

WESTERN YUNNAN ROADS DEVELOPMENT PROJECT

Supporting HIV Prevention in the People's Republic of China

The Asian Development Bank (ADB) is supporting a human immunodeficiency virus (HIV) and sexually transmitted infection (STI) prevention program, which is being implemented in conjunction with the Western Yunnan Roads Development Project (Baolong Highway) in the People's Republic of China (PRC).

The road project is a 77-kilometer (km) expressway that will eventually be part of a longer expressway linking Kunming, Yunnan's capital city, to the Myanmar border. The ADB-supported construction passes through Baoshan and Longling prefectures of Yunnan Province—a poor interior province bordered by the Lao People's Democratic Republic (Lao PDR), Myanmar, and Viet Nam. The area includes 36 ethnic minority groups and around 690,000 people who are poor.

The total cost of the road project was \$582 million. Construction began in January 2005 and is expected to be completed by the end of September 2007. The total budget for the HIV-prevention program associated with the ADB-financed construction was \$1 million (0.17% of the project cost).



Methodology for Case Study Review

ADB's case study review was undertaken to assess the design and implementation issues, as well as outcomes and impact, of the HIV-related measures incorporated into project implementation. The study involved document reviews, field visits, and meetings and interviews with key stakeholders. Construction company employees, government officials, ethnic minority groups, nongovernment organizations, women's groups, other donors, and mobile and migrant workers were among the key stakeholders who were consulted.

Rationale for HIV-Focused Interventions

Yunnan Province has one of the highest HIV-prevalence figures in the PRC. Infections mostly occur among injecting drug users near the Myanmar–Yunnan border. Myanmar is thought to have a generalized epidemic, with between 1 and 2% of its adult population infected with HIV. While the development of the Baolong Highway is intended to bring significant economic opportunities to both the PRC and Myanmar, increased connectivity and mobility are feared to aggravate the spread of HIV and other STIs across and within borders.

Construction of the Baolong Highway was of particular concern because it cuts through several poor and remote ethnic minority communities in Yunnan that have been relatively isolated before this. With the influx of construction employees, local communities—many with ethnic minority populations—will be exposed to external sociocultural influences and threats, including drug and human trafficking. In addition, as new commercial establishments sprout around the highway construction, more mobile and migrant workers will seek employment in the area.

HIV-Prevention Measures

Recognizing the HIV risks that construction of Baolong Highway could bring to local communities, construction workers, and migrant and mobile populations, the Government—with support from ADB—initiated the Baolong Healthy and Safe Action (BHSA) technical assistance (TA) project. This project was designed to help prevent the spread of HIV along Baolong Highway during the construction phase, and test an approach to HIV-prevention communications that could be used in similar projects. The project has been executed by the Office of Yunnan Provincial Working Committee for HIV/AIDS Control and implemented by Marie Stopes International Australia/the PRC (under a contract awarded by ADB).

The BHSA project has used an innovative approach that focuses on “settings” rather than the more narrowly defined “risk groups” usually described and targeted in HIV-focused interventions. For each setting, the major focus of all activities was to make the setting safe. Four core activities were part of all intervention efforts: (i) advocacy aimed at HIV awareness, (ii) behavior change communication (BCC) materials, (iii) access and promotion of health services and products, and (iv) rigorous monitoring and evaluation.

Five priority settings were identified and the communication and behavior change interventions were:

- 1. The construction workplace** – including advocacy with the construction company and worksite management, peer leadership and education, and specifically targeted BCC materials, condom social marketing, promotion of STI and voluntary counseling and testing (VCT) health and pharmaceutical services. The project has also piloted a number of innovations such as film nights, photo exhibitions, and the use of mobile phone text messaging. The local media has been an important partner.
- 2. Entertainment settings** – BHSA has used a mix of communication strategies to ensure safe-sex messages for

vulnerable women, youth, and construction workers. Tailored BCC materials and condom social marketing to promote 100% use of condoms has been critical for program success. The managers and workers of entertainment venues have been trained as peer leaders to reinforce safe-sex messages and promote model STI and VCT services.

- 3. Transport corridors** – Survey data indicated that truck drivers and other transport workers were the most vulnerable to HIV risk behavior on the Baolong Highway. Yet, they are a difficult population to reach because of their mobility. The BHSA project focused on linking road safety with HIV prevention using tailored BCC materials such as mirror hangers and a road safety kit with a condom. Condoms as well as STI and VCT services were promoted through worksite peer leaders and truck company managers. Traffic police were also involved.
- 4. Local communities** – Communities and villages were supported to develop community plans that would promote the benefits and mitigate the risks of the highway construction. Mobile and out-of-work youth were recognized as being particularly vulnerable in these settings. Strategies used included life-skills training for HIV prevention and safe migration as well as entertaining and educational multimedia presentations.
- 5. Condoms and health services** – Given the quality of services and health-seeking practices of communities, a health service referral network was formed by developing five existing private and public health services into model STI and VCT health services and pharmacies. The project developed their capacity to provide syndromic management, counseling services, referrals, and social marketing. The services were promoted through a peer educator and social mobilizer network and by distributing discounted referral coupons/vouchers.

The project established a rigorous monitoring and evaluation process through an independent consultancy under the direction of the Kunming Medical College. The monitoring design included a comprehensive baseline study in August 2005 with intervention and control sites and routine collection of over 13 process indicators. As of mid-2007, process indicators show that the project has reached over 2,000 people with HIV-related messages for the first time, 900 people in one-to-one peer education, and over 20,000 people in group and community events. The project had also trained more than 300 peer educators, and sold or distributed for free more than 80,000 condoms.

Findings from the midpoint survey (August 2006) included:

- (i) exposure to the project interventions had significantly and positively impacted on knowledge and behavior change when compared to the control site;
- (ii) degree of exposure to project messages was highly correlated with knowledge and behavior change;
- (iii) most significant changes in knowledge and behavior occurred among the most at-risk groups, namely, construction site supervisors and truck drivers; and
- (iv) more than 80% of construction and entertainment workers questioned had been exposed to intervention packages—a number higher than the project’s original goal.

In terms of behavior change, across a range of workers (project office staff, foremen, drivers, and skilled and unskilled workers), the baseline and midpoint survey found that all had improved correct knowledge and beliefs about HIV; and in all groups, except unskilled workers, there was a decline in the number of commercial sex contacts. Similarly, all groups reported an increased use of condoms with commercial sex partners, except drivers and unskilled workers.¹

Key Issues

The case study analysis identified a number of key structural and operational issues that will be useful for designing and implementing future programs similar to this one.

Structural

- **Role of the responsible government authority.** The Ministry of Communications (MOC) was the government authority responsible for the road construction project. The BHSA project operated in parallel to the road project because MOC did not agree to include an HIV-prevention component in the main design of the road project.
- **Securing the cooperation of construction companies.** Twenty-two construction and inspection companies were contracted for road construction. Most agreed to work with the BHSA project, but some refused because they did not consider HIV prevention relevant to their work.²
- **Size and nature of the technical assistance team.** The original design for implementing the HIV-prevention activities had inadequate staffing provisions, so changes had to be made to the BHSA project team. The project also relied on a team of volunteers, but project staff found it was not easy to retain the services of unpaid volunteers.
- **Measuring the impact of HIV-prevention campaigns.** The project's monitoring systems assessed the net impact of the BHSA project using a case-control study. This indicated that the combination of BHSA project activities combined with the HIV-related programs of the provincial government had a greater impact than the activities of the provincial department of health alone in terms of positive behavior change.

Operational

- **Government and community support.** The BHSA project was highly successful in eliciting support from a range of government stakeholders, which underpinned the success and is likely to lead to some sustainability in HIV-related programs and capacity.
- **Integration with occupational health and safety programs.** The BHSA project worked with the construction and inspection companies to make HIV-prevention messages an integral part of their occupational health and safety programs.
- **Ongoing support for peer education.** A number of peer

educators were trained in each construction site but limited resources meant ongoing support was only available to a fraction of these.³ High turnover in project sites meant that new peer educators, social mobilizers,⁴ and project advocates had to be retrained regularly; this proved to be a major demand on project staff resources.

- **Adapting methodologies and materials.** The BHSA project staff customized more traditional HIV-prevention methodologies and materials to fit the highway construction setting. Specially tailored BCC materials were produced for each target setting and these were strongly associated with the positive outcomes.
- **Voluntary counseling and testing as well as STI health services.** A health service referral network was developed by establishing model STI and VCT health services from existing private and public health providers. However, the monitoring system found that this component fell short of expectations, given the poor state of health service delivery in the project area.

Recommendations

Based on this review of implementation experience and the emerging issues, a number of recommendations can be made for future programs.

1. **A "settings" vs. target-group approach.** The innovative holistic settings approach that the BHSA project adopted was effective and could be replicated. Emphasis should be placed on the interconnectedness of the construction work site, local communities, and the entertainment sector rather than narrowly defining risk groups and targeting each with separate interventions.
2. **Require contractors to be involved.** Project design and loan agreements should require construction and other related contractors to provide the implementing NGO and/or agency with a suitable amount of access so that HIV-awareness and prevention activities can be performed safely in a supportive environment.
3. **Human resources and financial flexibility.** Careful attention should be paid to determining the implementation arrangement and financial commitments during the design stage of the HIV-prevention program to realistically meet demands in the field. To the extent possible, design and contracting arrangements should allow for adjustments and flexibility as implementation proceeds.
4. **Monitoring and evaluation mechanisms.** An independent monitoring and evaluation mechanism should be a standard part of the project/component design to accurately identify and understand the strengths and weaknesses of HIV-awareness and prevention activities during implementation, and thus, adjust accordingly.⁵
5. **Local resources.** The BHSA project team has proposed defining a minimum package of interventions for future

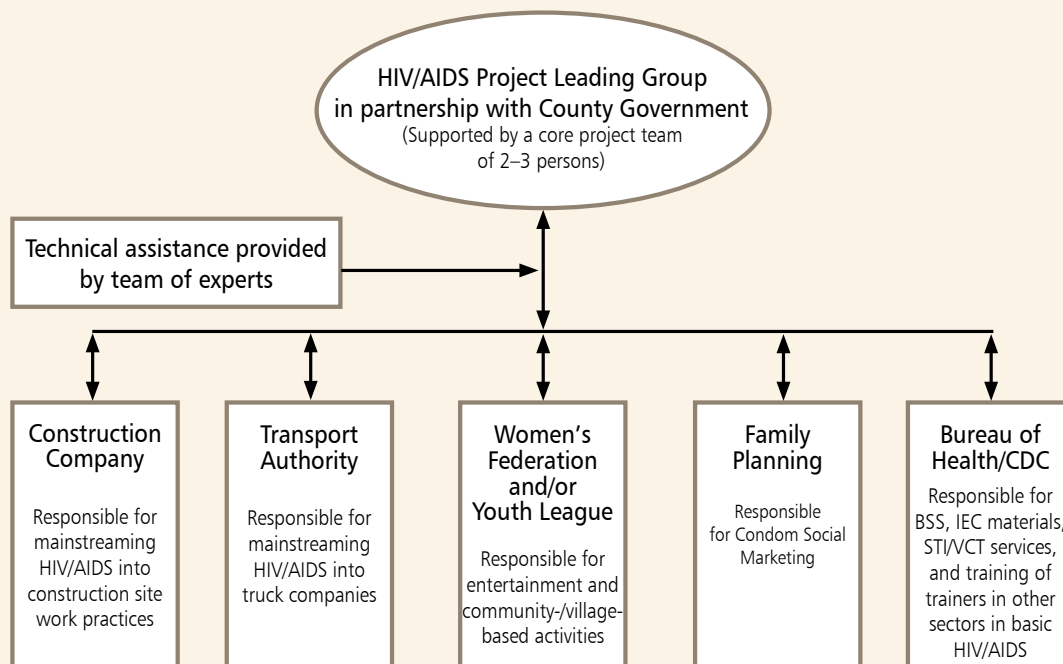
projects in the PRC. The package would be multisectoral to achieve a comprehensive approach to HIV prevention across settings (figure 1). Local communities should be empowered with resources and skills to build their own resilience skills for HIV prevention, and to reinforce the HIV-prevention efforts of other groups.

6. Occupational health and safety. In countries such as the PRC that require an occupational health and safety program for all infrastructure projects, integrating HIV prevention as

a component of the occupational health and safety program should be considered. This could make mainstreaming of HIV prevention more sustainable in the infrastructure setting.

7. Information, education, and communication/BCC approaches. Traditional information, education, and communication as well as BCC methodologies and materials can be successfully adapted to the infrastructure sector to more accurately and efficiently reach target settings and achieve project goals.⁶

Figure 1: Model for Future HIV and AIDS Prevention on Highways in the People’s Republic of China



AIDS = acquired immunodeficiency syndrome, BSS = behavioral surveillance survey, CDC = Centre for Disease Control and Prevention, HIV = human immunodeficiency virus, IEC = information, education, and communication, STI = sexually transmitted infection, VCT = voluntary counseling and testing.
Source: Marie Stopes International. 2007. *Case Study: Preventing HIV/AIDS on Road Projects in Yunnan – An Overview of Experiences and Lessons Learnt: Baolong Healthy and Safe Action*. Yunnan.

¹ Information in this section was drawn from C. Katz. 2007. *Case Study: Preventing HIV/AIDS on Road Projects in Yunnan – an Overview of Experiences and Lessons Learnt*. Bangkok.
² The Baolong Healthy and Safe Action (BHSA) technical assistance (TA) team had to secure official letters from the executing agency of the road project to introduce the BHSA TA and elicit the cooperation of the companies.
³ The BHSA TA trained 1–2 peer educators per construction site, but they were only able to provide ongoing support to active peer leaders in 7 of the 14 construction sites and 1 of 8 of the sites where the inspection companies work. The road project employed an average of 15,000–20,000 workers each day.
⁴ Social mobilizer is defined as a member of the village who is trained and supported to implement human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) prevention interventions in their own and surrounding villages.
⁵ Asian Development Bank. 2007. *Preventing HIV/AIDS in Infrastructure: Disseminating the Experiences of the Baolong Healthy and Safe Action Project and their Implications for National and Regional Policy*. Dissemination Workshop, 14–15 March 2007, Kunming.
⁶ For example, “info-tainment” mobile film nights, SMS messaging, photo exhibitions, mirror hangings, key chains, etc.

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All photos were taken by Charmaine Cu-Unjieng.

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