Mapping HIV Vulnerability along Kampong Thom, Siem Reap, Odor Meanchey and Preah Vihear, Cambodia

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FOREWORD

This report is based on a mapping of HIV vulnerability along selected sections of secondary and tertiary feeder roads along National Road Number Six. This mapping was done as part of the preparatory phase of the World Bank Provincial and Rural Infrastructure Project (PRIP). This project aims at reducing rural poverty through economic and social development, thus facilitating the reintegration of the four target provinces into mainstream national development. The development objective of the PRIP is to provide sustainable and safe access to markets and essential services for people located in rural areas of Kampong Thom, Siem Reap, Odor Meanchey, and Preah Vihear.

Road and infrastructure development in the Asia and Pacific region encourages regional economic development. However, a large influx of people (i.e. construction workers, road engineers and truckers) during this form of development has resulted in increases in HIV prevalence. The exposure of inhabitants, who previously had little or no contact with the outside world, has facilitated HIV proliferation. The increasing prevalence of HIV takes away the benefits from rehabilitation and development of the road system. The ASEAN leaders recognized the importance of the Chiang Rai Recommendation[1], adopted in 1999, when they again reiterated the importance of regional cooperation in reducing HIV vulnerabilities related to population movement and development at the ASEAN summit in 2001.

In this era of globalization, the ASEAN member countries are committed to completing and linking member countries through the Trans-ASEAN Highway. Unless the Chiang Rai Recommendation is fully integrated into the development contracts, containing a sound HIV prevention programme, and is properly implemented by a qualified service provider, the development of the ASEAN Highway could expand the HIV epidemic. The UNDP South East Asia HIV and Development Programme, in collaboration with the World Bank, provides technical assistance in HIV and development. It has facilitated the Ministry of Public Works and Transport and the Ministry of Rural Development, Cambodia, in ensuring the Route Six rehabilitation project is in compliance with the Chiang Rai Recommendation.

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[1] A precondition for bidding on infrastructure construction contracts is that potential contractors are required to include HIV prevention programmes for their workers and communities surrounding the construction sites.

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Finally, my special thanks to the UNDP South East Asia HIV and Development Programme for its support which made this assessment possible.

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I. Introduction

The poor state of Cambodia's infrastructure has posed a major obstacle to development and poverty reduction efforts. The Cambodian government has recognized this challenge and made infrastructure, especially road rehabilitation, one of its top priorities. The "Provincial and Rural Infrastructure Project (PRIP)", 2003-2005, was jointly developed by the Cambodian Ministry of Public Work and Transport (MPWT), the Ministry of Rural Development (MRD), the Ministry of Economy and Finance (MEF) and the World Bank (WB). As part of this project, parts of Route six, which run through the four provinces of Kampong Thom, Siem Reap, Preah Vihear and Odor Meanchey, have been targeted for rehabilitation. Although this project is expected to reduce poverty, negative side effects are also expected, such as the increase in HIV vulnerability of roadside communities. It is therefore essential to identify populations that are most vulnerable to HIV infection, and develop ways to build their HIV resilience.

As a result of two decades of civil war, much of Cambodia's infrastructure has been completely destroyed. In many areas, there is little access to safe water supplies, because public water is supplied only in the centre of the Phnom Penh Municipality and other large provincial towns. Consequently, other areas have had to rely on wells, rivers and lakes for water. In addition, the general population, both in municipalities and provincial towns, has had limited access to electricity. This is because either people cannot afford electricity or because electricity is unavailable in their area. All roads, national, provincial, and rural, are deteriorating and urgently need rehabilitation. Segments of these roads have been damaged to the extent that they have become inaccessible. Other segments are still in use, despite their poor condition. As a result, travel time between areas is unpredictable and has increased to the extent that people may spend hours or even a whole day travelling by road.

Responsibility for road maintenance in Cambodia falls under three jurisdictions: the Ministry of Public Work and Transport, which is responsible for the national network; the Provincial Department of Public Work and Transport, which is responsible for provincial roads; and commune councils, with the support of provincial rural development departments and the Ministry of Rural Development, are responsible for maintaining rural roads.

The bidding process for construction is planned to begin September 2003. This will be overseen by the Ministry of Public Work and Transport (MPWT) and the Ministry of Rural Development (MRD). Contract conditions for national and provincial roads stipulate that 80 per cent of the workforce must be Cambodian, while rural roads require a 100 per cent Cambodian workforce. Rehabilitation of rural roads will be accomplished in two ways, either through contract bidding or through a food for labour programme. Commune councils are responsible for selection of rural roads for rehabilitation. Factors to be considered for road selection include road age, accessibility and the environmental impact of reconstruction. The MPWT and MRD will be responsible for reconstructing roads with a total length of 105,351 km and 66,208 km, respectively.

The goal of this mapping assessment is to identify HIV vulnerabilities in communities affected by the PRIP in order to build HIV resilience. To achieve this goal, the two specific objectives of this assessment are as follows:

- Conduct an HIV vulnerability mapping of the PRIP project coverage area which will identify the socio-demographic and economic status of communities; possible indicators; and hotspots within the project area, which would contribute to HIV vulnerability.
- To design responses that will reduce negative impacts of the PRIP project. This involves identifying indicators for HIV/AIDS monitoring and evaluation and providing recommendations for reducing HIV vulnerability.

II. Methodology

A seven member coordinating committee, consisting of three officials from the National Centre for HIV/AIDS, Dermatology and Sexually Transmitted Diseases (NCHADS) and the Ministry of Health (MoH); three officials from the National AIDS Authority (NAA); and one from MPWT was established to work with the consultant.

A data collection interview questionnaire was then developed by the team (see Annex I for questionnaire). Two teams of eight members each from NCHADS, NAA, MTPW, and MRD, were then created for field data collection following one day of training. Topics covered during training included: the objective of the HIV vulnerability mapping project, its methodology, understanding and using the questionnaire.

Kampong Thom, Siem Reap, Preah Vihear, and Odor Meanchey are the provinces targeted under the PRIP. One team was sent to Kampong Thom and Preah Vihear, and the other to Siem Reap and Odor Meanchey. A total of almost 500 individuals from selected groups were interviewed. Approximately 120 interviews were conducted at each of the four sites. Target groups included: provincial, district, and commune authorities; officials in charge of the public work, transportation, rural development and health; villagers; owners of entertainment establishments; sex service providers; NGOs working in each province; and people living with HIV/AIDS. Field data collection took about two weeks to complete.

A draft report based on the data collected was presented at a consensus meeting where key stakeholders participated and made clarifications and recommendations which were incorporated into the final report.

III. Assessment findings

1. Road conditions

People interviewed as part of this assessment were concerned about the existing national, provincial, and rural road conditions. Poor road conditions, especially during the rainy season, have made travelling very difficult, resulting in isolation and limited access. For example, people usually wait hours if not days for transportation. They complained of deteriorating public and private infrastructure (e.g. house and bridges) along the roads, many of which did not conform to building codes or road regulations. Transportation costs make imported basic necessities expensive and the export of agricultural products impossible. As there is no market for locally produced goods, many local residents rely on subsistence farming. The poor road access has also reduced the potential for tourism.

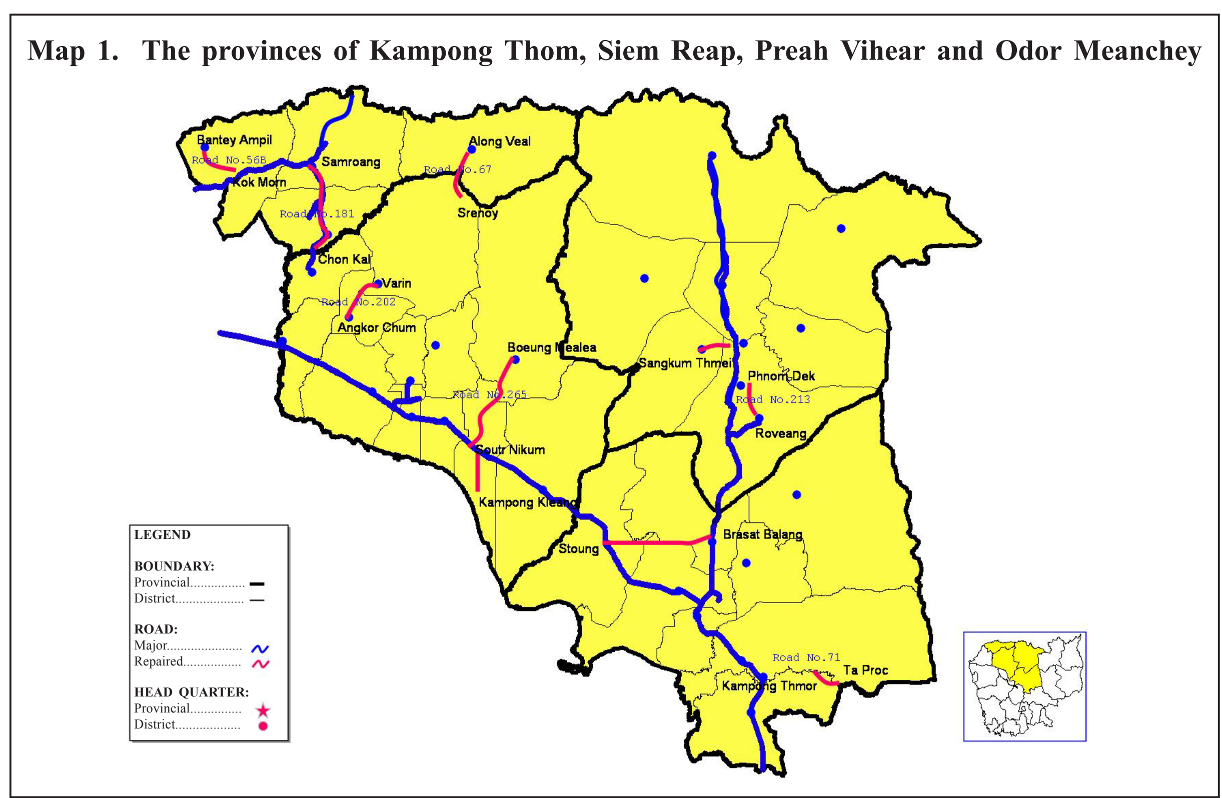
Education in the communities suffers during the rainy season, since the road conditions make travel impossible; this results in the closure of schools because students cannot reach them. Pollution, including dust and dirt, from deteriorating roads increases local residents' risks of contracting respiratory illnesses. Access to health care services is difficult, which forces people to rely on self-treatment.

Segments of the roads are blocked by trees

2. The geo-demographic situation of project sites

As part of the PRIP, Route six, which runs through the four provinces of Kampong Thom, Siem Reap, Preah Vihear and Odor Meanchey will be rehabilitated. The geo-demographic situation varies from province to province.

Map 1. The provinces of Kampong Thom, Siem Reap, Preah Vihear and Odor Meanchey



Kampong Thom

Kampong Thom is located at the centre of Cambodia and forms part of Tunle Sab region. It borders Preah Vihear in the north, Kampong Chnang in the south, Kratie in the east and Siem Reap in the west. It is divided into eight districts, 81 communes and 737 villages. The province has a population of 569,060 (52 per cent are female). There are three national roads and five provincial roads in this province.

Siem Reap

Siem Reap province is an international tourist destination located in the northwest part of the country. It borders Odor Meanchey in the north, Tunle Sab Lake in the south, Kampong Thom in the east and Banteay Meanchey in the west. It is divided into 12 districts, 100 communes and 882 villages. The province has a population of 696,164 (52 per cent are female). There are six national roads and 11 provincial roads.

Preah Vihear

Preah Vihear is located in the plateau and mountain region of northwest Cambodia. It borders Thailand and Lao People's Democratic Republic in the north, Kampong Thom in the south, Stoung Treng in the east, and Siem Reap and Odor Meanchey in the west. It is divided into seven districts, 49 communes, and 208 villages. The province has a population of 119,261 (half are female). There are two national roads, eight provincial roads and nine rural roads.

Odor Meanchey

Odor Meanchey was officially established in 2001, incorporating areas of Banteay Meanchey and Siem Reap. It borders Thailand to the north, Banteay Srey district of Siem Reap to the northeast, and Banteay Meanchey to the west. Odor Meanchey is divided into five districts. The province has a population of 126,015 (52 per cent are female). There is one national road, eight provincial roads, and two rural roads.

3. Roads selected under the PRIP

A bridge on the verge of collapsing

Reconstructions are being planned for 10 national roads in the four project provinces. These roads have either deteriorated or were destroyed during two decades of civil war. Segments of road have become obstructed by vegetation growth and are only accessible by motorcycle or bicycle. Also, some roads are covered with landmines. Communities alongside the project roads will feel the most direct impact from the project. See Annex II for mapping of communities along roads selected for rehabilitation under the PRIP in each province and Annex III for road network details.

The mobility of community members will increase as a result of road rehabilitation. Communities will also have to accommodate workers during the construction period. Since this group is most vulnerable to HIV, they must be targeted for HIV prevention strategies. The sections of road selected for rehabilitation under the PRIP in each province are listed in Table 1.

Table 1. Road sections selected for rehabilitation in the four provinces

Province	Road section	Distance (Km)	Areas served	Area description
Kampong Thom	1	15.9	National route 71-1 starts at Kampong Thmor, runs to Ta Proc commune on the Kampong Cham border.	There is a population of 9,785 living in seven villages, in two communes.
	2	16.9	Runs from Sala Visay to Preah Damrey commune, in the Stoung district.	Along this section of road, there are 11,864 villagers living in 14 villages, in five communes.
Siem Reap	1	30.9	National route 65 runs from Soutr Nikum district to Boeung Mealea.	Along this road there is a population of 640 living in 4 villages in Boeung Mealea commune, in the Svay Leu district.
	2	11.8	National route 207 runs from Thnal Chek to Wat Khleng.	Along this road, there is a population of 4,963 living in 31 villages in six communes within Soutr Nikum district.
	3	28.8	Runs from the Ankor Chum to the Varin district.	Along this road, there is a population of 2,206 living in 21 villages in five communes within Varin and Ankor Chum district.
Preah Vihear	1	18.4	National route 64 runs from Phum Svay Pat to Sdav village, in the Sangkum Thmei district.	Along this road, there is a population of 3,090 living in four villages within two communes.
	2	10.8	National Route 213 runs from Phnom Dek (national road number 64) to Roveang district.	Along this road, there is a population of 5,525 living in seven villages, within two communes.
Odor Meanchey	1	8.9	Runs from Sala Samrong (road number 181-1) to World Food Programme road.	Along this road, there is a population of 1,396 living in four villages in Bos Sbov commune within Samrong district.
	2	18.2	Road 181-3 runs from Rolong Vieng (road number 181-3) village to Chong Kal district.	Along this road, there is a population of 5,574 populations living in seven villages in three communes within Chong Kal district.
	3	12.7	Runs from Kok Morn to road 56B.	Along this road, there is a population of 3,072 living in six villages in Kok Morn commune within Bantey Ampil district.

4. Transportation

Ox carts and bicycles are the most common forms of farm and local transportation. Only a few people, such as market sellers, NGO workers and civil servants own motorcycles. When travelling between neighbouring districts, motor-taxis are commonly used. Taxis are used when travelling longer distances. District towns along the roads act as transit or rest areas for cars and trucks, while roadside provincial towns act as central points in the transportation network.

Table 2. Road use and infrastructure along national routes

Province/road	Daily number of vehicles	Transit/terminal stations
National route six along Kampong Thom	450	Tangkuk, Romlorg, Baray, Kampong Thmor, the provincial town of Tang Kasang and Stoung.
National road across Siem Reap	500	Phsa Chas, the provincial town of Psa Loe, Chi Kreng, Kralagn, and Soutr Nikum.
National road across Preah Vihear (note the road between Thnal Chek to Wat Khlang has been discontinued)	15	Phnom Dek, Roveang, the provincial town of Sangkum Thmei, and Saem.
National road across Odor Meanchey	30	Samraong, O Smach, Anlong Veal.

5. The socio-economic situation

Farming is the main source of income for most of the population. Residents in provincial or district towns earn their income by selling goods or running small businesses. Many people interviewed said that they were in debt to either local market sellers or non-government organizations (NGOs). Most preferred borrowing from NGOs since interest rates were lower. However, not all villagers took advantage of the micro-credit programmes setup by NGOs since those who were in urgent need of a loan or who had time constraints tended to rely on local market sellers.

In order to earn sufficient income, in addition to farming, many residents have had to take on extra jobs. Married couples generally look for work locally so that they can return home after work. Employment options include fishing, hunting, logging, producing charcoal, bee farming, looking for resin or wood oil, raising cattle or selling food. Single adults, on the other hand, generally look for extra jobs outside of the community. Many move to the Phnom Penh municipality or to other urban areas where job opportunities are better and wages higher compared to local jobs. Employment opportunities generally include working as a motor-taxi driver, construction worker, factory worker, hotel or restaurant worker, entertainment worker (night club, bar, Karaoke, etc), beer or cigarette promotion worker, and in some cases, as a sex worker.

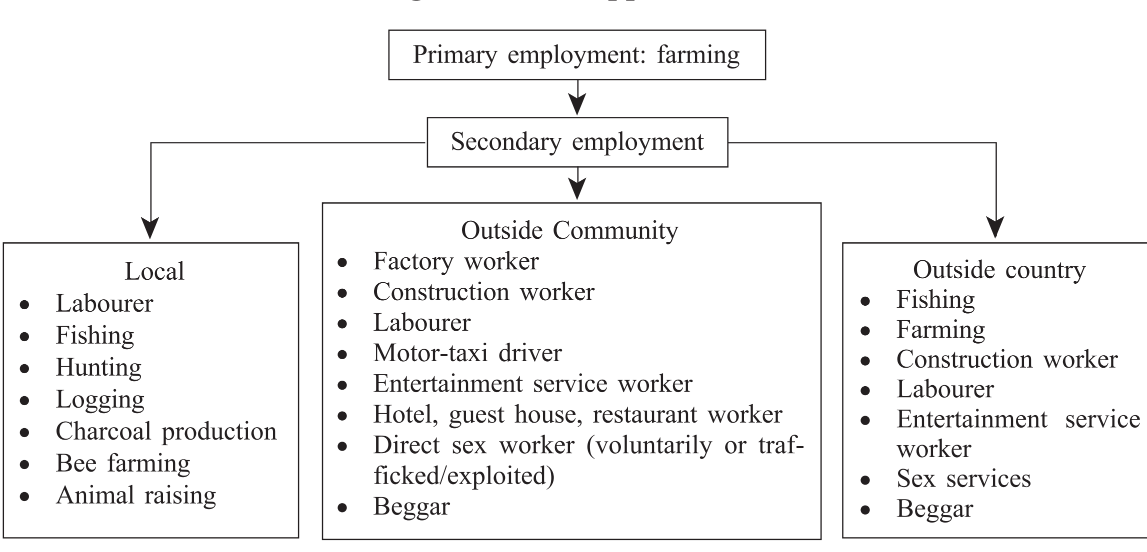
Small groups have also crossed legally and illegally to Thailand for extra jobs such as farming, fishing and manual labour. Also, girls have been trafficked into Thailand to work in the sex industry. According to authorities, some villagers have been lured away to Bangkok to act as beggars for criminal organizations. On average, a typical villager can earn 30,000 – 100,000 Riels[2] per month from an extra job, which can cover about 80 per cent of their daily expenses, excluding food. Given the poverty and mobility of the population in these communities, people are particularly vulnerable to HIV infection.

These community houses will be directly affected by the project during road rehabilitation

Social structure

Poverty and limited job opportunities within communities have lead to increased mobility among family members, thus weakening family bonds. Adult males within the household often leave their communities in search of work. Those most likely to remain behind are the elderly, married and widowed women and children. Some married men who leave their communities for extended periods of time have taken on second wives. This has left first wives with the burden of supporting their children. Some of the women interviewed stated that they had not heard from their husbands since they had left the family in search of work. Learning from this, some women have begun accompanying their husbands to their new places of work. According to the chief and members of the commune council in each community, there is an average of three to four children per household.

Figure 1. Job opportunities



2 Exchange rate US$1= 4,015.00 Riels (November 2003, UN operational rate of exchange)

Education

The majority of the children receive primary level education, while only a small number of boys go on to the secondary level. This is because once children have completed primary school, many leave to work as manual labourers to support their families. Another factor which contributes to low secondary school enrolment rates is the fact that many children find it difficult to access schools.

Labour workers at the Thai-Cambodia border (Poit Pet, Banteay Meanchey province)

6. Mobility

Poor road conditions have been a factor in reducing people's mobility. Mobility is one of the key factors in determining HIV vulnerability. The most mobile groups are typically young and/or single adults, who leave their communities in search of work. There are two types of mobility: in country and out of country mobility.

In country mobility

Young people, between the ages of 16 and 25, leave home to look for work in the capital city of Phnom Penh or provincial towns. Many find jobs in factories, construction sites, restaurants, or are involved voluntarily or involuntarily in the sex industry.

Out of country mobility

Although some family members have found work in Malaysia as housemaids or factory workers, many also migrate to Thailand, usually illegally, to find work in the fishing or agriculture industry.

7. Communication and media coverage

Communication and media availability are important for building HIV resilience through information campaigns. Fax, telephone, e-mail, mail, and radio are commonly available in the provincial towns. Radio is used where telephone communication is limited and is generally used by government civil servants. In certain district towns, radio is preferred over telephones because phone servers are usually expensive. Communities outside provincial or district towns rely solely on mail. In areas with service, mobile phones are popular, as landlines are either unavailable or in poor condition.

Accessibility to television is limited in small communities outside the provincial or district towns. Roughly one out of three households have access to colour television, while roughly one out of 15 households have black and white TV. More than 80 per cent of residents in these small communities own radios while ownership is nearly 100 per cent in urban areas. Cambodia has one government and eight private TV channels: TVK, TV3, TV5, TV9, TV11, TV27, and CTN including two private cable networks.

Table 3. Television and radio stations available in each province

Province	Television station	Radio station
Kampong Thom	TV5, TV27, TVK, cable TV	FM95, FM103, provincial station
Odor Meanchey	TV7, TVK, cable TV	Provincial station
Siem Reap	TV27, TVK, TV5, TV3, cable TV	FM95, FM103.5, provincial station
Preah Vihear	TVK, cable TV	FM95, FM99, FM103, provincial station

There is one short-wave government radio station and 10 private FM radio stations. These include FM88, FM90, FM95, FM96, FM97, FM97.5, FM98, FM99, FM102, FM103, FM105, and FM107. Both television and radio stations are available in the Phnom Penh municipality and, depending on the frequency, are able to reach other parts of the country. Government channels reach a wider audience than the private channels.

8. Health problems and service delivery

Health infrastructure

Following reform of the health system in 1996, administration and management of the system has been divided into four levels: 1) national programmes, institutions and the departments at the Ministry of Health, 2) provincial health departments, 3) operational districts, and 4) health centres. In addition, the delivery of health services has been classified into three levels: 1) the national hospital, 2) the referral hospital, and 3) the health centre. Each health centre has the necessary equipment to deliver primary health care services to 8,000-10,000 persons. Referral hospitals have more comprehensive equipment to deliver multiple services to 100,000 – 200,000 persons. The national hospital provides services requiring more specialized and advanced equipment such as CD4 count, heart surgery and cancer treatment.

Table 4. Type and number of service delivery in each province

Provinces	Number of health centre	Number of referral hospital
Kampong Thom	50	3
Siem Reap	57	4
Preah Vihear	12	1
Odor Meanchey	10	1

Health problems

Common health problems in project areas include respiratory diseases such as flu, pneumonia, bronchitis and TB; infectious diseases such as diarrhoea, dysentery, typhoid fever, malaria, and HIV/AIDS; chronic diseases such as diabetes, heart disease, arthritis, rheumatoid and gout; and mine accidents. Acute respiratory failure, dengue fever and malnutrition are the predominant diseases among children.

Most people interviewed denied having sexually transmitted infections (STIs) and even those who admitted to having STIs have not been to a clinic for consultation. Even so, all health centres have the capacity to do STI case management through a syndromic approach. HIV/AIDS is a growing concern as more than half of the villagers interviewed believed that there have been people within their communities who had died of AIDS.

Suspicion, discrimination and stigmatization of a person with HIV/AIDS (PWHA) are concerns to those in these small rural communities. To avoid discrimination and stigmatization, many PWHAs refer to their condition as hepatitis or liver disease, which is chronic and difficult to treat. Similarly, when asked about a death in the family, the response of most family members was that the death was caused by hepatitis or a liver disease rather than AIDS.

It was revealed that many of the people contacted believed that it was useless to discriminate against PWHAs, and that instead, care and support should be provided for them. Despite their concerns, all those interviewed had never had their blood tested for HIV, due in part to the lack of voluntary testing and counselling services outside provincial towns.

Responses to health problems

All the people interviewed expressed concern over health problems. They said that with current road conditions as well as the economic conditions in their community, people's access to quality health services was limited.

Despite attempts by the Ministry of Health to reform the health system, in order to provide easy access to health services, people still rely on traditional responses to health concerns. Despite the availability of proper health services, people seek the services of a pharmacist or drug store, for minor health problems, such as diarrhoea, cough, fever, or joint pains. This is because it requires less travel time and is less costly. However, if the problem persists, people visit health workers, and in rare cases, when the condition is serious, individuals are referred to a hospital.

People interviewed preferred going to traditional healers as they are easier to access, cheaper, and less time consuming to visit than other health care providers. For childbirth, women prefer to give birth at home with the support of a traditional birth attendant or health worker.

Table 5. Number of drug stores and private clinics by province

Provinces	Pharmacy/drug store	Private clinic/consultation
Kampong Thom	18 pharmacies 89 drug stores	23 consultations
Siem Reap	8 pharmacies 30 drug stores	39 consultations
Preah Vihear	9 pharmacies 63 drug stores	7 clinics 45 consultations
Odor Meanchey	2 pharmacies 12 drug stores	24 consultations

9. The HIV/AIDS situation

HIV prevalence rates listed below are based on the HIV sentinel surveillance conducted by NCHADS in 2002. Siem Reap has the highest prevalence rate compared to the overall national rate.

At the national level, the National AIDS Authority, chaired by the Senior Minister and Minister of Health, oversees HIV/AIDS policy development, coordination and resource mobilization. The Authority consists of PWHAs and members from government ministries, civil society, NGOs and the United Nations.

At the provincial level, there is an AIDS committee, chaired by the provincial governor, and which includes members from provincial departments, NGOs and civil society. Each provincial department has a unit which is responsible for HIV/AIDS interventions and activities. For example, in the Department of Health, there is a HIV/AIDS Programme unit, which is responsible for implementing a comprehensive provincial HIV/AIDS prevention and care programme. At each district and commune level there is a district AIDS committee and a commune AIDS council.

The main goal of the national HIV/AIDS intervention policies is to reduce HIV transmission and to improve the quality of life for PWHAs. Identifying and targeting high-risk populations is a priority in the intervention strategy. There are three main components to prevention: 1) Behaviour Change Communication (BCC) including information, education and communication (IEC) material development and outreach programmes to high-risk groups and community, 2) 100 per cent condom use programmes for high-risk groups and condom promotion for the general public, 3) STI case management, specifically STI clinic for high-risk group and STI integrated services for the general public.

Table 6. HIV prevalence among target groups by province

Provinces	DCSW	ICSW	Police	TB	ANC
Kampong Thom	20.2%	9.4%	2.1%	1.4%	2.3%
Siem Reap	36.9%	22.0%	6.5%	4.7%	4.2%
Preah Vihear	30.0%	0.0%	3.1%	2.7%	1.2%
Odor Meanchey	N/A	N/A	N/A	N/A	N/A
National	28.8%	14.8%	3.1%	8.4%	2.8%

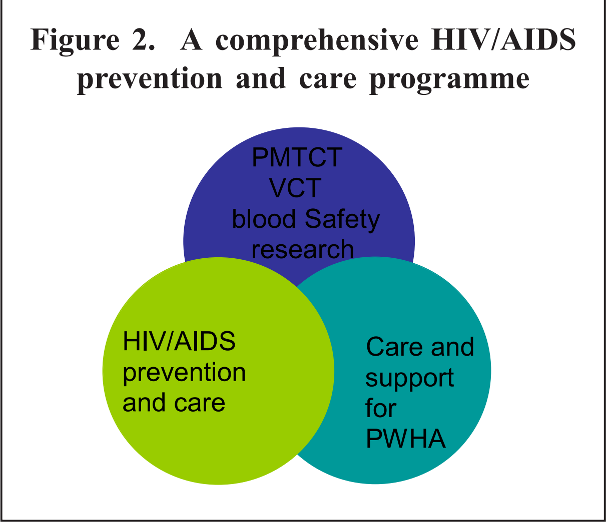
Note: DCSW: Direct commercial sex worker (brothel based sex worker)
ICSW: Indirect commercial sex worker (entertainment worker)
TB: Tuberculosis patient
ANC: Pregnant women who come to the antenatal care clinic

The Ministry of Health has developed a care strategy which has three core components: hospital care, community and home based care, (including self-help groups) and hospice care. To support these strategies a variety of services are provided and include: voluntary counselling and testing (VCT); capacity building through training, research and surveillance; and monitoring and evaluation. Other strategies which have been implemented are: HIV/AIDS awareness campaigns, community outreach programmes and education.

Knowledge of HIV/AIDS

Knowledge of HIV/AIDS of those interviewed, came from a variety of sources such as neighbours, outreach workers, health workers, village volunteers, education campaigns, TV, and radio. Most people interviewed preferred health education via media as many had little or no education. Living in rural communities has limited accessibility, for those who were literate, to media outlets such as newspapers and magazines.

Figure 2. A comprehensive HIV/AIDS prevention and care programme



The majority of people interviewed were, to some extent, aware of how HIV/AIDS was transmitted and how it could be prevented. They understood that transmission was possible through sexual contact and could be prevented through condom use. Alternative forms of transmission and prevention, such as blood transfusion, sharing of needles, mother to infant infection; abstinence, and remaining monogamous, were less well understood.

Condom use and awareness

All males contacted for this assessment were aware of condoms. However, only a few admitted to using them in situations where they had sex with a sex worker. Among females contacted for this assessment, more than half were unaware of condoms. Although some have seen condoms at health centres, none had ever used them. When asked further about birth control methods, many community members preferred using birth control pills or injections.

Many people said that they were unsure where to obtain condoms in their community, except at the health centre, where they are free. In communities outside of urban areas, condoms are mainly available at health centres and drug stores. Within urban areas, condom availability is widespread and can be found in many places such as pharmacies, drug stores, grocery stores, street vendors, brothels, and karaoke bars. When asked about condom sales, grocery store owners replied that their customers never requested condoms. Popular brands of condoms found in health centres are “Protector”, supported under the birth spacing programme, and “Number One”, supported by the HIV/AIDS social marketing programme.

Table 7. Condom brand availability

Rural community	Provincial town	Phnom Penh municipality		
Number 1	Number 1	Number 1	Madonna	Apple
Protector	Protector	Protector	Romantic	Ausny
OK	OK	OK	Skinlove	Buddy
Viva	Viva	Viva	Delux hairy	Cass
	Good couple	Good couple	Delux pearly	Mint
	Lifestyles	Lifestyles	Strawberry	One touch
	Madonna	Trojan	Aoxini	Play safe
	Romantic	Trust	Ribbed	
	Skinlove			

HIV/AIDS risk factors

In general, all community members contacted felt that they were not at risk of infection since they believed that they were isolated from other high-risk communities, and also because sex services, entertainment establishments, and drug users are non-existent in their communities. Currently, sex-related services, such as brothels and entertainment establishments, i.e. karaoke bars, massage parlours, exist only in urban areas of provincial and district towns.

Although the probability of contracting HIV/AIDS is low in these communities, there are still opportunities for infection. National, international, or cultural events, organized by the community, can create a hospitable environment for contracting HIV/AIDS, as many brothels send their sex workers out to these events. Another concern raised by community members is the fact that many of their relatives, who have left the community in search of jobs, could be buying or selling sex and thus at risk of contracting HIV.

Table 8. The number of sex related workers

Provinces	Brothel	DCSW	EE	ICSW
Kampong Thom	32	91	43	167
Siem Reap	21	215	17	436
Preah Vihear	12	55	4	69
Odor Meanchey	29	145	20	44

Note: DCSW: Direct commercial sex worker (brothel based sex worker)
EE: Entertainment establishment (karaoke, massage parlour, bar, night club etc.)
ICSW: Indirect commercial sex worker (entertainment worker)

10. Hot spots

This assessment identified several existing hot spots in the four provinces. The number of hot spots in these areas is expected to increase when road construction begins, as construction workers move into temporary residential sites located near district towns where facilities such as water and electricity are available.

Hot spots are places where sexually related services and HIV risk-related factors co-exist. The availability of brothels, karaoke bars, or massage parlours within a specific location, determines an area's status as a hot spot. Hot spots tend to be located in places such as markets, taxi or bus stations, restaurants, guesthouses, entertainment establishments as well as tourist areas. Also, hot spots are places local people live their daily lives.

In Kampong Thom province, Kampong Thmor and Stoung district towns have been identified as hot spots. In Siem Reap province, Angkor Chum and Thnal Chek, Soutr Nikum district towns have been identified. In Preah Vihear province, hot spots that have been identified include Roveang, Sangkum Thmei and Boeung Mealea, which are tourist areas. In Odor Meanchey province, Samraong and Chong Kal have been identified as hot spots. See Annex IV for the mapping of hot spots in each of the four provinces.

11. NGO partnership

NGOs provide country assistance at various levels from provinces to communes. They support poverty reduction and improvement of living conditions by providing assistance in areas such as general education, primary health care, sanitation, human rights, mine clearance, rural road construction and income generation. Several NGOs are operating within the project and they are listed as follows:

- Cambodian Red Cross: actively works in community-based prevention and care programmes
- Cambodia Mine Action Centre: is involved in mine clearance
- World Food Programme: provides food labour for rural road development and food supply for TB and HIV people
- International Labour Organization: observes and supports the rights of workers
- Mines Advisory Group: is involved in mine clearance
- Medecins Sans Frontieres: provides hospital care and support
- The HALO Trust: is involved in mine clearance
- Handicap International: provides support and skills training for the handicapped
- German Technical Cooperation Agency: supports capacity building and health management for health care workers
- Cambodian Human Rights and Development Association: promotes human rights and democracy
- Adventist Development and Relief Agency: supports health centre service delivery and community outreach
- SEILA: supports provincial rural development programmes
- Health Unlimited: supports health centre service delivery and community outreach
- World Children’s Fund: supports community prevention and care programmes
- Church World Service: supports Traditional Birth Attendant programme within the community
- Transcultural Psychosocial Organization: supports the provincial mental health programme at the provincial hospital
- UNICEF: provides financial and technical support to strengthen the provincial and district AIDS committee and its service delivery of HIV/AIDS prevention and care programmes
- Mode: cares for PWHA within the community
- Caritase: cares for PWHA within the community
- Banteay Srey: cared for PWHA within the community
- Cambodia Reproductive and Child Health Resource Centre: supports MCH and reproductive health programmes

IV. Project impact

1. Anticipated positive impacts

During the road construction. Villagers interviewed expect that their living standards will improve as a result of the PRIP. They also believe that they will have the opportunity to apply for jobs in the labour force. Local businesses also hope that business would improve.

After the road construction. People are generally optimistic about the road rehabilitation project's impact as many feel that the prosperity of communities will improve and as a result poverty will be reduced. With better road conditions, the cost of exchanging goods and services is expected to decrease, while investment, job, and tourism opportunities are expected to increase. As a result, it is hoped that out-migration will fall so that family and marital bonds will be strengthened, which could lead to less infidelity. In addition, people hope that road construction will make it easier to access resources outside of the community.

2. Anticipated negative impacts

During the road construction. Other people interviewed were skeptical of the rehabilitation project since they had seen survey teams in the area but there were no actual work on the roads being done. Also, people were afraid of losing part of their homes or farms as a result of construction and that they will not receive compensation. Communities will have to support the large influx of migrants working on the project, with the possibility that businesses and services which are established could lead to the creation of hot spots. People are worried that criminal activities will increase. They also expect the prevalence of communicable or infectious diseases such as diarrhoea, TB, HIV/AIDS/STI will increase. Road closures are also expected to disrupt the daily life and travel of the locals.

After the road construction. Road accidents are expected to rise with the increased traffic on roads. More opportunities are expected to be created to travel away from home in search of work, thus increasing the vulnerability of the community and/or individual of HIV/AIDS. The activities and businesses established, during road reconstruction, are expected to remain and as a result become socialized or accepted by the community i.e. sex services, karaoke bars and pornography at the coffee shop.

V. Conclusions and recommendations

1. Conclusions

Overall, people in the project areas welcome the road rehabilitation project. Nearly all people contacted for this assessment are living in poverty and they generally believe that their standards of living will improve as a result of the project, through increased job opportunities and lower travel time and costs. This is despite the possibility that parts of their land could be lost due to road construction. Existing roads are in a poor condition, which makes travel difficult and sometimes impossible. This has lead to increased travel

time and cost. As a result many communities have become isolated from the outside world. Many people believe that poor road conditions have had a negative economic impact in their communities, in addition to adversely affecting community health and education. Despite their support for the project, many people are still worried about the spread of HIV/AIDS, the influx of migrants and the establishment of hot spot-related businesses.

Most people have a general understanding of HIV/AIDS, yet only have a limited knowledge of STI and reproductive health. Given that the PRIP is expected to increase community mobility and contact with other communities, thereby increasing HIV vulnerability, measures must be taken to reduce the vulnerability of roadside communities in project areas. In order to build resilience and to ensure effective HIV prevention measures are taken, participation of both roadside communities and migrant workers in HIV prevention programmes is needed.

2. Recommendations for reducing HIV vulnerability

For HIV intervention

It is anticipated that the road rehabilitation project will bring with it a number of social and economic benefits to the project communities. However, as with any project, it is expected that there will also be negative side effects, namely increased HIV vulnerability of roadside communities. Therefore a number of recommendations to mitigate these negative side effects are listed below.

Participation of roadside communities in HIV prevention programmes is needed in order to build HIV resilience and to ensure effective HIV prevention measures are taken. This is because road side communities are directly affected by the construction activities. It is anticipated that many workers will be employed from the local areas, and in exchange, the surrounding communities will provide services for the construction workers. Consequently, residents of these communities will be at the front line for building HIV resilience.

The objective of this project is to actively maintain HIV prevalence at baseline levels. Experience in the region has demonstrated that HIV programmes are effective when they are done in consultation with local communities and when NGOs are made responsible for implementing the programmes. This is necessary when assisting workers, residents and the local communities. Adoption of the mobile condom social marketing approach, developed by Population Services International (PSI) for Cambodia would ensure that target audiences, which are scattered throughout rural communities, are reached. Such an approach would also be flexible to the road construction work schedule.

In order to reduce HIV vulnerability, intervention needs to be available to both community villagers and migrant workers. The following are proposed strategies:

Prevention

- HIV/AIDS prevention packages should be made available to all communities as part of this rehabilitation project. People in high risk communities and construction sites should be educated about the possible risks they may encounter before, during and after construction.

- All communities and individuals, including new migrants, should be educated about HIV/AIDS and STIs, especially their risk factors, and prevention methods, such as condom use.
- Information on infidelity, exploitation and trafficking, and drug use should be integrated into a community prevention package.
- Outreach programmes should be provided for both community and construction workers.
- IEC material should be available through various forms of media such as billboards, posters, booklets, TV and radio to support the intervention. If possible, a movie produced by PSI should be made available to the communities.
- Condoms should be available within the community and on construction sites at an affordable price or free of charge.
- Education campaigns, in the form of parades, concerts, or contests, which raise public awareness, should be held during national, international or religious holidays.

Care

- Voluntary HIV counselling and testing should be made available to both the community and the construction workers through health centre along the project site.
- Community members should be encouraged to use the health centres for STI case management. If possible, a fixed or mobile STI clinic should be established for male migrant workers.
- Community resilience should be developed.
- Community meetings to assess potential agricultural markets should be held.
- Skills building needs should be identified in addition to where such learning can be obtained.
- Community plan joint efforts in small enterprise, including developing market information communication system and marketing collaboration with the transport sector to maximize community benefit of road access should be developed.
- Community cooperative small fund groups should be formed to begin implementing additional income generation activities.

3. Project management

A technical committee should be established to monitor the progress of the project implementation. The members of this technical committee would consist of members from MPWT, MRD, NAA and NCHADS, with clear terms of reference. The best implementing agencies for this intervention project would be local or international NGOs already present in the provinces, which have experience in community based prevention and care programmes, and in particular community outreach programmes. Some NGOs which would be suitable candidates include:

- PSI for mobile condom social marketing; it is the only entity in Cambodia which has the expertise and experience in handling this component of the programme. Its mobile design allows it to cover the four provinces.

- World Vision International for construction workers and communities in Kampong Thom and Siem Reap provinces.
- Health Unlimited for construction workers and communities in Preah Vihear and Odor Meanchey provinces.

4. Monitoring and evaluation

The National AIDS Authority is a government entity that is responsible for the overall technical advisory, monitoring and evaluation of the PRIP HIV prevention programme. If funding is available, a baseline survey of community members and migrant workers should be conducted in order to compare the results after three years of implementation. The PRIP HIV prevention programme has three phases:

1) *Pre-construction phase*. This phase is composed of sero-behavioural survey and mobile condom social marketing start-up.

2) *Construction phase*. This phase is composed of all components discussed in this assessment report and will be in accordance with the "toolkit for HIV prevention among mobile populations"[3] but adjusted to reflect the findings of the mapping. It will cover raising HIV vulnerability awareness, condom social marketing, and HIV resilience development.

3) *Post-construction evaluation.* This phase is composed of i) sero-behavioural survey as part of the overall evaluation, and ii) implementation of activities by communities utilizing the opportunities created as a result of improved road connectivity and transportation, but not covered by this funding cycle.

There are two types of indicators proposed for this project:

1. Process indicators
    - Number of meeting organized.
    - Number of outreach workers and peer educators recruited.
    - Number of training or workshops organized.
    - Number of outreach visits performed.
    - Number of IEC produced and distributed.
    - Number of Voluntary Counselling and Testing programmes (VCTs) established.
    - Number of education campaigns performed.
    - Number of condom sales and free distribution.
    - Proportion of community members reached by the project.

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[3] ADB/UNDP-SEAHIV/WVI/Burnet Institute: Toolkit for HIV prevention among mobile populations in the Greater Mekong Sub-region, 2002, <*http://www.hiv-development.org/publications/Tool-Kit.htm*>.

- Proportion of construction employees reached by the project.
- Proportion of community members and construction workers who visit STI clinics, VCTs.

2. Impact indicators
    - The STI prevalence among construction workers before and after the project.
    - The HIV prevalence among construction workers before and after the project.
    - The level of HIV/AIDS/STI knowledge, attitude and practice among community members and construction workers before and after project.
    - The behavioural surveillance to identify the rate of condom use, number of sexual partners, etc.

It has also been proposed that an end of project surveillance be conducted due to anticipated increases in the volume of people, as a result of improved roads.

Annex I. Questionnaire

1. **General question:**
    - Geo-demographic situation of each province and each part of the route.
    - Import and export product.
    - Industrial zone.
    - Agricultural productivity.
    - Modes of communication (telephone, fax, e-mail, internet, letter, icom etc.).
    - The existence of entertainment establishments, brothels and sex workers (number and location), its potential during and after road construction.
    - Where people go for sex-related services.
    - Number of hotels and guesthouses.
    - What do you think in general about HIV/AIDS?
    - What could be identified as a hot spot?
2. **The provincial health department**
    - What does the health structure of your province look like (number of existing and planned referral hospitals and health centres, STI treatment, family planning, TB DOTS, etc.)?
    - How many private clinics and pharmacies are located in the provinces both legal and illegal?
    - What are the main health problems in your province?
    - How is the HIV/AIDS situation in your province?
    - How many NGOs are working in your province?
    - What could be an HIV risk factor for your community?
    - What is your perspective on the road now, during and after construction?
3. **The provincial HIV/AIDS programme**
    - How can HIV/AIDS/STI be prevented in your province?
    - How can PWHAs be care for and supported?
    - What is the coverage of target population?
    - What could be an HIV risk factor for your community?
    - What is your perspective on the road now, during and after construction?
4. **The provincial public transportation department**
    - National, provincial and district route structure.
    - The plan for construction and renovation with timeframe.
    - Condition and criteria to get a contract.

- Criteria for building construction sites.
- Number of transportation registered in province.
- Number of transit places.
- Number of workers expected at each construction site.
- What could be an HIV risk factor for your community?
- What is your perspective on the road now, during and after construction?

5. The provincial rural development department

- Community route structure.
- The plan for construction and renovation with timeframe.
- Condition and criteria to get a contract.
- Criteria for building construction sites.
- Number of transportation registered in province.
- Number of transit places.
- Number of workers expected at each construction site.
- What could be an HIV risk factor for your community?
- What is your perspective on the road now, during and after construction?

6. The commune council

- What is the status of HIV/AIDS and STI in your commune (awareness, problems, barriers, PWHA, testing, health seeking behaviour in general and STIs specifically)?
- Is there an entertainment establishment in your commune?
- How many NGOs are working in your commune?
- What are the modes of communication (TV, radio, billboard, poster, leaflet, etc.)?
- How do they learn about HIV/AIDS/STIs?
- What is the source of main income and the extra income?
- How is in and out mobility?
- What is the main role of the commune council for the community at this moment?
- Do you have any experience of road construction and rehabilitation in your community?
- What are the main events that frequently take place in your community?
- What is the main mode of transportation in your community?
- How many drug stores and pharmacies are located in your community?
- Where could we find condoms?
- What could be an HIV risk factor for your community?
- What is your perspective on the road now, during and after construction?

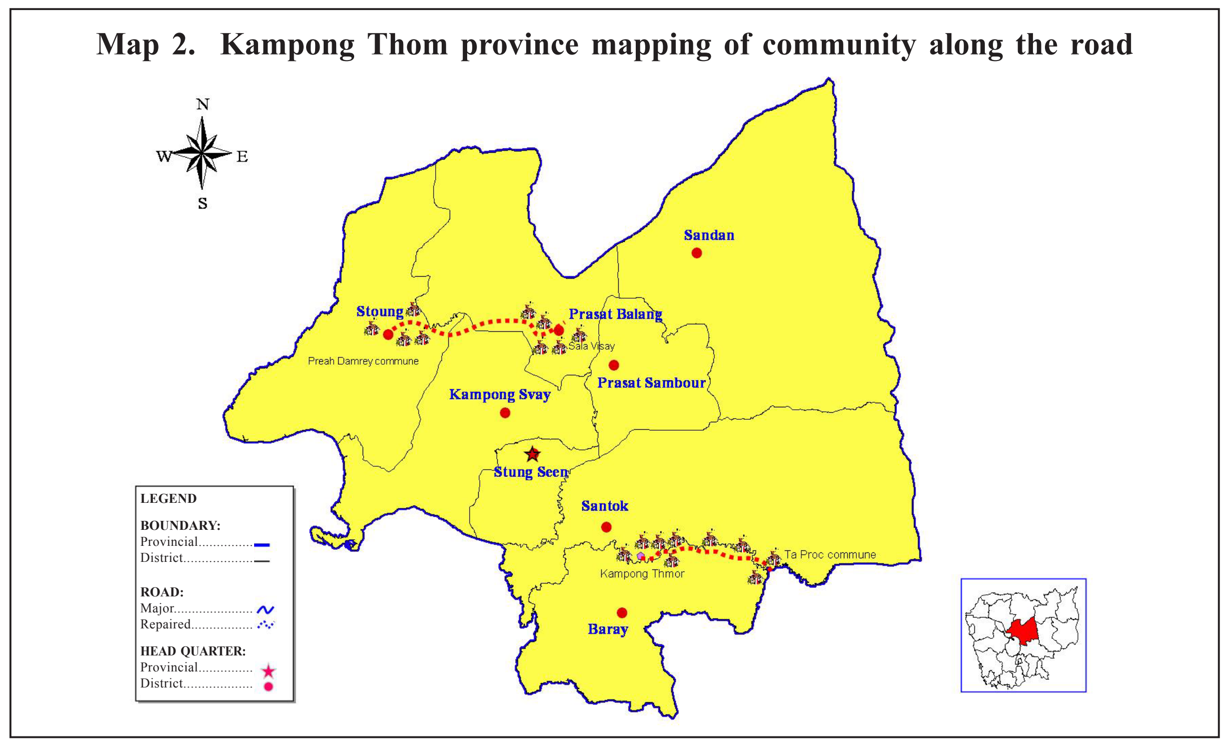
7. The village chief

- What is the status of HIV/AIDS and STIs in your commune (awareness, problems, barriers, PWHA, testing, health seeking behaviour in general and STIs specifically)?
- Is there an entertainment establishment in your commune?
- How many NGOs are working in your commune?
- What are the modes of communication in your commune (TV, radio, billboard, poster, leaflet, etc.)?
- How do people learn about HIV/AIDS/STI?
- What is the source of main income and the extra income?
- How is the in and out mobility?
- What is the main role of the commune council for the community at this moment?
- Do you have any experience of road construction and rehabilitation in your community?
- What is the main event frequently takes place in your community?
- What is the main mode of transportation in your community?
- Do you ever meet any outreach workers in your community?
- How many drug stores and pharmacies are located in your community?
- Where could we find condoms?
- What could be an HIV risk factor for your community?
- What is your perspective on the road now, during and after construction?

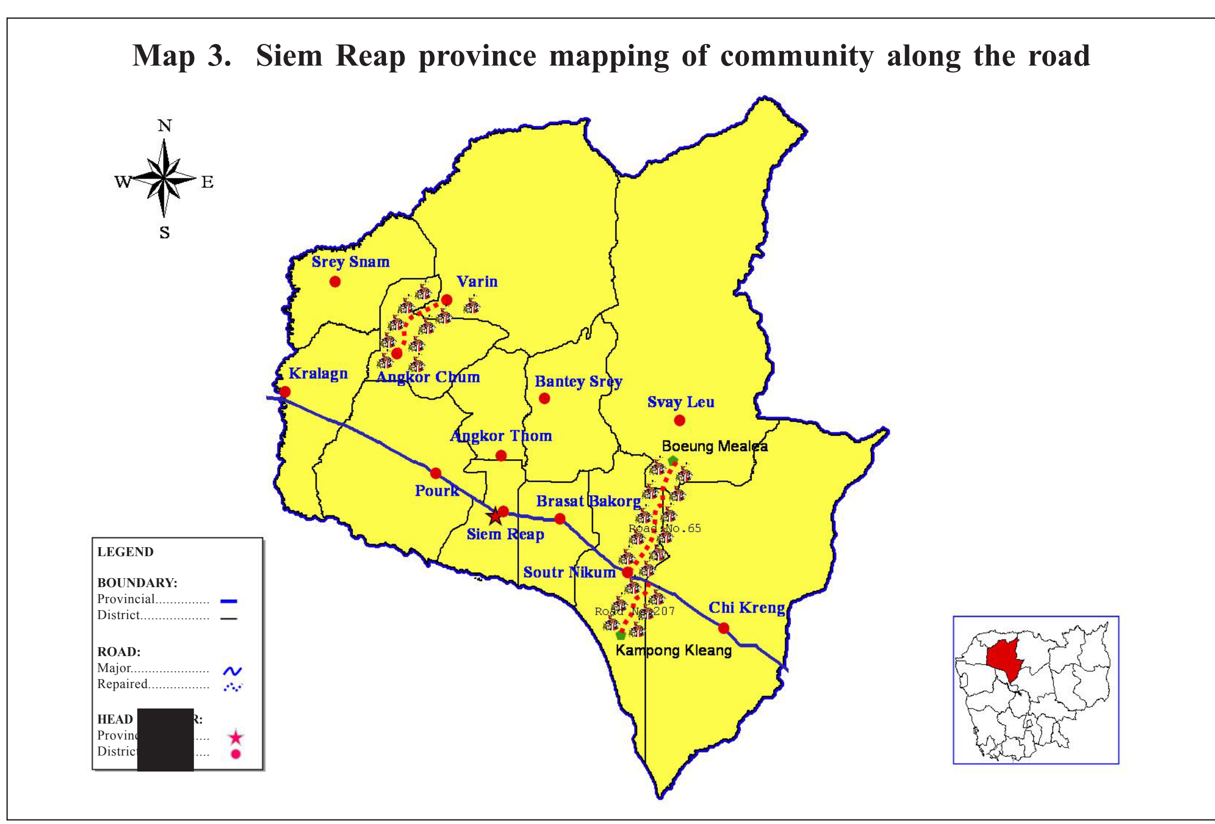
8. The villager

- How many children do you have?
- What is your main job and your family members' jobs?
- What is your extra job and your family members' extra jobs?
- How do you earn your income (enough for living)?
- Have you ever heard about HIV/AIDS?
- Do you know any PWHAs in your community?
- Is there discrimination in your community?
- Where do you go when you get sick?
- Where do you go when you get STIs?
- Do you travel away from home often?
- Do you have TV, radio, what channels do you receive?
- Do you have transportation (ox cart, bicycle, motorcycle, taxi, car, etc.)?
- Have you ever met any outreach workers in your community?
- Have you ever seen a condom and do you know where you can get condom?
- What could be an HIV risk factor for your community?
- What is your perspective on the road now, during and after construction?

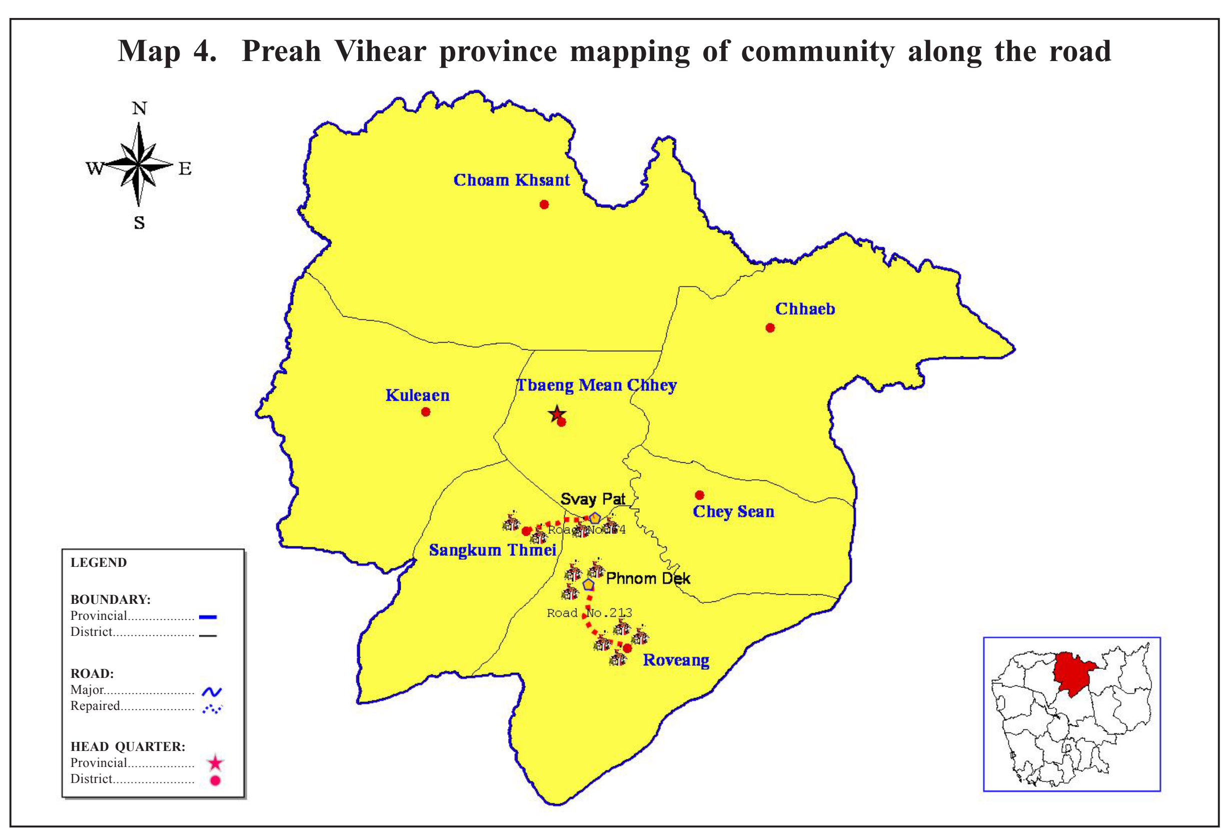
Annex II. Mapping of communities along roads selected for PRIP



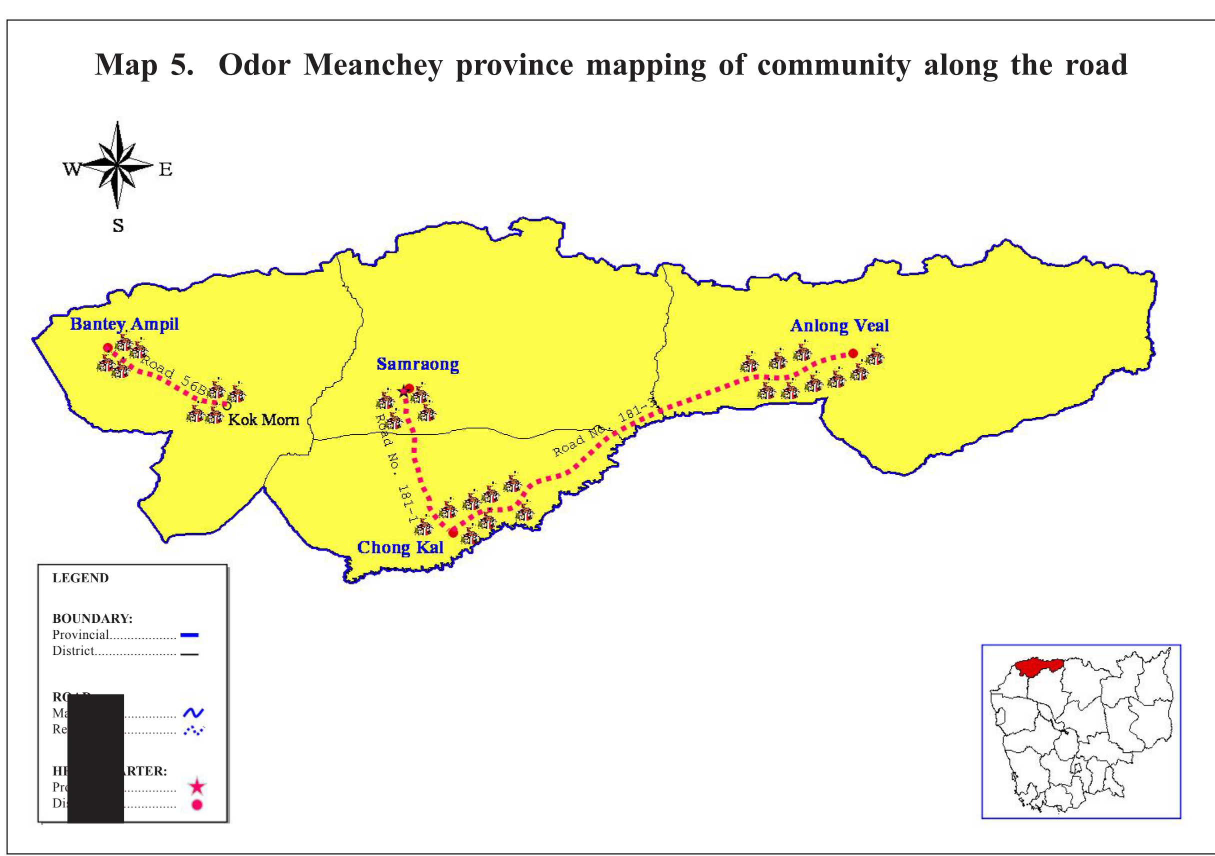
Map 2. Kampong Thom province mapping of community along the road



Map 3. Siem Reap province mapping of community along the road



Map 4. Preah Vihear province mapping of community along the road



Map 5. Odor Meanchey province mapping of community along the road

Annex III. Road networks in selected provinces

Kampong Thom	Distance (Km)	Districts
National roads		
Route 6	141	Baray, Santok, Stung Seen, Kampong Svay, Stoung
Route 64	36	Kampong Svay, Prast Balang
Route 71	60	Barang, Kampong Thmor, Treng, Kampong Cham Province border
Provincial roads		
Route 218	98	Prasat Sambour, Sandan, Preah Vilhear province border
Route 219	49	Prasat Balang, Prasat Sambour, Sandan
Route 220	14.3	Kampong Svay, Prat Sambour
Route 223	50	Santok, Baray
Town Road	29.7	Provincial Town

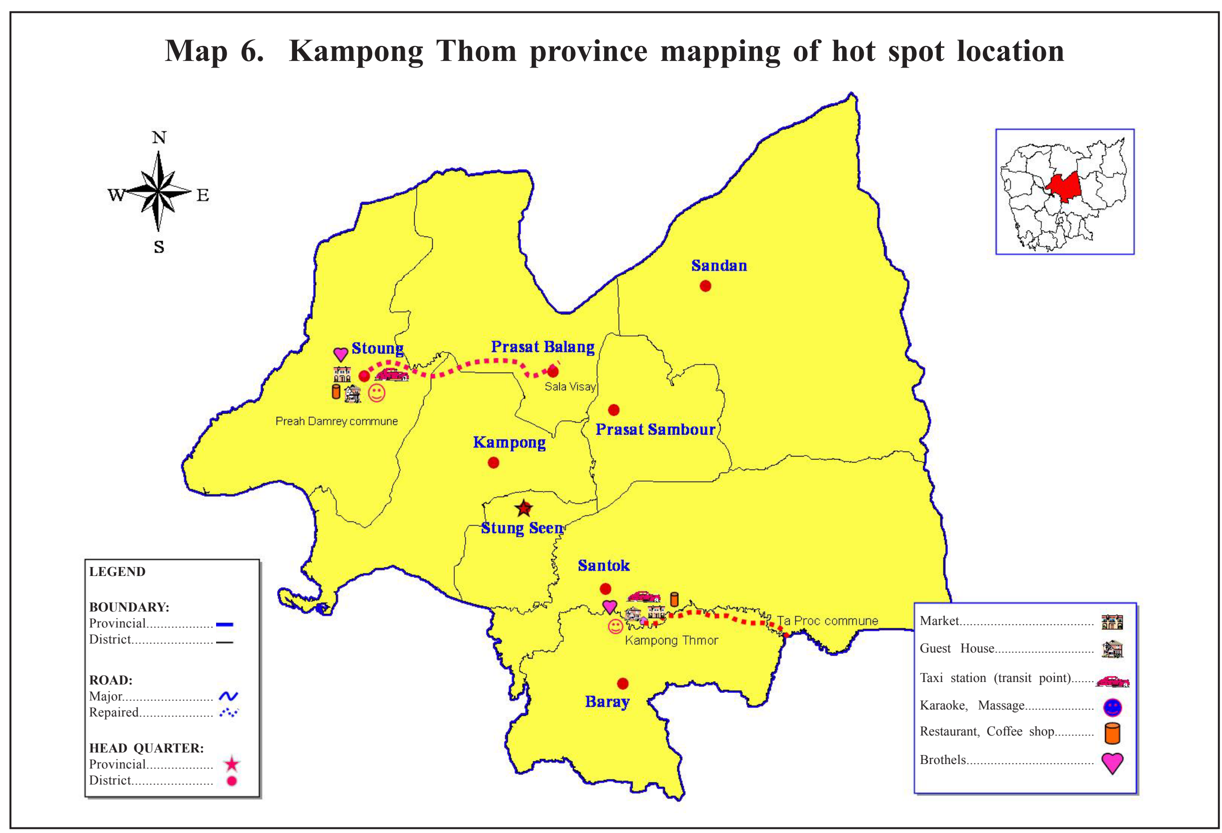
Siem Reap	Distance (Km)	Districts
National roads		
Route 6	131.5	Kralagn, Stoung
Route 63	10	Siem Reap, Phomn Krom
Route 65	32	Soutr Nikum, Svay Leu
Route 66	72	Prasat Ankor Wat, Boeung Mealea
Route 67	91	Svay Chum, Anlong Veng
Route 68	40	Kralagn, Ochik, Odor Meanchey province border
Provincial roads		
Route 201	37	Sosar sdom, Sen Sok
Route 202	40	Pourk, Ankor Chum
Route 203	27	Preah Dak, Tbeng
Route 204	15	Porpel Chum, Tbeng
Route 205	7	Psar Krom, Sala Tamine
Route 206	18	West of Stoung Rous to Tunle Sab Lake
Route 207	18	Thnal Chek, Wat Khleng
Route 208	16	Psar Deom Po, Kaom Sanor commune
Route 209	43	Psar Deom. Boeung Mealea
Route 210	20	Svay Leu, Preah Vihear border
Town Road	90	Provincial Town

Preah Vihear	Distance (Km)	Districts
National roads:		
Route 64	140	Phnom Dek, Preah Vihear, Thbaeng, Roveang, Kuleaen, Choam Khasant
Route 66	135	Phnom Dek, Siem Reap, Roveang, Sangkum Thmei
Provincial roads:		
Route 210		Provincial town, Kuleaen
Route 211		Choam Khsant, Chhaeb
Route 212		Choam Khsant
Route 213		Chey Sean, Chhaeb, Roveang
Route 214		Chhaeb
Route 215		Chhaeb, Chey Sean
Route 216		Roveang, Chey Sean
Route 217		no design yet
Route 218		Roveang
Rural roads		
Route 1	24	Roveang, road 66, Sangkum Thmei
Route 2	30	Kuleaen, Sangkum Thmei
Route 3	58	Tbaeng Mean Chhey (Po commune), Chhaeb
Route 4	20	Choam Khsant, An Ses (Thai border)
Route 5	50	Tbaeng, Chaom Khsant (road 211)
Route 6	35	Tbaeng (Preah Khlang commune), Chey Sean
Route 7	25	Kuleaen, Choam Khsant (road 212, Khantout commune)
Route 8	35	Sangkum Thmei district town, Kro Ya commune, Kampong Thom
Route 9	25	Kantout commune, Choam Khsant, Tropang Prasat, Odor Meanchey

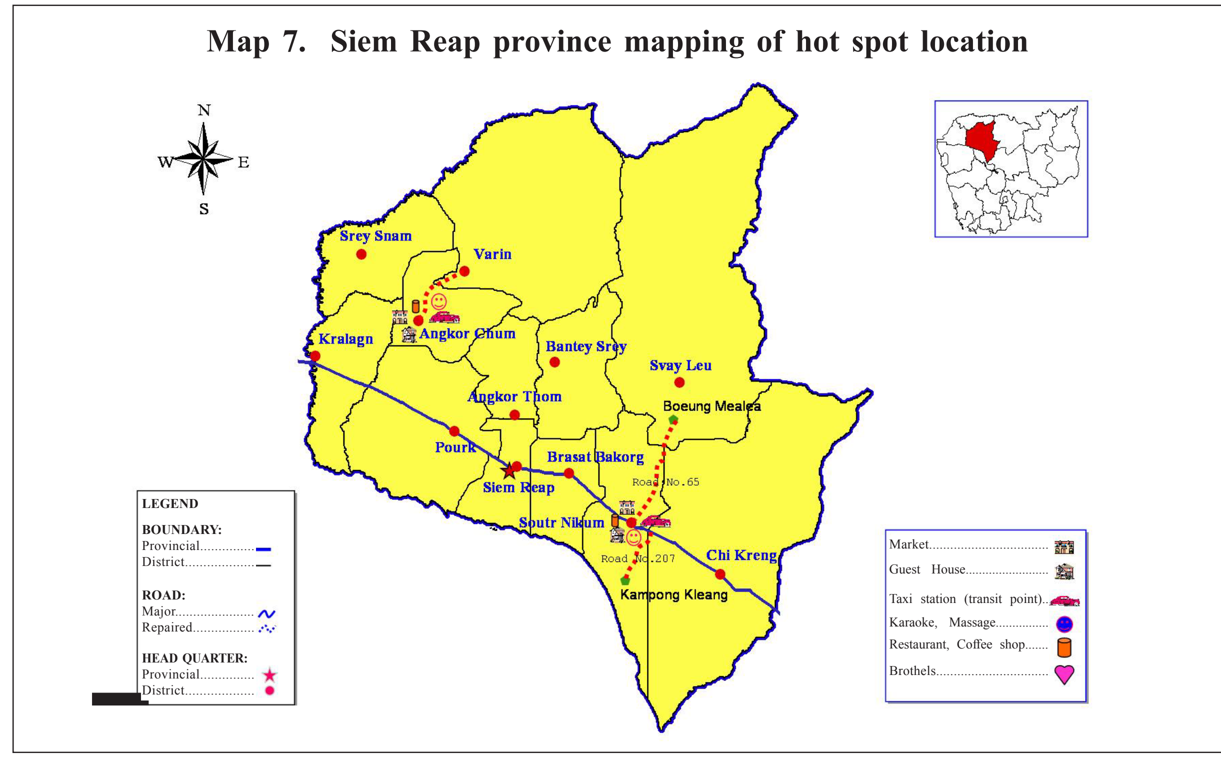
Odor Meanchey:	Distance (Km)	Districts
National roads:		
Route 68B	10	Daun Ken, Chey Voraman round about
Provincial roads:		
Route 67	42.8	Kong Toung River, Anlong Veal round about
Route 67B	14.4	Anlong Veal round about, Chror Cham
Route 68	79	Srey Snam, Chey Voraman round about
Route 68B	42	Chey Voraman round about, O Smach border
Route 56	53	Banteay Chhma border, Daun Ken border
Route 56B	43.7	Banteay Chhma, former Ampil district
Route 171	64	Kirivan, Anlong Veal round about
Route 174	60.8	Anlong Veal round about, PreahVihear border
Rural roads:		
Route 181	30	road 56 Bos Sbov, Chong Kal
Route 183	29.3	Chey Voraman round about, road 56B

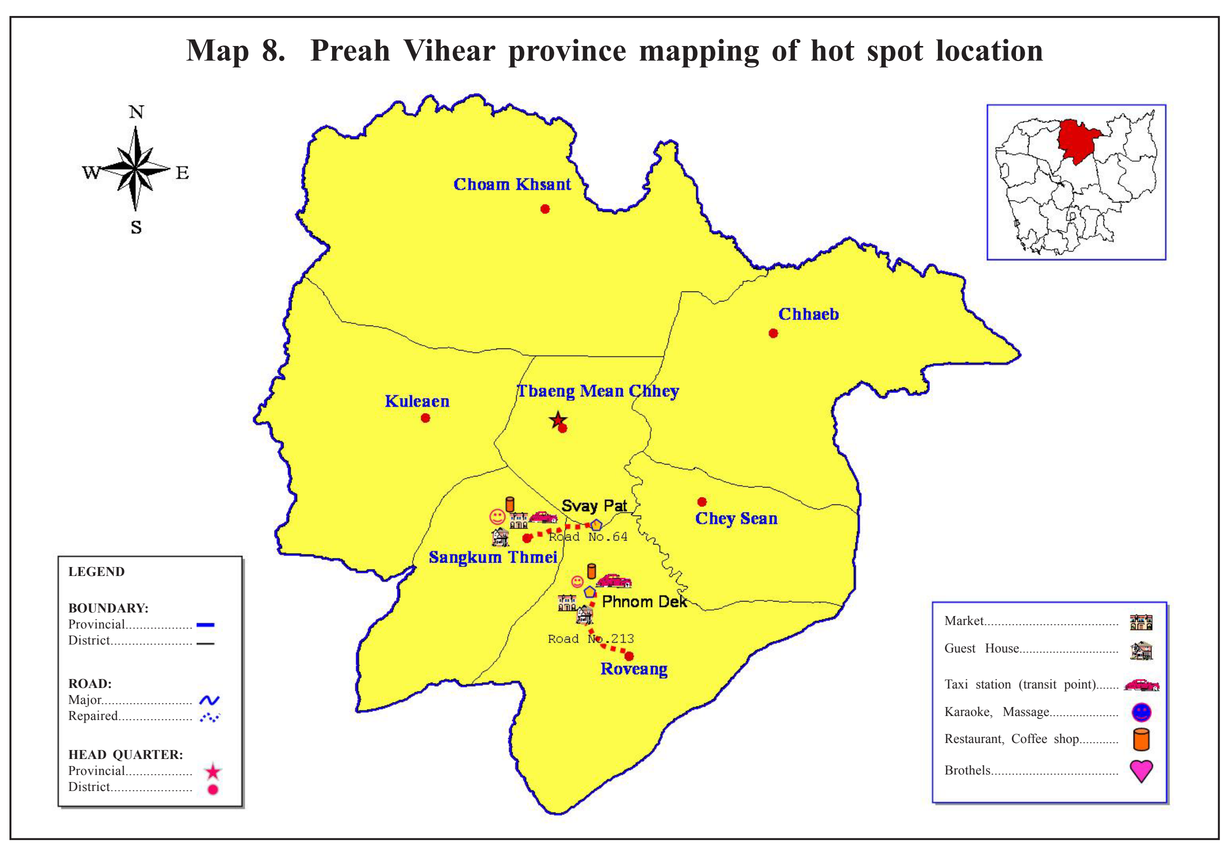
Annex IV. Mapping of hot spot locations in selected provinces

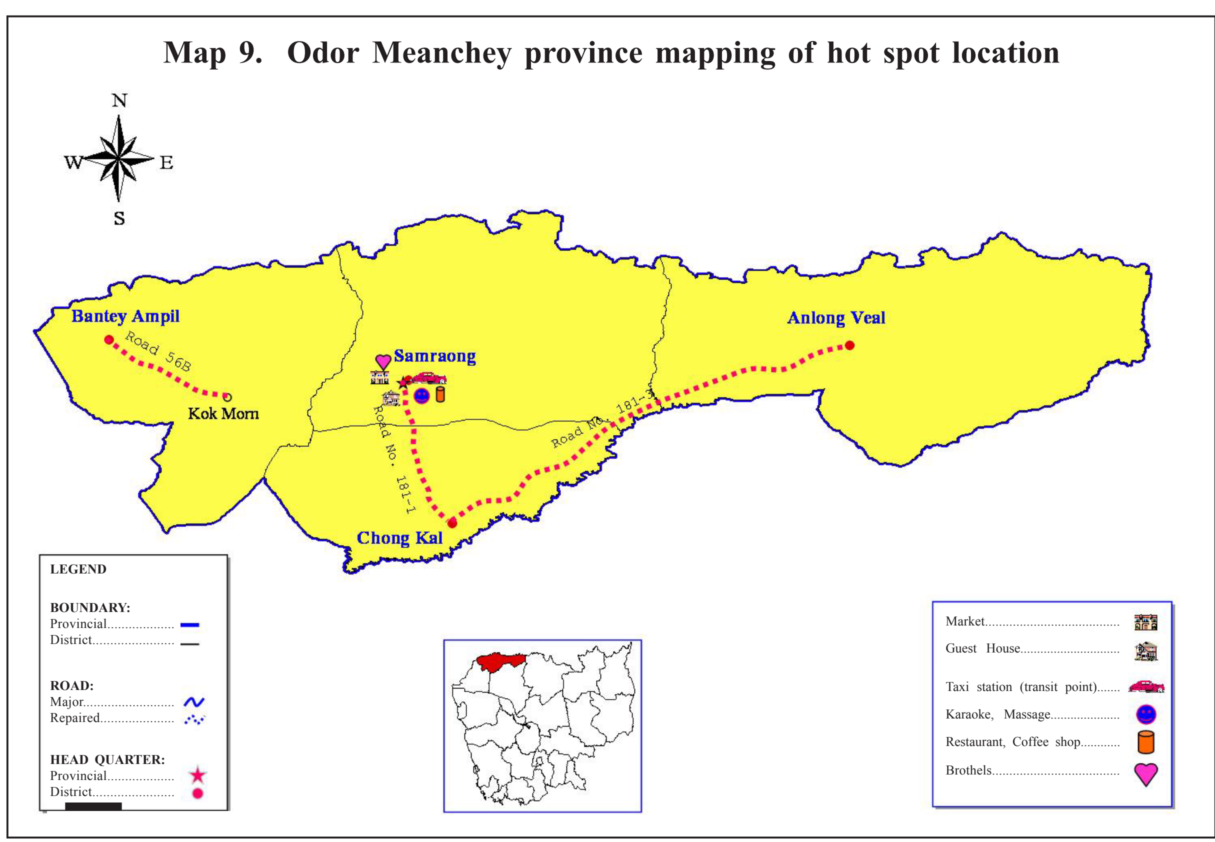
Map 6. Kampong Thom province mapping of hot spot location



Map 7. Siem Reap province mapping of hot spot location




Map 8. Preah Vihear province mapping of hot spot location
N
W
E
S
Choam Khsant
Chhaeb
Kuleaen
Tbaeng Mean Chhey
Svay Pat
Road No.64
Chey Sean
Sangkum Thmei
Phnom Dek
Road No.213
Roveang
LEGEND
BOUNDARY:
Provincial
District
ROAD:
Major
Repaired
HEAD QUARTER:
Provincial
District
Market
Guest House
Taxi station (transit point)
Karaoke, Massage
Restaurant, Coffee shop
Brothels


Map 9. Odor Meanchey province mapping of hot spot location
N
W
E
S
Bantey Ampil
Road 56B
Kok Morn
Samraong
Road No. 181-1
Road No. 181-3
Anlong Veal
Chong Kal
LEGEND
BOUNDARY:
Provincial
District
ROAD:
Major
Repaired
HEAD QUARTER:
Provincial
District
Market
Guest House
Taxi station (transit point)
Karaoke, Massage
Restaurant, Coffee shop
Brothels

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11. Annual Provincial work-plan of public work and transport department Odor Meanchey province.
12. Annual Provincial work-plan of rural development department in Kampong Thom province.
13. Annual Provincial work-plan of rural development department in Siem Reap province.
14. Annual Provincial work-plan of rural development department in Preah Vihear province.
15. Annual Provincial work-plan of rural development department Odor Meanchey province.
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United Nations Development Programme

South East Asia
HIV and Development Programme
http://www.hiv-development.org

Publications List

COVER	TITLE	ISBN DATE
	Building Dynamic Democratic Governance and HIV-Resilient Societies http://www.hiv-development.org/publications/Oslo_Paper.htm Authors: Lee-Nah Hsu *Language: English*	974-91870-8-3 February 2004
	Farmers' Life School Manual http://www.hiv-development.org/publications/FLS.htm Authors: Ou Chhaya, Jacques du Guerny, Richard Geeves, Masaya Kato and Lee-Nah Hsu *Language: English*	974-91708-1-4 January 2004
	Population Movement and HIV/AIDS: The case of Ruili, Yunnan, China http://www.hiv-development.org/publications/Ruili_Model.htm Authors: Jacques du Guerny, Lee-Nah Hsu and Cao Hong *Languages: English, Chinese*	974-91669-7-3 August 2003
	From Early Warning to Development Sector Responses against HIV/AIDS Epidemics http://www.hiv-development.org/publications/EWDSR.htm Authors: Philip Guest, Jacques du Guerny and Lee-Nah Hsu *Languages: English, Chinese*	974-91330-6-4 May 2003
	Multisectoral Responses to Mobile Populations' HIV Vulnerability: Examples from People's Republic of China, Thailand and Viet Nam http://www.hiv-development.org/publications/Multisectoral.htm Authors: Jacques du Guerny, Kellie Wilson, Promboon Panitchapakdi and Philip Guest *Language: English*	974-91165-8-5 February 2003
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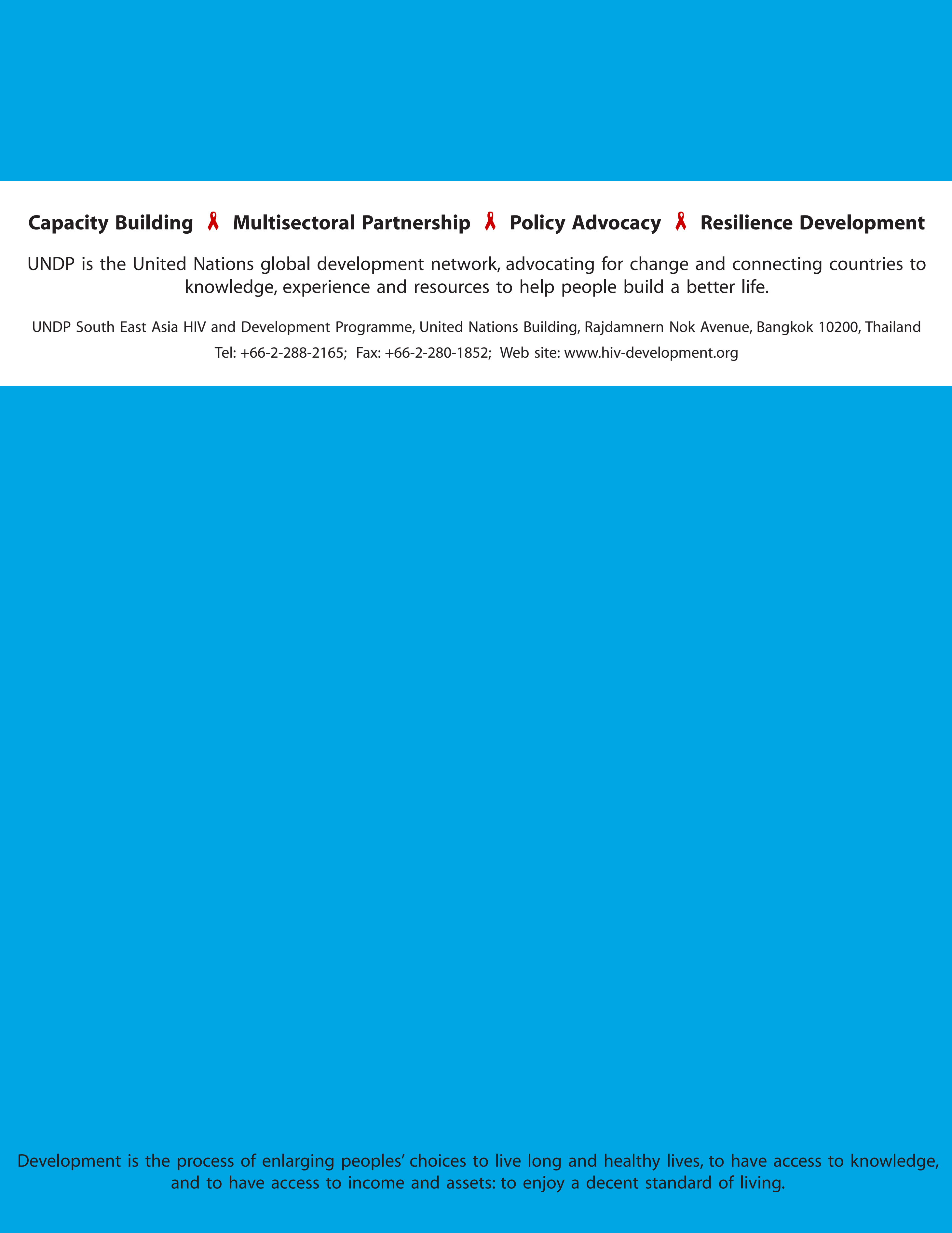

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