the pandemic has already begun to generate in critical areas for preserving the future of the country are presented below, with particular stress on the situation of Orphans and other Vulnerable Children (OVC), social capital, food security and nutrition, and governance in general.

### Orphaned and vulnerable children

One of the great challenges that HIV and AIDS poses to the country is the care and support to be given to orphans, and the whole situation of vulnerability that the combined effects of poverty, HIV and AIDS, unemployment, food insecurity and natural disasters are provoking in households and communities.

In Mozambique, the number of orphans and vulnerable children is estimated at 1,615,416. Of this

number, about 325,000 are orphans who lost one or both parents directly from AIDS (MISAU/INE – Demographic Impact of HIV and AIDS, 2004).

Social evolution and the traditional systems of responding to situations that result in children becoming orphans have shown that these children are sheltered and cared for within the extended family system, by direct relatives of their dead parents or, where social cohesion and solidarity remain firm, by people close to the family.

However, with the prevailing levels of poverty, and the growing number of children in a state of chronic vulnerability, the capacities of families to absorb more children, particularly those in a state of extreme need, has been declining continually.

To mitigate the problem, the work undertaken by the institutions involved in programmes linked to orphans is based on the principle of an integrated approach, in which the government plays the role of facilitator (MMAS, 2004).

The purpose of this approach is to ensure that the children are educated and supported within a normal system of functioning community structures, so as to guarantee that their health and emotional needs may be duly satisfied. Furthermore, the promotion of an approach contextualised in the system of community relations and functioning helps the children to have a guarantee that they will inherit the property and/or goods left by their parents, particularly land and housing.

But it has been common for children who lose their parents to insist on remaining alone in the houses where their parents used to live. A danger which it is important to stress and that arises from the absence of adults in households headed by orphan children is that many of them, once left on their own, run the risk of engaging in activities that could increase their vulnerability to sexually transmitted infections, including HIV.

Most of these children, due to the early loss of their parents and care givers, will be denied the

investment that, under normal circumstances, parental socialisation provides, such as education, care and love.

The HDD 2003 showed a negative impact of orphanhood on school attendance: the ratio of the proportion of double orphans ages 10-14 attending school to the proportion of non-orphans (children living with at least one parent) of the same age group attending school was 0.8 in 2003. The situation of maternal orphans is particularly worrying: this was the group with the lowest percentage (62%) school attendance. In general, the school attendance of orphans is improving: the school attendance ration was 0.47 in 1997.

### Strengthening of community level support systems

The growing numbers of orphaned and vulnerable children, within a weakened economy, will continue to be faced with the fragility of community-level systems of social cohesion and solidarity, which will increase social marginalisation, or discrimination, and the unbridled struggle for economic survival. To change this scenario, there is every need to invest in defending the rights of these children and in the need for a positive reaction from the community in order to make viable a balanced growth and promotion of their welfare.

However, so that this advocacy may become something concrete, a clear vision and strategy on the sharing of responsibilities, or on coordinating interventions between the state and civil society, is proving determinant.

As regards the social responsibility for orphans, social expectations are divided. In one perspective, the responsibility of the state is argued as an imperative to minimise the risks these children run of becoming street kids. This position is intimately linked to the promotion of community centres that shelter orphans, under the direct administration of the state (*AIDS Analysis Africa* Vol 6 no 1, 1996).

The responsibility of the state is also seen as critical since it can help to avoid the trend towards abuse of minors, or their exploitation as child labour, which is not uncommon in some social circles, making preferential victims of children in the direct care of foster families.

Another perspective sees the need for actions arising at the level of the extended family and of the

community, but coordinated with interventions and support that should come from the relevant state institutions. The need to find ways to educate these children inside the community is based on the advantages this provides for their healthy growth within the standard of values applicable to other children.

This perspective rests on the assumption that the social insertion of orphaned and vulnerable children is above all one of the most efficient and effective ways of avoiding the stigma that orphanages or shelters may create, regardless of the conditions they may provide for these children.

As one may understand, the discussion on this matter attracts various opinions and they are not always consensual. In any case, there exists a general understanding of the importance of effective coordination to ensure that orphaned and vulnerable children are not seen as “parasites” and undesirables in the community.

When the government emerges as the main actor and provider of social welfare for orphaned and vulnerable children, community tolerance for them proves difficult. Indeed, intervention undertaken through orphanages – with their countless financial difficulties, which can lead to malnutrition and to lack of adequate socialization (and often to access to education) – have so far had limited success in the Mozambican context.

Hence sheltering orphaned and vulnerable children in the family and/or community context, in the absence of systems with some tradition in this kind of social service, remains the way to ensure balanced insertion, as long as it is properly accompanied by the supervisory bodies, and given material support. And where this shelter does not exist, there will always be the risk of increasing the number of street children, child prostitution, drug consumption and other kinds of child and juvenile delinquency, including robbery and violence.

To avoid these predictable consequences and guarantee a balanced growth of the OVCs, it is necessary to strengthen the coordination between state institutions and community authorities, NGOs and community organizations in order to undertake a survey of these children, and provide documentation and basic care that can help them realize their citizenship rights, and ensure ever smaller chances of exposure and vulnerability to contracting HIV.

## Box 6.1

## What communication strategies in a context of cultural diversity?

During the initial years of the post-independence period, under a socialist approach to the promotion of development and national welfare, the country invested in attempts to suppress socio-cultural values, expressed under reductionist headings and labelled as "archaic", "obscurantist" and "traditionalist", which, in the dominant perspectives of the time, clashed with the modernizing values of so-called "scientific" socialism. Despite this, efforts at reconciliation with these cosmologies were among the first steps taken in the process of openness and democratising the country, which characterizes the present conjuncture.

During the political opening of Mozambique, begun in the mid-1980s, AIDS appeared, and with it, the country embarked on the invention of the *modus operandi* of neo-liberal societies, establishing and adopting policies in response to AIDS, underlying which are the language and terminologies of practices and forms of social structuring that are currently hegemonic in western culture, such as "democracy" which must doubtless always be accompanied by a strong "civil society" and by consultation and involvement of various social strata.

When the AIDS crisis set in, at a moment of change in the political and ideological conjuncture, a space was opened for the start of a process of looking at aspects that, under the socialist regime, were regarded as hidden and unworthy of consideration, such as the diversity of socio-cultural practices, which were pigeonholed into the universe of "obscurantism" and of supposedly "archaic" values which ought to be suppressed.

From the ostracisms and denial which the country tried to establish with its cultures (at least formally since, in practice, various subterfuges were used by communities to continually manipulate cultural values and references) the country moved on, with the advent of AIDS, to encourage a questioning stance, and even a re-invention of bits and pieces of aspects held as culturally characteristic to compose a framework for understanding the phenomenon of AIDS. Thus, also as a function of HIV, the cosmologies and social and cultural values of Mozambicans were declared as important in order to produce an "informed basis" on which the national response to HIV and AIDS could rest.

Studies and research into the behaviour, attitudes and practices of Mozambicans were promoted. An ethnographic look into various population groups, particularly as regards sexuality, is being encouraged. The results of these studies and reflections, most of which are of a quantitative nature, are contributing to nourish the repository of representations that characterize Mozambican society.

Even so, the policies, strategies, and above all the messages, reflect more the emphases that are circulating globally about the forms and methods of combating HIV and AIDS, and less the forms of dialogue with the multiple stereotypes and representations that circulate about HIV and AIDS among the various population groups and categories in Mozambique.

However, the impact of the data concerning knowledge about attitudes and practices is, in itself, relatively limited for stimulating the change of behaviour desired by the programmes combating AIDS. In general, the actions undertaken assume the theory of rational choice, based on which it is believed that the availability of adequate information about the

risk of HIV infection, transmitted through argued persuasion, would be sufficient in itself to encourage rational decision making, which would end up leading to a change of behaviour, and thus to a significant decline in the risk of infection.

But what the numbers don't say is that alongside the representations of HIV and AIDS regarded as correct, there is another repository of values and meanings which are being built and rebuilt as the national response against AIDS advances, and which do not necessarily meet the expectations or teachings of those who promote and implement that national response.

These cognitive mismatches should not be seen as deviations from the standards it is intended to promote, as some have argued when they interpret the competing perceptions of people on what was taught about condoms, for example, as "ignorance", despite the "clear messages" that were "widely disseminated".

If, on the one hand, we assume that the numbers and data transmitted have their methodological rationale and validity as reference models of social thought and behaviour, on the other hand, the contradictions, that which the numbers do not catch, the so-called preconceptions and stereotypes, are also ways of translating the complexity of meanings and values that glide through the socially imagined world, and that should be taken into consideration when weighing up the advances and setbacks in the national response against HIV and AIDS.

However this may be, it cannot be forgotten that the investment made in making the socio-cultural dimension stand out, as an important factor for understanding the phenomenon of AIDS is significant, and made it possible, in a singular way, to express verbally some questions associated with notions of health, disease and sexuality.

With this investment, aspects concerning the rites of "purification" (such as *pitakufa*), the behaviour of witchdoctors, characteristics of polygamy in the south and north of the country, notions of sexual guidebooks, meanings and motivations for sex between people of different generations, systems and networks of inter-family solidarity, and many other aspects that crisscross the territory of culture, sexuality, morals and ethics, have been scrutinized.

But recognizing the existence of elements that characterise the socio-cultural universe, and even cognitive and cosmological systems that coexist, and forms of their production and reproduction, as the national response against AIDS has done so far, is still not the same as holding a dialogue with them in political and pragmatic terms.

Assuming that in society we are not faced with a blank slate, on which we can write and prescribe codes and values, and expect these codes to be assimilated in an intact fashion, then perhaps we should pay more attention to cognitive and interpretative nuances, to what appears to be a simple contamination of the social, and also bring these factors and their bases as a constituent part of the dialogue of values and meanings that it is intended to advance, in the context of an epidemic that still shows no sign of slackening.

This should not be taken as an effort to essentialise or crystallise culture, but on the contrary, an investment in order to elevate the capacity or change and for the cohabitation of values within people in society.

### **The non-quantifiable impact – the case of social capital**

In dealing with the impact (generally not fully quantifiable) that HIV and AIDS exert upon the community, the systems of organising community life should deserve attention and analysis, including those that generate, transfer and sustain knowledge.

For the case of Mozambique, this attention becomes all the more justified, since it is known that more than two-thirds of its population lives in the countryside and manages their life based on systems and patterns of behaviour and communication rooted in custom. Custom is, in a manner of speaking, the reservoir and at the same time the most subtle expression of knowledge, values and convictions, expressed in culture that governs the modes of material and spiritual production.

For some time, academics have been mentioning the possibility that HIV and AIDS may contribute to the disappearance of traditional social structures at household, village or regional level, which have a critical role in the welfare and management of family or social resources (Norse, 1991). These structures are defined within a broader framework known as social capital.

Here, social capital refers to a series of “characteristics of social organisation such as trust, norms and work networks which can improve the efficiency of society by facilitating coordinated actions” (Whiteside & Sunter, 2000). It is, indeed, a series of specific processes that evolve between persons and organisations, working in a collaborative manner in an atmosphere of trust, with the purpose of achieving goals that bring mutual or collective social benefits.

Social capital has a significant role in reproducing or transforming social inequities. It stimulates the participation of people in working networks that, apart from producing community benefits, consolidate levels of trust based on identification with the objective of collective action. Likewise it increases practices of solidarity and mutual aid, as well as positive local identity. Its action is part of social awareness, and is thus not quantifiable through direct methods.

Examples are togetherness based on churches, campaigns of mutual support among peasants in preparing fields and in harvests, popular associations around informal savings schemes, etc.

Communities characterised by high levels of social capital provide better conditions for a healthy life. Linked to this fact, it has been argued that community capacity to mobilise or create social capital is

an important determinant for the success of participatory interventions in promoting community health (Campbell, 2003).

The organisation and functioning of communities bring together decisive elements for the success of interventions that catalyse social capital. Furthermore, people living in communities with high levels of social capital will very probably display high standards of control over their daily lives.

The fact that the morbidity and mortality caused by AIDS falls upon individuals whose contribution to the maintenance or transfer of social capital is determinant (36-49 years are the age groups most affected among men) will create social erosion with strong negative impacts on community development. These impacts will be reflected in the traditional systems of solidarity and social cohesion, as well as in the transmission of values through the pure socialization and interaction between generations of different ages.

The most representative expression of this chain of impacts is shown through the break in the natural sequence of the passage of “social testimony” (traditions and habits of life) through the daily routine and the community life between parents, children, grandparents and grandchildren and a gradual loss of collective social memory.

A study undertaken in Chókwè, in Gaza province, on “The Impact of HIV and AIDS on the knowledge of farmers concerning seeds” (Links, 2005), showed that HIV and AIDS is one of the many factors that may result in the loss of traditional crops and varieties and erode knowledge about seeds. The study also indicates that the loss of active and adult farmers, and the increase in the number of orphans, will deprive the children of the opportunities of learning from other members of the household.

Yet more critical is the forecast of this impact on other rural systems where the management of communal property is important. Indeed, on the assumption that learning through daily socialisation takes place informally, both the mortality and the morbidity caused by AIDS will result in the loss of values peculiar to individuals but generally invested for the common good, particularly the skills of improvising and responding promptly to specific events, based on the combination of common sense and the exercise of influence resulting from peculiar and non-transmissible qualities.

The loss of these characteristic and essential traits of a social system with solid social capital will

constitute a major setback for rural households and communities, and may impose a new form of organisation and structuring of communal life. These are the scenarios that are beginning to characterise communities where there are an ever growing number of households headed by children (who have lost their father) and where the mortality caused by AIDS has led to declines in material and spiritual production and productivity in general.

The impact of HIV and AIDS on social capital is still a subject that deserves deeper analysis in the general framework of studies that the area is beginning to mobilise. As already reported, these impacts are proving severe and adverse for many rural Mozambican communities. Analysis in other countries where the epidemic matured earlier pose strongly the possibility that the weight of the epidemic on social capital may lead to a trend towards the destructuring or even the disappearance of traditional social systems at community level (Norse, 1991).

#### **Food security, HIV and AIDS and nutrition**

Food security presupposes access by everybody and at all times to sufficient food for an active and healthy life. It is thus a basic condition for the human organism to create conditions to defend itself from possible infirmities. The lack of resources to produce or acquire food leads to food insecurity.

While all those infected by HIV need special attention in food and nutritional terms, pregnant women who are infected need to ensure an optimal nutritional status in order to reduce the likelihood of transmitting the virus to their babies, and so that they can have a safer birth. HIV-positive children have social nutritional needs so as to avoid retarding their normal development and help them survive.

HIV and AIDS increase vulnerability to food insecurity. In turn, food insecurity contributes to susceptibility to HIV infection and its progression to AIDS.

Food security is part of a concentric chain of the provision of interlinked services, which includes the production, availability and access to food, as well as standards of food consumption. That is why, for a more thorough analysis of the influence that food insecurity exerts over susceptibility to HIV and AIDS, an integrated examination of the agro-ecological, housing and socio-economic characteristics of each region becomes important (SETSAN, 2004).

In Mozambique, food security is influenced by several risk factors that condition how prone individ-

uals are to food insecurity. These risks are structured into:

- Production risks associated with drought, floods, pests or animal diseases;
- Risks linked to difficulties in access to food, due to poverty, unemployment, instability, or the imperfect functioning of the market;
- Risks associated with endemic diseases, particularly malaria, tuberculosis, cholera and HIV and AIDS; and
- Risks associated with social instability among households, which may lead to violence and/or to divorce.

National statistics show that almost 80% of the country's population live in the countryside, and that about 95% of the national labour force is absorbed by the agricultural sector, which is the base that sustains production and thus food security (SETSAN, 2004). This fact, when confronted with the progression of the epidemic, and particularly with the fact that the groups most affected are those of active age, leads to the conjecture that HIV and AIDS will have a significant impact on the agrarian sector and hence upon food security.

However, this impact will depend on the structure of the agricultural sector, particularly of the family sector and on the production techniques of systems used in agricultural activity. In fact, the Mozambican family agricultural sector is not only prone to constraints such as natural disasters (drought, floods and pests), but also faces production limitations, such as access to credit or to pesticides.

Bearing in mind that AIDS affects, to a large extent, those of productive age, the death of a household member weakens that household's productive capacity, by reducing the work force needed to cultivate the fields. The subsequent reduction in the area under cultivation will in practice be expressed in a decline in income.

With the sickness or death of the main household providers of resources, a chain of complications arises in managing the life of the surviving members, namely the crisis in family agricultural work, management skills, changes in cultivation systems, an increase in the number of orphans, medical costs, diversion of labour in order to look after the sick, loss of production income, and reduced ability to buy agricultural inputs (seeds, fertilizer, etc.). These aggregate factors often end up generating situations of chronic food insecurity.

### **The nutrition factor**

In the relationship between HIV and AIDS and food security, nutrition plays a significant role. Indeed, the role that good nutrition performs in the health and functioning of the human immunological system has long been recognised. Good nutrition is thus a necessary condition for any individual who is HIV positive, and to some extent, many people in this situation might even need more focused assistance.

People infected by HIV face enormous challenges as they struggle to keep up their nutritional health. Inadequate diet increases people's vulnerability to disease, and since the virus weakens the body's immune defences, opportunist infections tend to occur very frequently. Good nutrition helps to reduce this risk significantly.

While all those infected by HIV need special attention in food and nutritional terms, pregnant women who are infected need better nutrition in order to reduce the likelihood of transmitting the virus to their babies, and so that they can have a safer birth. HIV-positive children have social nutritional needs so as to avoid retarding their normal development and help them survive.

However, it is important to note that nutritional needs change over the course of infection and development of the disease. This change is influenced by the nutritional state of the individual under normal conditions. The organism of individuals who were malnourished before they contracted the virus will, now that they are HIV positive, require an increase in the body's energy intake, to confront the pressure that the virus will impose on the immune system.

### **HIV and AIDS, governance and national security**

The effects of HIV and AIDS are gradually hampering the capacity and the administrative and organizational power of the state, globally. This has implications for government effectiveness, particularly regarding the provision of goods and services. The picture becomes all the more worrying when it is known that, in Mozambique, the state remains the major producer, employer and provider of social and welfare services, just as happens in most poor countries (Barnett & Whiteside, 2002).

The sector impacts dealt with in the previous pages show that the threat posed by HIV and AIDS is not limited only to the most vulnerable strata of the population. In a situation of generalized epidemic, and

fed by processes that accommodate the construction of individual and social identity, the threat from HIV and AIDS is felt everywhere. There are signs that senior state and government cadres in various sectors of activity have died from the disease, although great secrecy still prevails over these deaths.

Compliance with state duties through the provision of public services is an imperative of governance. Pursuing this fully requires not only money, but above all, capable and motivated staff to comply with duties inherent to the public administration.

Since a large part of the professional groups or specialised areas in the state machinery – such as military and para-military personnel, the police forces or judicial staff – are among the sectors with the highest rates of HIV prevalence, and with high mortality rates, carrying out the state's mission, particularly as regards basic public security is not only threatened, but is also confronted with new challenges.

These challenges include, among others, the need to define and implement preventive and corrective strategies. This involves diverting budgetary funds, and continually realigning objectives, in order, for example, to recruit and train new technical staff.

HIV and AIDS is a development question and should be viewed as such. But at the same time it is a national emergency, and measures should be taken to stabilize government action. Seen from this perspective, it is prudent to note that, in order to minimise the adverse impacts the pandemic will impose on state revenue and expenditure, political options that combine prevention, treatment, and impact mitigation in a balanced manner should continue to be strengthened and made more efficient.

Because governance has the duty, among others, of establishing an environment of safety and stability for its citizens, the threat posed by HIV and AIDS requires that it be confronted with the example of a determined and committed leadership. For people tend to pay greater attention to, and value more highly, initiatives from their leaders when they go public and break the taboos surrounding the pandemic which have to some extent contributed to discrimination and stigmatization in the community.

As a national priority, the context in which the struggle against HIV and AIDS should occur must be assumed straightaway as an act of governance, and it is in public fora where the government leadership should confront the factors that may help or hinder the adoption of new behaviour.

## Chapter 7

# National Strategies against the Spread and Impact of HIV and AIDS

### Political commitment

In many of the countries affected by AIDS, the governments are in a dilemma. AIDS is a serious development problem, but it is also a problem that cannot be tackled with the ordinary instruments, methods and approaches of policy planning.

The ability and skill of governments to react to the pandemic with more creative interventions, continually adapted to a constantly changing reality, has become an imperative. It is from this that to some extent the level of political commitment that states confer on the problem has been assessed.

Political commitment is a determinant factor in the concrete expression of the response to HIV and AIDS. It shows the level of priority the government, and in the final analysis the state, attributes to the matter on the national agenda, bearing in mind the continually rising levels of infection and its impact on the lives of individuals, households, and communities, and finally on the human development of the country.

In Mozambique, the first sign of political commitment dates from two decades ago when, for the first time, a concerted response against the disease was established, in compliance with the recommendations of WHO, that emerged from a meeting of specialists held in Bangui in 1985. This meeting urged member countries to set up national committees in response to AIDS.

In August 1986, the first body in response to AIDS in Mozambique was set up. Named the National AIDS Commission, it was based inside the National Health Institute (INS). In 1988, a National Programme for the Prevention and Control of AIDS (PNPCS) was set up in the National Health Directorate. The activities carried out under this programme made a significant contribution to awareness and to expanding knowledge about the epidemic, with particular stress on the ways the virus could be contracted, as well as preventive measures in general.

As a result of increasing awareness of the socio-economic, cultural, demographic, epidemiological and governance impacts provoked by HIV and AIDS, a national strategy for fighting the epidemic was developed, involving various population strata from district to central level. At the culmination of this review and discussion with all sectors of society, the first National Strategy in response to HIV and AIDS was born, approved by the government in 1999.

The following year, in 2000, the Council of Ministers set up the National AIDS Council (CNCS), a coordinating body at the highest level for the national response against the pandemic, chaired by the Prime Minister, and including representatives of the government, of civil society and prominent individuals. This step marked the recognition that the scale of the epidemic went beyond the health context, and required multi-sector treatment, that could deal with the socio-cultural, economic, political and health dimensions in their broader context.

On 1 December 2005, on the occasion of World AIDS Day, the Head of State, Armando Emilio Guebuza, launched the “Presidential Initiative to Combat HIV and AIDS”, a specific programme of advocacy activities focused on open, public debates on the causes and consequences of the pandemic from households to organized social groups and rural communities. Under this initiative, the President of the Republic has held open discussion meetings with various sectors of society, during which he made the appeal to “Mozambicanise” messages against HIV and AIDS. The “Presidential Initiative” has been replicated in the provinces, also with activities to mobilise community and religious leaders, agents of the informal economic sector, and influential professional groups, such as teachers and health workers (Box 7.1).

While political commitment can also be recognised in the shape of the budgetary allocation to the anti-AIDS programme overall, there are still difficul-

**Box 7.1**

**Let's speak openly in our families: President Armando Emílio Guebuza<sup>1</sup>**

I want to talk with you, but particularly I would like to learn from you. I don't bring clear ideas, but I am bringing clear concerns. How do we deal with this problem? I too don't know!

For we've been waging campaigns for years against HIV and AIDS on television, on radio, in the papers, at meetings, through song, through theatre and other forms of communication. Everywhere we say: let's be careful, let's reduce our number of partners, let's have more responsible behaviour, but the number of people infected with HIV and AIDS is increasing, it's gradually increasing... And that's why I say I don't understand! I don't understand! I'm here so that, together with the leading figures who are with me, we can try to understand.

What can we do? I believe none of us here knows everything, but I believe that if each of us were to say what he or she thinks about this, it's going to help solve the problem. In this context, I'm making an appeal to the secretaries, to the traditional chiefs, to the teachers, to the doctors, to the business people. I'm making an appeal: Bring your concerns for debate.

Let's talk openly to solve this problem!

Ten years ago, when HIV and AIDS were talked about, nobody believed it. They didn't believe in the existence of HIV and AIDS. Today, 10 years later, we now see many people sick with AIDS. I'm not talking about those people we see and don't realise they're infected with HIV, but we've already seen many AIDS patients, many people have died of AIDS, and in this country of ours we have zones, regions, settlements where there are no youths. We only find children and old people. There's nobody in between. It's the grandparents who look after the children.

So I ask: will the message we transmit reach the people here in the countryside properly? Do parents speak easily with their children about this problem? Do young people, our children, ask us without fear about what they can do and what they shouldn't do? In our homes, do the cultural values we bear within us allow us to pass on information on sexuality and behaviour, which is what is missing? Why does this happen? Why does the number of cases of the disease go on rising?

Why is this the case now, when it's not like it was some years ago, when we heard that somebody died of AIDS, but we didn't know where this person came from? We didn't know what village this person lived in. But today all families have someone who died of AIDS or have someone sick with AIDS, What is preventing us from communicating properly with each other?

We have to halt this pandemic. The solution is in our hands, in our will. Let's speak openly to solve this problem.

**There are no "orphans" in our tradition**

Children in our communities have no lack of fathers or mothers. Those who are regarded as "uncles" or "aunts" in the nuclear family are considered, in our tradition, as father and mother.

Children become orphans. They lose their parents. But in our tradition, and I speak from my own experience of where I grew up, the concept of orphan does not exist. And I think that this part of our tradition should be recovered, valued and practised.

When I was a child, I and the children of my uncles regarded ourselves as brothers and not cousins. We treated everybody as father and mother. That's why it was sometimes said that x and y are brothers from the same womb. Wasn't it like that ?!

I'll tell you a personal story. My father scarcely knew his own parents. I didn't know my grandparents, and my father grew up in his uncle's house. He was treated as a son. Coincidentally my mother had the same experience. I didn't know my mother's mother. Or her father. She also grew up in an uncle's house, and was never discriminated against. Whenever she meets her cousins, she is regarded as a sister and not as a cousin. She grew up in this environment, which is a good part of our tradition.

There are no orphans! If the parents die, somebody else looks after them as though they were their own children!

**No to discrimination and to stigma**

In Mozambique there are now many orphanages. It's even said that these are orphanages whose parents have died of AIDS.

Today, why are we talking about orphans whose parents have died because of AIDS? Generally we say that this child's father died of AIDS. And we're marking the child. He or she is a different child. And even in orphanages, we have orphanages for children who are orphans because their parents died of AIDS. But there are other children who don't have parents, whose parents have died, and they're suffering too. They aren't supported, or they grow up differently. And again I ask: What is wrong in our society? Why aren't we managing to halt AIDS? This is the question! My brothers: Let's open up our hearts and speak openly.

We came here without answers, but above all we want your contributions. Your contributions can help us define policies that can lower, reduce the level of infections. We want communities to be able to find, at the most varied levels, answers to this question, and that the responsibility for fighting AIDS should not be attributed exclusively to the government. I think that all of us, from the individual to the family, to the neighbourhood, to the locality, to the school, we all have an answer to give to this pandemic that is threatening our future.

HIV and AIDS can be fought against. The current AIDS situation can change, it can be beaten. Yes, it has no cure, but much more can be done, so that it doesn't make people suffer so much. For this, it is enough to be determined, for us to believe that we can make a difference, by each of us changing our attitudes, being frank with ourselves, all of us working on this line in the same direction.

<sup>1</sup> Extracts from the dialogue held by the President of the Republic, Armando Emílio Guebuza, with community leaders in the "3rd February" village, in Manhiça district, Maputo province, on 1 December 2005, the International Day for the fight against HIV and AIDS. This meeting opened a series of activities, headed personally by the Head of State, throughout 2006, known as the "Presidential Initiative in the Fight against HIV and AIDS".



ties in reflecting in a sufficiently clear way that part of the state budget that is spent on the struggle against AIDS. This can be attributed to the cross-cutting nature of the subject, and the way the corresponding headings are scattered through the sector budgets.

### *Some legal and economic expressions of commitment*

Externally, Mozambique signed the Abuja Declaration of 2001. Through this declaration, the country not only recognised the setback that HIV and AIDS would mean for the national economy, but also the need for energetic commitment and sacrifice to attenuate the adverse effects of the deadly disease. The Abuja Declaration set a figure of 15% of the total state budget that should be allocated to health expenditure in general, and particularly to finance the national responses to the pandemic.

Mozambique also subscribed to the Declaration from the Special Session of the United Nations General Assembly on the epidemic, known as the UNGASS Declaration. This declaration, which recognised HIV and AIDS as a global crisis which demands action that is also global, recommends that strong leadership is essential for an effective response to the pandemic. It stresses that this leadership must be headed by governments, and complemented by the active and total participation of civil society, of the business class and of the private sector. It especially recommends that leaders should commit their personal undertaking and concrete actions at national level.

In the legal area, and in recognition of the need to protect the human rights of people living with HIV and AIDS, the Assembly of the Republic in 2002 passed Law no. 5/2002, which established the legal regime that protects the labour and social rights of HIV-positive people. It prohibits employers from submitting workers or candidates for employment to compulsory HIV tests, without their consent, and outlaws sacking workers, or otherwise discriminating against them in the workplace because they are HIV-positive.<sup>2</sup>

In the 2005 Economic and Social Plan (PES 2005), passed by the Assembly of the Republic, the pandemic is for the first time treated prominently among the government activities to be undertaken for poverty reduction, benefiting from a specific budget-

ary line. The 2005 PES envisages continuity of actions concentrated on treating opportunist infection and counselling on forms of prevention, including supplying anti-retroviral treatment to 25,000 people, of whom about 15,000 are pregnant women, and providing home care to AIDS patients. In 2006, this approach grew even more crystallized with progressive indicators, be it regarding anti-retroviral treatment for the majority of the population by double the previous year, or in terms of prevention of vertical transmission.

At the same time, a series of measures have been taken in the strengthening of advocacy work by political leaderships among the population, with concrete measures on holding provincial government bodies responsible for coordinating the response down to the most remote areas.

Resulting from these actions, the provincial governments have been given added responsibilities of chairing the Provincial Social Harmonisation Forums to prioritise actions and budgets at local level, in order to speed up the joint efforts in prevention and in fighting the pandemic. In this context, the action of leaderships at local level has contributed to raising the level of public awareness of the grave danger that HIV and AIDS poses to the survival of the national community, as well as to a more effective demystification of the disease, eliminating the taboos surrounding it.

On the other hand, this strategy has improved the bureaucratic processes of allocating the available financial resources for strengthening local community initiatives in response to the pandemic. As a result of this strategy, the CNCS programme in response to AIDS has since 2004 experienced a notable expansion translated into a range of ever more funding for subprojects, be it in the public or private sectors, and at the level of civil society, which greatly increased the number of beneficiaries, as well as the diversity of activities undertaken, always within the context of the new National Strategic Plan (PEN II) 2005-2009.

Exercises in sectoral planning at various levels have brought HIV and AIDS to the centre of debate and attention, particularly as a crosscutting issue in the development problematic. Thus this material has merited treatment in the context of formulating strategies that should constitute the main pillars for

<sup>2</sup> The fact that this law only protects formal sector workers, and leaves out those working in the informal sector and ordinary citizens in general has raised suggestions that it should be revised in order to make it more inclusive.

approaching the country's development over the next two decades, which are contained in Agenda 2025.

Likewise, PARPA II, approved by the Council of Ministers on 2 May 2006, stresses the need for greater strengthening and coordination of multi-sector activities in response to the deadly disease (Box 7.2). The relationship between and relative weight of prevention and treatment has been placed at the centre of the strategic lines of PARPA II in this specific field.

**Box 7.2**

**HIV and AIDS in PARPA II**

The central objective towards HIV and AIDS is to halt and begin to reverse the spread of the disease. Based on PEN II, 2005-2009, it is intended to focus on some selected results in the following five areas: prevention, stigma and discrimination, treatment, impact mitigation, and coordination of the national response.

The PEN stakeholders are the Ministry of Health, the entire private sector, and the NGOs that work for a reduction in the spread of the pandemic, and who work with the directly or indirectly affected population, under the coordination of the National AIDS Council.

The fundamental goals in this area are:

- reducing the number of new infections from the current level of 500 per day, to less than 350 in five years, and less than 150 in 10 years;
- transforming the response to HIV and AIDS into a national emergency;
- reducing the stigma and discrimination linked to HIV and AIDS;
- prolonging and improving the quality of life of people infected with HIV and of AIDS patients;
- reducing the consequences of HIV and AIDS for individuals, families, communities, companies and also the overall impacts;
- increasing the level of scientific knowledge about HIV and AIDS, their consequences and the best practices for fighting against them;
- strengthening the planning, coordination and decentralisation capacity of the decision taking and resource management mechanisms;
- promoting actions that reduce the weight of home care on women; and,
- taking action to prevent the feminisation of the epidemic.

An increase is envisaged in the proportion of the State Budget allocated to specific areas of the HIV and AIDS programme that will implement activities in the thematic areas mentioned above.

In the final analysis, the degree of political commitment will be assessed in accordance with achieving the Millennium Development Goals, particularly the struggle against absolute poverty and hunger, success in which is strongly dependent on the level of control achieved against the spread of HIV and AIDS and the combined effects of other associated diseases, such as malaria and tuberculosis.

**Community leadership and traditional normative systems**

The socio-economic and political transformations

the country has been undergoing in recent years, with the civil war, and with the economic opening to a regional and world liberalization, have dictated new ways of being which tend to generate a conflict of values between the old and the new.

This new form is sharpened by the growing deterioration in household living standards, which is expressed in weakening the traditional normative and organizational systems, and in the consequent weakening of their role in responding to the general challenges of survival, such as that which HIV and AIDS represents today.

This is the social reality, which has been marking increasingly visibly the distinction between the old and new generations, as well as between the urban and rural worlds.

Gender relations, the traditional rights of men and of women, the norms about what can be spoken of and what is forbidden, questions of a religious nature and other human sensitivities, can find treatment at community level through a complex web cultural, social and political questions that influence the pandemic.

The prestige, respect and obedience that generally surround traditional leaders in their respective territories of jurisdiction and influence, as depositories of the local historical consciousness and respective socio-cultural values, form a privileged space, an effective starting point, for community actions responding to the challenges that HIV and AIDS represent at local level.

The relevance of such an approach lies in the fact that the responses communities find locally, very often headed by these traditional leaders, are based on a solid knowledge of the local beliefs and practices in response to serious crises, such as disease and death, over time.

**The coordinated national response against HIV and AIDS**

The overall national response against this pandemic, in the multi-sector perspective, has been under implementation since the approval of the first National Strategic Plan (PEN) 2000-2002. This document was written at a critical moment in the course of the epidemic in the country and in the world, characterised by discussions, not only about strategic options (Prevention *vs* Treatment), but above all about the evolution of the question of anti-retroviral drugs, their manufacture and availability on the mar-

ket, accessibility and conditions for their expanded administration, and particularly their cost per year per patient.

In the framework of the strategic options defined by the PEN 2000-2002, primacy was given to preventing infection, recommending the development of expanded awareness activities through means of communication, information and education in general; peer education, theatre and dramatization, among others, at the same time as other, important interventions.

These interventions included:

- the care and treatment of sexually transmitted infections;
- the expansion of the Counselling and Voluntary Testing Offices;
- the observance of biosecurity;
- actions to mitigate impact; and
- the incorporation of material on sexual and reproductive health and HIV and AIDS into the school curricula, providing it with contents that explore knowledge about the disease by teachers and students.

During the implementation of the first National Strategic Plan 2000-2002, a notable dynamism was witnessed on the part of the actors most directly involved, whether within the government, or in the private sector and civil society organisations in general. However, notorious fragility in coordination and weaknesses noted in the prior assessment of the expected impacts, as a result of the cost-effectiveness relation, left the overall final results below the levels generally hoped for.

It should be stressed that the activities undertaken, albeit in an isolated, sporadic form, lacking coordination on the ground, to some extent helped raise the level of awareness and general knowledge about HIV and AIDS infection, although this awakening of minds did not have objective reflections in changing behaviour through suitable attitudes and practices.

The National Survey of Youths and Adolescents (INJAD), undertaken by the INE in 2001, for example, showed above average levels of knowledge about HIV and AIDS in both urban and rural areas. Over 70% of the adolescents and young people surveyed had already heard of HIV and AIDS. But there was substantial variation between men and women in their knowledge about this epidemic.

This fact was confirmed by a study on Behaviour, Attitudes and Practices (BAP) carried out in Tete

Province by DANIDA, three years later (2004) which continued to show relatively high levels of knowledge about HIV and AIDS — “the majority of the population have already heard of HIV and AIDS, and individuals, families and community groups are broadly aware that AIDS is a lethal disease that has no cure. A large part of the population recognises that people who look healthy may be infected. There is also a broad awareness that ‘the AIDS creature’ is in the blood and cannot be seen,” the final report mentions.

However, as regards specific preventive attitudes and practices, the situation remains very worrying, as the level of condom acceptance in Maputo City shows. (Box 5.1, Chapter 5)

Various programmes were implemented throughout the country, combining prevention, care and treatment and impact mitigation. Some deserve attention because they have become reference points for good practices.

In the southern zone, for example, among many other interventions, the Kulhuvuka Project of the Community Development Foundation (FDC), was the one with the largest audience, through its social marketing strategy, and through the involvement and empowerment of grassroots community organisations, among other national NGOs.

As regards the treatment, the experiences of the partnership between MISAU and the Sant’ Egidio Community (focusing on prevention of vertical transmission of the HIV virus from parent to child), well as between MISAU and Médecins Sans Frontiers, HAI, USAID, the Clinton Foundation, among others, are worth mentioning, and it was through these initiatives that ART started becoming more encompassing and to cause some impact throughout the country.

In the sphere of impact mitigation efforts, the experience to note is the partnership that Kindlimuka – the first national NGO of people living with the HIV virus (PLWA) and sympathisers – developed with Total, an international fuel company. Through an accord between the two, it was possible to set up a viable income-generating project run by PLWA, consisting of making and supplying uniforms for Total workers.

In Manica province, an experience should be recorded in the area of home care and psychological support for AIDS patients and their relatives, undertaken by Kubatsirana, an organisation with a religious base, as well as community mobilisation activ-

ities undertaken by Kubatana, an NGO of PLWA and sympathizers, spreading messages that not only demystify the interpretation of HIV and AIDS in the poorest communities, but above all develop hope and the value of life among PLWA.

In Zambézia, a province with strong intervention by national and international NGOs in this struggle, mention should go, among others, to the experiences of multifaceted interventions by organisations such as the World Vision, Save the Children, and FNUAP, with the viability of a programme for adolescents and youths – BIZ Generation, among others.

Social marketing and publicising the struggle against HIV and AIDS (PSI; FDC; MISAU; CNCS), as well as the movement to raise community awareness through mobile cinema – partnerships between national bodies and the Italian and Japanese international cooperation agencies, notably in Sofala province, as well as between UNICEF and GESOM (Manica Social Education Group), for information and education activities along the Beira Corridor, with the use of mobile communications units, also deserve particular reference.

In this list – merely of examples and by no means exhaustive – one should also include the bicycle races carried out by World Vision to raise awareness and the telephone line “Aló Vida”, which has a free service of information, clearing up doubts and counselling, managed by the FDC.

Initiatives aimed at making young people aware, and building up safer behaviour, expressed in introducing questions of sexual and reproductive health, including HIV and AIDS, into the school curricula, benefiting young people attending school; the programmes aimed at stimulating young people outside of school, undertaken by the Ministry of Youth and Sports and its partners in the United Nations system – UNICEF and UNFPA – as well as by national NGOs such as the Mozambican Association for the Defence of the Family (AMODEFA), through the Generation BIZ programme, are also part of the range of initiatives and national efforts to confront the pandemic.

### **The place of traditional medicine in national responses to HIV and AIDS**

As in most African countries, a great majority of the Mozambican population resorts in the first place to traditional medicine to treat bodily and spiritual diseases, before considering going to a hospital. This is

also encouraged by the fact that the national health service covers only 40% of the country's population and with a reduced average capacity.

The WHO recognises that traditional medicine should play a significant role in implementing the national strategies for fighting diseases in each country, since it is part of the community and individual health practices of the population, and strongly relevant in the provision of community assistance as regards Primary Health Care (WHO Traditional Medicine Strategy 2002-2005).

The role of Traditional Medical Practitioners (PMT) as community leaders and providers of health care is recognised and accepted by the majority of the population, since they form part of the decision-making systems in the community. Problems of a medico-biological nature, with social implications, are solved with the intervention of the PMTs, traditional midwives and other community leaders, which strengthens the authority of these groups and the trust that the community deposits in them.

Their capacity for communication in the area of health and social questions, made effective by their deep knowledge of the socio-cultural and even economic contexts of the community, is a vital resource that should be used in a variety of crucial areas of disease prevention and control, such as HIV and AIDS, malaria, tuberculosis and others.

Although it has pharmaceutical and therapeutic knowledge which, albeit empirical, science can test, the effectiveness of traditional medicine is based, above all, on the mastery by its practitioners of psychological, sociological and anthropological factors associated with disease, and important for curing the patient. These factors tend to consider health as a complex including both physical and mental or social well-being, whose balance depends on the socio-economic and cultural make-up of the individual.

Thus the factor of cultural identity between the PMT and the community and the ease of access of the community to him or her are conditions that offer a personalized, culturally adequate means of attendance, in a holistic perspective.

For these reasons, the practice of traditional medicine and the use of the medicines on which it is based should be considered as allies of modern or conventional medicine, and not a threat to public health. The official bodies in the sector should thus

creatively seek out strategies of negotiating with and upgrading the PMT, particularly by freeing them of concepts and beliefs that may damage the health and harmony of community life.

Indeed, it happens that, as a result of associating medico-biological problems with complex spiritual beliefs and/or interpretations, the patient's decision to seek assistance in health units is taken very late, thus making the chances of cure more remote, and also contributing to the spread of the disease, in the case of infectious and contagious diseases, such as HIV and AIDS or tuberculosis.

By way of example, we may note the case of TB, which in several parts of Mozambique is linked to breaking social rules or taboos associated with death or with sex, such as those according to which the disease results from sexual relations with a woman who has just aborted, or from failure to comply with ceremonies to "purify" widows after the death of their husbands, etc.

There are also cases in which the diagnosis and treatment of a variety of diseases is undertaken in an empirical manner which relates the illness with, for example, the environment, e.g. plants that are coloured red would be used to deal with problems of lack of blood. Or when a patient, in a high fever, mentions somebody's name, that person is immediately accused of causing the illness. These accusations result in disharmony in the community, and sometimes in serious human damage.

Thus recognising, above all, the relevance of the pharmaceutical knowledge of traditional medicine, strengthened by the socio-cultural identity between the practitioners and the community, an official approach, in the sense of greater involvement by the PMT to defend community health, and particularly against HIV and AIDS, malaria and tuberculosis, should be developed and strengthened. The first step in this direction should certainly be the establishment of a climate of trust and collaboration between the two medicines, thus facilitating the development of strategies and programmes for a multi-sector approximation, where the PMTs are regarded as important actors.

According to the WHO (2000), the place and role of traditional medicine remains undefined and controversial in many African countries. The major obstacles are the lack of adequate policies and legislation, the inadequate evidence of the safety and effectiveness of traditional medicine, the lack of

knowledge of the attitudes, practices and behaviour of traditional medicine, the lack of coordination between institutions, the scarcity of documentation, and the lack of protection for intellectual property rights and for species of medicinal plants at risk of extinction.

Thus WHO encourages overcoming these obstacles through strengthening and developing this sector, seeking its integration into the health systems of member states.

Mozambique already has an approved policy on traditional medicine, and the government is drafting a bill that will define the legal regime for the practice of traditional medicine, and facilitate the development of the sector, in a clear legal framework.

At the same time, the Ministry of Health has been implementing a programme of working with the practitioners of traditional medicine, specifically aimed at strengthening strategies to prevent the spread of HIV and AIDS. The main objectives of the programme are as follows:

- To assess the real potential and limitations of the PMT in preventing HIV transmission through systematic research;
- To develop effective ways of establishing synergies and collaboration between the capacities of the PMT and those of the formal health system, particularly in the area of reducing risky practices and distributing condoms;
- To develop specific training material for the PMT;
- Training the PMT for their integration into home care teams, and their participation in information, education and communication activities about the epidemic in general.
- Training of PMT as facilitators of the provincial groups coordinating activities against HIV and SIDA.

As general objectives of the established training activities, the following stand out:

- To train the PMT in matters of preventing STI/HIV/AIDS, namely in the early detection of opportunist infections caused by AIDS, and more frequent diseases, giving them skills in elementary questions of biosecurity associated to the practice of traditional medicine;
- To discuss with them habits, taboos, initiation rites and traditions that risk spreading HIV in the communities and to negotiate with them ways of maintaining such rituals without the risk of transmitting the AIDS virus;

- To encourage the PMT so that the leadership role entrusted to them by the communities may also be used to influence the public to accept safe practices of hygiene, nutrition and disease prevention.

### **Information, education, communication and counselling by PMT**

The role of the PMT in activities concerned with disease prevention, by raising the awareness and knowledge of the communities and of their clients in particular, about the most common routes of HIV infection, should be regarded as of the greatest relevance in the overall national strategies.

To this end, it will be important for the associations of PMT, notably the Association of Traditional Medicine Practitioners of Mozambique (AMETRAMO), to receive from the public health bodies, information and basic training about the main epidemics, particularly HIV and AIDS, concerning the characteristics and symptoms of the disease and the basic care that an infected person should take rigorously, in order to avoid spreading the disease.

Many PMT and traditional midwives have wide-ranging experiences in matters of counselling couples and solving family disputes. They also know about matters connected with the reproductive health and sexuality of special groups such as pregnant women and young people (through the initiation rites). They are thus in a privileged position to transmit, with potentially greater success, relevant information and advice to these target groups on sexually transmitted infections – which facilitate HIV infection – and about AIDS itself.

Thus, bearing in mind their privileged position to induce the community to change customs and traditions that are high risk factors in spreading HIV, the PMT should be encouraged to express their perception about diseases with high rates of morbidity and mortality, including their views on control and treatment. This should be achieved through their participation in focus group discussions and thematic seminars, so as to ensure that their knowledge and positive experiences may be taken into account and included in the national programmes to prevent and control the epidemic.

Focal points who will liaise between PMT and other health workers at various levels of the health system should be identified. This liaison may be strengthened and extended to coordinate and

mobilise collaborative activities in the prevention and control of other serious diseases, such as malaria, and tuberculosis, as well as in other Primary Health Care activities, such as vaccinations, ante-natal consultations, etc.

An effective and fruitful involvement of the PMT in these activities, implies that they be also involved at all stages of the design, implementation and control of HIV and AIDS activities, notably those based in the community, through lectures, theatre groups and other effective forms of portraying the disease and warning communities about it, as part of the education for health programme.

A mutual referral system between the two systems of medicine (modern and traditional) could be established. This system should be supported by a programme of continual education to equip the PMT with the necessary information and skills for efficient handling and care of patients in the community.

Likewise of the greatest relevance is the involvement of PMT in joint studies with the practitioners of formal medicine to evaluate the safety and effectiveness of traditional remedies, especially the medicinal plants used to treat opportunist infections and AIDS symptoms.

One of the fronts of combat against the spread of HIV concerns the vertical transmission of the virus, which causes the birth of HIV-positive children. Knowing that most Mozambican mothers, even if they attend ante-natal hospital consultations, end up giving birth at home, attended by traditional midwives, then adequate training of the latter by nurses in conventional medicine would offer them knowledge covering aspects such as:

- Refrain from practices that increase the risk of HIV infection, such as the use of cutting instruments on more than one patient;
- Encourage pregnant women and their partners to use the health services to prevent vertical transmission;
- Perform births without risk of contamination and with self-protection;
- Sterilise the instruments used in attending births;
- Encourage breast-feeding as a recommendation for good nutrition, but exclusive bottle-feeding for HIV-positive mothers.

To implement these objectives, the provision of budgetary resources should be considered within the National Programme to Combat AIDS, Tuberculosis and Malaria, focused on NGOs.

### **The role of PMT in providing home care**

In seeking to cure and improve their general state, a large majority of AIDS patients resort to multiple treatment alternatives, including traditional medicine. The PMT, in regular contact with these patients, are in a privileged position to follow them in the treatment they take when medicated by the health units. The PMT always provide the patients with a hope for life, and the patients, for their part, have great trust in the recommendations they receive from them.

This important role played by the PMT could be still more significant if the group is officially involved in caring for patients at home, first because they already know about the disease and are used to dealing with the patient, and second because many questions concerning the patient and his family could have the support of this group since, because of the nature of their work, they are already giving advice and form part of the group of leaders who solve family problems in the communities.

Likewise, it is important to note that many traditional cultural aspects that may be associated with the situation of the AIDS or tuberculosis patient and the stability of their family (ceremonies to “purify” widows, managing the inheritance of those who have died, etc), may benefit from positive management with the collaboration of the PMT, if these are trained to this end, since traditional communities better accept recommendations to change attitudes and behaviour when these come from someone who belongs to the same cultural environment.

Thus, and to sum up, PMT support in homecare for AIDS patients can cover the following areas:

- Advise patients to stick to hospital treatment (ARVT) and to follow strictly the medication instructions;
- Support and counsel the household in solving problems that may result from discrimination and stigmatisation in the community, and that may culminate in such acts as denying household members access to community standpipes, or isolating children at school;
- Channel to the relevant official bodies the matters that imply their intervention, such as the support of Social Welfare in basic foodstuffs, the intervention of community chiefs to ensure that children stay at school, etc.

### **Anti-retroviral treatment in Mozambique**

In 2001, in preparing the system for the new challenge of providing care and treatment for people living with HIV and AIDS, the Mozambican government, through the Ministry of Health, adopted Ministerial Diploma n° 183 of 18 December 2001, which introduced within the National Health Service the norms for treating people living with HIV and AIDS, and the guiding principles for treating patients infected with HIV, through the policy of introducing anti-retroviral in the country and the respective technical guides. These guides, cover, among other specific areas, the following general normative aspects.

It was decided to reactivate some attendance services to create the Day Hospitals (HDD), which should complement other specific services supporting AIDS patients, such as counselling and voluntary testing, me care, prevention of vertical transmission; sexual and reproductive health services for young people and adolescents, with the greatest stress on education and communication for behavioural change.

This strategy was the most adequate one for the initial phase of introducing ARV, for the patients, for the health workers, and for the system itself: it corresponded to a phase of familiarisation with the process, an exercise that would not be feasible if it were intended to cover at once the entire national territory.

The following step was the total integration of the care services for people living with HIV and AIDS, starting with counselling and voluntary testing, up to the approach of counselling and health testing, in the context of turning this into a service covering any user of the health unit carrying any other particularly chronic diseases, such as diabetes, high blood pressure, etc. In this stage of great expansion, the traditional organisation of the health services facilitated increased coverage of people on ART, from about 20,000 patients in 2005 to 44,000 in 2006. The undertaking for 2007 is to manage to cover all district capitals in the first six months, and to ensure treatment for 96,000 patients by December 2007.

Since AIDS is a chronic disease, this means that the total number of patients to be covered by the end of 2007 is the approximate sum of the 44,000 of 2006 and the 52,000 to be reached in 2007. Obviously these numbers make the challenges posed to the health sector, in ensuring expansion and quality, more critical. In particular, they imply greater

capacity in terms of properly trained human resources, as well as in material and infrastructure. It is known, however, that the supply of ARV is guaranteed (MISAU 2007).

With a population of around 20 million inhabitants in 2007, Mozambique has a total of some 24,000 health workers, of whom only about 600 are doctors, and a third of these are expatriates. To minimise this shortfall, and to provide at least a minimum response to the challenges posed by the increase in epidemics such as HIV and AIDS, malaria and tuberculosis, diarrhoeal and chronic diseases, the Health Ministry has adopted a Human Resource Development Plan for 2006-2010, which takes into account the epidemiological profile and the availability of funds. Thus the plan envisages the raining of 2,800 mid-level staff, 2,400 basic level staff and 625 specialised mid-level staff. This does not include estimates for training higher level staff, such as doctors, since their training depends on other institutions.

Thus, the Health Ministry plans to train, by 2010, a total of 6,554 health staff, of whom 2,394 correspond to the Plan for the Accelerated Training of Health Staff from June 2006 to June 2009, in order to meet the additional needs arising from the response to the AIDS epidemic.

### **The policy of ART and the target groups**

The policy of Anti-Retroviral Treatment (ART) was established bearing in mind the financial and coverage constraints of the country's health units. Under Mozambican conditions, an inclusive and universal policy was not yet possible. Given the prevailing financial and structural limitations, under the policy treatment, in the initial version of the Ministerial Diploma, the state did not assume any cost in treatment with ARVs, except improving the conditions for prophylaxis and treatment of opportunist infections. This was one of the most wide-ranging interventions for improving the quality of life of the majority of people in need, who could not afford the cost of ART.

There were several phases of evolving criteria for defining the target groups. In 2002 the first anti-retroviral in the National Health Service were made available experimentally through a foreign organisation – the Italian Sant'Egidio Community – in Matola and Beira cities, for a pilot project to prevent transmission of the infection from mother to child. A very limited number of people were involved. There was a great deal of questioning as to

why only a small number of women who met the selection criteria envisaged in the protocol, benefited from the intervention?

In the first year the number was very small, covering only about 500 women and their children. Due to improved prices of ARV, pressure on the Ministry of Health began to increase, mainly through the organisations of people living with HIV and AIDS. Under Ministerial Diploma 21/96, which envisages medical care for civil servants and their direct relatives, it was decided to establish a partnership with Sant'Egidio, to treat 100 civil servants a year, since the Ministry had no funds for a more inclusive intervention.

During implementation many questions were posed to the health ministry, first because few drugs were available and these did not cover the needs of most civil servants, much less the inclusion of their families. Those treated should be distributed throughout the country. In some provincial capitals there were already complaints and lists of civil servants waiting to start treatment.

At the same time there was some concern about health workers who, due to the nature of their work, are often exposed to risks of HIV infection. To safeguard their rights, under the same law, the use of anti-retrovirals was introduced for HIV prophylaxis in the event of suspecting possible contamination through contact with blood or other body fluids of infected patients. The problems raised by these workers were the same as those of the other civil servants. The anti-retroviral did not reach everywhere. Here the major problem was information and immediate availability, since prophylaxis should be started within 24 hours of the contact.

Other target groups were people living with HIV and AIDS who met the biological criteria for inclusion recommended by WHO and by UNAIDS. Since the state could not pay the expenses, a fundamental condition, a *sine qua non* for the start of treatment was the proven financial capacity of the patient to pay for his or her treatment without interruption. People living with HIV and AIDS who had, with their own resources, begun treatment abroad or in private Mozambican clinics, were another target group.

The selection of beneficiaries had a great deal to do with the quantity of drugs and financial capacity. This dilemma did not last long because a year later the process began of expanding anti-retroviral treatment in Mozambique.



### Programme of expanding ART and the Health PEN 2004-2008

In 2003, because of the increased threat of national collapse due to HIV and AIDS, and greater international sensitivity, there were many improvements in the approach to the disease which resulted in reducing the prices of anti-retroviral at world level, making them more available to poor countries. This was linked to various bilateral and multilateral financial initiatives supporting the neediest countries, such as: the Global Fund against HIV and AIDS, Tuberculosis and Malaria; the initiative of US President George W. Bush, initiatives of the World Bank, the Clinton Foundation and others.

Mozambique is one of the countries benefiting from these initiatives, which allowed the health ministry to revise PEN1, in order to include the treatment component. This revision culminated with the drafting of the PEN 2004-2008 of the health sector which stressed the need to improve the quality of care through integrating all the components into a functional unit that was named the Integrated Network for Providing Care to People Living with HIV and AIDS.

With funding guaranteed for anti-retrovirals and other necessities needed for treatment and follow up with AIDS patients, Ministerial Diploma n° 183 of 18 December 2001, under which the state did not cover the costs of anti-retroviral treatment, was partially revoked. Currently in Mozambique, in the public service and in non-profit making health units, the whole package of care for patients undergoing treatment is free of charge.

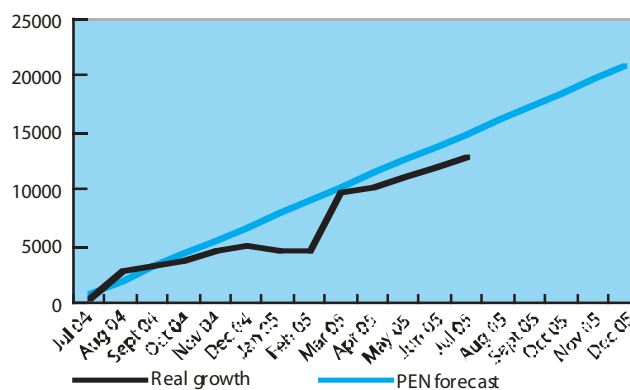
Counselling and voluntary testing, laboratory exams, treatment with anti-retroviral and other drugs for opportunist infection are fully subsidized by the state. All drugs, reagents and tests are acquired and made available through the Ministry of Health to all the institutions and organisations operating in the country in the area of treatment to allow uniformity in treatment and follow-up of the patients.

Under the PEN 2004-2008, as shown in Table 7.1, it is envisaged that treatment will reach 132,000 people by 2008. Bearing in mind the growth of the epidemic, these figures are below the needs. These calculations were made based on the capacity of the system and the possibilities of funding. To improve this estimate, there must be a major increase in financial, human and material resources, and fundamentally in infrastructures of the entire National Health Service for a more wide-ranging response,

**Table 7.1** Projections of patients undergoing ART 2004-2008

Number of Beneficiaries	2004	2005	2006	2007	2008
People HIV+ aged 15-49	1 262 000	1 355 000	1 435 000	1 509 000	1 575 000
With criteria for ART (25%)	315 000	339 000	359 000	377 000	394 000
Included in ART with GF	1 000	3 000	7 000	14 000	22 000
Included in ART with GF and Clinton Foundation	8 000	21 000	58 000	96 000	132 000
Unmet ARV needs	306 000	313 000	291 000	271 000	251 000
People undergoing other care with Clinton Foundation	4 000	29 000	56 000	123 000	163 000

**Graph 7.1** Evolution of ART in Mozambique, 2004-2005



which does not seem possible under the country's present conditions.

Thus, since 2002, the health ministry and its partners have been providing anti-retroviral treatment in Mozambique. By late 2004, the ministry and its implementing partners provided treatment for slightly more than 6,000 Mozambicans, which is approximately 4% of all Mozambicans who needed treatment. As Table 7.1 indicates, the number of people benefiting from treatment has been growing very significantly, and in September 2005 there were 15,000 patients undergoing treatment. This figure corresponds to about 6.8% of the total number of people needing treatment.

WHO recommends that at least 10% of the total number of people undergoing treatment should be children under 15 years of age. In Mozambique, the number of children in treatment has been increasing every year. In 2006, it was 3,416, and the projection for 2007 is a total of 7,200 children (Ministry of Health, 2006).

In late 2005, there were 30 health units in the country providing anti-retroviral treatment. Graph 7.1 shows the reflex of availability of services and resources in treatment coverage. Maputo City con-

**Box 7.3 The use of cotrimoxazole to prevent HIV-related infections in Africa**

UNAIDS and WHO recommend the use of cotrimoxazole in Africa for prophylaxis in adults and children living with HIV and AIDS, as part of a minimum package of treatment. Criteria for the use of the medication have already been established, covering the selection of patients, the drug regimen, the duration of treatment, follow-up, the supply of the drug, education and training, monitoring of drug resistance and adverse effects. Manuals for prophylaxis programmes have already been published.

Cotrimoxazole costs between US\$8 and US\$17 per person per year for prophylaxis. It is widely available on the continent, and preliminary analyses have shown that the use of cotrimoxazole prophylaxis is a cost-efficient intervention in Africa, particularly when combined with growing access to voluntary counselling and testing for HIV infection.

The generalised prophylactic or preventive use of cotrimoxazole in Africa was postponed for a long time due to inconsistencies in the research results. Two studies held in Ivory Coast in 1999, one by French researchers and the other by American scientists, showed that the drug reduces the frequency of opportunist diseases among HIV-positive people. One of these studies recorded a fall in the death rate from HIV-related diseases.

Preliminary results from two studies sponsored by UNAIDS in South Africa and Malawi confirmed that cotrimoxazole is safe in people with HIV, and the study in Malawi indicated significant beneficial impacts on mortality (WHO 2000).

Common HIV-related infections in sub-Saharan Africa, which can be prevented by cotrimoxazole, include certain bacterial pneumonias and diarrhoeal diseases. The fact that administering cotrimoxazole does not require medical staff with special training is an advantage, compared with ART.

tains almost 40%. And it covers over half the patients in treatment in the country. This is the result of the general conditions of care in the city, which existed even before the onset of the HIV and AIDS epidemic, which make the system relatively more accessible.

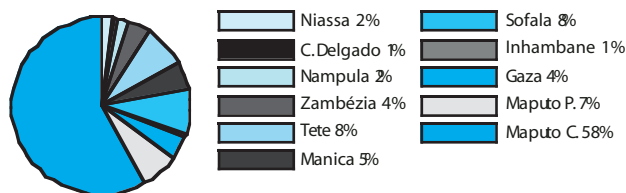
**Constraints on providing care to PLWA**

Accessibility to health care may not completely determine demand, but it greatly influences the use of services by the entire population that is seeking them. This factor should be very carefully analysed to allow an overall vision of the problematic of health care for the country's population. The difference in accessibility in itself is already a very widespread, serious ethical problem, lasting for several years, but its real scale seems better exposed with the increase in HIV and AIDS cases, the complexity in handling them, and the human and structural capacity required.

Treatment for PLWA in Mozambique is relatively new. It is still not very inclusive, leaving out many parts of the country. The level of experiences gathered during implementation is still poor. But the information from some countries with conditions similar to those of Mozambique and some local information may help in looking at some of the problems that might exist.

One of the main problems is that the National Health Service is not universal. Due to scarcity of resources, even the distribution of the health network, and of health workers themselves, and the quantity of drugs available, is much lower than the needs of diagnosis, treatment and follow-up of patients.

**Graph 7.2 National distribution of PLWH on ART by province, July 2005**



**Table 7.2 Distribution of PLWA on ART by sex/age/province/district, to November 2006**

Province	Number of people on ART	<15 Years	% Female	No. of Health Units with ART	No. of Districts with ART
Niassa	725	33	59	616	6
Cabo Delgado	1 014	20	59	1 017	10
Nampula	1 882	232	51	1 021	10
Zambezia	3 020	224	55	1 817	17
Tete	3 456	265	59	1 513	9
Manica	3 230	174	61	1 110	10
Sofala	4 697	400	58	1 313	8
Inhambane	1 441	103	64	1 414	14
Gaza	4 313	259	66	1 112	8
Maputo Province	3 119	210	59	138	8
Maputo City	17 203	1 496	59	115	5
TOTAL	44 100	3416	650	11 186	105

Source MISAU, November 2006

**Constraints on starting ART and its rigorous follow-up**

In Mozambique the hospital is still not the first choice of many people when they fall ill. A large majority of the population, particularly in the rural areas, have as their first option traditional medicine and other forms of treatment and cure, including some religious groups and sects. This demand for alternative treatments ensures that even the patients, who can be integrated into treatment, do so when they are already in a very advanced stage of the disease, which may compromise compliance with and effectiveness of the treatment.

All individuals who meet the established criteria have the right to begin treatment. Apart from the bio-

logical criteria, the selected individuals should demonstrate guarantees of compliance. They sign or agree verbally to an undertaking that they will comply with all the recommendations. To start the treatment, the protocol for including patients must be strictly complied with, and the evaluation process at the health units may last for approximately a month. This delays the onset of treatment, worsening still further the state of the patient. (Survey on Adherence to the ARS, MISAU/University of Columbia, 2004).

There is a limit per health unit in the quotas attributed. The decision on who will benefit from the treatment depends on the treatment management committee operating in each health unit.

But the greatest constraint is that most HIV-positive people do not know that they are HIV-positive. Those with access to the GATV mostly have initial difficulties in accepting their condition, which compromises timely guidance on the various possibilities of preventing the rapid evolution of the infection to the state of illness.

More than this, cultural factors, and particularly belief in the possibility of cure through certain traditional practices impact negatively on the attitude and behaviour of people towards the disease and its treatment. But above all, the lack of adequate information is the main constraint in this sphere.

Although there is little local factual information about the problems faced by the PLWA who are receiving anti-retroviral treatment, a few studies, that cannot be generalised, show that many people undergoing treatment keep it secret from their family and even from their spouses (Survey on Adherence to the ARS, *ibid*, 2004).

Often this attitude makes it difficult to comply correctly with the medication, namely taking the drugs daily and at specific times, or abstaining from alcohol. Those who work fear that their colleagues may find out that they are taking regular medication, and will discover that they are AIDS patients undergoing treatment. This means that often they fail with the medication. Stigma and discrimination are still common in the workplace, and there are also reports of some patients being abandoned by their families.

In the case of children, caregivers need to be trained to provide the drugs to them. Particularly the provision of paediatric syrups to the youngest children requires specific skills. Often, these caregivers are mothers or fathers who are infected with HIV and

might be weak or sick themselves, or elderly people who might also be weak.

A further important factor is diet. Taking the drugs requires a regular and balanced diet. Most of the patients are very poor, with serious financial problems, and often find themselves involuntarily compelled to interrupt the treatment because of hunger, since ingesting the drugs while fasting exacerbates discomfort and weakness. There are some initiatives to grant a basic basket of foodstuffs to people undergoing treatment, but these do not cover everyone.

Undesirable side effects caused by the drugs are among the factors that often influence temporary interruption of the medication, which is very serious, since it increases the risk of developing resistance and of therapeutic failure.

This expansion necessarily involves lifting the community taboos about HIV infection and AIDS. To control AIDS, it must be accepted that it is a disease like many others, and that people living with HIV and AIDS are normal. Only by overcoming stigma, discrimination and fear can we improve the impact of the various interventions until we reach the last woman in the most remote parts of the country.

### **Confidentiality, stigma and discrimination**

Confidentiality and the duty of maintaining patients' state of health private involve a compulsory international norm of professional ethics. It is the duty of all health professionals to keep the diagnosis of the patient secret, whatever it may be, while at the same time it is the patient's right to want, or not, his or her direct relatives, or anybody else, to be informed of his or her state of health.

Nowadays, because of AIDS, this concept is becoming more complex. There is an urgent need to deal with human rights around the principles of confidentiality and privacy and the possible consequences for public health in responses against HIV and AIDS.

Furthermore, for a campaign of HIV and AIDS prevention to be crowned with success, strategies must be defined to encourage people bearing the disease to break the silence. Up to now, a large proportion of the Mozambican population still sees AIDS, not as a problem for everybody, but only as something that concerns other people, since many have never seen an AIDS patient, although they exist near them and even in their own families.

Governments and world leaders have made various high level and unprecedented undertakings to fight against HIV and AIDS. One of the undertakings given by governments during the Special Session of the United Nations General Assembly on HIV and AIDS (UNGASS) in June 2001 was to promote the drafting of policies, laws and regulations, as well as other norms to protect AIDS patients and HIV-positive people. Thus, in April 2001 in Abuja a declaration by all African leaders was issued, that says:

“We commit ourselves to take all necessary measures to ensure that the needed resources are made available from all sources and that they are efficiently and effectively utilized. In addition, WE PLEDGE to set a target of allocating at least 15% of our annual budget to the improvement of the health sector. WE ALSO PLEDGE to make available the necessary resources for the improvement of the comprehensive multi-sectoral response, and that an appropriate and adequate portion of this amount is put at the disposal of the National Commissions/Councils to Combat HIV/AIDS, Tuberculosis and Other Related Infectious Diseases.”

(Abuja Declaration, 27 April 2001).

This pledge was taken and approved at UNGASS and the leaders of the developed countries also promised to assist African leaders in the efforts to reach the targets established in the Abuja declaration.

In relation to confidentiality and privacy, these rights are enshrined in various international and national legislation. At international level, we should stress the Universal Declaration of the Rights of Man of 1948, the African Charter of Human and People's Rights, the International Charter of Patients' Rights, which fixes the right to privacy and confidentiality.

To complement these initiatives, several analyses have been made in terms of developing support policies, legislation and other norms that defend the right to confidentiality and privacy, faced with problems of an ethical nature that arise on the various fronts of fighting this epidemic (Hamblin 2003).

In Mozambique the number of AIDS cases and of deaths from this epidemic have contributed to some extent to changes in public opinion about the strategies for fighting HIV and AIDS. In this context it is urgent to define or revise policies and legislation and other relevant norms, with the purpose of guarantee-

ing the rights to confidentiality and privacy, as the same times as establishing mechanisms to inform the most direct relatives, such as spouses, and all people living with the patient, about his/her situation, and setting forth the necessary rules of conduct.

In fact, under the umbrella of the principle of privacy and confidentiality, many patients, whose clinical situation is known to doctors, have continued, in a conscious and voluntary manner, to infect other people, mainly through sexual relations, and brusquely refuse to authorise doctors and other health professionals to reveal their HIV-positive status to their closest relatives.

Thus many women and men, married to HIV-positive spouses, end up contracting the disease without knowing about it because, under cover of the right to privacy and confidentiality, the patient keeps his status secret from his relatives, and does not allow health professionals to reveal his real situation (Plano Estratégico de Combate as ITS/HIV/SIDA actualizado 2004-2008).

Furthermore, those who, for various reasons, agree to break the silence, still receive as their reward attitudes of contempt, stigmatisation and discrimination where they live and at their workplaces. There are patients who are prevented from using public and semi-collective transport because citizens, who think they are immune to the disease, refuse to share the same transport with them (Khindlimuka & Monaso 2002).

There are citizens who, recognising that they have been infected by HIV, declare publicly that they are “living positively” in civil society organisations such as, for example, Khindlimuka and Monaso. Thus, through the media, many of these citizens, whose physical appearance does not give rise to any suspicion that they may be ill, as soon as their clinical condition is publicly known, suffer ill-treatment, harassment and all manner of gross and flagrant violations of their rights by their fellow citizens who imagine themselves HIV-negative, even if they have never taken an HIV test (Khindlimuka & Monaso 2002).

In approaching this problem it is intended to lay heavy stress on developing policies and laws that, on the one hand, protect those infected with HIV against stigma and discrimination, safeguarding them against segregation, while at the same time ensuring the preservation and defence of public health.

## Chapter 8

### Planning for the Future: The Window of Hope

#### The strategic approach in response to AIDS from 2005 to the present

The National Strategic Plan to Combat AIDS 2005-2009 (PEN II) is a consensual document coordinated by the National AIDS Council (CNCS). PEN II brings together strategic approaches and guidelines that challenge the traditional form of viewing the response to AIDS, and gives clear suggestions on how to guide interventions so as to encourage the situational and contextual environments that accommodate and facilitate infection with HIV, with the view to reverse the prevailing trend.

Efforts are becoming visible to bring to the surface the entire approach sustained in the socio-cultural context in which the personality of the individual is structured, and the entire learning of the elements of life, including sexuality and morality, among other reference points for guiding the behaviour of human beings.

The approaches contain clear support elements:

- a communications strategy that seeks to reclaim the socio-cultural values of Mozambican identity to confront the epidemic;
- advocacy that begins at the highest level of governance, involving intervention by the Head of State, for change in behaviour and understanding about sexuality (Box 7.1, Presidential Initiative to Combat HIV and AIDS);
- The advocacy of the First Lady of the Republic, based on promoting the Global Campaign “Unite for Children, Unite against AIDS”, convened by UNICEF and involving a broad range of sectors, and targeting:
  - Prevention of infection among young people,
  - Prevention of mother-to-child transmission,
  - Social protection of minors, orphans and vulnerable children in general, and
  - Paediatric treatment.
- the strategy of mass treatment in the context of universal access to prevention, care and treatment.

Complimentary to these actions there is the new vision of the health sector towards:

- integrating and unifying the system;
- eliminating the fragmentation of care services in response to the epidemic (GATV, Day Hospital, etc.); and,
- generating an attitude of combating stigma and discrimination, from the ordering and structuring of the service to the forms of care.

Despite this investment, the projections made in the past as to the evolution of the epidemic point to a rise of rates of HIV prevalence to around 18% nationally in the coming years. This figure needs to be reconfirmed, starting with the next rounds of epidemiological surveillance, which will update the evolution of the epidemic.

The question to be asked then is: Is an entire strategy and its investments failing? Although it is not easy to present a substantiated answer to this question, one fact is certain: Mozambique has not yet reached stable levels of infection rates and, judging from the continued waves of new infections, it can be said that the investment made is still not having the desired effects.

#### Sex and sexuality

If HIV is mostly transmitted through unprotected sexual relations, then understanding the motivations, situations and contexts that precede or condition the sexual involvement should not be underestimated.

Sexuality is not an easy area to discuss, since it is surrounded with a wide variety of taboos and stereotypes. It is no accident that in traditional education, when young people enter into puberty, it is the responsibility of adults often outside of the family to teach them matters linked to sexuality. But when sexually transmitted infections are contracted, there is also resort to older people and to the traditional healers.

This results from the fact that traditional matters that by their nature concern shame and modesty – as

is the case of sexuality – meet with a carefully structured treatment, under particular criteria based on age, which symbolizes experience of life, and other attributes that, in the individual charged with handling them, inspire confidence in others.

Underlying this social experience is the concept of sexuality and desire generally rooted in ideas about the different roles of male and female identities, where the man is represented as strong and impetuous, where the male drive and skill at dealing with the world are synonyms with potency and virility, the opposite of women, transfigured into a suave, candid and fundamentally receptive femininity, under the prism of sexual relations.

Furthermore, in the social construction of sexuality, sexually transmitted diseases are traditionally interpreted as a transgression of sexual morality.

These considerations, which are the basis for perceiving the motivations of sexual behaviour, escape the attention of the usual approaches of HIV and AIDS prevention efforts expressed in the national strategies, which often err by basing themselves on stereotyped orientations of action (message) and of reply (behavioural change), inspired in the biomedical and behavioural understanding of sexuality and of reproductive health in general.

The need for a deeper understanding of the determinants of sex and sexuality is essential in order to seek out alternative and less conventional interventions for AIDS prevention. Indeed, it must be understood that epidemics are, by definition, extraordinary events. They arise because the current understanding of health and disease, and the prevailing health systems and institutions, are not able to cope with the particular form that they follow, and to staunch the particular mechanisms through which they are spread.

### Window of Hope

Assuming that unprotected sex is the main route of HIV infection in Mozambique, and considering that the median age for first sexual relation is 16 years for women and 16.8 for men (IDS, 2003), the period that precedes these ages offers fertile ground for preventive actions to curb the growing pace of HIV infection and reverse its pyramid among adolescents and youths.

Even so, infection is possible, notably through vertical transmission – that is the transmission of HIV from mother to child, among other abnormal events. Diagnosis and confirmation of HIV infection at any age requires laboratory testing.

Although there are other, more sophisticated forms of laboratory diagnosis to detect HIV, viral particles in body fluids, the diagnosis to confirm the presence of the virus in the organism of a child born to an HIV-positive mother, is undertaken as from the 18th month, since that offers the best chance of interpreting whether or not the virus is present in the child (Patient and Orr, 2003).

At birth, children possess maternal antibodies for various diseases, including HIV antibodies, but this does not necessarily mean they are infected. The maternal HIV antibodies decline gradually until they are totally suppressed when the child is 18 months old. Definitive testing is advisable as from this age, since the antibodies detected then will indicate solely the presence of HIV infection in the child (PTV, UNAIDS, 2003; Manual TTT. HIV Criança).

Other signs and clinical symptoms of infection of the child by the HIV virus are used alternatively to determine the situation and what should be done – for example, delayed growth and development, repeated opportunist infections, or persistent signs of malnutrition, among others.

Following up the situation of child infections in the first five years of life has shown that in many countries, including Mozambique, children who contract HIV through vertical transmission – during pregnancy, birth or breast-feeding – have little chance of surviving beyond their fifth or sixth birthday (PTV, UNAIDS, 2003; Manual TTT. HIV Criança).

This fact, if it is not given due attention, may naturally compromise the overall objectives of reducing infant and maternal mortality rates, which have been showing signs of improvement (Government Five Year Assessment 2000-2004). The reversal of these indices of maternal and infant mortality associated with HIV and AIDS requires a more complete picture of concrete activities to reduce HIV infection at all ages, particularly after the first signs of the onset of puberty.

In this context, the period from the 10th to the 14th year of life is known as the **Window of Hope**.

This is a period in which the HIV infection is certainly absent (apart from extraordinary or unusual situations). The **Window of Hope** offers the best prospects for educational and moral investment, for measurable results in the future.

The **Window of Hope** is so named because it is assumed that it offers an optimal entry point for pro-

moting among adolescents the messages and education imbued with sustained information on sexuality, the prevention of sexually transmitted diseases, values of collective life, and signs that can help to build a well-advised personality equipped to take correct decisions, and make safe sexual choices in the future. The Window of Hope Campaign coordinated by CNCS and implemented by the FDC and N'weti organizations is based on this strategy.

In fighting HIV and AIDS, prevention remains the only “cure” until medicines are developed that can treat and eliminate HIV infection. In the context of preventive messages or those leading to safe decisions to prevent infection, abstinence and fidelity are the best options in that they rest on decisions and choices that the individual formulates fully aware of his or her actions.

Abstinence and fidelity, unlike condoms which, among other things, require knowledge and observance of particular conditions – expiry date, storage and handling, knowledge of how to use them – depend less on factors external to the individual, and are thus those that offer decisions and options that can be controlled by the individual conscience.

The individual conscience is shaped within a socialising context that begins in the family and is prolonged throughout the individual's life until death. It is the product of constantly learning social culture and of the constant confrontation and sifting of scattered data that characterise various facets of life and of knowledge that may influence the social behaviour of the individual positively or negatively.

This is why the moral component in the social construction of the individual personality is determinant since it offers the basic elements for distinguishing between good and evil, and to express behaviour in line with the shared culture and values of the individual's social environment.

As for the **Window of Hope**, it is crucial to make use of this period to instil in children and adolescents the values and virtues that can help to formulate in the future correct and safe decisions on their sexuality. On this use rests judgment in the future on the real meaning of the expression. “Window” represents an entrance into a particular place, which in this case is the preparation and education of children for their future lives; and “Hope” is the expectation of a result that compensates for the educational investment in children, and hence in the country's future.

### Sex education in childhood

Education in childhood about values and convictions concerning sexuality is complex and often collapses into irreconcilable polemics. The form and formulas of sex education and/or the approach to sexuality in childhood require greater depth, both in school curricula and in the whole cycle of socialisation and construction of the child's personality.

While in the broader context of the vast Mozambican cultural mosaic, it seems an accomplished fact that sex education is generally a responsibility of elders – normally grandparents and people recognised and legitimised by custom among the communities (educators/promoters of initiation rites) – modern educational psychology has defended the prime importance of parents in the sex education of their children (Haffner, 2000).

The argument underlying this position is that parents are responsible for giving children their first teachings about gender roles, relationships and values, as well as their first sense of self-esteem and emotional care.

Research in developmental psychology has long shown that parents educate their children about their sexuality when they talk to them, dress them, soothe them and play with them, without neglecting the fact that older children continue to learn about sexuality as they develop relationships with their relatives and observe the interactions around them (Clifford T. Morgan et al, 1986).

Since the need for investment in prevention as from the **Window of Hope** generation is now recognised in order to ensure that adolescents do not contract HIV, the challenge that arises is that of implementing the specific actions so that hope produces the desired effects, and this investment thus makes a contribution to halting the gradual spread of the HIV infection.

This challenge poses critical questions, namely:

- the definition of the programmatic context of sex education, and the expansion of prevention based on the framework for the children at the various stages of their development;
- the role of parents and guardians, teachers and educational monitors in the various spheres of life, especially in adolescence; and,
- the role of society in general, but particularly the main socialising environments – schools, churches, sports clubs and others.

The concept of the **Window of Hope**, as seen above, is strong and requires not only commitment, but above all social responsibility, which should be borne and monitored by all sectors of society. Saving children, adolescents and youths from HIV infection is a key condition for the development of the country tomorrow. The prevention of infection, expressed in messages that strengthen abstinence at these ages, until the psychological and physical growth of the human organism is consolidated, and young people, no longer children, feel they are able to formulate a correct decision on their sexuality, should be the banner of the campaign.

Faithfulness should accompany the educational models that seek to instil a moral approach to sexuality from a tender age. It will be difficult to control HIV and AIDS with palliatives. Prevention must always be the battlefield. It should be consistent with the values it is intended to instil in children from the earliest ages of their development.

Putting these principles into practice will require the development of curricula on how to approach matters connected with knowledge of healthy and balanced growth and respect for one's body in an unashamed way in early childhood. Duly designed and standardised programmes can be transmitted by radio or in simple brochures which give clear instructions on the role that parents and guardians or education monitors in infancy can play in this area. In line with this, the **Window of Hope** Campaign coordinated by the CNCS and implemented by two NGOs, the FDC and N'weti, are to be highlighted as relevant experiences in the national response to HIV and AIDS in Mozambique.

Meanwhile, the pre-school curriculum and all subsequent education should strengthen in stages the contents on the sex education of children, depending on their psychological and bodily development and the association of these contents with other school materials, through placing them on the curriculum.

In adolescence, specialised services should be set up with a strong impact on the personality, including personalised assistance to all adolescents and young people who seek information about sexual and reproductive health.

### **Strengthen ART through prioritising prevention**

Despite the various questions that can be posed, and although the number of people undergoing treatment is still insignificant, the growth in treatment means a

great qualitative and quantitative improvement in care for PLWA. In terms of individuals this means a great advance for those benefiting from treatment, but in terms of public health the significance of this intervention is minimal because it still excludes many patients who require treatment.

However great the commitment of the government for all to gain access to treatment, the possibilities of success along this line will always be limited, if the costs implied are taken into account (Table 8.1).

While it is the conviction of government and its main national and international partners that ART should be reinforced and made as widely accessible as possible nationally, the truth is that treatment in itself will never solve the problem.

The success of HIV and AIDS control programmes in reducing the spread of the epidemic in countries such as Senegal, Uganda and Thailand was not achieved with treatment, but with prevention programmes that deter the occurrence of new infections.

Along these lines, the strategy implies certain undertakings. The state should make efforts to continue expanding the opportunities for treatment to ensure that every Mozambican has the same chances of survival. For their part, the patients undergoing treatment should comply strictly with the therapeutic rules and guarantee that they will infect nobody else.

### **Critical analysis of the national response** ***The prevention strategy:*** ***from the first PEN to 2005***

Using a similar approach to the one widely used by countries that have experienced and are still experiencing a growing epidemic, Mozambique has, from its First National Strategic Plan to the present, been guided by interventions along the classic "ABC" line – that is, Abstinence, Be faithful and use Condoms.

If the final goal to be achieved through this three-pronged approach is to reduce infection, the messages used to encourage behaviour aligned to each of the targets of this approach have been frequently questioned. The inadequate nature of the messages has been mentioned, in that they often do not respect certain principles of ethics and decency, and are thus referred to as competing in the promotion of promiscuity, particularly among the youth (Report of the National Debate on Prevention, CNCS, 2004).



But it is not just the messages that have been queried. An entire communication strategy for changing behaviour is considered as somehow alien to the way individuals navigate their social and sexual lives, and also to how they establish their identities within communities.

Instead of making a point of using a contextualised approach that exploits the socio-cultural variables that govern specific human relations from place to place, the interventions undertaken lapse into information flows and audio-visual pieces in the media that are saturated with contradictory and sensational messages on sex, love and relationships.

It is a fact that in the traditional African, and specifically the Mozambican, context, sexuality is a subject which, when approached within the community, is done so in a way where not only the sexes, but also age groups are separated; and there are also times that are considered appropriate for this. But the prevention programmes carried into the community and domestic spheres for the purposes of consciousness-raising intended to change sexual behaviour have often not observed these criteria and requirements, bringing together, for the same purpose, old people and children, parents and their sons or daughters, without any age or sex discrimination.

Messages drawn from the one-fits-all communication approaches, in disregard of the different socio-cultural contexts may slip into rejection by the targeted groups (e.g. when young activists use a wooden imitation penis to simulate how condoms are worn to elder people).

This is also apparent in many of the interventions expressed through other conventional means of influencing a target group. (In fact, the leaflets and visual resources that seek to awaken awareness for a visible change in behaviour always reflect the stereotypical vision and sentiment of what change means for the activist communicator.) There is no fluid cognitive communication between them and the audience, since the language, the symbolism, the context and the idiosyncrasies contain irreconcilable differences.

That is why many studies on Knowledge, Attitudes and Practices (KAP) have shown that there has been for some time a considerable rise in the level of knowledge about what HIV and AIDS is, how it is transmitted, and how it can be avoided, but without this being reflected in visible changes of behaviour, since the same studies show that the attitudes and practices remain at worrying levels.

Rather than information, people need motivation and skills to begin a visible change in behaviour. They also need a welcoming environment that better encourages the changes that it is urgent to make. This is what Catherine Campbell is referring to, in her work on *Why HIV/AIDS Intervention Programmes Fail* (2003), when she states that:

“...giving people information about health risks is unlikely to change the behaviour of more than one in four people, and these are generally the more affluent and better-educated members of a social group. This is because health-related behaviours (such as condom use) are determined not only by conscious rational choice by individuals, on the basis of good information, but also by the extent to which broader contextual factors support the performance of such behaviours.”

Indeed, when we compare the investment made to date with the gains achieved in the prevention of AIDS in Mozambique, we have good reason to say that we are still rather a long way from finding the right approach for halting the damage that the pandemic imposes on us. In fact, in the absence of a sensitivity about how to anchor these approaches within the context and social determinants that condition the acceptance and assimilation of outside contributions, intended to encourage behavioural changes, the investment in HIV and AIDS prevention, in the way that it has been taken to the communities, however well-intentioned, brings marginal returns.

It will be said that it is useful to bring in lessons and good practices from other countries that have already found instruments more or less able to reduce risk and provoke a relative change in behaviour. Such references should not be underestimated. However, it is useful to note that the few examples of countries which have experienced some success can often be reduced to the specific context of the places where they occur. It is difficult to recommend, in letter and spirit, their mechanical replication.

Since HIV and AIDS is an epidemic that communities will live with for a long time, and since there is a need for care about its effects, it is useful to rethink what looks like probable weaknesses in the current strategies.

### ***The allocation of financial resources***

The growing level of HIV and AIDS infection, and the maturing of its evolution towards the state of illness in the human organism, are beginning to bring to the

surface the need for a financial rescaling of health expenditure, in order to provide a response in terms of care services and treatment of infections.

The health sector in Mozambique is one of the main contributors to improved welfare among the population and thus to the Human Development Index (HDI).

*Agenda 2025* concluded that implementing its vision in the health sector involves expanding the National Health Service across the entire country, training staff for the health units, and providing medicines. According to the government's Five Year Programme (PQG) 2005-2009: "...government policy towards the health sector will be guided towards improving the availability of and access to quality health care, based on criteria of efficiency and equity in the distribution of resources and in their use."

To improve attainment of the strategic vision presented in *Agenda 2025* and the PQG, one priority in the sector, which has been considered in PARPA II, should be appropriate distribution of budgeted funds and the modality of budget flows.

As a whole, the PARPA priority sectors, and particularly health and education with 32.4% of total planned expenditure, are approaching the targets set with the donors in the Joint Review of April 2004 (65% for all of the priority sectors and 32.5% for health and education, relative to total expenditure, excluding debt servicing). However, this overall sum tends to disguise a reduction in the allocation of the health sector.

Indeed, with the volume of funds available, the health sector allocation in the country's state budget shows a worrying trend, falling from 14% in 2002 to 13% in 2003 and 11% in 2004, according to estimates from the planning and finance ministry.

Budgetary execution for the same period was about 51%, 65% and 69% respectively, showing a

growth trend. However, it is difficult to establish the overall levels of expenditure in the sector because of the large amount of "off-budget" funds, which are still not included in the budget. There is little information about the level of execution in this particular area.

A recently concluded study of the health sector shows that 29% of resources in the sector are not programmed in the State Budget, 60% are not executed, and 44% are not covered by the Public Accounts within the State Budget system (Cabral et al, 2005). This large amount of funds and financial flows outside the system makes planning and efficiency difficult.

Estimating the cost of interventions in response to HIV and AIDS is extremely difficult, starting with the fact that it is not possible to calculate the volume of related activities undertaken by the health services. Furthermore, there are no specific cost estimates for these activities with reference to Mozambique, and those in international literature are not always comparable. The projections presented here represent almost exclusively the financial gap the country faces in fighting the disease.

Several documents have been published in recent years assessing the intervention in terms of cost-effectiveness, thus introducing a rough calculation of the financial burden of implementing these programmes. Most of the studies try to be useful to the process of decision-making in the context of allocation of resources. More than simply establishing the costs of implementing a given activity (which should be planned and budgeted), what is done is to compare the difference in the costs of avoiding an HIV infection with those of gaining another year of healthy life (DALY or QALY) – between the various interventions, to decide which ought to be prioritised.

**Table 8.1 Financing of the health sector as % of public expenditure, 2000-2004**

STATE BUDGET	Projections in millions of meticaís				
	2000	2001	2002	2003	2004
Total public expenditure	15 966 200	14 482 454	28 666 306	27 891 091	29 810 733
Public expenditure on health	1 437 415	1 973 849	3 905 377	3 630 848	3 275 233
Public expenditure as % of GDP	27%	20%	35%	27%	24%
Health sector as % of GDP	2%	3%	5%	4%	3%
Health sector as % of budget	9%	14%	14%	13%	11%

Source: MPF

The cost estimates presented are not always directly comparable. Some include all the costs, others only the cost of drugs, while staff and other expenses are included on the days of hospitalisation or outpatient consultation. For ART, there are still no reliable estimates of costs in a mass treatment approach. Furthermore, prices are falling dramatically, and estimates calculated a year ago are already completely out of date the following year.

### *Resources allocated still below the Abuja undertakings*

The few studies of costs undertaken in Mozambique correspond to different methodologies and periods, and propose much less expensive measures for hospitalisation and consultations. Thus, according to the unit studies obtained in several of the country's health units, US\$5 per day of hospitalisation and US\$0.5 per consultation, would be the costs of these two activities, although the methodology is difficult to compare.

To cover the estimated number of people suffering from AIDS, the total cost would be US\$12 million for hospitalisation and US\$500,000 for consultations, covering the total number of patients in 2004.

There are much lower estimates for treating Sexually Transmitted Infections (STI), generally less than US\$4 per occurrence, but this includes only drugs and home-based care. For the latter component there are two estimates that situate the cost per patient at US\$45 and US\$200 respectively, but with significant differences in the model of care offered (more or less medicalised) and in the area covered (rural/urban), so that US\$100 has been used as the average. For opportunist infections, an average estimate is used of US\$20 in antibiotics per patient per year.

A great limitation of the calculation methods presented to date is the lack of consideration for the fact that interventions against AIDS do not happen in isolation, but as part of a system that has to provide other services. In Mozambique, as in other countries, the system as a whole must be improved, so that other interventions may be integrated into it, specifically for HIV and AIDS. Thus, the expenditure needed to offer good quality care should be increased to include training and investments.

A projection of costs, including this systemic component, estimated the financial needs at about US\$500 million for five years, but with relatively

modest objectives for ART coverage (PEN ITS/HIV/SIDA 2004-2008).

Important questions in this sector include:

- how can we improve the quality of the data in the Health Information System; and
- how can we improve the levels of absorption of health professionals trained inside and outside the health ministry's training institutions, stressing their placement in the areas most lacking in professionals (especially because of the impact of HIV and AIDS).

Due to the feeble funding allocated to the sector in recent years, as well as the type of activities undertaken at each level of care, the funding channeled to the primary level, recently increased, is still relatively low, particularly for rural areas.

In addition, great inequalities remain between the provinces, suggesting that, in the coming years, through an allocation of adequate funding, more stress should be put on expanding the network to the poorest parts of the country. Priority should be given to the more remote rural areas, and particularly Zambézia, Nampula, Niassa, Cabo Delgado and Inhambane, which have been identified as the worst served provinces.

Over the next five years (2005-2010), it is essential to ensure that 15% of the State Budget is directed to the health sector, in line with the promise given by the government in the Abuja Declaration (2000). The sector should also establish mechanisms to improve financial management and thus improve efficiency in the use of resources. Finally, it is important to develop sustainable and community-based financing mechanisms (including pre-payment schemes for health care provided above the primary level), which can have a significant impact on the quality of services, and on the incentives to seek health services.

Given the context of the significant shortage of resources that the country faces, and considering the persistent inequalities, together with the difficulties inherent to implementing poverty-sensitive strategies, the main challenges for this sector are the following:

- to review the criteria for allocation of resources, in order to guarantee that adequate resources are directed to the poor;
- to expand and improve the implementation of priority programmes, so as to reach the poorest strata;

- to develop community participation schemes;
- to improve dialogue with other sectors;
- to develop knowledge and increase its use associated with the adoption of appropriate technologies;
- to reduce the financial and non-financial barriers to using the health services;
- to promote and develop sustainable financing mechanisms, including pre-payment systems.

Consideration should be given to the implications of an anti-AIDS programme with a strong ARV component for the future funding needs of the sector. For the first time in Mozambique, the health sector must face exponential costs with a health programme—the programme's success in the number of patients on ART means an undertaking to keep up the treatment for an indefinite period.

The risk of committing an excessive portion of the system's resources for an activity with no foreseeable end should be faced in two ways.

On one hand, the allocation for preventive and curative interventions should be properly balanced, so as to reduce the future load by reducing the number of new patients.

On the other hand, gains in efficiency should be obtained by integrating the responses to HIV and AIDS into the regular functioning of the system (which will certainly imply a change in the way of providing health services), and directing the funds to activities that benefit the system.

### Conclusions and recommendations

HIV and AIDS are officially recognized as a major problems on a "devastating scale" (PARPA II). It is predicted that 800,000 Mozambicans will die of AIDS between 2004 and 2010. The target is to get 165,000 adults onto anti-retroviral treatment by 2009. Of those infected, 57% are women. PARPA II notes in particular the problem of poor women "who run extra risks because they are involved in sexual activities for subsistence."

This report puts a strong emphasis on the need for the Ministry of Health to greatly improve its capacity for delivery of services. The first priority of the health sector should be to spend the money it has been given; in 2004 the health sector spent only 62% of its budget. And, as stressed in the PARPA II document, the health coverage remains limited, with just 36% of the population living within 30

minutes of a health facility. A new priority is to establish health facilities in poorly serviced areas and especially in the poorly served provinces, to raise access to 45% by 2009.

The national response to HIV and AIDS pandemic will depend, to a large extent, on the success of this strategy, in which prevention is maintained as a priority, in parallel with increased access to ART and stronger prevention of parental transmission of the virus that causes AIDS.

For this strategy to succeed the following recommendations must be considered:

- Continued reinforcement of the government's strong political commitment at the highest level, and of an efficient and systematic leadership, seeking to ensure the integration of HIV and AIDS into the strategic plans of all sectors, including the private sector and civil society organisations, in a multi-sector perspective, coordinated by the National AIDS Council (CNCS);
- Continued promotion of voluntary testing and counselling as the way to ensure the provision of care and support, and the reduction in stigma and discrimination;
- Continued expansion of access to anti-retroviral treatment, under conditions of adequate technical and medical safety, and with the minimum nutritional levels required of patients;
- Implementation of an effective, knowledge-based communications strategy, which is integrated into the socio-cultural diversity of Mozambican communities;
- Mitigation of the impact of the epidemic, by ensuring programmes to protect and support orphans and other children who are vulnerable, due to the diseases associated with AIDS, and expanding the possibilities of preventing parental transmission of HIV;
- Promotion of home and community-based care, and of social support systems.

For the implementation of these recommendations, it is essential to follow strictly the objectives laid down by PARPA II in this area, including strengthening of the budgetary provision. In order for the National AIDS Council to fully perform its tasks as the body coordinating the multi-sectoral response strategy, its authority, powers and resources must also be strengthened.

**Box 8.1**

This is the last speech I shall make at any of these international conferences in my role as United Nations Special Envoy on AIDS.\* I'm pleased that this has been a good conference, covering an extraordinary range of ground, and I therefore feel confident in asking you to join with me in giving force to the oft-repeated mantra: "Time to Deliver".

Of what would that meaning consist? Allow me to set out a number of items.

**Number 1:** Abstinence. Only programmes don't work. Ideological rigidity almost never works when applied to the human condition. Moreover, it's an antiquated throwback to the conditionality of yesterday to tell any government how to allocate its money for prevention. That approach has a name: it's called neo-colonialism.

**Number 2:** Circumcision, as a preventive intervention, should not be subject to bureaucratic contemplation forever. We have enough information now to know that it is an intervention worth pursuing. What remains is a single-minded effort to get the word out, respect cultural sensitivities, and then for those who want to proceed, make certain that we have well-trained personnel to do the operating.

**Number 3:** In the hierarchy of preventive measures, the Prevention of Mother To Child Transmission (PMTCT) is very near the top. It is a bitter indictment that so few HIV-positive pregnant women have access to PMTCT. It is inexcusable that in Africa and other parts of the developing world we continue to use single-dose Nevirapine, rather than full triple therapy during pregnancy, as we do in western countries like Canada. I ask: What kind of a world do we live in where the life of an African child or an Asian child is worth so much less than the life of a Canadian child?

**Number 4:** It is now accepted as unassailable truth that people in treatment need nutritious food supplements to maintain and tolerate their treatment. And yet, there is a growing clamour from People Living with AIDS that decent nutrition simply isn't available, leaving them in a desperate predicament. The World Food Programme released a study at this conference calculating the cost of food supplementation at 66 cents a day for an entire family; what madness is it that denies the World Food Programme the necessary money?

**Stephen Lewis: "Time to Deliver"**

**Number 5:** One of the issues that received an insufficient airing at this conference is sexual violence against women. Just a few months ago, I was visiting the local hospital in Thika, Kenya, which houses the one rape counselling centre in that part of the country. The rise in sexual violence has meant that there are over 30 reported cases every month, with multiples of that number never of course reported. The phenomenon is by no means singularly African; we live in a world community where the depravity of sexual violence has run amok. And yet, we lack the laws, the jurisprudence, and the enforcement that would give to women even a modicum of protection.

**Number 6:** There is an ongoing epidemic of child sexual abuse. The dynamic of abuse of children is often different from that of the sexual abuse of women; what is common to both is the terrifying danger of transmission. Children require different interventions. Alas, we are nowhere near the articulation of a response. In this instance, as in every such instance, children are relegated to the scrap heap of society's priorities, and have been so relegated throughout the 25 years of this pandemic.

**Number 7:** It is impossible to talk about children without talking about orphans. And it is impossible to understand how, in the year 2006, we still continue to fail to implement policies to address the torrent, the deluge of orphan children. Countries have programmes of action; they languish unfunded. One of the most chilling pieces of statistical data is the finding that only three to five per cent of orphans receive any intervention of any form.

**Number 8:** It is impossible to talk about orphans without talking about grandmothers. Who would ever have imagined it would come to this? In Africa, the grandmothers are the unsung heroes of the continent: these extraordinary, resilient, courageous women, fighting through the inconsolable grief of the loss of their own adult children, becoming parents again in their fifties and sixties and seventies and eighties. We need major social welfare programmes that will recognize these essential caregivers' contributions to society as legitimate and difficult labour, and offer the guarantee of sustainable incomes to the grandmothers of Africa; from food to school fees to income generation, the answers must be found.

**Box 8.1 continued**

**Number 9:** In the midst of everything else, we must continue to roll out treatment. I am worried by the new figures. There were one million, three hundred thousand people in treatment at the end of 2005. Six months later there are one million, six hundred and fifty thousand in treatment. Treatment is keeping people alive; treatment is bringing hope; treatment is stimulating prevention.

**Number 10:** Unbeknownst to many, we are on the cusp of a huge financial crisis in response to the pandemic. I think we have been lulled into a damaging false security by the fact that we jumped from roughly US\$300 million a year from all sources in the late 1990s, to US\$18 billion in 2007 and US\$22 billion in 2008. Projections indicate the need for US\$30 billion in 2010, from the moment of universal access to treatment. The financial promises made at the G8 Summit in Gleneagles in 2005 are already unraveling. We will never accumulate the extra US\$25 billion for Africa by 2010 as was committed.

\* These are selected extracts from remarks by the UN Special Envoy on AIDS, Stephen Lewis, at the closing ceremony of the 16th International AIDS Conference in Toronto, Canada, on 18 August 2006.

# Technical Notes

## Technical Note 1

### Calculating the Human Development Index disaggregated by Provinces and Regions

One of the innovations of Mozambique's National Human Development Report (NHDR) is the presentation of the Human Development Index (HDI) disaggregated by provinces and regions. A fundamental step for this innovation is the disaggregation of the Gross Domestic Product (GDP) by provinces and regions at both current prices and constant prices.

This technical note describes in terms of national accounts the methodology used to break down the Gross Value Added (GVA) from 2000 to 2005 by provinces and regions and how this indicator is adjusted to arrive at the concept of the GDP. The material takes up and updates the methodologies for disaggregating the national GVA by provinces and regions described in the previous NHDRs.

### Principles and Methods of Regionalisation

This section explores the general principles used in disaggregating the GDP produced by the INE's Department of National Accounts by provinces and regions. Thus we start by defining the concept of Regional Accounts and regional territory, and then establish rules for the provincial/regional breakdown of the GDP.

In an initial approach, the regional/provincial accounts consist of the regionalised registration of operations concerning the flow of goods and services between the residents of a region/province, and make possible the construction of a series of macro-economic indicators that facilitate comparisons of structure and evolving analyses of different regions. Thus each region is treated as a specific economic entity. However, this undertaking runs into some serious conceptual obstacles, particularly the fact that the regional territory is not a "closed area" from the point of view of its economy; that is, the complete description of the economy of each region/province cannot be obtained with the same depth or breadth as a national economy, given the multiplicity of statistical restrictions on deeper knowledge of regional or provincial activities.

Like the national accounts, the regional accounts are governed by the principle of residency, according to which each

economic or productive unit is allocated to a particular economic territory in relation to which it has a centre of economic interest. Thus the application of the principle of residency, as a general principle, in the regional/provincial accounts by area of activity means that the Gross Value Added should be allocated where the production unit resides. In the case of households, since they are single-region institutional units, it is considered that their centre of economic interest is in the region where the majority of their activities take place, which corresponds to the region where they live, but not necessarily the region where they work.

Delimiting the regional economy rests on the functional perspective, that is, the technical economic unit of reference is the establishment whose activity in the region where it is located it is intended to capture. Since the establishment is the unit which best represents regional activity, it is also here that one finds the greatest constraints on constructing an accounting system identical to that used for the national accounts, since the establishment, unlike the company, does not possess legal status, and has no autonomous accounting. This fact makes it difficult to individualise an important part of the flows supporting the production of regional accounts (IGBE, 1999).

### Methods of Regionalisation

The regionalisation of operations varies since it is determined by the type of data available, and on the organisation of the National Statistical System itself. According to IBG (1999) and Eurostat (1995), in general there are three methods of regionalisation:

- The Ascending Method, which presupposes the collection and treatment of the elementary statistical units, taking into consideration local level units of economic activity (establishments) and institutional units (households and public administrations) and gradually adding them together until reaching the desired regional level. This method, although it ensures the use of statistical data strictly linked to the variables that it is intended to measure at regional level, does not guarantee *a priori* consistency with national figures.
- The Descending Method consists of disaggregation of the national product on the basis of a regional indicator resulting in the use of apportioning units, i.e. it functions by ref-

erence to a regional indicator that is as close as possible to the variable to be estimated. The method is called descending because the aggregate is allotted to a region and a year on the basis of a local or regional unit of economic activity. However, the notion of unit of local economic activity, in most cases, continues to require an accurate regional allocation. For example, the Gross Value Added of rail transport can be allocated to regions according to the number of passengers and aggregate tonnage transported. This method has advantages over the previous one because of guarantees that the national figures and the regional figures are consistent, since the latter result from a division of the national total based on a distribution key – but it has disadvantages in that the regional valuations do not always result from data directly linked to the variables to be measured and the basic units in question. But this disadvantage can be less serious if the distribution indicator is correlated with the operation in question.

- The Mixed Method, which consists in using simultaneously the ascending and descending methods, since the ascending method is rarely found in its pure form. There are always gaps in the data which have to be filled by using the descending approach. Similarly many descending methods frequently include data from exhaustive sources, as do ascending estimates. Thus mixed methods are the norm, and their degree of reliability depends above all on the available statistical sources.

In this work, priority has been given to the descending method, where the main regional aggregate is a replica of the following aggregates in the national accounts: Production, Gross Value Added and the Gross Domestic Product (GDP), in the perspective that the resulting estimates reflect the National Accounts produced by the National Statistics Institute (INE).

One advantage of this method is the numerical coherence between the national accounts and the regional ones, i.e. it guarantees that the national figures and the regional figures are consistent, knowing that the latter result from a division of the national total based on a distribution key. This method is cheaper to develop in that it uses existing data, and does not require new exhaustive records. It is the method most recommended in situations where there is no information from the units of local economic activity.

### Sources of Data

To regionalise most of the operations, priority was given to the sources and statistical indicators from the provinces/regions, while simultaneously verifying whether they admit the possibility of certain operations being multi-regional. In cases where the quality of the data was mediocre or unsatisfactory, or because it simply did not exist and hence for a particular operation it was

not possible to use sources or indicators based on place of residence, the regional allocation of production was undertaken on the basis of estimates and approximations resting on empirical knowledge of the reality of the provinces.

Thus for the operations of allocating production and Gross Added Value where adjustments were made to reach the concept of regional/provincial GDP, the main statistical sources were the balance sheets for 143 products drawn up by the INE's Department of National Accounts, the State Budget, the Provincial Statistical Yearbooks, the data from the Early Warning System, the data from surveys and censuses (IAF, QUIBB, CAP, TIA, IAF, RGPH, etc.), accompanied by estimates and approximations resting on empirical knowledge of the reality of the provinces.

For agricultural products, the annual data from the Early Warning System was used, which provides estimates of production and cultivated area by province for seven major crops (unhusked rice, maize, sorghum, beans, fresh cassava, groundnuts and millet). It is estimated that, taken together, these crops account for about 75% of agricultural production (IAF96). Apart from the data from the Early Warning System, the provincial yearbooks have information on other crops. For the remaining agricultural produce, for which there is no detailed provincial/regional information, the authors took the population growth rate, on the assumption that, when the market is saturated and there is no possibility of exports, production becomes stabilised at the size of the market, and its growth, in the case of perishable products, in the absence of other distorting factors, approaches the population growth rate.

For livestock produce, the data from the Agricultural and Livestock Census held by the INE in 1999- 2000 was used. This information is updated by using data on livestock inventories by province, and by category and species, providing data on cattle, goats, pigs and other species.

For the fisheries, mining and commercial services sectors, the allocation of production to provinces was based on the number of people employed in the respective economic activity, in accordance with the results from IAF 2002/03 and the projections from the 1997 Population Census.

For the industry and construction sectors, the allocation was based not only on the number of people employed in the respective economic activity, but also on estimates and approximations resting on empirical knowledge of the reality of the provinces. For example, allocation of production in the construction sector paid a great deal of attention to Maputo and Inhambane provinces which in the last four years have benefited from large investments in manufacturing industry and in mining respectively.

For electricity, both the amount generated and the amount invoiced by provinces, and included in the EDM annual reports,



were used. The application of the principle of residence according to which production of Gross Value Added should be allocated where the unit of production is resident allowed the production of HCB to be entirely allocated to Tete province. From the production point of view, for piped water services, the reference data come from the water companies in each province. This information was complemented by the IAF data registering expenditure on water that is not piped. This value is updated annually by the population growth rate, on the assumption that the service bears a direct relation to the number of people who need these services.

For most activities in the tertiary sector (trade, banking and insurance, and real estate services), although they have a huge weight in the national economy,<sup>1</sup> they are the least known part of the regional estimates. In many countries, the methodology used for estimating even the national Gross Value Added of this sector is not very good. In this work, recognizing the poor quality of the data on this sector, the allocation of operations was based on the number of people employed in the service sector.

For restaurants and hotels, production was allocated according to the guest-nights in hotel establishments, as registered in the provincial yearbooks. This criterion is more consistent with that used by the INE's Department of National Accounts in calculating quantitative indices for the sector.

The distribution of production in the transport and communications sector was based on an index combining statistics of the number of vehicles, cargo handled in the ports, passengers transported, and telephone coverage.

Finally, for the public administration and defence services, and for health and education services, the authors used the expenditure in the State Budget, and number of health staff and school attendance respectively.

### Disaggregation/Regionalisation of Operations

To allocate production to provinces, the reference point taken was the balance sheets for each year drawn up by the INE's Department of National Accounts for each of the 143 products, on the assumption that the sum of the production of all of the provinces should be approximately equal to the value of production on the balance sheets.

As the main rule, the regional data with provincial detail is used to estimate the relative participation of each region in the national sum by areas by variables. This establishes a key of distribution by province. However, it is not possible for all areas to obtain regional information for all variables. Hence alternative methods are used so as to obtain better estimates for the variable in question. This implies, in practice, that the same regional distribution can be applied both for production and for value in the various fields of activity at the most detailed level. Thus

the technical coefficient of intermediate consumption is assumed, that is, the ratio between production and intermediate consumption is the same in all regions. This hypothesis, although difficult to confirm, cannot be avoided as a result of the methodology used in this study.

### Adjustment of the Provincial Values

From the conceptual point of view, it was not possible to establish an objective criterion for a provincial allocation of customs duties and services of indirectly measured financial intermediation (SIFIM). Arising from the difficulties in obtaining indicators to share out the customs duties and SIFIM by provinces, the distribution was done proportionately to each province. This adjustment made it possible to reach the concept of the GDP.

### Quality and Precision of the Estimates

The precision and quality of the estimates presented here depend on the type of methodology applied, but above all on the quality of the data, a factor which is beyond our control, and necessarily involves improving the provincial statistical information. In general, the regional/provincial data are less exact than the national data, because they are based on smaller samples, and on data bases of inferior quality.

The national economy has a strong identity: the national frontiers are fixed and cross-border flows (of people, goods, services and financial assets) are habitually measured, or are even regulated. The regional economy is much more open: the regional/provincial boundaries vary from time to time, and the flows between regions/provinces are so common that they are rarely regulated or measured. Even so, based on the available data and the criteria we have defined, it has been possible to present an estimate that we believe reflects what is really happening in the Mozambican economy.

### Conclusions

In this work, the Descending Method has been used to disaggregate the 2000-2005 GDP by provinces and regions. For sources of data, the authors used the balance sheets, the Provincial Statistical Yearbooks, data from the Early Warning System, as well as the data from surveys and censuses (IAF, QUIBB, CAP, TIA, IAF, RGPH, etc.), accompanied by estimates and approximations based on empirical knowledge of the reality of the provinces to disaggregate production and Gross Value Added by provinces/region and produce estimates of the GDP from the perspective that the resulting estimates would mirror the national accounts compiled and published by the INE.

Based on these assumptions, first distribution keys were constructed based on the balance sheets of the national accounts formed by a sample of 143 products. Based on the dis-

<sup>1</sup> As a whole, the tertiary sector accounted for 48% of the GDP in 2004

tribution keys, proportional allocation of the national sums was made for each field of activity and by provinces/regions. Arising from the difficulties of obtaining indicators for sharing out customs duties and SIFIM by provinces, the national values of these operations were allocated proportionately to the Gross Value Added of each province. This adjustment made it possible to reach the concept of the Gross Domestic Product of the province or region.

The precision and quality of the estimates presented here depend on the type of methodology applied, but above all on the quality of the data, a factor which is beyond our control, and necessarily involves improving the provincial statistical information. Even so, based on the available data and the criteria we have defined, it has been possible to present an estimate that we believe reflects what is really happening in the Mozambican economy.

### Technical Note II

#### Calculating the Human Development Index (HDI)

The HDI is based on three indicators: longevity, as measured by life expectancy at birth; educational attainment, as measured by a combination of adult literacy (two-thirds weight) and the combined gross primary, secondary, and tertiary enrolment rate (one third weight); and standard of living, as measured by real per capita GDP (in PPP \$).

To calculate the HDI, the parameters used are derived strictly from the methodology of the Global Human Development Reports, which fix for each of the indicators of the HDI, the following minimum and maximum values:

- Life expectancy at birth: 25 years and 85 years;
- Adult literacy: 0% and 100%;
- Combined gross enrolment rate: 0% and 100%;
- Real per capita GDP (PPP \$): \$100 and \$40,000.

Thus, the results obtained are comparable with the indicators of other countries and to the figures published in the GHDRs, diverging only in the sources of the data used. However, since it makes no sense to use a per capita GDP in PPP dollars to compare the level of human development between regions within Mozambique, the minimum and maximum values of the GHDRs were converted into Meticals based on the PPP dollar conversion rate, and then applying a deflator allowing comparisons between years along a series under analysis.

Based on these fixed minimum and maximum values, the indices for life expectancy and educational attainments were calculated according to the following general formula:

$$Index = \frac{Actual\ x_i\ value - minimum\ x_i\ value}{Maximum\ x_i\ value - minimum\ x_i\ value}$$

Taking as an example Mozambique's life expectancy at birth (43.3 years), the adult literacy rate (43.3) and the combined gross primary, secondary and tertiary enrolment rate (31.6), all for the year 2000, then the life expectancy index ( $I_{LE}$ ) and the educational attainment index ( $I_{EA}$ ) for this year would be:

$$I_{LE} = \frac{43.3 - 25}{85 - 25} = 0.322 \quad I_{EA} = \frac{2^* \frac{43.3}{100} + \frac{31.6}{100}}{100 - 25} = 0.394$$

Constructing the income index ( $I_y$ ) is a little more complex, and it is not the aim of this technical note to present the details of how it is built. But we can summarise the construction of the income index by using the following formula:

$$I_y = \frac{Log(y\ actual) - Log(y\ minimum)}{Log(y\ maximum) - Log(y\ minimum)}$$

Taking as an example the real per capita GDP in PPC dollars of 2000 (996.3), we can calculate the corresponding index in the following way:

$$I_y = \frac{Log(996.3) - Log(100)}{Log(40000) - Log(100)} = 0.384$$

Once the indices for life expectancy, educational attainment and income have been obtained, the HDI is calculated as a simple average of the three indices.

$$HDI = \frac{0.322 + 0.394 + 0.384}{3} = 0.366$$

### Technical Note III

#### Calculating the Gender-adjusted Development Index (GDI)

Calculating the GDI is based on the same variables as the HDI, with the difference that the GDI adjusts the average achievement in life expectancy, educational attainment and income in accordance with the disparity in achievement between women and men. In other words, the GDI is the HDI adjusted to take account of sexual inequality.

In this study the weighting formula was set at  $\alpha=2$ , taken from UNDP (2004) which expresses a moderate aversion to inequality.<sup>2</sup> As in the HDI, in constructing the GDI the following

maximum and minimum values were established, taken from the GHDRs:

Life expectancy at birth: Maximum 82.5 e 87.5 years for men and women respectively: Minimum 22.5 and 27.5 years for men and women respectively. The difference reflects the fact that women tend to live longer than men, given the same care (medical care, nutrition etc.)

The same maximum and minimum values as used in calculating the HDI were maintained for the Adult Literacy Rate, the Combined Gross Enrolment Rate, and real per capita GDP, as well as the formula for calculating the individual indices. However, to allow comparability of the administrative regions within Mozambique, the minimum and maximum values were converted into nominal meticaís, based on the PPC conversion rate, and then applying a deflator that allows comparability between years along a series under analysis.

**The equally distributed life expectancy index is given by:**

$$\{ \text{Female population share} \times (\text{Female life expectancy index})^{(1-\alpha)} + \text{male population share} \times (\text{Male life expectancy index})^{(1-\alpha)} \}^{(1-\alpha)}$$

Likewise, **the equally distributed educational index is given by:**

$$\{ \text{Female population share} \times (\text{educational attainment index})^{(1-\alpha)} + \text{male population share} \times (\text{educational attainment index})^{(1-\alpha)} \}^{(1-\alpha)}$$

### Income Calculation

Values of real per capita GDP (PPP US\$) for women and for men, in an ideal situation, are calculated, following UNDP (2004:264) recommendations, from the female share ( $S_f$ ) and male share of earned income, using the ration between female non-agricultural wages ( $W_f$ ) and male non-agricultural wages ( $W_m$ ) and the percentage shares of women ( $ea_f$ ) and men ( $ea_m$ ) in the economically active population. Formally:

$$\text{Female share of the wage bill} = \frac{(W_f / W_m) * ea_f}{(W_f / W_m) * ea_f + ea_m}$$

Assuming that the female share of earned income is exactly equal to the female share of the wage bill:

$$S_f = \frac{(W_f / W_m) * ea_f}{(W_f / W_m) * ea_f + ea_m}$$

When data on the wage ratio are not available, as is the case in Mozambique, the same document suggests an estimate of 75%, the weighted average of the wage ratios for countries with wage data out of the series of countries included in the study, of which Mozambique was part. This value means that, on average, the wages of women are 25% lower than those of men.

It is then assumed that the total GDP (PPP US\$) of a country (Y) is divided between men and women in accordance with the female share of earned income. Formally,

$$\text{Total GDP (PPP US\$) going to women} = S_f \times (\text{Total GDP PPP\$ of the country})$$

$$\text{Total GDP (PPP US\$) going to men} = \text{Total GDP PPP\$ of the country} \times (1 - S_f)$$

The per capita GDP (in PPP US\$) of ( $y_f$ ) and of men ( $y_m$ ) is obtained by division by the female and male population of the country.

The adjusted income both for women  $W(y_f)$  and for men  $W(y_m)$  is dealt with in the same way as in the construction of the HDI:

$$W(y_f) = \frac{\text{Log}(y_f) - \text{Log}(y_{\text{minimum}})}{\text{Log}(y_{\text{maximum}}) - \text{Log}(y_{\text{minimum}})}$$

&

$$W(y_m) = \frac{\text{Log}(y_m) - \text{Log}(y_{\text{minimum}})}{\text{Log}(y_{\text{maximum}}) - \text{Log}(y_{\text{minimum}})}$$

**The equally distributed income index is given by:**

$$\{ \text{Female population share} \times [W(y_f)]^{(1-\alpha)} + \text{Male population share} \times [W(y_m)]^{(1-\alpha)} \}^{(1-\alpha)}$$

2 Expresses a moderate degree of inequality aversion and is calculated as a constant average of the male and female values.



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## Statistical Annex

