



Kingdom of Cambodia  
Nation Religion King

# CAMBODIA HUMAN DEVELOPMENT REPORT



Societal Aspects of the  
HIV/AIDS Epidemic  
in Cambodia  
Progress Report, 2001

Ministry of Planning

UNDP is the UN's global development network, advocating for change and connecting countries to knowledge, experience and resources to help people build a better life. We are on the ground in 166 countries, working with them on their own solutions to global and national development challenges. As they develop local capacity, they draw on the people of UNDP and our wide range of partners.


[www.undp.org](http://www.undp.org)



**KINGDOM of CAMBODIA  
NATION - RELIGION - KING**

# Cambodia Human Development Report

Societal Aspects of the HIV/AIDS Epidemic in Cambodia  
Progress Report, 2001

Prepared with the assistance of  
United Nations Development Programme 



---

# Foreword

---

It gives me great pleasure to introduce the *Cambodia Human Development Report 2001*, which is the fifth in a series of national Human Development Reports published in Cambodia. More than 100 countries throughout the world have published national Human Development Reports. These reports have been important tools for the promotion of the cause of human development and a people-centred approach to national policy making. Each of the four previous *Cambodia Human Development Reports* has been very well-received by government agencies, NGOs, international donors and civil society groups. They have also attracted considerable media attention. More importantly, they have provided information that is useful for planning and programming purposes to many development organisations working in the field.

This report is the first Cambodia Human Development Report to be produced within a new capacity building strategy. It was prepared by the newly formed National Research Team with technical cooperation, and ensured full ownership of each stage of production. This is an important step towards national autonomy in production and full ownership of the *Cambodia Human Development Reports*.

*Cambodia Human Development Report 2001* focuses on the HIV/AIDS epidemic in Cambodia. Such a research effort will spread over a period of two years. This year's progress report documents the reciprocal relationship between the HIV/AIDS epidemic and human development in Cambodia. The Royal Government of Cambodia responded rapidly to the emerging epidemic in Cambodia, and evidence suggests that the HIV prevalence rate may now be stabilising. Nevertheless, Cambodia has the most serious epidemic in the region and its impact is now being felt throughout the country. For this reason, it was important for the *Cambodia Human Development Report 2001* to focus on understanding the main determinants contributing to the epidemic in Cambodia.

The report details how widespread poverty in Cambodia provides fertile ground for the spread of the epidemic and how the epidemic, in turn, undermines efforts to alleviate poverty.

The report highlights the key concept of vulnerability and identifies essential features of present-day Cambodian society that feed this vulnerability. Thus, the report is an important tool for policy and programme design. I would like to add my support to the report's recommendation that a people-centred approach is essential in order to build on the achievements of the Cambodian response to the epidemic so far and to move this response to the next stage.

The *Cambodia Human Development Report 2001* is the outcome of a nationally executed project funded by UNDP and executed by the Ministry of Planning with the technical cooperation of the Cambodia Development Resource Institute. This report makes extensive use of the quantitative surveys undertaken by the National Institute of Statistics, Ministry of Planning: particularly, the 1998 population census and the Cambodian socio-economic survey 1999, which were

undertaken by the National Institute under the auspices of the Ministry of Planning. The report also makes extensive use of the HIV sentinel surveillance surveys and behavioural surveillance survey undertaken by NCHADS, Ministry of Health with support from FHI, WHO, UNICEF, French Cooperation and the Cambodia Disease Control and Health Development Project.

I would like to acknowledge the assistance of several agencies and individuals in bringing out the *Cambodia Human Development Report 2001*. First and foremost, the Ministry of Planning would like to thank UNDP for its many contributions including mobilizing technical inputs and funding for producing the report. Ms. Dominique Aï t Ouyahia-McAdams, Resident Representative of UNDP-Cambodia, has been very supportive and encouraging of this new capacity building phase of the *Cambodia Human Development Report 2001*.

Second, I would like to acknowledge the Cambodia Development Resource Institute for providing technical cooperation and an appropriate academic and research-focused environment which enabled the development of professional skills among the National Research Team. Particular thanks are due to the Director of Research for the *Cambodia Human Development Report 2001* who facilitated this process, Dr. Claude Katz, and to Ms. Eva Mysliwiec and Dr Sarthi Acharya for their technical cooperation. The members of the National Research Team are: Ms. Khiev Bory, Mr. Maun Sarath and Mr. Chea Chantum (Ministry of Planning), Dr Lim Kalay (National AIDS Authority), Dr. Ly Penh Sun (National Centre for HIV/AIDS, Dermatology and STDs), Mr. Prum Virak, Mr. Deup Channarith, Mr. Long Yav and Mr Rath Sethik (Centre for Population Studies, Royal University of Phnom Penh). Assistance to the team was also provided by Ms. Tep Saravy at CDRI. The report was edited by Ms. Alexandra Maclean.

Third, I would like to thank the technical advisory group established by the Ministry of Planning for the *Cambodia Human Development Report 2001*, comprising of: Ms. Mom Thany (Child Rights Foundation), Ms. Khieu Serey Vutha (Ministry of Women and Veteran's Affairs), General Meas Sakon (Ministry of Interior), Mr. Lim Kalay and Dr. Tia Phalla (National AIDS Authority), Mr. Veng Bun Lay (Ministry of Defence), HE Kim Saysamalen (Ministry of Planning), Mr. David Salter and Mr. Gunner Walzholz (ILO), Mr. Geoff Manthey (UNAIDS), Mr Sar Nak (Ministry of Education, Youth and Sports), Dr. Yath Yathy (Ministry of Health), Mr. Chea Chantum (Ministry of Planning), Mr. Chea Samnang (Ministry of Rural Development), Mr. James D'Ercole (UNFPA), Ms. Aye Aye Twin (WHO), Ms. Ingrid Cyimana (UNDP), and Ms. Heang Siek Ly (Ministry of Planning). The technical advisory group provided very useful guidance to us in ensuring that the report reflects the various concerns and sectors of Cambodian society.

I am confident that this year's progress report will contribute to the national debate and dialogue about the HIV/AIDS epidemic in Cambodia, informing strategic direction and policy and programming decisions.



Chhay Than  
Minister of Planning  
Royal Government of Cambodia

Phnom Penh  
June 2002

---

# Foreword

---

Cambodia faces an AIDS epidemic that potentially could reverse the development gains made since peace returned to the country. It is estimated that 2.8% of the adult population is infected with HIV, among the highest in Asia; that many tens of thousands have already died as a result; and that possibly two hundred thousand people including children will develop AIDS within the next 5-10 years.

The efforts of the Royal Government of Cambodia to achieve effective response to the HIV/AIDS crisis, including its efforts to achieve the Millennium Development Goal on HIV/AIDS – to halt and reverse the spread of HIV/AIDS by 2015 – are tremendous. Indeed, the leadership and broad partnership stance that the RGC has adopted in addressing the HIV/AIDS epidemic by steering reforms as outlined in the “National Strategic Framework for a Comprehensive and Multi-Sectoral Response to HIV/AIDS, 2001-2005” is already yielding valuable results. Of great encouragement for this concerted response are the indications of a reduction in the HIV/AIDS prevalence rate. In the context of such a broad partnership on HIV/AIDS, the United Nations Country Team (UNCT) in Cambodia is working to significantly enhance its support to the national response against HIV/AIDS on the basis of the UNDAF (2001-2005). In doing so, the UNCT has developed a Common Strategy that clearly sets out the future emphasis of the Team both collectively and individually.

In line with the above, the CHDR has opted to focus on addressing key human development challenges in relation to HIV/AIDS. Such a research effort will spread over a period of two years. This year’s Progress Report on the “Societal Aspects of the HIV/AIDS Epidemic in Cambodia” sets a framework that outlines the fact that HIV/AIDS deepens the poverty of households and nation, while poverty favours the spread of the disease by increasing the vulnerability of individuals to infection.

In acknowledging the complex links between the HIV/AIDS epidemic, Poverty and Human Development, the initial research work provides critical analysis to the effect that the HIV/AIDS epidemic is a development issue, striking as it does at the social welfare of the population of an already fragile Cambodian society. One of the key message of the Report is the importance of building on achievements to-date and the adoption of a broad people-centred approach, by giving voice to the people living with HIV/AIDS, ensuring respect for the rights of people with HIV/AIDS through improved knowledge on the disease, and addressing social inequity in order to ensure effective participation and mobilization of all social groups.

In this regard, I wish to congratulate the National Research Team for their outstanding work in preparation of this year’s Progress Report. It is indeed important to note that the responsibility to prepare the Progress Report was entirely a national effort, with four institutions involved in the research work. These institutions are the Ministry of Planning, the Royal University of Phnom Penh, the National AIDS Authority, and the National Centre for HIV/AIDS, Dermatology and STDs. The overall coordination for advisory and support services was provided by a national

research institute, the Cambodia Development Resource Institute (CDRI). This new partnership arrangement is designed to achieve two key objectives. First, it aims at strengthening national ownership on the outcomes of the key findings and policy recommendations of the CHDR(s), by allowing for an in-country and demand-driven research effort. Second, it seeks to adopt an alternative capacity development strategy capable of providing a more sustainable capacity in the Ministry of Planning, other line ministries and government institutions in relation to policy analysis and research methods.

I trust that the analysis and recommendations of this Progress Report will contribute to further support a broad-based national debate on the challenges of HIV/AIDS, including setting the stage to finalize the Report on HIV/AIDS through additional research work aimed at further shaping public policy direction, resource allocation, priority setting and targeted interventions.



Dominique Ait Ouyahia-McAdams  
United Nations  
Development Programme  
Resident Representative



---

# Executive summary

---

The 2001 CHDR has many original features. First, it is oriented toward keeping national capacity building as a prime concern. This is, indeed, the first concrete step to realising the objectives promoted by the first CHDR: to see that the HDR is “transferred fully into Cambodian hands”<sup>1</sup>. The 2001 report was prepared and produced jointly by a national research team and a senior research advisor, under the technical assistance of a private Cambodian research institution, the Cambodian Development Resource Institute.

The 2001 CHDR is also unique because of the specific circumstances in Cambodia. In addition to serious concerns born from the HIV/AIDS epidemic as a major threat for the human development process in all countries, the HIV/AIDS epidemic in Cambodia deserves particular attention. Cambodia is one of the poorest countries in Southeast Asia, and the country with the highest HIV prevalence rate, but it seems to have curbed its epidemic rate. From 1997 onwards, the series of national prevalence rates among adults, as estimated through the HIV Surveillance Surveys, shows a steady decline, from 3.9% to 2.8%.

At the same time, analysing the background of human poverty raises fundamental concerns about the future. The human development perspective points out the structural link between societal balances and the sustainable capability of a society to respond to social threats. Cambodia has one of the poorest human development performances in the region, its HDI score

(0.541) ranks Cambodia 121<sup>st</sup> internationally, and the worst but one in Southeast Asia. Cambodian society is characterised by entrenched inequality, in many essential dimensions, such as income poverty (the consumption share of the poorest 10% of the population being as low as 4%, while the richest 10% share 20%), gender status and access to education. Marked regional differences within the country enhance these inequalities.

The aim of the 2001 CHDR is to study these diverging aspects characteristic of the Cambodian case, and to contribute, through an effective human development perspective, to outlining the ways towards controlling the epidemic.

Chapter 1 elaborates on the contribution of the human development perspective to an understanding of the spreading of the HIV/AIDS epidemic. The key concept of social vulnerability goes beyond pointing out ‘risk groups’ in order to highlight, through a better understanding of sex as a social issue, the circumstances pregnant with opportunities for the epidemic to spread. Meanwhile, it provides all actors involved in the struggle against HIV/AIDS with an effective framework to address both immediate and structural determinants of the epidemic.

Chapter 1 then retraces the Cambodian situation in relation to the HIV/AIDS epidemic. Particular care has been taken to list the assumptions needed to provide estimates: taking into account the level of confidence of a quantitative assessment is needed in

---

<sup>1</sup> Paul Matthews, former UNDP representative, CHDR-1997

order to accurately interpret trends. The large range of dispersion across provinces for all groups surveyed points to the need for precaution when drawing national results. Conversely, consistent declining trends for most of the groups surveyed, and indicators drawn from Behavioural Surveillance Surveys, such as rising consistent condom use, support the conclusion of a declining prevalence in the general population.

Chapter 2 reviews the aspects of Cambodian society whose links to the HIV/AIDS epidemic are expected to be particularly active in the previously elaborated framework. The analysis takes into account the specific features of the Cambodian population. It first studies the impact of the epidemic on human development achievements. From the household and individual viewpoint, three main issues typify the main consequences of the epidemic. The first is the impoverishment of the household, in particular through the distressed sale of productive assets. This calls for public intervention to enable households to avoid the distressed sale of productive assets, and also to address the difficult question of the cost of health care. The second issue is the vulnerability of children, due, in particular, to being orphaned by AIDS. This requires a sufficient input of resources to provide support for children affected by AIDS. It also calls for an open debate on the urgent issue of the availability of Anti-Retroviral Therapy (ART), the only means to prevent HIV infection leading to AIDS and therefore to death. The provision of ART is examined in the following section, which deals with the setbacks in human rights achievements, the third main consequences of the epidemic according to the present analysis. Finally, although there was no new quantitative assessment of the HIV/AIDS impact at national level, a previous study from Bunna and Myers has been used

to point out the hypothesis needed for such an assessment and the order of magnitude of the results derived.

The main contribution of the Human Development perspective to the study of the spread of the HIV/AIDS epidemic and to aid the design of effective responses, is to highlight the structural features in a society which provide the best opportunities for this epidemic. Four such features in Cambodian society are underlined, only two are examined due to time constraints. The first is the marked gender inequality. The strict division of roles and the separate and distinct lifestyles of males and females from a very young age provide, among other aspects, a fertile ground for the epidemic. The second feature is the weakness of the public sector, which deprives the society of the means to act upon itself. The last two of these features, the issue of mobility and migration, and the way in which human poverty renders the poor unable to claim their rights, are only briefly mentioned. It is to be hoped that a specific in-depth study can be undertaken for each. Both features, together with calling for specific intervention, also indicate that the challenge of governance will play a key role in scaling up the response to the epidemic.

Chapter 3 reviews the main features of the response to the epidemic so far, a response which testifies to a strong will at government level to establish an effective HIV/AIDS task force as early as possible. The 'National Strategic framework for a comprehensive and multi-sectoral response to HIV/AIDS' has been produced for the 2001-2005 period, it draws on the improvements made in the national response during the last ten years. A major feature of the Cambodian achievement is the successful partnership between the national structures, the United Nation system, and the network of local and international NGOs.

The major result that the prevalence has possibly been curbed relies clearly upon the development of an impressive level of awareness in the population (the 2000 Demographic and Health survey found that more than 70% of the sampled women knew of ways to prevent infection from HIV), and upon a **firm** campaign for safe commercial sex. Numerous and various actions have been undertaken to care for and support people affected by HIV/AIDS.

Cambodia is now facing the challenge of scaling up previous achievements in a context marked by significant disparities and possibly characterised by multiple epidemic stages, and

weak public means of action. The key message of the report is that, given the present situation, one of the best means of ensuring an effective and holistic response is to adopt a people-centred approach. It would make possible the creation of a link between local initiatives and the sharing of information between these. Such cooperation will prove invaluable in informing, influencing and strengthening the response to the epidemic at national level.

The readers will find in the conclusion of the report recommendations based on the analysis presented. These recommendations are offered as a contribution to the necessity of continued, coordinated and concerted action.

# List of Abbreviations

<b>AIDS</b>	Acquired immune deficiency syndrome
<b>APN+</b>	Asia Pacific Network of people living with HIV and AIDS
<b>ART</b>	Anti-retroviral Therapy
<b>BSS</b>	Behavioural Surveillance Survey
<b>CBO</b>	Community-based organisation
<b>CDRI</b>	Cambodia Development Resource Institute
<b>CHDR</b>	Cambodia Human Development Report
<b>CPN+</b>	Cambodia Network of people living with HIV and AIDS
<b>CPS</b>	Centre for Population Studies
<b>DHS</b>	Demographic and Health Survey
<b>GDP</b>	Gross Domestic Product
<b>HDI</b>	Human Development Index
<b>HIV</b>	Human immunodeficiency virus
<b>HSS</b>	HIV Surveillance Survey
<b>MoP</b>	Ministry of Planning
<b>NAA</b>	National AIDS Authority
<b>NCHADS</b>	National Centre for HIV/AIDS, Dermatology and STDs
<b>NGO</b>	Non-governmental organisation
<b>NIS</b>	National Institute of Statistics
<b>RUPP</b>	Royal University of Phnom Penh
<b>SEA-HIV</b>	South East Asia HIV and Development Project
<b>SES</b>	Socio-economic survey
<b>STD</b>	Sexually transmitted disease
<b>UN</b>	United Nations
<b>UNAIDS</b>	Joint United Nations Programme on HIV/AIDS
<b>UNCT</b>	United Nations Country Team
<b>UNDP</b>	United Nations Development Programme
<b>UNICEF</b>	United Nations Children's Fund
<b>VCT</b>	Voluntary counselling and testing
<b>WHO</b>	World Health Organisation

---

# Table of Contents

---

<b>Introduction .....</b>	<b>p.17</b>
<b>a) Human Development: a global effort towards fundamental human rights .....</b>	<b>p.17</b>
<b>b) Cambodian strategy for Human Development Reports: towards national ownership .....</b>	<b>p.18</b>
<b>c) The HIV/AIDS epidemic in Cambodia: between hope that the current response to the epidemic may have curbed its spread, and major concerns emerging from the present social situation .....</b>	<b>p.19</b>
<b>d) The Human development situation in Cambodia .....</b>	<b>p.24</b>
i Persistent widespread poverty .....	p.27
ii Encouraging schooling rates marked by spatial and gender inequality .....	p.29
iii The overall poor health status with sharp local distinctions .....	p.31
<b>1. Human development facing HIV/AIDS epidemic: conceptual framework and the Cambodian epidemic situation .....</b>	<b>p.33</b>
<b>1.1. From the perspective of individual behaviour to the concept of vulnerability: the societal approach .....</b>	<b>p.33</b>
1.1.1. Sex is a social issue .....	p.33
1.1.2. Risk and context .....	p.34
<b>1.2. Conceptual framework .....</b>	<b>p.35</b>
<b>1.3. Human rights implications of HIV/AIDS .....</b>	<b>p.38</b>
<b>1.4. The HIV/AIDS epidemic in the Cambodian context: knowledge and lack of knowledge .....</b>	<b>p.39</b>
1.4.1. Prevalence rate estimation: HIV Surveillance Surveys .....	p.39
1.4.2. Behavioural Surveillance Surveys .....	p.44
1.4.3. On a knife's edge between success and threat .....	p.47
<b>2. The Human Development perspective and the dynamic of the HIV/AIDS in Cambodia .....</b>	<b>p.49</b>
<b>2.1. Introduction: Link between HIV/AIDS epidemic and demographic features .....</b>	<b>p.49</b>
<b>2.2. The HIV/AIDS epidemic threatens human development achievements in Cambodia .....</b>	<b>p.51</b>
2.2.1. The crucial issue of the distressed sale of productive assets .....	p.51
2.2.2. AIDS deaths and the vulnerability of children .....	p.54
2.2.3. Setbacks in human rights achievements .....	p.56
2.2.4. An example of assessing the national impact of the HIV/AIDS epidemic .....	p.58
<b>2.3. Poverty in Cambodia fuels the HIV/AIDS epidemic .....</b>	<b>p.60</b>
2.3.1. Gender inequality feeds HIV/AIDS epidemic .....	p.60
• Strict division of roles between men and women inside society and inside the family ..	p.60
• Parallel life education .....	p.60

2.3.2. Poverty and low human development deprive society from the ability to act upon itself. ....	p.61
• Social link, public sector and governance issue .....	p.61
• The case of the health sector .....	p.61
• The two aspects of the infrastructure issue .....	p.64
2.3.3. Poverty fuels mobility and migration .....	p.65
2.3.4. Poverty disempowers the poor from claiming their rights .....	p.66
<b>2.4. Conclusion .....</b>	<b>p.66</b>
<b>3. Achievements and Challenges .....</b>	<b>p.69</b>
<b>3.1. Governmental and public sector involvement .....</b>	<b>p.69</b>
3.1.1. The HIV/AIDS task force .....	p.69
3.1.2. The 'National Strategic Framework for a Comprehensive and Multi-Sectoral Response to HIV/AIDS, 2001-2005' developed by the National AIDS Authority .....	p.71
<b>3.2. Successful partnerships .....</b>	<b>p.72</b>
3.2.1. The United Nation Country Team (UNCT) .....	p.72
3.2.2. Local and international NGOs .....	p.73
<b>3.3. Achievements .....</b>	<b>p.74</b>
3.3.1. Impressive level of awareness .....	p.75
3.3.2. Resolute campaign for safer commercial sex .....	p.75
3.3.3. Care and support for people with AIDS .....	p.76
<b>3.4. Challenges .....</b>	<b>p.77</b>
3.4.1. The heterogeneous nature of the epidemic in Cambodia .....	p.77
3.4.2. A people-centred approach .....	p.77
• Giving voice to people. ....	p.78
• Ensuring respect for the rights of people with HIV/AIDS through improved knowledge of HIV/ AIDS. ....	p.78
• Addressing social inequity in order to mobilise all social groups effectively .....	p.81
<b>3.5. Summary: Breaking the vicious cycle .....</b>	<b>p.82</b>
<b>4. Conclusion .....</b>	<b>p.85</b>
• Towards a new stage in the response to the epidemic .....	p.85
• Action on HIV incidence: .....	p.86
• Action on the impact of the epidemic: .....	p.88

## List of Annexes

Annex A: Capacity building for national ownership on Human Development perspective .....	p.91
Annex B: Large surveys in Cambodia: a wealth of invaluable quantitative data .....	p.92
Annex C: Measuring poverty .....	p.93
Annex D: Poverty temporal comparison issues .....	p.99
Annex E: Fieldwork methodology .....	p.102
<b>References .....</b>	<b>p.107</b>

---

# List of illustrations

---

## Boxes

Box 1: Proposal for further investigation on declining HIV seroprevalence rate in Cambodia ...	p.23
Box 2: Human Development Index calculation .....	p.24
Box 3: Human rights and human development .....	p.38
Box 4: Estimates of prevalence rates are inherently fragile data .....	p.41
Box 5: HIV/AIDS and the vulnerability of children .....	p.55
Box 6: The salary issue .....	p.64
Box 7: The provincial HIV/AIDS taskforce .....	p.70
Box 8: Phnom Penh hospital services for people with HIV/AIDS .....	p.71
Box 9: The 100 percent condom use campaign .....	p.75
Box 10: An example of grassroots action in response to the epidemic .....	p.76
Box 11: Cambodian Network of People Living with HIV .....	p.79
Box 12: Rights and responsibilities of people with HIV/AIDS .....	p.79
Box 13: Poverty is a multidimensional concept .....	p.94
Box 14: The food poverty line .....	p.95
Box 15: Total poverty line .....	p.96

## Figures

Figure 1: The HIV Surveillance Surveys show a decrease in prevalence .....	p.22
Figure 2: Human Development Index in South-East Asia .....	p.25
Figure 3: PPP GDP per capita plotted against HDI, South-East .....	p.26
Figure 4: Urban/rural disaggregation of HDI .....	p.26
Figure 5: Cambodian poverty lines .....	p.28
Figure 6: Distribution of literacy rates among provinces, by sex and age groups .....	p.30
Figure 7: Gender inequality in schooling enrolments .....	p.31
Figure 8 : HIV seroprevalence among sentinel groups in 2000 .....	p.42
Figure 9: HIV prevalence in high risk groups decreases .....	p.43
Figure 10: Improvement in consistent condom use .....	p.46
Figure 11: Evolution in commercial sex use .....	p.46
Figure 12: The number of persons living with HIV/AIDS decreases .....	p.47
Figure 13: percentage of each surveillance group knowing someone sick with AIDS .....	p.48
Figure 14: Cambodian population structure (1998 census) .....	p.50
Figure 15: Age and Sex Imbalance .....	p.50
Figure 16: Lorenz curve for the consumption distribution by households (SES 1999) .....	p.51
Figure 17: mean expenditure (in US dollars) for a first treatment .....	p.54
Figure 18: Epimodel projection for cumulative number of AIDS deaths .....	p.54
Figure 19: Gender differential in school drop out (population census 1998 data) .....	p.60
Figure 20 : Knowledge of AIDS .....	p.74

## Tables

Table 1: Global summary of the HIV/AIDS epidemic, December 2000 .....	p.20
Table 2: Regional HIV/AIDS statistics, end of 2000 .....	p.21
Table 3: Consumption profile .....	p.27
Table 4: Head-count indices .....	p.28
Table 5: Poverty gap indices .....	p.29

Table 6: Summary of schooling rates, by age and sex .....	p.30
Table 7: life expectancy in South East Asia .....	p.31
Table 8: Sentinel groups .....	p.40
Table 9: Range of HIV prevalences in different provinces .....	p.43
Table 10: Quantitative summary of consumption distribution by household .....	p.52
Table 11: Estimation of 1999 HIV/AIDS epidemic cost .....	p.59
Table 12: Key milestones in the government response to the HIV/AIDS epidemic .....	p.69
Table 13: Key characteristics of the socio-economic survey in Cambodia .....	p.93

## **Maps**

Map 1: Distribution quintiles of infant mortality rate by province (NIS PopMap software) .....	p.32
Map 2: Percentage of persons declaring a previous residence less than 6 years ago .....	p.65

## **Diagrams**

Diagram 1: Construction of the HDI .....	p.25
Diagram 2: The HIV/AIDS epidemic is a human development issue .....	p.35
Diagram 3: Links between human development and HIV/AIDS: individual perspective .....	p.36
Diagram 4: Links between human development and HIV/AIDS: the national perspective .....	p.37
Diagram 5: Mechanisms by which people become landless .....	p.53
Diagram 6: Breaking the vicious cycle .....	p.82



---

# Introduction

---

This introduction provides an overview of previous Cambodia Human Development Reports and explains the key principles on which the present report is based. The 2001-Cambodia Human Development Report differs significantly from the previous CHDR. It is for this reason that this first part of the report also sets out the reasons for bringing in new features in the 2001 CHDR. It then explains that the 2001 topic was selected in response to serious and widespread concerns about the HIV/AIDS epidemic as a major threat to the human development process in all countries. Moreover, the HIV/AIDS epidemic in Cambodia deserves particular attention because of its uniqueness. An early and resolute response, relying particularly on effective partnerships at the national level between governmental, non-governmental, and United Nations structures, has resulted in a genuine hope with regard to curbing the prevalence of HIV. But at the same time, the low performance level of crucial aspects of human development threatens to undermine the achievements already made. It is in light of this situation, that the human development situation in Cambodia is reviewed in order to highlight the context in which specific aspects of human development, and in particular the HIV/AIDS epidemic issue, are being addressed.

## **a) Human Development: a global effort towards fundamental human rights**

The concept of development is often understood in terms of economics: a developed country is characterised by a flourishing economy, leading to a high average standard of living based on sufficiently large GDP per capita. For

more than 10 years, UNDP has been advocating that development is a multi-dimensional concept encompassing far more than economic wellbeing at the national level. To this end, the concept of human development has regularly improved. As the most recent Global Human Development Report (UNDP 2001a) states,

*Human development is about much more than the rise or fall of national incomes. It is about creating an environment in which people can develop their full potential and lead productive, creative lives in accord with their needs and interests. People are the real wealth of nations. Development is thus about expanding the choices people have to lead lives that they value. And it is thus about much more than economic growth, which is only a means – if a very important one – of enlarging people’s choices.*

The most basic human needs are food and water. Of the 4.6 billion people living in developing countries, about 1.2 billion (one in four) live on less than US\$1 a day and nearly one billion people have no access to safe water sources. However, protection against communicable diseases for parents and children, education, and meaningful citizenship are also fundamental human rights (UNDP 2001a):

*Fundamental to enlarging these choices is building human capabilities – the range of things that people can do or be in life. The most basic capabilities for human development are to lead long and healthy lives, to be knowledgeable, to have access to the resources needed for a decent standard of living and to be able to participate in the life of the community. Without these, many*

*choices are simply not available, and many opportunities in life remain inaccessible.*

Health, education and participation in the life of the community must therefore be taken into account together with the standard of living in order to assess a country's developmental level. This concept of development – of human development – is closely related to the concept of human rights. Both share the objective of human freedom and both face the challenge of poverty.

While UNDP has been publishing the *Human Development Report* (HDR) annually since 1990 to review the state of human development around the world, we have begun to see a number of countries producing national HDRs since 1995. These national HDRs have focused on trends in human development and poverty within a country, and highlighted intra-national disparities in human development across regions, economic groups, and gender.

#### **b) Cambodian strategy for Human Development Reports: towards national ownership**

The UNDP funded project, 'Capacity Development for Preparation of the Cambodia Human Development Reports', executed by the Ministry of Planning, began in 1997. Four important reports have been produced:

- **CHDR 1997: Poverty assessment.** This first report provided a factual overview of human development in Cambodia. Relying on the second Socio-Economic Survey (SES) (see below), conducted in 1996, the report calculated three human devel-

opment indices: HDI, GDI and a specific Cambodian Human Development Index which is based on the monitoring of ten indicators<sup>2</sup>. In order to illustrate the main patterns of poverty in the country, all analysis was disaggregated by poverty status.

- **CHDR 1998: Women's contribution to development.** This second report was essentially based upon the 1997 CSES. It provides measures of HDI, GDI, a third indicator, the Gender Empowerment Measure (GEM)<sup>3</sup>, and another UNDP indicator, the Human Poverty Index (HPI). The HPI measures deprivation in three essential elements of human life: longevity, knowledge and a decent standard of living. The report sets out the cultural and legal context of the gender issue, and then assesses the gender situation in the main areas of life.

- **CHDR 1999: Village Economy and Development.** This report analysed the role of villages in Cambodia's development, making use of the village questionnaire of the 1997 CSES. It thus provides a socio-economic profile, and information about educational and health infrastructures, and an assessment of village-based development programs. HDI, GDI, GEM and HPI were again presented. As the data sources were the same as in the preceding report, the index values do not reflect any evolution, but were updated in order to take into account the change in the HDI formula used by UNDP since 1999.

- **CHDR 2000: Children and Employment.** The report documented the magnitude of child labour in Cambodia, and attempted to understand the

<sup>2</sup>The 10 indicators are: percentage of households making use of safe water, same percentage for toilets, same percentage for electricity as lighting source, percentage of households owning radio, average housing space, percentage of children under 5 years old being not stunted, percentage of school enrolment among children aged 6 to 11 years, difference between average age at entry to school and 6 years of age, percentage of children aged under 5 years with no diarrhoea disease during the two weeks preceding SES survey, percentage of children aged under 5 years treated for diarrhoea by modern (defined as non-traditional) health service providers.

<sup>3</sup>A measure of the relative participation of women and men in political and economic spheres of activity.

determinants of child labour within the context of the overall labour market in the country. This time the report could draw on data from the General population Census of 1998 and the recent 1999 CSES for the computation of the four indices HDI, GDI, GEM and HPI.

Building on these achievements, a new emphasis was placed on capacity building in the preparation of the 2001 report. In line with a fundamental goal of human development, which implies full development of personal capacities leading to actual ownership of one's production, a strategy to strengthen transfer of skills and knowledge was implemented through the recruitment of a National Research Team to prepare and produce the report (see Annex A).

Thus, this 2001 report differs from the preceding reports in a number of ways foremost of which is that it views the need for national capacity building as one of its main concerns.

- The report is intended as a pedagogical tool for CHDR readers: no autonomy is possible in interpreting quantitative information without sufficient knowledge of the conditions in which the figures were produced. Of course this does not mean that all policy makers or all users of CHDR have to become statisticians. However, people and institutions in charge of policy design or active in civil society should share the ability to participate fully, on an informed basis, in the necessary dialogue between technicians of quantitative data production and analysis and policy designers. This is reflected throughout the report.

- The report fulfils the essential requirement of knowledge transfer: it reflects the actual work undertaken by the National Research Team. Ownership is synonymous with full understanding, and full understanding is also the

condition of effective dissemination. We hope that this aspect of the report will allow exchanges with others about this process of knowledge transfer, either nationally or globally.

- The methodology employed by the National Research Team during the study was to combine the use of quantitative and qualitative information, in order that each approach provides critical understanding of the other. The principle sources of quantitative data (see Annex B) were the general population census of 1998, the socio-economic survey of 1999 and the series of HIV sentinel surveillance surveys and behavioural surveillance surveys.<sup>4</sup> Throughout the study process, importance was attached to understanding the conditions in which the figures were produced, in order to support critical interpretation.

The source of qualitative data was fieldwork, undertaken in four provinces (see Annex E) that aimed at providing an understanding of the consequences of the epidemic in everyday life far from Phnom Penh and to confirm or repudiate intuitions about the dynamics of the epidemic. During the fieldwork, key importance was attached to developing an understanding of the epidemic from the perspective of people living in rural locations. Given the time constraints, it was decided to focus on the perspective of health staff who might be expected to be providing an active response to the epidemic on a day-to-day basis. In addition, the expertise of professionals working in Phnom Penh informed the work of the research team through a series of seminars on different topics.

**c) The HIV/AIDS epidemic in Cambodia:** between hope that the current response to the epidemic may have

<sup>4</sup> Unfortunately, the database of the 2000 Cambodian Demographic and Health Survey, which was expected to be an extremely valuable source of information, was not available for the National Research Team.

curbed its spread, and major concerns emerging from the present social situation.

The 2001 CHDR focuses on the causes and consequences of the HIV/AIDS epidemic in Cambodia. The first reason for this focus is the inestimable threat to the international development process posed by the epidemic. The second is the importance of lessons, which can be drawn, to-date, from the Cambodian response to the challenge of the epidemic. Cambodia, one of the poorest countries in Southeast Asia, with the highest HIV prevalence rate, seems about to curb the spread of this epidemic. But, at the same time, an analysis of the background of human poverty in this country raises important concerns about the extent to which this achievement is sustainable. The 2001 CHDR aims to highlight these dual, but apparently contradictory, aspects of the Cambodian situation, and to contribute, using a human development perspective, to the determining of an effective way forward.

The HIV/AIDS epidemic presents a global challenge to human development and human rights. In the twenty years since the first observation of the symptoms of an unknown disease in 1981, the global spread of the epidemic has reached every location and every population group. In 2001, a review of the current situation by the UNAIDS Global Strategy Framework on HIV/AIDS makes for frightening reading:

*The scale of the HIV/AIDS epidemic is now far greater than a decade ago, exceeding the worst-case projections made then<sup>5</sup> ... In just 20 years, nearly 58 million people have been infected with HIV. Countless others have become more impoverished as a consequence: children have lost their parents; families have lost their property; communities have lost teachers, health workers, business and government leaders; nations have lost their investments in decades of human resources development; and societies have lost untold potential contribution to so-*

**Table 1: Global summary of the HIV/AIDS epidemic, December 2000**

People newly infected with HIV in 2000	<b>Total</b> Adults Women Children < 15 years	<b>5.3 million</b> 4.7 million 2.2 million 600,000
Number of people living with HIV/AIDS	<b>Total</b> Adults Women Children < 15 years	<b>36.1 million</b> 34.7 million 16.4 million 1.4 million
AIDS deaths in 2000	<b>Total</b> Adults Women Children < 15 years	<b>3 million</b> 2.5 million 1.3 million 500,000
Total number of AIDS deaths since the beginning of the epidemic	<b>Total</b> Adults Women Children < 15 years	<b>21.8 million</b> 17.5 million 9 million 4.3 million

Source: UNAIDS and WHO 2000

<sup>5</sup> UNAIDS and WHO (2000), now estimate that the number of people living with HIV or AIDS at the end of the year 2000 stands at 36.1 million. This is more than 50 percent higher than the 1991 projections of WHO's Global Programme on AIDS.

cial, economic, political, cultural and spiritual life. (UNAIDS 2001b)

As noted by the UNAIDS Strategy Framework, the situation differs significantly according to location. The HIV/AIDS pandemic presently consists of multiple, concurrent epidemics.

At the end of 2000, 36.1 million men, women and children around the world were living with HIV or AIDS, 25.3 million in sub-Saharan Africa alone. There are 11 countries in Latin

America and the Caribbean where prevalence in the adult population is above 1%.

In parts of Eastern Europe there were more infections in 2000 than in all previous years combined, while in parts of southern Africa, the number of people living with HIV/AIDS has increased by 50% in the last three years. In Asia, 5.8 million people are living with HIV/AIDS and the number of new infections is increasing.

**Table 2: Regional HIV/AIDS statistics, end of 2000**

Region	Epidemic began	Adults & children living with HIV/AIDS	Adults & children newly infected with HIV	Adult seroprevalence rate <sup>6</sup>	% of HIV-positive adults who are women	Main modes of transmission for adults living with HIV/AIDS
Sub-Sahara Africa	late 70s-early 80s	25.3 million	3.8 million	8.8%	55%	Heterosexual transmission (HS)
North Africa & Middle East	late 80s	400,000	80,000	0.2%	40%	Injecting drug use (IDU)
South & South-East Asia	late 80s	5.8million	780,000	0.56%	35%	HS, IDU
East Asia & Pacific	late 80s	640,000	130,000	0.07%	13%	IDU, HS, Men having sex with men (MSM)
Latin America	late 70s-early 80s	1.4 million	150,000	0.5%	25%	MSM, IDU, HS
Caribbean	late 70s-early 80s	390,000	60,000	2.3%	35%	HS, MSM
Eastern Europe & Central Asia	early 90s	700,000	250,000	0.35%	25%	IDU
Western Europe	late 70s-early 80s	540,000	30,000	0.24%	25%	MSM, IDU
North America	late 70s-early 80s	920,000	45,000	0.6%	20%	MSM, IDU, HS
Australia & New Zealand	late 70s-early 80s	15,000	500	0.13%	10%	MSM
<b>Total</b>		<b>36.1 million</b>	<b>5.3 million</b>	<b>1.1%</b>	<b>47%</b>	

<sup>6</sup> HIV prevalence rate (or seroprevalence rate) is the ratio between the number of infected persons (whatever the date of infection) and the number of persons likely to be infected (the size of the reference population). The incidence rate is the ratio between the number of newly infected persons (during a given lapse of time, usually one year) and the size of the reference population.

Table 2 shows two major features of the epidemic in South and Southeast Asia. The epidemic began probably about a decade after it was detected in most other countries, and, despite the prevalence rate being much lower than that of sub-Saharan Africa, it is rather high among adults.

The HIV/AIDS epidemic in Cambodia began relatively late, with the first reported incidence of HIV occurring in 1991.

This broadly coincides with the emergence of the disease in the East Asian region. Cambodia now has the highest prevalence rate in the region. The 2000 HIV Surveillance Survey (NCHADS 2001) arrives at a prevalence rate among the adult population (15–49 years) of 2.8 percent as compared to, Thailand (2.15 percent), Laos (0.05 percent), Vietnam (0.24 percent), Malaysia (0.42 percent) and Indonesia (0.05 percent) (UNAIDS and WHO 2000).

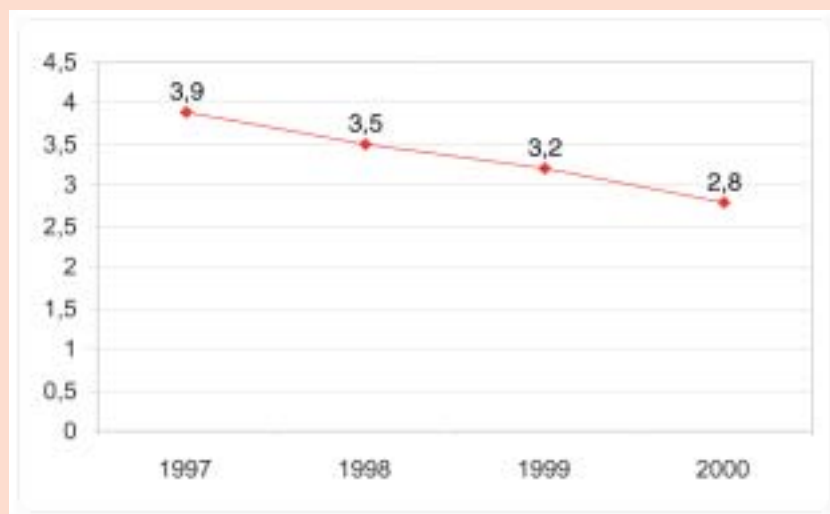
This prevalence rate is calculated from the prevalence rate among a nation-wide sample of pregnant women attending antenatal clinics, among

whom HIV prevalence was 2.3 percent. HIV prevalence among men is deduced from this HIV prevalence rate, corrected to account for the differential infection ratio for men and for women. The Behavioural Surveillance Survey of 1999 (BSS III) (NCHADS 2000) deduced a value for this ratio of 1.5:1 (men:women). Thus the prevalence rate among men is approximated to 3.45 percent. The adult prevalence rate of 2.8 percent is the weighted mean of both male and female prevalence rates.

In drawing conclusions and designing policy based on these data, the context of data collection and analysis needs to be taken into account. As with findings from all other countries, it is important to allow for an error bar when working with prevalence data (as will be discussed in the body of the report). Nevertheless, Cambodia does exhibit an extremely rare feature: there is a consistent decrease, in the year period 1997 to 2001, from 3.9% to 2.8%<sup>7</sup> (see Figure 1). It is, therefore, reasonable to hope that the disease may have been contained.

**Figure 1: HIV Surveillance Surveys showing a decrease in prevalence**

National HIV Prevalence among adults aged 15-49



Source: 2000 HSS dissemination – NCHADS

<sup>7</sup> The 1998 value is not a measured value, but an interpolation between 1997 and 1999 values. Strictly speaking, Figure 1 relies on only three dates, 1997, 1999, 2000.

As will be fully discussed in the report, this apparent trend does not necessarily imply a declining incidence rate. The rapidly rising number of deaths from AIDS also contributes to a declining prevalence rate. Next to nothing is known, and it is even very difficult to develop a hypothesis about the scale

and evolution of incidence rates.

The 2001 HIV Surveillance Survey will provide more information about this apparent trend, both through computation of an additional point for the curve and by an original attempt to assess new infections scale (see Box 1).

#### Box 1: Proposal for further investigation on declining HIV seroprevalence rate in Cambodia

##### Background and conceptual framework

Since the first case of HIV in Cambodia was detected by the National Blood Bank, the epidemic of HIV spread rapidly, Cambodia even having the highest HIV prevalence rate in the region. From 1995 onward, the Cambodian Ministry of Health initiated the HIV Sentinel Surveillance (HSS) once a year in order to help the intervention program monitor the epidemic and serve as a tool for advocating prevention. Since then HSS continues to show increasing seroprevalence every year in every target groups, but starting from HSS 1998 the prevalence seems to be slightly decreasing and the trend continues in HSS 1999 and 2000. Although many intervention activities on HIV have been implemented, Antiretroviral drug access in Cambodia is very limited, therefore the decline of seroprevalence is most likely due to the increasing rate of AIDS deaths than to the decline of new infections, which is called incidence. In order to investigate the cause of that decline, further study should be done.

##### Methodology

Retest all positive serum samples that were kept frozen during the 1998, 1999 and 2000 rounds of HSS by using Detuned ELISA, which has a capacity to detect recent seroconversion (<121 days). Therefore the incidence of HIV infection will be detected from samples, for each year, and this will make it possible to point out the trend of incidence from year to year and to confirm the decline of seroprevalence rate. It should be emphasised that such a crucial study could not have been undertaken a few years ago, because Detuned ELISA, which provides a unique opening on the degree of new infection, was not available. Such a tool is therefore of the utmost importance to understand the dynamics of the epidemic.

Source: NCHADS

For the moment, this apparent decreasing trend in HIV prevalence rates constitutes a spark of hope, of great encouragement for the determined response from Cambodian authorities, achieved with support from the UN system, multilateral and bilateral agencies, and with the involvement of a network of national and international NGOs. This successful partnership is one of the main aspects which needs to be highlighted, and it may provide valuable guidelines for HIV/AIDS strategies in other countries.

However, alongside this message of hope, is another message about the need to acknowledge that reasons for serious concerns continue to persist. Although much still remains to be un-

derstood about the dynamics of the HIV/AIDS epidemic, its persistent and consistent characteristics over the past decades all over the world allow one to arrive at an understanding of its pertinent features. Of these, the main feature is that the link between the epidemic and human poverty is crucial. As the epidemic gradually wanes in the wealthier countries, it has begun to devastate countries already weakened by conflict, intractable poverty or social upheaval (as is presently the situation in central Europe). Moreover, within countries the same pattern is evident. The epidemic moves from the population as a whole to become concentrated in socially vulnerable groups. Upon knowing the particular circum-

stances of Cambodian society—widespread poverty and severe social inequity—it is not possible to be other than very concerned about its high susceptibility to a resurgence of the epidemic.

#### d) The Human development situation in Cambodia

Human development is a structurally complex notion, aimed at going beyond the understanding of development solely in economic terms. Thus, the indicators developed to measure

human development will be complex indicators, gathering in one final value information drawn from different aspects of life.

UNDP developed a Human Development Index (HDI) in order to attempt to capture part of the complexity of the Human Development concept (see Box 2). Since 1990, a global Human Development Report has been produced each year that has used this index to assess the different situations of the countries and regions of the world.

### Box 2: Human Development Index calculation

HDI is a composite measure of:

- **Longevity**, as measured by average life expectancy at birth
- **Educational attainment**. This is constructed from adult literacy rates (which account for two-thirds of the educational attainment measure) and a combination of primary, secondary and tertiary enrolment ratios (accounting for the remaining third)
- **Standard of living**, as measured by real GDP per capita

Each component of this index is expressed on a scale from 0 to 1. These component values are calculated using pre-determined minimum and maximum values. The three components are then scaled according to the general formula:

$$\text{Dimension index} = (\text{actual value} - \text{minimum value}) / (\text{maximum value} - \text{minimum value})^*$$

In calculating this formula, the logarithm of the values for GDP per capita (actual, minimum and maximum) is used instead of the values themselves, in order to take into account the fact that achieving a respectable level of human development does not require unlimited income. Variation in the high values is less important than variation in the low values, a property well accounted for by the logarithm function.

HDI is then simply the average of the three dimension indices.

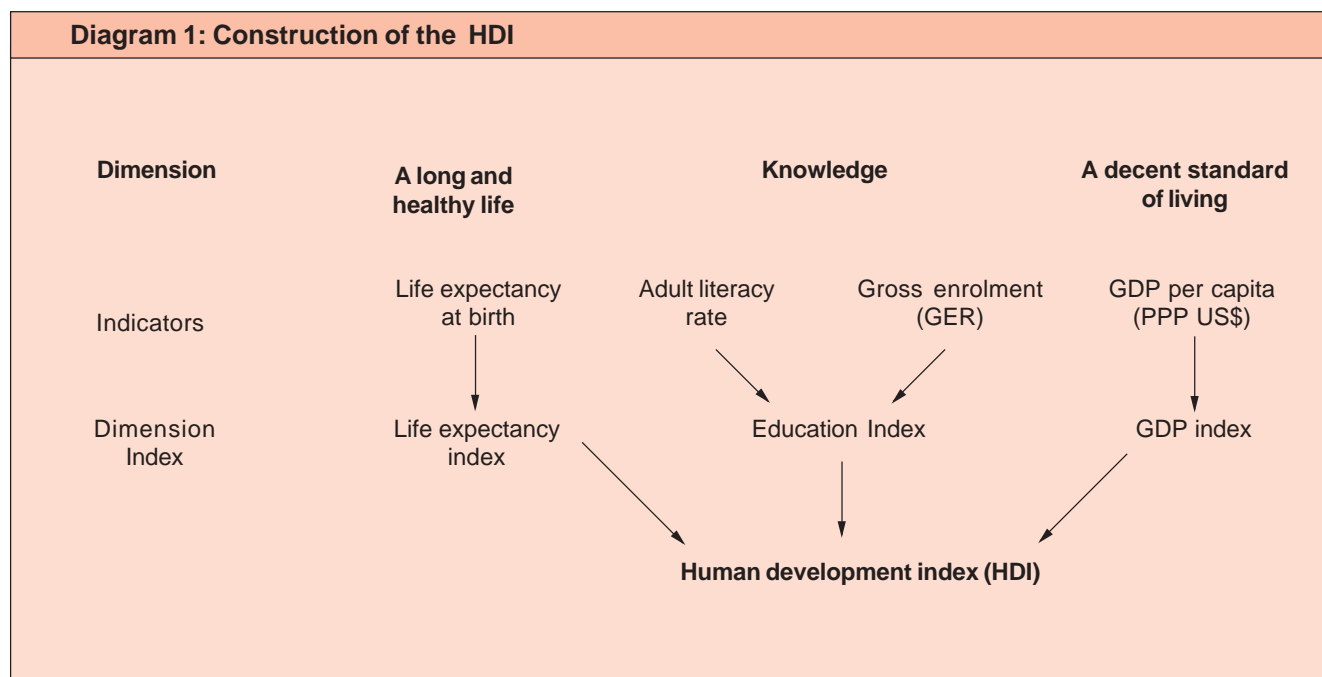
Source: UNDP 2000

#### \* Goalposts for calculating the HDI:

- Life expectancy at birth: minimum = 25 years, maximum = 85
- Adult literacy rate (%): minimum value = 0, maximum = 100
- Combined gross enrolment ratio (%) : minimum value = 0, maximum = 100
- GDP per capita (purchasing power parity US\$): minimum value = 100, maximum = 40,000



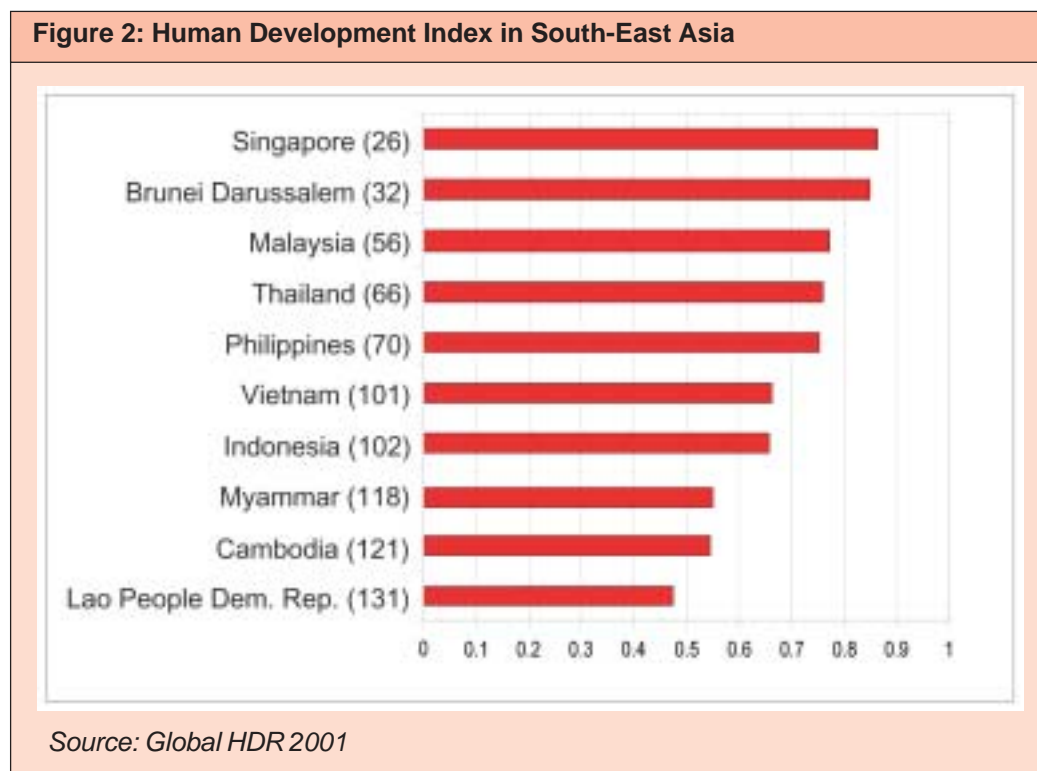
The following diagram summarises the construction of the HDI:



Globally, the latest HDI values published for 162 countries by the most recent Human Development Report (UNDP 2001a) make use of 1999 values and run from a highest value of 0.939 (Norway) to a lowest value of 0.258 (Sierra Leone). Cambodia is

credited with a value of 0.541, which ranks the country at 121 out of the 162 countries.

The situation of Cambodia among East Asian countries is shown in Figure 2:

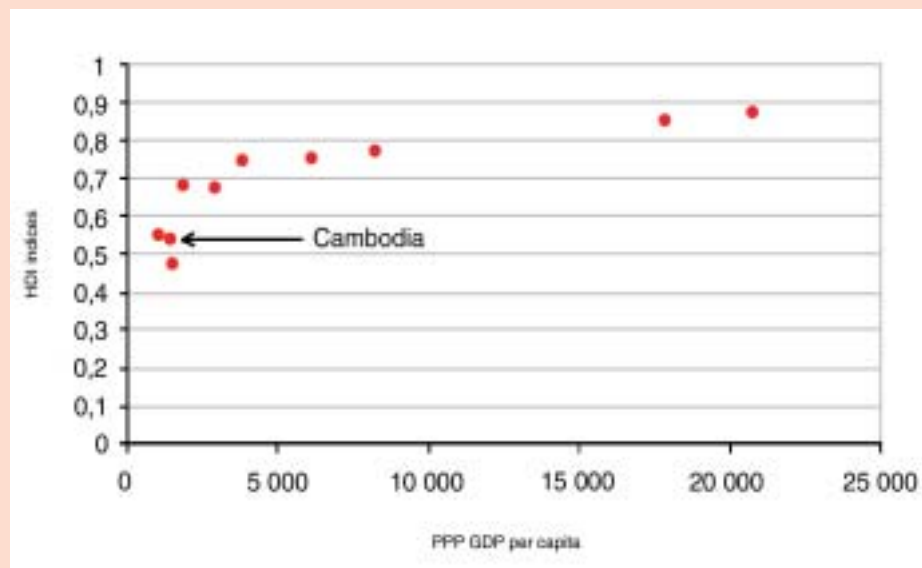


Cambodia thus exhibits one of the poorest Human Development performances of its region.

The HDI aims to capture the combined picture of three development fields, income, health and education. Income poverty certainly explains part of Cambodia's low ranking for HDI. Nevertheless, if we plot this dimension

against the total HDI, we see that education and longevity are also responsible for Cambodia's low HDI. Among the four countries with the lowest GDP per capita (and in the same order of magnitude), HDI ranks from 0.48 (Laos) to 0.68 (Vietnam), with Cambodia achieving the relatively low figure of 0.54.

Figure 3: PPP GDP per capita by countries in South East Asia



Source: Global HDR 2001

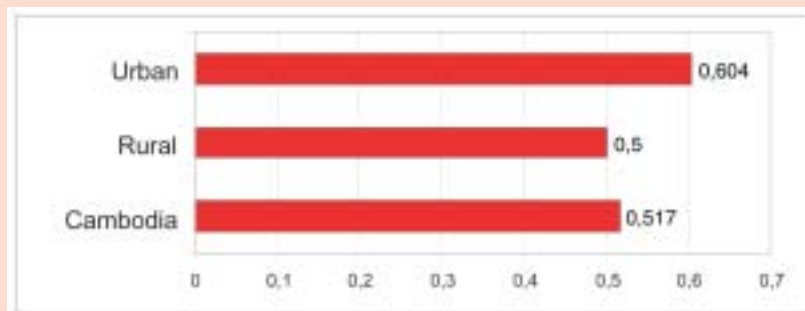
It is not possible to look for a temporal trend in Cambodia's HDI, as a technical change occurred in the index computation algorithm of UNDP in 1999. So the series of results have to be cut into two sequences of two years, sequences too short to allow conclu-

sions to be drawn: the 1997 and 1998 indices were respectively 0.427 and 0.421, and for the last period 1999-2000 respectively 0.509 and 0.517.

Urban/rural disaggregation reveals expected results, with urban areas in much better situation.

Figure 4: Urban/rural disaggregation of HDI

Human Development Index



Source: CHDR 2000

An examination of the three dimensions of the HDI (the GDP index, the education index and the life expectancy index) shows that each contributes to the resulting low HDI, together with the spatial and gender differences.

### i. Persistent widespread poverty

Obviously persistent widespread poverty, as can be established through a study of consumption distribution, has a significant effect on the Cambodia's HDI level.

A study of the consumption data from the period 1993-99 is possible thanks to the series of Socio-Economic Surveys (see Annex B), and provides policy makers, along with all institutions and actors involved in social issues, with possibility of drawing poverty profiles.

However, care is needed with temporal comparisons (see Annex D). Let us first compare, over these six years, distributions of per capita consumption<sup>8</sup>.

Table 3: Consumption profile				
Indicators	Strata	SES 1993-94	SES 1997 (if adjusted)	SES 1999
Average per capita consumption, in 1993 - 94 prices	National	2,260 riels per day	2,530 riels per day (2,150 Riels non-adjusted)	1,800 riels per day
Inequality in consumption: Gini index*	National	0.38	0.42	0.35
	Phnom Penh	0.39	0.46	0.38
	Other Urban	0.44	0.44	0.35
	Rural	0.27	0.33	0.24
Consumption share of the poorest 10%	National	3.4 %	3.0 %	3.2 %
	Phnom Penh	2.5 %	2.6 %	2.8 %
	Other Urban	2.7 %	2.7 %	2.8 %
	Rural	4.4 %	3.7 %	4.0 %
Consumption share of the richest 10%	National	32.8 %	35.3 %	30.7 %
	Phnom Penh	31.2 %	40.3 %	30.0 %
	Other Urban	36.7 %	37.6 %	28.4 %
	Rural	22.9 %	27.1 %	20.3 %
* Gini index is a measure of inequality, which runs from 0 (perfect equality) to 1 (perfect inequality).				
Sources: Prescott and Pradham 1997, Knowles 1998, Gibson 1999				

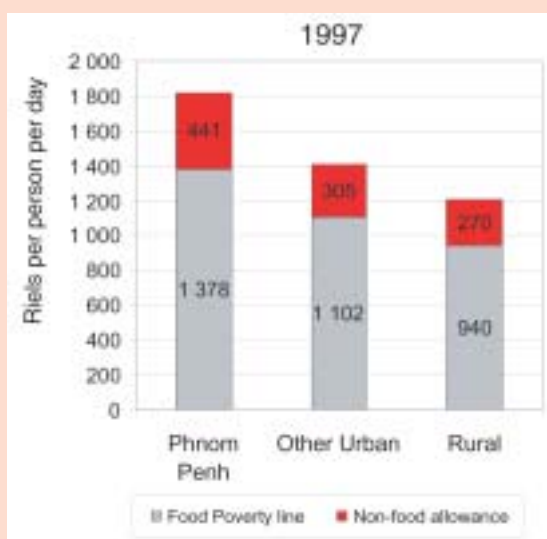
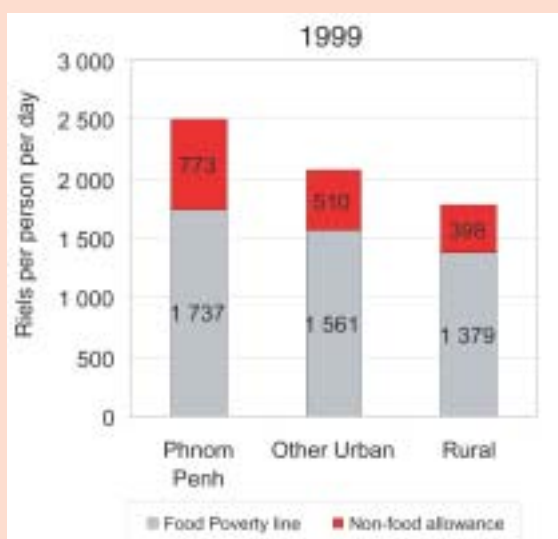
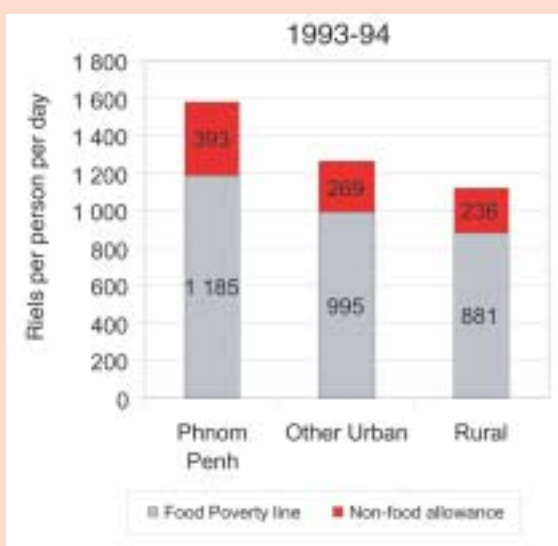
Two main conclusions may be drawn from Table 3. Firstly, improvement in the average consumption over the six-year period has been weak or even non-existent. Secondly, there has been a persistent pattern of inequality in consumption, with the poorest 10 percent of the population sharing three percent of the total consumption and the richest 10 percent sharing 30 percent. This

inequality is slightly less marked in rural areas with the corresponding figures rounding to four percent and 20 percent respectively. This context of poverty and high inequality is conducive to the spread of HIV/AIDS and inhibits society's capacity to respond to the epidemic.

In order to identify the proportion of the population that should be

<sup>8</sup> This requires monetary inflation to be taken into account. The table is given in 1993-94 prices.

Figure 5: Cambodian poverty lines



Sources: Prescott and Pradham 1997, Knowles 1998, Gibson 1999

counted as poor, consumption is compared to the values of the poverty lines (For definition and computation of poverty line, see Annex C). The poverty line values are summarised in Figure 5.

The most commonly used index of poverty is simply the proportion of the population whose expenditure levels fall below the poverty line and is often called the 'head-count index'. This index is easy to interpret and provides a striking view of the prevalence of poverty. However, according to the consumption distribution, the head-count index may be very sensitive to small

variations of the poverty line setting. It thus provides important information, but cannot be interpreted in isolation from other features of the consumption dis-

tribution. The proportion of the Cambodian population who is defined as poor according to this analysis is shown in Table 4.

Table 4: Head-count indices

	SES 1993-94	SES 1997 (adjusted)	SES 1999 (Round 1)	SES 1999 (Round 2)
National	39.0	36.1 % (47.8 unadjusted)	64.4	51.1 % 35.9 %
Phnom Penh	11.4	11.1	19.4	9.7
Other Urban	36.6	29.9	57.3	25.2
Rural	43.1	40.1	70.0	40.1
% under food poverty line	20.0	17.9	47.7	11.5

Sources: Prescott and Pradham 1997, Knowles 1998, Gibson 1999

Interpreting this table as a broad indication of the Cambodian situation enables a conclusion that between 40 and 45 percent of the Cambodian population subsist below the poverty line and that there is no evidence that this situation is improving. This is a striking result, which should form the starting point for reflection on poverty alleviation programmes. It is within this context that the HIV/AIDS epidemic has taken root in Cambodia.

However, the head-count index does not indicate how far below the poverty line the poor are. Whether a person is just below the poverty line or

very far below, s/he will be counted by the head-count index in the same way. Thus, it is useful to consider a second index, which measures the average gap between poor people's standard of living and the poverty line. This index is called Poverty Gap Index and is expressed as a ratio of the aggregate poverty gap to the total numbers below the poverty line. The index permits the calculation of the cost of eliminating poverty by making perfectly targeted transfers to the poor (in a hypothetical situation that assumes no transaction costs or disincentive effects).

Table 5: Poverty gap indices				
	SES 1993-94	SES 1997 (adjusted)	SES 1999 (Round 1)	SES 1999 (Round 2)
National	9.2	8.7 (13.7 if unadjusted)	15.4	
			23.9	6.5
Phnom Penh	3.1	2.2	5.2	2.0
Other Urban	9.6	7.5	23.3	6.8
Rural	10.0	9.7	26.0	6.9
According to food poverty line	3.7	3.5	14.5	2.3

Sources: Prescott and Pradham 1997, Knowles 1998, Gibson 1999

With variations, the poverty gap indices show a depth of poverty rounded to 10 percent. This means that, although poverty is dramatically widespread, values of consumption by poor people are concentrated around 10 percent below the poverty line.

To summarise, there is widespread poverty in the countryside (where 84 percent of the Cambodian population resides), high levels of inequality in consumption patterns and no clear trend of overall poverty alleviation. These severe poverty related indicators do not mean that Cambodian society is unchanging, nor that the Cambodian government is inactive on these issues. The first and second five-year socio-economic development plans, 1996–2001 and 2001–05 respectively, attest to early and persistent efforts made by the

Cambodian authorities to design and implement poverty alleviation policies.

## ii. Encouraging schooling rates marked by spatial and gender inequality

The circumstances of education is important part of the human development perspective as it reveals both the recent historical context, through the distribution of literacy among adults, and the current policy orientation, through the school enrolment rates of children and teenagers.

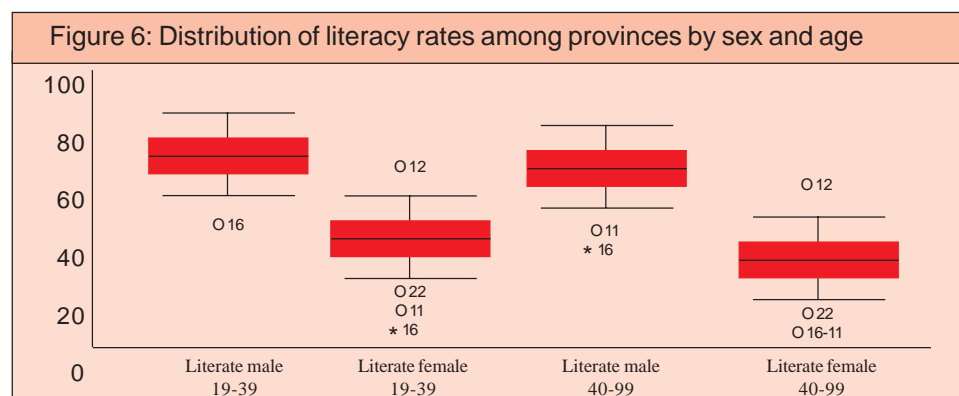
A Box-and-Whiskers plot of the adults' literacy rate, as reported in the 1998 Cambodian national census, showing the dispersion by province for two age groups and by sex, illustrates beyond doubt the current pattern of inequality in terms of literacy (Figure

6): a strong gender inequality essentially due to a marked disparity in the older generations:

- the male literacy rate was approximately 80% (79.5%)<sup>9</sup>
- there was a marked gender gap, with the rate of female literacy (57%) being some 25% lower than the male

rate. This inequality was less apparent among young adults.

- the significant dispersion range by province, especially for women (with about a 60% discrepancy between the situation in the capital and the situation in the remote and poorest provinces along the north-east border).



This pattern of inequality by sex and location is common to all dimensions of human development in Cambodia. The present report aims to show that it, specifically, must be taken into account when attempting to understand and/or make efforts to monitor the

HIV/AIDS epidemic. Further, the schooling rate distribution for children and teenagers does allow for some optimism: the marked gender inequality that is characteristic of the schooling rates among the older age groups, is almost imperceptible

Table 6: Summary of schooling rates by age and sex														
Children schooling rates distribution parameters (%)														
Age	6		7		8		9		10		11		12	
Sex	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Median	15.6	14.9	31.4	31.3	45.5	44.8	58.6	57.3	64.8	63.5	72.6	71.3	75.9	72.4
Max	38.7	37.6	63.4	63.1	77.3	76.4	85.2	84.9	87.9	86.9	91.3	90.2	90.8	88.3
Min	5.91	4.66	10.8	9.96	11	11.6	17.7	17.2	17.6	15.3	26.7	22.2	28.2	21.6
Teenagers schooling rates distribution parameters (%)														
Age	13		14		15		16		17		18			
Sex	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female		
Median	75.7	69.42	73.1	60.2	63.5	44.73	53.1	34.27	42.1	22.1	31.9	16.14		
Max	91.3	86.44	90.4	80.75	85.4	69.8	80.1	57.85	71.1	44.16	60.5	31.52		
Min	30.7	20.74	33.9	21.33	22.7	11.95	28.2	13.32	17.6	11.91	17.3	5.9		

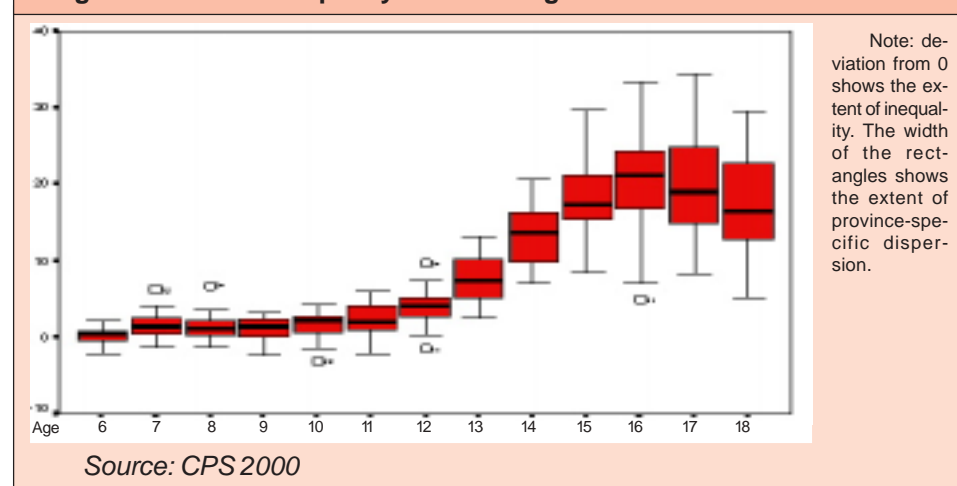
<sup>9</sup> Further investigations undertaken by UNESCO in Cambodia conclude that the 1998 Census results are overly optimistic, and that the literacy level is, in fact, much lower. A reason for this discrepancy may be that the Census recorded literacy levels by declaration, while UNESCO asked respondents to perform a practical test.

among the very young (Table 6).

As gender inequality is an essential dimension of the HIV/AIDS issue, it is worthwhile examining the situation in regard to schooling at greater length. Figure 7 shows that up to the age of 12, gender inequality is minimal, with a growing but still marginal dispersion by

province. However, from the age of 12 to 16, the difference in the gender schooling rate increases sharply as does the increase in dispersion according to province. The marginal decrease in the gender discrepancy observed from the age of 16 to 18 are related to poor schooling rates for both sexes.

**Figure 7: Gender inequality in schooling enrolments**



In summary, although the schooling situation is characterised by marked spatial and gender inequality, reason for hope can be found in the high level of schooling rates for young teenagers<sup>10</sup> and the reduced gender discrepancy in enrolment rates for the youngest age groups.

### iii. The overall poor health status with sharp local distinctions

Life expectancy is a striking indicator of global inequality. As the Global HDR declares, leading a long and healthy life is among most basic aspects of for human development. Life expectancy in Cambodia, at approxi-

**Table 7: Life expectancy in South East Asia**

Country (projected figures for 2000)	Life expectancy at birth			Infant mortality rate (/000lb)
	Male	Female	Both	
Brunei Darussalam	74	78	76	8
Cambodia	55	57	56	90
East Timor	49	50	50	120
Indonesia	65	69	67	39
Lao People's Dem. Rep.	54	57	56	76
Malaysia	71	75	73	9
Myanmar	61	64	62	65
Philippines	68	71	69	30
Singapore	75	80	78	5
Thailand	67	73	70	25
Viet Nam	66	71	69	32

Source: PopMap software, World application.

<sup>10</sup> It should nevertheless be added that curricula are often very delayed. Many 14 year old pupils are still enrolled in primary school.

mately 55 years, is poor and among the worst in the region (see Table 7).

As already shown in terms of schooling rates, the spatial distribution of social indicators is highly heterogeneous in Cambodia. As a consequence, any policy, and in particular those addressing the HIV/AIDS epidemic, must give due consideration to this important feature. To highlight further this feature in the case of the health status, the infant mortality rate, one determinant of the life expectancy, is considered here. The reason for choosing the IMR is the fact that the life expectancy indicator is highly model-dependent and, when applied, the model relies on the population age and sex structure. In Cambodia these structures have been severely distorted because of its recent bloody history. An analysis of the infant mortality rate in these circumstances is, by contrast, more reliable as it permits a direct approach, and is more susceptible to policy initiatives.

Table 7 shows that the overall figure for infant mortality is high in Cambodia. Moreover, from recent measurements (see, for example, the Demographic and Health Survey 2000) it is possible to conclude that there has been a slight worsening in the situation. The DHS found that no more than 40% of

the children between 12 to 23 months at the time of the survey had been fully immunised. Using an international scale, the DHS reports that 45% of the children were stunted, 45% underweight and 15% were too thin for their height.

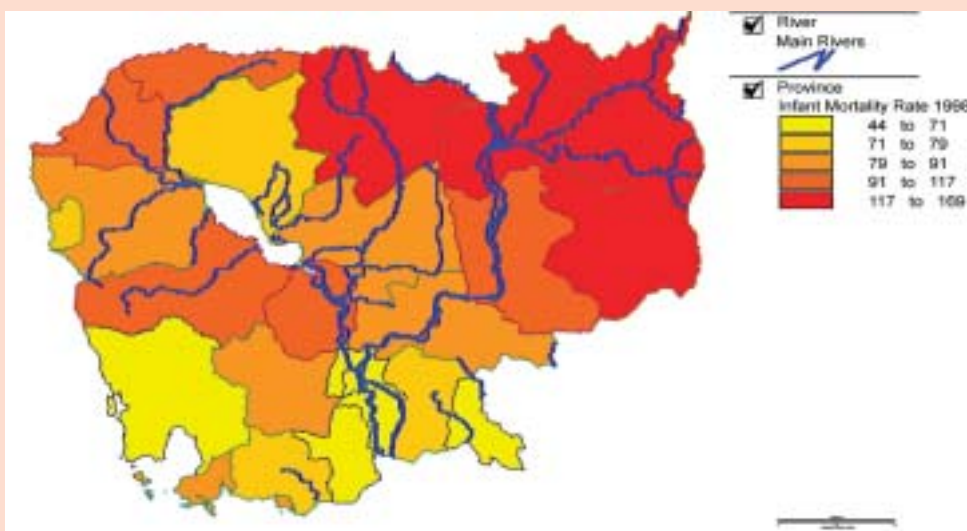
Map 1 provides a striking example of unequal human development in Cambodia. The mortality rate ranges from 1 to 3 (64 percent to 170 per thousand) (1998 population census).

Map 1 showing the IMR again attests to this inequality across the provinces of Cambodia. Not only is this pattern evident for other aspects of the public health status, but also for many social phenomena.

As will be explained in the body of the report, this spatial inequality is a critical feature, which cannot be ignored when assessing the HIV/AIDS situation and designing appropriate responses.

This is the context in which Cambodia is facing HIV epidemic, a context that, as will be advocated in the body of the report, provides a fertile ground for the epidemic, as well as inhibiting social capacity to respond to the epidemic. Nonetheless, as will be shown also, Cambodia is not without resources with which to respond to the epidemic.

**Map 1: Distribution quintiles of infant mortality rate by province (NIS PopMap software)**



Source: Census 1998



---

# 1. Human development facing HIV/AIDS epidemic: conceptual framework and the Cambodian epidemic situation

---

## 1.1. From the perspective of individual behaviour to the concept of vulnerability: the societal approach

Among four principal means of HIV transmission (sexual intercourse, blood transfusion, re-use of needles for injections,<sup>11</sup> parent-to-child transmission), heterosexual intercourse is the predominant means of transmission in Cambodia,<sup>12</sup> with parent to child transmission increasing as more and more women become HIV positive.

The strong association between the HIV/AIDS epidemic and sexual activity has often, at least in the global beginnings of the epidemic, obscured understanding of mechanisms spreading the epidemic. Sex is usually thought of as a private domain, an individual choice. This conceptualisation gave rise to the notion of risky behaviour that has played a major role in epidemic description. The task became to identify the sub-populations most likely to adopt risky behaviour and to develop interventions in order to bring about behaviour change.

This approach, useful as it may be, turned out to be highly insufficient for reducing the spread of HIV. Two main factors may help account for its shortcomings: the social determinants of human behaviour and the necessity of understanding “risk” within a particular context.

### 1.1.1. Sex is a social issue

The main shortcoming of the “risky behaviour” perspective is that it does not account for the fact that sex, like all

other human activities, is a social issue. As such, sexual behaviour patterns are constituents of overall social design, linked with other constituents by double bonds of action and reaction. Gender inequality, average age at marriage, personal and social insecurity, employment patterns, role of women inside the family, quality of citizenship, education levels and so forth, result in specific sexual patterns, some of which provide fertile ground for the epidemic to spread.

The social determinants of sexual behaviour result, in particular, in differences between countries, and among their social groups, as to their capability to respond to a given threat. This mechanism of behaviour driven by circumstance is well known in relation to many social issues. For example, in the case of threats to public health, some social patterns so seriously deprive the concerned social groups of capability that the disease is likely to oppose more resistance in these groups. This can be observed in developed countries where tuberculosis persists in the poorest segments of the population. Another similar example of this relationship is the persistence of the medically understood disease, leprosy, in developing countries, despite the low cost of the drugs required for treatment.

A dramatic illustration of the above analysis may be found in the evolution of the HIV epidemic in the USA:

*A new pattern is emerging, with the epidemic shifting towards poorer*

---

<sup>11</sup> HIV is transmitted through the introduction of infected blood or sexual fluids into the body.

<sup>12</sup> It is assumed that sexual transmission is mostly heterosexual. There is little information available about men having sex with men (UNAIDS 2001c).

*people ... who face disproportionate risks of infection and are more likely to be missed by prevention campaigns and deprived of access to treatment. (UNAIDS 2001a)*

For example, the report quoted above goes on to describe how the rate of newly reported AIDS cases in the USA, disaggregated between white and black communities, shows a perfect mirror trend. There was a constant decrease from 1985 to 1999 for the white community and a constant increase over the same time period for the black community. The two curves crossed in 1995.

Another highly worrying example is provided by Eastern Europe and Central Asia. These societies have undergone deep socio-economic transformations in the last ten years. The UNAIDS (2001a) report notes:

*Infection rates are climbing ominously in Eastern Europe and Central Asia, where overlapping epidemics of HIV, injecting drug use and sexually transmitted infections are swelling the ranks of people living with HIV/AIDS. Most of the quarter million people who became infected in 2000 were men - almost all injecting drug users living in the margins of the society. In some parts of the region, more infections occurred in 2000 than in all previous years combined.*

This shows that the pattern of individual behaviour is significantly determined by the social context, and some contexts are inevitably **disastrous**. Assessing the social context through the perspective of human development achievements, the relationship between the HIV/AIDS epidemic and human development achievements has to be clearly delineated in order to render this perspective effective and result in relevant recommendations for all stakeholders.

The key feature of such a societal approach is its incorporation of the concept of vulnerability, and the way vulnerability is then viewed in relation to social stratification. The concept of vulnerability complements the HD perspective, as it deals with the availability, or otherwise, of a range of choices in a given social context. Addressing vulnerability calls for an understanding of the relationships which shape the structural dynamics of a society, if such an approach is to go beyond words and become effective. The appropriacy of this conceptual framework will be illustrated in this chapter.

The validity of this approach is evident in relation to gender. Examining a society from this perspective does not mean restricting the analysis to a case study of women. It means questioning the balance of the differential social position of both men and women and their respective roles. Similarly, a vulnerability perspective does not mean restricting the study to only the poorer groups, but seeing poverty as a condition shaped by human relations within particular structural dynamics. This means taking into account the differential social positions that constitute all the elements of that society, in order to understand the different behavioural responses and the consequent different effectiveness of these responses to a social threat.

### 1.1.2. Risk and context

The second main shortcoming of the individual behaviour-based approach is that it supposes that vulnerability to infection is dependent on defined sets of behaviour. This is wrong. It supposes that behaviour can be separated from the social context – such as local gender and power relations - in which it takes place. A behaviour is not risky or safe in or of itself. Central and South African women learned this tragically: in high prevalence regions, to be a mar-

ried woman is to be at extremely high risk of infection. Accordingly, the sex ratio of persons with HIV inverted from a predominance of men to a predominance of women.

This finding leads to an important observation: the ways in which the epidemic spreads are not uniform, but depend upon the way a country responds to it. Global evidence shows that the epidemic in its primary stage settles in the general population through male behaviour, and in predominantly urban areas. For example, high rates of early sero-prevalence have often been found among civil servants such as male teachers. Without timely and sufficient attention to this stage of the epidemic, the infection among spouses will play, in turn, the next main stage in the spread of the epidemic. Educated people may benefit from information campaigns earlier and in a greater number than the non-educated. Thus the epidemic is likely to move into pockets of poverty, which will include the rural areas.

Therefore, considering sexual behaviour patterns is fundamental to understanding how the epidemic may have established itself in a specific country context. Given that vulnerability to HIV infection is closely related to social fac-

tors, one should consider that the dynamic of the epidemic is a social issue, and related to its relatively recent emergence and responses to it. The remaining part of this chapter is first devoted to illustrate the proposed conceptual framework, and then to record the current stage of the Cambodian HIV/AIDS epidemic. The CHDR 2001 will then focus on the social vulnerability issue in Cambodian society.

### 1.2. Conceptual framework

The concept of Human Development embodies far more than economic wealth. The present report will emphasise some its major aspects. Readers must bear in mind that such a picture is not exhaustive, but aimed at providing relevant examples of the social mechanisms under examination.

The HIV/AIDS epidemic is similar to all other social phenomena: it participates in and inevitably affects the overall social balance between various groups. It develops in a given social context, and in turn, it alters that context. Diagram 2 illustrates some of the reciprocal links between key aspects of human development and the HIV/AIDS epidemic drawn from the global experience.

**Diagram 2: The HIV/AIDS epidemic is a human development issue**

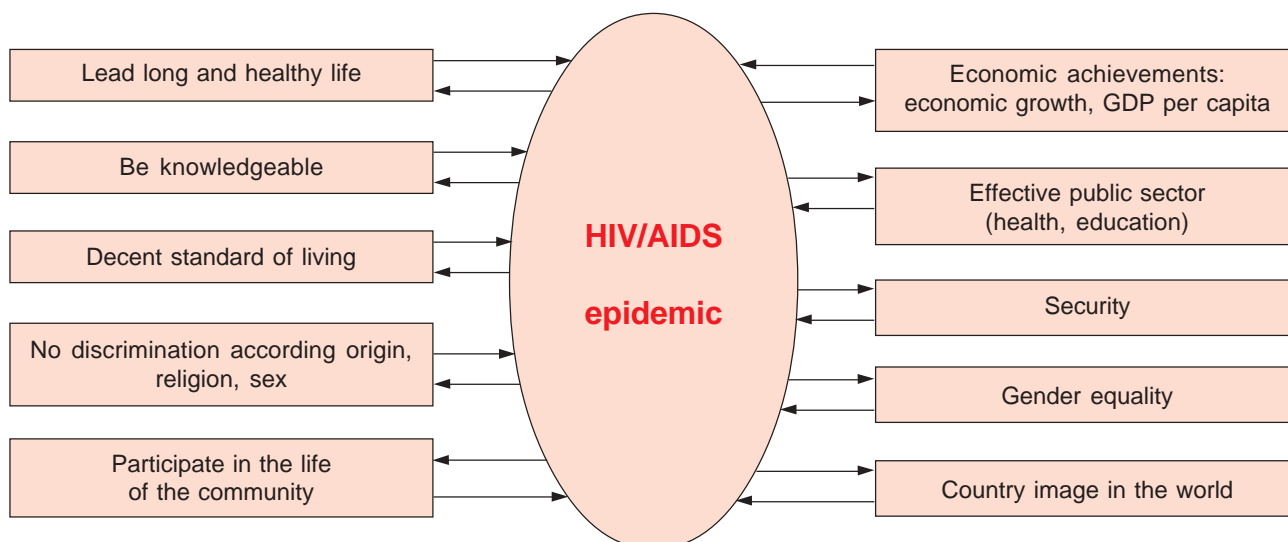
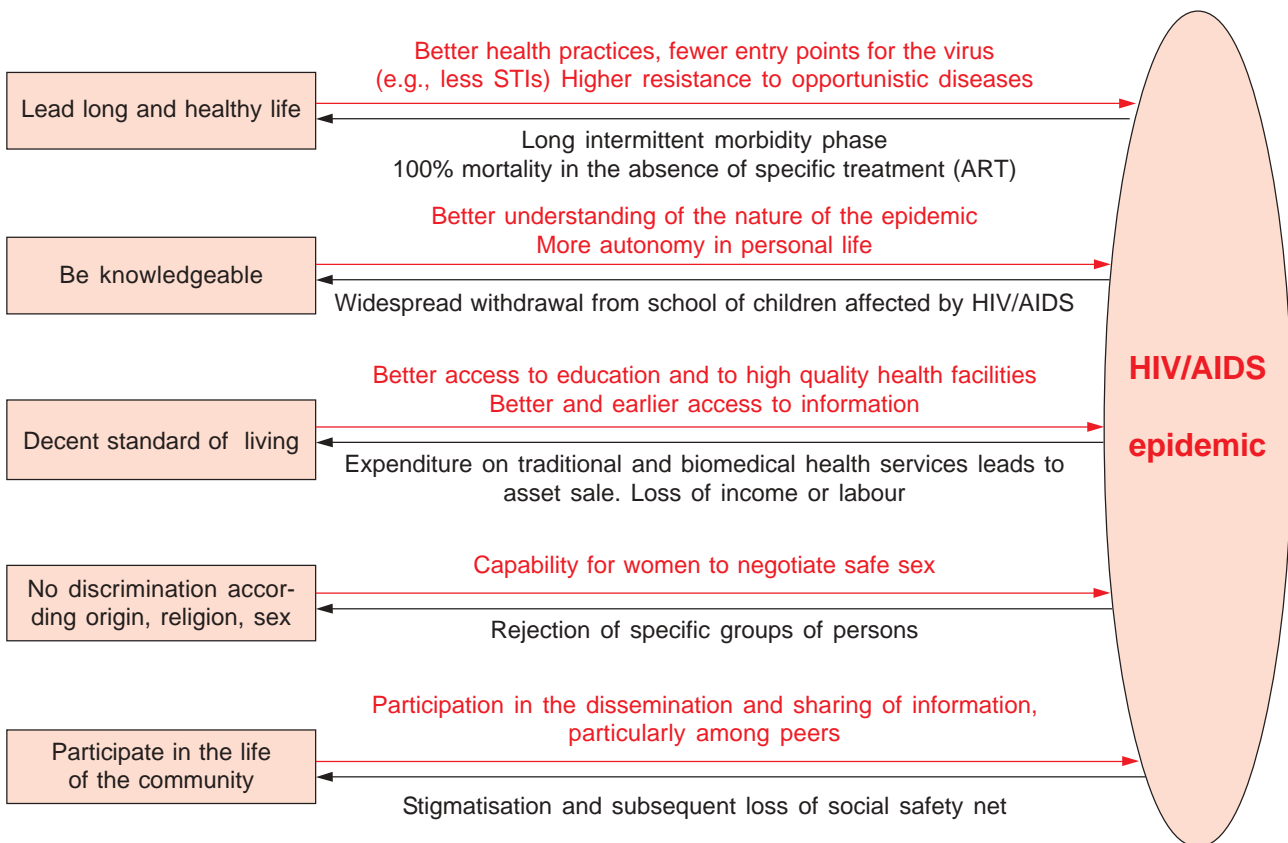


Diagram 2 illustrates two dimensions of the same issue. Both sides of this diagram address the question of how people organise themselves to live together: the left side reflects the individual perspective, while the right side reflects the perspective at the national level. The arrows directed towards the HIV/AIDS epidemic ellipse illustrate a key premise of this report: **the level of national development and the extent to which individuals participate in and benefit from that development are key factors determining the spread of the epidemic.** The arrows directed away from the HIV/AIDS epidemic ellipse in Diagram 2 illustrate the reciprocity of these relation-

ships: the HIV/AIDS epidemic impacts heavily on development achievements, thereby lowering overall standards of living. A descending spiral, if set in motion, can be disastrous.

To make some aspects of these links explicit, Diagram 3 illustrates the individual perspective, focusing on five key areas of human development. Again, the arrows pointing towards the HIV/AIDS epidemic ellipse offer some examples of how the level of human development influences the spread and impact of the epidemic. The arrows pointing away from the HIV/AIDS epidemic ellipse illustrate some examples of how the epidemic undermines human development achievements.

Diagram 3: Links between human development and HIV/AIDS: individual perspective



A high standard of health protects individuals, especially as the link between HIV infection and STIs is well established. Conversely, HIV infection

results in the infected persons having an increasingly poor health status (death being unavoidable without specific treatment): the reciprocal influence

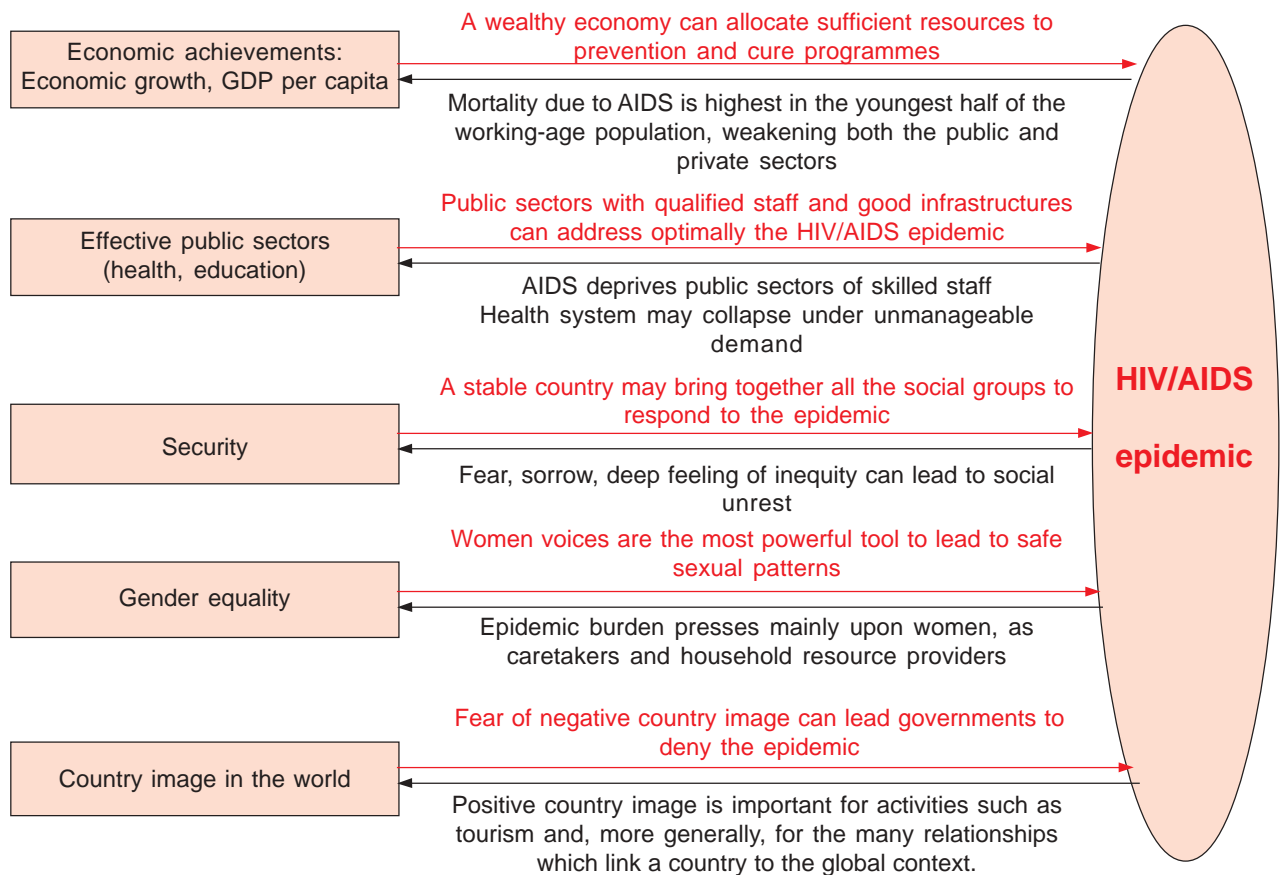
between the health situation and the epidemic is obvious. It is only one example of a general mechanism linking together essential social structures. Reciprocity is an important characteristic of these links, despite the fact that one direction of the relationship is often acknowledged more readily than the other.

Restricting comments on these links to some of the fields illustrated in Diagram 3, it is apparent that an educated person has more resources and is, therefore, more able to benefit from HIV prevention campaigns, and will also have more opportunities to modify his/her behaviour. At the other end of the educational scale, are children affected by the HIV/AIDS epidemic. They lack both resources and oppor-

tunities. Active participation in civil society life, through community structures, for example, places the individual inside a beneficial net of information and discussion. In turn, this increases his/her range of possible effective reactions. In contrast, the stigmatisation, so often associated with a seropositive status, forces the people concerned into isolation and silence, depriving the community of their participation in information sharing.

This mechanism of reciprocal forces, which exists at an individual level, is also effective at the level of society. Diagram 4 provides a similar illustration of links between the HIV/AIDS epidemic and key aspects of human development from the national perspective:

**Diagram 4: Links between human development and HIV/AIDS: the national perspective**



Again, it is essential to fully understand the reciprocity of the influences as shown by the arrows in Diagram 4. A society is, of course, a dynamical

structure. Human development is one of the most entrenched and demanding of the movements at work in any society. Achievements in the dimensions

shown above are inextricably linked, and contribute to the creation of circumstances which the epidemic finds either more or less fertile.

The links between dimensions are not mechanical: they interact, but progress—and setbacks - may occur at various paces. This means that even if general mechanisms can be identified, each society will have a unique pattern of development and consequently, a social issue such as the HIV/AIDS epidemic has to be understood and addressed within its specific context, while taking into account global lessons.

Diagram 3 and 4 also highlight another important feature. As all social fields are linked with the epidemic as an issue, so too are the actors who are shaping the response to the HIV/AIDS issue involved in and affected by the same social dimensions.

Finally, a last distinction will be useful to render the above framework operational. Readers could easily be convinced, when reading the example given for each of the red arrows (providing an illustration of how the con-

text determines the features of the epidemic) that these belong to two separate levels of action. Some are directly linked with the epidemic: sexual practices (for example, negotiating safe sex), and better health practices which will impact immediately on the spread of the epidemic. These are the near determinants of the infection. The others, such as poverty alleviation, or improvements to the level of education throughout the entire population, will slowly modify the circumstances in which the epidemic is rooted. These are the structural determinants. They are linked with the near determinants: they determine whether the actions taken in relation to the near determinants are sustainable.

### 1.3. Human rights implications of HIV/AIDS

While the fundamental goals of the Human Rights approach converge with those of the Human Development approach, the former does nonetheless emphasise the rights that any human being can demand of the society he/she participates in.

#### Box 3: Human rights and human development

The basic idea of Human development – that enriching the lives and freedoms of ordinary people is fundamental – has much in common with the concerns expressed by declarations of human rights. The promotion of human development and the fulfilment of human rights share, in many ways, a common motivation, and reflect a fundamental commitment to promoting the freedom, well-being and dignity of individuals in all societies.

Human development and human rights are close enough in motivation and concern to be compatible and congruous, and they are different enough in strategy and design to supplement each other fruitfully. A more integrated approach can thus bring significant rewards, and facilitate in practical ways the shared attempts to advance the dignity, well-being and freedom of individuals in general.

To have a particular right is to have a claim on other people or institutions that they should help or collaborate in ensuring access to some freedom. This insistence on a claim on others takes us beyond the idea of human development. Of course, in the human development perspective, social progress of the valued kind is taken to be a very good thing, and this should encourage anyone who can help to do something to preserve and promote it. But the normative connection between laudable goals and reasons for action does not yield specific duties on the part of other individuals, collectivities or social institutions to bring about human development – or to guarantee the achievement of any specified level of human development, or of its components.

This is where the human rights approach may offer an additional and very useful perspective for the analysis of human development. It links the human development approach to the idea that others have duties to facilitate and enhance human development.

source: *Global Human Development Report 2000, UNDP*

In accordance with the proposed conceptual framework, the issue of human rights implications of the HIV/AIDS epidemic can be considered by examining the reciprocal links between the epidemic and the promotion of human rights.

The promotion of Human Rights has an effect on the dynamics of the HIV/AIDS epidemic. The overall situation has unfortunately resulted in this situation being illustrated by its negative side, but important examples of a positive linkage may be found, particularly in Phnom Penh.

- The lack of effective means of expression on the part of individuals and communities results in the central administration having insufficient information about the status and the possible progress of the epidemic.

Enabling the voice of concerned individuals, families and communities to be expressed is a basic duty. It is also a powerful tool for monitoring the epidemic. In no country is this declaration easily put into effect. For example, activists from the homosexual communities in Europe and in the USA struggled to make their voices heard. The global experiment nevertheless provides important evidence about the effectiveness of this approach.

- The lack of effective means of expression on the part of individuals and communities results in there being fewer demands for a public safety net. Thus the burden of the epidemic remains mainly with the concerned households, undermining their contribution to and benefit from the wider economic achievements and threatening to polarise this impoverished group from the wider society.

Sharing the burden of the epidemic by mobilising public support is the first of a society's duties on behalf of the affected part of its population. Assum-

ing this responsibility is also part and parcel of maintaining and continuing with strategies to address entrenched poverty and implement effective development strategies.

Conversely, the epidemic accentuates the negative aspects of the Human Rights situation.

- Fear from infection leads to discrimination; no moral conviction can overcome the refusal to endanger oneself or a near relative. As long as this fear exists, no clear understanding about the circumstances of people living with HIV/AIDS can be reached.

- The stigmatisation associated with seropositive status (which is worse for those with AIDS) silences most of the affected people. In turn this silence lengthens the time taken to create awareness in the remainder of the population.

One essential contribution of the Human Rights approach is that it makes explicit the legitimacy of the call for support. The practical implications of this perspective are both demanding and highly effective in terms of shaping a response to the epidemic. The outputs of this framework can be appreciated by raising the controversial question of access to Anti-Retroviral therapies (ART). The primary right of each human being is to stay alive: demand for access to ART therapies, which inhibit HIV from becoming AIDS, ensue, therefore, as an elementary right. It is the duty of a country to mobilise its means to cope, as far as possible, with this demand.

#### **1.4. The HIV/AIDS epidemic in the Cambodian context: knowledge and lack of knowledge**

##### **1.4.1. Prevalence rate estimation: HIV Surveillance Surveys**

Quantitative knowledge on HIV/AIDS epidemic relies on data provided

by the Sentinel Surveillance system implemented by the National Center for HIV/AIDS, Dermatology and STIs, a department of the Ministry of Health. These are the only countrywide estimations for the sero-prevalence rate, and as such they are essential. There have been successive issues of the Surveillance Sentinel Surveys since 1992, but these have covered a significant part of the country only since 1997. The report relies on the four most recent surveys of 1997 to 2000. While sentinel surveys have inherent limitations, as

discussed in this chapter, these surveys provide in-depth information about the spread of the epidemic within selected population groups.

The methodology of the Sentinel Surveys consists of identifying groups presenting potentially high-risk sexual behaviour, and groups likely to be representative of the national behaviour norm. From these groups, a sample of volunteers is tested for the presence of HIV. The groups chosen during the previous four years are listed in Table 8.

**Table 8: Sentinel groups**

1997 (22 provinces)	1998 (19 provinces)	1999 (20 provinces)	2000 (21 provinces)
DCSW <sup>1</sup> Male police ANC <sup>2</sup>  Hospital in-patients <sup>3</sup> Tuberculosis patients Military personnel	DCSW Male police Married women of reproductive age Hospital in-patients  IDCSW <sup>4</sup>	DCSW Male police ANC  Hospital in-patients Tuberculosis patients  Beer promoters Non-brothel based sex workers <sup>5</sup> Households (general population)	DCSW Male police ANC  Hospital in-patients Tuberculosis patients  IDCSW
<p><sup>1</sup> Female Direct Commercial Sex Workers,  <sup>2</sup> Pregnant women attending antenatal clinics  <sup>3</sup> Hospital in-patients were surveyed in only three provinces  <sup>4</sup> Indirect Commercial Sex Workers. IDCSW includes women beer promoters, women bar workers and women working in karaoke lounges and massage parlours.  <sup>5</sup> 'Beer promoters' and 'non-brothel-based sex workers' were an attempt to disaggregate the IDCSW group.</p>			

The 2000 Sentinel Survey Sampling thus encompassed six sentinel groups: 1) Female direct commercial sex workers (DCSW) 2) Female indirect commercial sex workers (IDCSW) 3) Male police 4) Pregnant women attending antenatal clinics (ANC women) 5) Tuberculosis patients and 6) Hospital in-patients (in 3 provinces only).

For DCSW, IDCSW and Police (and ANC women and TB patients), the sample covered 21 provinces,

stratified in Provincials capitals and remaining districts. The sampling frame in all the 21 provinces but Battambang covers the two strata. For hospitals in-patient, the three provinces in which the survey takes place are Battambang, Kampong Cham and Phnom Penh.

DCSW, IDCSW and police were recruited from randomly selected sites, while ANC women, TB patients and hospital in-patients were recruited from purposely selected sentinel sites. In provinces where the total number of



DSCW was not likely to exceed 150, the corresponding sample includes all the DSCW. In provinces where the total number of DSCW was significantly higher than 150, cluster sampling was done. IDSCW were sampled from a list of all beer companies that hire beer promotion women, as well as bars, karaoke lounges and massage houses.

The sampling size, per province, was decided to be 150 people from each sample group if prevalence in 1999 was higher than 5 percent, and 300 people from each sample group if prevalence was less than 5 percent. In some provinces it was not possible to achieve these sampling targets, and so as many people as possible were included in the sample.

The first aim of the HSS is to provide an estimate of the overall prevalence rate among adults. The figures for 2000 have already been described in the introduction of this report: **2.8% of Cambodian adults were expected to be HIV positive in 2000.**

As already explained, this figure is based on measuring the prevalence rate in a sample of pregnant volunteers attending antenatal clinics. This choice may be questioned for the following reasons, but no other choice would have

been any less questionable. First, pregnant women are likely to be more sexually active than the total group of adult women. But, and this is the main limitation, most Cambodian women do not attend antenatal clinics. According to the 2000 Cambodian Demographic and Health Survey, 89% of the babies born in the five years preceding the survey were delivered at home. Thus only about 10% of mothers gave birth in a health facility. Indeed most (55%) had no contact with a health facility during pregnancy.

Although attending antenatal clinics is an urban phenomenon typical of the wealthier groups, it also includes women with high-risk pregnancies. It is not easy to assess how these biases are likely to distort the measured prevalence, and even less how they might change over time.

When the epidemic is most present in urban areas, such prevalence assessed through these attendance figures might overestimate the overall national prevalence. When prevention is successful among educated people, the reverse might be true. It results in an underestimation of national prevalence. Box 4 gives details for some aspects of this discussion.

#### Box 4: Estimates of prevalence rates are inherently fragile data

Estimates of prevalence rates are essential, as knowledge of the extent of the spread of the epidemic is clearly key information in the organisation of any response to the epidemic. Unfortunately, gathering data to estimate prevalence, in addition to the difficulties common to all measurements of social phenomena described in Annexes, has specific requirements and features that cause such estimations to be inherently fragile data.

Firstly, estimation of HIV prevalence rates requires blood testing from a representative sample of the population. This requirement is impossible to meet. An essential feature of HIV testing is that it is voluntary. Accommodation of the needs for both voluntary testing and a representative sample requires compromises. The Ethical considerations demand that the requirement that blood testing is voluntary is met in full. Therefore, distortions inside the surveillance samples have to be accepted.

Secondly, fortunately, within the range of overall prevalence likely to be found in Cambodia (an order of magnitude of around 3 percent), only a few people in a sample of a few thousand will be HIV positive. For example, the sample of pregnant women attending antenatal clinics (ANC), from which the overall Cambodian prevalence rate is deduced (as explained earlier in the report), included 6,562 women in the 2000 round of sentinel surveillance. Among them, 152 were found HIV positive, unequally spread across the 21 provinces. Thus, by province, there were between one and 17 women who tested positive. Obviously, small hazard variations will significantly influence any description of such a sub-sample. In other words, any figures deduced from this sub-sample encompass a large error bar.

School attainment will be used here to illustrate the type of distortion resulting from these unavoidable features of prevalence measurement. An obvious concern about the choice of the sentinel group of pregnant women attending ANC to represent Cambodian women of reproductive age is that a very small percentage of Cambodian women of reproductive age access ANC. Most pregnant Cambodian women do not attend ANC, and those who do are not likely to be a random sample of pregnant women and are likely to share certain characteristics. Indeed, the sample of pregnant women tested in the 2000 Sentinel Surveillance Survey were found to have a school attainment distribution distorted towards a high level.

The same kind of distortion was found in the sample of household men surveyed for the 2000 Behavioural Sentinel Survey. Of the 3,166 men sampled through a multistage sample frame, 6.5 percent reported that they had not attended school (8.7 percent of men in rural households and 4.3 percent of men in urban households). The corresponding figures from the 1998 census, for the five provinces surveyed pooled together, are respectively 19.1 percent (total), 23.68 percent (rural) and 8.84 (urban). School attainment of men from 15 to 49 is not susceptible to significant change in a two year time period. The choice of the ANC sample, and the sample from household sampling exhibit the same feature. Reasons contributing to this same distortion appearing in both the sample of pregnant women attending ANC clinics and the male household survey may include difficulties in conducting the survey deep in the countryside and the greater ease of response and cooperation with the survey among more educated people.

Adjusting estimates of prevalence rates in the context of a sample that is unrepresentative of school attainment levels is not straightforward. Global trends suggest that the older an epidemic is, the more deeply it is rooted in the poorest part of society. If this trend holds for Cambodia, it could mean that surveillance survey results will gradually come to underestimate the actual HIV rate. Such underestimation will have consequences for all quantitative assessments deduced from the estimated prevalence rate, including the projected number of persons developing AIDS at a given time and the projected number of AIDS-related deaths.

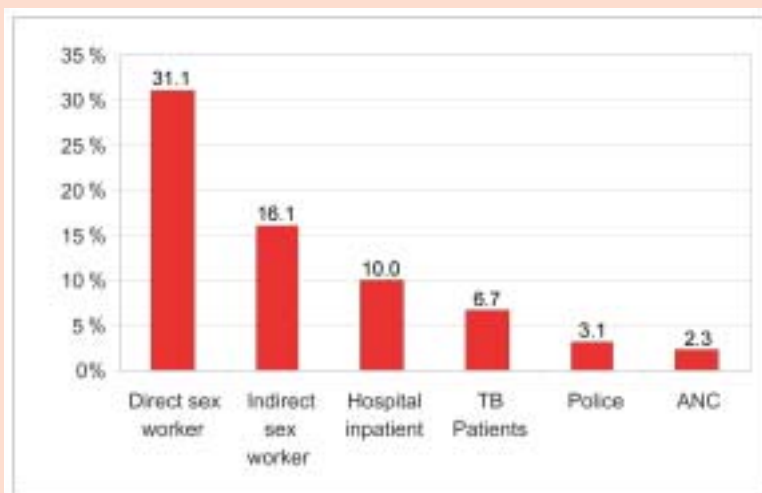
The best way to clarify this question of prevalence is to crosscheck this survey with other types of prevalence surveys. But there has been, so far, no clear answer. An attempt was made in 1998 to substitute the sample of women attending ANCs with a sample of married women of reproductive age. The corresponding value proved to be

lower than what would have been expected through an interpolation of the results from ANC attendant women. The three values measured from women attending ANCs are 3.2%, 2.6%, 2.3% (for 1997, 1999 and 2000 respectively), resulting in an extrapolate value for 1998 of 2.9%. The measured value from married women in the same year is 2.4%.

Finally, on the basis of the chosen framework, one has to evaluate the differential rate of infection between males and females in order to provide a national estimate. This may be measured directly through household testing surveys, or deduced from behavioural estimates. The ratio of infection for males to females of 1.5:1 comes from the Behavioral Surveillance Survey.

It should be clear to readers that the steps detailed here do not mean that Cambodian data are less reliable than other data of this kind. These steps highlight the Cambodian response to the unavoidable constraints of prevalence estimates. In one way or another, all countries have to deal with the same

**Figure 8 : HIV seroprevalence among sentinel groups in 2000**



Source: NCHADS, Sentinel Survey 2000 dissemination

problem. The prevalence data in Cambodia are far from being less reliable, and the Surveillance System is considered one of the best in the region. The CHDR deals with the question of reliability in some detail, as fair consideration of the level of confidence to be given to epidemic spreading assessment is needed to consider the possibly weak ground on which epidemic might keep on rooting, if not refuelling.

The second aim of the HSS is to follow the groups designated as high-risk groups. The HIV seroprevalence for Sentinel sub-populations in 2000 is

shown in Figure 8.

In order to interpret these data, it is important to produce an estimated rate of variation from one province to another.

Sentinel Surveys are not designed to provide data for a discussion on the situation in each province, but the range of variation is nevertheless a significant indicator. Table 9 shows that, for each sampled group, the dispersion across the provinces is very important. The results combine statistical fluctuations with significant local disparities.

Sentinel Group	Lowest Prevalence	Highest Prevalence
Direct sex workers	7.1%	58.6%
Indirect sex workers	5.2%	32.8%
Police	0.7%	10.7%
Antenatal clinic attendees	0.5%	5.7%
TB patients (20 provinces)	0.0%	19.5%
Hospital in-patients (3 provinces)	8.1%	12.1%

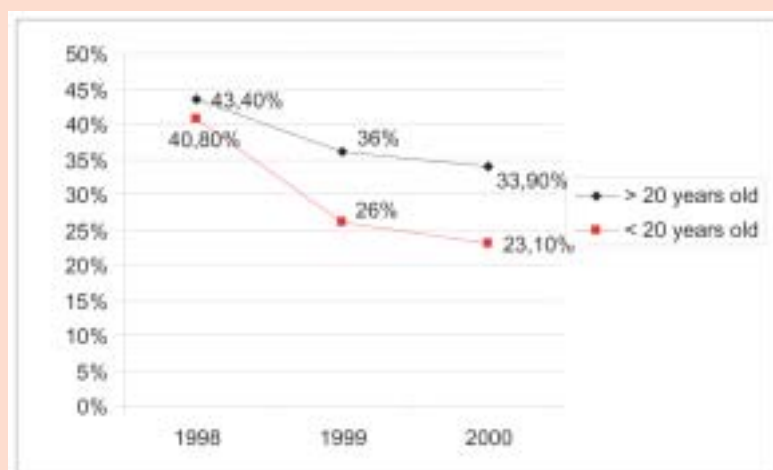
\* N=21 provinces

The prevalence trends of the epidemic provide data which are of paramount importance when assessing the effectiveness policies already implemented and when considering the design of future strategies. In order to understand and qualify the major result, presented in the introduction, that is, the decreasing prevalence for the past three years, it is essential that the evolution of the prevalence among the surveillance high risk groups is also assessed.

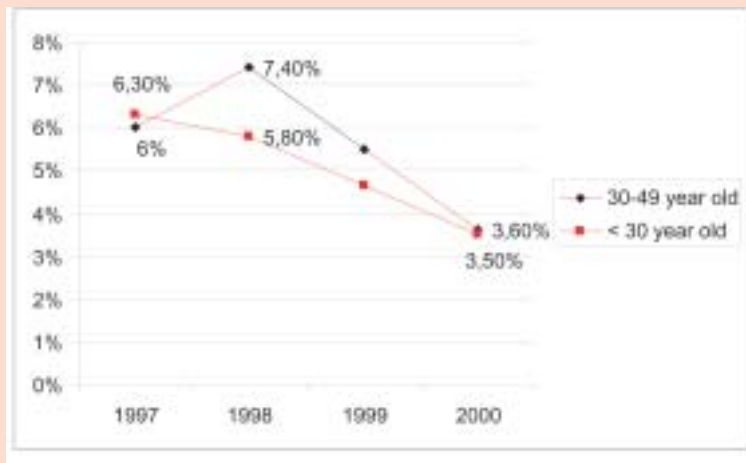
Figure 9 confirms the prevalence results derived from women attending antenatal clinics. Among the four high risk groups, two (DSW and Policemen) clearly have a decreasing trend. Less clear are the trends for 'Beer Girls' and

Figure 9: HIV prevalence in high risk groups decreases

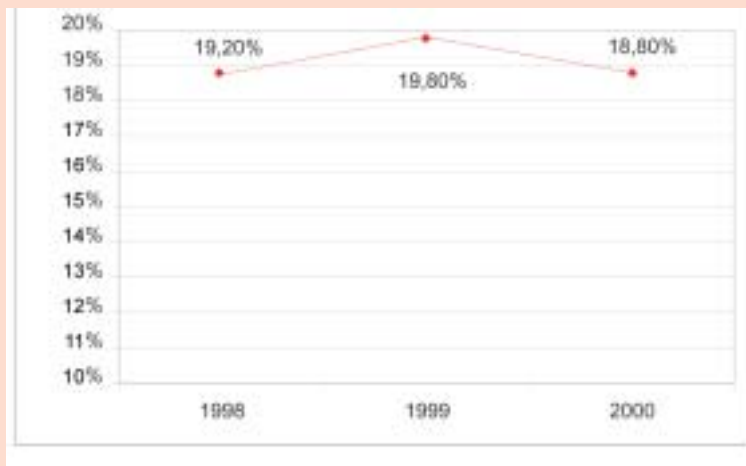
The Trend of HIV Seroprevalence among Direct Sex Workers by Age group (in 19 provinces)



The Trend of HIV Seroprevalence among Policemen in Urban Areas by Age Group



The Trend of HIV Seroprevalence among Beer Girls



The Trend of HIV Seroprevalence among TB Patients



TB patients, but, nevertheless, they are at least compatible with a decrease.

### 1.4.2. Behavioural Surveillance Surveys

The Sentinel System also includes repeated behavioural surveys (NCHADS 1997-2000). The Behavioural Surveillance Survey is a series of repeated cross-sectional surveys conducted at regular intervals on a national or regional scale in target groups. The goal is to monitor and track high-risk sexual behaviours in selected target groups on a regular and systematic basis.

While HIV Surveillance Surveys are intended to estimate the prevalence of infection among chosen surveillance groups, Behavioural Surveillance Survey (BSS) is intended to assess and follow over time the sexual behaviour of these groups. BSS methodology is widely used around the world in relation to various aspects of public health, such as smoking, eating patterns, alcohol consumption and so on. Annual rounds of BSS have been included in the Cambodian process for monitoring the HIV/AIDS epidemic since 1997, in order to monitor high-risk sexual behaviours in selected target groups on a regular and systematic basis. Expected uses of BSS are stated to be:

- Targeting prevention programs
- Identifying specific behaviour in need of change
- Providing indicators of success and identifying persistent problem areas
- Serving as an advocacy and policy tool.

The population is divided into groups characterised by three broad categories of behaviour. Firstly a core group, defined as a highly vulnerable group of individuals characterised by high rates of partner change, long du-

ration of STD infection often related to poor access to acceptable health care, and highly efficient transmission of infection per exposure. Secondly, bridging groups, as the transmission of STD/HIV beyond core groups into the general population has been shown to be based on patterns of mixing by individu-

als who have sexual intercourse with people categorised as ‘core group’ and ‘general population.’ The ‘general population’ is assumed to be at low risk.

The occupational groups chosen to represent these three categories and be sampled for the surveillance survey are:

Female sex workers (BSS I, II, III) Police/Military (BSS I, II, III)	Core groups
Women beer promoters (BSS I, II, III) Moto-taxi drivers (BSS I, II, III)	Bridge
Working women (BSS I, II) Vocational students (BSS I, II) Governmental officials (BSS II) Multistage sample of households males (BSS IV)	General Population

BSS I: 1997 (sample 4,356), BSS II: 1998 (sample 4,265), BSS III: 1999 (sample 3,400), BSS IV: 2000 (sample 3,166).

\* In three of the five sites, BSS I relied on GTZ study.

The BSS are administered in only five provinces, where the five largest cities are found:

Phnom Penh, Sihanoukville, Battambang, Kampong Cham and Siem Reap. Each provincial town is sampled, plus three rural districts in each province. BSS collects basic demographic information about the respondents (age, marital status, age at first marriage, number of children, educational level and, since 1998, monthly income, whether the person lives with family or not and whether the person has migrated in the surveyed location during the last year). Patterns of sexual behaviour among the pre-defined groups are captured by the following items:

- Mean age at first sex. BSS I to III consistently found younger values for

the women belonging to the core groups (17.6 all rounds for female sex workers<sup>13</sup>) and bridge groups (approximately 18.4 for women beer promoters) than for general population women (21 to 22.5 for the two first rounds for working women). Nothing similar is observed for men, with figures running from 21 to 22 without definite trends.

- Percentage ever had ‘sweetheart’ and percentage with a ‘sweetheart’ in the past year.

- Percentage never married and sexually active

- Number of lifetime sexual partners - median (and mean).

Beyond expected broad indications (for example, only a few working women who have never been married report being sexually active, as com-

<sup>13</sup> Readers should keep in mind that a large number of female sex workers in Cambodia are forced into sex work. Addressing the trafficking of women is part of a comprehensive response to the HIV/AIDS epidemic.

pared to 40-45 percent of beer promoters reporting sexual activity), none of these indicators enable straightforward interpretation. This is due to the fact that they are linked with other char-

acteristics of the respondents, such as age. Readers must refer to the four drafts of the BSS.

Particular attention has been paid to monitoring condom use. The figure 10

Figure 10: Improvement in consistent condom use

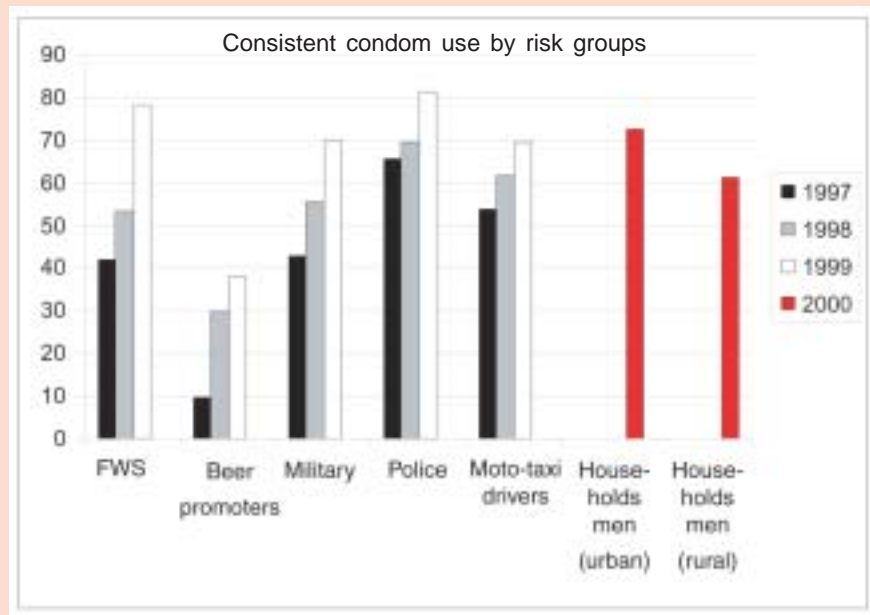
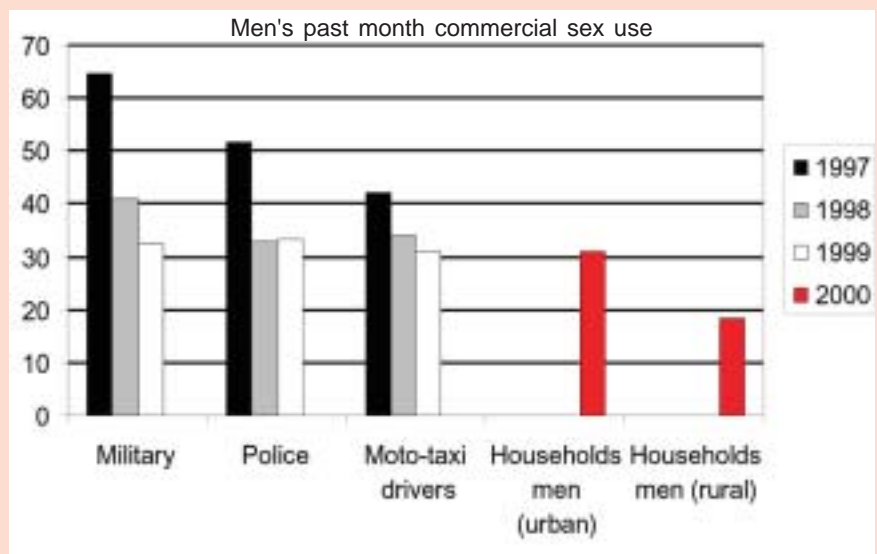


Figure 11: The evolution in commercial sex use



below shows an appreciable improvement in consistent condom use.

Attention is also paid to the frequency of STDs and access to STD treatment and to HIV testing. The successive BSS also exhibit a trend towards less commercial sex use. (See figure 11).

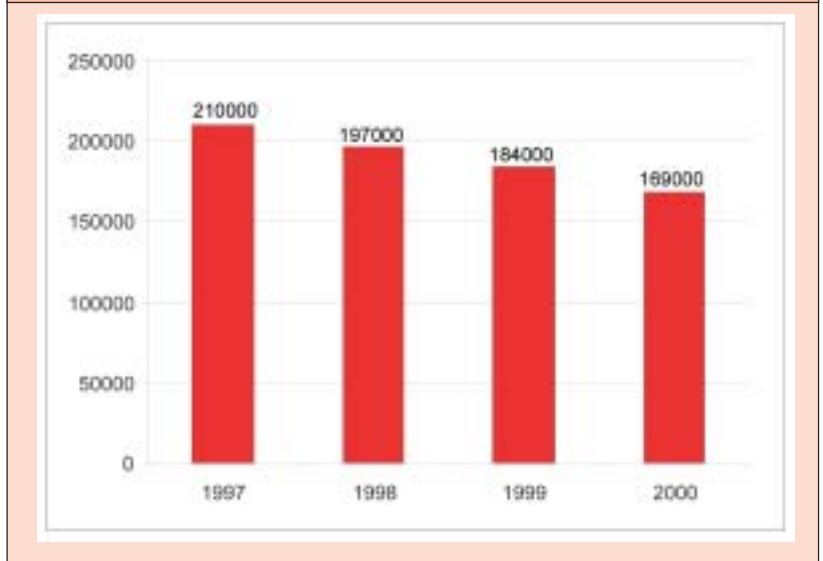
Nevertheless, BSS also captures the inexorable progression of the human consequences of the HIV/AIDS epidemic: in one year, between 1998 and 1999, the percentage of people knowing someone sick with AIDS has increased 2.5 to 3 fold among the sentinel group. The 2000 household male survey found that the lowest proportion of respondents knowing someone sick or who has died from AIDS was nearly one quarter (in Siem Reap), while the highest proportion was more than half of the sample group (in Phnom Penh).

#### 1.4.3. On a knife's edge between success and threat

As shown, the Cambodian epidemic situation, as assessed by the surveillance system, includes contrasting features. **However**, most importantly, the prevalence rate, hence the number of person living with HIV, shows a marked decrease. (See figure 12).

Nevertheless, decrease in prevalence does not mean a decrease in the number of new infections. People with HIV remain HIV positive as long as they live. In the context of a steadily increasing population size, a decrease in the sero-prevalence rate is synonymous with a decrease in the number of HIV positive people. Therefore, a decrease in the number of HIV positive people means that the number of deaths of HIV positive people is greater than the number of new infections. Thus, decreasing prevalence may occur in a variety of contexts: for example, where there is increasing incidence coupled with a more steeply increasing number of deaths or where there is decreasing incidence. In the current context of the

Figure 12: The number of persons living with HIV/AIDS decreases



epidemic in Cambodia, the number of deaths can only increase. Therefore, it is necessary to mobilise other information sources in order to interpret the decrease in the prevalence and determine further steps in a relevant response to the epidemic.

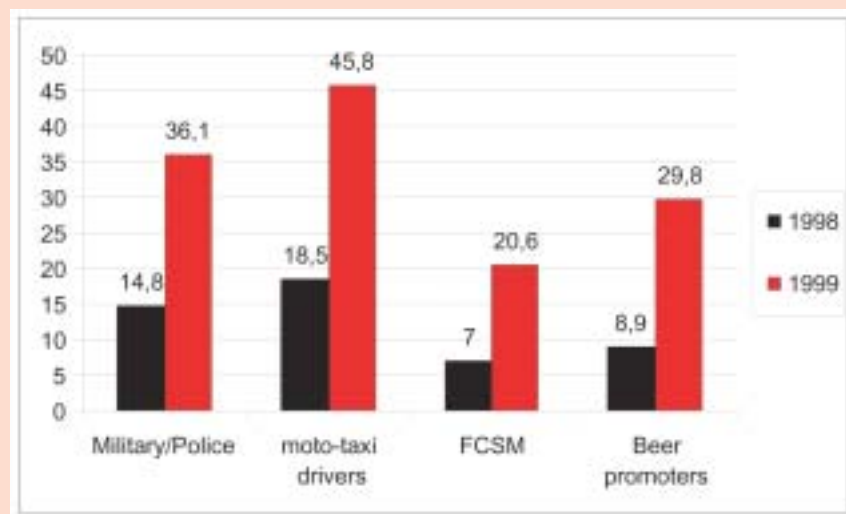
Currently, the only way to gain insight into the gradual lessening of the incidence rate is to consider the prevalence rate for very young adults (A new, original effort will be undertaken in 2001 to provide more direct information. See Box 1). The sub-sample of pregnant women attending antenatal clinics cannot be disaggregated by age group, particularly with regard to younger women because this sub-sample is statistically very weak inside the sample. The sample of direct commercial sex workers (DCSW) provides an alternative method for estimating incidence rate variation. The trend among this group shows a significant decrease, from a prevalence rate of 42.6 percent in 1998 to 31.5 percent in 2000. The youngest women in this sample account for the largest decrease. When this sample of women is divided into two age groups, younger than 20 years and older than 20 years, both age groups exhibit a decline in prevalence.

However, while the older group shows a decline of about 10 percent (decreasing from 43.4 percent to 33.9 percent), the decline in the younger group is almost 20 percent (decreasing from 41.8 percent to 23.1 percent).

It is difficult to assess whether this encouraging result reflects a general trend in the overall population. However, other features give reason for optimism, in particular, the steady increase in reported consistent condom use.

Less encouraging is, first, the increasing number of AIDS deaths. While no direct measurement is available, convergent information supports this fact. On the basis of the global experiment, a ten years period from the first reported HIV case corresponds to the median length of survival. The Behavioural Surveillance Surveys report a sharp increase from 1998 to 1999 in the proportion of people knowing someone “sick with AIDS” (see figure 13).

**Figure 13: The percentage of people in each surveillance group knowing someone sick with AIDS**



In 2000, 47.8% of the sample of women surveyed for the Demographic and Health Survey answered that they personally knew someone who has AIDS or who had died of AIDS. The dispersion across provinces is significant. It ranges from 13% in the north eastern provinces to 76.3% in Phnom Penh.

Secondly, from the societal perspective, several aspects of Cambodian society are highly relevant to the HIV/AIDS epidemic: these include gender norms and relations, and poverty that is both widespread and highly iniquitous, along with personal and so-

cial insecurity. Moreover, is it possible **to infer** that the trend towards a gradual concentration of the HIV epidemic in the vulnerable segments of the population is true in the case of Cambodia?

The answer will be decisive for designing steps for prevention and mitigation of the epidemic's consequences.

**In order to cast some light on a possible answer to this crucial question, Chapter 2 explores** the issue of reciprocal relations between Human Development achievements and the HIV/AIDS epidemic in the Cambodian context.



---

## 2. The Human Development perspective and the dynamic of the HIV/AIDS in Cambodia

---

The Human Development perspective, together with critical information about the current HIV/AIDS epidemic, provide the CHDR with a conceptual framework to elaborate on the proposed approach specific to the Cambodian context. A decrease in the prevalence rate represents a first and an important success: the epidemic in Southeast Asia is at its worst in Cambodia, but its spread has been dramatically slowed. It is, therefore, particularly important to understand and surmise how the epidemic may evolve in the future. Certain questions may be asked in relation to this. Can the descending spiral described in chapter 1 be activated in Cambodia? A process of development is occurring in Cambodia, but which of its main achievements will be threatened by the spread of the epidemic? Conversely, which features of the Cambodian society are the most likely to facilitate this spread?

The reader will not find a comprehensive review of the many related social fields and issues in this report. It is not within its scope to consider all these. The attached bibliography can be consulted for greater detail regarding the issues mentioned, or complementary research. The report focuses as closely as possible on the Cambodian situation, and the features most relevant to this context. Moreover, it has been decided that the report should rely on the findings of previous studies where possible, and elaborate on only those issues considered both crucial and currently

less examined. Finally, certain important issues, for example, the safety of blood products and drug abuse - no doubt significant problems linked to the spread of the epidemic - have been excluded from this report, because, even if they play a role in the dynamic of the epidemic, their specificity renders them questionable and, again, it was not possible to address them in this report.

Conversely, the aims of this report are to show the effectiveness of the Human Development approach to considerations of the HIV/AIDS epidemic as a social issue and to discuss what light this perspective can cast on the dynamics of the epidemic.

### **2.1. Introduction: Link between HIV/AIDS epidemic and demographic features**

Population structure, together with its spatial distribution, is of key importance for social issues such as the HIV/AIDS epidemic. Population structure in Cambodia has been heavily affected by several decades of war and conflict. Of particular relevance here is the significant lack of births and high infant mortality levels during the Khmer Rouge regime of 1975–79 (see Figure 14). This generation – children born and surviving this period – are now young adults. Already proportionately small in number compared to other age groups in the population, this generation is likely to be severely affected by AIDS deaths.

Figure 14: Cambodian population structure (1998 census)

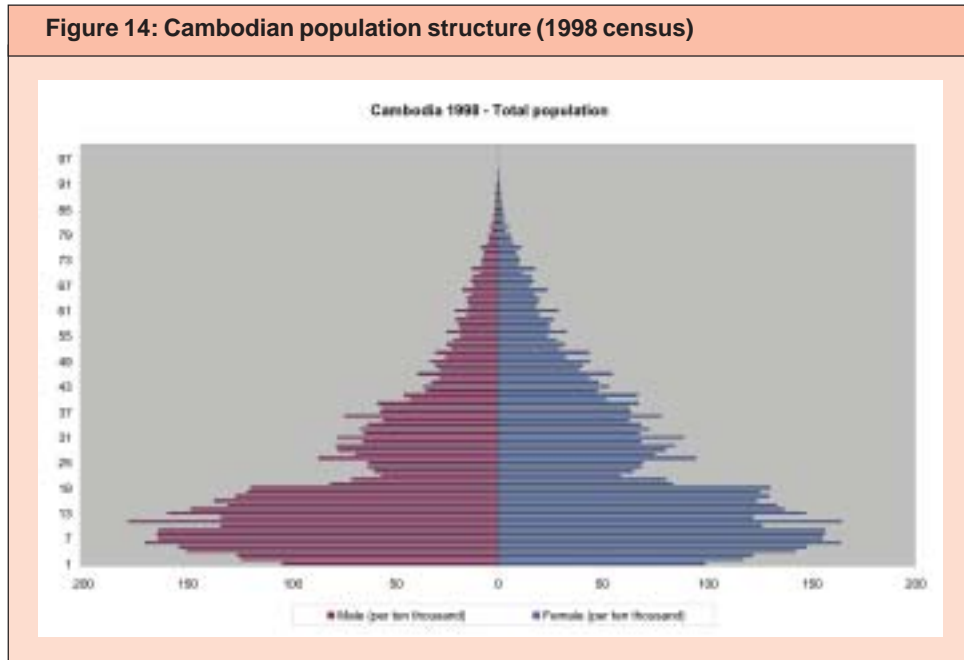
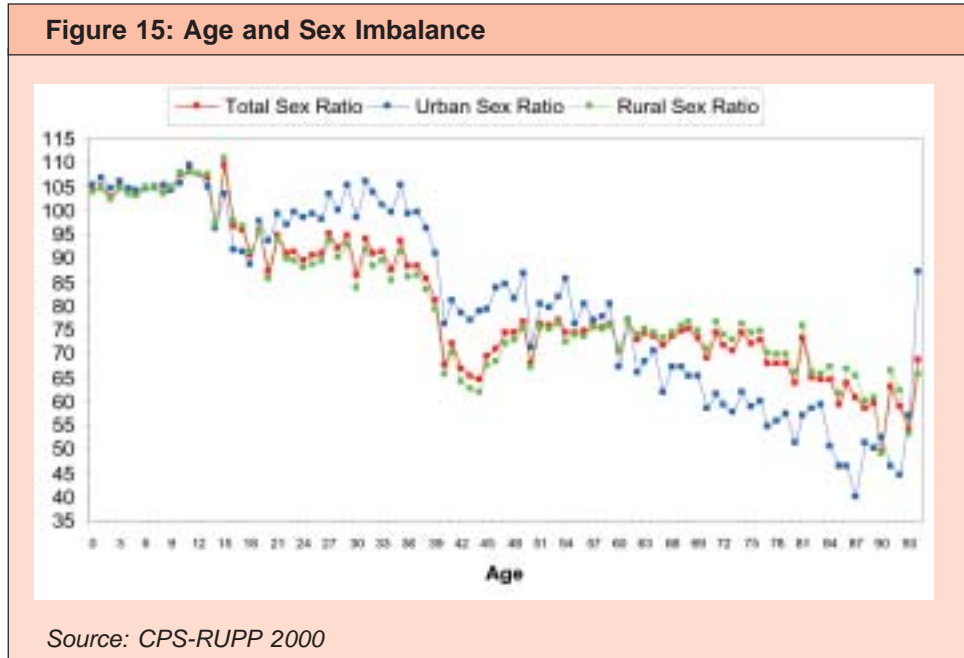


Figure 14 shows the age structure and the age-specific sex ratio of the population.

Disproportionately small in size and with an unbalanced sex ratio, the youngest segment of the working age population is now facing the HIV/AIDS

epidemic. The imbalance of the spatial distribution of women and men is another very significant factor to be taken into account when considering the projections at national level for the potential spread of the HIV/AIDS epidemic (see Figure 15).

Figure 15: Age and Sex Imbalance



Source: CPS-RUPP 2000

In addition to an imbalance in the national sex ratio, Figure 15 illustrates how the sex ratio varies significantly by age between urban and rural areas. In contrast to the general trend, in the age 20 to 40 years age group, the sex ratio

is 100 or higher in urban areas, probably as a result of internal migration for work. Disaggregation of this information by province reveals that this general demographic feature is more pronounced for some urban areas than oth-

ers and also exists in some semi-rural areas, again, probably due to the availability of employment opportunities that attract migrant male workers. Locations such as these that attract high levels of migration require special attention from policy makers.

It is essential to take the dynamics of the demographic structure of the population into account in an assessment of the potential nationwide consequences of the HIV/AIDS epidemic. Epidemics are dynamic by nature. It is vital for the public administration to attempt to anticipate potential triggers for the further spread of the epidemic. The accuracy of this analysis and the efficacy of the action taken in response impacts dramatically both on the number of people directly affected and the economic consequences of the epidemic.

## 2.2. The HIV/AIDS epidemic threatens human development achievements in Cambodia

After 20 years of the global HIV/AIDS epidemic, its power to ravage a nation is all too obvious. Dramatic setbacks in human development are seen in high prevalence regions of the world. Economies are shattered when the epidemic sweeps through the workforce, as is widely observed in some countries in Sub-Saharan Africa.

Cambodia is not experiencing such very high prevalence rates. However, with a prevalence rate of 2.8 percent, the country stands on the edge of a dangerous slope. The epidemic is already generalised throughout the population, beyond the so-called “risk groups”, but vigorous efforts may be expected to keep it under control and to mitigate its impact, provided that the 2001 surveillance results will confirm the downward trend suggested by the 2000 figures. However, it is necessary to understand how the epidemic affects society, in order to scale up achieve-

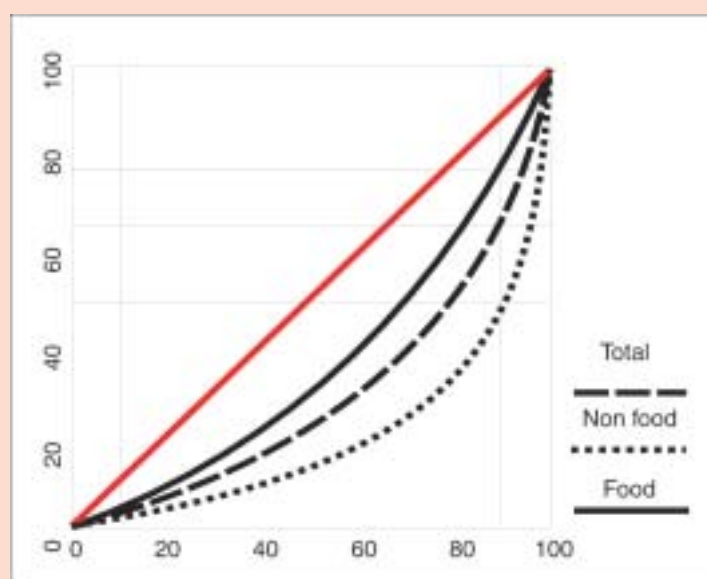
ments. Aided by such an understanding a relevant response may be designed and activated. Moreover, this understanding is necessary because setbacks in Human Development achievements worsen the social context and provide opportunities for the epidemic to resist and develop new roots in the population.

The chapter begins with the individual perspective, as it is appropriate to stress the main consequences of the current epidemic: household impoverishment and the consequent vulnerability of children.

### 2.2.1. The crucial issue of the distressed sale of productive assets

As the study of the distribution of individual consumption has already shown, the standard of living in Cambodia is highly unequal, with a wide part of the population living in impoverished and precarious situations. The Lorenz curve of inequality in the consumption distribution by household in 1999 (Figure 16) and the quantitative summary in Table 10 below provide a clear illustration.

Figure 16: Lorenz curve for the consumption distribution by households (SES 1999)



Source: Computed by National Research Team from SES 1999 data

**Table 10: Quantitative summary of consumption distribution by household**

	Share of food consumption	Share of non-food consumption	Share of total expenditure
10% poorest	2.97%	0.97%	2.26%
10% richest	24.32%	51.4%	34.8%
Gini coefficient	0.33	0.63	0.44

*Source: Computed by National Research Team from SES 1999 data*

Some of the principal characteristics of poor households are well-established, as they have been repeatedly confirmed by the successive SES. These surveys confirm common trends in social stratification:

- Poor households tend to be larger, younger and include proportionately more children than richer households.

- The poor are more likely to live in households in which the head of the household is illiterate and has significantly fewer years of schooling than her/his richer counterparts.

- Human poverty is highest in poor households in which the head of the household is engaged in agriculture.

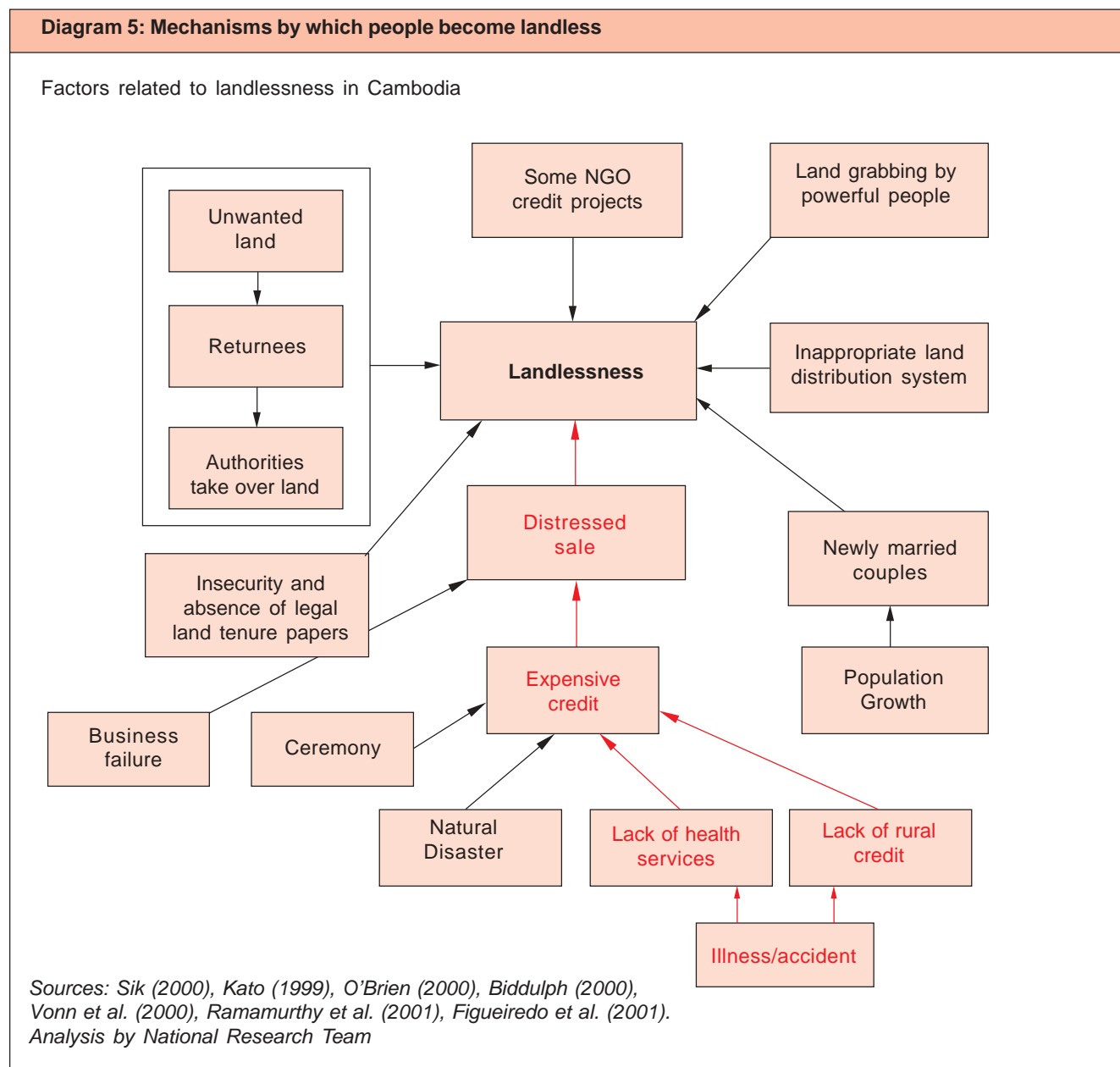
This profile has to be understood in a context where subsistence farming is the main occupation for a majority of the working age population. The census for 1998 shows that more than 75% of the working age population were farmers: that is, 3 out of four employed people over the age of 14 worked in the agricultural sector. Thus, an assessment of the consequences of the HIV/AIDS epidemic must begin with an assessment of the consequences for rural farming households. With many among this vulnerable population living a precarious existence, the epidemic feeds the mechanisms by which households become landless. Landlessness is already widely anticipated to become an increasingly serious problem over the coming years. Landlessness in Cambo-

dia is an extremely serious issue due to the limited range of alternative activities. Farmers forced to sell their productive land face few options other than to sell their labour to other farmers or to migrate to towns in search of work as labourers. Diagram 5 illustrates the mechanisms by which people become landless.

Land issues are indeed of crucial significance for an agricultural country such as Cambodia.

Moreover, the same mechanisms lead to asset sale and impoverishment of households affected by HIV/AIDS regardless of the basis of their livelihoods. Mounting health costs (including high spending on unregulated or inappropriate biomedicine or traditional medicine), the loss of labour of productive family members and the impact of fear and discrimination on employment and business activities are all factors that trigger sale of land and other assets, followed by a rapid slide into poverty and sometimes destitution.

Health cost is a surprisingly complex issue in Cambodia. The negative consequences of illness on household members often feature in the stories of families who have fallen into social distress. On the other hand, as will be shown in the second part of this chapter, the safety net of public health centers is active, and staff claim, at least outside the towns, that services are provided free—the fee-based system being inappropriate, due to the extent

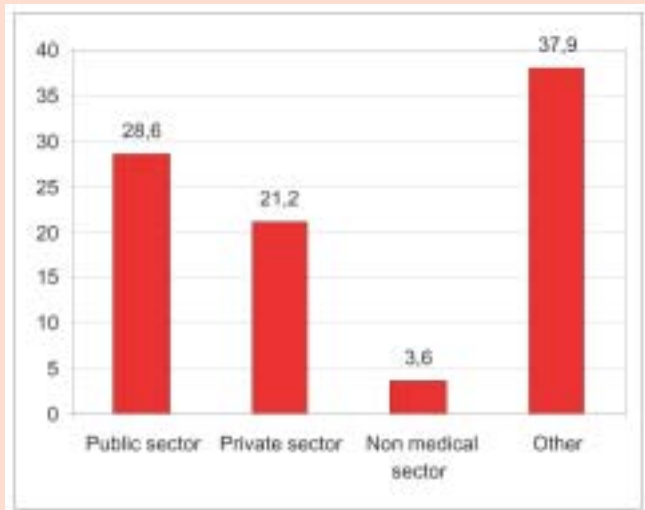


of poverty. An exploratory qualitative survey taken in the agricultural province with the highest population density<sup>14</sup>, where landlessness is currently the main threat to households, illustrates the complexities of the relationship between the health care system and the people. Every household surveyed claimed to need more land, but declared that the hope of buying such land was dependent on none of its number becoming ill. Only the poorest household stated that health care was provided free in the public facility.

The Demographic and Health Survey findings also reflect this inconsistency. Households were asked about seeking treatment for members ill or injured in the 30 days before the survey. Of these, for a first treatment, 35% sought care in the non-medical sector, 33% in the private sector, and 19% in the public sector. The mean total expenditure for this first treatment according to the source is displayed in figure 17, and it shows that public sector was the most expensive of the three sources (the category “Others” can be ex-

<sup>14</sup> Takeo province

Figure 17: Mean expenditure (in US dollars) for a first treatment



Source: Cambodia DHS - 2000

cluded, as it may represent those who went to another country such as Thailand or Vietnam, or who used specialist services).

As these mechanisms cause increasing numbers of households affected by HIV/AIDS to slide into deep poverty, the expansion of the segment of the population living far below the poverty line in severe and entrenched poverty

will, in turn, provide increasingly fertile ground for the spread of the epidemic. A descending spiral that rapidly gathers momentum could thus be initiated, becoming ever more difficult to halt. Therefore, enabling households to avoid distressed sales of productive assets should be a key focus for public intervention.

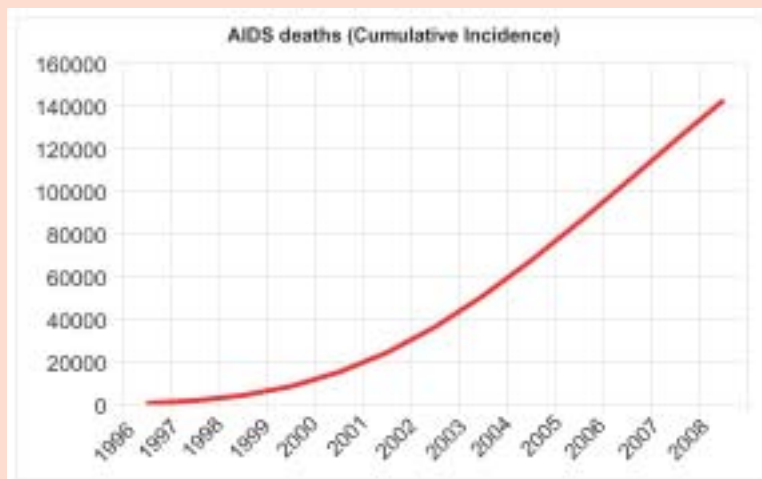
### 2.2.2. AIDS deaths and the vulnerability of children

In addition to the loss of livelihood through the sale of productive assets, households affected by HIV/AIDS face the illness and death of family members. The welfare of children orphaned by AIDS is a major concern from both the household and national perspective. In the current conditions, the vast majority of people with HIV will eventually die from AIDS. Anti-retroviral therapy is available only to a small, affluent minority. A projection of deaths per year was done in 1999, using three different scenarios for epidemic spreading, by Bunna and Myers (see 2.2.4 below).

Two years after their study, the projections they derived from Epimodel software may be retained as an order of magnitude. Although their projections concerning the pressure on the health system seem, at the present time, not to have come to pass in rural areas, the conclusion that 'the benefits of aggressive prevention are clear' remains relevant to the current situation.

The 2000 Surveillance Survey estimates the number of adults (aged 15-49 years) living with HIV to be near 170,000.<sup>15</sup> According to the ratio of death to the number of people with HIV provided by the projections of Bunna and Myers (1999), an order of magnitude of the estimated number of cumulative deaths is around 10,000.

Figure 18: Epimodel projection for cumulative number of AIDS deaths



Source: Estimated Economic Impacts of AIDS in Cambodia, Bunna and Myers (UNDP, 1999)

<sup>15</sup> The 2000 sentinel surveillance gives a figure of 169,000 adults (aged 15-49) living with HIV. A computation, based on linear interpolation between 1998 census data and the NIS projection (2000), for the estimation of the number of adults (15-49 years old) in 2000, gives a figure of 170,000 adults living with HIV.

Figure 18 shows how the cumulative number of deaths could rise at an increasing rate over time.

The majority of deaths now occurring are the result of infection in the early years of the epidemic. Spouses, particularly women, remain highly vulnerable to infection from one another. The infection and eventual death of both parents results in growing numbers of orphaned children. With limited community resources and options for pro-

viding adequate care and support for these children, they are particularly vulnerable to poverty and extreme deprivation that is additionally fuelled by fear and discrimination. From the national perspective, the growth of such a seriously deprived sub-group within the population will undermine other development achievements.

Of particular concern is the problem of school drop-out rates. These are high in Cambodia, especially for

#### Box 5: HIV/AIDS and the vulnerability of children

*This text is taken from 'Children Affected by HIV/AIDS: Appraisal of Needs and Resources in Cambodia', published by the Khmer HIV/AIDS NGO Alliance (Khana (2000) (Phnom Penh)).*

Many factors make children vulnerable in Cambodia. These are nearly all related to poverty and are more pronounced for girls than for boys. The most vulnerable ages are between 7 and 12 years, and the most vulnerable children overall are orphans from poor families. Children affected by HIV/AIDS are exposed to increased factors of vulnerability through high levels of psychosocial stress and stigma. The impacts of having a parent with HIV-related illness are multiple and serious. Families can slide into poverty quickly. Children take on new roles as carers and income generators. Some may have to leave home. After the death of a parent, children can be cheated of land, housing and other assets. Some may have to work or beg to pay back their parents' debts. Siblings are often split up and are unable to look after one another.

There are limitations to all the options for the care of orphans. Grandparents are often old and poor and the demographics show proportionately few people of grandparent age. Other relatives may treat fostered children as servants, monks have limited resources, children prefer family life to orphanages and life on the street can be dangerous and unhealthy. Adoption and fostering practices are largely unregulated.

The psychosocial impact on children affected by AIDS is very high. Caring for sick parents, coping with grief, relocation to unfamiliar surroundings, separation from siblings and other support networks can all be traumatic for children. Children may worry that they themselves are infected, that their parents have done something bad, or even feel that they themselves are responsible for what has happened. They may be actively discouraged from talking about a situation where the death of parents is associated with sex. They may be made fun of by other children, or isolated from playing with other children by adults who are misinformed about HIV transmission. Often, children in distress behave in ways that may be interpreted as misbehaviour.

Children with HIV are at risk of being denied their basic rights. Poverty and misinformation can result in families thinking that it is not worth treating a child with HIV or sending them to school. There is little experience amongst health workers of treating children with HIV/AIDS in Cambodia and drugs are either expensive or not available.

girls over the age of 12 (see Introduction). Specific solutions are needed urgently, and they should be another key focus for public intervention, possibly in partnership with the NGOs already involved.

The input of sufficient resources to provide support for children affected by AIDS - for example, enabling them to continue their education and remain in their home communities - is essential if the huge social costs of allowing them

to suffer extreme poverty and deprivation are to be avoided. The resources required to provide support for children affected by AIDS will grow continuously over the next decade as existing HIV infections lead to deaths from AIDS. Such scenarios raise legitimate questions about the possibility of preventing mortality among people infected with HIV. The medical technology to achieve this exists. The key question is whether or not Cam-

bodia can mobilise the resources and capacity required to make this technology available and effective for people with HIV (see next session).

### 2.2.3. Setbacks in human rights achievements

Human development achievements are fragile, particularly in the field of human rights. The presence of HIV/AIDS can have a shattering effect on the very concept of human rights. The first right of any human being is to live. This basic right requires acknowledgement in all fields of human activities, and HIV/AIDS leads to setbacks in all these.

#### - Respect for the person.

Firstly, with regard to respect for persons with HIV, a significant effort is being made in Cambodia to facilitate respect for people with HIV by inclusion of the subject in communication about HIV/AIDS at community level, in information campaigns<sup>16</sup> and in training for staff involved in HIV/AIDS work. The negative impact of discriminatory behaviour and attitudes is stated and discussed. However, the overall situation in the country differs from the requirements. It is frequent to still encounter a persistent disregard for the most elementary rights of people with HIV especially those with AIDS. Fear is a powerful motive for discrimination: a lack of clear information and understanding about HIV transmission is an important factor in the continued existence of discriminatory practices.

HIV/AIDS prevention and care cannot be separated from one another. Discrimination is an important issue in the availability of a continuum of care for people with HIV/AIDS. In Phnom Penh and in the few other areas where it is implemented at the current time,

the joint government-NGO home-based care programmes have been successful in reducing fear and discrimination within the household and local community, and in establishing effective referral systems for hospital care. Elsewhere it is possible to witness appalling situations. It is vital for discrimination to continue to be actively addressed at each step along the continuum. Discrimination, often based on fear, remains a dominant issue among people involved in the care of people with HIV and AIDS. For example, although staff in one referral hospital stated that people with AIDS were not refused admission to the hospital, patients with end-stage AIDS were accommodated in an extremely small and poorly maintained building away from the main wards.

Unfortunately, discrimination - and a failure to acknowledge a person's basic right for respect - may also be fuelled by prevention campaigns. For example, efforts to implement effective measures to reduce transmission of HIV through commercial sex can quickly lead to discriminatory practices against women working in the commercial sex industry.

#### - Equitable access to the benefits of scientific progress

*The needs of AIDS patients and their families are universal: medicine and scientific progress are the common property of all humankind.* (UNAIDS 2001a)

People have a right to receive the highest level of technical support that their society is able to provide at a given time. Discussion of what Cambodian society is able to provide at the present time has, so far, been limited to a circle of experts. From the perspective that the HIV/AIDS epidemic is a human

<sup>16</sup> Such as the video "With Hope and Help: Cambodia" (funded and co-ordinated by UNICEF East Asia and Pacific Regional office and UNICEF Cambodia, with support from UNAIDS, produced by Living Films, 2001), which was televised in part. This gives a voice to people living with HIV



development issue and needs to be addressed through a rights based approach, it is suggested that it is now time to open up this debate for people directly affected by HIV/AIDS and society in general.

The CHDR wants to emphasize the need to overcome obstacles and consider enabling anti-retroviral therapy (ART) on a rights based strategy. At the present time, there is no cure for HIV/AIDS. Without specific treatment (ART) there is 100 percent mortality from AIDS. After a long asymptomatic period (the global median period of survival from HIV infection to death is estimated at 10 years), with episodic opportunistic diseases, a brief symptomatic period (estimated at several months to more than one year) with steeply declining health status, is followed by death. With ART, this last period can be postponed, and optimal treatment may enable people to have a nearly normal life expectancy, although this is not a cure for HIV.

The year 2001 is an important benchmark in debate of the issue of ART, as the formerly insurmountable barrier of the costs of ART has been overcome. Nevertheless, there are still major difficulties in enabling widespread access to ART:

- ART requires adequately trained medical personnel and adequate facilities. Key issues in the provision of ART include beginning therapy at the appropriate time and ensuring correct dosage. Failure to do so results in the rapid development of virus resistance to drugs and consequently, in very poor prognosis

- ART has serious side-effects (for example, on liver function). In a country where the average level of health is poor, side effects of the drugs may be an insoluble problem.

- ART is extremely demanding on the patient, requiring a quasi perfect adherence to the drug regime. The ef-

fectiveness of the therapy declines very steeply without strict adherence to the regime

- In the present conditions ), ARV drugs are rare goods. A market exists for the re-sale of many drugs, and this is likely to be particularly significant for ARV drugs. A failure to effectively address this situation will result in the rapid enrichment by a few traders rather than a significant mitigation of the consequences of the epidemic

However, these difficulties have to be considered in the context of the social cost of the deaths of the vast majority of people with HIV. Assessments of the social costs must take into account both the direct and indirect consequences of AIDS mortality. Direct consequences include orphaned children, impoverishment of households and impact on the working age population. Indirect consequences include the weakening of social links and cooperation resulting from increasing inequity and the limited involvement of people with HIV in efforts to develop an effective response to epidemic.

Open and informed debate on this issue of access to ART, involving all sectors of society is urgently needed. International assistance, particularly from the UN system may inform this debate with global experience.

Notwithstanding that this will be a difficult debate, discussion which enables the informed participation of people with HIV and people affected by HIV/AIDS will enable their voice to be heard in the public sphere. Open discussion about access to treatment is also intrinsically linked to the facilitation of access to voluntary counseling and testing.

An open and informed debate about access to treatment will also facilitate the sharing of accurate information about HIV/AIDS. Knowledge about HIV/AIDS and about treatment for HIV/AIDS exists, in a context of

vast amounts of conflicting and inaccurate information<sup>17</sup>. Facilitating the sharing of accurate information not only empowers people to make informed choices about their lives, but also dramatically reduces discrimination against people with HIV, based on fear. Clear knowledge about HIV transmission enables carers to support people with HIV without fear that they are placing themselves at risk of infection. Clear information about HIV reduces rejection – by families, communities and institutions – of people who have a basic human right to live with dignity and respect and to receive the best treatment, care and support that society is able to provide.

#### **2.2.4. An example of assessing the national impact of the HIV/AIDS epidemic**

Combined, two reasons render difficult any tentative assessment of the macro consequences at a national level. The first is the scale of the epidemic: within a range of a few percent, social consequences are pointed at the community level, but quantitative consolidation of these findings at the national level is reliable only for very limited activity domains. The second reason is the specific features of Cambodian society. These encompass in particular the weak social sector, various levels of monetisation and the feeble enforcement of the existing labour code. A summary of an assessment of the economic consequences of the HIV/AIDS epidemic by Bunna and Myers (1999) nevertheless allows certain assumptions to be made about the magnitude of its impact. The methodology they used to assess economic impacts of HIV/AIDS states that:

*Studies of the economic costs of illness and death typically distin-*

*guish 'direct costs' and 'indirect costs'. The 'direct costs' of HIV/AIDS include the public and private costs of treatment and care, the costs of caring for AIDS orphans, the costs of funerals, the public and private costs of prevention, and the costs of preparing the health care system to deal with the growing epidemic. The most important 'indirect costs' of AIDS are the private losses to households, extended families and communities due to the premature death of young adults of prime working age. What is lost is the income these adults would have earned, the product they would have produced. (Bunna and Myers 1999)*

Bunna and Myers explore the consequences of three possible scenarios for the evolution of the HIV/AIDS epidemic in Cambodia. The first scenario is that the epidemic had already peaked in 1998, the second is that the peak will occur in 2002, and the third scenario is that the epidemic will peak in 2006. The authors attempted to compute, for each of the three scenarios, direct and indirect costs of the epidemic: that is, the costs of illness and death resulting from HIV/AIDS.

1) Direct costs include the public and private costs of treatment and care, the cost of caring for children orphaned by AIDS, the cost of funerals, public and private costs of prevention and the costs of preparing the health system to cope with the growing epidemic.

Of those, only public costs of treatment, for both inpatients and outpatients, were priced. Lack of information prevented quantitative assessment of the following items:

- Cost of prevention (public and private, including expenditure by NGOs)
- Household costs (expenditure on

<sup>17</sup> For example, so-called Tai-Sheng capsules were being offered by medical staff as Anti-retrovirus medication in a large provincial town. The composition of these capsules is, in fact, plant extracts (Radix ginseng, Radix angelicae, Sinensis, Fructus lycii) and by no means do they constitute ARV medication.

healthcare and funerals)

- Public health system costs other than the cost of treatment (e.g., managing blood supplies and HIV testing)

Costs of treatment were priced as follows:

**Inpatient care:**

- Estimate the number of hospitalisation episodes: number of people with HIV who will use public health facilities multiplied by the number of times they will use them.

- Estimate the average length of one hospitalisation episode, in days.

- Estimate the average cost per hospitalisation episode (cost per inpatient day plus and average drug cost per episode).

**Outpatient care:**

Assessed by the same method as above (number of outpatient episodes per person with HIV and average cost per episodes).

These assumptions are time dependent and based on the current situation of Cambodia's main public hospitals and experience in Thailand. In particular, the authors assume that the widespread availability of home-based care will gradually be achieved.

2) Indirect costs are computed as the loss of earnings of adults dying from AIDS. The authors argue that it is possible to compute this loss using the av-

erage per capita product (\$300), with a decrease over time (to \$250) due to the probable concentration of the epidemic among urban poor and rural households

3) The impact on households is mainly the result of expenditure on health services (direct costs and means of financing payment of health costs). One consequence is that children are left very vulnerable for example to malnutrition and school dropout. The authors stress the vulnerability of most Cambodian households to illness and the costs of illness even before the HIV/AIDS epidemic.

For calculation of points 1) and 2) above, the key data is the estimation of the number of people with HIV, the number of people with AIDS and the number of deaths from AIDS in each successive year. This is done through Epimodel software (Chin and Lwanga 1990, 1995), using data available at the time of the paper, for the three scenarios described above. Figure 6 in this CHDR report is based on projections for the 'best' scenario (the peak of the epidemic in 1998), which possibly best represents the current situation.

Bunna and Myers' cost estimation for 1999 within scenario 1 (epidemic peak in 1998) is given below as an example of the outputs of this method of quantitative assessment of the economic consequences of the HIV/AIDS epidemic (Table 11)

**Table 11: Estimation of 1999 HIV/AIDS epidemic cost**

<b>Estimation of 1999 situation (scenario 1)</b>	
- Number of new AIDS cases:	5,336
- Cumulative total number of AIDS cases:	11,216
- Number of AIDS-related deaths occurring this year:	6,610
<b>Direct costs (in USD)</b>	
- Inpatient cost estimates:	1,152,575
- Outpatient cost estimates:	400,200
- Total:	1,552,776
Indirect costs: (in USD)	23,131,560

### 2.3. Poverty in Cambodia fuels the HIV/AIDS epidemic

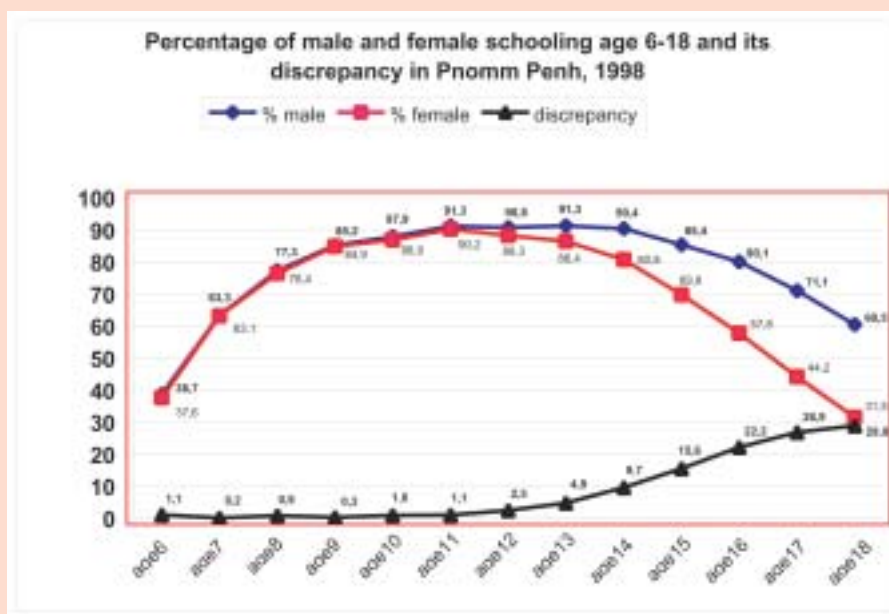
One specific result of the Human Development perspective is that it helps to understand the social mechanisms stimulating the epidemic. Global inequality according to the capability to respond to the epidemic has been discussed in the Introduction. Obviously the multi-faceted problems of human poverty are highly conducive to the spread of the epidemic. In order for this statement to result in effective policy design, the main mechanisms leading to it have to be identified.

#### 2.3.1. Gender inequality feeds HIV/AIDS epidemic

· Strict division of roles between men and women inside society and inside the family

At the current time, Cambodia is characterised by a strict division of roles between men and women inside society and inside the family. Combined with strong social hierarchies, this leads to rigid stratification. To continue with the example of the important issue of schooling, gender differentials are evident from childhood: girls drop out from school younger and more often than boys. This is not a rural feature: even the capital town, with its high schooling rates, follows the drop out pattern explained earlier in the report (see Figure 19).

Figure 19: Gender differential in school drop-out rates (population census 1998 data)



Source: CPS-RUPP Research Team 2000

#### · Parallel life education

Cambodian society is not tolerant to mixed sex youth activities and does not countenance premarital sex between young people. This parallel life education is ground for socially tolerated commercial sex consumption by young men. This is enhanced by a high singulate mean age at marriage: Cen-

sus-1998 data give the ages of 24.2 years for men and 22.5 years for women, respectively. There is evidence of a present lower value for women, but no known trend for men.

Gender inequality contributes to commercial sex consumption by young men and the vulnerability of married women to infection from their husbands,

preparing the ground for the spread of the epidemic in the general population. Gender issues are actively addressed by a number of organisations, both Cambodian and international. There is some evidence of changing behaviour in urban areas. However, sustainable improvement in gender-related vulnerabilities requires structural changes towards a new balance. Obviously, this new balance cannot be conceived of without significant poverty alleviation.

### **2.3.2. Poverty and low human development deprive society from the ability to act upon itself.**

#### **• Social link, public sector and governance issue**

Low social and economic development not only contributes to the spread of the epidemic, but also renders the necessary response at national level difficult to achieve.

*The full power and authority of the state needs to be brought to bear on the crisis, ensuring optimal allocation of resources and the mobilisation of all sectors and levels of government around a result-oriented national strategy. This is the governance challenge of HIV/AIDS. (UNAIDS 2001a)*

In Cambodia, the national authorities are responding to the epidemic (see chapter three). However, these efforts are hindered, and possibly rendered ineffective, by the weakness of the social sector.

A multi-sectoral response is essential to reduce vulnerability to infection, as well as to mitigate the impact of the epidemic at all levels. For example, action by the education sector is clearly needed. As described above, it is particularly important for young people to be targeted for HIV prevention. Knowledge of the social and biological mechanisms by which HIV is transmit-

ted as, or before, young people enter into sexual relationships may be expected to lead to a significant drop in the HIV incidence rate. The classroom is one of the few places where girls and boys gather together. Even if school attendance rates are proportionately lower for girls in the high grades, the school provides an opportunity to discuss openly both the HIV/AIDS disease and the underlying mechanisms that facilitate its spread, particularly gender inequality.

Equally important is the response from the health sector. Following the reform of the health system, a network of health centres is in place throughout Cambodia. These health centres are the basic tool for implementation of effective public health surveillance. Among its responsibilities are the promotion of reproductive health through STI treatment and antenatal care and the immunisation of children. Each health centre is linked to a referral hospital, to which it refers patients needing hospitalisation or whose illness requires more sophisticated medical intervention.

An assessment of the effectiveness of the public sector is needed in order to evaluate the means actually available to the authorities to implement programmes for HIV/AIDS information, prevention and care. Effectiveness of the public sector is not an internal question for the public services, but a question of the relationship between the local facilities and local population.

#### **• The case of the health sector**

The National Research Team undertook fieldworks to collect information about the level to which the population can and do make use of public facilities. A short timeframe meant that the team had to focus their research on selected aspects of this question. The health sector was chosen as example of the public sector and four

provinces were selected. However, the results of the field study hold for other fields of public intervention and other provinces as well: careful study of specific cases sheds light on how the level of human development in Cambodia is undermined by public action.

The four provinces visited were Kompong Cham, Pailin, Koh Kong, and Monduliri. Kompong Cham is a central province and the provincial capital is accessible by river and by a good road from Phnom Penh. Pailin and Koh Kong are both along the border with Thailand, in the west and southwest of Cambodia respectively. Monduliri, the largest province in Cambodia on the eastern border with Vietnam, is a plateau with an elevation of 800 meters. It is particularly difficult to reach from Phnom Penh due to the abysmal road access. The situation in the province is evidence of the poorest achievements in human development.

In these four contrasted situations, observation of the everyday life of people involved in responding to the HIV/AIDS epidemic and those infected or directly affected by HIV/AIDS helps to assess consequences of the epidemic for basic economic activities. This assessment will inform recommendations for an effective response. These four examples enable a number of generalisations to be made:

The Cambodian population lives with endemic diseases, which contribute to the precariousness of life. Malaria is widespread. In each of the four locations surveyed, campaigns for mosquito nets are implemented periodically, including the distribution of mosquito nets supplied by the Ministry of Health or with help from NGOs. Nevertheless, malaria kills in Cambodia. In Pailin, medical staff reported that newcomers were particularly likely to suffer serious episodes of malaria, while the local population tends to have less acute episodes. In Monduliri, it is es-

timated that up to 70% of the population is infected by malaria. Tuberculosis is very widespread, as are acute respiratory infections. Health staff also reported significant incidence of diarrhoeal disease and dermatitis. Leprosy is not yet eradicated. There are periodic dengue epidemics, particularly in urban or more densely populated areas, resulting in child deaths. In Kompong Cham, at the time of the study, health staff were distributing insecticide for the water containers in response to an outbreak. Although dengue outbreaks are generally more common during the rainy season, dengue is a dry season problem in Koh Kong. The HIV/AIDS epidemic is taking place in a population already fighting against and/or living with endemic communicable diseases.

The network of health centres is intended to address the day-to-day health needs of the population and to identify patients who need to be referred to hospital. This network is reasonably dense, despite an unequal spread. The study found a high awareness of the HIV/AIDS epidemic at all levels of the health system as well as motivated health staff.

This renders even more striking the major finding of the fieldwork. The health system addresses, at least partially, the HIV/AIDS epidemic. However, the epidemic, rather than exerting pressure on the health system, is nearly invisible at each of the different levels of the system.

For example, commercial sex is targeted for prevention activities by Provincial AIDS Offices. One hundred percent condom campaigns are in place, conducted through the Operational Districts and sometimes supported by NGOs. The 100 percent condom campaigns are implemented differently in different locations (see Box 9). For example, in Kompong Cham the campaign largely employs

strategies of education, including peer education. Elsewhere, measures are more coercive, including the relocation of all brothel-based commercial sex to a single location outside the town and control of individual sex workers at Provincial Health Department level through the holding of personal data. At the local level, all the health centres surveyed were willing to include information on HIV/AIDS in their outreach activities. Prevention work with indirect sex workers is also undertaken in some places, for example, through a programme of peer education in Kompong Cham.

Yet, demands on the health system from people directly affected by HIV/AIDS are very low. This lack of demand is a reflection of extremely low rates of utilisation of health facilities for all healthcare needs. For example, while the standard of facilities and equipment levels vary at the four referral hospitals, they share (with the notable exception of Sean Monorom RH in Mondulhiri) a low to very low rate of occupancy of their medical wards. Occupancy rates are low or minimal even in the referral hospital in Kompong Cham provincial town, which is one of the largest and has an advantage in terms of trained staff, since it was formerly the provincial hospital. The 'Communicable Diseases Ward' has a capacity of 20 beds, which are designated for patients with a range of diseases including HIV/AIDS, and has been newly repaired and repainted. During our visit only four beds were occupied.

Medical staff at all levels are categorical: only poor people make use of the public health system, and clients are

often the poorest among the poor. This results in under-activity for the health centres. The health centres visited are responsible for providing services to between 10 and 15 villages.<sup>18</sup> The number of reported outpatient consultations ranged between 100 to 500 for the month of July 2001, which gives an average of 16 per day. It is not negligible, but it is out of proportion with the expected healthcare needs of the catchment area populations.

The clinical skills of health staff are clearly not a factor in this under-utilisation of the health system by the better off. The private clinics used by better off people are usually run by staff from the public clinics. This under-utilisation may be accounted for by three main reasons, both of which are closely linked to development issues.

The first reason is the limited availability of the health staff, which in turn is directly linked to the issue of salaries. Health staff members receive a salary that meets the family needs only for a few days of each month. They therefore have no choice but to undertake other activities, such as running private clinics or cultivating *chamcar*.<sup>19</sup> The time available for fulfilling their duties in the public health services is therefore, what remains after they have met their family's expenses. Cambodia urgently needs a more effective system, but the health staff are presently able to secure only a small part of their livelihood through work in the health system. Lack of national resources creates a significant discrepancy between the organigram of the health system and reality, and it facilitates the spread of the HIV/AIDS epidemic.

<sup>18</sup> Exceptions can be found in remote areas. For example, staff at the Sala Krau HC in Pailin reported that the HC was responsible for providing services to four communes, a total of 32 villages. Staff noted that difficulty of travel to the referral hospital demands an inpatient facility in the HC that does not currently exist.

<sup>19</sup> Chamcar is land used for cultivation other than rice.

**Box 6: The salary issue**

The reported salaries of government staff range from 30,000 to 60,000 riels per month (between approximately US\$ 8 to US\$15), depending on the family size and position. This does not provide a living wage for an individual, let alone a family. Well aware of this fact, the government has implemented a policy of salary incentives for staff but these are currently available only in a small number of work contexts, for example, for health staff working with tuberculosis patients. The government is in the process of building partnerships to support the implementation of this policy of staff incentives. International assistance also plays an important role in the implementation of projects that would otherwise be unaffordable. However, this assistance has the potential to create significant imbalances in health service provision, through patchy geographic coverage and time-limited support.

Low salaries coupled with this incentive system result in incentive-driven activity. This may not permit staff to identify and follow their own clinical priorities that can be highly frustrating and discouraging to the staff.

How far do health staff salaries fall short of providing a basic acceptable standard of living? Health centre staff in Koh Kong made a rapid calculation, based on the basic needs of a family (rice, food, electricity, water). These needs amount to US\$345.

Insufficient state resources result in a poor public sector. A poor public sector deprives government of the means for effective action. This situation provides fertile ground for the spread of the HIV/AIDS epidemic and increases its impact.

The second reason for the under-utilisation of public health facilities is the poor state of the infrastructure in Cambodia. Health centres, without electricity, result in difficult conditions (for example, babies born at night are delivered by candlelight). Travel is difficult for healthy people; it can be traumatic and dangerous for ill people.

Another important reason for the restricted utilisation of public health facilities is linked to the availability of medicines. Firstly the list of essential drugs available at public health facilities appears to be too limited. Secondly, periodic shortages in essential products undermine the efforts by health care staff in the areas of prevention and education. For example, while STIs are thought to be a serious public health issue, and knowing that they can facilitate the transmission of HIV, a lack of

appropriate basic medicine (such as vaginal suppositories) was found in each of the surveyed public facilities in all provinces visited. In Mondulhiri, at the end of the 2001 rainy season, the contraceptive pill was no longer available, and it was not known when the next supply would arrive. Hence, the assessment by the population is that public health facilities have limited usefulness.

- **The two aspects of the infrastructure issue.**

Cambodia has limited and poorly maintained infrastructure. Poor quality roads and limited alternative transport options make travel to many parts of the country difficult and time-consuming. For example, until the upgrading of Route 42 is completed, Phnom Penh is accessible from Koh Kong by a twice-weekly plane or by sea followed by road. Weather conditions, especially in the rainy season, sometimes prevent both these modes of transport. The road north to Pursat is also very poor and impassable in the rainy season. There has, however, been reported sig-



nificant migration and mobility between Koh Kong and the bordering province of Klong Yai in Thailand. Similarly, it requires half a day to travel from Pailin to Battambang, the provincial capital, a distance of 75 kilometres. And, again depending on the season and the condition of the roads, at least twelve to sixteen hours are needed to reach Mondulkiri from Phnom Penh.

HIV/AIDS prevalence rates differ between provinces and within provinces.

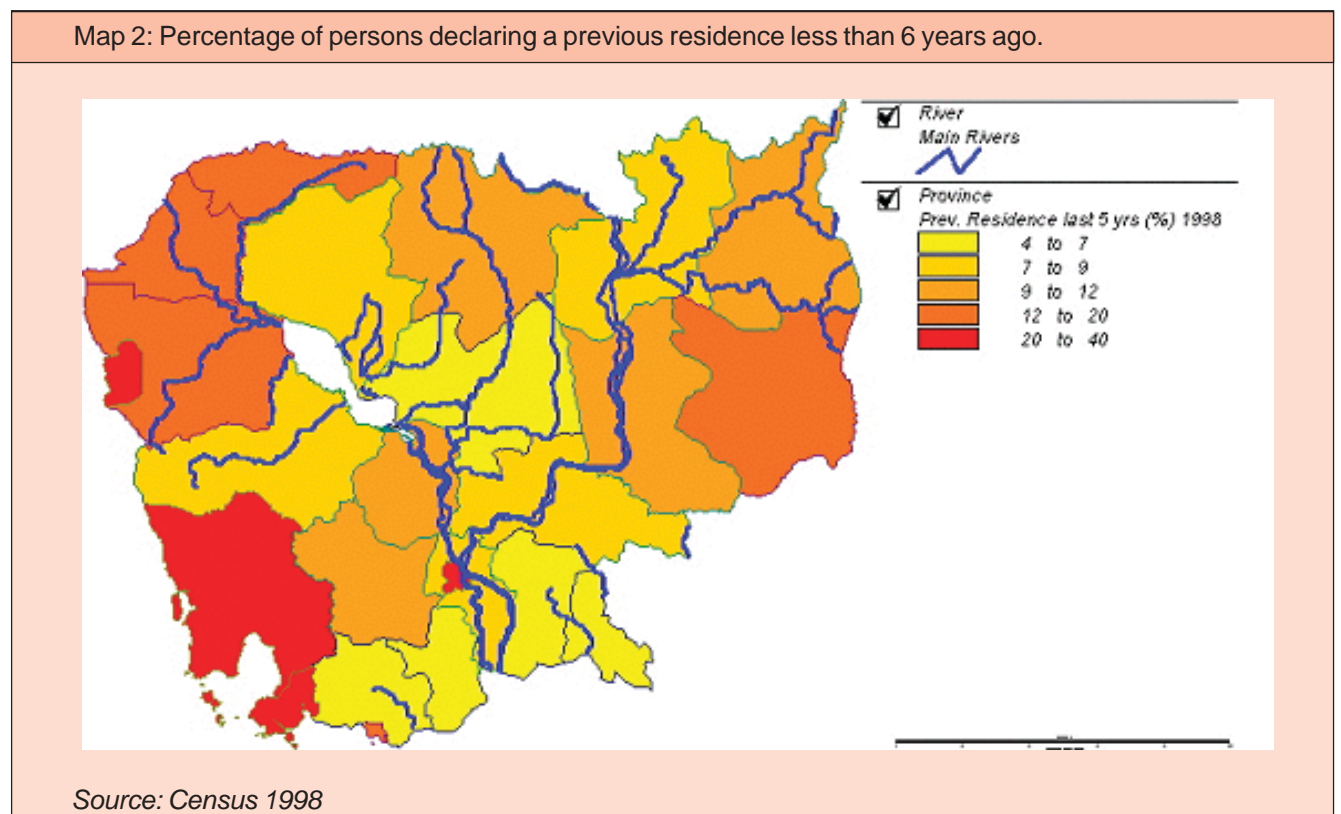
These differences may be partially accounted for by limited population mobility in some areas, which is itself partly due to poor transport infrastruc-

ture. Improvements in the road network have the potential to fuel the spread of HIV/AIDS, and, ironically, avoiding this possibility will be an important challenge of the coming years (Lee-Nah Hsu 2001).

### 2.3.3. Poverty fuels mobility and migration

Mobility and migration are widespread in Cambodia, for economic and historical reasons. The population census of 1998 found that 10.4 percent of the population had changed their residence within the last five years, with this rate being much higher in some provinces and lower in others.

Map 2: Percentage of persons declaring a previous residence less than 6 years ago.



The highest rates of immigration found by the 1998 census are in Phnom Penh, Koh Kong and Pailin, with the figure for Pailin approximately 40 percent. These statistics were one of the reasons for selecting these provinces as fieldwork sites. Superimposing Map 2 onto a corresponding map for the sex ratio shows that migrants to Koh Kong and Pailin tend to be male workers. These different migratory patterns are an important determinant of vulnerability.

Mobility and migration are briefly discussed here as this report aims to cover societal aspects of the HIV/AIDS epidemic comprehensively. However, in view of the significance of mobility and migration to the epidemic, a separate study is required in order to provide comprehensive, in-depth understanding of current patterns of migration and mobility and to enable future patterns to be anticipated along with their potential consequences for the HIV/AIDS epidemic.

#### **2.3.4. Poverty disempowers the poor from claiming their rights**

Another reason for the failure of the epidemic to exert noticeable pressure on the health system is deeply rooted in the social context of widespread poverty: poverty disempowers the poor from claiming their rights. The Director of the Kompong Cham referral hospital gave a striking example of this disempowerment. He stated that people with HIV/AIDS admitted to the hospital are among the poorest of the poor. However, these patients did not approach the hospital independently, but are brought to the hospital by an NGO.

The HIV/AIDS epidemic in Cambodia is characterised by the public silence of those affected. The conse-

quences of infection are a private affair, a statement supported by the fact that there is no visible demand on either the health system or the local authority. The burden of HIV/AIDS is being felt at household level. Only in Phnom Penh is the health system under some pressure. So, unexpectedly, for a country whose sero-prevalence rate (2.8 percent) indicates that the epidemic is already generalised throughout the population, researchers find themselves in search of the epidemic in the public sphere.

#### **2.4. Conclusion**

This section briefly reviews four key issues raised in this chapter.

Firstly, fieldwork undertaken for this study suggested that substantial human resources are available to respond to situations arising as a result of the HIV/AIDS epidemic, but the effective deployment of human resources is undermined by a lack of material resources.

Secondly, at the current time, due to characteristics of social and economic development in Cambodia, it is possible that the epidemic has already had dramatic consequences for large sectors of the population without this impact being reflected by standard economic indicators. Cambodia is characterised by a very small salaried sector, limited monetisation of the informal sector<sup>20</sup> and transition to a market economy that is still recent. The majority of the population is occupied in subsistence farming. In such a context, standard economic indicators are not well-adapted to capture even significant changes because such indicators are all based on monetary calculations.

Thirdly, inequitable shares in development achievements are a serious concern for attempts to respond effec-

<sup>20</sup> For example, calculations using the 1998 census data show that 41 percent of the population aged 14 or above are 'unpaid family workers'. For women this rate is 62%.

tively to the HIV/AIDS epidemic. Economic development will not automatically reduce social and economic inequity: indeed certain paths of economic development contribute to an increase in GDP while widening income gaps and promoting de-skilling. Some investment is directly exploitative and contributes to an increase in other forms of inequity, specifically gender inequity. An example of this is the growth of the commercial sex industry.

Finally, society is constructed from a set of relationships encompassing balances of power, gender, knowledge and economic status. These relationships are tightly interdependent. It is not possible to bring about sustainable change in one area of social relations without altering the balance in another area. Similarly, one area cannot be addressed without addressing all areas of social relations. For example, it is not possible to bring about change in gender relations without directly address-

ing relations of power, knowledge and economic status.

These findings point out the governance challenge as playing a key role for scaling up the response given so far to the epidemic.

*HIV/AIDS is a **governance challenge** of great complexity. In other words, success in tackling the epidemic will depend on how well the overall national response is governed, managed and coordinated, through strong leadership at all levels, dynamic interaction between government and civil society, and society-wide mobilization behind the common goal of containing this epidemic (UNAIDS June 2001)*

Cambodia is facing this challenge with strong will and involved human resources, together with poor means of action. Chapter 3 reviews the achievements already reached in this context, and proposes orientation to overcome this essential inconstancy.



## 3. Achievements and Challenges

### 3.1. Governmental and public sector involvement

#### 3.1.1. The HIV/AIDS task force

Chapter two discussed the social context within which the HIV/AIDS epidemic is developing. This context of poverty, inequality, mobility and weak public sector services and infrastructure provides fertile ground for the epidemic. The situation in Cambodia in 2001 includes a range of obstacles to HIV/AIDS prevention, care and impact mitigation. These include: widespread poverty, low human development achievements, and weakness in means of governance. Conversely, there have been

important achievements in the response to the epidemic that, it is hoped, will enable Cambodia to join the very small number of countries that have decreased their sero-prevalence rates.

The government indeed responded quickly to the emerging HIV/AIDS epidemic in Cambodia. In cooperation with UN agencies, an HIV/AIDS taskforce was constituted and operationalised in stages. Table 12 describes key milestones in the government response to the HIV/AIDS epidemic (UNAIDS 2001c).

The National AIDS Authority (NAA) plays a key coordinating role in the government response to the HIV/

**Table 12: Key milestones in the government response to the HIV/AIDS epidemic**

1991	National AIDS Programme established
1994	Provincial AIDS Committees (PAC) and Provincial AIDS Secretariats (PAS) established
1998	Establishment of the National Centre for HIV/AIDS, Dermatology and STDs (NCHADS) within the Ministry of Health
January 1999	Establishment of the National AIDS Authority (NAA)
2000	Strategic Plan for HIV/AIDS and STI Prevention and Care 2001-05, developed by Ministry of Health
2001	Review of the National AIDS Response
Mid 2001	Development of the National Strategic Plan 2001-05

AIDS epidemic. Key tasks include making recommendations for policy and for action at national level and ensuring information exchange and communication. Identified challenges for action include:

To ensure that all government structures can work together within the strategic framework.

*To develop the capacity and ca-*

*pabilities of the NAA (including member ministries) as well as Provincial AIDS Committees to ensure timely response and implementation of the National Strategic Plan and (future) Provincial Strategic Plans. (UNAIDS 2001c)*

The National Centre for HIV/AIDS, Dermatology and STDs (NCHADS) is another pillar of the

government response. NCHADS is in charge of the sentinel surveillance system, it develops, in line with the Strategic Plan for HIV/AIDS and STI Prevention and Care 2001-05, strategies based on three concepts:

- that a series of high risk situations for HIV transmission exists in the country; these situations arise from the behaviour of a large number of both married and single men who continue to buy large amounts of commercial sex

- that the HIV prevalence rates among men throughout the country are already sufficiently high that the spread, via their wives and girlfriends, into the general population, and eventually into children, is already taking place

- that sufficient numbers of HIV infections already exist in the coun-

*try to make a significant burden of increased morbidity and mortality inevitable* (quoted in UNAIDS 2001c)

The Ministry of Health is a key actor and is part of the Priority Action Programme. Involvement of other ministries is also required, through training of staff and through specific actions. For example, the Ministry of National Defence organises peer education programmes. Guidelines for alternative care of children affected by HIV/AIDS in formal or non-formal institutions have been produced by the Ministry of Social Affairs, Labour, Vocational Training and Youth Rehabilitation in cooperation with UNICEF.

In addition to an HIV/AIDS taskforce and the effective collection

#### Box 7: The provincial HIV/AIDS taskforce

Administratively a province is divided into districts. Following health sector reform, a province is also divided into health districts, known as Operational Districts (OD). One OD often covers more than one administrative district. The OD is the administrative office in charge of planning, supplying, monitoring and evaluating the health services and structures.

Each OD has one Referral Hospital (RH) and several Health Centres (HCs). In ordinary conditions, the RH provides only inpatient services, while HCs provide exclusively outpatient services. In areas where transportation is very difficult, a HC may provide inpatient services.

In order to respond to the HIV/AIDS epidemic, three working groups are established by the Provincial Health Department together with the Provincial Authority: the Provincial AIDS Committee (PAC), Provincial AIDS Secretariat (PAS) and Provincial AIDS Office (PAO).

- PAC is a policy-making body, headed by the first deputy governor of the province. Its membership consists of the heads of all the departments within the province, such as the department of health, department of women's affairs and so forth.

- PAS is a coordinating body, which is headed by the provincial health director. Members are officers working in HIV/AIDS prevention in different departments within the province. For example, the member from police department is responsible for HIV/AIDS prevention activities in all police stations within the province, such as the recruitment and training of peer educators within the police force.

- PAO is the team of the health staff who work in the HIV/AIDS section of the provincial health department. They are permanent members of the PAS, which means that they play an important role in implementing HIV/AIDS prevention activities in the health sector. In addition, they assist other members of the PAS in the implementation of HIV/AIDS prevention activities in the different departments.

of data, advanced medical services for HIV/AIDS exist in Phnom Penh, an important vanguard in the provision of medical technology with which to ad-

dress HIV/AIDS prevention and care. Efforts are now underway to link HIV/AIDS services with other existing services, particularly TB services.

#### Box 8: Phnom Penh hospital services for people with HIV/AIDS

##### **Calmette Hospital**

Calmette hospital has a ward named 'Medecine B' with a capacity of 55 beds. Of the 26 staff assigned to this ward, 6 are medical doctors and 3 are medical assistants. The bed occupancy rate is almost 100 percent. At the time of writing, 60 percent of the 55 patients were people with HIV-related conditions. The majority of these patients were hospitalised with opportunistic infections. The hospital does not provide anti-retroviral drugs (ARVs). However, ARVs are available through private stockists in Phnom Penh and the doctors will prescribe them if the patient can afford them.

In addition, the hospital has an outpatient department that provides services for people with HIV-related illnesses. On average, the department sees about 30 patients a day.

##### **Preah Norodom Sihanouk Hospital**

This hospital there is a ward called 'Medecine infectieuses ward' with a capacity of 60 beds. Of the 30 staff assigned to this ward, 6 are medical doctors and 2 are medical assistants. In cooperation with MSF France, the ward provides treatment for opportunistic infections as well as providing ARVs to people with HIV.

##### **Centre of Hope/ Sihanouk hospital**

The Centre of Hope is a hospital run by a Christian NGO, providing general outpatient services on Mondays to Fridays. An average of 10 patients with HIV-related illnesses are seen each day. ARVs are not provided.

##### **Maternal and Child Health Centre**

A pilot project providing ARV drugs to HIV positive pregnant women and their babies after delivery is currently in the training phase.

#### 3.1.2 The 'National Strategic Framework for a Comprehensive and Multi-Sectoral Response to HIV/AIDS, 2001-2005' developed by the National AIDS Authority

The conceptual framework designed by the NAA for the period 2001-2005 advocates a shift in paradigm. NAA vision relies on the observation that two complementary approaches in support of decreasing the vulnerability to HIV/AIDS at the individual, community and societal level have emerged, according to the review of the current situation and the analysis of obstacles and opportunities for change.

The first approach concentrates on influencing individuals to understand that safe behavior is a more attractive op-

tion, whereas the second strategy focuses on changing aspects of the existing socio-economic context to support individuals to protect themselves from HIV infection and to cope with the consequences of HIV/AIDS.

Therefore, the NAA strategy calls for a change to the existing paradigm for HIV/AIDS actions from a segmented, health centered, and top-down approach to a more holistic development approach that is gender sensitive and people-centered with a focus on empowering individuals, communities and society.

The guiding principles of this paradigm shift are:

- Holistic
- > Multi-sectoral and interdiscipli-

nary involvement is essential for building an adequate response to the HIV epidemic.

- Empowerment

- > People and groups should be empowered to protect themselves against HIV infection

- > The plan endorses the GIPA (Greater Involvement of People Living with or Affected by HIV/AIDS) principle as an overriding principle of the national response

- Community involvement

- Gender equality

- > Resources allocated must take into consideration the vulnerability of the various affected groups and communities

- Human rights based

- > Equal access to basic care and services must be guaranteed for all people infected and affected by HIV/AIDS

- > The individual rights and responsibilities of people infected and affected by HIV/AIDS must be upheld, in particular the right to confidentiality

- > HIV testing must be voluntary with guaranteed confidentiality and adequate pre- and post-counselling both in the public and private sectors

- > Adequate health care and support services must be easily accessible to all persons infected and affected by HIV/AIDS

The goals for the national response are set as:

- To reduce new infections of HIV

- To provide care and support to those people living with and affected by HIV/AIDS

- To alleviate the socio-economic and human impact of AIDS on the individual, the family, community and society

economic and human impact of AIDS on the individual, the family, community and society

Within this framework and according to the above goals, seven strategies have been designed by NAA

- Strategy 1: Empowering the individual, the family and community in preventing HIV and dealing with the consequences of HIV/AIDS through the promotion of a social, cultural and economic environment that is conducive to the prevention, care and mitigation of HIV/AIDS

- Strategy 2: Enhancing legislative measures and policy development

- Strategy 3: Strengthening the managerial structures, processes and mechanisms to increase the capacity for coordinating, monitoring, and implementing HIV/AIDS actions, and enhance cooperation with stakeholders at national and international levels

- Strategy 4: Strengthening and expanding preventive measures which have proved to be effective and piloting other interventions

- Strategy 5: Strengthening and expanding effective actions for care and support which have proved to be effective and piloting 'new' interventions

- Strategy 6: Strengthening national capacity for monitoring, evaluation and research

- Strategy 7: Mobilising resources to ensure adequate human capacity and funding at all levels.

### 3.2 Successful partnerships

#### 3.2.1 The United Nation Country Team (UNCT)



This National Task Force is supported by UN agencies active in Cambodia. The United Nations Country Team (UNCT) developed a Common Strategy 2001–05 for the work of the United Nations Country Team in support of the national response to the HIV epidemic in Cambodia' in May 2001.

Within this conceptual framework, the UNCT has articulated a set of principles for its individual and collective support to the national response to the HIV epidemic. It has decided that its approach should be: holistic and development linked; human rights based; people centred and gender sensitive; based on the mobilisation of the social and moral resources of Cambodian society, and synergistic.

The element of the common strategy are: A unified country presence; Leadership dialogue; An advocacy strategy; National capacity building for an integrated and holistic approach; National capacity building for aid co-ordination; Collaborative programming; Review and assessment mechanism. United Nations agencies in Cambodia will support almost 60 HIV/AIDS activities costing a total of \$2.9 million in 2001.

#### 3.2.2 Local and international NGOs

Local and international NGOs working on HIV/AIDS in Cambodia coordinate their work through the Phnom Penh-based HIV/AIDS Coordinating Committee (HACC). HACC currently has 49 member organisations, many of which in turn provide technical and funding support to partner NGOs and CBOs in order to build the capacity of the local NGO sector to address the HIV/AIDS epidemic. NGO strategies for HIV/AIDS prevention commonly include: awareness-raising; condom promotion and normalisation and improving access to condoms; supporting access to health services and, where

available, voluntary counselling and testing; intensive work with targeted groups of men and women to build knowledge and skills that assist them to reduce their vulnerability; work at community-level to address the social context of vulnerability; mobilising the support of local authorities, community and religious leaders, and work with peer educators and community volunteers.

As the epidemic has become more visible in Cambodia, and communities are experiencing increasing numbers of deaths from AIDS, many NGOs and CBOs have begun to provide care and support for people affected by HIV or AIDS, their families and carers, and to develop initiatives for impact mitigation. Key activities include the provision of psycho-social support, material support and basic medical care as well as referral to clinical and other services. Many care and support initiatives have drawn lessons from the joint government-NGO Home Care programme, and importance is attached to building partnerships in order to provide effective linkages between services. At community level, the synergy between prevention and care initiatives are obvious – for example, in reducing discrimination against people with HIV.

Some NGOs are working in the provision of medical care for people with HIV or AIDS, either directly or through capacity building and funding support for public services. Improving access to treatment is a key challenge and in Phnom Penh, pilot projects providing ART are underway (see Box 8). NGOs also have a key role in advocating for the rights of people with HIV, at local and national level. The recent formation of the first network of people living with HIV in Cambodia receives crucial technical and financial support from NGOs and is a key step in enabling the involvement of people

with HIV at both programming and policy level (see Box 11).

NGOs work in all provinces of the country and in the capital. However, geographic coverage is uneven and many needs remain unmet. NGOs have a vital role to play in enabling effective local and national responses to the HIV/AIDS epidemic. Much has been achieved, but the need to scale up both depth and coverage of activities, in coordination with government services and activities, remains a significant challenge.

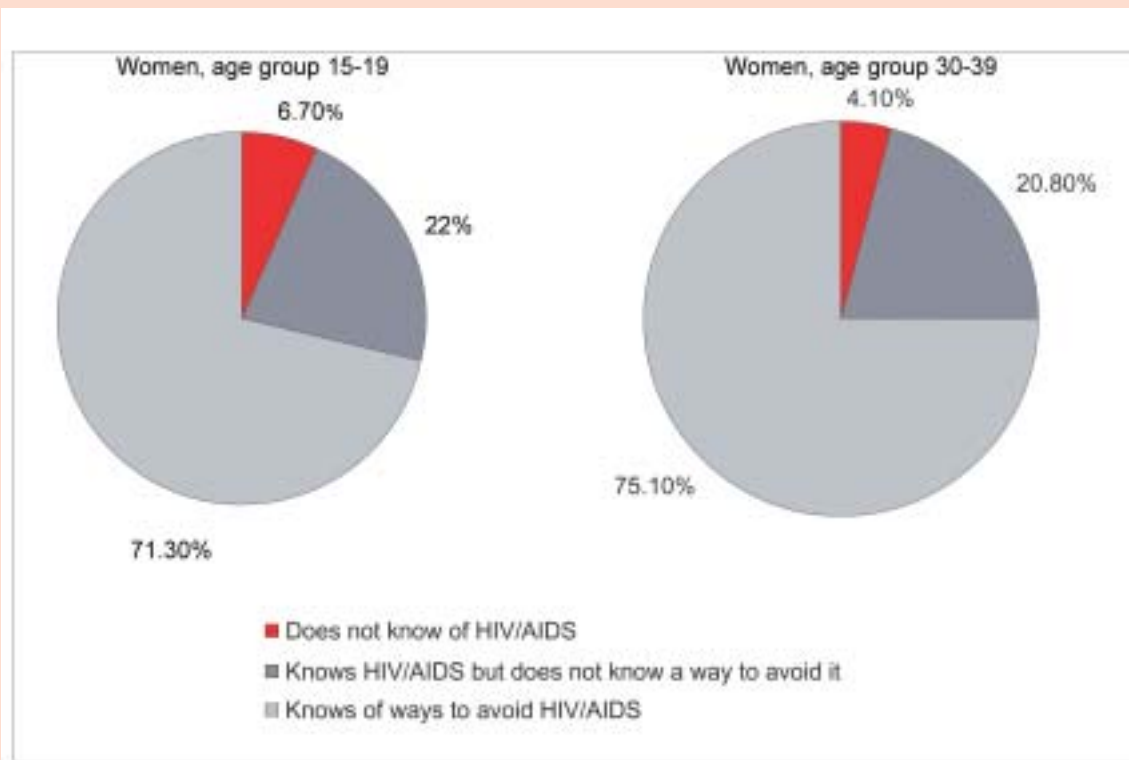
### 3.3. Achievements

In order to assess achievements of the response to the HIV/AIDS epidemic, the process of the epidemic can

be divided into five components. First, the context in which the epidemic develops: the key concept here is social vulnerability. Second, the near determinants of infection: responses here often attempt to target people considered most likely to adopt risky behaviour. A third component is the issue of voluntary counselling and testing (VCT) facilities. Fourth, the issue of people affected with HIV. Fifth, the issue of people dying of AIDS.

This division is only methodological. It is devised from the natural progression of the disease, rather than by the relative significance to the society or as a chronological order for the social response. Clearly, these five components are intrinsically linked at many

Figure 20 : Knowledge of HIV/AIDS



Source: Cambodia Demographic and Health Survey, 2000

levels. Each component constitutes the context of the others and acts directly on them.

For example, greater availability of VCT has been widely shown to enable people to make more informed assessments of risk.<sup>21</sup> Therefore, available and accessible VCT services can be expected to influence the two first components. Public disclosure of HIV status by significant number of people with HIV, compared to the present situation where the disclosure is exceptional, would deeply modify both the context of the epidemic and near determinants of infection, through the power of the voice of people with HIV and through the social response to advocacy for the rights of people with HIV.

Along this methodological division, two components have been the current foci of responses to the epidemic to date: near determinants of infection and, to a lesser extent, care and support for people with AIDS.

#### 3.3.1. Impressive level of awareness

Cambodia is characterised by a good level of awareness of the HIV/AIDS epidemic: this is both a consequence of the achievements mentioned above and a factor that is conducive to the strengthening and development of such achievements. Throughout the fieldwork undertaken for this report, both the knowledge and active involvement of staff at all levels of the provincial governmental structures were obvious. Opportunistic mini-surveys on markets consistently found awareness of the epidemic and of the main means of preventing HIV transmission.

The CDHS-2000 Survey confirms the same result for women, with a slight improvement according to age (see figure 20).

#### 3.3.2 Resolute campaign for safer commercial sex

Among the achievements contrib-

#### Box 9: The 100 percent condom use campaign

Regulations on 100 percent condom use in Koh Kong province, July 2001

As we know, HIV/AIDS is a savage disease that is continuing to spread through the population across all the provinces of Cambodia. At the same time, there is an increasing rate of deaths caused by this disease which is of growing concern

In order to suppress and reduce this death rate due to AIDS, and to ensure the welfare of the population the provincial authority has issued regulations for compulsory 100 percent condom use as follows:

1. The Provincial AIDS Committee, Provincial Health Department and Provincial AIDS Secretariat must strongly encourage education and dissemination to all the general population in order to avoid the transmission of HIV through condom use every time they have sex outside marriage. This measure is to guarantee safety during sex.
2. 100 percent condom use is compulsory throughout the province, to make sure that the people are clear in their minds that they have no danger in having sex with all kinds of sex workers, in brothels, hotels, guest houses or any other places.
3. Administrative measures will be used to enable active collaboration with concerned organisations to implement this regulation in order to achieve success such as closing down the establishments and sanctioning people who do not comply with the regulation.
4. People who make their living from commercial sex must implement and participate in the 100 percent condom use campaign very actively.
5. The authorities at all levels must participate actively with the 100 percent condom use monitoring committee.
6. The 100 percent condom use campaign must be implemented from the date of issue of this regulation onwards. The 100 percent condom use monitoring committee must provide a written report every month to the provincial authorities and solve all problems that occur in commercial sex and entertainment establishments within the province in order to achieve a positive result.

*(unofficial translation)*

<sup>21</sup> 2000 Behavioural Surveillance Survey found a proportion of 13% of men having ever been tested.

uting to this stabilisation of the prevalence rate is the campaign for safer commercial sex. This approach aims to target particular contexts of risky behaviour and has been vigorously developed. The campaign focuses on 100 percent condom use (see Box 9). Different provinces and teams are variously adopting more education-based or more control-based approaches. It is not yet fully deployed, and is just beginning in some places, but its potential importance should be recognised within the context of a clear understanding of the dynamics of commercial sex in Cambodia.

### 3.3.3 Care and support for people with AIDS

Care and support for people with AIDS assume different forms. At least in Phnom Penh one finds Hospices, that provide palliative care to terminal stage AIDS patients, such as pain relief, accessory medical care like wound dressing, education on hygiene, nutrition, sanitation and food providing:

1. Missionaries of charity (Home of Peace) located in Chaom Chao commune, Phnom Penh, has a capacity of 24 beds, 12 for men and 12 for women.

#### Box 10: An example of grassroots action in response to the epidemic

##### Norea Peaceful Children

Norea Peaceful Children (NPC) is an NGO launched and headed by the Venerable Munny Vansaveth, at Norea pagoda, near Battambang. It was begun as an orphanage for children whose parents died as a result of civil conflict, in order to help them to escape a future of continued deprivation: the alternative for these children is often a life limited by lack of education, lack of food supply and lack of health care.

By 1997, the Ven. Munny Vansaveth realised that a new disaster was causing many children to become orphans – namely, the AIDS disease. NPC decided to launch an HIV prevention and care programme. NPC continued to provide shelter for orphans from war and AIDS, for street children, and began to provide care and support for people living with HIV/AIDS who do not have relatives to care for them.

In 1998, the Ven. Munny Vansaveth believed that he was caring for most of the local orphans needing his support (there are presently 61 living inside Norea Pagoda), and began to visit neighbouring villages in order to develop an education programme about AIDS. Four houses have been built to provide shelter to people living with HIV, in different villages. During visits to villages, the Ven. Munny Vansaveth tries to encourage people living with HIV and to provide information to relatives, mostly wives, about taking care of an HIV infected person.

The Ven. Munny Vansaveth believes that pagodas should and can play an important role in the fight against HIV/AIDS. There is a high level of respect for monks among Cambodian people and their religious teaching is influential. Nowadays, he raises these ideas as widely as possible: two other pagodas now care for orphans, but have not yet joined the HIV/AIDS programme.

The key message advocated by Ven. Munny Vansaveth is that the role of the pagoda is precisely to help. Moreover, the AIDS epidemic is different from other communicable diseases, such as tuberculosis which can be transmitted through everyday contact. He believes that it is both important and possible to help HIV infected people. Monks should educate monks. In accordance with this, NPC try to train other monks. NPC also cooperates with the Provincial AIDS Office, particularly in order to share training material, in order to increase support to infected people.

This support includes encouragement for people, but also explaining and teaching in the community. For Ven. Munny Vansaveth, it is important to involve both traditional healers in dealing with opportunistic infections and the government in implementing a policy enabling low price modern drugs. Gathering all human resources is his essential message: if one could achieve an actual co-operation between government, pagodas, and NGOs, a lot could be done!

This impressive example of involvement of a religious institution in the fight against the HIV/AIDS epidemic is also an example of lone man's courage: minimal support is given to Norea Pagoda (so far, the only contribution has been a supply of rice from the World Food Programme). In order to ensure sustainable support for the 61 orphans gathered there, and to try to reduce the number of children orphaned by AIDS in the future. NPC is developing three programmes: agriculture (to help meet food needs), care for the children, and the HIV/AIDS programme. NPC urgently needs food supplies and equipment.

2. Maryknoll provides hospice care as part of its HIV/AIDS programme, with 12 beds available at a hospice in Chakangre Krom commune. The aim of the hospice is to provide care for 'those who have no family'. Maryknoll also supports two group homes for a total of 20 people who are able to take care of their personal needs.

Pagoda Involvement are an issue of first importance, as one finds in Battambang (Wat Norea) together with the NGO, named Salvation Centre for Cambodia. They provide food to patients, advise patients to meditate, and care for orphans (see Box 10)

Finally, home-based care is a most promising approach to effective, respectful care and support. This important achievement has been developed mainly in Phnom Penh, but provincial teams are also active in a few locations. Home-based care teams succeed in gathering medical and non-medical carers and ensuring their effective co-operation. They integrate the three following important actions:

1. The provision of basic treatment for symptoms
2. The provision of counselling and advice and information on condom use and HIV/AIDS
3. The provision of welfare fund for needs such as transportation to medical services and testing facilities, food and house repairs.

The present numbers of Home Care Teams are:

- Phnom Penh 10 teams
- Battambang 2 teams
- Siem Reap 2 teams
- Kandal 2 teams
- Kompong Cham 1 team
- Along national road # 1 and # 4

Related to this issue of care and support for people with HIV/AIDS, their families and carers, but applying more widely, is the co-operation between

governmental sector and NGOs, both national and international. Despite obstacles in some areas, the achievements resulting from this co-operation are encouraging.

#### 3.4. Challenges

##### 3.4.1 The heterogeneous nature of the epidemic in Cambodia

An important challenge is the heterogeneous nature of the epidemic in Cambodia. Pockets of high prevalence rates and of low prevalence rates exist for all surveyed groups, at provincial and - presumably - local level (see chapter 1). Evidence exists for geographic differences in development of the epidemic. For example, some areas, such as Pailin, exhibit features of a more recent epidemic than elsewhere in the country, except the north eastern provinces (Mondulhiri and Ratanakiri, which have been so far only marginally struck). The coming years will also bring increased national and international traffic, through the upgrading of the national road network (Lee-Nah Hsu 2001). Future challenges may include the need to respond to multiple epidemics, thus multiplying and diversifying the need for accurate information and effective means of action.

##### 3.4.2. A people-centred approach

The key message of this study of the societal and individual aspects of the HIV/AIDS epidemic is that the most effective means of ensuring an effective and holistic response is to adopt a people-centred approach. As shown in the report, making the present achievements sustainable and taking further steps towards reducing the spread of the epidemic and mitigating its impact, requires significant changes in the relations between different social actors. For example, changing the balance of gender norms and relations

will be of key importance in developing a fully effective response to the HIV/AIDS epidemic. Other factors are perhaps circumstantial rather than deeply rooted in society, but are so closely linked to the national and international environment that effecting change presents a difficult challenge. Measures to improve the effectiveness of the public sector, such as addressing the issue of civil servants' salaries are an example of this.

An effective response to such societal challenges is to adopt a resolutely people-centred approach, enabling local communities to assess the situation and local needs in relation to HIV/AIDS, and to enable linkages and information-sharing between local initiatives which will be invaluable in informing, influencing and strengthening the response to the epidemic at national level. Key principles that inform such a people-centred approach include:

- Giving voice to people.

At present, the people most directly affected by HIV/AIDS, including the people living with HIV and the people suffering from AIDS, are largely silent outside their family and immediate social context. This silence has had a very negative impact on both the response to the epidemic and the situation of the affected persons. On the one hand, this silence deprives the wider population of knowledge and an understanding of the epidemic, which are vital for their education and as a source of information. Conversely, when they are able to voice their situation, people directly affected by HIV/AIDS are eager to share their knowledge and are efficient in raising public awareness. For example, an important testimony is presented to the public in "Cipy heritage", a video produced by NCHADS in 1999. Cipy, who contracted HIV, infected his wife and watched her death, knows that he will leave his children

without any parents. He hopes that if others, at least, know the circumstances of his family tragedy, then that may help them avoid the same. As he explains,

*"This is the tragedy that my family is experiencing. I would like to tell the true story of my family for the whole of Cambodian society to learn from it. I hope there must be a change in behavior to stop the transmission of HIV, otherwise this tragedy will hurt you. I hope that AIDS will be away from Cambodia from now on."*(NCHADS 1999)

On the other hand, for the thousands like Cipy with HIV or AIDS and others affected by HIV/AIDS, silence deprives them of the chance to claim their rights and benefit from the available social help and medical support. An immediate priority is to enable the voice of people affected by HIV/AIDS, as well as that of grassroots communities and civil society actors, to be heard. The Cambodian network of people living with HIV will be essential in achieving this goal (see Box 11).

- Ensuring respect for the rights of people with HIV/AIDS through improved knowledge of HIV/AIDS.

*"My feeling is that I don't want anyone to look down on me; I'm a human being, just like everyone else...I am not afraid of showing my face to you, because it is not only me who has this disease, but thousands of other people as well...I like to tell people who have HIV like me, to try not to be upset but to stay healthy as I do. You may not believe that I have been infected for 7-8 years. But I'm telling the truth, I have HIV, and I've had it since 1993. So far, I am still healthy because I take care of myself. I don't let the virus bring me down."* (UNICEF 2001)

**Box 11: Cambodian Network of People Living with HIV**

The voice of people living with HIV is now beginning to be heard. Support groups and CBOs run by, and for, people with HIV have played an important part in establishing opportunities for advocacy. Recently, these groups and organisations have come together to form CPN+, the first network of people with HIV in Cambodia. The creation of CPN+ is a vital step in enabling the voice of people with HIV to be heard in public discussion about HIV/AIDS and in all levels of policy-making. The member groups and organisations that make up the network currently have a total membership of approximately 800 people.

The objectives of CPN+ include advocacy for the rights of people with HIV and ensuring that they achieve and maintain a visible public face, and the expansion of the network beyond its strong base in Phnom Penh and the three provinces where it is currently active. CPN+ is focusing attention on the need to build capacity in order to implement its activities with maximum effectiveness. Strong and important links with the regional network, APN+, are already established. CPN+ has also attracted the active support of government and non-governmental organisations in Cambodia, including KHANA, UNAIDS, HACC, NAA and the Home Care Network Group.

CPN's member groups undertake many vital activities in addition to advocacy. For example, the CBO, Vithey Chiwit, has established strong links with public health services that facilitate referrals to, and from, the organisation. Practical and psycho-social support is provided, including counselling, support for children affected by AIDS, home support visits, a telephone hotline and practical support for funerals.

The people living with HIV who appear in the UNICEF video “With Hope and Help” send a message that links their requirement for complete respect of their dignity with explanations of their fight to cope with the disease and the possibility of going on with an active life. A clear understanding of the situation of people living with HIV/AIDS is indeed essential for them to be respected and supported. Above all what is needed is an understanding that HIV/AIDS cannot be transmitted through daily acts:

*“We can have meals together, can rest together, can wear each other’s clothes. Therefore, we should not be scared to live with people with HIV.*

*Instead, we should encourage them, help them to feel comfortable around their family and friends. Mental support like this helps them to regain their spirit, it gives them the hope to survive and instils in them the courage to live in society”* (Dr Ph. Cheang Sun Kaing, UNICEF 2001). The NAA, for its part, has proposed a Charter for Persons with HIV/AIDS in Cambodia. The charter gives examples how to defend and respect the rights of people with HIV/AIDS. One of the objectives in writing the charter was to create a base from which a national discussion could spring to produce a law enforcing these rights (see box 12).

**Box 12 Rights and responsibilities of people with HIV/AIDS**

**Charter for Persons with HIV/AIDS in Cambodia**

**by National AIDS Authority**

Considering:

- the existing discrimination against persons with HIV or AIDS and their partners, their families, their care-givers,
- danger that the rapid growth of the epidemic in Cambodia, will lead to an unfair and/or irrational attitude towards HIV infected people and AIDS sufferers,
- the imperative necessity for the population to be more aware and better informed about the HIV/AIDS epidemic and its consequences,
- the necessity to undertake common action within the whole country to stop the progression of HIV/AIDS,

This charter stipulates the fundamental and basic rights and duties of all citizens with regard to the HIV/AIDS epidemic.

**1 Liberty, Autonomy, Security of the Person and Freedom of Circulation**

- The persons with HIV or AIDS are entitled to have the same rights to assure their autonomy, the security of their person and their freedom of circulation as the rest of the population,
- No restriction concerning their movements within the national borders as well as abroad should be imposed upon the persons with HIV or AIDS,
- Segregation, isolation or quarantine of persons with HIV or AIDS in prisons, hospitals or elsewhere is totally unacceptable,
- Persons with HIV or AIDS have rights in decisions regarding marriage and child-bearing, although counselling about the consequences of these decisions should be provided.

**2 Confidentiality and Privacy**

- Persons with HIV or AIDS are entitled to confidentiality and privacy concerning their health and HIV status,
- Information regarding a person's HIV or AIDS status must not be given without that person's consent. After his/her death, this information must not be given without the consent of this or her partner or his/her family except if this information is legally requested or could prevent other people's lives from being endangered or threatened.

**3 HIV Test**

- The HIV test must occur only with free and informed consent,
- The voluntary and anonymous test must be preceded and followed by a medical examination available to all the people,
- Any HIV positive person shall have access to medical services and to medical, psychological and social support within the provisions and capabilities of the state.

**4 Education on HIV and AIDS**

- All people are entitled to receive adequate education on HIV and AIDS and to have access to information concerning preventive methods,
- Information to the general public shall be widespread in order to prevent discrimination against persons with HIV or AIDS

**5 Employment**

- The HIV test shall not be part of an employment test,
- Being HIV positive shall not, by itself, be grounds for cancellation of an employment contract, nor for downgrading or relocating an employee or discrimination in the work place,
- No information concerning an employee who is HIV positive or has AIDS shall be given by any employer,
- No justification whatsoever shall be given to have an employee get an HIV test,
- Information and education about HIV and AIDS as well as access to medical visits shall be organised at the workplace.

**6 Health and Support Services**

- Persons with HIV or AIDS have rights to housing, food, medical assistance and welfare equal to all other citizens,
- Reasonable accommodation in public services and facilities should be provided for persons with HIV and AIDS,
- Persons with HIV or AIDS shall not be denied access to medical aid funds and to medical services.

**7 Media**

- Persons with HIV or AIDS have the rights to fair treatment by the media and to observance of their rights to privacy and confidentiality,
- The public is entitled to receive comprehensive and detailed information about HIV and AIDS in order to guide their behaviour.

**8 Insurance**

- Persons with HIV or AIDS and those suspected to be at risk of having HIV or AIDS, should be protected from arbitrary discrimination in insurance,

**9 Gender and Sexual Partners**

- Any person has the right to insist that they or their sexual partners take appropriate precautionary measures to prevent transmission of HIV,



- The particular vulnerability of women and children shall be recognised and taken into account.

#### **10 Prisoners**

- Prisoners shall have access to education, information and preventive measures just like the rest of the population,
- HIV infected prisoners shall have access to the same level of care and treatment as available to all prisoners
- Prisoners with AIDS shall have access to treatment that is equivalent to that given to prisoners suffering from long and other chronic and serious diseases

#### **11 Equal Protection of the Law and Access to Public Benefits**

- Persons with HIV or AIDS shall have equal access to public benefits and opportunities and the HIV test shall not be demanded
- Public measures shall be taken to protect persons with HIV or AIDS from discrimination in employment, housing, education and medical and social welfare

#### **12 Duties of Persons with HIV or AIDS**

- Persons with HIV or AIDS shall respect the rights, the health and physical integrity of others. They shall take the appropriate measures to ensure this where necessary.

The Cambodian Network of People Living with HIV and the NAA charter are very important. Nevertheless their existence and efforts have yet to change the realities of those living with HIV/AIDS throughout Cambodia. The main challenge is to succeed in providing sufficient, accurate and understandable information. The root of rejection of people with HIV or AIDS is fear, resulting from misinformation and inaccurate knowledge about HIV/AIDS. For example, the symptoms of AIDS is often extremely distressing, with huge loss of weight and diarrhea. In order to support and care for a person sick with AIDS without fear for their personal safety, carers need clear and accurate information about communicable diseases in general and HIV in particular. As long as misplaced fear of infection persists, the rights of people with HIV or AIDS cannot be respected.

- Addressing social inequity in order to mobilise all social groups effectively

Giving voice to people and ensuring accurate knowledge about HIV/AIDS are crucial strategies. Establishing open

and informed debate will enable the participation of vulnerable populations in initiatives intended to benefit them and this will greatly enhance the effectiveness of such initiatives. Such debate will, in turn, inevitably lead to discussion of issues of equity. For example, at present:

- Access to the full range of treatments available in Cambodia and the capacity to mitigate the impact of HIV are directly related to individual wealth, education and power

- Families and carers of the poor lack resources to care and support for their relatives

An illustration of dialogue between actors and civil society groups at community level and national authorities is provided by Botswana. The Botswana Human Development Report (BHDR) of 2000 was entitled *Towards an AIDS Free Generation* (UNDP 2000). Widespread dissemination of the BHDR throughout Botswana enhanced mobilisation of society, including people with HIV, in response to the epidemic.<sup>22</sup> In Botswana, this led to debate about access to treatment (in particular, anti-retroviral drugs) which

<sup>22</sup> Botswana has one of the highest sero-prevalence rates in the world.

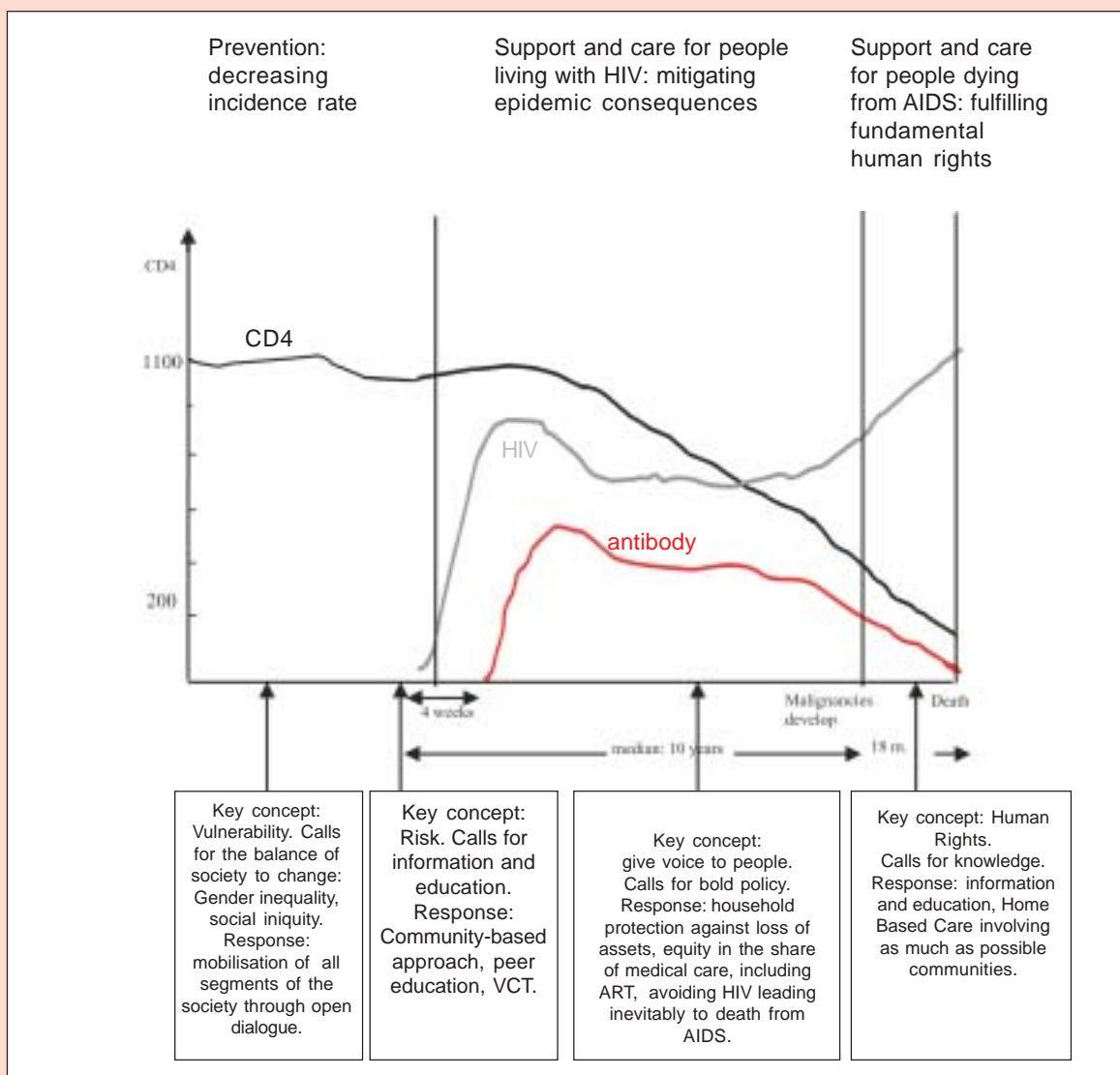
allows HIV positive people to manage the infection, substantially prolonging life. Botswanan authorities are responding to this issue.

### 3.5. Summary: Breaking the vicious cycle

The human development perspective is effective when developing a coherent understanding of the epidemic's dynamics. Poverty and inequality fuel the HIV/AIDS epidemic, which in turn feeds deepening poverty and inequality and leads to setbacks in human development achievements. Pov-

erty and inequality enhance vulnerability: the essential mechanism of this vicious cycle. In order to break this vicious cycle, its context of gender and social inequalities in development must be addressed. It is also essential to address the specific mechanisms of this vicious cycle, at least at two levels: the mechanism by which poverty leads to infection (thus leading to a decrease in the sero-prevalence rate) and the mechanism by which infection leads to death (this mitigating the consequences of the epidemic). Diagram 6 summarises this analysis.

Diagram 6: Breaking the vicious cycle



It is essential to understand that the four parts of Diagram 6 are intrinsically linked with one another, each being the context, cause and consequence of the others. Addressing one aspect requires that all are considered and acted upon.

Prevention is essential if the incidence of HIV/AIDS is to be controlled. As can be understood from Diagram 6 (see the two left inserted text boxes), prevention necessarily involves both the structural and the near determinants of the infection. While the near determinants may be addressed with immediate actions, and they will respond rapidly (a good example in Cambodia is the 100% condom campaign for commercial sex workers), addressing the structural determinants is essential for sustainable progress to be made in managing and eventually halting the epidemic. Calling for fundamental changes to the main social balances (such as the gender imbalance) involves all sectors of the society and cannot be considered without first considering the full implications for each from the central to the grassroots levels.

Mitigating the consequences of the epidemic (in Diagram 6 the third textual box from the left) is a social challenge of great importance for Cambodia. Although significant difficulties have been encountered when attempting to alleviate widespread poverty, no further

steps towards economic and human development may be considered without this alleviation first taking effect. Poverty alleviation is crucial in helping households avoid the consequent impoverishment of HIV/AIDS. This is call for both a social safety net and determined efforts to keep alive and active people infected by HIV.

Dignified support and care for those with HIV/AIDS (the fourth of the text boxes in Diagram 6) is not only a basic duty of the society. This mobilisation of communities through initiatives such as home-based care structures is in return invaluable information, which will contribute to prevention strategies.

Both the graph and textual parts of Diagram 6 show that effective governance is called for.

The Cambodian government has shown strong political will and shaped an effective tool to design and implement a truly multi-sectoral strategic response to the HIV/AIDS epidemic in its creation of the National AIDS Authority. But, other governance aspects such as the creation of the capacity to mobilise civil society or the ability to bring the response to the local level, are being undermined by the ineffectual social sector and widespread poverty. Shortcuts have to be found, whose common features will be enabling people initiative.



---

## 4. Conclusion

---

Cambodia has attained an important first stage in the response to the HIV/AIDS epidemic. Key achievements to date, which are expected to be conducive to continued success in developing an effective response to the epidemic, may be summarised as follows:

- While it is too early to claim that the epidemic is under control, evidence exists that the national prevalence rate may have stabilised and is, perhaps, decreasing.

- The presence of the epidemic, its key characteristics and the challenges it poses for society are well-known and are addressed by the staff of central and local administrations.

- Cooperation between central and local administrations, the UN agencies and international and national NGOs exists and plays a significant role in addressing various aspects of the epidemic.

However, global experience of HIV/AIDS shows that a mature epidemic can become concentrated in vulnerable sectors of society, where there is already significant social deprivation. This leads to the worsening social and economic situation of the most vulnerable people in society and the undermining of poverty alleviation efforts. Such concentration of the epidemic among the poor and vulnerable also serves to maintain levels of infection which have the potential to refuel the spread of the epidemic. Cambodian society might experience such a situation because:

- There is widespread social deprivation.

- The central administration is largely deprived of the means to conduct effective action, due to unrealistic salary provision for public servants and such poor infrastructure that a number of areas remain effectively isolated from the rest of the country.

Therefore, in addition to continuing to implement strategies that have been found to be effective, the response to the epidemic needs to move to a new stage. The first key message of this report is the importance of building on achievements to date through the adoption of a broad people-centred approach. **An effective people-centred approach means the mobilisation of communities together with sufficiently strong civil links inside society to organise the circulation of resources and suggestions between communities and central administration.**

- **Towards a new stage in the response to the epidemic**

Such mobilisation is possible, as a formal public structure exists, with highly skilled leaders, informed and involved staff, with coordination with UN system and with the NGO network. This structure may link community level initiatives with governmental action, enable community expression to be heard by policy makers and facilitate the sharing of information.

Such mobilisation is urgently needed, as the inequalities in Cambodian society, together with the differential prevalence rates found in different locations are likely to be conducive to the further spread of the epidemic.

Poverty has long been a central concern of the Cambodian authorities. An effective response to the HIV/AIDS epidemic calls for a rapid and effective poverty alleviation process, together with the strengthening of participation of all social actors in the development and implementation of social policies. Such effective processes are possible only if the following issues are addressed.

- The weakness of the public sector. A significant factor in this weakness is the low salary levels that fall far short of providing a decent standard of living. Developing and implementing sustainable policy will be very difficult as long as this sector remains incapacitated by salary levels that necessitate civil servants making their living by other means.

- The vulnerability of households, particularly poor rural households which account for the majority of the population, to crisis and emergency. Legal and supportive measures to prevent the distress sale of productive assets are urgently needed, if a growing core of deep and intractable poverty inside Cambodian society is to be avoided.

- The low socio-economic status of women, which is a serious obstacle to addressing gender issues, a vital step in reducing the spread of the epidemic. Key areas of concern include the trafficking of women, gender-based violence and the vulnerability of married women.

- The limited opportunities for information, demands and ideas to circulate openly, particularly from the grassroots level of communities and other groups to the higher authorities and policy makers. Increased communication flows from 'bottom to top' require mechanisms of policy making that are able to incorporate suggestions, analysis and demands from the various communities.

The human and economic consequences of the HIV/AIDS epidemic in Cambodia will depend on the direction that is now taken in the response to the epidemic. For example, the international road network currently under construction is a potential catalyst for the further spread of the epidemic. The extent to which such catalysts are foreseen and addressed in a timely manner are key determinants of the consequences of the epidemic for

Cambodia. Another example is the extent to which access to treatment is enabled, which substantially decreases the number of people with HIV who develop AIDS in the future. The accessibility of effective treatment for people with HIV will determine the number of households devastated by AIDS through asset sale and the loss of the productive labour of family members, and the number of children orphaned by AIDS.

This report has detailed the availability of data and analysis related to the HIV/AIDS epidemic in Cambodia. The contribution that quantitative studies make to the understanding of the dynamics of the epidemic has been noted, along with some of the inherent fragility of such data. It will be important to ensure that the current surveillance systems receive adequate support for continued effective implementation. However, there is now substantial information existing, as well as a wealth of documentation of global experience of the epidemic that can inform the Cambodian response to the epidemic. While gaps in understanding remain, and it will be important to learn and document lessons specific to the Cambodian experience, the next stage of the response cannot be delayed. The urgent need is for coordinated and concerted action.

The following recommendations are offered as a contribution to this coordinated and concerted action:

• **Action on HIV incidence:**

- Effective strategies for reducing the rate of new infections are already in place and should receive continued and adequate support.

The partnership between PAC structures and NGOs has proved to be highly effective. Cooperation between relevant administrations, local authorities and the PAC needs to be continued and enhanced.

- Enabling sharing of information,

open discussion and the development of strategies for coping with the epidemic for all groups in society. Part of an effective strategy for achieving this may include extending networks of peer educators within professional and vocational bodies. Peer educators have been found, internationally, to be an invaluable resource for enabling an environment of informed discussion and support

The different line ministries are key structures to scale up peer education programmes. Of particular importance should be the involvement of the Ministry of Social Affairs, Labor, Vocational Training, and Youth and Rehabilitation (MoSALVY), in partnership with the corporate sector. Within the corporate sector prime responsibility rests with the transport and garment industries. The latter being concentrated in the suburbs of Phnom Penh and employing thousands of young women.

- Opening up communication channels within communities, between communities and between community and national levels, will enable the epidemic, and its impact, to be better understood and will ensure that the views and needs of people at community level are heard by people responsible for coordinating the response to the epidemic at national level. At village level, the existing system of local administration provides a key opportunity for the sharing of information and understanding between different stakeholders.

The communal elections, to take place in early 2002, will place at the head of each commune their first elected commune leaders. Communal candidates should interact with the NGO networks, and the Ministry of Interior should facilitate the raising of HIV/AIDS concerns during the electoral campaign.

- Mobilising the support of influential people in the community is a key aspect of an effective response to the epidemic. The pagoda, and religious

leaders, remains a focal point for many communities. Active support from the pagoda and religious leaders has a key role to play in raising awareness and reducing discrimination.

A people-based approach relies on the involvement of a variety of key community members. This group should include monks, Achars, and more generally those well-versed in Buddhism, as well as teachers and older educated men. All these community members command respect. They are a part of a series of integrated social links. Their participation in the effective implementation of a people-based strategy will be very valuable, provided support is given, at all levels, for accurate information circulation and open debate.

- Women face specific vulnerabilities, both to HIV and to the impact of HIV. Women are also largely unrepresented in the local administration systems. Enabling the voice of women to be heard at local and national level, and providing full support for action undertaken by women to reduce vulnerability and impact are key components of a response to the epidemic.

The Ministry of Women and Veterans Affairs has developed awareness campaigns about the need for women's participation in civil, professional and political life. However, the development of women's associations is primarily an urban phenomenon and mostly limited to the affluent in Phnom Penh. Nevertheless these associations are important and some have radio, electronic and printed communications, examples of which are the *Cambodian Women Media* and the *Khmer Women Voice Magazine*.

- Protecting the different social segments by understanding their differences is very important. This type of understanding is especially needed in the design and implementation of strategies aimed at Cambodia's youth.

Steps towards a future without AIDS must include vigorous youth-oriented prevention programmes in order to achieve what Botswana's HDR has called "an AIDS free generation". As explained in the report, Cambodian society is characterised by a strict division of gender roles and the marked separation of males and females during their youth. These social and physical demarcations provide an incentive for traditional male behaviour particularly in relation to the consumption of commercial sex. Integrating safe sex campaigns within wider reflections on gender, responsible sexuality and family life will be essential if their programs are to shape the values of those on the cusp of adulthood.

In these campaigns the Ministry of Education incorporating the Department of Informal Education, is a key institution as many young Cambodians no longer attend school in their teenage years. Both HIV prevention programs and programs addressing discrimination and stigmatisation should be in the curricula. Where possible the contents of these programs should be determined and designed in collaboration with relevant NGOs and community associations.

**• Action on the impact of the epidemic:**

- Improving access to quality VCT is essential if the incidence and impact of HIV/AIDS are to be affected. Currently there is a serious lack of nationally approved VCT facilities. Multiplying Family Health Clinics with appropriate resources and trained staff is needed. Increasing the level of access to VCT facilities also calls for co-op-

eration between the private and public health sectors.

- Increasing access to effective treatment for opportunistic infections will improve the health status of people with HIV and enable them to continue to play an active and productive role in the family and in the wider society. This requires that sufficient resources, in terms of drugs, equipment<sup>23</sup> and salaries are made available to public health facilities and steps are taken to ensure that treatment is accessible for people with HIV.

- An informed debate about antiretroviral therapy is needed at all levels of society in order to assess the possibility of making this therapy widely available and effective for people with HIV throughout Cambodia. Recent global reductions in the cost of antiretroviral drugs<sup>24</sup> and lessons learned from the implementation of pilot projects in Phnom Penh provide a basis for serious debate of this issue. Such a debate may be expected to have an immediate benefit in that it will counter the current climate of misinformation about 'AIDS cures' available in Cambodia and internationally. The possibility of requesting technical support from the *Accelerating Access* initiative of the UNAIDS Secretariat could be considered during such a debate.

The Ministry of Health has an important role in the provision of information about the technical aspects of the ART issue, but it is also recommended that a tripartite co-operation (involving the key informants, people living with HIV and health centre staff) be established at the grassroots level

- Continued support for the exist-

<sup>23</sup> Health centres surveyed during this study had staff with laboratory technician skills but lacked equipment with which to put these skills to use. For example, the only equipment available in most of the health centres was a microscope.

<sup>24</sup> An Indian pharmaceutical company is offering generic drugs to *Medicins sans Frontieres* at a cost of US\$ 350 per person per year, in contrast average costs in the US of US\$10,000 per person per year. The same drugs have been offered to governments at a cost of US\$500-600 per person per year (Colebunders 2001).



ing networks of people with HIV and planned expansions should be provided by the relevant bodies in order to strengthen the capacity and scale-up of these networks.

- The burden of care for people with HIV or AIDS is felt at household level. Action is needed to lessen this burden. For example, the strengthening of existing social safety nets and the creation of additional appropriate legal and social systems will enable families and households to avoid distress sales of assets which lead to impoverishment and destitution of family members, including children.

Based on the findings from experiments in Cambodia (for example those conducted by NGOs dealing with credit systems) and outside Cambodia (for example the Thai system of co-operation between referral hospitals and communities), the Village Development Committees could assume leadership of a co-operative relationship between the Ministry of Rural Affairs and local and international NGOs.

- The provision of home-based care through joint government-NGO initiatives is one of the achievements to date in the response to the epidemic.

However, scale-up is urgently needed and sufficient financial and technical support should be provided to enable this. It will be important to ensure that home care teams are part of an active and effective network at provincial level.

- The vulnerabilities of children affected by AIDS will be addressed, at least in part, by the actions detailed above. Children orphaned by AIDS have a specific need for appropriate care-givers to be identified. International and Cambodian experience shows that children usually prefer to remain with family members and in their home communities where this is possible. Support should be made available to initiatives that promote and support care for orphaned children by appropriate people within their home community. Local institutions, such as the pagoda, may also be in a position to provide valuable support for orphaned children.

Actions on incidence and action intended to mitigate the impact of the HIV/AIDS epidemic are intrinsically linked on many levels. International experience shows that the most effective responses to the epidemic are those which address both HIV prevention and HIV care and impact mitigation simultaneously.

Cambodia has made great strides in a short space of time towards a peaceful society. Building on these achievements, Cambodia may now adopt a people-centred approach for the mobilisation of all its resources in its efforts to reduce the spread of the HIV/AIDS epidemic, joining the ranks of the small minority of countries that have reduced their prevalence rate, and to mitigate its impact.



## Annex A

### Capacity building for national ownership on Human Development perspective

The goal of this capacity building process is national capacity to produce Human Development Reports, through a body of skilled government and non-government researchers, drawn from a number of relevant Cambodian ministerial and academic institutions. This goal is in line with the concept of Human Development and with the global UNDP principles underlying the production of Human Development Reports (UNDP 2001b), including:

- National ownership
- Independence of analysis
- Quality in analysis
- Participatory and inclusive preparation
- Flexibility and creativity in presentation
- Sustained follow-up

The capacity building is currently in pilot phase, which has involved the recruitment of a National Research Team of nine members, with a Research Director appointed by an independent research institution, Cambodia Development Resource Institute (CDRI). Four institutions are involved, Ministry of Planning (MoP), Royal University of Phnom Penh (RUPP), National AIDS Authority (NAA), and National Centre for HIV/AIDS, Dermatology and STDs (NCHADS), the two last in view of the fact that the 2001 CHDR focuses on the HIV/AIDS epidemic. This team has been responsible for the preparation and the production of the CHDR 2001, with technical support from CDRI and under the overall leadership of Ministry of Planning.

The capacity building project is guided by three principles:

#### 1. Capacity building is a process over time

Learning is a complex process. It is well known that there exists a gap between a first stage of familiarity, which is sometimes assessed through the acquired capacity to repeat definitions and stereotyped procedures, and full ownership of a field of knowledge, which implies an understanding of the context of knowledge and analysis of information. Such full ownership enables autonomy in conducting research and producing hypotheses and findings. Capacity building programmes are aimed at supporting processes of learning to this latter stage, which alone can lead to sustainable intellectual and national autonomy.

#### 2. On-the-job training: an effective but demanding approach

An effective method of learning, and one which is well-suited to adults with existing professional experience, is on-the-job training, enabling trainees to 'learn by doing'. The present phase of the UNDP project Capacity Development for the Preparation of the Cambodia Human Development Reports is utilising this approach fully, as the National Research Team recruited in 2001 is responsible for preparing and producing the 2001 CHDR report.

In the field of human development, where the conceptual framework must be informed by quantitative assessments, a broad training programme is recommended. Ownership of the report's content implies the capacity to understand and undertake the entire process from raw data to analysis and the drawing of conclusions. This re-

quires a good knowledge of up-to-date computer data analysis procedures, as well as the ability to contribute fully to the discussion of the necessary adjustments that influence the final value attributed to indicators. This final step requires a researcher to draw on a broad range of skills and knowledge. It also requires access to discussions held among international experts: 'Learning by doing' is possible only in close synergy between trainees and that body of international expertise.

### 3. Medium of communication

At the present time, English language is the international language of science

and communication. No high-level work in the human sciences can be achieved without access to this medium. English language is needed to acquire familiarity with international resources and to participate in scientific exchanges.

In parallel with this requirement, the working language used by the National Research Team is Khmer. This is typical of research practices around the world. Working in the national language and mother-tongue of the researchers serves to ensure both full understanding and communication among the researchers and effective dissemination to a broader audience in Cambodia.

## Annex B

### Large surveys in Cambodia: a wealth of invaluable quantitative data.

#### 1) General Population Census – 1998

The National Institute of Statistics (in the Ministry of Planning) conducted a General Population Census in 1998. Based upon a *de facto* population, the 1998 census collected information about household facilities, and individual demographic, educational, employment, and recent fecundity data. Thus it provides a robust description of the country.

The National Institute of Statistics took particular care when disseminating the results, both in the form of several reports, including the main tables, and as a database, thus allowing researchers to undertake further analyses. The census database is available in the following three presentations:

- aggregation at the village level, which can be handled by any statistical package (NIS Cdrom n°2).
- the above village database is incorporated in a software package belonging to the SIG family, PopMap

(NIS Cdrom n°3)

- the data for individuals is only available through the software WinR+, ensuring no misuse of this information is possible (NIS Cdrom n°4).

#### 2) The Socio-Economic Surveys

These sample surveys include a very detailed questionnaire, covering the main aspects of social life (education, activity, health, income and expenditure). The table 13 shows the key characteristics of the Socio-economic Survey in Cambodia

#### 3) Demographic and Health Survey

The Cambodian Demographic and Health survey was conducted in 2000 by the National Institute of Statistics (Ministry of Planning) and the Directorate General for Health (Ministry of Health), with technical assistance from Macro International through its MEASURE DHS+ program. 12236 households were interviewed (1817

Table 13: Key characteristics of the socio-economique survey in Cambodia			
	SESC 1993-94	CSES 1997	CSES 1999
Sample size	498 villages 5,578 households 32,079 pers.	474 villages 6,010 households	600 villages 6,000 households
Sample coverage	Rural 68.0% Urban 95.2% 15 Provinces 3 strata	Rural 88.4% Urban 97.4% 21 Provinces 3 strata	Rural 96.2% Urban 99.7% 24 Provinces 10 strata
Survey timing	October-September	June	January-March June- August
Consumption recall	177 food items 266 non-food items	20 food items 13 non-food items	23 food items 13 non-food items
<i>Adapted from 'A Poverty Profile of Cambodia' (Gibson 1999).</i>			

in urban areas and 10419 in rural areas), from which the corresponding number of eligible women, those between the ages of 15 and 49, interviewed was 15351 (2627 in urban areas and 12724 in rural areas).

The DHS asked for descriptions of the household population, housing characteristics and the respondents' characteristics and status, together with the questions about the following 12 topics:

- Health status and the utilisation of health services

- Fertility
- Abortion practices
- Fertility regulation and other proximate determinants of fertility
- Fertility preference
- Adult and maternal mortality
- Infant and child mortality
- Maternal and child health
- Maternal and child nutrition
- HIV/AIDS and other sexually transmitted infections
- Women's status and empowerment
- Domestic violence.

## Annex C Measuring poverty

### 1) Poverty is a multidimensional concept

The concept of poverty is applied to situations at both individual (or household) and country levels. From both these perspectives, poverty is a multidimensional concept. Box 13 describes the concept of poverty from an individual (or household) perspective. At the country level, poverty is linked to the capacity of the economy to provide a central administration with sufficient resources to develop infrastructures, organise public services and im-

plement development programmes. Key economic factors that determine this capacity include: the level of economic activity, the state of the international market, and the currency exchange rate. While the first of these three factors can be directly affected by policy at national level, the latter two are closely related to the global economic context. In addition, social factors are also key determinants of the capacity of the economy to provide adequate resources to the central administration.

**Box 13: Poverty is a multidimensional concept**

Poverty at the individual or household level is a complex concept. It affects individual or household capacity to achieve an acceptable quality of life. These capacities can be characterised as follows:

- The capacity to meet the basic needs of the individual

One obvious dimension of poverty is the inability of the household to provide each of its members with sufficient food and shelter: meeting the basic needs of its members is one of the most immediate concerns of poor households. In a cash economy, the ability to meet the basic needs of the members of a household is determined by the balance between income and essential expenditure. In rural village life – where 84 percent of the Cambodian population live (1998 population census) – subsistence farming or the exchange of goods form an important part of the rural economy. Therefore, the possession of even the simplest of productive assets, including labour, is often a significant factor in enabling households to meet the basic needs of their members.

- The capacity to cope with emergencies

Poverty is the lack of minimum security in the face of unforeseen events and crisis. For example, a health crisis is a common factor in triggering a decline into poverty or worsening poverty at the individual and household levels. Medical costs or the loss of the labour of a productive member of the household often lead to debt or distress sales of productive assets, even when basic needs were met on a day to day basis under normal circumstances.

- The capacity to mobilise a support network

The capacity to mobilise support in the face of shortages or crisis reduces vulnerability to poverty or worsening poverty. Such a support network often includes extended family and kinship ties as well as other alliances. Poverty is the lack of a network that can provide such support in time of need.

- *The capacity to benefit from opportunity*

Socio-economic changes, inherent to every society, may lead to disaster at an individual and household level – for example, through the collapse of agricultural prices or the loss of traditional sources of income. Such changes also provide opportunities for advancement, such as the opportunity for employment or business. Poverty is the lack of resources to seize such opportunities, including economic and human resources; for example, the lack of resources to respond to a business or employment opportunity.

- *The capacity to promote children out of poverty*

Poverty is also an inheritance. Simply meeting the basic needs of children does not reduce their vulnerability to crisis or enable them to break free of the cycle of poverty. Poverty is the lack of capacity of families to enable children to grow out of poverty. Access to appropriate education and training is a key factor in raising children out of poverty

Links between poverty at household level and poverty at country level are complex: positive economic growth rate (measured, for example, as an increase in per capita GDP) may be accompanied by impoverishment of particular sub-populations. Such vulnerable groups often include workers migrating from rural areas in search of economic opportunities in the cities, where they often make a precarious living at the margin of urban development. Industrial activity requiring large amounts of cheap labour may generate appreciable taxes and incomes from export while workers receive low wages with limited job security and little negotiating power.

Despite the complexity of the concept of poverty, it is essential for policy makers and social actors in general to have access to a quantitative assessment of the poverty situation. Quantitative knowledge is required both to follow changes over time (in order to monitor the impact of policy implementation) and to compare with the situation in other countries. In Cambodia, substantial efforts have been made over the last decade, both by the central administration and by the international community, to collect information countrywide about a range of demographic and socio-economic variables.

Measuring poverty, as with all measurement of social issues, necessarily

requires simplification. Many of the dimensions of poverty described above are difficult – or impossible – to quantify. Even for those features that seem possible to measure, summarising various dimensions in a single index is highly challenging. In order to provide a measure of poverty it is necessary to make choices, leading to a simplification of the concept of poverty.

However, measurement of poverty is necessary in order to provide essential information for all programmes that aim to reduce poverty. For example, the World Bank discussion paper, *A Poverty Profile of Cambodia*, states, *Better and up-to-date information about the poor is essential to assist*

*the government in designing effective policies for attacking poverty. Who are the poor? How many poor are there? Where do they live? What are their sources of income? Policies intended to help the poor cannot succeed unless the Government knows who the poor are and how they are likely to respond to public interventions.* (Prescott and Pradham 1997)

Therefore, we must simplify. Two aspects of poverty are more easily quantified than others and can be used as a basis for poverty assessment – individual income and consumption values.<sup>25</sup> In Cambodia, consumption values have been selected as the basis

#### Box 14: The food poverty line

The consumption level that separates the poor from the rest of the population is called the poverty line. Turning first to food consumption, the food poverty line has been calculated using data from the SES 1993–94 and updated with data from the subsequent SES surveys. Data were collected by asking respondents to report the quantity<sup>1</sup> consumed in the past week of a given list of food items and the value of this consumption. Where values are given in-kind rather than in cash terms, value is assessed using the market price. The steps for calculating the food poverty line from this data are as follows:

1) Nutrition is itself a complex subject. Diet must fulfil a wide range of nutritional needs, such as protein, energy and many micro-nutrients. Again, measurement requires simplification. The choice made here is to simplify by focusing only on energy intake, measured in terms of calories. **The benchmark adopted is a 2,100 calories minimum energy requirement per person per day.** This is a low value; for example, the World Health Organisation (1985) states that the daily calorie requirement for a subsistence farmer (a large part of Cambodian population) is 2,780.

2) There are many possible ways to provide 2,100 calories per day. However, typical consumption patterns can be identified for broad categories of population in a given country at a given date. SES 1993–94 provides detailed data on quantities of food consumption, from which consumption patterns may be drawn. **The population group chosen to derive the model composition of food consumption is the third quintile for total consumption distribution.**<sup>2</sup> A reference food basket is constructed by taking average values of the reported quantities consumed of each food item by this population group. It is important to notice that in this basket more than two-thirds (69 percent) of the calories obtained are from cereals, especially rice. The reference food basket derived in this way actually corresponds to a calorie content of 2,298. Thus, all quantities are scaled down by the same factor in order to achieve a reference food basket with a calorie content of 2,100.<sup>3</sup>

3) Cost of this reference basket has now to be determined. This is done using market prices. SES makes use of pre-stratification of areas (see Annex A). SES 1993–94 defined three strata: Phnom Penh, other urban areas, and rural areas. Separate price estimates were obtained for each of the three strata, leading to three different food poverty lines.

<sup>1</sup> At least for SES 1993-94. SES 1997 and 1999 did not provide quantities, but only values, leading to a complicated update method.

<sup>2</sup> The median quintile is the 20 percent of the population whose total consumption is mid-way between the poorest and the richest quintiles.

<sup>3</sup> Dividing 2,100 by 2,298 gives a factor of 0.9138

<sup>25</sup> Consumption data is collected at household level. Individual consumption values are calculated by dividing the household value by the size of the household (Knowles 1998).

for attempts to quantify poverty. The main reason for selecting consumption rather than income as a basis for a poverty index is that discrepancies are often observed between declared income and declared consumption, with the declared income being significantly lower than declared consumption. Another reason is that there is more information available on consumption than income as the socio-economic surveys (SES) of 1993-94 and 1997 focus on consumption assessment. Consumption data are usually more reliable than those of income. The first countrywide survey to provide information on income was the 1999 SES.

## 2) Poverty lines

The first step in calculating a consumption-based index is to assess a level of consumption below which an

individual will be defined as poor: the so-called poverty line. It is well known that if consumption is divided into two categories, food consumption and non-food consumption, the poorer people are, the higher the proportion of their overall consumption that is accounted for by food consumption. In determining consumption levels that can be used to separate the poor from the non-poor, food consumption is the most significant measure. Thus, a food poverty line (a minimum level of food consumption) is first calculated (see Box 14). A non-food minimum allowance is then calculated (see Box 15) and added to the food poverty line to provide the total poverty line.

The non-food allowance estimation relies on regression model. Let us recall that the minimal allowance for non-food goods is based on the typical non-food spending of those who can just afford the reference food requirement.

### Box 15: Total poverty line.

To incorporate non-food expenditure into the construction of the poverty line, a minimum allowance for non-food goods was computed, based on the typical non-food spending of those who can just afford the reference food basket and are therefore just on the food poverty line. If people who are just on the food poverty line allocate expenditure to non-food items, it can be assumed that the welfare derived from this amount of non-food is higher than welfare derived from the food expenditure that this requires them to forgo. It can thus be considered a minimum allowance for non-food spending.

It is not easy to calculate the cost of this minimum non-food allowance, and consequently the overall poverty line, because no unit value for non-food items were recorded in any of the SES surveys. SES 1997 used a different method for calculating the cost of this allowance to that employed in SES 1993-94 and SES 1999.

The method used in 1993-94 and 1999 was to estimate a regression equation. Given the individual total expenditure and the poverty line value, one can estimate an equation for the individual food share to be a function of these two values. The value of this estimated food share for those just reaching the poverty line (total expenditure equal to poverty line) enables the non-food allowance to be calculated, and then the overall poverty line (see annex B for detailed model).

The method used in SES 1997 is closer to the steps used to estimate the food poverty line and is an update of the non-food allowance calculation from the 1993-94 data. The non-food consumption of individuals whose total consumption was within 10 percent above or below the value of the food poverty line was used to form a set of weights (share in total consumption) for ten groups of non-food items. To overcome the fact that data on unit price were not collected, the Phnom Penh Consumer Price Index was used to obtain an estimate of the change in the cost of the non-food allowance between July-September 1994 and June 1997. The main drawback of this method is that it assumes that price movement in the Phnom Penh strata is a good approximation for the rural and other urban areas strata. This is unlikely, as it is not the case for food prices.



The regression approach follows the following steps:

\* In order to compute the non food allowance for those just capable of reaching the food poverty line, one build a food demand function for each strata  $j$  (Phnom Penh, Other Urban areas, Rural areas), which compute the food share for each household (food share for household  $i$  in strata  $j = s_i^j$ ) as a linear function<sup>26</sup> of the log of the value of total spending (total spending for household  $i = x_i$ ) relative to the food poverty line (food poverty line for strata  $j = z_j^f$ )

$$s_i^j = a_j + b \log (x_i / z_j^f) \quad (1)$$

In this equation, we know the food share, the total expenditure and the food poverty line. We use (1) to compute the constant  $a_j$  and the slope  $b$  by best adjustment on the data.

\* using the such determined coefficients  $a_j$  and  $b$ , we compute a non-food allowance (we compute a food share, so we deduce a non-food allowance) for each strata for those just reaching the poverty line. For these households indeed,  $x_i = z_j^f$ , so the ratio equal 1, and consequently the log equal 0: Thus the food share for those just reaching the poverty line is given by  $a_j$ .

\* We compute an overall poverty line by adding the non-food allowance to the food poverty line for each stratum. As  $a_j$  is the food share for those just reaching the poverty line, their non-food share is given by  $(1 - a_j)$ , and thus the non food allowance is  $(1 - a_j) * z_j^f$ . Then the overall poverty line is:

$$z_j = z_j^f + (1 - a_j) * z_j^f$$

$$z_j = z_j^f * (1 + 1 - a_j)$$

$$z_j = z_j^f (2 - a_j)$$

The resulting values for the poverty lines are presented in the table below:					
Poverty lines, in riels per person per day					
		Food Poverty line	Average food share* (%)	Non-food allowance	Poverty Line
1993-94	Phnom Penh	1,185	0.67	393	1,578
	Other Urban	995	0.73	269	1,264
	Rural	881	0.73	236	1,117
1997	Phnom Penh	1,378	0.68	441	1,819
	Other Urban	1,102	0.72	305	1,407
	Rural	940	0.71	270	1,201
1999	Phnom Penh	1,737	0.58	733	2,470
	Other Urban	1,583	0.68	510	2,093
	Rural	1,379	0.71	398	1,777
*for those just reaching the poverty line					
Sources: Prescott and Pradham 1997, Knowles 1998, Gibson 1999					

<sup>26</sup>  $y$  is a linear function of  $x$  if the dependence of  $y$  from  $x$  takes the form :  $y = a + b*x$ .  $a$  and  $b$  are two parameters, the first one called intercept (or constant), the second one called slope.

### 3) Poverty indices

When individual consumption is compared with the corresponding poverty line value, classified as poor are those whose level of consumption is below the poverty line. A series of indexes may be derived for the purpose of describing and comparing situations. The indicator most often used is the head count index, which gives the percentage of the population classified as poor. It is this index which is used in the body of the report (see Table 4). It belongs to the family of indices derived from the Foster, Greer and Thorbecke equation. This equation reads:

$$P_{\lambda} = (1/n) * \sum_{j=1}^q (g_j / z)^{\lambda}$$

where  $z$  is the poverty line,  $x_j$  the value of expenditure of person  $j$ ,  $g_j = z - x_j$  is the poverty gap for individual  $j$ ,  $n$  the total population size, and  $q$  the number of poor.

The sum runs over all poor (from 1 to  $q$ ), and  $\lambda$  is a parameter which runs from 0 to whatever wanted (one seldom goes after 2).

If the parameter  $\lambda$  is set to zero, each term of the sum become 1, as a any number rise to the power 0 gives 1. A sum of  $q$  terms each equal to 1 gives  $q$ : the equation reduce to:

$P_0 = q/n$ , which is the head-count index: proportion of person whose expenditure level is under the poverty line.

If parameter  $\lambda$  is set to one, the equation becomes:

$P_1 = (1/n) * \sum_{j=1}^q (g_j / z)$ , which is the poverty gap index: mean of the gaps between poor peoples' standard of living and the poverty line.

If parameter  $\lambda$  is set to two, the equation becomes:

$P_2 = (1/n) * \sum_{j=1}^q (g_j / z)^2$ . This is the Poverty Severity index, which is sensitive to the distribution of living standards among the poor. Even if its absolute value has no intuitive interpretation, this index is thought to provide relevant ranking among countries, as it takes into account the variations in distribution of welfare amongst the poor.

## Annex D

### Poverty temporal comparison issues

The difficulty in comparing socio-economic data collected at different times since 1993 (see for example Table 3) has sometimes led to disappointment, if not impatience. The fact that no straightforward trend could be computed seemed discouraging, but it should be remembered that the population census of 1998 and the set of countrywide sample socio-economic surveys provide invaluable sources of data. Nonetheless, the lengthy process of developing high level knowledge and skill in administrative and research oriented statistics apparatus is still underway. In addition, quantitative surveys have inherent and inescapable limitations: data provided by surveys are unavoidably tainted by the methods and context of their collection, at best providing only approximate figures. The main pitfalls in attempts to measure social phenomena are briefly reviewed below.

#### 1) Measuring social phenomena: main pitfalls

Social phenomena are inherently difficult to measure. For example, counting the number of people in a given location, region or country may appear to be a simple task, although there are practical difficulties. However, conceptual difficulties arise as soon as any more precise description is attempted. Age is a good example of a notion that at first glance seems to be particularly suitable for quantitative treatment until closer examination reveals how it is rooted in the socio-cultural context. Developed countries have long relied on exhaustive civil records, resulting in constant use of age data and a precise knowledge of this characteristic by individuals. However, in most developing countries no precise record or knowledge of their age is familiar to the

people. Instead approximate age groups are used by individuals. Isolating age data from the social context in which it was collected leads to demographic charts where round ages (finishing in 0 or 5) are disproportionately more numerous than the other values, creating peaks where the analyst was legitimately expecting smooth variation.

Similarly, particular circumstances may add to the complexity of handling information about age. For example, in a context where there is no formal age record system but there are administrative requirements, such as maximum age for school applications or recruitment, necessity often leads people to declare an official age younger than the biological one and to make use of this official age in everyday life. All such sources of imprecision will be reflected in the quantitative data. As soon as attempts are made to measure more complex characteristics than age, misunderstandings, confusions and lack of trust will increase occasions of mis-recording.

Therefore, the first thing to bear in mind when making use of quantitative information is that it necessarily comes from measures which embody errors and, consequently, has to be understood as probable – rather than precise – values. This is the case regardless of the quality of the survey used to collect information: a perfectly designed and implemented survey will reduce the imprecision, but never provide an exact figure. For conceptual reasons, exact figures are unattainable by measurements of social phenomena.

A second aspect of measurement is worth recalling before turning to the quantitative information of this report. The sources of imprecision described above apply even in the case of an ex-

haustive survey, such as a census. But most of the social information collected does not come from census but from sample surveys. Sampling can cause another type of imprecision. Again, excellent sampling techniques can reduce the uncertainty, but cannot reduce it to zero.

The main practical consequence of these structural aspects of all measures of social phenomena can be summarised by the following empirical rule: as soon as the sub-population studied is too small (one often chooses a threshold of 60 cases), no conclusions should be drawn from measured characteristics. This is why general population surveys are not intended to provide reliable information about specific small sub-populations and why disaggregation of data cannot be pursued too far.

## 2) Comparing SES data

The problems in comparing data from the different SES outlined above can be grouped into two categories. The first category relates to conjunctural issues, mainly arising from the failure to maintain a consistent methodology across the successive surveys. The second category is structural: this refers to the difficulties inherent in social issue measurements, which are unavoidable.

Concerning the SES series, the main comparison issue is that consumption quantities were collected only during the first survey (1993–94). Therefore, the only option is to use the data from the subsequent SES to update poverty line calculations based on the 1993–94 data, as no independent poverty line calculations can be made. In addition, even updating these calculations will require a good deal of approximation due to variation in the items retained in the food basket and the non-food al-

lowance.

The 1993–94 food basket contains 155 items.<sup>27</sup>

No consumption quantities were collected in 1997 and, moreover, the village survey provides the prices for only 36 food items of which only 22 are comparable with the food basket items. These 22 items correspond to less than 50 percent of the cost of the reference food basket. The following steps were therefore necessary in order to update the poverty line:

- The Consumer Price Index for Phnom Penh was used to calculate price changes for 75 items in order to calculate changes in the cost of living. (The result showed a 16.2 percent increase.)

- The prices for 22 items collected in the 1997 village survey were compared with the prices for those items collected in 1993–94, in order to estimate increases in the cost of living in the three strata. The increase in Other Urban areas was found to be 10.7 percent - two-thirds of the increase in Phnom Penh. The increase for Rural areas was calculated at 6.7 percent, only 40 percent of the increase in cost of living in Phnom Penh.

In 1999, the proportion of the reference food basket for which prices are available rises by more than 20 percent, enabling 70 percent of the cost of the bundle to be priced. This data was used to update the poverty line as follows:

- 46 items of the reference food basket were priced

- The sub-total cost of these 46 items was then calculated

- The cost of the same 46 items was calculated using 1993–94 values, in order to find their share of the total cost of the reference food basket. (The re-

<sup>27</sup> In fact, it contained 177 items, but 22 items happened to have a weighting of zero for the third consumption quintile population.

sults were: 67.4 percent share of the total cost for Phnom Penh, 68.1 percent for Other Urban areas and 70.1 percent for Rural areas.)

- This cost share is then used to calculate the cost of the whole basket

Therefore, the updated values of the poverty line rely on a series of assumptions and approximations. In addition, the three poverty lines, and the reliability of their comparison, rely heavily on the quality of the data collection. In response to the demand for precision, an innovation was made in the 1999 SES, which has provided a benchmark for data reliability. The survey was administered in two rounds, one in the dry season (January-March) and one in the rainy season (June-August). A method of interpenetrating sub-samples was employed, ensuring each sub-sample was nationally representative, in order to capture the impact of seasonality (or other temporal changes) without the data being spoiled by variations in the composition of the samples.

Unexpectedly, major differences appeared between the volume of consumption estimates, inequality estimates, and some features of cross-sectional profiling, in the two rounds of data collected. These differences were either not consistent with previous evidence about seasonality, or were too large to be accepted as valid. Several organisational factors were identified which helped explain this outcome, but these factors cast doubt on the data quality.

In order to mitigate justifiable disappointment, let us point out again some inherent difficulties in the measurement of social phenomena. One is the inverse relationship between the depth of the

study and quality of the record; a very long and complex questionnaire will increase the proportion of mistakes and inconsistencies. A difficult balance has to be struck between eagerness for completeness and precision on the one hand and the actual manageability of the questionnaire administration on the other hand.

Another inherent difficulty is that measures of social phenomena, even more than other measures, are imperfect. The figures obtained have to be understood not as exact figures but as the centre of an error bar. The size of this error bar depends on the context of the survey and while it may be large, it is never a null set. This error bar encompasses well known statistical phenomena such as sample fluctuations, as well as issues related to the measurement tool – in this case, the questionnaire and its context. When looking for temporal change, conclusions should be drawn not from comparing the centres of these bars, but from the shape of the band formed between the edges of each error bar.

Nevertheless, the two rounds of SES 1999 revealed unacceptable incoherence. The fact that SES 1997 was administered in one round avoids this question does not in itself prove higher quality of data. In addition, changes in the questionnaire forced a good deal of approximations during updating poverty line measurements. Moreover, sample coverage greatly improves along the series of SES. These difficulties should not discourage examination of the series of results, but should be taken into account while considering the data.

## Annex E

### Fieldwork methodology

#### 1) Fieldwork selection

One striking feature of the HIV Surveillance Surveys is the wide dispersion across provinces (see Table 9). Part of this dispersion can be accounted for by statistical fluctuations, as the study deals with fairly small samples. This feature of dispersion is the reason why the Surveillance System cannot be used as a valid tool for drawing local conclusions. Nevertheless, provided care is taken in interpreting the data, comparing the specific provincial circumstances with the level of HIV prevalence may be expected to provide some understanding of the epidemic's dynamics. Moreover, the differences between the provinces are expected to be critical in the possible refuelling of the epidemic. On this basis, the principal criterion of the fieldwork was to cover the contrasts from both the epidemic and human development points of view. A second criterion was added privileging remote areas. The reason for these choices relied mainly on the analysis that an essential challenge to the epidemic must ensure that a capability to respond is brought to the local level. This two criteria led to the choice of the four following provinces: Kampong Cham, Pailin, Koh Kong and Mondolkiri.

Kompong Cham is an agricultural province, with substantial fishing opportunities, large rubber plantations, and fruit growing. There are two towns with business activities. However, in some districts, landlessness is becoming a problem since land plots are too small to accommodate the new generation, or of little agricultural value; as a result, some in the workforce, mainly young adults, migrate to the provincial capital and to Phnom Penh. A mobile sub-population is thus emerging.

#### Kompong Cham: Key statistics

Demographic indicators in 1998:

Population: 1,608,914

Sex ratio<sup>28</sup>: 93.1 (93.0)

Percentage of population under 15 years old: 42.1 (42.8)

Percentage of working age population engaged in agricultural activities: 85.4

Percentage of working age population engaged in industrial activities: 2.8

Percentage of persons with a previous residence outside the province during the last 5 years: 6.8

HIV prevalence rate 2000:

- Direct female sex workers: 29.3 (31.1)

- Indirect female sex workers: 15.1 (16.1)

- Policemen: 2.0 (3.1)

- TB patients: 4.6 (6.0)

- Pregnant women attending antenatal care clinics: 1.0 (2.3)

Trends in prevalence rate:

- Direct female sex workers 28.0 (1998) 41.7 (1999)

- Policemen 1.8 (1997) 3.3 (1998) 3.0 (1999)

- Pregnant women attending antenatal care clinics 1.5 (1997)

Health equipment:

<sup>28</sup> The figures contained in brackets are the corresponding countrywide statistics.

Sources for provinces description: Population census 1998; NCHADS 2001; National Research Team primary research

<ul style="list-style-type: none"> <li>- Referral Hospitals: 10</li> <li>- Health centres: 128 (of which 93 fulfil Minimal Package of Activities)</li> <li>- Medical staff: 1,403 (of which 132 are medical doctors)</li> </ul> <p>Main disease in the population:</p> <ul style="list-style-type: none"> <li>- Tuberculosis</li> <li>- Malaria in the north of the province</li> </ul>
---

Pailin is a remote province, isolated from the main activity centres of the country, mostly as a result of very poor road access rather than geographical obstacles. Pailin is a recently established administrative division, separated from Battambang province in 1996, after prolonged conflict. Land mines remain a serious issue, and sections of the population remain in fragile settlements. There has been a surge of newcomers hoping to take advantage of the economic opportunities emerging since the reconciliation.

<b>Pailin: Key statistics</b>
Demographic indicators in 1998:
Population: 22,906
Sex ratio: 117.9 (93.0)
Percentage of population under 15 years old: 40.3 (42.8)
Percentage of working age population engaged in agricultural activities: 50.5
Percentage of working age population engaged in industrial activities: 8.6
Percentage of persons with a previous residence outside the province during the 5 last year: 39.6
HIV prevalence rate:
- Direct female sex workers: 37.9 (31.1)
- Indirect female sex workers: 8.6 (16.1)
- Policemen: 6.6 (3.1)
- TB patients: not tested (6.0)
- Pregnant women attending antenatal care clinics: 0.5 (2.3)
Trend in prevalence rate:
- Direct female sex workers 10.9 (1999)
- Policemen 5.6 (1999)
Health equipment:
- Referral hospitals: 1
- Health centres: 3
- Medical staff: 149 (of which 11 are medical doctors)
Main disease in the population:
- Malaria

Koh Kong is characterised by a quasi-absence of agricultural land. Only 10 percent of the area of the province is suitable for cultivation, between a mountainous landscape covered by forest and a wide mangrove swamp bordered by the sea. At present, Koh Kong is usually accessible only by boat or plane. Koh Kong had a very small population at the end of the Khmer Rouge period (some witnesses report a population of 3,000 inhabitants in 1979). The province has since attracted many immigrants, especially in the early 1990s, when there were lucra-

tive opportunities for logging, smuggling, marijuana growing and fishing. Of these activities, only fishing now remains. The logging ban became effective only in 1999, but it has had a huge effect on the population, as the cessation of logging was followed by large-scale emigration from the province. The repair of the road that links Koh Kong with the rest of the country is now near completion, and appears likely to have a significant impact on the province.

#### **Koh Kong: Key Statistics**

Demographic indicators in 1998:

Population: 132,106

Sex ratio: 105.1 (93.0)

Percentage of population under 15 years old: 40.7 (42.8)

Percentage of working age population engaged in agricultural activities: 53.2

Percentage of working age population engaged in industrial activities: 7.4

Percentage of persons with a previous residence outside the province during the last 5 years: 31.2

HIV prevalence rate:

- Direct female sex workers: 53.6 (31.1)

- Indirect female sex workers: 15.7 (16.1)

- Policemen: 10.7 (3.1)

- TB patients: 16.7 (6.0)

- Pregnant women attending antenatal care clinics: 5.0 (2.3)

Trend in prevalence rate:

- Direct female sex workers 52.0 (1997) 41.0 (1998) 41.7 (1999)

- Policemen 21.0 (1997) 25.9 (25.9) 24 (1999)

- Pregnant women attending antenatal care clinics 19.5 (1997)

Health equipment:

- Referral hospitals: 2

- Health centres: 8

- Medical staff: 132 (of which 29 are medical doctors)

Main disease in the population:

- Malaria

Mondolkiri is a high plateau. It is very lush during the rainy season, but dry for the remainder of the year. One of the main characteristics of the population in this province is the predominance of other-than-Khmer ethnic groups. The provincial norm of severe poverty in all dimensions of human development and the recent degradation of the means of transport (there are no more scheduled flights and the condition of the roads is ever-worsening) limit the population's contact with the rest of the country.

#### **Mondolkiri: Key Statistics**

Demographic indicators in 1998:

Population: 32 407

Sex ratio: 102.2 (93.0)

Percentage of population under 15 years old: 43.8% (42.8)

Percentage of working age population engaged in agricultural activities: 75.6%

Percentage of working age population engaged in industrial activities: 5%

Percentage of persons with a previous residence outside the province during the last 5 years: 13.7%



HIV prevalence rate: Mondolkiri is not covered by the Surveillance System  
Health equipment:  
- Referral hospitals: 1  
- Health centres: 6  
- Medical staff: 133 (5 of which are medical doctors)  
Main disease in the population:  
- Malaria (a prevalence rate of up to 70%)

## 2) The Survey

The daily activity of the local health centers was the beginning point for the study. Firstly, because it could be expected that the health system would feel the presence of the epidemic earlier than most other parts of the population. Secondly, because it is a reasonable place to observe the general relationship between local population and the public administration.

The Provincial Health Director and at least one District Operational Officer were first interviewed. Then the referral hospital in the provincial capital was visited. Finally, medical staff from several Health Centers, outside the provincial capital, were interviewed. Where possible, simple opportunistic surveys were performed in some private health facilities, and with the local population in the market places.

The following is an outline of the respondents' roles and the various issues they were asked about:

### • Provincial Health Department:

- Health issue in the province:
  - the presence of major health diseases in the province.
  - the current major concerns.
  - the health body: size, training, origin of the staff.
- The organisation of the HIV/AIDS task force in the province: chart, number of persons involved.
- The NGOs in the province involved with the HIV/AIDS issue.
- The assessment of those responsible concerning their knowledge and the involvement of the medical body of the province vis-a-vis the HIV/AIDS issue.
- The supply of medication
  - general organisation of supply
  - specific HIV/AIDS needs
- the availability of antiretroviral drugs
- Suggestions for efficient action against HIV/AIDS.

### • Referral Hospital Headquarters:

- The HIV/AIDS section: its organisation, number of persons, origin of the staff.
- Daily organisation of the hospital
  - a description of the weekly schedule.
  - issues related to the supply of medications
- An assessment of the HIV/AIDS situation in the province:
  - trends observed
  - the sub-populations at risk

- Suggestions:
  - unmet needs
  - further suggestions

- **Health Centres:**

- Daily organisation of the centre:
  - schedules
  - the number of person involved
  - the main diseases treated
- Specific HIV/AIDS related activities:
  - the intensity, frequency and level of demands
  - the main characteristics of HIV/AIDS patients
  - usual behaviour of HIV/AIDS patients
  - availability of medication
- An assessment of the epidemic situation in the district
  - trends observed
  - the sub-populations at risk
- Suggestions:
  - unmet needs
  - further suggestions

---

# References

---

Biddulph, R. 2000, *Interim Report on Findings of Landlessness and Development Information Tool (Ladit) Research September 1999 to April 2000*, OXFAM GB, Phnom Penh

Bunna, S. and C. Myers (1999), *Estimated Economic Impacts of AIDS in Cambodia*, draft report

Colebunders, R. (2001), *Anti-retroviral therapy in resource-poor settings*, Seminar at Sunway Hotel, Phnom Penh, 7 April 2001

Collins, J. and B. Rau (2000), *AIDS in the Context of Development*, UNRISD Programme on Social Policy and Development, Paper Number 4, UNRISD, Geneva

Figueiredo, F. and R. Walraven (2001), *Cambodia: An Overview of the Land Sector*, Sida

Gibson, J. (1999), *A Poverty Profile of Cambodia, 1999*, draft report, World Bank

ILO (2001), *An ILO Code of Practice on HIV/AIDS and the World of Work*, Geneva

Kato, E. (1999), *Where Has All the Land Gone? Land Rights and Access in Cambodia*, Case Studies Volume 2, OXFAM GB, Phnom Penh

Knowles, J. (1998), *A poverty profile of Cambodia, 1997*, Ministry of Planning, Phnom Penh

Lee-Nah Hsu (2001), *Building an Alliance with Transport Sector in HIV Vulnerability Reduction*, UNDP SEA-HIV, Bangkok

NCHADS (1998), *Report on Sentinel Surveillance in Cambodia 1997*, Ministry of Health, Phnom Penh

NCHADS (1999), *Report on Sentinel Surveillance in Cambodia 1998*, Ministry of Health, Phnom Penh

NCHADS (2000), *Report on BSS I-III*, Ministry of Health, Phnom Penh

NCHADS (2000), *Report on Sentinel Surveillance in Cambodia 1999*, Ministry of Health, Phnom Penh

NCHADS (2001), *Report on Sentinel Surveillance in Cambodia 2000*, Ministry of Health, Phnom Penh

NIS (2000), *General Population Census of Cambodia 1998: Analysis of Census Results Report No. 6: Population Projections 2001-2021*, Ministry of Planning, Phnom Penh

NIS dissemination of 1998 general population census data, CD Rom #3, PopMap software

- NIS dissemination of socio-economic survey data, CD Rom 1997, CD Rom 1999
- O'Brien, N. (2000), *Access to Forest Resources and Landlessness: Case Studies of Degraded Forests and Livelihoods in Kampong Thom and Kampong Chhnang Provinces*, OXFAM GB, Phnom Penh
- Prescott, N. and M. Pradham (1997), *A Poverty Profile of Cambodia*, World Bank, Washington D.C
- Ramamurthy, B., S. Boreak, P Ronnas (2001), *Cambodia 1999-2000: Land, Labour and Rural Livelihood in Focus*, Sida, Stockholm
- RGC (1997), *Cambodia Human Development Report 1997*, Ministry of Planning, Phnom Penh
- RGC (1998), *Cambodia Human Development Report 1998: Women's contribution to development*, Ministry of Planning, Phnom Penh
- RGC (1999), *Cambodia Human Development Report 1999: Village Economy and Development*, Ministry of Planning, Phnom Penh
- RGC (2000), *Cambodia Human Development Report 2000: Children and Employment*, Ministry of Planning, Phnom Penh
- RGC (2001), *Second five year socioeconomic development plan 2001-2001*, draft report
- RGC (Royal Government of Cambodia) (1996), *First Socioeconomic Development Plan 1996-2000*, Ministry of Planning, Phnom Penh
- Sik, B. (2000), *Land Ownership, Sales and Concentration in Cambodia: A Preliminary Review of Secondary Data and Primary Data from Four Recent Surveys*, Working Paper 16, CDRI, Phnom Penh
- UNAIDS (2001a), *Together We Can*, Geneva
- UNAIDS (2001b), *The Global Strategy Framework on HIV/AIDS*, Geneva
- UNAIDS (2001c), *The HIV/AIDS/STD situation and the national response in the Kingdom of Cambodia*, 4th edition, Phnom Penh
- UNAIDS and WHO (2000), *AIDS epidemic update December 2000*, <http://www.unaids.org>
- UNAIDS and WHO (2000), *Epidemiological Fact Sheets 2000 Update for Thailand, Vietnam, Laos, Indonesia, Malaysia*, <http://www.unaids.org>
- UNDP (2000), *Human Development Report 2000: Human Rights and Human Development*, New York
- UNDP (2001a), *Human Development Report 2001: Making New Technologies Work for Human Development*, New York
- UNDP (2001b), *UNDP Corporate Policy on NHDRs*, New York
- Vonn, V., S Than, S. Pen, C. Kao, Y. Khan, B Booy and W. Gum (2000), *"All Our Livelihoods are Dead": Landlessness and Aquatic Resources in Battambang Province*, OXFAM GB, Phnom Penh

---

## Videos

“**Cipy heritage**”, product of National center for HIV/AIDS, STDs and Dermatology, with National Center for Health Promotion and Cambodi Heamth Development Project of Ministry of Health, Kingdom of Cambodia, November 1999.

“**With Hope and Help: Cambodia**”, funded and coordinated by UNICEF East Asia and Pacific Regional office and UNICEF Cambodia, with support from UNAIDS, produced by Living Films, 2001.





