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Building an Alliance with Transport Sector in HIV Vulnerability Reduction



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Author: LEE-NAH HSU

UNDP South East Asia HIV and Development Project

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Prepared by: Lee-Nah Hsu

*Contact information: Lee-Nah Hsu, Manager
UNDP South East Asia HIV and Development Project*

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FOREWORD

Can the transport sector contribute to HIV vulnerability reduction? This paper provides concrete examples of how the transport system's operation efficiency can contribute to reduction in workers' and passengers' vulnerability to HIV infection. In addition, some statistics are provided to show the correlation between road construction-improvement and the increase in HIV prevalence in areas where there were no proactive transport sector HIV preventive policies and strategies.

The objective of sharing this lesson is to stimulate the public and private transport sectors through their own expertise in facilitating the exchange of goods and people, while contributing to the regional economic prosperity and simultaneously reducing people's vulnerability to HIV.

Since 1998 UNDP-SEAHIV has been advocating the potential contributions by the transport sector to HIV vulnerability reduction in the following relevant publications:

- *Reduction of HIV Vulnerability within the Land Transport Sector: Towards a Public Policy Framework for Addressing HIV/AIDS in the Transport Sector*, May 2000.
- *Land Transport & HIV Vulnerability: A Development Challenge*, April 2001.
- *HIV Policy Formulation and Strategic Planning for the Transport Sector in Vientiane, Lao People's Democratic Republic*, August 2001.

LEE-NAH HSU

Manager

UNDP South-East Asia HIV and Development Project

**Building an Alliance with Transport Sector in
HIV Vulnerability Reduction**

Lee-Nah Hsu¹

Many studies, particularly in [Africa](#),² have strongly correlated the availability of transport and the spread of HIV/AIDS. If conditions are there, the mobility that land transport facilitates and acts as a catalyst for economic development, can also promote the spread of the AIDS epidemic.

While the countries of South-East Asia are not presently as severely infected and affected as many of those in Africa, it is widely acknowledged that this region is at high risk of repeating the African experience, at least in part. More than half of the world population is in Asia with a population density far greater than that of Africa. Two-thirds of the world's poor are in [Asia](#).³

The South-East Asia road network is extensive and interconnected, e.g. the Asia Highway network. With the improvement of South-East Asian road conditions and infrastructure in recent years, especially construction of major roadways, a noticeable spread of the HIV epidemic from highly endemic areas to previously low prevalence areas has been observed. For these reasons, the member countries of ASEAN have requested the United Nations Development Programme's South East Asia HIV and Development Project (UNDP-SEAHIV) to facilitate the development of policies and programmes related to population movement and HIV prevention.

Why engage the transport sector?

The premise for a *sectoral approach* to HIV policy formulation and strategic planning is to introduce the concept of HIV vulnerability reduction in a particular sector through a systems approach based on a sector's unique attributes. Thus the introduction of a viable HIV policy and strategy to the transport sector requires an understanding of such attributes at both sectoral and subsectoral levels. The transport subsectors include, but are not limited to, road freight industry, road construction industry, rail sector, ports and shipping, passenger transport, aviation and road maintenance.

The unique attributes of the various transport subsectors may have physical, institutional and operational aspects. To formulate HIV prevention policy for the transport sector, one should start with the comparative advantage a sector possesses over others so that the sector may benefit from the policy. Once the specific attributes of different transport subsectors and their inter-relationships are understood in a development context, the entry points for effective policy and strategy become clear.

UNDP-SEAHIV's contribution to HIV/AIDS reduction is to utilize the sector's attributes to create new options and alternatives for people in the sector and affected by the sector. These are intended to both improve people's livelihood and reduce their HIV

vulnerability in a manner that benefits the sector and its profitability. This is also the key to ensure effective mobilization of the transport sector and stimulate additional resources to support HIV prevention.

At the sectoral level, the transport industry's overarching attribute is *connectivity*. It links people and goods of one area to another domestically, internationally, city-to-city and urban-rural-urban. The greater the reach of the transport infrastructure for distance and density, the greater its potential connectivity.

This same attribute also applies at the sub-sectoral level, particularly in relation to the connectivity between the various transport modes, e.g. river-land, air-land, land-sea, and the specificities of each mode in serving the goods and passengers it carries. Connectivity also has seasonal and industry-specific aspects. Some modes of transport are particularly suited (or ill-suited) to particular seasons or forms of economic activity, e.g. river transport can be seasonal (halted during dry season).

In view of the current rapid expansion of road infrastructures in the greater Mekong sub region, this paper will focus on discussing specific examples of the land transport sector for illustration purposes.

Land transport sector can uniquely contribute to HIV vulnerability reduction

When roads and bridges are built, they link low- and high-HIV prevalence areas such as villages and cities, respectively – true not only domestically but also internationally. The table illustrates the impact of road construction on HIV spread by providing data on HIV for a low prevalence area pre- and post road construction or improvement.

The Mandalay-Muse Highway, constructed in 1997, links Mandalay, Myanmar via Muse to Yunnan, China. An overall increase of HIV prevalence amongst injecting-drug users was observed after the completion of the highway. A similar phenomenon was also observed in Guangxi, China, when the highway linking Kunming (Yunnan) to Nanning (Guangxi) was completed. Overall documented HIV cases for Guangxi jumped from 10 to 525 within this short three-year period. The improvement of National Highway one in Viet Nam has also facilitated the increase of HIV cases in the North (Ha Noi and Hai Phong). This rapid increase in HIV prevalence in the North is associated with the improved linkages that characterized the pre-existing high HIV-prevalence area in the South, such as Ho Chi Minh City.

Diverse sectors of mobile populations may interact at certain key points, often involving sedentary community **populations**.⁴ The behaviours and practices of these sectors are dynamic with respect to one another and the sedentary community populations at their points of intersection. These complex interactions can synergistically accelerate the spread of HIV in areas previously isolated from external contacts. From the perspective of the HIV epidemics, stretches of roads joined together are more than just a network. The mobility systems and the road networks being established could contribute to the formation of dynamic hubs that have the

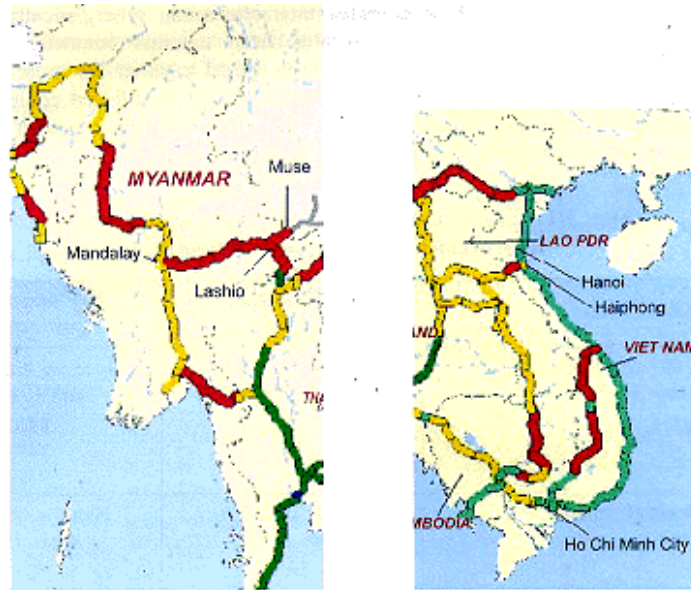
potentials of connecting different epidemics into a larger pandemic with a possible multiplier effect.⁵

Table: HIV prevalence prior to and post construction or improvement of transport corridors

<i>Highway routes</i>	<i>HIV prevalence: prior to activity</i>	<i>HIV prevalence: post activity</i>
Myanmar: 1997 construction Mandalay-Muse Highway ⁶	Injecting drug users HIV+, 1996	Injecting drug users HIV+, 1998
Mandalay	51%	88%
Lashio	34%	74%
Muse	86%	92%
China: 1996 construction Yunnan-Nanning, Guangxi ⁷	Number of HIV+ cases 1995	Number of HIV+ cases 1998
Guangxi	10	525
Viet Nam: Highway one: Ho Chi Minh City (HCMC)-Hanoi highway improvement ⁸	Number of HIV+ cumulative cases 1997	Number of HIV+ cumulative cases 1998
Hanoi	51-100	101-1,000
Hai Phong	11-50	101-1,000
HCMC	>1,000	>1,000

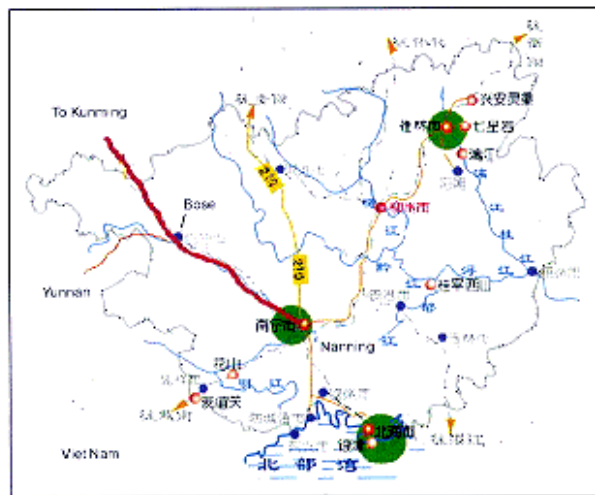
Notes: Although the estimates might not reflect the real levels of HIV infection, the changes over time are significant.

Activity for China and Myanmar is the *construction* of the road, while for Viet Nam, it describes road *improvements*.



Map 1: Myanmar

Map 2: Viet Nam



Map 3: Guangxi, Province of China

Maps 1 through 3 show the location of the routes presented in the table.

In order to ensure that the potential socio-economic benefits from the improved infrastructure are maximized, it is vital that HIV vulnerability of the communities served by the new transport routes is reduced. The workers, passengers and operators who run and use the system must also be protected.

UNDP-SEAHIV, in collaboration with UNAIDS-APICT & UNESCAP Division of Transport, Communications and Tourism, organized a workshop on *Reduction of HIV vulnerability within the land transport sector: towards a public policy framework for*

addressing HIV/AIDS in the transport sector, in Bangkok in November 1999⁹ for representatives from the Ministries of Transport throughout Asia and the Pacific. As requested by Member States following the November 1999 workshop, UNDP-SEAHIV organized a *UNDP Workshop on HIV policy formulation and strategic planning for the transport sector in Vientiane, Lao People's Democratic Republic* in July 2000. Workshops are being planned for Guangxi Province (China), Cambodia and perhaps Viet Nam.

By reviewing the magnitude of transport volume in Lao People's Democratic Republic, one of the least travelled areas, one senses the magnitude of transport frequency in the Greater Mekong Subregion. In 1997, a year of economic crisis when activities levels were relatively low,¹⁰ freight transport was 1,663 tons and passenger transport volume 19,995 persons. If an area with the least transport flow already demonstrated a high volume, one can only imagine the magnitude of transport volume of a more frequented route.

An example of transport systems linking people's movement to HIV vulnerabilities (see the figure) was illustrated by participants of the *UNDP Workshop on HIV policy formulation and strategic planning for the transport sector in Vientiane, Lao People's Democratic Republic*, in July 2000. This Workshop brought together the National Committee for the Control of AIDS (NCCA), Ministry of Health; National Tourism Authority; Transport Associations; Ministries of Communication, Transport, Post and Construction; NGOs working with mobile population in Lao People's Democratic Republic; UNICEF; UNAIDS; and Japan International Aid Office.

The figure, drawn by the participants of the transport sector-working group - (independent of HIV/AIDS specialists), showed the participants' understanding of the risk for HIV transmission between transport connectivity and human behaviours. Based on their work and observations, the participants illustrated in this diagram that air links and land transport bring tourists, officials and business people into contact with the local communities, thus facilitating HIV transmission. People working in the transport sector with no previous exposure to HIV/AIDS intervention strategies spontaneously developed the drawing. Though they did not correlate HIV to their work before the Workshop, the participants soon understood the impact of HIV on their sector. They then identified potential HIV vulnerabilities of people working in or served by their sector.

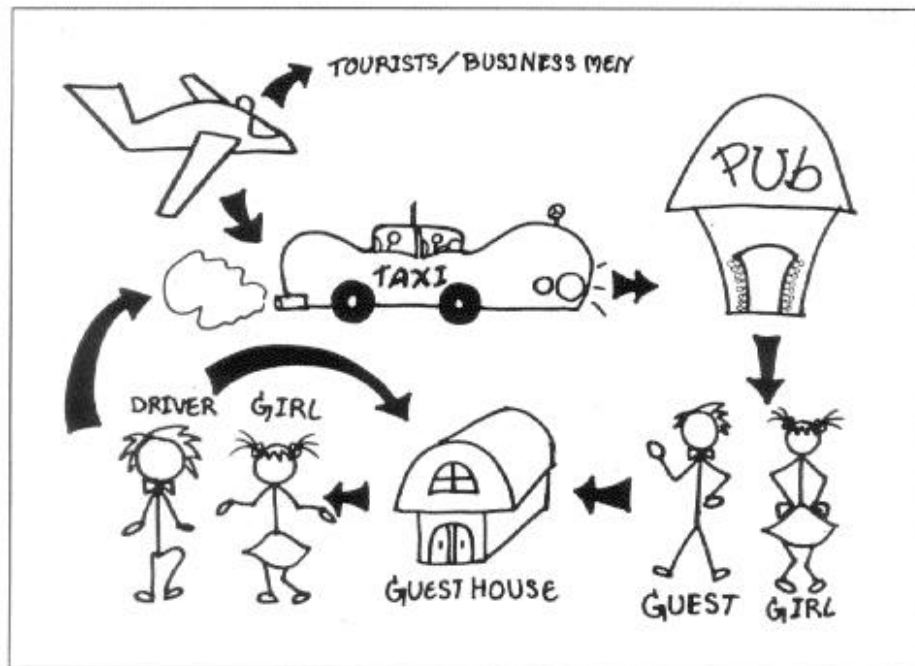


Figure: Illustration linking peoples' movement and HIV vulnerability

The lag time between loads manifests itself in the transport sector through extended waiting times during loading/unloading and at border crossings. It also extends the length of time away from home due to substandard infrastructure, creating situations that increase the likelihood of transport crews engaging in high-risk behaviours. They then transmit their infection(s) along the routes and back home.

Concurrently, improved connectivity results in increased transport efficiency and hence greater productivity and profit. Such improved efficiency will speed up transport and may thus reduce travel time, as well as the number of nights a driver is away from home. This potentially reduces the frequency and probability of high risk activities for HIV infection, such as commercial sex. The following four examples illustrate that improved efficiency and connectivity by the transport systems contribute towards effective policy and strategic planning for HIV prevention.

Example 1: Transport sector and community partnership

When new roads are built or road networks improved, the volume of traffic will rapidly increase. During the road construction phase, there will be an increasing number of construction-related vehicles coming through or stopping by certain communities. After the completion of road construction, there will be more vehicles using the new roads. The communities at certain road transport relay points will feel the impact the most. These places

usually expand into booming markets, rest stops, restaurants, entertainment facilities, vehicle repair stations, fuel stations, and traffic congestion. It presents an opportunity for the community to work in partnership with the transport sector to organize arrangements that would benefit both the local communities and facilitate efficient operations of the transport sector.

a. Secured parking

The transport/construction authority or contractor can plan jointly with the community to build conveniently located, safe, spacious and well-lit parking lots for trucks. The community can plan and allocate space to construct market stalls or vending shops surrounding the parking lots. The secured parking facility, when jointly owned by the local community and employing and benefiting the community economically, will motivate the community to be vigilant in reducing crimes and vandalism of the parked trucks and loaded goods. The reputation of secured parking facilities will increase the popularity of such communities for truckers to stop over.¹¹

b. Road safety measures

The transport/construction sector could also take this opportunity to liaise with the community for the latter to plan preventive education and devise measures on road safety, thus reducing potential road-related accidents. One often sees a surge of road deaths in rural communities when new highways first opened as the local residents and animals gradually learned to adapt to the increased speed of on-coming vehicles. Such coordinated road safety education and measures can reduce unnecessary deaths, social trauma and economic loss.

c. Skills transfer to widen employment opportunities for the community

The transport/road construction sector can form partnership with the local communities and transfer auto mechanics and road maintenance skills to selected local residents to enable the communities to increase job opportunities beyond marketing produce and goods.

Example 2: Reduced waiting time

In an age of globalization and increased economic cooperation, free trade agreements are being negotiated within the Greater Mekong Subregion¹² and with other regions. These offer unprecedented windows of opportunity to incorporate measures into trade practices to facilitate the quick and easy passage of goods and people across international boundaries.

Without such free-trade agreements and establishment of economic free trade zones, people and goods crossing from one country to another have to pass through many layers of clearance. In addition, customs clearance at borders can be a lengthy procedure sometimes

requiring days. Lengthy customs clearances at the borders mean idle drivers and loaders in border towns.

The combination of cash, leisure time and long distance from home potentially results in visits to commercial sex establishments. Introducing measures to reduce waiting time also reduces transport workers' vulnerabilities to HIV. Such measures require complex negotiations but could significantly contribute to improving transport connectivity, productivity and profit and promoting macroeconomic growth while concurrently reducing HIV vulnerabilities.

It is also possible that reducing the demand in sex can impact on the supply and the risk of HIV and other sexually transmitted infections among commercial and informal sex workers. This strategy should be complemented by a strategy for alternative income generation possibilities for these women.

Example 3: Compatible transport standards

Junctions of physical transport infrastructure at international borders, such as [rail-gauge](#) break points and domestic inter-modal nodes, contribute to unnecessary and costly delays. As a general example, different specifications or standards of truck or rail carriage wheels and container sizes disrupt the flow of goods from one country to another. In these instances, regulatory interventions specifying either compatible physical infrastructure or appropriate container standards could achieve multiplier benefits beyond the immediate increase in efficiency, as well as the added benefits illustrated in Example 1.

As a specific case-in-point, once the free trade agreement is reached between Pingxiang, China and Northern Viet Nam, the roads will be widened and improved on the Vietnamese side. The improved infrastructure will allow heavier trucks to go through the border crossing into internal delivery points in Viet Nam without having to transfer their goods among smaller vehicles which require manual unloading and reloading. Similarly, loads to China can begin in larger vehicles and bypass the current delay of transferring the cargo to many small trucks by remaining in the original one to maintain cost effectiveness. Such an improvement can reduce the number of workers for each ton of transported goods, as well as the number of nights the transport workers have to stay in border towns. This would result in fewer visits to commercial sex establishments.

Example 4: Payment scheme of transport drivers and crews

If a portion of transport crew's payments were made to their home base rather than at the point of delivery, not only would their households' income be more secure, but the crew's susceptibility to high-risk behaviours could also be modified. Studies have shown that the

frequency of sex worker visits by the members of a mobile population is directly proportional to their disposable income when away from home.^{13, 14}

Conclusions

As a minister in Asia once stated, “What is the use of building roads and bridges if we do not prevent HIV? If more of our people die of AIDS, soon there would be no one left to use them”.¹⁵ It is therefore time to engage the transport sector itself in those preventive activities to maximize the value of the relevant infrastructure and promote the well being of society.

In conclusion, improved road transport leads to increases in population movement. When controlling all other factors, transport improvements are associated with the spread of HIV. By integrating HIV prevention policies and strategies through the transport sector as illustrated above, one can reduce the individual number of exposures to HIV infection risks.

It is critical to make a clear distinction that the transport sector’s HIV prevention policies and strategies do not focus on lessening the number of HIV infections through direct contacts (sexual and otherwise), which result with the increase in population movements. The contribution to containing HIV epidemics by introducing transport sector’s HIV preventive policies and strategies based on the comparative advantages of the transport sector, is to *avert* the potential number of HIV infections due to the improvement and interventions of the transport system itself.

Consequently, there is a real need for a truly multisectoral approach, where each sector contributes to its own HIV-averted infections and not just replicating the health sector’s approach. The synergy of these multisectoral diversified efforts could then reduce the HIV epidemics while promoting development.

¹ Lee-Nah Hsu, Manager, UNDP South East Asia HIV & Development Project. The opinions expressed in this paper is that of the author and do not necessarily represent the position of UNDP. The author wishes to acknowledge, with thanks, the comments made by various reviewers and country workshop participants.

² AMREF, Tanzania trucker’s project.

³ World Development Report, World Bank, 2000.

⁴ Population Mobility and HIV Vulnerability in South-East Asia: An Assessment and Analysis, United Nations Development Programme South East Asia HIV and Development Project, February 2000, ISBN: 974-85835-11.

- ⁵ From AIDS Epidemics to an AIDS Pandemic: Is an HIV/AIDS Hub Building in South-East Asia? United Nations Development Programme South East Asia HIV and Development Project, August 2000, ISBN: 974-680-172-4.
- ⁶ Source: Ministry of Health, Myanmar.
- ⁷ Source: AIDS unit, anti-epidemic station, provincial public health department, Guangxi province.
- ⁸ Source: Viet Nam National AIDS Bureau, Sentinel Surveillance data 1997-1998. Note 1996 data is in percentage and changed to cumulative case numbers for 1997 and 1998.
- ⁹ Reduction of HIV Vulnerability within the Land Transport Sector: Towards a Public Policy Framework for Addressing HIV/AIDS in the Transport Sector, UNDP South East Asia HIV and Development Project, May 2000, ISBN: 974-685-008-3.
- ¹⁰ HIV Vulnerability and Population Mobility in the Northern Provinces of the Lao People's Democratic Republic, UNDP South East Asia HIV and Development Project, March 2000, ISBN: 974-85913-87.
- ¹¹ Chung A, Nguyen D T, et al, HIV vulnerability mapping: Highway one, Viet Nam, United Nations Development Programme, South East Asia HIV and Development Project, October 2000, ISBN: 974-680-176-7.
- ¹² Cambodia, Lao People's Democratic Republic, Thailand, Viet Nam as well as Myanmar and Southern China.
- ¹³ Assessing Population Movement and HIV Vulnerability: Brunei-Indonesia-Malaysia-Philippines - Linkages in the East ASEAN Growth area, UNDP South East Asia HIV and Development Project, November 2000, ISBN: 974-680-175-9.
- ¹⁴ HIV Vulnerability Mapping: Highway One, Viet Nam, UNDP South East Asia HIV and Development Project, October 2000. ISBN: 974-680-176-7.
- ¹⁵ A speech made by a Minister at the 5th ICAAP, Kuala Lumpur, Malaysia, October 1999.

Capacity Building Social Mobilization Institutional Partnership Advocacy & Information
UNDP South-East Asia HIV and Development Project - United Nations Building
Rajadamnern Nok Avenue Bangkok 10200 Thailand

Tel: (662) 288-2165 Fax: (662) 280-1852 Website: www.hiv-development.org

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