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PROJECT PERFORMANCE ASSESSMENT REPORT

KINGDOM OF CAMBODIA

DISEASE CONTROL AND HEALTH DEVELOPMENT PROJECT
(CR. N005-KH)

April 21, 2004

*Sectoral and Thematic Evaluation Group
Operations Evaluation Department*

Currency Equivalents (annual averages)

Currency Unit = riel

1996	US\$1.00	Riel 2,624	1999	US\$1.00	Riel 3,790
1997	US\$1.00	Riel 2,938	2000	US\$1.00	Riel 3,795
1998	US\$1.00	Riel 3,750	2001	US\$1.00	Riel 3,900

Abbreviations and Acronyms

ADB	Asian Development Bank	M&E	Monitoring and evaluation
AIDS	Acquired immune deficiency syndrome	MEF	Ministry of Economy and Finance
BHS	Basic Health Services project of the ADB	MOH	Ministry of Health
CENAT	National Center for Tuberculosis and Leprosy Control	MOP	Ministry of Planning
CNM	National Malaria Center	MPA	Minimum package of activities
CPA	Complementary package of activities	NAA	National AIDS Authority
CSW	Commercial sex workers	NAO	National AIDS Office
CUMEC	Condom Use Monitoring and Evaluation Committee	NCHADS	National Center for HIV/AIDS, Dermatology and STDs
CUWG	Condom Use Working Group	NGO	Nongovernmental organization
DCHDP	Disease Control and Health Development Project	NMP	National Malaria Program
DOTS	Directly Observed Therapy, Short-course	NTP	National Tuberculosis Control Program
GPA	Global Program on AIDS of WHO	OED	Operations Evaluation Department
HBC	Home-based care	PCU	Project Coordination Unit
HIV	Human immunodeficiency virus	PHD	Provincial Health Department
HMA	Health Management Agreements	PIP	Project Implementation Plan
HSSP	Health Sector Support Project	PPAR	Project Performance Assessment Report
ICRC	International Committee for the Red Cross	PSI	Population Services International
ICR	Implementation Completion Report	SDR	Special Drawing Rights
IEC	Information, education, and communication	SFKC	Social Fund of the Kingdom of Cambodia
ITF	Interim Trust Fund	ss+	Sputum smear positive
Khana	Khmer HIV/AIDS Alliance	STD	Sexually transmitted disease
MDR	Multi-drug resistant	TB	Tuberculosis
		UNAIDS	Joint United Nations Program on HIV/AIDS
		USAID	United States Agency for International Development
		WHO	World Health Organization

Fiscal Year

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OED Mission: Enhancing development effectiveness through excellence and independence in evaluation.

About this Report

The Operations Evaluation Department assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the Bank's self-evaluation process and to verify that the Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, OED annually assesses about 25 percent of the Bank's lending operations. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming studies or country evaluations; those for which Executive Directors or Bank management have requested assessments; and those that are likely to generate important lessons. The projects, topics, and analytical approaches selected for assessment support larger evaluation studies.

A Project Performance Assessment Report (PPAR) is based on a review of the Implementation Completion Report (a self-evaluation by the responsible Bank department) and fieldwork conducted by OED. To prepare PPARs, OED staff examine project files and other documents, interview operational staff, and in most cases visit the borrowing country for onsite discussions with project staff and beneficiaries. The PPAR thereby seeks to validate and augment the information provided in the ICR, as well as examine issues of special interest to broader OED studies.

Each PPAR is subject to a peer review process and OED management approval. Once cleared internally, the PPAR is reviewed by the responsible Bank department and amended as necessary. The completed PPAR is then sent to the borrower for review; the borrowers' comments are attached to the document that is sent to the Bank's Board of Executive Directors. After an assessment report has been sent to the Board, it is disclosed to the public.

About the OED Rating System

The time-tested evaluation methods used by OED are suited to the broad range of the World Bank's work. The methods offer both rigor and a necessary level of flexibility to adapt to lending instrument, project design, or sectoral approach. OED evaluators all apply the same basic method to arrive at their project ratings. Following is the definition and rating scale used for each evaluation criterion (more information is available on the OED website: <http://worldbank.org/oed/eta-mainpage.html>).

Relevance of Objectives: The extent to which the project's objectives are consistent with the country's current development priorities and with current Bank country and sectoral assistance strategies and corporate goals (expressed in Poverty Reduction Strategy Papers, Country Assistance Strategies, Sector Strategy Papers, Operational Policies). *Possible ratings:* High, Substantial, Modest, Negligible.

Efficacy: The extent to which the project's objectives were achieved, or expected to be achieved, taking into account their relative importance. *Possible ratings:* High, Substantial, Modest, Negligible.

Efficiency: The extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. *Possible ratings:* High, Substantial, Modest, Negligible. This rating is not generally applied to adjustment operations.

Sustainability: The resilience to risk of net benefits flows over time. *Possible ratings:* Highly Likely, Likely, Unlikely, Highly Unlikely, Not Evaluable.

Institutional Development Impact: The extent to which a project improves the ability of a country or region to make more efficient, equitable and sustainable use of its human, financial, and natural resources through: (a) better definition, stability, transparency, enforceability, and predictability of institutional arrangements and/or (b) better alignment of the mission and capacity of an organization with its mandate, which derives from these institutional arrangements. Institutional Development Impact includes both intended and unintended effects of a project. *Possible ratings:* High, Substantial, Modest, Negligible.

Outcome: The extent to which the project's major relevant objectives were achieved, or are expected to be achieved, efficiently. *Possible ratings:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Bank Performance: The extent to which services provided by the Bank ensured quality at entry and supported implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of the project). *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

Borrower Performance: The extent to which the borrower assumed ownership and responsibility to ensure quality of preparation and implementation, and complied with covenants and agreements, towards the achievement of development objectives and sustainability. *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

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Principal Ratings

	<i>ICR*</i>	<i>PPAR</i>
Outcome	Satisfactory	Satisfactory
Sustainability	Likely	Likely
Institutional Development Impact	High	High
Bank Performance	Satisfactory	Satisfactory
Borrower Performance	Satisfactory	Satisfactory

* The Implementation Completion Report (ICR) is a self-evaluation by the responsible operational division of the Bank.

Key Staff Responsible

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Preface

This is a Project Performance Assessment Report (PPAR) for the Cambodia Disease Control and Health Development Project (Cr. N005-KH), which was approved on December 24, 1996 and became effective on June 23, 1997. It provided financing for expansion of Cambodia's health infrastructure and support for national disease control programs for tuberculosis (TB), malaria, and HIV/AIDS. The \$35.6 million project was supported by an Interim Trust Fund (ITF) credit of SDR 20.6 million (US\$30.4 million equivalent in 1996). The credit was closed on December 31, 2002, following a 9-month extension of the original closing date. It was 98.7 percent disbursed, with the final disbursements taking place on May 9, 2003.¹ The Disease Control and Health Development Project (DCHDP) was the first Bank-supported health project and the first decentralized operation of the Bank in any sector in Cambodia.

The PPAR findings are based on: a review of the project's files and the Implementation Completion Report (ICR); review of published and unpublished literature or evaluations on health and infectious disease in Cambodia; interviews with current and previous task managers, project staff and technical advisers, central and provincial government officials in the Ministry of Health (MOH) and the national disease programs, the Social Fund of the Kingdom of Cambodia (SFKC), nongovernmental organizations (NGOs), and other donors; field visits to Phnom Penh and three provinces; and analysis of available data on program expenditure and epidemiological outcomes. An OED evaluation mission visited Cambodia in May 2003. The mission interviewed Provincial Health Directors, AIDS, TB, and malaria staff in Kampot and Sihanoukville provinces and visited six health centers, four of which were built or renovated by the project, in Kampot and Kampong Speu provinces. OED expresses its appreciation to all of those who made time for interviews and provided information.

This is the fifth of a series of PPARs that will be undertaken on the "first generation" of completed Bank-financed HIV/AIDS projects, as background for a larger OED evaluation of the development effectiveness of the World Bank's AIDS assistance.² In light of that purpose, relatively more material has been presented in this "enhanced" PPAR than is the OED standard. In addition, the dataset on NGO grants supported by the project will be posted on the OED AIDS evaluation website (www.worldbank.org/oed/aids).

Following standard OED procedures, copies of the draft PPAR was sent to government officials and agencies for their review and comments. Comments have been taken into account in the text and are included as Annex G. Following transmittal to the World Bank's Executive Board, this will be considered a public document.

1. The disbursement rate is based on the SDR value. Because of changes in the dollar-SDR exchange rate, the US dollar value of the disbursed credit was \$26.8 million at the close of the project.

2. The other projects assessed to date include the Kenya Sexually Transmitted Infections Project, the Zimbabwe Sexually Transmitted Infections Prevention and Care Project, the first India National AIDS Control Project, and the first and second Brazil AIDS and Sexually Transmitted Disease Control Projects.

Summary

The Disease Control and Health Development Project (DCHDP) was the first World Bank health operation in Cambodia and the first donor-funded project to substantially invest in the capacity of the Ministry of Health to implement public health programs. It was also the first decentralized World Bank project in any sector in Cambodia. As the project was being prepared in the mid-1990s, Cambodia was emerging from more than two decades of conflict that destroyed the country's infrastructure and severely depleted its human resources. Health conditions were among the lowest in Southeast Asia. The public health system was extremely weak and NGOs, financed by donors, were an important source of medical care.

The project adopted a two-pronged strategy of strengthening government health infrastructure and decentralizing health management in 11 provinces, while financing complementary disease control programs for malaria, TB, and HIV/AIDS nationally. Among the project's key achievements: the piloting of Health Management Agreements as a basis for decentralized management and implementation of health services, a model that has been extended nationwide; substantial expansion of health infrastructure and improvement in drug availability in the 11 project provinces; investments in capacity building that enabled the Ministry of Health to launch, coordinate, and lead a national response to HIV/AIDS; capacity building of national NGOs for action on HIV/AIDS; extension of ambulatory DOTS for TB treatment to rural health centers; and experimentation with social marketing of insecticide-impregnated hammock nets.

The project design was complex; it suffered in the early years from inadequate training of Cambodian implementers in procurement and financial management and an inability to get resources to the provinces. However, flexibility and learning on the part of the Bank and the Government helped to identify and mitigate the constraints, contracting complex civil works and NGO sub-components. The project was fully implemented and the credit nearly entirely disbursed with only a 9-month extension of the completion date.

The DCHDP sponsored many monitoring and evaluation (M&E) activities within each of the national programs. The project's M&E design, supported by strong government commitment to evidence-based decisions in public health, encouraged use of results to improve implementation and outcomes. Over the project period: there was a marked increase in condom use in commercial sex, a reduction in use of commercial sex, and decline in HIV prevalence in high-risk groups; the number of treated TB cases jumped as ambulatory DOTS was extended to health centers, indicative of an increase in the case detection rate; and reported malaria mortality dropped substantially. These achievements cannot solely be attributed to the project's impact on the implementation capacity of the MOH, given the enormous parallel investments by other donors in health during the same period. However, unlike most other donor programs, the DCHDP financed the basic functioning of the MOH in most of these activities, enhancing the leadership in setting national health strategy and enabling government workers to implement that strategy, including initiatives supported by other donors through technical assistance or parallel investments.

The project also included national baseline and end-point household health surveys, conducted in coordination with the parallel ADB-financed Basic Health Services Project. Unfortunately, the baseline did not capture important indicators for tracking progress on HIV and malaria behaviors; the end-survey used a sampling frame based on communities with better access to health care and a questionnaire with reference periods and reporting conventions for morbidity and use of health care that were not comparable with the baseline questionnaire. As a result, the two surveys combined could not accurately monitor trends in morbidity and access to

health care and the end-survey is inadequate as a baseline for the follow-on Health Services Support Project (HSSP).

OED rates the project's outcome and the performance of the Bank and borrower as **satisfactory**. Institutional development impact is rated **high**. Sustainability is rated as **likely**, based on evidence of increased implementation capacity founded in stronger institutions, greater financial commitment to health by the Government, and follow-on multi-donor projects and finance to implement the national health strategy. However, the 8-month gap between the closing of the DCHDP and effectiveness of the follow-on Health Sector Support Project (HSSP) and lack of a detailed implementation plan prior to HSSP effectiveness detract from sustainability of the benefits of DCHDP.

The DCHDP produced lessons for Cambodia and the Bank that may be relevant to other countries with similar initial conditions:

- Projects launched with a new borrower with low capacity need to front-load the implementation plan with training in Bank procurement and financial management.
- When activities are prioritized and comparative advantages of partners are tapped, relatively complex projects can be successfully implemented in a low-capacity setting.
- Health Management Agreements are a promising framework for decentralized management of the health system.
- When M&E is linked to implementation decisions, it becomes an input into the planning process and can contribute to improved performance. However, the comparability of indicators, instruments, reference periods, and sampling frames over time must be assured.

In addition, a number of lessons lend insight to OED's evaluation of the Bank's HIV/AIDS assistance:

- Investment in institutional development can have a dramatic impact on the ability of the Government to define and lead the national AIDS agenda.
- Promoting government commitment to fight HIV/AIDS and embrace a public health approach requires continuing efforts.
- Cambodia's HIV/AIDS strategy focuses scarce capacity on preventing transmission among high-risk groups, where programs can make the biggest difference.
- A strong HIV/AIDS program in the MOH provides the foundation on which multi-sectoral efforts can be built.
- Building capacity of NGOs is a prerequisite to their mobilization but doesn't assure that they will undertake cost-effective activities or complement government action.
- Tracking HIV prevalence and behavior is necessary but not sufficient for monitoring outcomes in a mature epidemic and must be linked with inputs and outputs to establish plausible causality.

Gregory K. Ingram
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1. Introduction and Background

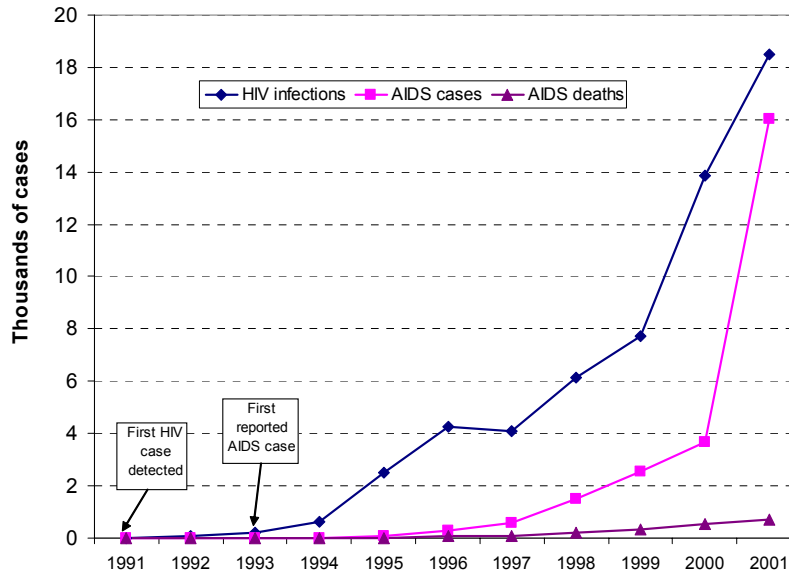
1.1 At the time that the Disease Control and Health Development Project (DCHDP) was being prepared (1994-96), Cambodia was emerging from more than two decades of conflict that destroyed the country's physical infrastructure and decimated its human resources. During the brutal rule of the Khmer Rouge regime (1975-78), an estimated 3 million Cambodians died as urban dwellers were forced to work in the countryside (NIS et al. 2001); health facilities, schools, equipment, and textbooks were destroyed; and an estimated 75-80 percent of all teachers and secondary school students either fled or were murdered (World Bank 1999). Even after the Khmer Rouge was defeated in 1979 and fled to the countryside, internal insurgency continued in the west and northwest border areas while the country tried to rebuild. As of the early 1990s, Cambodia's health and education infrastructure was physically destroyed from years of conflict or, if still standing, non-functional due to neglect and the dearth of trained professionals. An estimated 4-6 million unexploded landmines littered the countryside, hampering reconstruction and economic recovery (World Bank 1999a).

1.2 Despite efforts in the 1980s and early 1990s to rebuild, the health conditions of Cambodia's roughly 11 million people were among the lowest in Southeast Asia. Life expectancy was under 50 years (World Bank 1994) and infant mortality was estimated at 115 per 1,000 live births, compared with the regional average of 42 per 1,000 (World Bank 1996). Morbidity and mortality from preventable communicable diseases were among the highest in the world. More than half of the population was infected with the tuberculosis bacillus, a leading killer of young adults, with an estimated 35,000-40,000 active cases. Malaria transmission was concentrated in the forested and mountainous areas covering two-thirds of the country's land area, home to an estimated 17 percent of the population with the least access to health services and the destination for a transient population of forest workers highly vulnerable to the disease. The first case of HIV in Cambodia was detected in 1991 through blood screening and the first AIDS case was reported in 1993 (see Figure 1), but the epidemic had already taken off years earlier, fueled primarily by commercial sex. Between 1992 and 1996, HIV prevalence³ among brothel-based sex workers rose from 9 percent to 41 percent; by 1996, more than 5 percent of police and the military and 1.7 percent of women attending antenatal clinics were infected (NCHADS undated).⁴ Recent models suggest that in 1995 nearly 145,000 Cambodians were living with HIV/AIDS and more than 3,000 had died since the beginning of the epidemic (Cambodia Working Group 2002).

3. The percent of a population that is HIV-positive (currently infected with HIV) at a point in time.

4. From March 1992-September 1993 roughly 20,000 UN peacekeeping forces from nearly 100 countries were temporarily stationed in Cambodia as part of the United Nations Transitional Authority (UNTAC), in advance of elections. In addition, from March 1992 to March 1993 the United Nations High Commission on Refugees assisted in repatriation and resettlement of 365,000 refugees and displaced persons, reaching a peak of 40,000 persons per month in early 1993. Both of these factors are potentially important contributors to the rapid increase in HIV in Cambodia in the early 1990s. See Annex F for a timeline of key events in Cambodia's response to AIDS.

Figure 1. Annual Number of Newly Reported HIV Infections, AIDS Cases, and AIDS Deaths, 1991-2001



Source: NCHADS data.

1.3 Total government health spending in 1993 was about US\$7 million, less than \$1 per capita (World Bank 1994). The public health care system in the early 1990s – to the extent that it was functional – was heavily biased in favor of Phnom Penh and provincial capitals, with very few personnel or functioning facilities in the countryside. Services suffered from lack of equipment, drugs, and trained staff, and low staff salaries that gave rise to widespread informal user fees. Much decision-making on health priorities and resource allocation was decentralized to the provinces, leaving weak capacity at the central Ministry of Health (MOH) and large variation in spending priorities and quality of care across provinces (World Bank 1994). International donors and nongovernmental organizations (NGOs) were directly funding activities and health facilities at the local level, relying heavily on expatriate management. While some of these initiatives were promising, the donors generally bypassed the Government in terms of implementation, resulting in an “uncoordinated patchwork” of activities (World Bank 1994).

1.4 Yet, Cambodia was firmly on the road to reconstruction and relatively greater political stability. The 1991 Paris Peace Accords led to United Nations-sponsored elections in 1993 and the formation of a national government. With the support of WHO and UNICEF, the MOH published the “National Health Development Plan 1994-1996,” which called for strengthening primary health care to meet the needs of communities. At the periphery, the plan proposed creation of “operational districts” (ODs), comprising a network of health centers (HCs) and district referral hospitals (RHs). Health centers serve a catchment area of 8,000-12,000 people with a “minimum package” of basic public health and curative services (MPA), and are supported by district referral hospitals with a “complementary package” of public health and clinical services (CPA). The operational districts were to be supported by

Provincial Health Directorates (PHD), provincial hospitals for referrals, and other provincial health programs. The PHD was to provide the key link between the ODs and the central MOH, which was responsible for coordination, policy-setting, and running the national institutes, disease programs, and hospitals.

1.5 The plan also called for strengthening national disease programs for malaria, TB, and HIV/AIDS – previously run as vertical programs with separate management structures at the central and provincial levels – and integrating them into the general health system at the provincial and district levels.

- The *National Tuberculosis Control Program* (NTP), established in 1980, is managed by the National Anti-Tuberculosis Center (CENAT). Until 1993 the NTP endorsed a hospital-based treatment strategy of extended inpatient treatment. In 1994, this was replaced with hospital-based Directly Observed Therapy, short-course (DOTS), which involved a 2-month in-patient stay followed by 6 months of drug therapy on an ambulatory basis. By late 1995, more than half of public hospitals were equipped and trained to provide DOTS (World Bank 1996).
- The *National Malaria Program* (NMP), also established in 1980, is managed by the National Malaria Center (CNM). At the time that the DCHDP was underpreparation, the NMP strategy was to improve access to accurate diagnosis and prompt treatment of malaria, expand use of insecticide-impregnated bednets, and improve community knowledge of prevention, recognition, and treatment.
- Cambodia's *National AIDS Office* (NAO) was established in 1993 in the MOH. WHO's Global Program on AIDS (GPA) collaborated with the NAO to implement an "outreach" program to sex workers in urban centers,⁵ launched in all provinces in 1995 and HIV epidemiological surveillance in high-risk groups was supported by technical assistance from the U.S. Agency for International Development (USAID). In parallel, USAID and the U.K. Department for International Development (DFID) funded Population Services International (PSI) in launching a social marketing program of "Number One" brand condoms for disease prevention in late 1994. Aside from GPA, there was very little funding available for the government HIV/AIDS program, and when GPA was discontinued in 1995, little more was forthcoming.⁶ The bulk of HIV/AIDS activities were being undertaken by donors and international NGOs, which were keeping the NAO informed. There was little capacity or finance for a government-led program.

5. The objective of the program, designed and initially financed by WHO, was to reduce HIV transmission by raising condom use among primarily brothel-based commercial sex workers (CSW) through education about HIV/AIDS and STDs, training on the importance of condom use and negotiating skills with clients. The program covered Phnom Penh and the provinces and used provincial outreach workers who recruited and trained 2-3 peer educators per province (NCHADS and Oppenheimer 1998).

6. The Staff Appraisal Report (SAR) reports that commitments from the then newly formed Joint United Nations Program on HIV/AIDS (UNAIDS) for 1996 and 1997 amounted to only \$150,000 annually.

2. Project Design and Objectives

2.1 The Cambodia Disease Control and Health Development Project (\$35.6 million) was approved by the World Bank in December 1996, funded by a SDR 20.4 million (US\$30.4 million equivalent) credit and a planned government contribution of US\$5.2 million. It was the first free-standing health project in Cambodia financed by the World Bank and became effective in June 1997.

2.2 The objective of the DCHDP was to support the Government of Cambodia in pursuit of two of its principal health sector objectives: (i) to reduce death and illness from preventable diseases, especially malaria, tuberculosis (TB), and HIV/AIDS; and (ii) to rehabilitate the health system infrastructure so as to deliver basic health services and disease control programs more effectively down to the community level. The project had two main components:

2.3 **Component 1:** Support for three national communicable disease programs to control malaria, TB, and HIV/AIDS (US\$13.0 million equivalent base cost), including provision of drugs and laboratory supplies, impregnated bednets, training, logistical support, and technical assistance, in order to expand and increase the impact of these programs.

2.4 The AIDS subcomponent (\$6.5 million) supported eight main activities: *institutional development* of the National AIDS Office (which was to be funded and elevated to the level of a department as a condition of the credit); *information, education and communication* (IEC) to the general population on HIV transmission and prevention; civil works, training, and reagents for the *blood transfusion service*; *outreach to sex workers* using peer educators; *condom promotion* in the outreach program and in sexually transmitted disease (STD) clinics; introduction of *syndromic management of STD*⁷ and construction of STD referral clinics; *monitoring, research, and evaluation* (including annual HIV surveillance and program evaluation); and a *small grants program* for NGOs. The broad goal was to reduce transmission of HIV; there were no specific outcome targets.

2.5 The TB subcomponent (\$3 million) had the dual objectives of: (a) improving the quality and accessibility of TB services in health centers and referral hospitals, including case diagnosis and management; and (b) strengthening the institutional capacity of CENAT through improved management, training, and research. The three main activities were: *disease management*, involving finance of diagnostic equipment, reagents, and supplies; *program management*, with staff training, technical assistance, upgrading of offices, office equipment, and vehicles for supervision at the provincial level; and *evaluation and research*, including a national TB prevalence survey, annual surveys of drug resistance and HIV infection among TB patients, and tuberculin skin test surveys every five years. Three key project targets were:

7. An approach by which clinicians diagnose and treat STDs based on standardized protocols based on presenting symptoms. The project collaborated with WHO, which was promoting this approach.

- A cure rate for pulmonary smear-positive cases⁸ of more than 85 percent
- An increase in the case detection rate to 70 percent by 2000⁹
- A relapse rate of less than 5 percent

2.6 The objective of the *malaria subcomponent* (\$3.5 million) was to support the CNM to implement the national malaria program, the objective of which is to reduce malaria transmission and case morbidity and mortality through treatment and community-based prevention. Four strategies were pursued: improve *access to diagnosis and treatment*; expand community use of *impregnated mosquito nets in high- and medium-risk areas*; pilot testing of *social marketing of impregnated mosquito nets*; and *increasing the capacity of the CNM* to manage, supervise, and monitor the program, including evaluation and research. The only specific project target was 80 percent coverage of bednets in 347 highly endemic communes. Surveys of bednet coverage of high-risk groups and areas of the country were to be conducted at the first and final years.

2.7 **Component 2: Strengthening of the basic health infrastructure** (US\$18.1 million equivalent base cost) to ensure the effectiveness of the disease control programs by restoring acceptable standards for facilities, equipment, and drug supply of the health system, particularly at the provincial level and below. The five activities financed were: (i) *construction and rehabilitation* of health centers and referral hospitals; (ii) *medical equipment, furniture, and transportation*; (iii) *essential drugs* (including TB, STD, and malaria drugs); (iv) *in-service training*; and (v) *strengthening of the MOH*, including a nationwide baseline health survey, technical assistance, a provincial supervision fund, and Health Management Agreements (HMAs) between the MOH and the provinces as the basis for decentralized implementation.

2.8 This component included \$10.8 million for construction or rehabilitation of 26 referral hospitals and 230 health centers. In light of the shortage of MOH staff, equipment, supplies, and management, the project selected 10 priority provinces¹⁰ for implementation in two phases over five years. The provinces were selected based on disease patterns, management capacity, accessibility, population size, and the presence or absence of other donor activity. The Asian Development Bank's (ADB) Basic Health Services (BHS) Project intended to strengthen health infrastructure in five additional provinces. Together, the Bank and ADB projects covered basic health services for provinces that accounted for 80 percent of Cambodia's population.

8. Most TB control programs, including Cambodia's, focus on detection and treatment of pulmonary smear-positive TB cases because these are the most infectious to others and where the benefits of treatment occur in terms of preventing the spread of TB in the population. Other cases include pulmonary smear-negative cases and extra-pulmonary TB. The program does not discriminate among smear-positive and smear-negative cases for treatment.

9. This goal was postponed in the 2001-2005 National TB Strategy to the year 2005.

10. The selected provinces included: Battambang, Kampot/Kep, Kandal, Kampong Speu, Kampong Thom, Kratie, Phnom Penh, Pursat, Rattanakiri, Siem Reap.

2.9 There were several key policy-related agreements made in the course of negotiations: (a) the NAO was to be elevated to the level of a department in the MOH, similar in status to the TB and malaria programs and with an administrative and financial officer; (b) an evaluation of the HIV/AIDS outreach program was to be prepared following two years of implementation; (c) an HIV/AIDS Project Grant Committee was to be formed; (d) provinces had to enter into an HMA with the MOH as a condition of approval of expenditures on civil works and medical equipment; (e) technical performance audits of the implementation of the HMAs were to be randomly conducted annually; (f) a social marketing strategy for bednet distribution and treatment was to be developed and reviewed by IDA; (g) health centers and referral hospitals for upgrading were to be identified; and (h) a national policy on user fees for health services, including policies on retention of fees, setting and adjusting the fees, and allowable expenditures of fee revenues, was to be developed. An agreement was also reached that a final evaluation survey would be conducted. Finally, the Government (with donor funding) agreed to finance the cost of food supplementation for TB patient hospitalization and, resources permitting, for ambulatory chemotherapy.

2.10 Aside from the parallel ADB Basic Health Services project, several other donors had a high profile in support of the national disease control programs: the European Union (malaria and STD); JICA (TB); USAID (HIV/AIDS); and WHO (malaria and TB).¹¹ Many of these donors had their own technical consultants to the programs. What largely differentiated the Bank's support from that of other donors was the Bank's direct financing of government implementation, in addition to complementary inputs like drugs, bednets, and technical assistance.

3. Implementation

3.1 The project became effective on June 23, 1997. Implementation was managed by a central Project Coordination Unit (PCU) in the MOH, which also served the ADB Basic Health Services (BHS) project, and by 11 Provincial Project Units (PPU). Implementation was considerably slower than envisioned due to a number of factors:

- Weak procurement and financial management skills and lack of familiarity with World Bank procedures in the PCU, the Ministry of Economy and Finance (MEF), and the provinces. To expedite delivery of goods and with an eye toward possible technical assistance in management and procurement, UNICEF was used as the procurement agent for \$2 million of essential drugs and \$1.3 million in laboratory equipment. However, the UNICEF procurement proved extraordinarily

11. The International Committee of the Red Cross, French Cooperation, and Pasteur Instituted assisted in the design of the blood bank sub-component.

slow – a one-year delay for delivery of essential drugs and over two years' delay for price quotations for the equipment.¹²

- Micro-management by the MEF of project expenses and delayed counterpart funding. The MEF had a much lower threshold for prior review of expenditures than did the Bank, leading to scrutiny of many small expenditures.¹³
- Inability to channel funds to the provinces. Within the first year, 90-day advance accounts were set up for the three national disease programs and for each of the project provinces. However, because there were no banks in the provinces, these accounts were all in Phnom Penh. Officials had to travel with their cash budgets back and forth from the capital.
- Lack of MOH experience to implement the civil works and NGO small grants programs. Both involved many small transactions, which took up a huge amount of staff time. During the first year of operation, only 3 grants were made to NGOs following the procedures in the Staff Appraisal Report (SAR).
- A coup d'état in July 1997 and, in 1998, elections and an epidemic of dengue fever that preoccupied the CNM.

3.2 With this early experience, the Bank and Government decided to simplify project management by sub-contracting two key sub-components. In May 1998 implementation of civil works was contracted to the Social Fund of the Kingdom of Cambodia (SFKC) in a Project Cooperation Agreement between MEF, MOH, and SFKC.¹⁴ The SFKC is an autonomous state entity that had substantial national experience in constructing civil works (including 78 health centers and one referral hospital) as part of the first Social Fund Project (Credit 2739-KH), which was coming to a close. The agreement allocated \$6,427,000 for the DCHDP civil works and an additional \$499,877 for consultant services, salaries, fees, and operating costs. A special account was created and project funds could be withdrawn directly by SFKC from the special account, without going through MEF.¹⁵

3.3 The second sub-component to be contracted was the small grants for HIV/AIDS prevention. The Khmer HIV/AIDS Alliance (Khana), an affiliate of the International HIV/AIDS Alliance, was awarded two contracts in August 1999 – one for the NGO grants (\$550,000) and one for capacity building and supervision in support of the NGO grant component (\$97,000).

12. These delays were attributed by informants to problems at the UNICEF/Copenhagen headquarters during a period of reorganization, and a lack of communication and responsiveness to the UNICEF/Phnom Penh office. The PCU eventually executed 70 percent of the equipment procurement.

13. These interventions by MEF were contrary to the terms of the Memorandum of Understanding (MOU) established between MEF and MOH in early 1997 that would reduce red tape and allow MOH to take the lead in decision-making with respect to implementation.

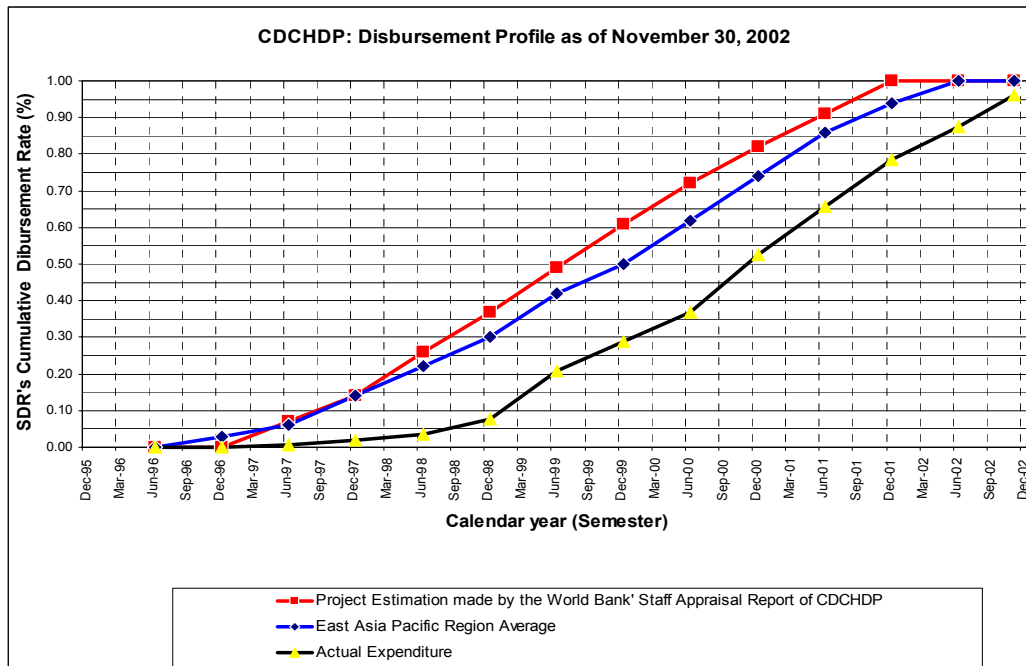
14. According to informants, several other NGOs in Cambodia also bid for the civil works contract. The use of SFKC for civil works had been floated as a possibility during project preparation.

15. The credit agreement was revised in June 1998. First disbursements to SFKC were in December 1998.

3.4 The PCU was unsuccessful at contracting two major tasks as planned – the social marketing of insecticide-impregnated hammock nets and the information, education, and communication (IEC) activities for HIV/AIDS. A cooperative agreement with the PCU allowed WHO and CNM to integrate the social marketing activity into WHO’s ongoing Malaria Control Project (CAM/CTD/010), which had been active since 1992. A total of \$335,800 was made available to WHO and CNM for the malaria IEC and social marketing tasks, while the PCU remained in control of international procurement of commodities and consultants. The government AIDS program directly implemented IEC activities, but on a reduced scale.

3.5 These measures helped to speed up disbursements, particularly of the civil works component, by early 1999 (see Figure 2).¹⁶ HMAs had also been concluded in all 11 project provinces. However, the problems of lack of experience with procurement and financial management, slow counterpart funding, and inability to

Figure 2. DCHDP Disbursement Profile, 1996-2002



Source: PCU (2002). Note: The project advance arrived in August 1996 and became accessible to the MOH in February 1997.

channel resources to the provinces remained. A June 1999 supervision mission recommended on a pilot basis that funds for provincial and district-based activities of the national disease programs be channeled directly from the PCU to the provincial health departments in the 11 project provinces (rather than through the national programs) to accelerate decentralization of the malaria, TB, and AIDS activities. The mission was also successful in getting the MEF to agree to cut the red tape and allow the MOH to take the lead in project implementation as foreseen in the MOU.

16. The SFKC, in contrast, was not subject to prior review by the MEF – only by the Bank—expediting disbursements.

3.6 By the mid-term review (MTR) in December 1999, only 29 percent of the credit had been disbursed. Yet there were signs that implementation was improving. The SFKC had launched construction or renovation of 54 health centers, one referral hospital, five ODS, and the national AIDS office. Concerns about the quality of the work and the lack of supervision by the PCU led to creation of a unit within the SFKC for the health project and hiring of one new engineer per province for supervision. User fees were being collected at health facilities with exemptions defined by village health committees; half of revenues were allocated to recurrent costs, 49 percent as salary supplements (boosting the morale of poorly paid health workers), and 1 percent to the MEF. All vehicle procurement had been completed. A National Health Survey (NHS) of women of reproductive age had been conducted in 1998 by the ADB and GTZ to serve as a baseline for both the DCHDP and the BHS projects. The AIDS component had finally taken hold with the reorganization and elevation of the National AIDS Program to the National Center for HIV/AIDS, Dermatology and STD (NCHADS) in early 1998, a new director, the arrival of project-sponsored technical assistance, and launching of an 18-month work program.

3.7 A few adjustments were made at the time of the MTR. The in-service training sub-component, originally to develop curricula for and train surgeons, obstetricians, and anesthetists in emergency obstetric and surgical care in each of the full referral hospitals upgraded under the project, was scaled back to train surgeons and surgical nurses only. The sub-component on the syndromic management of STD was scaled back because other donors (UNFPA, WHO, and a major EC project) had stepped in to finance these activities. The project retained \$400,000 for an STD prevalence survey, supervision and training, and reallocated remaining funds to training of health professionals in AIDS care, for which the need had become more apparent since appraisal, and to additional research and evaluation.

3.8 Among the remaining problems in implementation were lack of electricity, running water, transport, or equipment in some constructed health facilities (due to the slow UNICEF procurement contract) and the inability to get money to the provinces for implementation of decentralized activities. It wasn't until late 2000 that the project was able to set up accounts physically in the provinces. This was made possible by ACLEDA, a microfinance NGO supported by the International Finance Corporation, which got a full retail banking license in that year with branches in provinces. Once the ACLEDA accounts were opened for the DCHDP, other World Bank projects followed suit. The activities of the three national disease programs were extended to all 24 provinces in October 2000, requiring the establishment of 13 additional PPUs (SBK 2002).

3.9 The project was briefly classified as "at risk" of not completing its development objectives, from August until December 2000, at which time nearly half of the credit was disbursed and both the health strengthening component and the three national disease subcomponents were rated as satisfactory, with the exception of equipment for HC, which was not expected to arrive before the close of the project.

3.10 Based on the momentum gained in disbursements, the project closing was extended by 9 months to December 2002: 98.7 percent¹⁷ of the credit had been disbursed, and almost all of the planned activities had been implemented. Considering the complexity of the project and the very low implementation capacity at the outset, this is a remarkable achievement. The Government contributed only \$1.37 million (26 percent) of its planned contribution of \$5.2 million; both the Implementation Completion Report (ICR) and supervision reports claim that this did not adversely affect the project's performance.¹⁸ The final report prepared by the borrower attributes this result to the accounting program used by the PCU, which considers only counterpart funds managed by the PCU and the SFKC and excludes government spending on all of the units (salaries and running costs) (PCU 2002).

4. Outputs, Outcomes, and Impacts

BASIC HEALTH STRENGTHENING

4.1 The project greatly expanded the coverage of the health system in the 11 project provinces. Health centers were a completely new type of health facility. According to the SAR, the target number of HC for these 11 provinces under the health coverage plan was 455, of which 32 were already in existence either through the Government or other donors. The project's target was to construct or renovate 230 HC, or more than half of the 423 needed. It succeeded in constructing or renovating 198, or 86 percent of targets (Table 1). In addition, the project aimed to renovate 26 of the 28 total referral hospitals required for 10 provinces, which was 85 percent accomplished.¹⁹ Three of the five planned STD clinics and all of the provincial blood banks were built or renovated, 160 percent of the targeted OD, and 11 district pharmacies were built/renovated, not originally a project target. Based on the catchment area for a HC, the project effectively increased access to basic health facilities to 2.8 million people. The BHS Project, which financed construction or renovation of 197 HC and 13 RH in five provinces, provided access to another 2.4 million people (Sheladia 2001). The civil works sub-component was fully disbursed; reallocation of expenditure across types of facilities was due to negotiations with provinces in the HMA, changes in the unit costs of construction, and new information about the feasibility of renovations.

17. This is in terms of Special Drawing Rights (SDR). Because of changes in the SDR-U.S. dollar exchange rate, the credit funds available in dollars had declined from \$30.4 million to \$27.1 million by October 2002, two months before closing, of which \$25.4 million had been spent. Of this amount, \$9.45 million (37 percent) was spent by SFKC and \$15.94 million (63 percent) by MOH.

18. This share is increased to 37 percent in terms of Cambodian currency (riel), if the nearly 50 percent depreciation of the riel against the U.S. dollar over the life of the project is taken into account. That part of the counterpart funds identified for maintenance of the completed health facilities apparently was forthcoming.

19. According to the SAR, because the five RHs required for Phnom Penh were in an otherwise relatively better served urban area, none were targeted for renovation by the project. Many of the RHs could not be renovated and new facilities had to be constructed.

4.2 Decentralization of planning, budgeting, and financing of health care through the piloting of HMA in the 11 provinces was one of the major achievements of the project. The first HMA were negotiated between the PHD and the PCU for all 11 project provinces in 1998, lasting for 12 months (July 1–June 30). The 2001 HMA was set for a period of 15 months (Jan 2001–March 2002).

Table 1. Civil Works Targets and Results

<i>Type of Facility</i>	<i>Appraisal target</i>		<i>Achieved</i>		<i>Percent of appraisal</i>
	<i>New</i>	<i>Renovated</i>	<i>New</i>	<i>Renovated</i>	
Health center	173	57 (26) ^a	173 ^b	25 (6)	86 (23)
Referral hospital	0	26 ^c	14	8	85
Operational Districts	10	0	15	1	160
District pharmacy	0	0	9	2	--
National program	0	3	2	2	133
STD clinic	0	5	0	3	60
Provincial blood bank	8	0	8	0	100
Total	191	91	218	42	

Source: World Bank (1996) and PCU (2002).

Notes: a. Figure in parentheses is number with TB wards. b. Number of HC based on comparison of Annexes 7 and 16 of PCU (2002), and eliminating multiple contracts on the same facility. Three HC with both new buildings and renovations are counted under new. It is not known whether the 10 HC and 2 RH completed by the MOH before the involvement of SFKC are included. c. 8 basic RH and 18 full RH.

4.3 HMA are viewed by both the MOH and Provincial Health Directorates as beneficial, as they set out the responsibilities of both parties and serve as the basis of a work program. These benefits are largely responsible for the extension of the HMA concept to all 24 provinces in the follow-on Health Sector Support Project (HSSP). The second audit of the HMA, in 2001, identified the main problems they continue to face: (a) lack of incentives for non-compliance by either party or rewards for good performance; (b) the work plans of the provinces depend on procurement managed by the MOH, the timing of which the provinces cannot control; and (c) slow approval of work programs and budgets, which delay implementation. Nevertheless, the audit found, in general, “an improvement in the [provincial] planning of activities and budgets from the previous year...” (SBK 2002, p. 6) The one-year time frame for the HMA was found to be too short; subsequent HMA were set for 15 months to overcome some of these problems, and the respondents to the audit suggested a somewhat longer time frame to allow procurement and implementation of the planned activities.

4.4 The extent to which the extension of the health infrastructure and decentralization of the health system in fact improved access to services depends on the extent to which the HC were fully staffed with trained workers, equipped, and stocked with drugs, and the catchment population was not dissuaded by user fees. The project’s supervision files indicate that while the drug supplies were forthcoming and training occurred, many of the health centers were lacking in medical equipment up to the close of the project. (This was not the case for the referral hospitals.) Based on results of interviews with health staff and

clients in four randomly-selected project provinces,²⁰ the second HMA audit in May 2002 found that drug supply was generally reliable and technical training of staff had occurred, but that supervision was variable, some facilities were still under-staffed,²¹ and that in some cases drugs arrived close to their expiration date²² (SBK 2002). The Final Project Evaluation survey of 61 HC in 21 provinces found that almost all HC undertake most MPA activities, and about two-thirds provide TB control and/or malaria treatment (Coffey 2002).²³ All HC in the 21-province sample reported receiving regular supplies of drugs but two-thirds also said that the HC runs out (the time frame was not provided, however) (Coffey 2002, p 12-20).

4.5 With the extension of the health system to under-served areas, the contact rate of the population with public health services and key outcomes like the immunization coverage rate should have risen dramatically. According to the MOH Health Information System, based on service statistics, the percent of deliveries by trained staff rose from 29.1 percent to 40.9 percent between 1997 and 2001 and the number of outpatient consultations at HC rose from 3.4 million to 4.6 million (PCU 2002, Annex 6). However, the number of health system contacts per inhabitant per year rose only modestly, from 0.32 to 0.37. A National Health Survey (1998), which used a stratified random sample of 21 of the 24 provinces, was conducted as a baseline to measure both health outcomes and health care utilization by households. However, the project's 2002 Final Evaluation Survey used a fundamentally different sampling frame – one based on fully functioning health centers (Coffey 2002) – biasing results in favor of better health outcomes. It also collected health care utilization on a different group of household members and with a different reference period for reporting illness. Thus, trends in health care use by households over the project period (1997-2002) cannot be tracked. The 2000 Demographic and Health Survey (DHS) collected utilization data comparable to the 1998 NHS, but implementation of the civil works did not accelerate until 2000-2002, after the DHS fieldwork.²⁴

4.6 Nevertheless, there are some indicators of client satisfaction at the end of the project. The second HMA audit conducted a survey of more than 400 HC clients in four provinces and found that more than 90 percent received some drugs or medications from their visit, the health workers were thought to be generally courteous, and the

20. Kandal, Kampong Thom, Pursat, Kratie.

21. One Provincial Health Director noted that while the norm for staffing an HC was 6-8, the average in his province was between 3-4. The HC visited by OED in two provinces had 4-10 staff. Provincial health authorities reported that staff were giving priority to outreach activities in the community (immunizations, deliveries, and anti-malaria activities), which sometimes left a shortage of staff for treatment in the facility.

22. Unfortunately, the audit report does not quantify these shortcomings, so it is difficult to know how pervasive they were. In field visits to Kampong Speu provinces, OED found that in two of the three health centers for which the pharmacy was open, there were stock outages of adult doses of anti-malarial drugs and the TB drugs had expired one month previously.

23. TB and malaria treatment were defined as available if “services were provided routinely most days or the same day of each week;” this may understate availability of treatment. At the start of the project, DOTS was not offered in HC.

24. The non-comparability of the 1998 and 2002 survey results cast doubts on other dramatic improvements in outcomes asserted in the PCU's final report on the project (for example, dramatic reductions in infant and child mortality). The comparability of results of the 1998 NHS, the 2000 DHS, and the 2002 Final Evaluation Survey are discussed in greater detail in Annex C.

major impediment to use of health care remained the *long distances and poor road infrastructure, staff shortages, and drug shortages*.²⁵ User fees were not cited by the clients as an impediment; those who did not receive drugs attributed it to drugs being out of stock, and not high costs. The second HMA audit and OED field interviews found that fee revenues were used in most cases to improve the quality or maintenance of the facilities and for topping off salaries of the health workers. The final project evaluation patient exit poll found similar findings on the courtesy of health staff and that 96 percent of HC clients received drugs. In addition, 76 percent of HC clients and 91 percent of hospital clients got some exemption from paying the fee.

HIV/AIDS

4.7 The main achievements of the project with respect to HIV/AIDS were to invest in the institutional development of the Government response through NCHADS and decentralized Cambodian implementation of the national strategic plan for the health sector. HIV/AIDS activities have been and continue to be funded in parallel by bilateral donor agencies (such as DFID, EU, French Cooperation, USAID) and international NGOs (such as FHI/Impact, MSF, Care, Save the Children, World Vision). However, the DCHDP enabled the Government to direct and coordinate the national HIV/AIDS strategy, particularly those activities within the purview of the MOH. The key outcomes to which the DCHDP contributed include:

- *Creating the institutional foundation for a strong government response based in the MOH.* The project was the catalyst for creating a completely new national institution, on a par with the other national communicable disease programs, capable of leading an effective fight against HIV/AIDS. As a covenant in the credit agreement, the NAO was elevated to the level of a department within the MOH when it merged in 1997 with the National Center for Dermatology and Venereology to become NCHADS. At the central level, the project created a management system based on annual and quarterly work planning and detailed budgets for all activities, with monthly and annual reporting. NCHADS took on a role of strategy development and management, with provincial implementation through operational plans and indicators in the HMA. During the project it prepared two strategic plans for HIV/AIDS prevention and care (1998-2000 and 2001-2005 [MOH 2000]) and strategic implementation guidelines for the outreach program, 100% condom use, STI treatment, HBC, IEC, testing and counseling, universal precautions, and surveillance (NCHADS 2001a, 2001b, 2001c). At the provincial level, the project financed decentralized training, implementation, and supervision, using new procedures that channeled funds directly from the PCU/MOH to provinces, bypassing the MEF and the national programs. Respondents reported that the project instilled new confidence of Cambodian staff to manage the program, attracted many bright people, and fostered much learning.
- *Raising political commitment.* The project financed a study tour in March 1999 for senior officials from the PCU, NCHADS, MEF, NAA, and provincial health

25. While the audit commendably interviewed a large sample of clients, the views of those who did not seek health care would also be important in assessing the constraints to increased use of health facilities.

directors and governors of Sihanoukville and Siem Reap to India, Kenya, South Africa, and Thailand. The tour raised commitment to attacking HIV/AIDS, improved the working relationships between agencies, cemented the commitment among participants to a decentralized national program, and instilled an appreciation for the importance of monitoring and evaluation (M&E) data to improve performance. The tour also reinforced among participants the need to strengthen the health system to care for the rising number of AIDS patients.

- *Implementing HIV prevention in commercial sex.* The project financed the evaluation, re-design and provincial implementation of the outreach program, preparation, launching, and gaps in Cambodian implementation of the pilot 100% condom program in Sihanoukville,²⁶ and renovation of three STD clinics where sex workers can obtain services. The redesigned outreach program was the launching pad for national expansion of the 100% condom use program, also financed by the project (see Box 1).
- *Strengthening the capacity of indigenous NGOs in AIDS prevention and care.* The NGO small grant sub-contract to Khana built capacity among indigenous NGOs to design and implement technically sound interventions, financing 68 grants totaling \$541,328 to 39 NGOs in 15 provinces from 1999-2002 (see Box 2).²⁷
- *Monitoring and evaluation.* A covenant in the credit, the outreach program to sex workers was externally evaluated in 1998 and re-designed in 1999. Beginning in 1999, the project funded the Government's annual HIV sentinel surveillance (among direct and indirect CSW, police, TB patients, and women attending antenatal clinics) and behavioral surveillance (CSW, police, military, mototaxi drivers) (NCHADS undated c); it also funded the 2001 STD prevalence survey.
- *Enhanced capacity for AIDS treatment and care.* Funds were reallocated mid-term to train health staff in adult AIDS care guidelines (96 physicians – roughly 5 percent of all government physicians), pediatric care guidelines (40 physicians), and laboratory techniques for voluntary testing (29 lab technicians). Nearly a third of the NGO small grants issued through Khana supported piloting and expansion of home-based care (HBC), primarily in Phnom Penh and Battambang.
- *Building infrastructure for the national transfusion system.* The project financed construction of 8 regional blood banks and provision of HIV testing kits.

4.8 There were also some shortcomings. While there was substantial decentralization of management to provinces, the AIDS program is not as well integrated with basic health services in the provinces as the malaria and TB programs. Widespread access of the general population to integrated STD treatment was not yet a reality as of the end of the project. IEC activities were not as extensive as planned, though condom publicity by PSI may have compensated to some extent. Except for

26. Other contributors were the EU and WHO.

27. Khana received an additional \$412,000 in World Bank-administered trust funds from May 2001–May 2003.

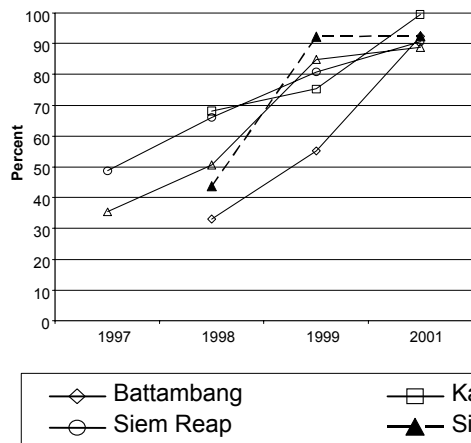
Box 1. Cambodia's 100% Condom Program

Building on Thailand's success in curbing the HIV epidemic through 100% condom use in brothel-based sex (Rojanapithayakorn and Hanenberg 1996), in October 1998 Cambodia launched a home-grown 100% condom use pilot project in Sihanoukville, the country's only major port, with 60 brothels and 500 brothel-based and 200 indirect sex workers in massage parlors, restaurants, and karaoke bars. The pilot project mobilized political support from provincial authorities, the police, and brothel owners; created CSW-friendly STD clinic that offers monthly medical checkups; and made socially marketed condoms available in brothels.^a A condom use working group (CUWG) and outreach team worked with local authorities and brothel owners to implement the program; a Condom Use Monitoring and Evaluation Committee (CUMEC) was chaired by the vice-governor.

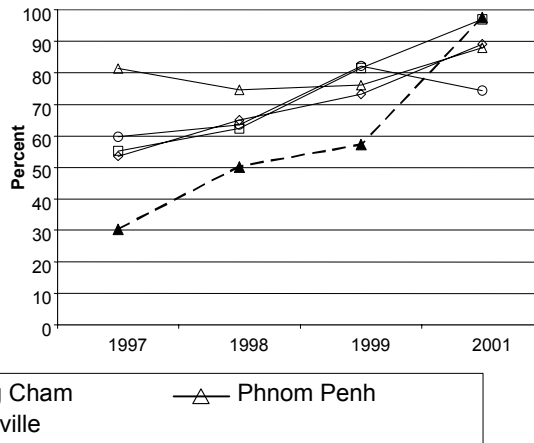
From 1998-99, condom use in Sihanoukville doubled, from 45 to 90 percent among CSW and by 2000 nearly doubled among male clients (Figures A and B). Syphilis rates among SW dropped from 9 percent to 1.8 percent and trichomonas from 5.6 percent to 2 percent (Crabbé et al. 2001). The 100% condom use policy was endorsed by the Prime Minister in 1999 and all provincial governors were asked to support it. The program was extended to seven provinces in 2000, 15 in 2001 and achieved national coverage in 2002.^b Commercial sex remains illegal in Cambodia, however.

Cambodia's 100% condom use program has never been independently evaluated. While informants believed the pilot to be highly successful, all agreed that the program has been implemented too recently to have had an impact on behavior in the late 1990s. During the pilot phase, condom use rose dramatically in Sihanoukville but also in other provinces where the program had not yet been launched, though at a less rapid rate. The general population avoids the CSW-STD clinics. The pilot project found that the syndromic approach to STD detection and management was not suitable for CSW. The CSW-dedicated facilities, the need for a higher level of diagnostic skills and equipment, and the financial incentives for implementation by health workers, the CUWG and CUMEC presumably raised the cost of the program.^c The annual cost of the two committees' activities and the outreach program for a single urban area is estimated at roughly \$15,000 annually, plus \$9,000 for a one-time launch, but excluding the cost of STD clinics (World Bank 2002). These costs – and less-costly alternatives to achieve the same outcomes – need to be evaluated against the benefits in terms of reducing transmission among those most at risk and to the rest of the population. The extent to which lack of access to free condoms among high risk groups affects outcomes also needs to be studied.

A. Percent of Brothel-Based CSW Who Always Use Condoms, by City



B. Percent of High-Risk Men Always Using Condoms, by City



Source: NCHADS sentinel surveillance data.

a. The sex worker clinic was sponsored by the EU STI project, with technical assistance from the Institute of Tropical Medicine, Antwerp. DCHDP funded Cambodian implementation, of the pilot when funding gaps occurred and most costs of expanded implementation to other provinces.

b. The 100% Condom Use program was launched in 13 provinces in 2002 (Banteay Meanchey, Battambang, Kampong Cham, Kampong Chhnang, Kampong Speu, Kampot, Prey Veng, Svay Reng, Koh Kong, Pailin, Pursat, Siem Reap, and Takeo). However, the program had yet to be launched in Kep, Oddar Meanchey, and Mondulkiri because of the scarcity of sex workers (NCHADS 2002).

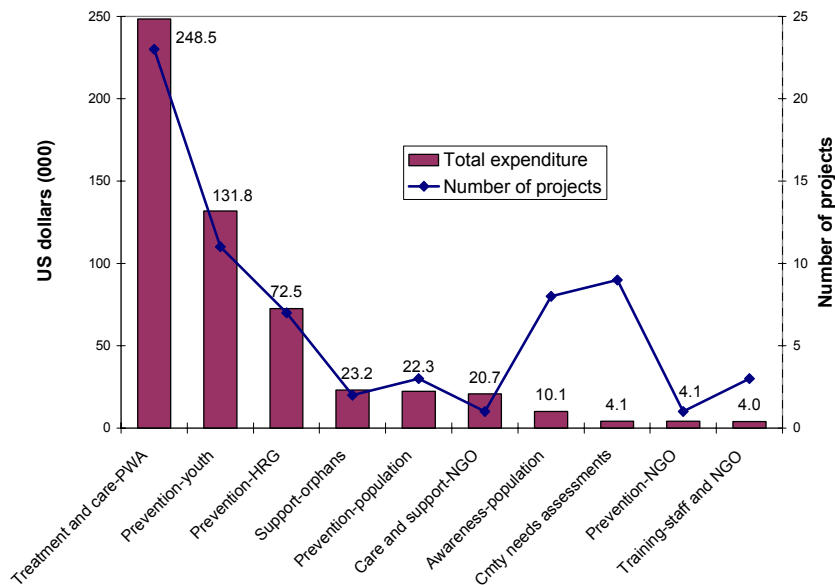
c. The pilot clinic was equipped to diagnose trichomoniasis, syphilis, candida or bacterial infections, but not chlamydia or gonorrhea. Treatment for "suspected" STD was prescribed based on the number of white blood cells. All of the other provinces with the exception of Sihanoukville use syndromic management of STD, despite its limited ability to detect illness among sex workers (NCHADS 2002, Annex 3).

Box 2. Building the Capacity of Indigenous NGOs to Fight AIDS

International NGOs and local affiliates had long been active in providing health care in Cambodia, but there were very few indigenous NGOs with capacity to do so. The Khmer HIV/AIDS NGO Alliance (Khana) was established in 1996 as a project of the UK-based International HIV/AIDS Alliance and registered as a Cambodian NGO in 1999. Khana receives both technical and financial support from the Alliance. Khana's objective is to strengthen the organizational capacity of local NGOs to design and execute HIV/AIDS activities in Cambodia and to secure funding for them.

The MOH/DCHDP contract was the first for Khana that was not routed through the International Alliance. The largest share of the 68 grants (33 percent) and spending (46 percent) were for home-based care (HBC) or care and support for households with PWA (see Figure). Much of this was to support NGOs in the post-pilot expansion of HBC in Phnom Penh and to the Khmer Rural Development Agency in the piloting of HBC in rural Battambang province in 1999 (Wilkinson et al. 2000). Another third of projects and 30 percent of spending were for prevention and/or awareness among youth or the general population. Only 7 grants (13 percent of spending) supported prevention among high-risk groups (sex workers, the military, factory workers), and two (4 percent of spending) were exclusively for support of orphans and their families. The provinces receiving the most resources were Phnom Penh (48 percent of the total) and Battambang (12 percent), followed by Kratie (6 percent), Kandal, B. Meanchey, K. Chhnang, and Svay Rieng (5 percent each). Khana's NGO partners expanded from 15 in 1999 to more than 40 in 2002.

Khana grants supported by DCHDP, 1999-2002, by type of intervention



Each vetted NGO had to conduct a community needs assessment prior to project design, followed by a workshop to refine the design. The grants supported by the DCHDP lasted one year, with field supervisory visits and disbursements once per quarter. Unfortunately, the DCHDP contract had no requirement for evaluation of the NGO grants or of Khana, reducing the ability to learn from experience and improve program effectiveness. A USAID-funded evaluation of the HBC pilot and follow-on programs in June 2000 found important impacts on the health and well-being of PWA and their families and reduced community stigma, compared to villages with no program (Wilkinson et al. 2000). The estimated cost of medical services per visit (\$3.71) was less than outpatient hospital services (\$15 per patient episode), but the total cost per HBC visit including other support services amounted to \$9.28 in Phnom Penh and \$14.60 in rural Battambang.

HBC, the NGOs funded by Khana were often not linked to government provincial or district activities. There was no evaluation of the NGO activities financed by the project through Khana.

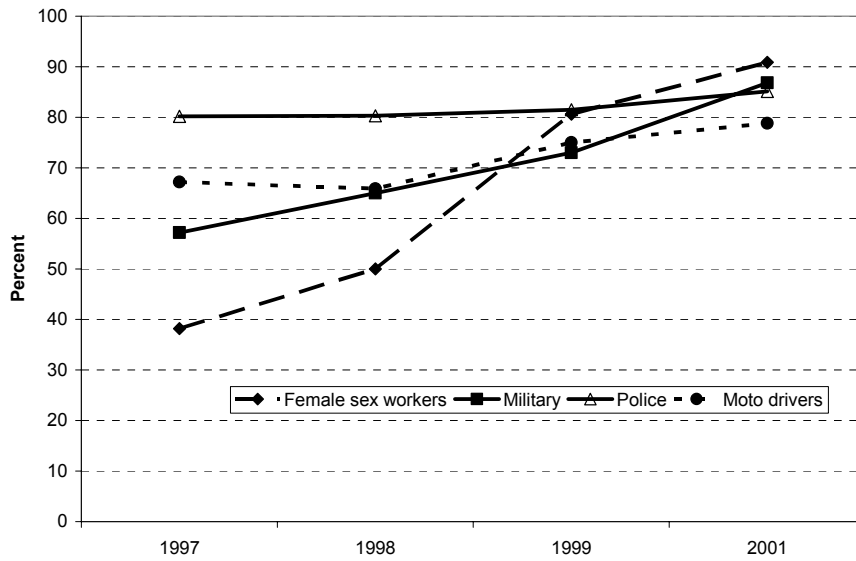
4.9 HIV sentinel surveillance from 1997-2002 shows dramatic declines in HIV prevalence among direct and indirect sex workers and blood donors, a decline then leveling off among police, an increase and leveling off among pregnant women, and continued sharp increases among TB patients (NCHADS data, see Annex D). Weighting these results, NCHADS estimates that HIV prevalence among adults 15-49 nationally has declined from 3.3 percent in 1997 to 2.6 percent in 2002 (NCHADS undated). Since there is no cure for HIV, changes in prevalence are determined by the balance of the number of new infections (HIV incidence, which raises prevalence), and the AIDS mortality rate (lowering it). All informants interviewed by the OED mission acknowledged that higher mortality has contributed to the decline in HIV prevalence. Most were convinced that behavior change has also contributed to somewhat lower incidence. However, there are no studies of HIV incidence in Cambodia to confirm the extent to which the rate of new infections has declined, nor are there sufficiently reliable mortality data to deduce incidence from prevalence and mortality.

4.10 Nevertheless, reductions of risk behavior among high-risk groups, increased condom sales, and reductions in STD prevalence are strong evidence for the plausibility of reduced HIV incidence. The most dramatic declines in HIV prevalence are among brothel-based sex workers and police, both groups at high risk of contracting and spreading HIV and the focus of NCHADS strategies to curb transmission. These declines have happened in parallel with an increase in condom use, particularly by sex workers themselves (Figure 3), and a decline in the percent of men who use sex workers (Figure 4). Annual sales of the socially marketed Number One condoms have jumped from 5 million in 1995 to 19 million in 2002 (Figure 5). Corroborating the actual increase in condom use, STD surveys conducted in 1996 and 2001 show a decline in gonorrhea (from 23.2 to 14.2 percent), chlamydia (from 22.5 percent to 12.1 percent), and syphilis (from 13.8 percent to 2.8 percent) among sex workers (Leng et al. 2002, Ryan and Gorbach 1997).²⁸ Moreover, the 2001 survey found very low rates of ulcerative STD in all three groups surveyed (ANC women, police, and sex workers). No cases of primary syphilis were found among any of the groups, and no cases of gonorrhea were found among ANC women or police (Leng et al. 2002).

4.11 Knowledge of HIV transmission and prevention has also improved among women of reproductive age. While there are issues of comparability of the sampling frames, the 2000 Cambodia DHS and the Final Project Evaluation Survey in 2002 both collected data on knowledge of HIV/AIDS, and the latter may be less biased with respect to HIV/AIDS knowledge than other indicators, since AIDS information

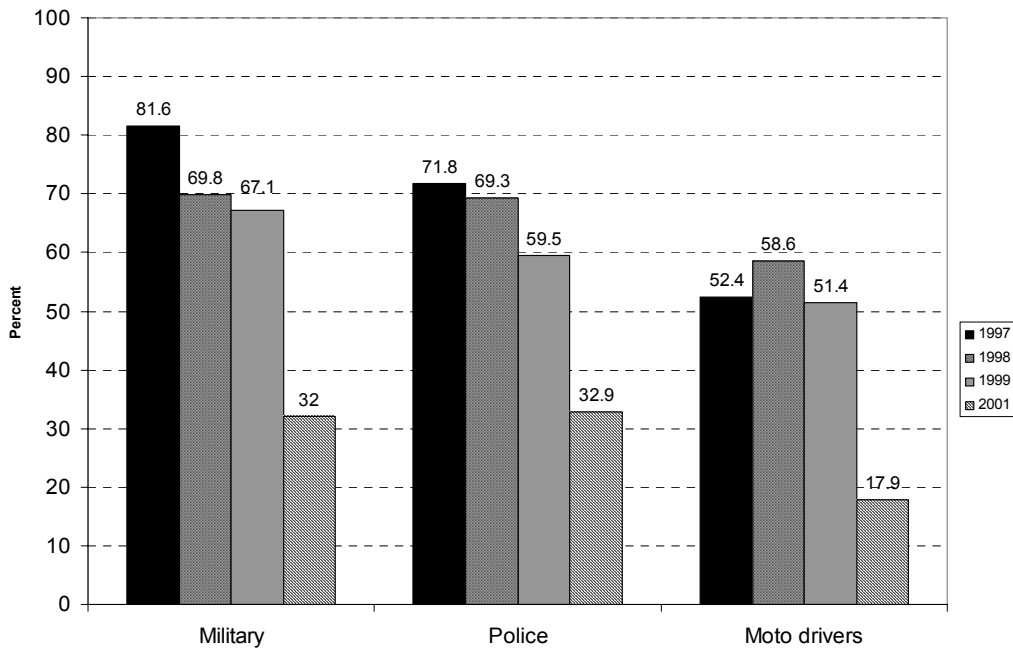
28. The sampling of the two surveys and provincial coverage were not identical, so comparisons must be made with care. The 2001 survey used a population-based sample, which was not possible in 1996 due to security concerns (Leng et al. 2002).

Figure 3. Trends in Consistent Condom Use among High-Risk Groups in Urban Areas, 1997–2001



Source: NCHADS behavioral surveillance data.

Figure 4. Percent of High-Risk Men Who Used Brothel-Based Sex Workers in the Past 12 Months

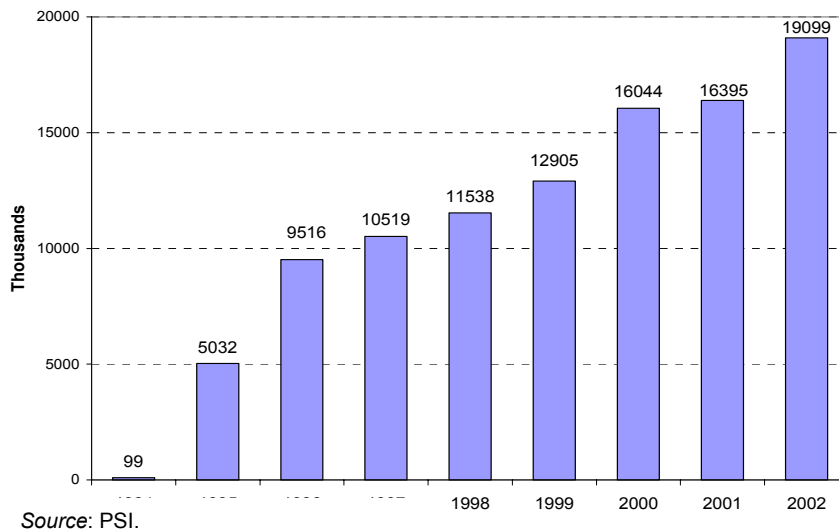


Source: NCHADS behavioral surveillance data.

programs were not strongly linked to extension of the health infrastructure.²⁹ The share of women who spontaneously mentioned that using condoms could prevent HIV/AIDS rose from 66 percent to 86 percent, and the percent who mentioned avoiding sex with prostitutes as a way of preventing infection rose from 19 to 35 percent (Annex C). The share who understood that a healthy person can have the AIDS virus jumped from 63 to 86 percent.

4.12 These well-documented outcomes are a reason why the Cambodian response is increasingly cited as an example of effective public policy on HIV/AIDS. The DCHDP clearly had an impact on the ability of Cambodia to effectively implement its HIV/AIDS strategy. Project resources accounted for roughly half of the budgetary resources for HIV/AIDS under control of the Cambodian Government over the period 1997-2001 (P. Godwin, personal communication). To the extent the national program has been successful and developed the technical and implementation capacity for a sustained response, the project could be said to have made a major contribution. However, at the same time roughly two-thirds of all HIV/AIDS spending over the same period was from UN agencies, bilateral and multilateral donors, and international NGOs, most of it implemented outside the MOH. WHO financed the initial outreach program launched in 1995 and PSI, with funding from DIFD and USAID, launched the condom social marketing scheme in late 1994, with huge and continued publicity even before the start of sentinel or behavioral surveillance. Other NGOs launched parallel early programs in the military. This may explain why condom use among some groups of men was already high at the start of the project (Figure 3).

Figure 5. Annual Sales of “Number One” Condoms, 1994-2002



29. See Annex C for a discussion of the comparability of the data for the 1998 NHS, the 2000 CDHS, and the Final Evaluation Survey, and Table C-2 for a comparison of the results of the 2000 CDHS and the 2002 Final Evaluation Survey on AIDS knowledge. Unfortunately, the project’s baseline survey (the 1998 NHS) did not include any questions on HIV/AIDS knowledge or sexual behavior. Women of reproductive age (who were the respondents for all three surveys) are considered to be a low-risk group. There has never been a nationwide survey of HIV/AIDS knowledge and risk behavior that included both men and women.

TUBERCULOSIS

4.13 The major achievement of the project was to finance the training, supervision, and implementation by Cambodians of two key activities:

- *Extension of ambulatory DOTS* to all 68 referral hospitals and 386 health centers, more than half of the roughly 650 HCs equipped to provide the MPA at that time and 119 percent of the target for the end of 2002.
- *Monitoring and research*, including completion of a study of multi-drug resistant (MDR) TB (2001) and a TB prevalence survey in a population of 30,000 (April-December 2002), and preparation for a January 2003 survey of HIV in all incident TB patients in the country.

4.14 Most of these achievements occurred during the last two years of the project. It also financed renovation of the CENAT headquarters building (2001), TB drugs (through UNICEF, which were delayed until September 1999), laboratory supplies, and technical assistance. DCHDP TB activities were extremely slow in taking off, due to capacity constraints, the lack of a strategy, and a one-year hiatus (2000) during which CENAT had no director. For an 18-month period from June 1999 through most of 2000, World Bank supervision reports rated this sub-component as unsatisfactory, with very low disbursements (only 12 percent of the budget was disbursed by the MTR in December 1999).

4.15 However, the project's TB activities accelerated with the appointment of a new CENAT director in early 2001, the articulation of a *National Health Strategic Plan for Tuberculosis Control, 2001-2005* (CENAT 2001a), training of health workers for decentralized implementation, and the decision to send the implementation budget directly to all 24 provinces. The project was premised on supporting hospital-based DOTS. However, a successful pilot of ambulatory DOTS³⁰ in 9 HCs in three provinces in 1999 proved the feasibility of decentralized, non-hospital based treatment. Ambulatory DOTS was extended to 60 HC in 2000, 264 in 2001 (including Phnom Penh), and 386 in 2002 (Eang 2003). The *Strategic Plan* set as a target the extension of ambulatory DOTS to all HC equipped to provide the MPA by 2005, to maintain a cure rate for pulmonary ss+ cases of more than 85 percent, and to achieve a case detection rate of at least 70 percent of pulmonary ss+ cases by the end of 2005.³¹

4.16 All of the TB monitoring activities foreseen in the project design were completed, although the timing and periodicity were revised. The TB prevalence

30. Ambulatory DOTS relies on sputum smear microscopy for diagnosis (not x-ray) and requires neither a physician nor a hospital stay.

31. WHO estimated the case detection rate in 2001 as 41 percent for new ss+ cases, down from 44 percent in 2000 and 49 percent in 1999 (WHO 2003). However, it isn't clear what assumptions were used for TB incidence, on which these rates are based. The Strategic Plan claims that the 2000 case detection rate was 51 percent.

survey was conducted toward the end of the project with full participation of CENAT staff, with plans to repeat it every five years. The frequency of the MDR TB survey was revised to once every five years. Annual surveys of HIV infection among TB patients (called for in project design) were being conducted by NCHADS. The national survey of HIV in all 2,206 incident TB cases in January 2003 conducted by CENAT found prevalence of 10.3 percent nationally and 31.1 percent in Phnom Penh (Onozaki 2003). This is higher than the last round of NCHADS sentinel surveillance data in 2002 (8.4 percent), which tracks trends but is not nationally representative.³²

4.17 The eventual success of decentralized TB activities relied on the infrastructure investments of the DCHDP (for 11 provinces) and were complemented by the JICA National TB Control Project (1999-2004), which expended a total of ¥ 151.6 million (roughly \$1.32 million) in 2000-2002 (Onozaki 2002).³³

4.18 The ultimate objective of the NTP is to reduce the annual number of new (incident) and chronic infections by raising the case detection rate and maintaining a high cure rate. However, TB incidence is rarely measured and in Cambodia efforts to reduce incidence are countered by the growing number of new TB cases due to the AIDS epidemic: TB and chronic diarrhea are the most common opportunistic infections associated with AIDS in Cambodia (Kimerling et al. 2002, Senya et al. 2003). Further, due to the decades of lack of effective health care in Cambodia, there is a huge reservoir of the population with untreated chronic TB. The lack of information on TB incidence and prevalence makes it difficult to monitor the case detection rate, although the future ability to monitor it has been enhanced by the TB prevalence survey supported by the project.³⁴

4.19 There is nevertheless evidence of the NTP's short-run effectiveness in terms of increased cases treated and maintenance of a high cure rate. The number of TB cases treated increased sharply in 2002, when ambulatory DOTS was finally extended to a large share of newly constructed or renovated health centers in the provinces (Figure 6).³⁵ It is impossible to know the extent to which this is due to an increase in the case detection rate, to an increase in the incidence of TB or both, but the fact that treatment outside of the major urban centers became much more widely available at that time is strongly suggestive that an important share is due to an increase in the case detection rate. The cure rate, which was only 69 percent in 1993, has been maintained at the target of 85 percent or better since 1995, reaching as high as 91 percent in 2000. Consistent with a high cure rate, the 2001 survey of MDR TB found

32. HIV prevalence among TB patients has been rising since it was first tracked in 1995. See Annex D, Fig. D-4.

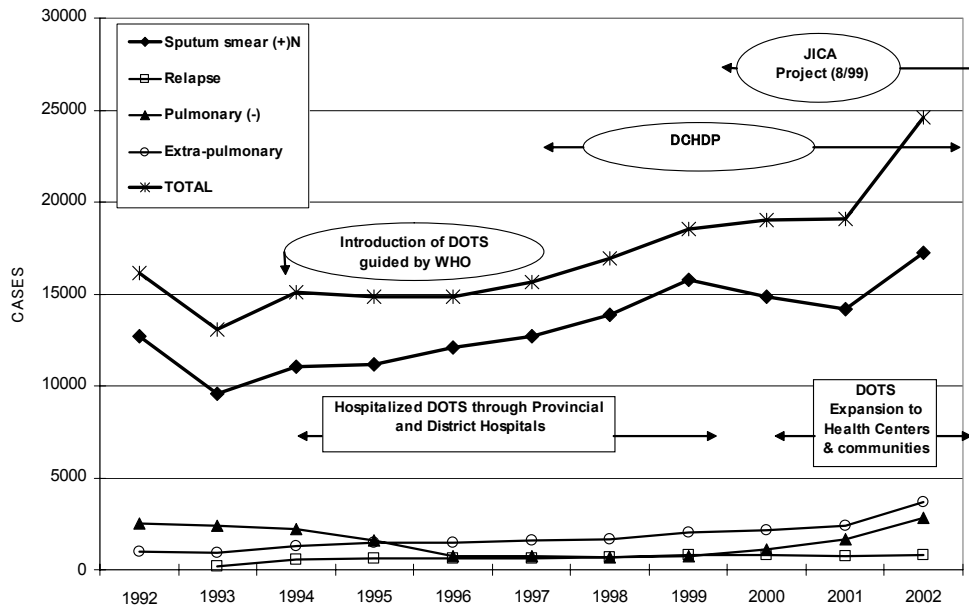
33. Other contributors to TB control included WHO and the Government of Japan and CIDA (through WHO). JICA expenditures exclude the cost of Japanese advisers and counterpart training in Japan.

34. Preliminary results suggest a prevalence of bacteriological TB in all ages of 902/100,000. The prevalence and incidence of pulmonary ss+ TB were 270/100,000 and 256/100,000, respectively. In contrast, WHO estimates for 2001 put prevalence of bacteriological and pulmonary ss+ TB much higher – at 1,356/100,000 and 548/100,000, respectively. The prevalence survey results suggest a case-detection rate of around 60 percent, higher than thought but short of the goal of at least 70 percent (Onozaki 2003).

35. The number of reported TB cases rose by 57 percent, from 15,629 in 1997 to 24,610 in 2002. The increase in reported cases in 1992-93 likely reflects an increase in percentage of TB cases that were treated as the health system was consolidated following the 1991 Peace Accords.

resistance to single drugs but no MDR cases (Onozaki 2003). Most observers contacted by OED attributed a large part of the high cure rate to the food supplied by the World Food Program to patients, improving the incentives for completing treatment. The estimated relapse rate has remained at 5 percent or less for the duration of the project.³⁶

Figure 6. Trends in TB Cases and Timing of Interventions



Source: Dr. Ikushi Onozaki, personal communication, based on NTB figures.

MALARIA

4.20 The key achievements of the project in terms of anti-malaria objectives were:

- Expansion and reinforcement of *first-line treatment of malaria in public health facilities* in the periphery, particularly HC. The project trained 934 public health staff and 247 military health staff in clinical skills, 472 public health and 375 military lab technicians in microscopic diagnosis, and 772 HC staff in dipstick diagnosis and national treatment guidelines. In addition, it financed equipment and more than \$0.5 million in anti-malaria drugs.
- *Institutional development and capacity building*, in terms of vehicles and per diems for supervision and improved management and budgeting for decentralized implementation of the national malaria strategy.
- Piloting and implementing the *social marketing of insecticide-impregnated hammock nets* for forest dwellers, part of a program to prevent malaria in high-risk areas under-served by the formal health system (see Box 3).

36. A relapse rate of 5 percent or less was an objective in the SAR. The overall relapse rate declined from 4 percent to 3.2 percent and the ss+ relapse rate from 5 percent to 4.6 percent over the period 1997-2002 (NTP data).

Box 3. Lessons from the Social Marketing of Hammock Nets

One of the innovative pilot interventions financed by the DCHDP was the social marketing of insecticide-treated mosquito nets suitable for use with hammocks. A transient population of roughly 1.5 million people engages in seasonal work in Cambodia's forests and is highly vulnerable to malaria. About two-thirds of them sleep in hammocks and only half were believed to be using hammock mosquito nets for protection from malaria. With project resources, the CNM and WHO developed two brand name products – *Peace Nets* for hammocks and *Peace Pills* to treat them with insecticide. The goal was to develop the brand name and market and to turn this activity over to the private sector.

The national launching of the *Peace Net* campaign was delayed by procurement problems and did not take place until 2001, a year before the end of the project. By December 2002, only 12,000 of the 40,000 *Peace Nets* had been purchased (representing only 2.4 percent of the estimated 500,000 hammock sleepers without nets) and only 10 percent of the stock of 100,000 *Peace Pills* was sold. The *Peace Net* – which had a break-even cost of 12,000 Riels (about \$3), including the insecticide treatment – encountered strong competition from untreated military-style hammock nets already in the market, whose price dropped from 6,000 Riels at the start of the project to only 4,000 Riels (\$1) at the end. Despite the extensive publicity around the *Peace Net* and the benefit of insecticide treatment, sales did not really take off until their price was lowered below that of the competition, a price that was too heavily subsidized to be sustainable. Sales of *Peace Pills*, in contrast, did not respond to price reductions, suggesting that the public did not understand their benefits.

While the *Peace Net* will be discontinued when current stocks run out, the publicity surrounding the nets may have created a “halo” effect in stimulating demand for the inexpensive hammock nets already on the market. The important lessons were that the existing hammock net market can address the need of forest workers at lower cost and that the government's malaria program must focus on increasing the public's understanding of the advantages of treating hammock nets (and bednets) with insecticide. The media campaign for the *Peace Pill* will be intensified and the existing stock will be marketed (at a price of 2,000 Riels) until the end of 2004, their expiration date. At that time, it is hoped that the private sector will take over this activity.

Source: Dara 2002, WHO et al. 2002.

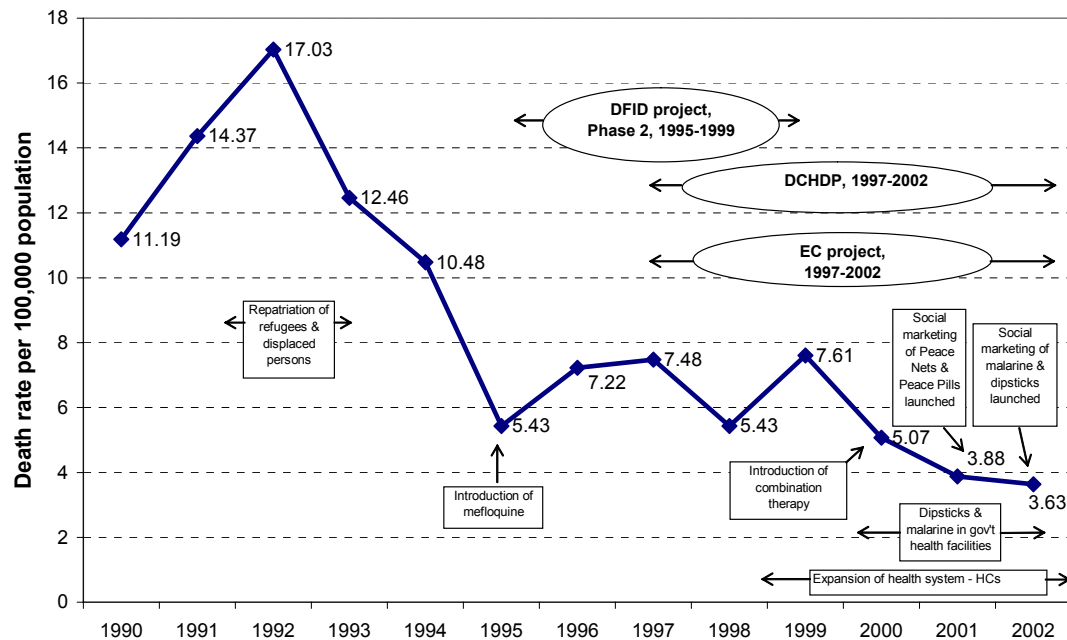
4.21 By project closing, the DCHDP had disbursed \$2.472 million on the malaria sub-component, excluding the drugs and renovation of the national program offices (covered under the health strengthening sub-component). Other donors were also active in malaria during this period. DFID's Malaria Control Project (1995-99, £1.387 million), implemented by WHO, also focused on public sector interventions, including technical training in case management and microscopy, malaria drug supplies, and distribution of over 127,000 bednets (Meek et al. 2000). The EC's Malaria Control Program in Cambodia (1997-2002, € 5.59 million, of which € 3.84 million was spent in-country) was implemented over exactly the same period as the DCHDP. Its main contribution was in terms of developing early diagnosis and treatment for malaria (diagnostic dipsticks and *Malarine*, a combination therapy of mefloquine and artinsenat) that were implemented in the decentralized public health system, in the private sector through social marketing (at the end of 2002) and, eventually, in communities (Bouth Denis et al. 2003). The EC also supported distribution of insecticide-treated bednets and provided per diems to Cambodian staff for implementation. As with the DCHDP, the EC project accelerated in its implementation from 2000 onward, following the appointment of a new director of the NMP, resolution of disbursement problems, and arrival of EC and Bank-

sponsored technical advisers in 2000. As a result, two-thirds of the EC project funds (€2.56 million) were spent in the last two years, 2001-2002.

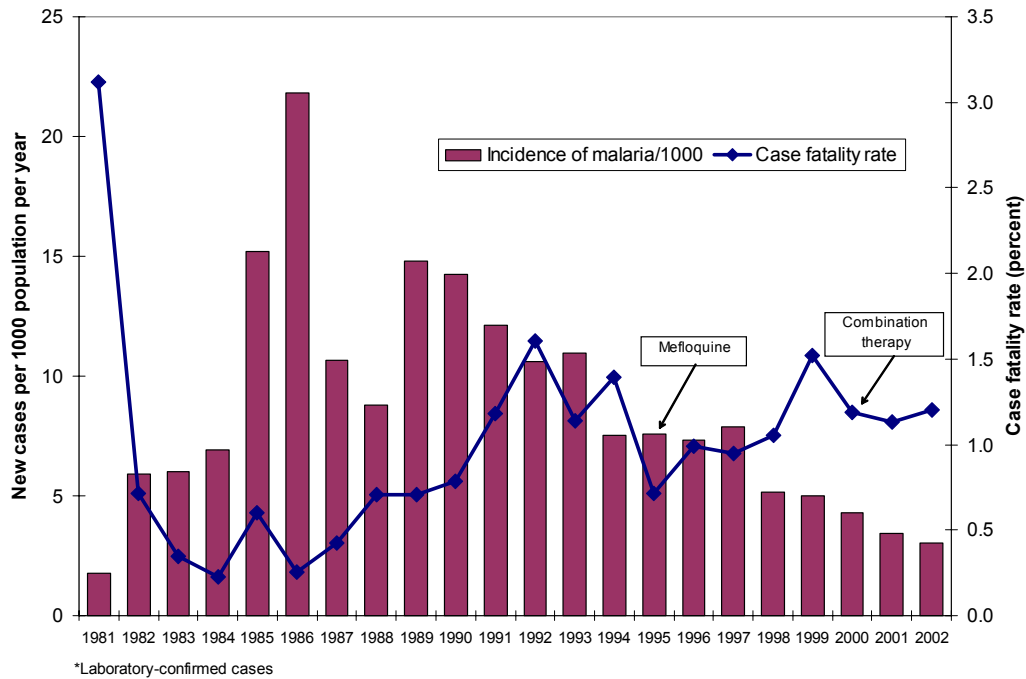
4.22 The combined efforts of government and donors contributed to a 51 percent decline in the reported mortality rate from malaria between 1997-2002, from 7.48 to 3.63 per 100,000, with most of the decline occurring since 1999 (Figure 7). This reflects a 62 percent reduction in the reported incidence of malaria over the same period (from 7.9/1,000 to 3.0/1,000); the case fatality rate (the percent of reported malaria cases that are fatal) rose from 0.95 percent to 1.52 percent in 1999, then declined to 1.2 percent in 2002, so has effectively been unchanged or risen slightly (Figure 8).

4.23 While these results are suggestive of an important improvement in malaria outcomes, they must be qualified. The data in Figures 7 and 8 pertain only to cases confirmed in the public health system by laboratory examination. An estimated 80-90 percent of malaria patients seek treatment in the private sector. Thus, the reduction in incidence of reported malaria cases could reflect a shift from public to private treatment. The monitoring system is attempting to collect data on cases confirmed by dipstick in health centers, but the numbers are still not consistently reported. There is currently no regular monitoring system for malaria cases diagnosed in the private sector (including self-diagnosis with dipstick technology). Nor is there information on the extent to which the strategy of private marketing of pre-packaged dual therapy and dipsticks has resulted in more effective treatment.

Figure 7. Trends in Malaria Mortality and Timing of Interventions, 1990-2002



Source: CNM data.

Figure 8. Malaria Incidence* and Case Fatality Rate, 1981–2002

Source: CNM data.

4.24 There were simply too many different activities being launched in the period 1997-2002 by the Government and donors – bednets, training, expansion of the system, new treatments, not to mention a reduction of military action in the forested areas due to higher political stability and new restrictions on logging, which would lower malaria exposure – to be able to attribute the trends in the public sector reporting system to a specific intervention or project (Figure 7). Unfortunately, there are no large-scale population-based studies over time of the incidence or prevalence of malaria, knowledge of malaria transmission, symptoms, or treatment, or ownership and use of mosquito nets (impregnated or not). The surveys of bednet coverage of high-risk areas in the project design were not completed. Neither the 1998 NHS nor the Final Evaluation Survey had questions on malaria knowledge or the ownership and use of bednets. The only nationwide household data known to OED were from the 2000 CDHS, which asked about household ownership of mosquito nets, whether they had been impregnated, whether children under five had slept under one, and whether female respondents 15-49 had slept under a mosquito net the previous night. These results are presented in Annex E.

5. Ratings

OUTCOME

5.1 The project's overall outcome rating is **satisfactory**, based on the continued high relevance of its objectives and substantial efficacy and efficiency at meeting them.

5.2 The project's objectives remain *highly relevant* in 2003. The objective of improving access of the poor to basic health care through expanding the health infrastructure and addressing key communicable diseases – specifically, malaria, TB, and AIDS – is highlighted in all three Country Assistance Strategies (1995, 1997, 2000). Investment in improved health is a major poverty alleviation strategy in Cambodia's Poverty Reduction Strategy Paper, and the project directly addressed three of the five priority areas of the Government's *Health Sector Strategic Plan, 2003-2007*.

5.3 The project attained *substantial efficacy* in reducing death and illness from preventable diseases and of rehabilitating the health system infrastructure to deliver basic health services and disease control programs down to the community level. The mortality rate from malaria declined, the health system expanded to treat a likely increasing share of TB cases, and significant behavior change occurred in terms of raising condom use in commercial sex and reduced probability of using sex workers to strongly suggest lower incidence of HIV. These results likely would not have been possible without the expansion of health infrastructure, capacity building, and institutional development supported by the DCHDP, which was the first donor project to substantially invest in the capacity of the Ministry of Health to implement public health programs. Underlying this success were several M&E activities within each of the national programs, and government commitment to evidence-based decisions that encouraged the results to be used to improve outcomes.

5.4 While a lack of training in Bank procurement and financial management procedures contributed to low efficiency at the start of the project, a number of measures were taken (in addition to efficiency-enhancing elements of project design) to result in *substantial efficiency* by the close of the project. The contracting of civil works to SFKC and of the NGO small grants to Khana, establishment of provincial accounts, and per diems in support of supervision at all levels enhanced efficiency in implementation. The results of pilot activities supported in part or total by the project (HMA, social marketing of hammock nets, 100% condom use) as well as monitoring and evaluation (the AIDS outreach program) enhanced learning and were used as a management tool to improve the efficiency of government programs. With respect to civil works, the unit cost of HC (\$20,900 in Phase I and \$25,500 in Phase II, a 21 percent increase) was substantially higher than the appraisal estimate (\$17,500).³⁷ In supervision reports, this was attributed to increased costs of materials (the quality of

37. The costs of HC construction by the ADB project rose for similar reasons. For example, the average cost of a square model HC rose from \$22,033 to \$25,681. The cost of an elevated HC, implemented in the more remote areas at the end of the project came to \$31,855 (Sheladia 2001).

some inputs was revised upward during the project, such as tiling for the floors) and the remote location of some of the Phase II facilities, where the SFKC relied more heavily on local shopping, reducing competition and raising the costs.³⁸ The Phase II sites were also more challenging, requiring more backfill and grading.

5.5 An important concern affecting both efficacy and efficiency is the extent to which the HC were adequately staffed and equipped to perform effectively. The late supply of drugs was largely met by other donors, but the mission encountered evidence that timeliness of drugs in relation to their expiration date is still an issue, while supervision reports note that equipment for some HC would not arrive before the end of the project. The mission was not able to obtain systematic data on the extent to which the HC and RH are fully staffed or information on the proportion of staff that were trained. The overall number of government health staff has remained relatively constant at 17,000-18,000 over the life of the project (Ensor 2002); maintaining adequate staff at new facilities would require redeployment from those that were phased out. It is not known the extent to which this occurred.

INSTITUTIONAL DEVELOPMENT IMPACT

5.6 Institutional development was **high**, based on the contribution of the project to an enormous improvement in the ability of Cambodia to make more efficient, equitable and sustainable use of its resources through better institutional arrangements and better alignment of the mission and capacity of MOH, the national disease programs, and provincial health offices with their mandates.

5.7 The MOH has evolved from a weak bystander to the owner and implementer of national health strategies, in coordination and collaboration with international donors. The project was the catalyst for fundamental changes in the relations between the MOH and the provinces, in which the national government was responsible for strategic direction and mobilization of resources and the provinces for planning, management, and implementation. Substantial progress was achieved in integrating ‘vertical’ national disease programs into the decentralized health system, an achievement that has eluded many other countries. Each program developed short- to medium-term strategies and quarterly work programs and budgets to deliver them – a revolution in terms of the way that things get done. The HMA provided the principles if not incentives for this to occur and the project’s investment in the technical and managerial capacity of the provinces made it possible to carry it out. The innovative financing arrangements piloted by the project to get money to the provinces were later adopted by decentralized World Bank projects in other sectors in Cambodia. The DCHDP created the institutional basis (NCHADS) and technical and managerial capacity for a nationally-owned AIDS response based in the MOH that is a source of technical expertise for expansion to other sectors. The contract with Khana built the capacity of national NGOs to prepare and implement AIDS

38. According to SFKC, greater use of local shopping in Phase II for some projects was due to: (a) the need to divide larger projects into smaller components when all components were not submitted simultaneously; (b) low total costs; and (c) indication of urgency by MOH for some facilities (see Annex G).

interventions. These achievements would not have been possible without strong MOH leadership and commitment of the government to the project's objectives.

5.8 The high rating on institutional development impact is based on the remarkable progress instigated by the project, yet the institutional agenda is evolving and progress has not been uniform. There are still large differences across provinces in implementation capacity and use of HMA. Much work remains to improve the accountability and incentives of MOH and the provinces to manage by results. Many improvements can be made in M&E at the central and provincial level, particularly with respect to population-based monitoring tools and ensuring the consistency of methodology over time. The capacity of the PCU to manage dual World Bank and ADB projects was enhanced during the project; it remains for this capacity to be developed within the MOH. The NGOs and activities sponsored by the Khana contract, while building local implementation capacity, were at arms length from NCHADS, had minimal links to provincial activities, and were never evaluated.

SUSTAINABILITY

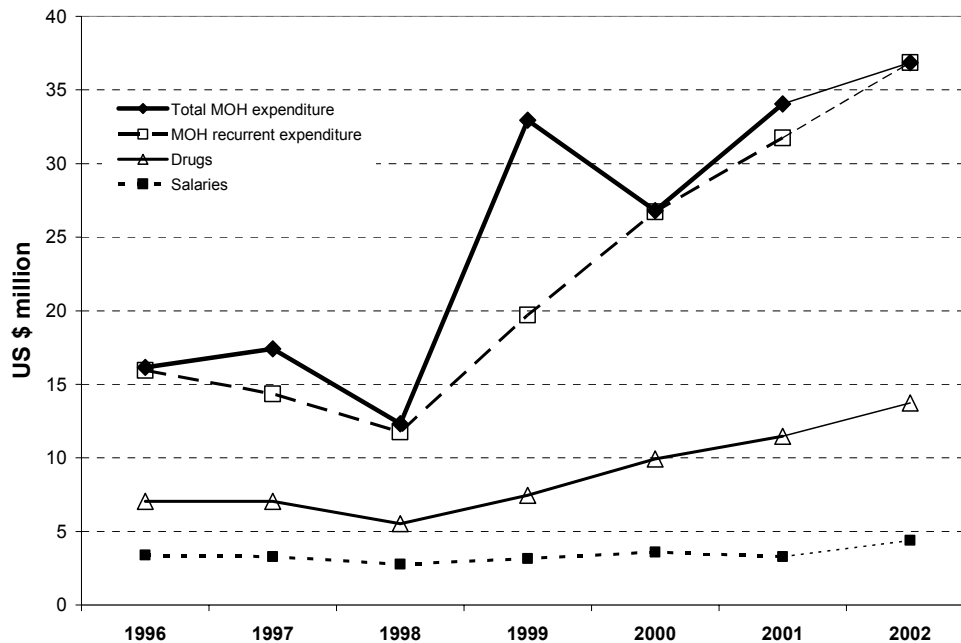
5.9 Sustainability is **likely**, but with some important caveats. Sustainability of the outcomes and resilience of the project's benefits to risk are enhanced by the following factors. First, the Government has drafted a *Health Sector Strategic Plan* for 2003-2007 that continues the expansion and improved quality of the health system with special provisions for the poor, and the national programs for TB, malaria, and AIDS all have recent strategic plans that they are following. Second, substantial Cambodian capacity has been built in terms of technical training, planning, budgeting, management, and monitoring. Third, the domestic resources allocated to health have been rising. Over the period 1998-2002, government health spending from the MOH has risen from \$1 to \$3 per capita and total public expenditure on health has more than doubled (Figure 9). Revenue from user fees (99 percent retained by the facilities) has risen from CR3.4 billion to CR5.3 billion between 1998 and 2001. Fourth, Cambodia has been or will be the recipient of significant continued donor support for these health programs through the follow-on Health Sector Support Project (HSSP), funded by the Bank (\$31.8 million) and the ADB (\$32.6 million), a DFID grant for HIV/AIDS totaling \$74.2 million over that period, as well as grants from the Global Fund of \$10 million for malaria and \$15.9 million for HIV/AIDS. The Bank-financed part of HSSP includes a \$2.0 million IDA grant for NCHADS, specifically for STI treatment drugs and to implement the 100% condom program in high-risk populations nationally.

5.10 However, sustainability is weakened by several factors: First, the low salaries and morale of health staff are a continued concern and threatens the quality and availability of health care. The total number of health staff has been kept fairly constant at 17,000-18,000 (Ensor 2002), while the amount spent on salaries in dollar terms has crept upward slowly in dollar terms (see Figure 9).³⁹ Second, the follow-on HSSP is more complicated and the PCU and PPU have been disbanded. The HSSP

39. The decline in spending between 1996-98 in Figure 9 is due to depreciation of the riel against the dollar. Expenditure increased in nominal riels.

will be implemented by the MOH, which has less implementation capacity that will require substantial investment and learning at the outset. Third, there was a several-month gap in funding between the end of DCHDP and effectiveness of the HSSP, during which time there was no money for supervision or training and activities ground to a halt.⁴⁰ Finally, the huge influx of funds for national disease programs from donors and the Global Fund may exceed the programs' capacity to use the resources well.

Figure 9. Trends in MOH Expenditure, 1997–2002



Source: Ensor (2002) and Government of Cambodia.

BANK PERFORMANCE

5.11 Overall, the Bank's performance is rated as **satisfactory**. While there were many aspects of the preparation and supervision of the DCHDP that were exemplary, several significant shortcomings could have been anticipated and prevented.

5.12 The project design was appropriately selective, given the limited implementation capacity of government. It addressed priority health issues with clear criteria for choice of provinces and disease programs—cost-effectiveness, public economics, reaching the poor, and the ongoing activities of other donors. The choice of communicable diseases (especially malaria) favored the poor, as did the construction and rehabilitation of rural health facilities. The Bank took a long-term perspective, investing heavily in government capacity and health infrastructure while

40. This point was made repeatedly by informants. For example, funds for the outreach program for sex workers were depleted by October 2002, while new funding from the HSSP was not forthcoming until August 2003.

supporting communicable disease control programs that can have an impact in the short run. It attempted to improve the efficiency of the system by rationalizing and capturing informal user fees to improve service quality and encourage local management, while exempting the poor. Preparation tapped strong technical expertise and prior sector analysis. The implementation plan was complex but detailed and developed with the full participation of MOH. Monitoring and evaluation were explicit – including a national baseline and final household survey – and were linked to management decisions to improve performance. However, the Bank failed to anticipate the need to train Government staff in financial management and procurement, which plagued the project for many years. The assumption that these functions could be delegated to external consultants proved wrong. The ambitious timetable for completion of civil works was unrealistic.

5.13 Supervision emphasized proactive problem-solving, such as sub-contracting with the SFKC for civil works, sub-contracting the small grants component to Khana, and introducing new financial management structures to ensure decentralized implementation. National baseline and final household surveys were implemented in a timely way. There was good collaboration with partners. Despite the complexity of the project and implementation delays, the credit was virtually fully disbursed with only a modest 9-month extension of the completion date. However, given that this was the first health operation in Cambodia, there should have been more intense supervision at the outset, reinforced by a field-based Bank staff member. Further, inadequate supervision in design of the baseline and final surveys resulted in exclusion of key indicators in the baseline (on malaria and HIV/AIDS) and non-comparable questions, reference periods, and sampling design for the final survey. These omissions render both surveys of limited use in evaluating the impact of the project and the final survey will be of little, if any, use as a baseline for the HSSP.

BORROWER PERFORMANCE

5.14 The borrower's performance was **satisfactory**. During preparation, the Government generally took into account the economic, financial, technical, policy, and resource considerations—including limited implementation capacity—and ensured participation of other stakeholders. The MOH was strongly committed to the objectives of the DCHDP, including decentralization of the health system and setting up a new and untried relationship with the provinces through the HMAs, and developed the detailed project implementation plan.

5.15 With respect to implementation, the borrower executed the conditions and covenants in the credit agreement. Some of the implementation delay was due to factors under the borrower's control – the initial lack of coordination between the MOH and MEF, lack of leadership in CENAT until 2001, and delayed counterpart funding, for example. Most of these problems were eventually overcome, though final counterpart funding was still less than half that planned. The borrower exhibited flexibility in agreeing to contract key functions to other agencies and NGOs when the initial design didn't work. After a late start and resolution of quality control issues, the SFKC performed well in implementing the civil works component on time. Training in procurement and financial management and the adoption of strategies and

quarterly work programs dramatically improved implementation performance in the last two years of the project. The Government's commitment was demonstrated through increases in the health budget and attempts to raise remuneration for health staff. Its strong commitment to evidence-based decision-making and testing pilot programs before they are nationally replicated enhanced both implementation and sustainability. The borrower has embraced the M&E activities of the project, which have become an integral part of decision-making. OED was unable to establish the adequacy of staffing and maintenance of the new health facilities, a continuing concern in light of the deficit in counterpart finance and the gap between projects.

6. Lessons

6.1 This assessment highlights lessons from the project as a whole as well as specific lessons on HIV/AIDS that are relevant to OED's ongoing evaluation of the Bank's HIV/AIDS assistance.

PROJECT-WIDE LESSONS

6.2 **Projects launched with a new borrower with low capacity need to front-load the implementation plan with training in Bank procurement and financial management procedures – in the MOH, MOF and, for decentralized projects, at the periphery.** Many of the problems encountered early in the project could have been prevented with adequate training before project launch; more frequent supervision and the presence of staff in health or procurement at the Phnom Penh field office would have improved performance.

6.3 **When activities are prioritized and the comparative advantages of different partners are tapped, relatively complex projects can be successfully implemented by government in a low-capacity setting.** Despite inadequate training in procurement and financial management and an over-estimation of the capacity of government early in the project's life with respect to several aspects of the project design (civil works, NGO grants), the Bank and borrower worked together to simplify and prioritize activities to complete the project with only a short extension. The key to this success involved: (a) prioritization of tasks; (b) a detailed, explicit project implementation plan (PIP); (c) focus on capacity building and institutional development; (d) strong M&E linked to decisions; (e) contracting other implementers when possible and necessary; (f) technical assistance provided by the project and from other donors; (g) coordination with other donors and health NGOs.

6.4 **HMA are a promising framework for decentralized management of the health system.** Their successful functioning depends on investments in: (a) management, planning, budgeting and technical capacity in the provinces; (b) the means to get financial resources to the periphery; (c) strong M&E at the center and periphery to verify outcomes; and (d) the ability to reward good performance and

penalize non-performance. The project made important progress in a subset of provinces on the first three of these; the fourth remains a goal.⁴¹

6.5 When M&E are linked to implementation decisions, they become inputs into the planning process and can contribute to improved performance. The project embraced baseline and final household surveys, intermediate evaluations of key program components and pilot projects that conditioned implementation (AIDS outreach, malaria hammock net programs, HMA audits), and monitoring of outcomes that were project targets (HIV prevalence, risk behavior, STD prevalence, TB prevalence). The HMA framework, which emphasizes funding based on meeting program objectives and targets, also strongly encouraged M&E.

6.6 Monitoring instruments must ensure comparability of indicators, instruments, reference periods and sampling frames over time to track results. There's always pressure to "improve the next survey" by re-phrasing questions, changing respondents, altering reference periods for morbidity questions, or changing the instructions to interviewers. But succumbing to that pressure makes it impossible to monitor trends. The project failed to ensure that key indicators were consistently measured using comparable sampling frames at baseline and project end. As a result, trends in health care use and health outcomes cannot be tracked in the project's timeframe and the final survey will not be adequate to serve as a baseline for the follow-on HSSP. This problem was not limited to the DCHDP within Cambodia; similar issues in maintaining comparability of poverty measures and household expenditure trends over time have been encountered with the Cambodia Socioeconomic Survey (CSES) implemented by the National Institute of Statistics in 1997 and 1999.

LESSONS FOR HIV/AIDS ASSISTANCE

6.7 Investment in the institutional development of NCHADS and its implementation capacity empowered the government to define and lead the national AIDS agenda. NCHADS was created in conformance with a covenant in the credit agreement, elevating the national profile of HIV/AIDS. The Bank was one of many donors supporting HIV/AIDS prevention and care in Cambodia, but the only one to substantially finance government implementation capacity.

6.8 Promoting government commitment to fight HIV/AIDS and to embrace a public health approach is never finished. Government commitment in Cambodia was strong during the project, but it has not always been and cannot be taken for granted. There has been much soul-searching among national and provincial leaders, as in other countries, on the proper approach – whether to close brothels and arrest sex workers, which is politically popular but drives HIV transmission underground, or to promote policies that will produce safer behavior in commercial sex. This is

41. It was intended that small cash accounts set up for each participating province to pay for day-to-day operating costs for travel, subsistence, and office supplies would serve as an incentive if the payments could be linked to performance (and not payments for civil works and equipment). However, it does not appear that the cash accounts were used in this way in implementation.

still an issue. Indeed, at the time of the OED mission brothels in Battambang province had been closed for several months even while NCHADS was trying to expand the 100% condom use program there. The project helped to sustain government commitment through support for: data collection to document the severity of the problem (reducing denial); the 100% condom use pilot project and its expansion; capacity among local NGOs, a constituency that will lobby for AIDS activities; and South-South interactions among policymakers and technical staff.

6.9 Cambodia's HIV/AIDS strategy focuses scarce capacity on the areas where policy and programs can make the biggest difference (Pisani et al. 2003). The MOH strategy has embraced prioritization and sequencing of activities to reflect capacity constraints and improve the cost-effectiveness of the response. It recognizes that the spread of HIV into the general population and the growing numbers of AIDS patients will require new public services and resources in prevention and care. However, both the strategy and program implementation have maintained a priority on reducing high-risk behavior linked to commercial sex as the engine of the epidemic, feeding these other two groups.

6.10 A strong HIV/AIDS program in the MOH provides the foundation on which multisectoral efforts can be built. While action by other key sectors is important (many sectors, like the military and police, were already active) and the NAA has the responsibility for coordinating the multisectoral response, the MOH is in a unique position to provide technical expertise and key M&E functions crucial to the response of all sectors. Further, the MOH is central in coordinating the response of many sub-units responsible for key health interventions – for example, the National Blood Transfusion Center (for safe blood), the National Maternal and Child Health Center (for prevention of mother-to-child transmission), hospital services for universal precautions, the Central Medical stores for STD and AIDS drug supplies, and so forth.

6.11 Building capacity of NGOs in project preparation, management, and technical skills is a pre-requisite to mobilizing their potential in the fight against AIDS, but doesn't ensure relevance, cost-effectiveness, or complementarity with government efforts. While many of the NGOs contracted by Khana did develop innovative approaches – notably experimentation with models of HBC – there was very little consultation with NCHADS, activities were usually not conducted in collaboration with provincial authorities, and with the exception of the HBC evaluation conducted at the initiative of another donor, none of the NGO activities financed by the project were evaluated (nor was there a mechanism or incentives for doing so).

6.12 Tracking HIV prevalence and behavior is necessary but not sufficient for monitoring outcomes in a mature epidemic and must be linked with inputs and outputs in the context of an evaluation design to credibly attribute outcomes to public policy. NCHADS has developed a strong system for monitoring HIV prevalence and behavior among high-risk populations that are the target of policy, which many countries have failed to do. Yet there are holes in the monitoring system and evaluation capacity is nascent. With the exception of a single round of the BSS

(in 2000) in a sample of men in the general population, there has never been a national survey that would reveal the percentage of the male and female population engaging in risk behavior or a series of such surveys that would reveal whether such behavior has declined. Further, trends in HIV prevalence are not a good guide to changes in incidence (the number of new infections) in a country like Cambodia where AIDS mortality is high. Greater insight into incidence could be gained by launching efforts to: (a) measure levels and trends in adult mortality (either through the vital registration system or periodic population-based surveys) and (b) directly or indirectly measure incidence by encouraging academic research.

7. The Future

7.1 The follow-on Health Sector Support Project (WB-HSSP, US\$31.8 million equivalent) was approved December 19, 2002. It is funded by an IDA credit of \$17.9 million equivalent and two IDA grants of \$2.0 million (HIV/AIDS)⁴² and \$7.8 million (poorest country grant) plus a \$1.84 million DFID grant, with the balance financed by the Government. The project's objective is to contribute to the improvement of the health status of the population by increasing the access and quality of health services, assisting Cambodia to implement its *Health Sector Strategic Plan (2003-2007)*, and strengthening the sector's capacity to manage resources efficiently. Specifically, it aims to increase utilization of services by the poor, mitigate the effects of infectious disease epidemics and of malnutrition, improve the health sector's capacity and performance, and develop quality health services in rural areas. A parallel ADB project (ADB-HSSP, \$35 million) supports health strengthening activities in other provinces, including a continuation of contracting health care. The HSSP is part of a larger action among donors that will eventually lead to a sector-wide approach in health. Unfortunately, the HSSP did not become effective until August 14, 2003, leaving at least an eight-month funding gap between projects during which time many of the basic functions supported by the DCHDP ground to a halt. World Bank task management also changed between project approval and effectiveness.

7.2 **The complexity and scope of the HSSP far exceed that of the DCHDP.** The MOH and PHDs will manage the HSSP, including civil works; the PCU and PPU from the previous project have been disbanded and the civil works capacity built in the SFKC will not be used.⁴³ While it is a laudable objective to transfer management to the MOH and PHD, the abrupt elimination of the PCU and PPU will likely result in substantial delays in getting the HSSP up and running.⁴⁴ The number of vertical health programs supported has expanded from three in the DCHDP to five in the HSSP (nutrition and dengue fever were added). Of the 12 provinces to be supported, only 7

42. The AIDS component will finance STD drugs and nationwide expansion of the 100% Condom Program.

43. Informants generally agreed that the overall performance of SFKC in the civil works component of DCHDP was satisfactory. No explanation was offered in the HSSP appraisal documents as to why the previous project's model or other contracting arrangements for civil works were not pursued.

44. The most recent supervision report notes, for example, that none of the civil works are likely to be underway until early 2005.

participated in the DCHDP (where PHD capacity will replace PPU) and the other 5 are completely new to World Bank procedures. The number of donors has increased from two (WB, ADB) to three (with the addition of DFID), with multiple instrument types across and within donor components (grants, loans).

7.3 Unfortunately, the lessons in dealing with complexity in the face of low capacity are not well reflected in the HSSP design. The number of activities is greater and prioritization is less evident. While the design does attempt to front-load implementation with extensive training in procurement, financial management, and planning, the PIP is far from explicit and leaves the detailed specification of activities until after effectiveness. For example, the implementation plan for civil works, including the number of facilities of different types to be built and where they will be located, is not specified. Likewise, the data collection and management plan was not spelled out. The only component to be delegated to others for implementation is the dengue fever component, to WHO. Intensive preparatory work and supervision will have to take place following effectiveness to compensate for this lack of preparation.

7.4 The M&E activities in the Project Appraisal Document and the PIP are unlikely to be adequate for monitoring or evaluating the impact of the project. There is an impressive list of indicators, but there is no evaluation plan.

(a) The HSSP is relying on the 2002 Final Project Evaluation Survey as the baseline. However, the biased sampling frame of that survey and the inadequate series of questions on use and access to health care make it unsuitable as a baseline for measuring increased access to health care or changes in health outcomes. There is supposed to be a final evaluation survey for the HSSP (co-funded by the World Bank and ADB), but the experience of the DCHDP risks repeating itself. Care must be taken to ensure that the HSSP final survey is comparable in sampling and content to a suitable baseline (such as the 1998 NHS, the 2000 CDHS or a new baseline) to maintain comparability.

(b) The HSSP indicators are not useful for monitoring outcomes of some of the most important activities. For example, the emphasis of the HIV/AIDS program is on changing behavior in high-risk groups. Yet the sole proposed outcome measure (the infection rate among pregnant women) addresses neither behavior nor high-risk groups. There is still no nationwide survey of risk behavior of men and women in the general population.

(c) The use of other relevant indicators often depends on additional data collection, but it isn't clear which surveys will be conducted, when, by whom, and how they will be financed. For example, malaria incidence is a key indicator, but to date this has only been measured by reported cases in health facilities. The emphasis of the malaria program has been on reaching out to communities, and social marketing of dipsticks and treatment; a periodic population-based survey would be necessary to measure impact and no baseline was collected by the DCHDP. Likewise, an accurate measure of the baseline case detection rate for TB was made possible by the TB prevalence survey financed by the DCHDP. The PIP does not explain whether

a follow-up TB prevalence survey will be launched and who will fund it, on the basis of which a trend in the case detection rate could be established.

(d) Finally, the failure to be more explicit in the M&E implementation plan prior to project approval was a lost opportunity to formally link the results of M&E activities to project decisions.

7.5 Based on the experience of the DCHDP, these inadequacies will likely lead to considerable delay in implementation and efficacy. Early and intense supervision will be necessary to prioritize activities, identify key partners, and develop a detailed implementation plan, including a realistic and detailed plan to monitor and evaluate the project.

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Annex A. Basic Data Sheet

Key Project Data (amounts in US\$ million)

	Appraisal estimate	Actual or current estimate	Actual as % of appraisal estimate
Total project costs	35.6	28.17	82%
Credit amount	30.4	26.80	88% ^a
Cancellation		0	

Source: Credit amount from internal auditing system, counterpart funding from PCU (2002).

a. During project implementation, changes in the dollar-SDR exchange rate reduced the dollar value of the credit to \$26.8 million by closing. As a percentage of the appraisal estimate in SDR terms, the credit was 98.7% disbursed and none was cancelled.

Cumulative Estimated and Actual Disbursements

	FY98	FY99	FY00	FY01	FY02	FY03
Appraisal estimate (US\$M)	4.26	11.25	18.55	24.94	30.41	30.41
Actual (US\$M)	0.97	5.73	10.36	16.97	23.36	26.8
Actual as % of appraisal	23	51	56	68	77	88
Date of final disbursement	May 9, 2003					

Source: SAR (for estimates) and PCU data.

Project Dates

	Original	Actual
Appraisal		11/15/1996
Board approval		12/24/1996
Signing		03/26/1997
Effectiveness		06/23/1997
Mid-Term review	06/30/1999	11/29/1999
Closing date	03/31/2002	12/31/2002

Staff Inputs (staff weeks)

Stage of Project Cycle	Actual/Latest Estimate	
	N° Staff weeks	US\$('000)
Identification/Preparation	N/A	487.03
Appraisal/Negotiations	N/A	N/A
Supervision	N/A	445.31
ICR	N/A	N/A
Total		932.34

Note: Identification/Preparation costs include Appraisal/Negotiation. Supervision costs include ICR.

Other Project Data

FOLLOW-ON OPERATIONS			
Operation	Credit no.	Amount (US\$ million)	Board date
Health Sector Support Project	3728	\$17.2 credit	12/19/2002
	H015	\$2.0 grant	
	H016	\$7.8 grant	

Mission Data

	Date (month/year)	No. of persons	Specializations represented	Performance rating	
				Implementation progress	Development objective
Identification/ Preparation	12/94	1	Mission Leader (1)		
	08/95	11	Mission Leader (1); HIV/AIDS Specialist(1); Management Specialist (1); Tuberculosis Specialist (1); Public Health Specialist (1); Malaria Specialist (1); Health Specialist (2); Management Specialist (1); Finance Specialist (1); Legal Officer (1); Equipment Specialist (1)		
	11/95-12/95	10	Mission Leader (1); Public Health Specialist (1); Health Specialist (1); Malaria Specialist (1); Management Specialist (2); Finance Specialist (1); HIV/AIDS Specialist (1); Architect (1); Equipment Specialist (1)		
Appraisal/Negotiation	02/96-03/96	8	Task Manager (1); Public Health Specialist (1); Health Specialist (1); Legal Officer (1); Human Resources Specialist (1); HIV/AIDS Specialist (1); Management Specialist (1); Architect (1)		
	03/96	4	Mission Leader (1); Legal Officer (1); Public Health Specialist (1); Health Specialist (1)		
	07/96	5	Mission Leader (1); Health Specialist (1); HIV/AIDS Specialist (1); Management Specialist (1)		
	11/96	5	Mission Leader (1); Health Specialist (1); HIV/AIDS Specialist (1); Management Specialist (1); Procurement Officer (1)		
Supervision (MTR)	02/28/1997	2	Public Health Specialist (1); Mission Leader (1);	S	S
	09/11/1997	3	Budgeting Specialist (1); HIV/AIDS Specialist (1); Mission Leader (1)	S	S
	06/10/1998	3	Task Manager (1); HIV/AIDS Consultant (1); Architect Consultant (1)	S	S
	02/03/1999	6	Mission Leader (1); Operations Officer (1); TB Specialist; GTB (1); AIDS Consultant (1); Architect Consultant (1); Economist (Health) (1)	S	S
	06/18/1999	2	Team Leader (1); Project Implement Specialist (1)	S	S
	12/22/1999	7	Team Leader (1); Project Analyst (1); Public Health Specialist (1); Procurement Specialist (1); Malaria Specialist (1); HIV/AIDS Specialist (1); TB Specialist (1)	S	S
	08/30/2000	4	Team Leader (1); Public Health (1); Project Analyst (1); Civil Works (1)	S	S
	12/19/2000	4	Team Leader (1); Public Health Specialist (1); Project Analyst (1); Architect/Consultant (1)	S	S
	07/24/2001	2	Team Leader (1); Project Implem. Spec. (1)	S	S
	03/15/2002	4	Task Team Leader (1); Project Analyst (1); Procurement Specialist (1); Architect (1)	S	S
ICR	06/2003	1	Implementation Specialist (1)		

Annex B. People Consulted

World Bank

Christopher Chamberlin, DCHDP Task Manager, 1995-97
 Darren Dorkin, Operations Officer
 Omowunmi Ladipo, DCHDP Financial Management Specialist, 1998-2002
 Rama Lakshminarayanan, DCHDP Task Manager, 1997-99
 Michael Porter, Consultant for the design of AIDS component
 J. Shivakumar, former Division Chief for Health in East Asia, 1992-94
 Vincent Turbat, DCHDP Task Manager, 1999-2002
 Lingzhi Xu, Task Manager, HSSP

Ministry of Health

H.E. Dr. Mam Bunheng, Secretary of State for Health
 Dr. Char Meng Chuor, Project Coordinator, HSSP, and Director, Department of Planning and Health Information, MOH.
 Dr. Uy Vengky, Executive Administrator, HSSP Secretariat
 Dr. Lim Kaing Eang, Director, Provincial Health Department, Kampot,
 Dr. Khem Saron, Deputy Director, Provincial Health Department, Sihanoukville
 Provincial AIDS, TB, and malaria officers, Kampot province and Sihanoukville

National TB Program

Dr. Mao Tan Eang, Director, National Center for TB and Leprosy Control, MOH
 Dr. Kosuke Okada, CENAT/JICA National Tuberculosis Control Project
 Dr. Ikushi Onozaki, former Chief Advisor, CENAT/JICA National Tuberculosis Control Project

AIDS Control Program

Dr. Mean Chhi Vun, Deputy Director-General of Health, Director of NCHADS
 Dr. Tia Phalla, Secretary General, NAA
 Peter Godwin, former AIDS Technical Adviser for the DCHDP, 1998-2001
 Dr. François Crabbé, Technical Advisor on STI Management, NCHADS
 Heng Sopheap, Chief of Surveillance Unit, NCHADS
 Seng Sopheap, Project Implementing Officer, ADB “Community Action for Preventing HIV/AIDS”, NCHADS

National Malaria Program

Dr. Duong Socheat, Director, CNM
 Dr. Mey Bouth Denis, former EC National Adviser
 Roberto Garcia, former EC Technical Consultant
 Dr. Ros Seyha, Technical Officer responsible for social marketing of Malarine malaria treatment and the Rapid Diagnostic Test
 Neang Sophan Dara, Domestic Consultant responsible for the social marketing of hammock nets and the “Peace Pill” insecticide for impregnation, National Center for Parasitology, Entomology, and Malaria Control
 Reiko Tsuyuoka, WHO Scientist for Malaria Control

Social Fund of the Kingdom of Cambodia

Chum Bun Rong, General Director, and colleagues

Donors and technical agencies

David S. Hausner, Sr. Technical Advisor for HIV/AIDS, USAID/Phnom Penh

Benjamin Loevinsohn, World Bank, formerly task manager for the ADB BHS project

Geeta Sethi, Country Programme Advisor, UNAIDS

Elizabeth Smith, Health and Population Adviser, DFID

Jim Tulloch, WHO Representative

NGOs

Tim Brown, East-West Center and Family Health International/Bangkok

Chawalit Natpratan, Country Director, Family Health International/Cambodia

Jeffrey O'Malley, Executive Director, International HIV/AIDS Alliance

Pok Panhavichetr, Executive Director, Khmer HIV/AIDS NGO Alliance (Khana)

Barry Whittle, Country Representative, Population Services International/Cambodia

Annex C. Health and HIV/AIDS Indicators from National Surveys, 1998-2002

During the life of the DCHDP, there were at least five national household surveys that collected data on health status and health care utilization: Cambodia Socioeconomic Survey (CSES) 1997; National Health Survey (NHS) 1998; CSES 1999; Cambodia Demographic and Health Survey (CDHS 2000); and the DCHDP Final Evaluation Survey 2002. The NHS 1998 was the official “baseline” for the DCHDP and the ADB health project and the Final Evaluation Survey 2002 was the end survey for both. Thus, in theory, there are many sources of nationally representative data on health care utilization and outcomes for Cambodia and it should be possible to trace their evolution over the duration of the project.

However, there were important differences between the three main health surveys (NHS 1998, CDHS 2000 and Final Evaluation Survey 2002) that suggest caution in interpreting the outcomes as trends (see Table C-1). While the NHS 1998 and the Final Evaluation Survey 2002 collected data from the same 21 provinces, there was a fundamental difference in the sampling frame. The NHS 1998 sampling frame was based on the 1997 listing of areas provided by the Population Census Office in preparation for the 1998 Census, while the Final Evaluation Survey sample was drawn from a list of villages covered under fully-functioning health centers with

Table C- 1. Characteristics of Three Health Surveys in Cambodia, 1998-2002

Characteristic	NHS 1998	CDHS 2000	Final Evaluation Survey 2002
Sample size (women)	7,630	15,351	15,536
Sampling frame	NIS listing for the 1998 Census	Master sample based on the 1998 Census	List of villages covered under fully-functioning health centers with Minimum Package of Activities.
National coverage	21 provinces ^a	24 provinces	21 provinces
Dates of field work	May-July 1998	February-June 2000	July-September 2002
Data collection	SAWA-Cambodia and National Institute of Public Health (NIPH)	National Institute of Statistics (NIS) and Ministry of Health	Coffey Philippines Inc. and Center for Advanced Studies
Technical assistance	Macro International	ORC Macro	Coffey Philippines Inc.
Steering/Technical Committee	MOH, NIPH, WHO, UNICEF, ADB, World Bank, GTZ, USAID, UNFPA	MOH, MOP, NIS, UNFPA, UNICEF, USAID	MOH, MOP, UNICEF, WHO, DCHDP project implementation unit
Funding	GTZ and ADB	UNFPA, UNICEF, USAID	DCHDP (World Bank)

a. Preah Vihear, Otdar Meanchey, and Pailin were excluded in 1998 for security reasons and these omissions were repeated in 2002 to maintain comparability. They represent less than 3 percent of the total population

a minimum package of activities. It stands to reason that people in these villages would have systematically better access and health outcomes than those that were not yet covered. In contrast, the CDHS 2000 used the master sample of the National Institute of Statistics, based on the 1998 Population Census – a sampling frame that is much closer to that of the NHS 1998 – but covered all 24 provinces.

The different sampling frame used by the 2002 Final Evaluation Survey seems to have resulted in a sample of women of reproductive age that are systematically older, more educated, and more likely to be married than the women in the NHS 1998 and CDHS 2000 (Table C-2). It's particularly remarkable that roughly 23 percent of the NHS and DHS sample of women were age 15-19, while only 15 percent of the Final Evaluation Survey were in this age group. About 31 percent of the NHS and CHDS samples were never married, compared to 21 percent of those in the Final Evaluation Survey. Finally, nearly 22 percent of the women in the Final Evaluation Survey attained secondary school or higher, compared with only 17 percent in the other two surveys. It is highly unlikely that these basic characteristics of the Cambodian population could change so radically over the two-year period 2000- 2002.

For these reasons, extreme caution must be taken in interpreting the results of the three surveys as trends – particularly any comparison between the first two surveys and the final survey, which had a different and possibly biased sampling frame that would be expected to produce better health outcomes. While trends from 1998-2000 can be tracked more confidently, project implementation didn't get rolling until around the time of the mid-term review in late 1999. It would be difficult, therefore, to attribute any changes between 1998-2000 to the project.

With these caveats in mind, there appears to have been a slight improvement in the measles immunization rate between 1998-2000 (from 49.5 to 55.4 percent) and an even slighter increase in the percentage of women seeking antenatal care (Table C-3). The Final Evaluation Survey 2002, in contrast, shows dramatically higher percentages for women seeking antenatal care, deliveries in a medical facility, tetanus immunization of mothers, and complete child immunization. It also shows much lower infant and under-five mortality rates. While 2000-2002 was the peak period of implementation for the DCHDP, it is difficult to know how much of this apparent increase is due to better access to health care and how much is due to the sampling frame of the 2002 survey.

The Final Evaluation Survey 2002 also shows considerably higher levels of HIV/AIDS knowledge than the 2000 CDHS on a number of prevention methods – using condoms (86 percent in 2002, 66 percent in 2000), avoiding sex with prostitutes (35 percent in 2002, 19 percent in 2000) – and the percent believing that a healthy person can have AIDS was much higher in 2002 (86 percent versus 63 percent in 2000) (Table C-4).⁴⁵ These probably represent a real increase (although the exact magnitude may be slightly less) and reflect most likely the effort on the 100% condom use campaign as well as successful social marketing of Number One condoms by PSI. However, it is interesting to note that respondents in the 2002 survey were much less

45. The 1998 NHS failed to collect any data on HIV/AIDS knowledge or sexual behavior.

likely to cite abstinence, limiting the number of partners, and being faithful to one partner as a means for prevention, compared with the 2000 CDHS.

Table C- 2. Demographic Characteristics of the 1998, 2000 and 2002 Samples

Characteristic	NHS 1998	CDHS 2000	Final survey 2002
<i>Households</i>			
Mean household size	5.5	5.4	5.6
Population <15 (percent)	44.2	42.7	40.7
Percent female headed	21.8	25.4	17.5
<i>Women of reproductive age (percent)</i>			
Age 15-19	23.5	23.6	14.9
Age 20-24	13.3	12.9	17.4
Age 25-29	16.1	13.8	12.1
Age 30-34	14.6	14.3	15.2
Age 35-39	13.3	14.1	15.1
Age 40-44	10.5	12.0	13.6
Age 45-49	8.7	9.3	11.7
Married	60.6	59.1	71.0
Never married	30.8	31.8	20.5
Widowed/divorced	8.6	9.1	7.9
No schooling	27.5	28.3	22.1
Primary schooling	55.4	54.6	55.6
Secondary and higher	17.1 ^a	17.1	21.6
Sample size	7,630	15,351	15,536

Source: NHS 1998 final report and Coffey Philippines Inc (2002).

Notes: a. Table 3.1 of the NHS 1998 contains a typographical error for the percent of women with secondary or higher education (20.0 percent). This is the correct figure based on the weighted number of women in column 2 of that report.

Table C- 3. Health Care Utilization and Health Outcomes, Three National Surveys

Indicator	National Health Survey 1998	Demographic and Health Survey 2000	Final Project Evaluation Survey 2002
Utilization			
Percent of live births in the past five years whose mothers consulted antenatal care from a medical practitioner	34.3	37.7	55.7 ^a
Percent of live births in past 5 years delivered in a medical facility	9.7	9.9	16.1 ^a
Percent of live births in past 5 years delivered by a trained medical staff	34.0	31.8	38.1
Percent of children whose mothers had at least one tetanus shot during pregnancy	39.8	44.8 ^b	67.2 ^a
Percent of children 12-23 months vaccinated against measles	49.5	55.4	57.0
Percent of children 12-23 completely immunized (TB, polio, DPT, measles)	38.9	39.9	52.0 ^a
Outcomes			
Infant mortality rate/1000 live births ^c	89 ^d (1993-1997)	95.0 ^d (1995-1999)	78.0 ^a (1997-2001)
Under five mortality rate/1000 live births ^c	115 ^d (1993-1997)	124.4 ^d (1995-1999)	82.8 ^a (1997-2001)

a. Differences in indicators between 1998 and 2002 would be statistically significant if they were assumed to be from the same population. However, due to the difference in sampling methodologies between the two surveys, this may not be a correct assumption. b. Percent of mothers with live births in the past five years who have been immunized; if multiple births then the most recent birth. c. Mortality rates are for the five years before the survey. The 2002 mortality rates are being re-computed. d. The difference between the 1998 NHS and 2000 CDHS mortality rates are not statistically significant. The CDHS infant and child mortality rates are systematically higher for all previous periods (0-4 years, 5-9, 10-14, etc.) than the rates for the same periods calculated using the 1998 NHS. However, both surveys suggest an increase in infant and under five mortality indicators between the early and mid-1990s (NIS et al. 2001, pp. 123-124).

Sources: NHS 1998 (Tables 6.2, 6.3, 6.5, 6.7); NIS et al. 2001 (Tables 12.2, 12.5, 12.7, 12.8, and 12.17); Coffey Philippines Inc (2002) (Chapter 11).

Table C- 4. Knowledge of HIV/AIDS^a Among Women 15-49, 2000-2002

Indicator	Demographic and Health Survey, 2000	Final Survey, 2002
Has heard of HIV/AIDS	94.8	98.8
Knows that HIV/AIDS can be prevented by:^b		
<i>Abstaining from sex</i>	22.9	7.9
<i>Limiting sex to one partner/stay faithful to one partner</i>	35.5	25.0
<i>Limiting the number of sexual partners</i>	19.0	5.4
<i>Using condoms</i>	66.3	86.1
(Urban)	79.6	89.7
(Rural)	63.4	85.5
<i>Avoiding sex with prostitutes</i>	19.4	35.0
(Urban)	29.6	36.0
(Rural)	17.2	34.8
<i>Avoiding transfusions</i>	13.7	19.7
Believes that a healthy person can have the AIDS virus	62.6	86.2
(Urban)	77.4	91.0
(Rural)	59.4	85.4
Sample size	15,351	15,536

a. Knowledge of ways to prevent HIV/AIDS were solicited through open-ended questions (unprompted).

b. The question soliciting these answers was identical in the two surveys (an open-ended question in which the interviewer circles all responses that were mentioned). However, this formulation is very sensitive to the motivation of the interviewers to continue probing. This may have been a factor in the seeming huge decline in the percent of respondents mentioning abstinence and fewer sexual partners.

Sources: Cambodia Demographic and Health Survey 2000, Tables 14.1, 14.2, 14.4. Coffey Philippines Inc. (2002), Chapter 10, Tables 64-66.

Annex D. Trends in HIV Prevalence Among Population Groups

Figure D-1. Trends in HIV Prevalence Among Brothel-Based Sex Workers by Province, 1995–2002

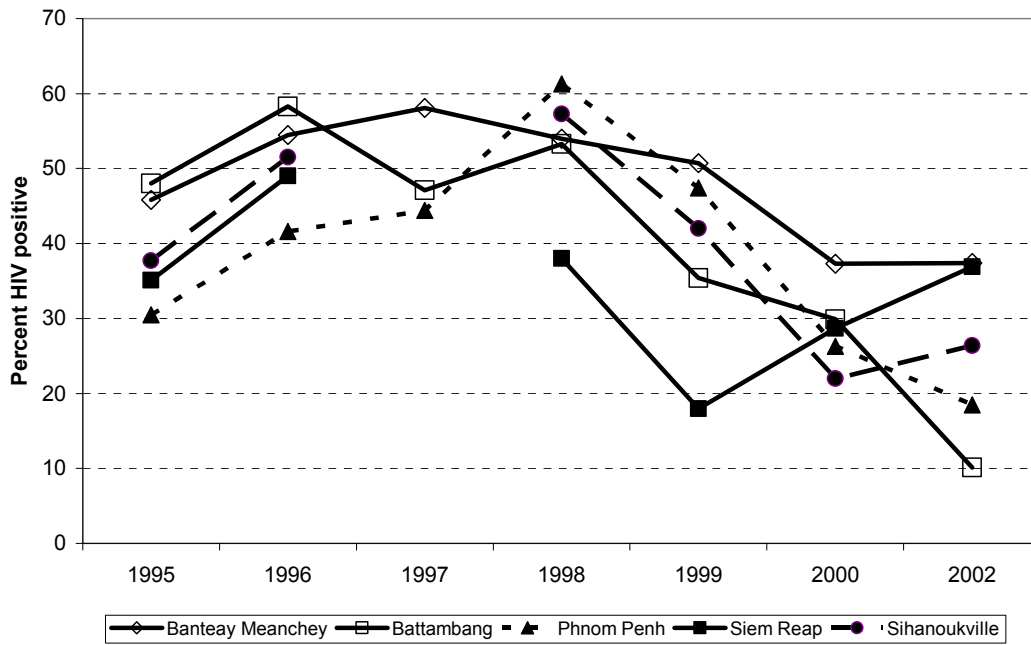


Figure D-2. Trends in HIV Prevalence among Police by Province, 1995–2002

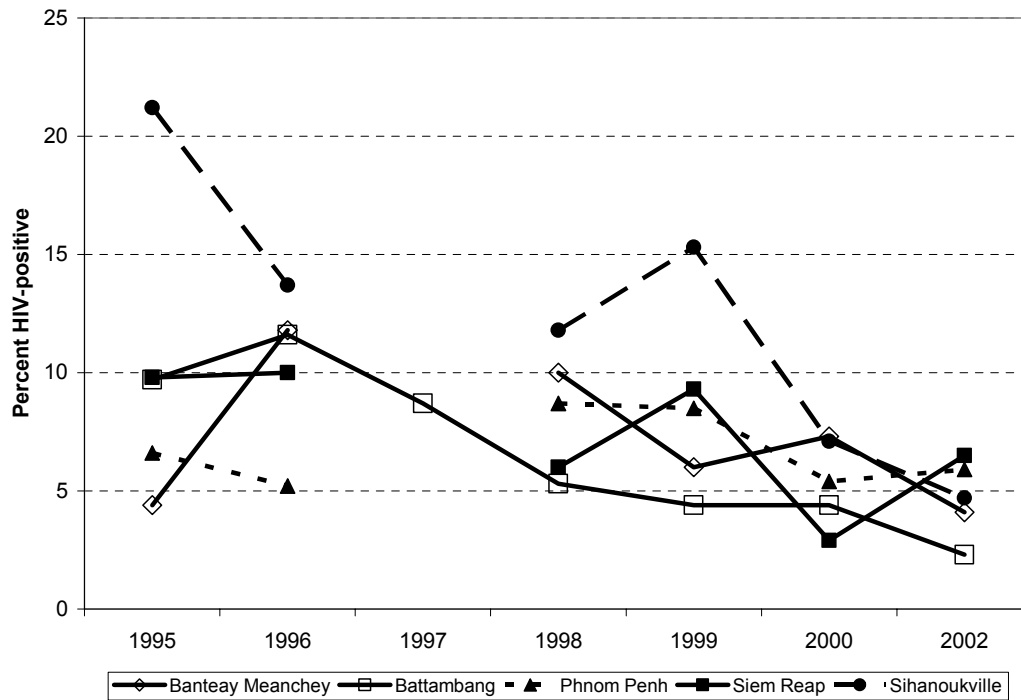


Figure D-3. Trends in HIV Prevalence among Women Attending Ante-Natal Clinics by Province, 1995–2002

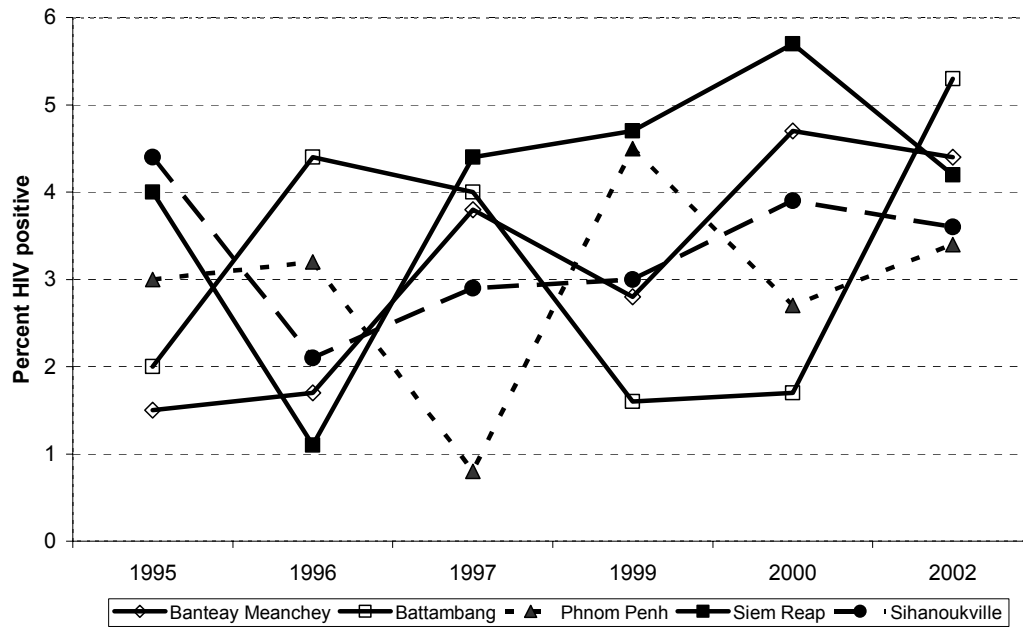
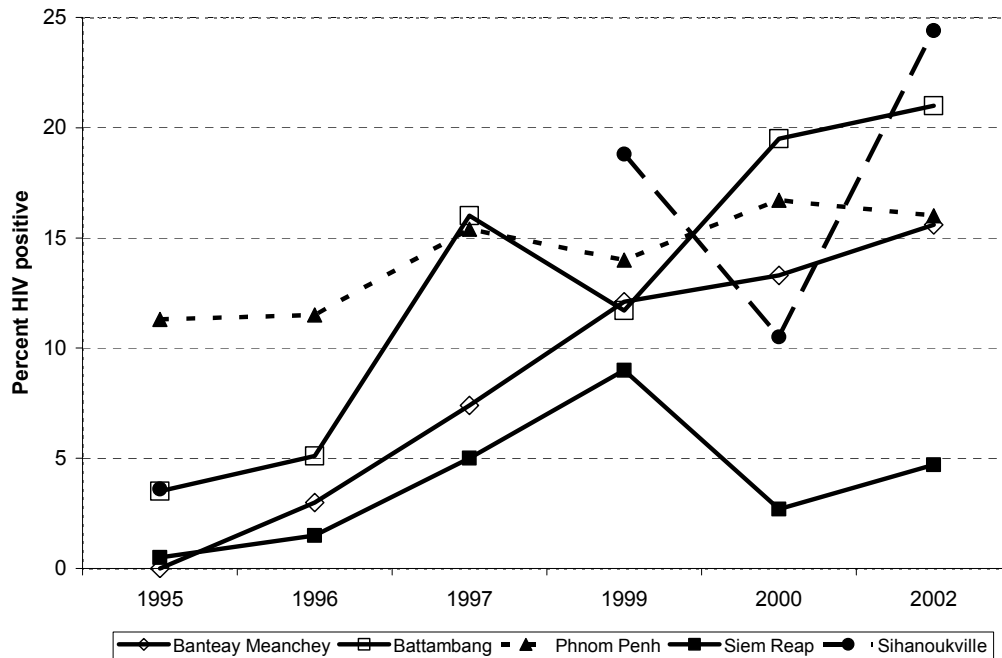


Figure D-4. Trends in HIV Prevalence among TB Patients by Province, 1995–2002



Source: NCHADS HIV Sentinel surveillance data.

Annex E. Bednet Statistics, 2000 CDHS

Figure E-1. Household Ownership of Bednets and Percent Impregnated with Insecticide in the last 12 months, DHS 2000

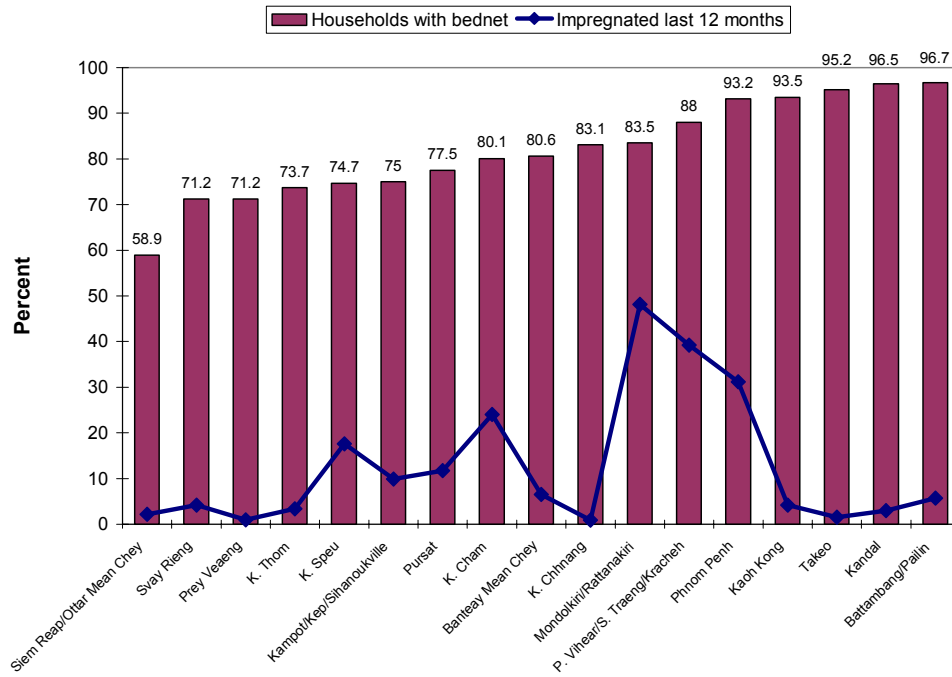
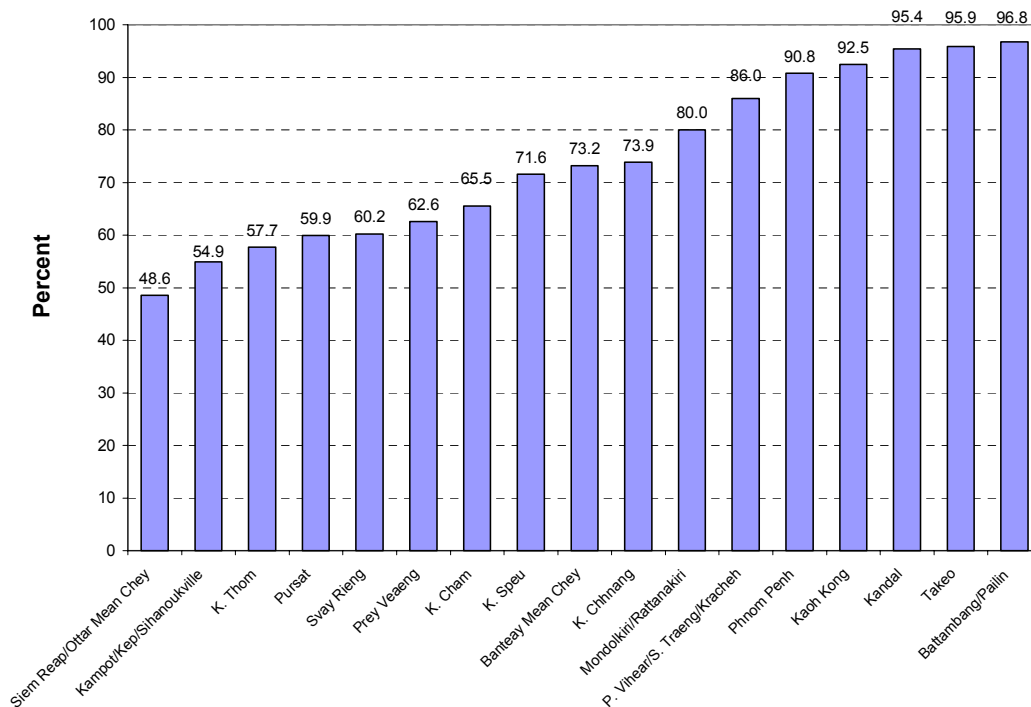


Figure E- 2. Percent of Women of Reproductive Age who Slept Under a Mosquito Net the Previous Night, DHS 2000



Annex F: Timeline of events for HIV/AIDS in Cambodia

Year	Cambodia		International donors	World Bank & PCU
	National events	HIV/AIDS events		
1991	<ul style="list-style-type: none"> ▪ Paris Peace Accord, Oct 23 ▪ UN Advance Mission in Cambodia (UNAMIC) set up to keep the peace, October 1991- March 1992 	<ul style="list-style-type: none"> ▪ First HIV case detected by blood screening ▪ National AIDS program established 		
1992	<ul style="list-style-type: none"> ▪ UN Transitional Authority in Cambodia (UNTAC) deployed, March 1992. At its peak, 21,000 military and civilian personnel from more than 100 countries deployed. ▪ UNHCR oversees repatriation and resettlement of 365,000 refugees and displaced persons, March 1992-March 1993. At peak, 40,000/ month arriving. 	<ul style="list-style-type: none"> ▪ Two-year AIDS plan developed (1992-93) ▪ National AIDS Committee, chaired by Minister of Health, formed to provide a multi-sectoral response to the epidemic 		
1993	<ul style="list-style-type: none"> ▪ First free elections under the UN Transitional Authority in Cambodia (UNTAC) – May 25 ▪ New constitution and government formed with two prime ministers (Prince Norodom Ranariddh of FUNCINPEC and Hun Sen of PPC), UNTAC leaves. ▪ Khmer Rouge rejects election results and resumes insurgency 	<ul style="list-style-type: none"> ▪ National AIDS Office established ▪ National AIDS Plan (1993-98) developed ▪ National AIDS Council (multi-sectoral) and National AIDS Secretariat established ▪ Tia Phalla, deputy director and acting director of ACP (until 1999) ▪ TV campaign for condoms launched ▪ First AIDS case reported 	<ul style="list-style-type: none"> ▪ Financing of NAO by WHO/GPA 	<ul style="list-style-type: none"> ▪ Economic mission to Cambodia, including health, November 1-25 ▪ The first IDA credit to Cambodia, <i>Emergency Rehabilitation Project</i> (\$63 million), was approved by the WB Board in October, became effective in January 1994. Paid mainly for critical imports in agriculture, transport, power, water, education, health and administration.
1994		<ul style="list-style-type: none"> ▪ Provincial AIDS Councils (PAC) and Provincial AIDS Secretariats (PAS) established 	<ul style="list-style-type: none"> ▪ Global Program on AIDS pulls out ▪ PSI launches social marketing of “Number One” 	<ul style="list-style-type: none"> ▪ Report from WB economic mission: <i>Cambodia: From Reconstruction to Development</i>, including needs in health & communicable diseases (malaria, TB,

Year	Cambodia		International donors condoms (late in the year), funded by DFID and USAID	World Bank & PCU AIDS (Feb) ▪ <i>Technical Assistance Credit</i> (\$17 million) approved (Nov) to enhance government's economic management capacity, re-establish legal institutions and promote private sector development. Trg of civil servants. ▪ DCHDP identification mission (Dec)
	National events	HIV/AIDS events		
1995	<ul style="list-style-type: none"> ▪ Council of Ministers was on the verge of closing brothels. 	<ul style="list-style-type: none"> ▪ Attempts by government to close down brothels; Tia Phalla, w/support of Peter Piot, argues against it ▪ Outreach and peer education of sex workers launched, but internal travel difficult because of lack of security ▪ Sentinel surveillance launched 	<ul style="list-style-type: none"> ▪ Kirby Report (Australian) claims that the government was violating rights of sex workers by cracking down. ▪ UNDP launched project to prevent HIV in the military & sponsored study tours to Thailand. 	<ul style="list-style-type: none"> ▪ First <i>Country Assistance Strategy</i> emphasizes shortage of public sector capacity and sharp declines in health indicators. Proposes project to rehabilitate & expand public health system and support communicable disease control (malaria, TB, AIDS) ▪ <i>Economic Rehabilitation Credit</i> (\$40 million) approved for balance of payments & budgetary support. ▪ <i>Social Fund Project</i> (\$20 million) approved (May), implemented by SFKC. By 1999, 1,431 sub-projects worth \$17 million & eligible applications for additional \$52 million received. ▪ Two large (10-11 person) DCHDP preparation missions (Aug & Nov).
1996	<ul style="list-style-type: none"> ▪ Mass defections of Khmer Rouge (3,000-4,000) 	<ul style="list-style-type: none"> ▪ Two-day HIV/AIDS policy and implementation workshop for 60 program managers and four experts from Thailand ▪ STD survey conducted 	<ul style="list-style-type: none"> ▪ UNAIDS came into existence but had limited funding for Cambodia 	<ul style="list-style-type: none"> ▪ Four WB project appraisal/negotiation missions (Feb, March, July, Nov) ▪ DCHDP approved by World Bank (Nov), with \$6.5 million for HIV/AIDS
1997	<ul style="list-style-type: none"> ▪ Pol Pot ousted and imprisoned by Khmer Rouge ▪ Coup d'état by Hun Sen (July) ▪ Following the East Asian economic crisis, riel depreciates against the dollar 	<ul style="list-style-type: none"> ▪ Government proposes to establish NCHADS as a department with its own budget and account (Sept) ▪ First Cambodian PWA speaks out on World AIDS Day (Dec) ▪ Behavioral surveillance launched ▪ 3 NGO grants made 	<ul style="list-style-type: none"> ▪ FHI initiates activities among policy and the military (1997-98) ▪ EC STI project launched ▪ Following coup, donor assistance withdrawn. US prohibits direct funding of 	<ul style="list-style-type: none"> ▪ WB supervision missions (Feb & Nov), new WB Task Manager ▪ DCHDP becomes effective (June 23) ▪ Second <i>Country Assistance Strategy</i> (Jan) highlights non-lending services: analytic work; capacity building through Economic Development Institute; aid

Year	Cambodia		International donors government programs; only through NGOs	World Bank & PCU coordination.
	National events	HIV/AIDS events		
1998	<ul style="list-style-type: none"> ▪ National events by about 40% ▪ Second population census finds 11.4 million – previous census was in 1962 ▪ Pol Pot dies (April) ▪ National elections (July) lead to formation of a coalition government ▪ Outbreak of dengue fever (May-Sept) ▪ Remaining Khmer Rouge surrender (Dec) 	<ul style="list-style-type: none"> ▪ NCHADS created under directorship of Mean Chhi Vun ▪ NCHADS estimates 210,000 adults with HIV in 1997 ▪ World Bank TA (Godwin) arrives in Phnom Penh, until July 2001 ▪ National Strategic Plan (1998-2000) finalized ▪ Thailand's Dr. Wiwat presents 100% condom use idea to national AIDS committee; permission granted to pilot a Cambodian version in Sihanoukville ▪ STD clinic workers trained in Sihanoukville using EC-financed clinic, supervised by Crabbé (Oct) ▪ Outreach program externally evaluated (condition of DCHDP) ▪ Pilot program for home-based care implemented in Phnom Penh 	<ul style="list-style-type: none"> ▪ National baseline survey for DCHDP and BHSP conducted with ADB funding (NHS 1998) ▪ WHO funded visit of Dr. Wiwat to speak with NAC ▪ DFID & WHO support home-based care pilot project in Phnom Penh (Feb 1998-Feb 1999) 	<ul style="list-style-type: none"> ▪ WB supervision mission (June) ▪ Civil works of DCHDP contracted to SFKCC, including construction/ renovation of AIDS offices, blood transfusion centers, STD clinics, RH and HC (July) ▪ Dr. May Tum is working as WB unit chief in PCU.
1999	<ul style="list-style-type: none"> ▪ First full year of peace in 30 years ▪ Severe flooding 	<ul style="list-style-type: none"> ▪ National AIDS Authority (NAA) created, replacing the NAC and NAS, to coordinate a multi-sectoral response (Jan): 15 ministries, Cambodian Red Cross, & 24 provincial governments ▪ DCHDP sponsors field trip to S. Africa, Kenya, Thailand, India for NCHADS officials, PCU manager, 2 provincial health directors, 2 governors (March) ▪ Sub-committee on TB & HIV established by NCHADS and CENAT (March) ▪ First National AIDS Conference; PM signs decree to support 100% condom use, but not to legalize prostitution, admits he is torn. (March) ▪ Draft national policy on 100% CU developed, based on lessons from Sihanoukville (July- 	<ul style="list-style-type: none"> ▪ 6th International Conference on HIV/AIDS in Asia and the Pacific (ICAAP), Kuala Lumpur (Oct) 	<ul style="list-style-type: none"> ▪ Second <i>Social Fund Project</i> (\$27.7 million) approved by WB (Mar), to be implemented by SFKCC ▪ WB supervision missions (Feb & June) ▪ New WB task manager (April) ▪ Contract signed with KHANA to implement capacity building and small grant component (Aug). Grants to 2 NGOs used to pilot home-based care in Battambang province. ▪ Mid-term review of DCHDP (Dec) ▪ Dr. Sieng Nam becomes UB unit chief in PCU

Year	Cambodia		International donors	World Bank & PCU
	National events	HIV/AIDS events		
2000	<p>National events</p> <ul style="list-style-type: none"> ▪ <i>Interim Poverty Reduction Strategy Paper</i> (Dec) : reviews past achievements in poverty reduction & human resource development; critiques past strategies; sets agenda for data collection & policy analysis; involves many government agencies & external partners. ▪ PM closes all karaoke places (Nov) 	<p>HIV/AIDS events</p> <p>August)</p> <ul style="list-style-type: none"> ▪ PM issues video at ICAAP in Kuala Lumpur supporting the 100% CU program (Oct) ▪ Training course for AIDS care conducted for physicians ▪ MOH and NCHADS take over responsibility for coordination of post-pilot HBC program; Khana supplied technical & financial support to NGOs. HBC piloted in Battambang province w/Khana support financed by DCHDP. ▪ NCHADS estimates that 169,000 Cambodians are HIV-positive. HIV declines in all sentinel groups except bar workers. ▪ MOH approves Strategic Plan for HIV/AIDS and STI Prevention and Care, 2001-2005. ▪ Second National Conference on AIDS in Cambodia (Dec) ▪ 100% Condom Use program launched 7 provinces 	<ul style="list-style-type: none"> ▪ USAID authorizes \$2 million for HIV/AIDS programs, FY2000 	<ul style="list-style-type: none"> ▪ Dr. Uy Vengky becomes new WB unit chief in PCU ▪ 90-day advance accounts for training established in the 11 project provinces (mid-year) ▪ WB supervision (Aug & Dec) ▪ <i>New Country Assistance Strategy</i>, confirms commitment to improved access to health care for the poor, relevance of malaria, TB, and AIDS control.
2001	<ul style="list-style-type: none"> ▪ Law on the Prevention & Control of AIDS passes the National Assembly, ensures confidentiality of AIDS info, prohibits discrimination against PWA & families. 	<ul style="list-style-type: none"> ▪ DCHDP TA ends (July) ▪ STI prevalence survey ▪ 100% Condom Use program extended to 15 provinces 	<ul style="list-style-type: none"> ▪ EC STI project ends ▪ USAID authorizes \$9.5 million for HIV/AIDS, FY2001 	<ul style="list-style-type: none"> ▪ Dr. Mean Chhi Yun becomes project director ▪ KHANA receives \$412,000 in trust fund money through the Bank, for use through May 2003 ▪ WB supervision mission (July)
2002		<ul style="list-style-type: none"> ▪ Third National AIDS Conference (or second?) ▪ National Framework for TB/HIV approved by the Bank ▪ 100% Condom Use extended to all but 3 provinces (Kep, O. Meanchey, Mondulkiri) because of lack of sex workers. ▪ AEM model released (Nov), estimates 164,000 HIV-positive, 259,000 cumulative infections, 94,000 deaths, and 7300 new infections/year. 	<ul style="list-style-type: none"> ▪ USAID authorizes \$12 million for HIV/AIDS ▪ GFATM approves \$15.9 million grant to Cambodia for HIV/AIDS over 5 years. Second round grant of \$14.9 million pending. 	<ul style="list-style-type: none"> ▪ WB supervision mission (March) ▪ AIDS budget for the project runs out in April ▪ Project closes (December) ▪ HSSP (\$31.9 million) approved by WB, including \$2 million IDA grant for AIDS to finance STD drugs and 100% condom program. Doesn't become effective until August 2003.

Annex G. Borrower Comments

G-1: COMMENTS FROM THE DIRECTOR GENERAL FOR HEALTH

KINGDOM OF CAMBODIA

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MINISTRY OF HEALTH No. &? ? / . .gam

**Ms. Martha
 Ainsworth**
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 Health and
 Education The
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 ~Sector and Thematic Evaluation
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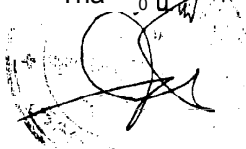
Re. Cambodia Disease Control and Health Development Project (CDCHDP)

Subject: Comments on Project Completion Report.

Dear Ms. Martha Ainsworth,

First of all we would like to express our sincere thank to the World Bank's supports to Cambodia, especially, for the health sector. We had carefully reviewed the OED' s report on the completion of the Cambodia Disease Control and Health Development Project (Cr. N005KH) and agreed that the report provides most relevant and correct information of the Project. We also wish to inform you that based on the successful experience in utilizing the Health Management Agreement as a tool to manage the project funds and activities at provincial level, this experience is now extended to cover activities of all 24 provinces including

Tha



provinces-supported under ADB and DFID.
 Prof. Eng. Huot
 Director General for Health

.CC. Mr. Alain Barbu, Manager, Sector and Thematic Evaluation Group, The World Bank.

G-2: COMMENTS FROM NCHADS⁴⁶

A. General comments

NCHADS agrees with the analysis and conclusions of the Report. In particular, NCHADS confirms that:

- **Institutional Development Impact** has been high; the successful coordination by NCHADS of the recent 4th Round Proposal to the Global Fund to fight AIDS, TB and malaria, for support for the Continuum of Care and introduction of ART, valued at \$38 million, and including 8 NGOs, is a good example of the institutional capability developed in NCHADS.
- **Sustainability** for NCHADS has been assured: the technical and implementation strategies and procedures developed under the project have been further built upon to become NCHADS Standard Operating Procedures used in all NCHADS activities especially for funds received from ADB, the EU, CDC-GAP, DFID, the GFATM and the University of New South Wales-led Research Consortium. These now total some \$7 million per year. In addition, the actual HIV/AIDS related activities initiated at provincial level under the project are being continued and extended with this funding for the next five years.
- **Bank Performance** was quite satisfactory throughout. Indeed, consistent Bank support for the development of the NCHADS programme was an important factor in its success.
- **Lessons for HIV/AIDS Assistance** have been clearly established and used to strengthen the NCHADS programme as it grows and expands.

B. Specific comments

Para 3.8: At the time of the project ACLEDA did not have branches in all provinces; some branches have only been opened in 2002. Still not all provinces are covered.

Para 4.7: Note that the NCHADS strategic plans are not NATIONAL strategies: National Strategies are coordinated by the NAA; NCHADS strategies are **health sector strategies** that contribute to overall National Strategies.

Para 4.8: Integrating the HIV/AIDS programme with basic services has been and remains a priority. It should be noted that at the time of the design of the MPA and CPA HIV/AIDS activities were still nascent, and unclear, so were by and large not included. With the formal approval of the Framework for the Continuum of Care for PLHA in 2003 considerable progress is being made for better integration. However, STD treatment for the general population has been integrated at health centre level since the 1998, and is available in 589 HCs.

⁴⁶ Editorial corrections identified by the borrower that have been corrected in the text have been omitted to conserve space.

Para 4.8, Box 1:

- Under the 100% Condom Use programme is that it is **mandatory** that condoms are available in brothels
- The Programme was externally reviewed by a WHO/UNAIDS team in 2003.
- The most recent BSS (2003) indicates the success of the programme in reaching sex workers: 48% of brothel-based sex workers visited the public hospital or clinic for their last STD; 60% of brothel-based sex workers quote 'trainings' (ie presumably given as part of the programme) for their main source of information about HIV; 43% and 31% of brothel-based sex workers give PAO staff and STI clinic staff respectively as the source for female groups to receive information about HIV/AIDS.
- The sex worker clinic in Sihanoukville was entirely supported by the EU STI project; all the other 26 clinics are managed by the government and were supported by the DCHDP project. From 2001 6 clinics were upgraded and supported from the ADB project; from 2003 a further 12 are being upgraded and supported from DFID funds.

Para 4.9: Dr Saphorn Vonthanak has conducted a **study of incidence** among antenatal women, using de-tuned Elisa, for his Ph.D thesis at UCLA. This will be formally disseminated soon.

Para 6.10: While the MoH does coordinate key health interventions, it should be made clear that the NAA has the responsibility for **coordinating the multi-sectoral response** in Cambodia. The MoH contributes, through the NAA Policy and Technical Boards, to this overall, multi-sectoral, national response.

Para 6.12: In fact the BSS 2000 (BSS IV) was conducted as a household survey among 3166 adult males from the general population.

NCHADS, 19 April 2004

G-3: Comments from SFKC

March 23, 2004.

Ref: Disease Control and Health Development Project (Credit no.N005-KH)

Dear Ms. Martha Ainsworth,

I am pleased to acknowledge receipt your draft report dated March 09, 2004 on project performance assessment report of the Disease Control and Health Development Project (DCHDP). Taking this opportunity, I would like to express my profound thankfulness for the information given that the overall performance of SFKC in the civil works component of DCHDP was satisfied. With referring to page 27, 1st Para, the report indicated that **"....., where the SFKC relied more heavily on local shopping, reducing competition and raising the costs...."**, I wish to clarify that SFKC had strictly familiarized with the procurement procedures and the relevant threshold for each procurement method mentioned in the credit agreement. I recognized that in phase II a lot of projects had been procured under local shopping method. In fact, we had no intention to break down the total sub project cost in the same province in small amount to conduct local shopping method. The reasons to conduct the local shopping are as follows:

1. The design of some projects in the same province did not finalize and submit to SFKC at the same time. In this connection, we were obliged to break down the whole projects in different parts as the completion of all designed projects could not provide on time at once.
2. The cost of some projects are small and
3. Urgent need of those facilities requested by MOH push us to implement the project with local shopping method.

I am hoping that our above clarification would be met your understanding.

Thanking you and best regards

Chum Bun Rong
General Director