



United Nations Development Programme
South East Asia HIV and Development Project

CAMBODIA HIV VULNERABILITY MAPPING

Highways One and Five



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FOREWORD

The rate of HIV infection in Cambodia is the highest for all of South East Asia at present. Economic liberalization, intermittent political instability, improvement of major road systems and increased exposure of formerly insulated communities and persons to outside contacts have exacerbated the vulnerability to HIV of the Cambodian people.

The planned reconstruction of two of Cambodia's major roadways, Highway One and Highway Five, pose a number of challenges in the battle against HIV/AIDS transmission. Cutting across the country, these two highways link Cambodia to its neighbours of Thailand and Viet Nam. Increased population movement including short-term movements between villages and cities, and the increase in economic activity surrounding large-scale construction projects along transit routes, serve as catalysts for the spread of HIV/AIDS.

Mobile populations such as long-distance truck drivers, commercial sex workers, seafarers, and migrant workers, are increasingly coming in contact with local communities where services are provided at places such as brothels, gambling places, hotels, guest houses, restaurants, bars and car parks. Interaction among these diverse sectors provides fertile ground for the transmission of HIV/AIDS.

To respond to this challenge, UNDP South East Asia HIV and Development Project (UNDP-SEAHIV) focuses its work on the linkages between development, population movement and HIV/AIDS.

This Cambodia study assesses the linkage between population movement and the spread of HIV/AIDS along Highway One and Highway Five to determine HIV vulnerability along these routes in Cambodia.

This mapping assessment employed surveys, interviews and site visits to identify the significance and the location of the various types of movement paying special attention to intersection/interaction points and patterns. This study forms the basis to formulate action plans, to be developed and implemented by relevant authorities & NGOs after national consultation.

The UNDP-SEAHIV gratefully acknowledges the coordination efforts of UNDP Cambodia country office, in particular Mr. Tea Phauly, HIV Focal Point of UNDP, Cambodia; the National Centre for HIV/AIDS, Dermatology and STD, Cambodia; other agencies; and staff at the provincial AIDS secretariat for their research and for compiling the information contained herein.

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EXECUTIVE SUMMARY

The mapping of HIV vulnerability along Highway One and Highway Five was initiated by the UNDP-SEAHIV. Data collection was undertaken by the National Centre for HIV/AIDS, Dermatology and STD (NCHADS). Findings are being used to develop the country's AIDS Action Plan for HIV Prevention over the next few years. NCHADS is conducting a nation-wide assessment as part of its 100 per cent condom use implementation plan.

HIV vulnerability factors in Cambodia are numerous. Economic liberalization and intermittent political upheaval have increased exposure to HIV, with a large number of incoming visitors, movement of refugees and ex-soldiers, movement of people from the countryside to the capital city, increased availability of commercial sex, cultural changes regarding extra-marital sexual practices, low levels of education, poverty and inadequate responses from government agencies, as well as preference for using injecting forms of medication, are but some of these factors.

It is feared that the construction of the Association of Southeast Asian Nations (ASEAN) highway linking Cambodia to its neighbours in East Asia might increase the vulnerability to HIV among these connecting countries.

NCHADS and the Provincial AIDS Secretariats' staff collected data using a standard questionnaire from late August to early September 1999. Data were then translated into English for compilation into the final report.

The study shows that while the local response to the HIV epidemic along the two highways is not well established, there are numerous factors which potentially may increase HIV vulnerability along the two highways and beyond.

Vulnerability has also been increasing due to changing attitudes and behaviours among men toward extra-marital sex, particularly among relatively highly paid drivers and their crews. It is expected that once these two highways are fully operational, the spread of HIV will intensify among the communities along these highways.

Effective intervention to reduce HIV vulnerability with the collaboration of communities, construction contractors, and government authorities, is vital in preventing the HIV pandemic.

I. BACKGROUND

In Cambodia, HIV/AIDS is a priority public health concern. The rate of HIV infection is the highest in South East Asia. HIV prevalence among blood donors increased from 0.1 per cent in 1991 to 3.6 per cent in 1997. By 1998, the HIV prevalence was 3.6 per cent among adults (18 - 45 years old), 2.6 per cent among women at childbearing age, and 30 to 60 per cent among sex workers. There were 1,494 AIDS patients treated in public health facilities, out of an estimated 16,000 AIDS patients in the country. Today the estimate is 180,000 HIV infected people in Cambodia¹.

UNDP-SEAHIV is mapping HIV vulnerability along major transportation highways, which link neighbouring countries in the Greater Mekong Sub-region. NCHADS is planning a similar nation-wide assessment as part of its 100 per cent condom implementation plan. This HIV vulnerability mapping for Highways One and Five forms a component of the overall national assessment. The existing infrastructure was mapped and a behavioural study conducted. The entertainment facilities or "hot spots" refer to places where high risk behaviour may occur.

II. LAND TRANSPORT

A. *Highway One*

(1) Highway condition

Highway One was constructed in the 1950s connecting Phnom Penh, Kandal, Prey Veng, Svay Rieng (See Maps 1, 2, and 3), and ending at Baveth at the Cambodian-Vietnamese border. The highway was almost completely destroyed during the wartime period of the 1970s and was repaired during the 1980s.

The highway has been repaired from time to time but due to lack of funds, overloaded transportation and improper maintenance, it is now in poor condition. There are no traffic signs or divided lanes for the traffic. The highway from Phnom Penh to Neak Loeung West (Kandal Province) is in fair condition, but the highway from Neak Loeung East to Baveth (Svay Rieng Province) is in poor condition.

Repair of the Neak Loeung to Baveth section of highway, funded by the Asian Development Bank (ADB) began in December 1999 and is expected to be finished in mid-2003. The work will cover a length of 105.5 kilometers at a cost of US\$ 22.9 million. The work includes expansion of the highway width to 11.5 meters, repair of six bridges and construction of four new bridges. The highway will be rebuilt and its quality improved to meet international highway standards². In Kampong Trabek (Prey Veng Province), road construction is in its initial stages. In Svey Rieng Province, it is expected that three major workshop stations (for road workers) will be erected in Krol Ko, Prasoth and Baveth districts.

¹ Ministry of Health, Department of Health Planning & Information, Health Situation Analysis 1998 and Future Directions 1999- 2003 (briefing paper), 1999: 6.

² Raksmev Kampuchea Newspaper, No. 2015, Year 7 Issue, 11 December 1999: A8.

The upgraded highway will not only improve economic activity within Cambodia, especially in eastern provinces, but will also link the country to the ASEAN highway in the Mekong Sub-region and other Asian countries. Currently, Highway One allows relatively free movement of passengers within the country and across the border. Once the repairs are completed, it is expected that a much greater volume of traffic will pass between the two countries.

(2) Vehicle movement

Transport movement along Highway One is hampered by poor highway conditions and delays in ferry crossings at the Mekong River. The average number of daily vehicles using Highway One is 75 passengers taxis, 35 freight trucks, 34 private cars, eight government cars, six military cars and 15 tourist coaches. In addition, there are a lot of motorcycles, moto taxis and Remork Motos on the highway. These figures fluctuate widely according to the season and festivities.

Points of highest density in transport movements and main stops along the highway include Chba Ampoev market (Phnom Penh), Neak Loeung West (Kandal Province, see Map 1), Nak Loeung East (Prey Veng Province, see Map 2), Svay Rieng provincial town, Chi Phu, and Baveth (Svay Rieng Province, see Map 3).

These locations have developed into small towns with high population density and booming businesses. Standards of living in these towns are relatively high compared to areas nearby. There are increased numbers of sex workers (Srey Khoch), beer promotion girls (Srey Langse) and massage girls (Srey Massage) working in these areas (excluding Nak Loeung West). These places are considered “hot-spots”. Different types of drivers may stop at these points for transit, to rest, fill petrol and for sexual entertainment. Thus, people living and passing through these places are vulnerable to HIV infection.

Vietnamese and Cambodian vehicles are not allowed to travel across the border except with special permission (and/or for diplomatic purposes) from both governments or from bordering provinces. Passengers and goods usually have to be transferred at Baveth before being transported to Cambodian or Vietnamese sites. Goods transported from Viet Nam to Cambodia include toys, foods, cereals, agricultural products, vegetables and fruits. Goods transported to Viet Nam include cigarettes, motorcycles, beers and construction materials. It is common for Vietnamese girls to pass from Viet Nam into Cambodia to serve as sex workers. However, Cambodian girls hardly ever cross the borders to do sex work in Viet Nam.

(3) Drivers

Though most Cambodian drivers hold driving licenses, they have limited knowledge of driving skills. Most of them receive minimal proper training at driving schools. Some of them are self-taught drivers. If they drive for long periods of time, they usually change with reserve drivers from the crew. Truck drivers and crews receive higher salaries, ranging from US\$ 80 to US\$ 120 per month, compared to civil servants and factory workers, who earn US\$ 15 to US\$ 25 and US\$ 40-US\$ 60, respectively. Crew members receive from US\$ 40 to US\$ 60. It is possible that drivers and crews seek sexual entertainment at truck stops.

(4) Entertainment facilities

Along the highway from Phnom Penh to Baveth, there are 20 brothels, with 13 in Kandal, four in Svay Rieng and three in Baveth. Of 17 karaoke lounges, four are in Phnom Penh, four in Kandal, one in Prey Veng, six in Svay Rieng and two in Baveth. Guest houses number 120, with 10 in Phnom Penh, 100 in Kandal, three in Prey Veng and seven in Svay Rieng (See Maps 1, 2, and 3). In Baveth, just inside Cambodian territory, a new casino is being completed which will reportedly cater to Taiwanese living in Viet Nam. Svay Park, about 9km North of Phnom Penh has approximately 300 Vietnamese sex workers.

(5) Health facilities

Along the highway from Phnom Penh to Baveth, there are three hospitals; two in Prey Veng and one in Svay Rieng. There are 14 Health Centres; two in Phnom Penh, two in Kandal, four in Prey Veng and six in Svay Rieng. Of the three STD clinics, one is in Phnom Penh, one in Prey Veng and one in Svay Rieng. There are also 10 private clinics and a number of drug stores (See Maps 1, 2, and 3).

B. Highway Five

(1) Highway condition

Highway Five was built during the 1950s but was destroyed during the war in the 1970s. It was rebuilt in the 1980s connecting Phnom Penh to the provinces of Kandal, Kampong Chhnang, Pursat, Battambang and Banteay Meanchey up to Poi Pet, at the Cambodian-Thai border (See Maps 4, 5, 6, and 7).

The transport movement along Highway Five is hampered by the poor condition of the highway and bridges. The highway has been repaired intermittently over the years but due to lack of funds for maintenance and overloading of transport, it is now in poor condition. There are no traffic signs or divided lanes for traffic. The highway from Phnom Penh to Punley is in fair condition but from Punley (Kampong Chhnang Province) to Krakor (30km towards Phnom Penh from Pursat Town, see Map 5) the condition is poor. Due to security improvements, truck drivers no longer stop at Krakor or Trapaing (16km on the Battambang side of Pursat), preferring to continue driving during the night.

The Government depends on loans from international organizations and financial institutions such as World Bank, International Monetary Fund (IMF) and ADB to repair this highway. Repair work is expected to start in early-2000. This highway is part of the ASEAN highway which joins Cambodia, Lao People's Democratic Republic, Malaysia, Singapore, Thailand and Viet Nam.

(2) Vehicle movement

The estimated daily number of vehicles transporting goods and passengers along the highway includes 607 passenger cars, 193 freight trucks, 248 private cars, 99 government cars, 41 military cars and 55 tourist cars. Besides these vehicles, motorcycles, moto taxis and Remork

Motos are increasing in number, adding to the congestion. These figures fluctuate widely according to the season and festivities.

The points of highest density for transport movement and the main stops along the highway from Phnom Penh to Poi Pet include Psa Thmey, Psa Toch, Chrang Chamress (Phnom Penh), Prek Phnoev, Ou dong (Kandal Province), Sala No.5, Punley, Kampong Chhnang provincial capital, Grand parking, Kbal Spean Tmar of Pursat Lake (Pursat province), 13 Makara Market, Boeung Chhouk market (Battambang Province), Serey Sophorn market, and Poi Pet market in Banteay Meanchey Province (See Maps 4-7).

These places have become small towns with high density and dynamic businesses. The standard of living in these towns is relatively high compared to nearby areas. The sex industry is very active in a number of these areas. More and more sex workers, srey bar, and srey massage are working there, turning these places into “hot-spots”. Different types of drivers and passengers may stop at these points to rest, fill vehicles with petrol and engage in sexual entertainment. Thus, people living and passing through these places are vulnerable to HIV infection.

Thai and Cambodian vehicles are not allowed to travel across the border except with special permission from both governments or from the bordering provinces, often for diplomatic purposes. Passengers and goods usually have to be transferred at Poi Pet before being transported to Cambodian or Thai sites (See Map 7). Thai trucks are allowed to cross the border and transit to Poi Pet for the purpose of transferring goods for a short duration (from 12 hours to 24 hours). Sometimes, if the transfer is delayed or late, Thai drivers and crews may be allowed to stay overnight in Poi Pet. However, trucks and cars from Cambodian sites are not allowed to enter Thai territory.

Main goods transported along Highway Five include construction materials, consumer goods, food crops, agricultural products, used steel, second hand clothes, fish products, vegetables and fruits. It is important to note that each day about 5,000 Cambodians cross the border to sell products in the Thai market (Loung Koeu) located near the border. All of them are required to return to Cambodian territory at nightfall.

(3) Entertainment facilities

Along Highway Five, from Phnom Penh to Poi Pet on the Cambodian-Thai border, there are 199 brothels: 100 in Phnom Penh, two in Kandal Province, eight in Kampong Chhnang Province, seven in Pursat Province, three in Battambang Province and 79 in Banteay Meanchey Province. There are 46 Karaoke lounges: three in Phnom Penh, 15 in Kandal Province, 10 in Kampong Chhnang Province, five in Pursat Province, three in Battambang Province and 10 in Banteay Meanchey Province. Of 40 guesthouses, three are in Phnom Penh, five in Kandal Province, five in Kampong Chhnang Province, five in Pursat Province, two in Battambang Province and 20 are in Banteay Meanchey Province. Nightclubs total 12, with two in Kampong Chhnang Province, three in Battambang Province and seven in Banteay Meanchey Province (See Maps 4-7).

Poi Pet Town in Banteay Meanchey Province is of particular concern because of its proximity to the border and its reputation as a “business and leisure” place. There are seven brothels in

the town (10-20 girls each) and three large busy casinos near the Thai border on either side of the highway, all of which are open to foreigners, mainly Thais. It was reported that some of the players at the three casinos are Cambodian. Each Casino can accommodate several hundred customers and about 200 to 300 workers. Five more casinos will be constructed here in the near future. In addition, indirect sex services are available in a number of hotels and karaoke bars in Poi Pet. Special events and festivals create the circumstances for increased interaction between villagers living close to Poi Pet and the passing highway traffic and cheap sexual services are reported in places surrounding event locations such as open theatres. The provincial centre of Sisophon is attracting similar business to Poi Pet yet to a lesser extent (See Map 7).

Table 1. Entertainment facilities along Highway Five

	Brothel	Karaoke	Hotel/ Guesthouse	Nightclub
Phnom Penh	100	3	3	0*
Kandal	2	15	5	0
Kampong Chhnang	8	10	5	2
Pursat	7	5	5	0
Battambang	3	3	2	3
Banteay Meanchey	79	10	20	7
Total	199	46	40	12

Notes: * only refer to district Russey Keo

Source: Outreach Programme to Sex Workers, NCHADS 1999

(4) Health Facilities

Along the highway from Phnom Penh to Poi Pet, there are eight hospitals, 45 Health Centres, 17 STD clinics, 37 private clinics and many drug stores (as shown in table 2).

Table 2. Health facilities along Highway Five

	Hospital	Health centre	STD clinics	Private clinic
Phnom Penh	0*	3	1	13
Kandal	1	3	0	8
Kampong Chhnang	2	14	1	1
Pursat	2	8	8	0
Battambang	2	8	4	5
Banteay Meanchey	1	9	3	10
Total	8	45	17	37

Notes: * only refer to district Russey Keo

Source: Outreach Programme to Sex Workers, NCHADS 1999

III. HIV PREVALENCE

Highway One plays a major role as a channel for the exchange of many types of goods between Cambodia and Viet Nam. There are four “hot spots” in Kandal Province (Keb Thmey, Kien Svay, Nimul pagoda area, and Dey Eth plywood factory); one in Prey Veng Province (Neak Loeng East) and two in Svay Rieng (in the provincial town and in Baveth). As Highway Five is very busy, many “hot-spots” have been identified along the highway. Therefore, prevalence of HIV is likely to be high in the future. HIV sero-prevalence among the target population in 1998 for Phnom Penh and the provinces along Highways One and Five are shown in Table 3 below.

Table 3. HIV sero-prevalence among target population (1998)

Province	CSW %	Indirect Sex Workers %	Police %	Hospital in-patients %	Married women %
Svay Rieng	25	17.5	0.7		2.5
Prey Veng	29.3	34	6		2.8
Kandal	21.4	9	8		4
Phnom Penh	61.3	7	8.7	11.3	3.8
Pursat	64.1	28	3.9		2
Kg. Chhnang	39.3	13.6	2		1.5
Battambang	53.3	20.4	5.3	18.4	3.8
Banteay Meanchey	54	22.3	10		0.2

Source: Health Sentinel Surveillance 1998, NCHADS

IV. RISK BEHAVIOUR

Behavioural assessments with respect to HIV vulnerability have been conducted in the communities in Phnom Penh and Kandal Province for Highway One and in Banteay Meanchey and Battambang Provinces for Highway Five. The behavioural assessment was conducted by Behaviour Sexual Surveillance (BSS) among Commercial Sex Workers (CSW), beer girls, factory workers, police, military, motor-taxi drivers, and students. In Kandal Province, an assessment was conducted by Population Services International (PSI) among in-school and out-of-school youths.

Certain places have become "hot spots" because they are favorable for rest, filling petrol, refreshment, lunch (or dinner), overnight stays, and also sexual entertainment. Other entertainment available in these spots includes karaoke, night-clubs, snooker and gambling.

Local villagers gain income mostly through interaction with those on the highway by selling refreshments and working as motor-taxi drivers. At the same time, there have been cases of girls from a number of villages (not sex workers) in Kampong Chhnang Province (near the gas station) providing sexual services to drivers and passengers.

V. CONCLUSION

The HIV epidemic is already established in Cambodia and threatens to cause serious disruption to the demographic, economic and even political structure of the country. HIV sero-surveys clearly show fast transmission from high-risk groups to the general population. The rate of transmission of a number of vulnerable groups is among the highest in the region although this country started to experience the epidemic long after its neighbours.

Despite the intensification of efforts by the government and relevant counterparts in dealing with the HIV epidemic during the last few years, the speed and efficiency of the country's response does not match its need. Much more needs to be done, especially at the provincial level where structures need strengthening and support. Staff capacity needs to be improved. Specific target groups need different strategic interventions. More resources and technical assistance should be identified and apportioned to enable these activities to proceed.

Once the two highways are officially open, it is expected that the movement of vehicles transporting goods, passengers and tourists will significantly increase. "Hot spots" along the highways will likely boom as well, increasing HIV vulnerability in Cambodia and consequently its neighbouring countries.

Facilities such as brothels, hotels and guest houses may provide sex services anytime to the highway users. Most of the car parks and provincial towns along the two highways have these entertainment facilities. Karaoke, night-clubs, gambling dens, and massage parlours may also provide relatively inexpensive sex services in an indirect way.

HIV vulnerability is increasing due to the growing number of sex workers and changing attitude and behaviour among men towards extra-marital sex. This is more so among the drivers and their crews as their earnings are higher than average. The perception of being far away from their own communities provides freedom to engage in risky sexual behaviour.

Effective intervention to reduce HIV vulnerability with the collaboration of communities, construction contractors, and government authorities, is vital in preventing the HIV pandemic.

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