



Gender Tool Kit: Transport

Maximizing the Benefits of Improved Mobility for All

Asian Development Bank



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Abbreviations

ADB	– Asian Development Bank
AusAID	– Australian Agency for International Development
BCC	– behavior change communication
BRT	– bus rapid transit
CAREC	– Central Asia Regional Economic Cooperation
CNY	– yuan
CPS	– country partnership strategy
DMF	– design and monitoring framework
EGM	– effective gender mainstreaming
GAP	– gender action plan
GEN	– gender equity theme
GPS	– global positioning system
IMT	– intermediate mode of transport
LGED	– local government engineering department
MDG	– Millennium Development Goal
MRT	– mass rapid transit
NGE	– no gender elements
NGO	– nongovernment organization
NMT	– nonmotorized transport
PAM	– project administration manual
PMU	– project management unit
RRP	– report and recommendation of the President
RSDD	– Regional and Sustainable Development Department
SGE	– some gender elements
STI	– sexually transmitted infection
STI-OP	– sustainable transport initiative operational plan
TOR	– terms of reference

Foreword

The transport sector and gender equity are both operational priorities of the Asian Development Bank (ADB) under its long-term strategic framework, **Strategy 2020**. Infrastructure (including transport) is one of five core areas of operations, while gender equity is one of five drivers of change for supporting and achieving inclusive growth. To ensure transport investments are sustainable and benefits are distributed and shared more equitably, a Sustainable Transport Initiative (STI) Operational Plan (OP) was developed and adopted to guide and provide a road map for ADB's transport investments. The STI-OP supports the development of safe, environmentally friendly, socially inclusive, and affordable transport systems in the region, and identifies social sustainability as one of the four new and enhanced operational areas for scaling up. Social sustainability requires core attention to gender and wider social inclusion in ADB-financed transport sector projects, including through building institutional capacity to better design, implement, and monitor gender-responsive and socially inclusive transport projects. Since transport investments comprise a large proportion of ADB's portfolio, we simply cannot afford to miss gender mainstreaming opportunities in this sector.

Transport investments that are designed with due consideration to gender dimensions can bring significant benefits to women in terms of increased access to employment, markets, education and health services, as well as directly reducing their time poverty. However, too often, the design of transport projects and services do not sufficiently consider women's travel needs, concerns, priorities, and preferences. Women also largely remain under-represented in transport sector agencies, and their voices are not heard in transport sector policy and planning processes.

For the transport sector to be sustainable and inclusive, women and men need to be equal partners in developing new ideas and strategies for improving access and affordability of transport infrastructure and services. Gender analysis needs to be undertaken to inform the design of transport investments. In recent years, ADB has improved its gender mainstreaming efforts by designing 39% of transport projects in 2011 and 50% in 2012 to be gender-inclusive, compared to none in 2009. We are committed to sustain and build upon these efforts and momentum in the coming years.

This *Gender Tool Kit: Transport* provides users with a set of tools and case study examples to help design transport projects that are gender-responsive and inclusive. I hope that you will find the tool kit to be a useful resource and that it will contribute toward more gender-inclusive transport sector operations in the Asia and Pacific region.



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Purpose of the Tool Kit

The purpose of the tool kit is to assist staff and consultants of the Asian Development Bank (ADB) and government partner executing agencies to conceptualize and design gender-responsive projects in the transport sector. ADB's Policy on Gender and Development adapts gender mainstreaming across all sectors to promote and support gender equality and women's empowerment. The tool kit provides guidance for transport sector specialists and gender specialists by drawing attention to the gender dimensions of transport, and how to mainstream gender equality issues into transport project design, implementation, and policy engagement.

It guides users in designing project outputs, activities, inputs, indicators, and targets to respond to gender issues in transport sector operations. ADB staff and government counterparts can use the tool kit in identifying social and gender issues to be considered and integrated into project planning, design, and implementation. Consultants can use it in carrying out more detailed social and gender analysis during the project preparatory technical assistance, detailed design, or due diligence phase. It should be noted that the tool kit is not meant to be prescriptive; rather, it offers a menu of entry points that the project team can select.

The tool kit is divided into key subsectors of ADB's transport sector investments—namely rural roads, national highways, railways, urban transport and services, bridges, and water-based transport and ports. Enabling policy and capacity development has been addressed as a crosscutting consideration applied to all subsectors. This is followed by sections addressing road safety and mitigation of social risks. While not all aspects of the tool kit are relevant to all projects, this approach will assist staff, government counterparts, and consultants to select the subsectors most relevant to the specific project context.

ADB projects categorized as “gender mainstreaming” require a gender action plan (GAP) and gender targets and indicators in the project design and monitoring framework. The tool kit provides tips to designing the GAP and identifying appropriate gender targets and indicators relevant to the specific subsector context. The tool kit also includes guidelines for preparing consultant terms of reference for detailed gender analysis and GAP preparation.

Case studies from ADB's project portfolio have been included to illustrate good practices and promising approaches in mainstreaming gender in transport sector projects. The appendixes provide samples of good practice GAPs for transport projects, terms of reference for consultants, and a selection of useful references.

The tool kit was prepared by Samantha Hung, Senior Social Development Specialist (Gender and Development), ADB. The preparation of the tool kit benefited from an initial transport and gender document prepared by Penelope Schoeffel, Consultant, and substantial guidance and inputs from Shireen Lateef, Senior Advisor (Gender), Office of Vice-President Knowledge Management and Sustainable Development. Other staff from various departments and the ADB Transport Community of Practice—including Bart Édes, Rikard Elfving, Scott Ferguson, Sri Retnaningdyah Soetantri, Jeremy Stickings, Ferdousi Sultana, and Francesco Tornieri—provided useful comments and suggestions. Jeff Turner also gave invaluable feedback as an external peer reviewer. Research assistance was provided by Rhea Marie Francisco, Staff Consultant, and production assistance was provided by Marian Lagmay, Operations Assistant, and Francoise Marie B. Alonzo-Calalay, Administrative Assistant.

Chapter 1

Why Is Gender Important for the Transport Sector?

Transport infrastructure and services are a means to improve the well-being of people by facilitating access to economic and social benefits, and thus should be designed to best meet the needs of men and women in ways that are equitable, affordable, and responsive to all groups. To achieve these objectives, the planning, design, construction, operation, and maintenance of transport infrastructure and services should involve the participation of all key stakeholders, including transport user groups and affected communities.

Transport infrastructure and services are often incorrectly considered “gender neutral.” It is wrongly assumed that transport projects equally benefit men and women and there is no significant difference in their travel patterns, modes of transport access, and utilization of transport infrastructure and services. In fact, mobility is experienced differently by women and men, as they use different modes of transport for different purposes and in different ways depending on their socially determined reproductive, productive, and community-related gender roles. Women’s and men’s relative economic and social status and livelihoods also influence their different transport needs and utilization of transport services. These differences need to be well understood in order to inform the design of gender-inclusive transport projects. Gender dimensions of transport become more evident when transport investments are viewed in terms of enabling the mobility of people for different purposes and needs, and by different modes—which are experienced differently by women and men, girls and boys—rather than in terms of mere investment in hard infrastructure that equally benefit all social groups.

Gender Differences in Travel Patterns

Women have daily mobility patterns that are more complex than men, owing to their gender roles, which combine domestic and care giving tasks with paid employment, income-earning activities, and community and social obligations. As primary family caregivers, women are more likely to be responsible for accompanying children to school and medical services, and purchasing fresh produce and groceries from markets; hence, their daily mobility will involve travel to and from these services and locations, often with purchases in hand. Due to their gender roles, women also tend to make more combined and frequent trips than men, often for shorter distances and for multiple purposes within one journey (e.g., taking children to school en route to their workplace, or stopping at the market on their way home), commonly referred to as “trip chaining.” Women are also much more likely to travel with children or elderly dependents, and during off-peak times (e.g., after school pick-up in the early afternoon or when taking elderly parents to medical visits). Men, on the other hand, tend to make fewer and more direct trips daily, such as to/from their workplace, often on their own and for a single purpose, and often during peak rush-hour times. Gender transport patterns can also be influenced and determined by sociocultural practices, such as in societies where women are generally always required to be escorted by male or elderly female relatives as chaperones.

In some rural areas, women's mobility patterns are closely associated with collection of water and fuel (e.g., firewood) for daily household consumption, which is both physically challenging and time-consuming. In some scenarios, women can face forced mobility where essential services are absent in order for them to carry out their daily gender roles. For example, inadequate water and sanitation in low-income communities may mean that women have to make long trips to access and collect water.

Gender Differences in Use of Transport Modes

Women and men often do not have equal access to different modes of transport. Men are more likely to own or know how to drive motor vehicles, particularly in certain cultural contexts where it is less socially acceptable for women to drive. Men are also more likely to have access to a cash income and control over family finances to afford and to pay for public transport. As women have primary domestic and caregiving responsibility in families, this provides men with more time to travel outside the home for further distances, and to have overall greater mobility.

For many women in developing countries, walking remains the predominant mode of travel, particularly in rural areas, because other transport modes are often not available, are too expensive, or are located too far away from home for women to access. In some contexts, women and children head-loading may also act as a form of freight transport for agricultural production. In addition, where women do use vehicles or transport services, they are more heavily reliant on slower, nonmotorized transport (NMT) or intermediate modes of transport (IMTs, such as bicycle, cyclo, motorbike-taxi, tricycle, rickshaws, and animals or animal-drawn carts). In urban areas, this usually translates to women being more dependent on public transport.

Gender Differences in Time Use and Time Poverty

Women's multiple gender roles in the reproductive, productive, and community spheres often means juggling numerous daily tasks. As a result, women often experience "time poverty" that impacts significantly on how much time women can allocate for travel—where they go, for how long, and what for purpose, and the scheduling of trips they make. Often, women's travel has to be undertaken in between or simultaneously with other daily household tasks. Hence, the availability and performance of transport systems and services place different burdens on men and women, with women more likely to forgo their mobility in order to save time. As a result, the opportunity costs of poor transport systems and services that are unreliable and inflexible are often borne disproportionately by women who cannot afford the lost time. For example, women may turn down employment opportunities further distances away from home if the transport system does not enable them to travel to and from work in time to also meet their domestic family care obligations, or provide ample space and flexibility for women to travel with dependents and household goods. Instead, they may have little choice but to accept lower-paid local job opportunities or informal income sources closer to or at home, so they can combine their dual responsibilities of managing household and productive activities.

Improved mobility for women can make a significant difference in their ability to effectively manage their time, access services, and increase social interaction. For example, the National Literacy Mission adopted the idea of cycling for women as part of a mass campaign for promotion of basic education in Pudukkottai district in the state of Tamil Nadu in Southern India. It was believed that cycling would address women's transport needs to enable them to carry out their daily tasks efficiently, and that learning a new skill, such as cycling, would give women confidence and a sense of freedom as well as motivate learning (Box 1).

Box 1 Song from the Cycling Campaign for Women (Translated from Tamil)

"Learn to ride the cycle sister, Set in motion the wheel of life sister. See the little boy riding high, You too can learn and ride by, Cars, ships and planes, are now piloted by women, Those days are gone, when the drivers were only men. So learn to ride the cycle quickly, And begin a new story."

Source: N. Rao. 2002. Cycling into the Future: The Pudukkottai Experience: Tamil Nadu, India. In P. Fernando and G. Porter, eds. *Balancing the Load: Women, Gender and Transport*. London: Zed Books. p. 152.

Gender Differences in Access to Resources for Travel

As women generally have lower cash incomes and may have less decision-making control over household financial resources, they may have limited affordability for public transport services. Given women's gender roles and associated travel patterns that require them to make shorter, more frequent journeys with multiple stops (often with accompanying dependents and other family members), they are likely to be disadvantaged and face higher costs by using public transport with ticketing systems that charge fares on a per journey and per person basis. Internationally, women are also less likely to own or have access to a private vehicle, whether it be a car, motorbike, or even a bicycle; hence, their greater reliance on public transport services.

Gender Differences in Mobility and Safety

In some sociocultural contexts, strict sex segregation especially in public spaces is the cultural norm. In these societies and communities, the public domain is largely a male world, while women are confined to the private domestic sphere of the household. This influences the social and cultural acceptance of women's independent travel beyond the home and vicinity of the community and constrains women's mobility. In these situations, women remain relatively homebound and it is generally unacceptable for a woman to travel away from home on her own without being accompanied by a male or elderly female family member. Similarly, in some contexts, it would be considered unacceptable for women and girls to travel on crowded public transport alongside male strangers. Men and boys, on the other hand, generally do not face such social and cultural restrictions on their mobility.

Personal safety and harassment on public transport are significant concerns for women. Women are often subjected to sexual and other forms of harassment when using transport services. Therefore, for women, perceptions of safe travel go beyond physical road safety to include risks of harassment, stalking, sexual assault, or rape.

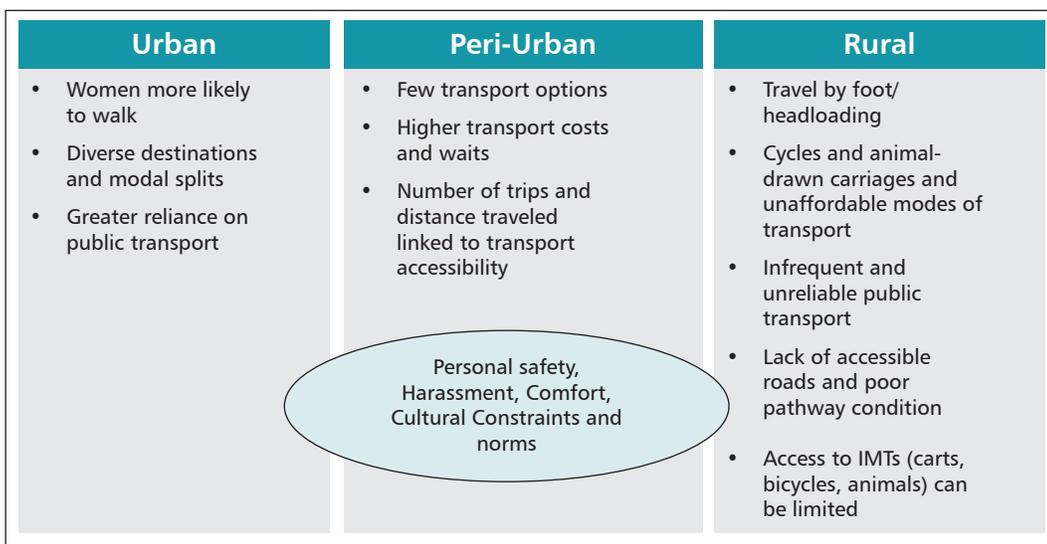
Gender Differences in Access to and Use of Transport in Rural versus Urban Areas

Rural context: Typically, rural women travel primarily on foot around the vicinity of their home, communities, and agricultural and forest land. They often manually carry heavy loads of water, firewood, and agricultural produce on their shoulders, heads, or backs. To improve rural women’s mobility, greater consideration needs to be given to investment in footpaths, footbridges, neighborhood paths and roads, intermediate means of transport, and other time- and load-reducing measures.

Urban context: Urban women are also more likely to walk than men, but are heavily reliant on public transport systems to carry out their multiple gender roles. Productive and reproductive gender roles are increasingly becoming physically separated in urban contexts. Women, particularly in manufacturing and service sector jobs, are commuting more for work, with long commuting times disadvantaging their family commitments. In some contexts, women may also have to commute with their children into urban areas to bring them to and from school. Hence, women’s urban mobility often depends on service reliability, scheduling, affordability, and physical and personal safety of public transport.

Figure 1 provides a diagram of common travel patterns and mobility constraints of women.

Figure 1 Women’s Travel Patterns and Mobility Constraints in Developing Countries



IMT = intermediate mode of transport.

Source: World Bank. 2010. Mainstreaming Gender in Road Transport: Operational Guidance for World Bank Staff. *World Bank Transport Papers*. TP-28. p. 16.

Potential Gender Barriers and Benefits in Transport Projects

Projects designed and implemented to improve transport infrastructure and services cannot be assumed to automatically benefit women. Improvements to transport systems may affect men and women differently and not always positively. Insufficient consideration of gendered needs in transport can inadvertently exclude or further constrain access of some groups if projects are not designed to be gender and socially inclusive. For example, a focus on improving major transport corridors may favor men at the expense of women, as more men may travel to economic activities and employment in towns along the corridor, whereas more women may work locally or in off-corridor locations. At the same time, provision of new or improved transport infrastructure and services can benefit and empower women to access employment, markets, education and health services, child care, training, and information, if existing gender inequalities are addressed simultaneously, and their capacity to utilize such opportunities are supported. Reducing women's transport time burden, particularly in rural areas, can increase their time for productive and income-generating activities, as well as allow more time for rest, leisure, and social interaction. Effective consideration of gender dimensions in project design can maximize benefits and opportunities and reduce potential risks to women.

As prevailing gender inequalities often prevent the realization of the full economic and gender benefits from transport projects, it is vital to identify key gender barriers specific to the project and find ways to address them during project preparation. Failure to consider gender dimensions can actually lead to overestimation of the economic benefits and work against the long-term sustainability of any given transport project. This is due to the potential risk that women do not use the resulting transport infrastructure and service because it is not designed to suit their needs or it places an extra hidden cost burden on women and their households.

Every day about 800 girls and women die needlessly in pregnancy and childbirth, almost all of whom are in the developing world.¹ Many of these deaths could have been prevented by timely access to transport and reduction of time and distance to health services.

Some typical gender barriers to be considered:

- Women compared with men generally lack capacity to fully capture economic opportunities from improved transport, due to their limited skills, access to credit, property rights, and time flexibility.
- Some cultural contexts restrict women's freedom to travel from home without a male companion or to use public transport with men.
- Women are less likely to be able to afford the cost of transport services.
- Voices of women as transport users are often not heard in consultative processes, and there is no critical mass of women in positions that influence transport planning.
- Gender dimensions are often overlooked in road safety responses.
- Women may not feel safe taking public transport due to incidence of gender-based violence.
- Transport service providers have little incentive to respond to women's needs due to their limited capacity to pay.

¹ See <http://www.whiteribbonalliance.org>

- Securing construction employment for women in local communities is often difficult in civil works due to the difficulty in setting gender targets in bidding documents, skills required, travel distances to sites, lack of child-care facilities, and harassment. The increased use of equipment-based methods and related skills requirements further affect women's ability to compete for labor.

If gender differences and barriers are well understood, a well-designed transport project can potentially incorporate added features to maximize gender benefits (Box 2).

**Box 2 Pilot Border Trade and Investment Development Project
in Papua New Guinea, 2009— Affordable Access to Health Services**

This project finances (i) facilities at the border town between West Sepik Province and West Papua, such as construction and refurbishment of customs, immigration, and quarantine facilities; resident homes for government officials; and markets; (ii) capacity development of local government; and (iii) a social development program for surrounding communities. The social development program comprises village power connections, septic tanks and individual household toilets in Wutung village; safe motherhood and education support for at-risk children in five villages; and HIV/AIDS prevention. Lack of money to take buses and visit the hospital was identified as a major constraint during project preparation. Hence, the project includes the provision of cash transfers to the female head or female adult of households to cover the costs of women's bus travel to the nearest hospital on the condition that they present evidence that they accessed prenatal and postnatal care.

Source: ADB. 2009. *Papua New Guinea: Pilot Border Trade and Investment Development Project*. Manila.

Some gender benefits to consider and pursue

During project design and implementation:

- Gender equal participation in planning and decision making related to transport projects (e.g., selection of road alignment, physical design features, safety designs, user ticketing systems and fees)
- Employment for women and men during construction and routine maintenance
- Improved and better labor conditions provided for women and men
- New and wider training and employment opportunities in the transport sector
- Training for women to benefit from transport-related ancillary work (e.g., vehicle repairs)
- Gender capacity building for transport authorities and project management

As a result of the project:

- Improved overall mobility for women
- Time saved, reduced workload, and improved welfare and well-being for women
- Improved access to health and education facilities by women and girls
- Improved access to markets, and income and employment opportunities for women
- Improved safety and security among mobile women and girls during travel

- Improved delivery of basic and extension services closer to home
- More higher skilled and decent jobs for women in the transport sector
- Enhanced gender responsiveness of transport authorities and project management

A well-designed transport project can provide women with significant benefits, such as in Peru's Second Rural Roads Project (Box 3) that provided women with employment opportunities and access to cash, and resulted in improved and increased mobility.

Box 3 Second Rural Roads Project in Peru

The objective of this project, which commenced in 1995, was to improve the access of the rural poor to basic social services, market-integrating infrastructure, and income-generating activities, with gender equity to help alleviate rural poverty and raise living standards. The project increased reliability of transport services, reduced travel time for women and men, and increased access to social services, particularly primary education for girls which increased 7%. About 100 community organizations engaged in local development, and 500 microenterprises were established and performed routine road maintenance. This created part-time paid employment for 6,000 unskilled worker for a year, 24% of which were held by women. A total of 24% of the members of rural roads committees and 45% of the rural road committee treasurers were women. Largely due to consultations with women about their transport needs, 3,465 kilometers of nonmotorized tracks were refurbished, thus connecting previously isolated communities to markets and services and increasing the economic rate of return of the project. A gender impact assessment conducted in 2007 found that 77% of women traveled more frequently and 65% felt they traveled more safely. It also showed that women's participation increased project efficiency, transparency, and quality. Women were more reliable and more concerned about the quality of the road work than their male counterparts. Women's presence reduced men's drinking during road work as well as the number of breaks taken. Women were trusted because they were more transparent in managing income, better at negotiating payments, and more responsible in managing quality control. Men and women's perceptions of women's value in the household and community improved significantly.

Source: Implementation Completion and Results Report for Peru's Second Rural Roads Project. June 2007. Cited in World Bank. 2010. Mainstreaming Gender in Road Transport: Operational Guidance for World Bank Staff. *World Bank Transport Papers*. TP-28. p. 33.

Chapter 2

Gender in ADB Operations

The transport sector and gender equity are both operational priorities of the Asian Development Bank (ADB) under its long-term strategic framework, *Strategy 2020*.² Infrastructure (including transport) is one of the five core areas of operations, while gender equity is one of the five drivers of change for achieving inclusive growth. The ADB Sustainable Transport Initiative (STI) Operational Plan identifies social sustainability as one of the four new and enhanced operational areas to be scaled up. Social sustainability requires core attention to gender and wider social inclusion in ADB-financed transport sector projects, including through building institutional capacity to better design, implement, and monitor gender-responsive and socially inclusive transport projects. ADB's *Policy on Gender and Development*³ adopts gender mainstreaming as a key strategy for promoting gender equality and women's empowerment, while the accompanying *Operations Manual C2*⁴ defines how gender considerations should be integrated into the project cycle.

It is important to consider gender and social dimensions at the policy engagement level so that gender and social dimensions of transport policy and planning are included in related policy dialogue with partner governments. Similarly, development of country partnership strategies (CPSs), which guide ADB operations in any given developing member country, should reflect gender and transport priorities in CPS gender strategies and transport sector road maps and accompanying results frameworks. Where applicable, existing national government legislation or policy that promotes gender equality broadly, and/or women's representation and participation in the transport sector can be leveraged. This ensures that the importance of gender mainstreaming is acknowledged in the framework for subsequent pipeline projects.

During the project concept phase, it is important that project teams assign a preliminary gender category to the proposed project, as this decision influences the required resources and actions for detailed design and implementation. Initial poverty and social analysis, a mandatory flagging exercise at the time of the concept paper preparation, should identify possible gender issues for consideration and inform the initial decision of the gender mainstreaming category.

The *Guidelines for Gender Mainstreaming Categories of ADB Projects*⁵ (Box 4) provide a definition and requirements of each of the four categories: gender equity theme (GEN), effective gender mainstreaming (EGM), some gender elements (SGE), and no gender elements (NGE). The first two categories—GEN and EGM—count toward ADB's gender mainstreaming targets, but project teams are encouraged to strive for SGE as the minimum and provide sound justification for NGE categorization.

If the GEN or EGM category is pursued, gender specialist services are required during the project design phase (often supported by project preparatory technical assistance) to

² ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila.

³ ADB. 1998. *Policy on Gender and Development*. Manila.

⁴ ADB. 2010. *Operations Manual C2 on Gender and Development in ADB Operations*. Manila.

⁵ ADB. 2011. *Guidelines for Gender Mainstreaming Categories of ADB Projects*. Manila.

Box 4 Gender Mainstreaming Categories

Gender equity theme (GEN): A program or project is assigned GEN if the project outcome directly addresses gender equality and/or women's empowerment by narrowing gender disparities through

- access to social services (e.g., education, health, and water supply/sanitation),
- access to economic or financial resources or opportunities (e.g., related to employment opportunities, financial services, land, or markets),
- access to basic rural or urban infrastructure (e.g., rural electrification, rural roads, pro-poor energy distribution, or urban services for the poor), or
- enhancement of their voices and rights (e.g., decision-making processes and structures, political empowerment, or grievance mechanisms).

The outcome statement in the project design and monitoring framework (DMF) should explicitly mention gender equality and women's empowerment, and/or include a gender-specific outcome indicator.

Effective gender mainstreaming (EGM): A program/project is assigned EGM if the outcome is not gender equality or women's empowerment, but is still likely to deliver tangible benefits to women by improving their access to social services, economic or financial resources or opportunities, or basic rural or urban infrastructure, and/or by enhancing their voices and rights, which contribute to gender equality and women's empowerment.

The GEN and EGM categories can be applied to virtually all sectors of Asian Development Bank operations, including public sector management contingent upon meeting the requirements outlined. Sample GEN/EGM projects across a range of sectors are available from the Poverty Reduction, Gender, and Social Development Division and can be provided on request.

Requirements for projects with a GEN theme or EGM include the following:

- (i) a gender analysis conducted during project preparation;
- (ii) for a GEN theme, explicit gender equality and/or women's empowerment outcome(s) and/or gender-specific performance outcome indicators and activities in the project DMF;
- (iii) a gender action plan (GAP) with gender-inclusive design features, and clear gender targets and monitoring indicators, and/or outputs that directly benefit women or girls. The majority of outputs should have at least three gender design features or mechanisms;
- (iv) gender targets and performance and monitoring indicators in the DMF;
- (v) inclusion of the GAP in the report and recommendation of the President (RRP) to the Board as a linked document and in the project administration memorandum;
- (vi) the RRP main text discusses how the project will contribute to improving women's access to or benefits from the project, at a minimum in the "Poverty and Social" subsection under the "Due Diligence" section; and
- (vii) a covenant or a condition in the policy matrix to support implementation of the GAP or gender features.

Policy-based loans and grants: For GEN and EGM categories, the policy matrix should include specific policy actions/measures or legal reforms that are likely to directly result in narrowing gender gaps; improving access to or delivery of basic services (such as social, or basic rural or urban infrastructure services); improving access to financial or economic resources and opportunities; enhancing voices and rights; improving public resource/expenditure management for the benefit of women; and more generally promoting gender equality and women's empowerment. A GAP and/or the compliance with criterion (iii) may not be necessary if the policy matrix, program DMF, and the main RRP text clearly and sufficiently demonstrate how the program actions will result in gender equality and women's empowerment.

Source: ADB. 2011. *Guidelines for Gender Mainstreaming Categories of ADB Projects*. Manila.

conduct a detailed gender analysis (see Chapter 3), collect sex-disaggregated data, and prepare a project gender action plan (GAP) comprising gender-inclusive design features and gender targets. A sample consultant terms of reference for project design is in Appendix 2.

Project implementation requires the use of a range of tools and mechanisms to monitor and evaluate the implementation of the project GAP or other gender design measures, and, where necessary, to modify the gender design features. It is important to note that the monitoring process also needs to include an assessment of the quality of the gender data collected and documented, in order to conduct an accurate and useful assessment of gender results. A sample consultant terms of reference for project implementation support is in Appendix 2.

Tables 1A–1C outline the key actions that need to be taken to address gender issues at each phase of ADB’s project cycle.

Table 1 Gender Mainstreaming: Key Actions in the Project Cycle

A. Concept Phase: Project Concept Paper			
	Key Actions	Tools	Responsibility
<ul style="list-style-type: none"> Preliminary gender category 	<ul style="list-style-type: none"> Assess and assign a relevant gender category of the project and include it in the basic project information sheet of the project concept paper. Explore if a higher gender category (GEN or EGM) can be pursued. 	Consultations with ADB gender specialists	Project team
<ul style="list-style-type: none"> IPSA 	<ul style="list-style-type: none"> Identify key gender issues in the relevant transport subsector. Assess if the project/program has the potential to promote gender equality and/or women’s empowerment or is likely to have an adverse gender impact or increase women’s exposure to risks. 	Desk reviews or reconnaissance mission	
<ul style="list-style-type: none"> Consultant TOR 	<ul style="list-style-type: none"> Allocate resources for a gender specialist and data collection during the design phase (often through PPTA), particularly for projects with GEN/EGM that require a detailed gender analysis. Prepare TOR for the project design consultant services, i.e., for a gender specialist or social development/social safeguard specialist (see Appendix 2). Identify further information needs, including baseline sex-disaggregated data and specify them in the TOR. If the proposed project offers opportunities to directly promote gender equality and/or women’s empowerment, include in the TOR the preparation of a GAP and other due diligence requirements for GEN and EGM. If the proposed project is likely to have an adverse impact on women or widen gender inequality, include a gender analysis and preparation of mitigation measures within the social safeguard specialist services in the TOR. 	If GEN/EGM, include ADB gender specialist in the project team to further guide the consultant	
<ul style="list-style-type: none"> Preliminary DMF 	<ul style="list-style-type: none"> Explore assigning tentative gender targets and indicators at the outcome (if GEN) and output levels, and for the activities and milestones of the preliminary project DMF. This would inform the need for sex-disaggregated data to be collected during the project design phase. 		

continued on next page

Table 1 continued

B. Design and Approval Phase—Report and Recommendation of the President or Periodic Financing Request Preparation			
	Key Actions	Tools	Responsibility
<ul style="list-style-type: none"> Project design/PPTA implementation 	<ul style="list-style-type: none"> Conduct a detailed gender analysis as part of the poverty and social analysis (see Chapter 3). Include a social/gender specialist on project design team Collect sex-disaggregated data and gender-specific information related to the possible project interventions (see Chapter 3). Ensure social/gender analysis and data collection is conducted in a gender-sensitive manner (e.g., consultation with both women and men, seeking out women’s voices, male and female interviewers, etc.). Review gender equity policies and laws and gender elements of relevant transport sector policies and laws. Identify government agencies, nongovernment organizations, and women’s groups that can be recruited for project implementation and assess their capacity. Identify and recommend key gender elements in mitigation measures (e.g., HIV, resettlement) For gender-mainstreamed projects or programs, design a GAP to integrate gender features and women’s participation in the project/program design with concrete targets and indicators for monitoring and impact assessment (see Chapter 5). Assess gender benefits of the project. 	<ul style="list-style-type: none"> Desk reviews, surveys (as necessary), field visits, focus group discussions, stakeholder consultations 	<ul style="list-style-type: none"> Project team/consultant
<ul style="list-style-type: none"> Draft RRP 	<ul style="list-style-type: none"> Discuss the project’s gender mainstreaming category and how the project would result in desired gender benefits in the RRP main text (“Due Diligence” section). In SPRSS, summarize key findings of the gender analysis and gender measures included in the project. Include the GAP in the RRP-linked document and PAM. Incorporate key GAP indicators in the DMF and/or policy matrix (in the case of program or policy-based loans). 	<ul style="list-style-type: none"> Verification of gender category by RSDD 	<ul style="list-style-type: none"> Project team/consultant
	<ul style="list-style-type: none"> In PAM, include specific steps and resources for implementation of the GAP or any other gender design features, e.g., implementation schedule, TOR to assist GAP implementation (see Appendix 2), and GAP (“Gender and Social Dimensions” section). In the loan or project agreement, include gender covenants to ensure that the borrower ensures effective GAP implementation in a manner to achieve key gender targets. 		
<ul style="list-style-type: none"> Final RRP 	<ul style="list-style-type: none"> If any changes are made on references to gender during loan negotiations, contact RSDD to provide final confirmation on gender category. 	<ul style="list-style-type: none"> Final confirmation by RSDD as needed 	<ul style="list-style-type: none"> Project team

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Table 1 continued

C. Implementation, Monitoring, and Completion			
	Key Actions	Tools	Responsibility
<ul style="list-style-type: none"> Monitoring and review 	<ul style="list-style-type: none"> At project inception, ADB project team to provide training to EA/IA project management team and the implementation support consultants on project GAP and implementation schedules. 	Inception workshop	EA/IA project implementation/management unit
<ul style="list-style-type: none"> Completion 	<ul style="list-style-type: none"> Ensure that there is a project gender specialist or focal point assigned to oversee implementation of the GAP and that project director and staff have ownership and understand their accountability for GAP implementation as a loan compliance issue. Involve ADB RM gender specialists, where available, to guide the project gender specialist. Ensure gender targets and physical design features are specified in bidding documents for contractors. EA/IA project management team and consultants to implement GAP and regularly (quarterly or biannual) report on the implementation progress. Use the “GAP implementation progress matrix” (which is a GAP with another column to document progress). Include the matrix in the regular reporting to ADB. Ensure that the collection of sex-disaggregated data is systematized within the overall project management database and used for routine reporting. ADB project supervision missions to monitor GAP implementation and discuss GAP progress with the project director and staff. Ensure that ADB review mission reports, including back-to-office reports, include analysis of the GAP implementation. Adjust the gender-inclusive design features or targets if necessary in consultation with RSGS. ADB review missions to review the GAP implementation progress, challenges, emerging gender equality results, and any need for midterm modifications. Midterm review is particularly important. 	<ul style="list-style-type: none"> Progress reports (by EA/IA and ADB) ADB review missions GAP implementation matrix RM gender specialists (to guide project gender specialist) 	<ul style="list-style-type: none"> ADB project team (including RM gender specialist, where available) EA/IA project implementation/management unit ADB project team (including RM gender specialist, where available)
	<ul style="list-style-type: none"> If there are GAP implementation issues, ensure that the supervision mission is taking action to help the project management unit (PMU) address them. Ensure that monitoring activities conducted by EA/IA and ADB are gender-inclusive and participatory. Include a section on gender (reporting on the GAP implementation performance, gender equality results achieved, and lessons learned) in both government and ADB’s project completion report. Ensure that gender equality and women’s empowerment results are accurately reflected and adequately assessed in project completion reports. Provide commentary on whether gender targets and sex-disaggregated performance indicators in the GAP were adequately monitored during implementation, and why. Explain whether any GAP activities were not implemented, and, if so, why not. Provide analysis of any lessons learned with gender mainstreaming in the project and future recommendations. 		

ADB = Asian Development Bank; DMF = design and monitoring framework; EA/IA= executing agency/implementing agency; EGM = effective gender mainstreaming; GAP = gender action plan; GEN = gender equity theme; IPSA = initial poverty and social analysis; PAM = project administration manual; PPTA = project preparatory technical assistance; RM = resident mission; RRP = report and recommendation of the President; RSDD = Regional and Sustainable Development Department; RSGS = Poverty Reduction, Gender, and Social Development Division; SPRSS = summary poverty reduction and social strategy; TOR = terms of reference.

Chapter 3

Gender Analysis, Policy Dialogue, and Capacity Development

The design and implementation of gender-responsive and gender-inclusive transport projects require gender analysis and policy dialogue during the planning and design phase, and gender capacity development for transport sector executing and implementing agencies during implementation. Without a gender analysis, the specific transport needs and concerns of women and men, the constraints to their mobility, access, and affordability issues cannot be identified, considered, and integrated into project design and implementation. Similarly, without gender policy dialogue transport agencies may not be convinced of the need and rationale for considering gender concerns and designing gender-inclusive transport projects. Often, as technical engineering specialists, their focus is more directed to technical and physical design elements and less on transport users, social benefits, or maximizing access and benefits for different groups of users. Finally, gender capacity development of transport sector executing and implementing agencies is needed to build ownership and commitment, and to develop the necessary skills for designing and implementing gender-inclusive projects.

Gender Analysis

Not all transport subsectors offer the same degree of opportunities for gender mainstreaming and the design of gender-inclusive projects. For example, rural road projects that directly meet the mobility needs of rural women are far more likely to lend themselves to gender-inclusive design, whereas a national highway designed primarily for transporting goods and commodities within and across borders may offer limited opportunities for integrating gender equality issues. However, even the design of national or provincial highways require some level of gender analysis to assess needs and constraints, and identify opportunities and potential social risks. A detailed gender analysis should be undertaken for projects identified with potential to directly support gender equality objectives. A less detailed analysis can be carried out for projects that are unlikely to provide direct benefits but can deliver some indirect benefits. However, even projects identified likely to provide only indirect benefits, every opportunity should be explored to include gender-inclusive design features, such as reducing women's vulnerabilities through mitigation measures; making provision for employment opportunities, where feasible; or improving the working environment for women in the transport sector. Due diligence and mitigation measures to address potential risks such as HIV, trafficking, resettlement, and labor standards should specifically address gender differences in vulnerability.

The gender analysis aims to (i) identify key gender issues and determinants directly relevant to the intended transport infrastructure and services to be provided by the project; (ii) assess the differing needs and constraints of men and women in access and utilization of transport infrastructure and services; (iii) inform gender-inclusive project designs by identifying opportunities to maximize gender benefits and minimize and mitigate adverse gender impacts or risks through the proposed project (see Chapter 5); and (iv) collect

baseline sex-disaggregated data to be used in monitoring project outputs, outcomes, and impacts during project implementation. In other words, gender analysis is a process that translates relevant gender and transport issues (see Chapter 1) into the project designs within the specific context.

While there is no “one size fits all” for gender analysis across different subsectors and types of projects in the transport sector (see Chapter 4), one approach can be to use different angles and layers of gender analysis to think about the possible gender entry points within transport policy, participation, accessibility, affordability, and acceptability (Box 5).

Box 5 Some Issues to Consider When Conducting Gender Analysis in Transport Operations

Policy: Integrate a gender perspective into transport sector policy and institutions, and increase consideration of transport in national and sectoral gender policies. Design and implement gender-responsive monitoring and evaluation systems for transport sector and projects.

Participation: Adopt proactive approaches to improving gender balance in policy development, project planning, implementation and monitoring, as well as project-generated employment.

Accessibility: Use gender analysis to inform the selection criteria for roads sections and design of urban transport services. Consider and address gender barriers across the entire network of travel, including attention to intermediate means of transport.

Affordability: Consider gender issues in tariff policy, cost recovery schemes, flexible tickets, and cost of transport services.

Acceptability: Address gender implications of physical designs (universal access in vehicle and station designs, women-only spaces, sidewalks, streetlights) and service timetables.

The link between gender equality and transport interventions becomes clear when attention is given to the different transport needs, purposes, and modes of transport of women and men, instead of a narrow focus on provision of hard transport infrastructure. These people-centered questions are critical to ask and understand if transport investments are to deliver inclusive results and bring equitable benefits to women.

Key Questions

The following gender-related questions are important to explore for all transport projects:

For gender analysis:

- What are the different needs and priorities of women and men transport users?
- What are the gender transport patterns of different groups, i.e., what types of journeys do different groups of women and men make? For what purpose and how?
- What type of goods do women and men move?
- What gender-related barriers exist in accessing transport infrastructure or services?
- Were women and/or women’s groups able to participate equally and be consulted in preparatory surveys and design?

- What are the relative costs of travel (in time, effort, cash, and lost opportunities) for women and men?
- What are the potential impacts on women and men, as determined through social and environmental impact assessments, preparatory surveys, or feasibility studies?
- Is sex-disaggregated baseline data collected and used?

For gender-responsive design:

- What physical design features can specifically benefit women versus men users?
- What livelihood opportunities exist for women, and how can the project maximize the social and economic benefits of improved transport connectivity for women?
- What measures can be included in the planning, design, implementation, and monitoring to improve gender equity in project management, civil works, and safety provisions?
- What opportunities are there to ensure benefits are derived by women, such as road safety awareness training, employment and income opportunities, or rural access roads?
- Are women employed in civil works in project areas? Do construction contracts for civil works include provision for recruitment of local female labor or gender-specific core labor standards (i.e., equal pay and provisions to prevent gender discrimination)?
- What is the gender balance in stakeholder groups and implementing agencies? Is there a need for gender training, mainstreaming policy, and affirmative action (e.g., targets for recruitment)?
- What gender indicators can be used in the project design and monitoring framework?
- How can gender dimensions be addressed within risk mitigation, such as HIV and human trafficking awareness, and in resettlement planning and activities?

Box 6 provides an example from Lesotho Integrated Transport of how gender analysis of transport needs and listening to women's and men's voices can significantly influence the design of transport projects in ways that may have otherwise been overlooked.

Box 6 Integrated Transport Project in Lesotho, FY2007–2011

This project aimed to reduce the isolation of Lesotho's citizens and improve access to services and market opportunities. A pilot project on participatory mapping was incorporated into a geographic information system used for local development planning, and provided information on the transport services available to communities, access to health, education, and other services, as well as how women, men, children, and the elderly use existing roads, paths, and services, and what bottlenecks existed. Community meetings, interviews, and focus group discussions provided information on differences in men's and women's priorities for transport. For example, in one village, while women preferred the road under discussion to be constructed in one direction to facilitate their access to the nearest village with basic services, men preferred that the road be built in the opposite direction to enable them to reach the larger town and market more easily on horseback.

Sources: W. Walker, S. Vajjhala, T. Phomane, N. Zaly, S. Moonyane, and M. Mokhorro. 2005. *Ground-Truthing: Mapping Mobility and Access in Rural Lesotho*. World Bank and Lesotho Ministry of Public Works and Transport; World Bank. 2006. *Project Appraisal Document for the Lesotho Integrated Transport Project*. Washington, DC: World Bank.

Gender-Sensitive Data Collection Methods

Gender-sensitive data collection and analysis will enable the planning and design of transport facilities and services that meet women's and men's specific needs. It will identify needs and suggest opportunities for physical design features, gender capacity development, and gender-responsive policies in transport management and service provider organizations. It can also inform opportunities for proactively supporting women's employment and representation in a wider range of roles in the transport sector. A range of tailored data collection methods can be used to give women more voice and collect gender-specific data, by incorporating sex-disaggregated data and/or inclusion of select gender-related questions into data collection instruments:

Box 7 Examples of Innovative Tools for Collection of Data on the Experience of Transport Users

The United Nations Human Settlements Programme (UN-HABITAT) is using rapid assessment tools (**Accessibility Tool**^a) on a pilot basis to capture the experience of transport access for low-income communities by using global positioning system (GPS) trackers to measure supply and spatial distribution of activities; and qualitative surveys to capture experience of mobility, personal security, affordability, and scheduling. Such approaches can be used by communities and civil society to consult women (and men) on what facilities would enhance their experiences of safety and security, providing both the necessary data for planning and local ownership.

GPS mapping, mobile phones, cameras, and internet technology can be used for identification and reporting of traffic or public transport performance hot spots. A mobile phone and internet-based initiative named **Harass Map**^b has been using modern technology to map the incidence of sexual harassment on urban public transport in Cairo. Sexual harassment is often a taboo subject among transport sector planners, and women may not have the social space to complain. This initiative, which allows women to report anonymously via free mobile texting, has clearly identified hot spots for sexual harassment around public transport stations.

^a See www.unhabitat.org/downloads/docs/11104_1_594416.pdf

^b See <http://harassmap.org> or <http://blog.harassmap.org>

- Public community consultation and focus group discussions in affected areas held separately for women and men, scheduled at appropriate times to enable women's participation, and with male and female facilitators, as appropriate.
- Mobility-focused diary surveys, which record travel patterns of a sample group in a diary form over a set calendar duration.
- Social mapping to visually display community member perceptions of physical dimensions in their community, with links drawn to transport.
- Rapid assessment of accessibility tools (see Box 7).
- Direct observation of transport bottlenecks, hubs, and existing services.
- On-demand passenger feedback mechanisms.
- Various transport-specific and sex-disaggregated quantitative and qualitative surveys.
- Needs assessments, feasibility studies, and preparatory surveys.
- Global positioning system (GPS), mobile phone, internet, and other modern technology for tracking the frequency and scheduling of transport services, for real-time reporting on traffic congestion or the incidence of sexual harassment and/or personal security complaints on public transport (Box 7).
- Participatory walking or cycling audits.

A combination of the above data collection methods can be used and tailored to collect the types of gender data that are considered important for informing any particular project design. To collect quality gender data and genuinely give voice to women's perspectives alongside men's, it is important to ensure that data collection methods are carried out in a gender-sensitive manner. For example, separate meetings with women or quotas and targets to ensure equal consultation of women in contexts where they are less likely to speak out may be important. It may also be important to create space for women to speak openly by asking them open-ended questions with a female facilitator in private, away from the pressures of other family and community members who may have different views.⁶

A nongovernment organization in Chennai conducted a Shanti Colony Walking Audit⁶ to support community involvement in transport planning, including documenting the condition of sidewalks and public toilets. A land use and density map was created by volunteers for posting on a public website.

Types of Gender Data to Be Collected

Sex-disaggregated information should be collected on both transport users and transport operators and providers, including

- use of different transport modes by location;
- perceptions and satisfaction of public transport users;
- public transport workers and personnel in urban transport agencies and organizations;
- information about the transport needs of target communities (Box 8);

Box 8 Sewa Bank Transportation Needs Assessment

A Sewa Bank transportation needs assessment of self-employed, female clients from the informal sector in Ahmedabad found the following:

- Vegetable vendors had the highest transportation costs, averaging 52% of women's monthly incomes, paid for shared private transport, public transport, or handcart pullers.
- Used clothes peddlers had the second-highest transportation costs, averaging 37% of their monthly incomes, paid mostly to auto-rickshaws.
- On average, rag pickers used 33.3% of their monthly incomes on transportation costs, paid either to public transport or pedal rickshaws.
- Mobile vendors spent on average 26% of their monthly incomes on transportation. A total of 64% of the women in this sample either walk or use a combination of walking and paid private transport.
- Head loaders/handcart pullers had the lowest transportation costs, averaging 11% of their monthly incomes. Most of these women either walk or catch public transport to the wholesale market. For most, the choice is either to carry goods on their heads or to hire handcarts on an hourly basis, as few own handcarts.
- A total of 69.5% of the total sample reported that they would like to acquire their own means of transport, with 45% stating that they would be prepared to seek credit to do so.

Source: ADB. 2006. Transport for Self-Employed Women: Transportation Needs Assessment Study – Shri Mahila Sewa Sahakari Bank, India. In *Working with Women's Nongovernment Organizations*. Manila.

⁶ See <http://test.transparentchennai.com/march-newsletter/>

- perceived safety on public transport, including incidence of harassment, transport expenditure by income level, and willingness to pay for services (Boxes 7 and 8);
- links between transport and livelihoods;
- locality-specific administrative data relating to transport (e.g., motor vehicle ownership, driver licensing, traffic crashes, etc.);
- origin–destination patterns of transport users;
- time use for traveling (travel times); and
- training needs assessments on gender awareness of transport sector organizations, service providers, and civil works contractors.

Sex-disaggregated and other gender data that are collected should be analyzed from a gender perspective as part of due diligence, and used to inform overall project design, development of a project-specific gender action plan (GAP), and related policy engagement.

Gender Policy Dialogue

Gender policy engagement can provide opportunities and open the space for dialogue on the need for adopting a more balanced approach to transport investments that meet the needs of industry, trade, commerce, and public commuters. It can also lead to the formulation of transport policies and programs that are more gender and socially inclusive. Policy dialogue can be accompanied by capacity building of transport agencies to develop strategies and incentives, alongside road construction and upgrading, to encourage the private sector to deliver safe, affordable, and regular services to meet the needs of rural and urban commuters.

Gender policy dialogue with transport agencies:

- Increasing attention to gender analysis is key to informing investment choices of transport projects that disproportionately benefit poor women.
- Encouraging policy and planning attention to also be directed toward nonmotorized transport (NMT) and intermediate modes of transport (IMTs).
- Promoting the role of the public sector in regulating mandatory gender-responsive physical designs (e.g., reserved seats, height-of-steps requirements, panic buttons).
- Implementing public awareness campaigns to address sexual harassment in transport services and hubs, and training of police on women’s security needs when using transport.
- Investing in gender and transport research to enable women’s voices to be heard.
- Promoting labor-based construction and maintenance, with industry- and project-level incentives to hire more women.
- Including gender employment targets and gender-responsive physical design in standard contract bidding documents.

The Department for Transport of the United Kingdom developed a gender audit checklist in 2000 that was followed by a 2004 Women’s Action Plan developed by Transport for London, the authority responsible for the London Underground. These key policy documents were informed by an advisory Women’s Transport Network, comprising women and men in the transport industry, which aims to promote safe accessible transport systems and pedestrian environments, as well as encourage women to enter and progress in the industry.

- Training contractors on gender-sensitive employment practices and hiring of women.
- Improving employment policies and practices of sector agencies, including for the recruitment, promotion, training, and working conditions of women.
- Improving information outreach to women on transport investments and transport sector employment opportunities.
- Encouraging women into higher-level transport sector jobs, including through the use of sector-wide vocational training targets.
- Evaluating the costs of gender-responsive transport interventions for effectiveness.
- Ensuring women's representation in planning and design of transport investments, by including user panels, and road fund boards.
- Encouraging wider community consultation and partnerships between transport sector agencies, and community and women's interest groups in transport policy and planning.

A gendered approach to transport policy engagement helps to draw attention to broader social dimensions and better access for people in general, including the needs of other often marginalized groups, such as the elderly, children, and people with disabilities.

Gender Capacity Development

To enhance gender mainstreaming of transport sector projects, it is important to build the gender capacity of executing and implementing agencies to recognize the importance of gender analysis, the skills to carry out gender analysis, and the design of gender-responsive approaches to transport sector development. At the same time, there is a need to proactively engage in policy dialogue with the transport sector on the importance of gender dimensions.

ADB's government transport agency counterparts are responsible for implementing the gender design features, particularly where a project GAP is part of the project design. However, this often requires building ownership for the GAP (ideally during the process of development) among staff of the executing and implementing agencies and providing capacity-building support to enable effective implementation of the GAP. The executing agency may need to contract gender specialist consultants to provide technical support for GAP implementation, monitoring, and reporting; hence, it is important for the executing agency to assess the availability of local consultants, institutes, and nongovernment organizations. Although not a transport sector agency, the experience of the Bangladesh Local Government Engineering Department provides a good practice example to illustrate how initial capacity development support has led to institutionalized processes for gender mainstreaming in a government line department that deals with some aspects of rural transport (Box 9).

Box 9 Institutionalization of Gender Mainstreaming in Local Government in Bangladesh

The Local Government Engineering Department (LGED) of Bangladesh is responsible for providing and maintaining transport infrastructure and other rural development infrastructure services. Because of the social disadvantages experienced by women in Bangladesh's gender-segregated rural society, LGED has received support from the Asian Development Bank and other donors to institutionalize gender responsiveness by recruitment of women community mobilization workers, social scientists, gender specialists, and women engineers to mainstream social and gender issues in projects. It has its own gender strategy and action plan, and has provided ongoing training for all staff in gender and participatory process and gender-sensitive monitoring, as well as training for contractors and leaders of local government institutions on gender issues. LGED has a Gender Forum for advocacy, training, and monitoring, and it works in partnership with nongovernment and microfinance institutions for social mobilization, group formation, and microfinance services. Institutionalized gender mainstreaming in LGED promotes

- gender-sensitive infrastructure design;
- social and gender assessment in preparing, implementing, and monitoring projects;
- consultations with women in communities and with women leaders;
- provisions to enable women to gain access to labor markets and produce markets;
- provisions for equal wage, participation, and decision making for women;
- reserving jobs for women as construction and maintenance workers; and
- facilitation of women's traders and savings associations, labor contracting societies, and microenterprises for roadside tree plantation and maintenance contracts.

Gender Design Features for Capacity Development Support

- Appointment of a gender specialist within the project management unit (PMU) or consultant team with clear terms of reference.
- Sex-disaggregated database for monitoring and evaluation.
- Building of understanding and ownership of responsibility for gender issues and gender analysis by PMU and consultants, including in all project monitoring and reporting, particularly where a project GAP is in place.
- Provision of gender awareness and GAP implementation training for all project staff.
- Requirement for project baseline and reporting data to be sex-disaggregated.
- Targets for women established for newly hired executing or implementing agency staff.
- Targets for greater representation of women at professional, technical, and decision-making levels in the executing or implementing agency.
- Development of gender awareness and GAP implementation training materials.
- Sex-disaggregated tracking of participation in all capacity development activities of the executing agency.
- Target setting for female staff participation in training, as appropriate.

Capacity-building support can also be in the form of encouraging peer lateral learning between transport sector executing or implementing agencies to share and exchange experiences, constraints encountered, successful approaches, lessons learned, and results from implementing transport projects with specific gender design features (Box 10). These

Box 10 Mekong Gender and Transport Workshop

The Asian Development Bank (ADB) and the Australian Agency for International Development (AusAID) jointly organized a workshop on gender and transport for the Mekong subregion in Viet Nam.^a The workshop aimed to build gender capacity of transport ministries, and share experiences and lessons on mainstreaming gender in transport sector operations in Mekong countries. Participants were mainly transport officials from Cambodia, the Lao People's Democratic Republic, and Viet Nam who are directly involved in implementing ADB-financed transport projects, as well as development partner representatives, and ADB and AusAID staff. The peer-to-peer learning approach provided a unique opportunity for transport sector specialists to share experiences and learn from peers about innovative designs and implementation practices.

^a Held in Ha Noi, Viet Nam, on 24–26 July 2012.

types of learning and capacity-building methodology can be a powerful learning tool as technical experts (often engineers) learn from their peers rather than from gender specialists or other social scientists.

Few national transport plans or policies explicitly address gender dimensions, despite most countries having national gender equality policies and action plans. This is because transport and other line ministries generally lack capacity to address gender and other social factors. Gender awareness of transport sector officials needs to be increased to ensure that national gender policy is incorporated into transport policies and planning. This can be in the form of tailored capacity development to ministries of transport or transport agencies (Box 11).

Box 11 Building the Gender Capacity of the Ministry of Transport in Viet Nam

The Ministry of Transport (MOT) of Viet Nam's Committee for the Advancement of Women (CAW) is striving to integrate gender into transport sector development and policy, including through transport sector training. MOT CAW conducted two workshops^a on gender and transport in Ha Noi and Ho Chi Minh City to assist MOT with better integration of gender equality issues in their programs and activities. Participants included MOT staff at the national decision-making level to staff from provincial departments of transport. A key workshop outcome was the decision to integrate gender content into the MOT national training institute curriculum, including rural transport training curriculum, to institutionalize gender-informed transport approaches.

^a Held in October 2010.

Source: World Bank. 2011. Building Capacity to Make Transport Work for Women and Men in Vietnam: Gender and Transport Challenges. *East Asia and Pacific Region Social Development Notes – Innovations, Lessons and Best Practice*.

Chapter 4

Gender Entry Points for Transport Subsectors

For transport sector projects to contribute to gender equality and women empowerment, it is necessary to think beyond conventional engineering aspects of physical infrastructure. Gender analysis needs to be proactively undertaken to inform the design of interventions to make transport infrastructure and services more responsive to the needs of women and men.

This chapter outlines the main gender issues that should be considered, entry points, and potential gender-inclusive design features in the following key transport subsectors:

- a. Urban transport and services
- b. Rural roads
- c. National highways
- d. Railways
- e. Bridges
- f. Water-based transport and ports

Guidance is provided on key gender issues and possible gender design features, measures, and activities, which may be applicable to projects in the different transport subsectors. Each subsector is furnished with several project examples.

Urban Transport and Services

Key Gender Issues

Much of the gender and transport discourse to date has focused on the rural realm, and there is relatively less research on gender-related urban transport patterns. It is known that travel by foot is a major means of transit in urban areas, and that women are more likely than men to be pedestrians. Women also have a greater reliance on public transport and nonmotorized transport (NMT), such as bicycles (which can often be closely linked to women's livelihoods and commercial distribution), make multiple trips, and are more likely to travel off-peak (Box 12).

Box 12 What Do We Know about Gender and Urban Transport Patterns in Developing Asia?

- In Chennai, 83% of women walked to work, compared with 63% of men.^a
- In a Delhi slum, 52% of women walked to work, compared with 26% of men.^b
- In Chengdu, 59% of women walked, compared with 39% of men; 32% of men and 19% of women cycle.^a
- In Dhaka, 71% of women workers made 1–2 trips per day, 7% made 3–4 trips per day.^c
- In Armenia, women spent between 20 minutes and 1.5 hours a day on the metro, compared with 15–40 minutes for men. Also, women relied more on off-peak and peripheral public transport routes.^d

^a T. P. Uteng. 2011. Gender and Mobility in the Developing World. Background paper for the World Development Report 2012. <http://siteresources.worldbank.org/INTWDR2012/Resources/7778105-1299699968583/7786210-1322671773271/uteng.pdf>

^b A. Anand and G. Tiwari. 2006. A Gendered Perspective of the Shelter–Transport–Livelihood Link: The Case of Poor Women in Delhi. *Transport Review*. 16 (1). pp. 63–80. Available at <http://tripp.iitd.ernet.in/publications/paper/planning/Anvita%20ansp%20rev%2005.pdf>

^c S. C. Zohir. 2003. Integrating Gender into World Bank Financed Transport Programs: Case Study, Bangladesh–Dhaka Urban Transport Project. Available at <http://www4.worldbank.org/afr/ssatp/Resources/HTML/Gender-RG/Source%20documents/case%20studies/ICNET%20Case%20Studies%20for%20WB/CSICN5%20BangladeshThirdRural.pdf>

^d ADB. 2011. Armenia Country Gender Strategy. Manila.

The management and performance of urban transport services places different burdens on women and men, with the costs of poor public transport often being borne by women. For example, women often turn down employment opportunities farther away from home in favor of lower-paid local opportunities when the public transport system is unreliable or unaffordable. Often, the workloads and well-being of low-income women living in urban areas are closely dependent on and affected by the efficiency and performance of transport infrastructure and services (Box 13). Similarly, improvements to urban transport routes may favor men at the expense of women, as more men may commute to city employment while women may work more locally or at peripheral locations.

Safety, security, appropriate physical design, and affordability are critical considerations in designing gender-inclusive urban public transport services. For example, well-lit metro and bus stations, women-only carriages, ticketing systems for multiple short trips, lower off-peak fares, and gender-friendly physical design contribute to promoting greater utilization of public transport systems by women. For example, research in Jakarta found that women

Box 13 The Experience of Women Commuters in Calcutta, India

Poor women on the outskirts of Calcutta who travel to the city primarily to work as domestic helpers, vendors, industrial workers, or laborers in government institutions, spend almost 12 hours outside their homes daily, and have to cope with overcrowded and irregular public transport, long waits, lack of facilities, and harassment by pickpockets and transport officials. The stress of commuting often takes a toll on their health and well-being, as well as that of their families, as they are left with a lack of time to interact and provide care for their families. Women commuters had many suggestions for improvement, including more buses/trains, a double-decker train, dual tracks for two-way journeys, better street lighting, cemented walkways, roadside toilets, more direct bus routes, new roads to shorten journeys, and more women-only compartments.

Source: M. Mukherjee. 2002. From Dawn to Dusk: Transportation of Rural Women to and from the Metropolis: Calcutta, India. In P. Fernando and G. Porter, eds. *Balancing the Load: Women, Gender and Transport*. London: Zed Books.

had concerns with the design of new suburban rail systems, relating to inappropriately designed handles in trains, the height of the step into trains, and perceived lack of safety and access to and within stations.⁷

Many surveys have shown that while men prioritize transport efficiency, women prioritize safety in their respective travel decisions, and that fear of violence is a very real barrier to mobility and public transport access for women. For example, a study in Chennai found that two-thirds of women respondents had been sexually harassed while commuting (groping, stalking, accosting), with the worst experiences on buses and trains that had no separate section for women.⁸ To address security concerns as well as cultural taboos, a number of cities have introduced women-only public transport services. For example, there are women-only train carriages in Manila, Mumbai, Seoul, and Tokyo; women-only buses in India, Indonesia, Pakistan, and Thailand. In some contexts, these can provide women with guaranteed safe spaces and enable their right to access and use the public transport service without fear of harassment. They are intended as measures to empower women in their right as equal transport users, rather than to exacerbate gender-based segregation.

There is a strong case for gender-responsive approaches to urban transport development, particularly public transport, which takes into account gender dimensions of cost, safety, and availability of services. There is also a need to synchronize the different forms of formal and informal public transport from the perspectives of different users. A greater focus on analysis to inform the design of projects

The Urban Transport Development Investment Program in Mongolia aims to develop efficient, safe, and affordable urban transport services in Ulaanbaatar. Gender-responsive and universal design features, such as waiting rooms with priority areas for women and children, priority seats for pregnant women and women with children inside the bus, improved lighting facilities at bus stops for the safety of female passengers, separate toilets for women and men, and pedestrian and disabled safety design elements, will be incorporated into the bus rapid transit (BRT) design and operations. At least 30% of jobs generated by the BRT system are to be filled by women at municipal bus operating company (women drivers, station attendees, and supervisors).⁹

⁷ J. Turner. 2012. Urban Mass Transit, Gender Planning Protocols and Social Sustainability – The Case of Jakarta. *Research in Transportation Economics*. 34 (1). pp. 48–53.

⁸ S. Mitra-Sarkar and P. Partheeban. 2010. Abandon all Hope, Ye Who Enter Here: Understanding the Problem of “Eve Teasing” in Chennai, India. In *Women’s Issues in Transportation: Summary of the 4th International Conference, September 2009. Vol. 2: Technical Papers*. Washington, DC: Transportation Research Board.

⁹ ADB. 2012. *Mongolia: Urban Transport Development Investment Program*. Manila.

addressing urban transport and services can have a positive flow on effects on increasing women's access to jobs and public services. It can also improve women's safety on urban streets and when using public transport services, as well as their ability to afford public transport services. For example, the Greater Dhaka Sustainable Urban Transport Project supports a bus rapid transit (BRT) system that was specifically planned to support women's employment by selecting an alignment along a transport corridor that services a garment factory hub and the residential areas of female garment workers. The physical design of this project tackles issues of safety, harassment, and bullying often experienced by women using public transport in Dhaka, by providing for separate male/female queues and reserved seats for women, even on a female-dominated transit route. Women's employment and livelihoods are also promoted by setting targets for women in construction and maintenance, and allocation of reserved spaces for women vendors at stations (Box 14).

Box 14 Greater Dhaka Sustainable Urban Transport Project in Bangladesh

This project aims to improve the public transport system of Dhaka North City Corporation and Gazipur City Corporation. The gender analysis resulted in a project design that specifically addresses women's limited access to safe and reliable transport by supporting a bus rapid transit (BRT) line in an area where a large proportion of passengers will be female garment sector workers commuting from their homes to the factory. A gender action plan has been prepared including the following features:

- reserve 20% of seats for women,
- reserve and allocate at least 15% of the vendor area to women vendors,
- provide subsidized monthly travel passes to 70% of garment workers (majority of whom are women),
- employ at least 20% women in BRT construction and maintenance work, and
- ensure participation of at least 30% women in the improvement of local markets and feeder roads for nonmotorized transport.

Source: ADB. 2012. *Bangladesh: Greater Dhaka Sustainable Urban Transport Project*. Manila.

Key Gender Planning and Design Features for Urban Transport Projects

Planning and Data Collection

- Collect sex-disaggregated transport and travel pattern statistics (trip purpose by mode) with baseline (i.e., journeys taken, by whom, to where, by which mode of transport).
- Conduct gender analysis of public transport users in target urban areas.
- Conduct community consultations with women and men from different groups of transport users (e.g., pedestrians, cyclists, public transport users, NMT users, and motorists) to identify and respond to local transport needs (e.g., How do men/women get to/from work, markets, health services? Are current services adequate, affordable, and safe to use? Do women have personal security concerns?).
- Consult with female passengers to inform appropriate alignment of public transport lines and routes, location of stations, and access to stations for their convenience and needs.
- Collect sex-disaggregated baseline data on public transport workers in executing and implementing urban transport agencies, and encourage the training and recruitment of women staff at higher skill levels.
- Assist transport agencies to establish links with gender focal agencies, gender equality advocates, and researchers concerned with urban women's transport and mobility.

Suggested Design Features

- Design public transport infrastructure with gender-responsive physical design features as contextually appropriate, which meet women's specific needs and promote universal access. For example, lower height of steps for entry into public buses, installation of handrails at appropriate height levels, and allocated space for parked baby carriages and shopping.
- Provide separate male/female toilets and larger capacity female toilets at stations.
- Set employment targets for women in construction and higher-skilled urban transport sector jobs generated by the project, such as station attendees, ticket collectors, drivers, and inspectors.
- Set targets to ensure women's participation in any training provided for skilled work in providing or managing urban transport services.
- Establish public transport schedules and pricing systems that respond to the needs of women users, including affordable off-peak, multiple trip, and group traveler ticketing (see Box 15).

Box 15 Gender Design Features in Urban Transport Projects

Viet Nam: Ho Chi Minh City Urban Mass Rapid Transit Line 2 Investment Program

The program has been designed to promote safe and secure mobility of women, provide women with better income-earning and employment opportunities, and allow women to better manage their domestic and child-caring responsibilities. The gender design features include targets of 20% construction and 30% station jobs for women; dedicated waiting spaces for women on platforms, shop spaces for female-owned businesses, women-only carriages with additional child seating and storage space for baby carriages/shopping, secure street lighting around stations, and easy access drop-off and pick-up points; ticketing systems and train schedules to suit multiple trips and intermodal transport usage; marketing to women as metro users; gender capacity development for project staff; and special attention to households headed by females in livelihood restoration support after resettlement.

Source: ADB. 2011. Viet Nam: Ho Chi Minh City Urban Mass Rapid Transit Line 2 Investment Program. Manila.

Georgia: Sustainable Urban Transport Investment Program

Urbanization in Georgia has resulted in transport problems such as traffic congestion, pollution, poor and inappropriate road infrastructure, and highly inefficient urban transport systems. The Sustainable Urban Transport Investment Program addresses these issues by improving the efficiency, reliability, and affordability of urban transport infrastructure and services. The gender action plan includes

- targets for increased municipal transport usage by women;
- information campaigns on HIV/AIDS risks, gender awareness, and hygiene promotion;
- improvement of sex-disaggregated statistics and increased representation of women at the decision-making level in the sector agencies; and
- physical designs and policies to help ensure protection of female passengers and employees against threats to their safety and security (e.g., increased visibility of security personnel; lighting in all stations, stops, waiting areas, toilets, and interchanges; information on where to complain in cases of violations to personal safety; and assignment of seats in metro trains and buses for women).

Source: ADB. 2010. Georgia: Sustainable Urban Transport Investment Program. Manila.

- Invest in safety features to reduce the risk of harassment for women users (e.g., separate entrances and ticketing queues, women-only waiting areas, separate buses or train carriages, reserved seats, lighting in stations, and panic buttons at stations and on trains/buses).
- Promote women's livelihoods and entrepreneurship around public transport hubs (e.g., allocation of reserved shop spaces at stations for women's businesses).
- Build safe and accessible pedestrian sidewalks, safe crossings, and street lighting as part of urban road and public transport improvement projects.
- Train public transport staff and local police (e.g., station attendants, drivers, and inspectors) on sexual harassment awareness, how to respond to observed situations of sexual harassment, and how to address complaints of harassment from the user public.
- Build capacity of executing and implementing transport agency staff, as well as transport planning officials, on gender issues in urban transport and the mobility needs of women.

Box 15 provides two urban transport project examples—the Ho Chi Minh City Mass Rapid Transit Investment Program and the Georgia Sustainable Urban Transport Investment Program—both of which included a range of gender design features.

Expanding Employment Choices for Women in the Urban Transport Sector

It is now relatively common to see targets for women in civil works construction in the rural, provincial, and, sometimes, national transport projects. This employment often provides much-needed cash income for women, especially in areas with few income-earning options. However, the urban transport sector remains heavily male-dominated, and there is a lack of a critical mass of women. This contributes to women's voices as urban transport users not being heard, with little incentive for urban transport services to respond to women's particular needs. There are a growing number of initiatives to increase women's participation and status in the transport sector. In addition to construction, opportunities should be considered to increase women's employment in higher-order transport sector jobs such as surveyors, technicians, heavy machine operators, engineers, or supervisors.

Increasingly, new transport systems, such as metros and BRT, are being used as an opportunity to change the gender composition of the transport workforce by promoting women's employment in new types of jobs (e.g., as station attendants and supervisors, ticketing staff, and bus drivers) and providing them with on-the-job prerequisite training (Box 16). More formal linkages with technical and vocational courses that supply skilled labor to the transport sector should be pursued. Similarly, there is scope to encourage formal training institutes of transport ministries to establish quotas for female students, provide scholarships and stipends to encourage female enrollment, and conduct public campaigns to attract women into the sector. Tertiary institutions should be encouraged to develop gender modules for incorporation in engineering training courses especially for engineers that may enter the transport sector. Such steps will gradually contribute to reducing the male dominance of urban transport professionals.

Box 16 Moving Women Up the Employment Ladder in Urban Transport**Viet Nam: Ha Noi Metro Rail System Project**

In the processes of establishing an integrated transit system in five districts of the city, the Ha Noi Metro Rail System Project design has specific provisions for increasing women's employment status in the sector. Not only will 30% of jobs generated by civil works be filled by women at equal pay, but targets have been established for female employment generation from new electrical and mechanical systems and rolling stock equipment (30% of maintenance and operations staff, ticketing booth staff, and station attendees and supervisors), and amongst the Ha Noi Railway Board (20% of newly hired staff).

Source: ADB. 2010. *Viet Nam: Ha Noi Metro Rail System Project*. Manila.

People's Republic of China: Jiangxi Fuzhou Urban Integrated Infrastructure Improvement Project

In addition to designing integrated transport physical infrastructure in a gender-responsive manner, the Jiangxi Fuzhou Urban Integrated Infrastructure Improvement Project will proactively ensure that women are encouraged into job openings emerging from the project, which go beyond unskilled labor. The gender action plan includes the following targets:

- employ at least 35% female bus rapid transit (BRT) drivers,
- ensure reemployment of female bus drivers from preexisting bus routes replaced by the BRT system,
- employ at least 30% women in all new transport hub/terminal jobs (e.g., terminal attendants), and
- employ at least 50% women in river greenery maintenance and landscaping jobs.

Source: ADB. 2012. *People's Republic of China: Jiangxi Fuzhou Urban Integrated Infrastructure Improvement Project*. Manila.

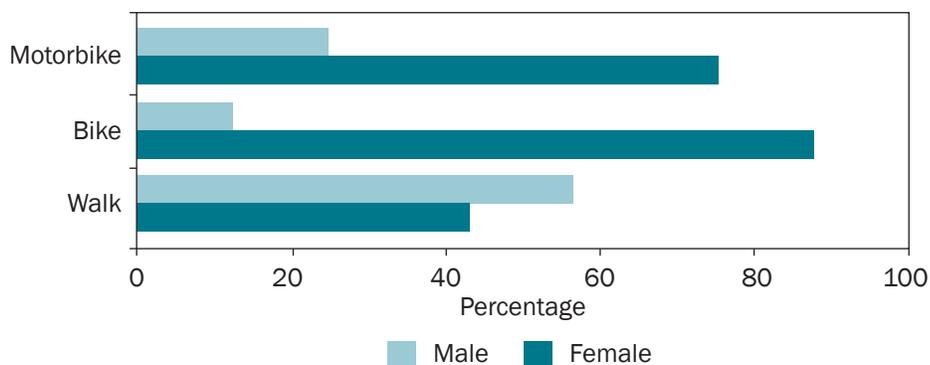
Rural Roads

Key Gender Issues

Social conventions and gender roles affect the extent to which women in rural areas are able to take advantage of opportunities created by new or improved rural roads, better transport services, and more convenient access to services and markets. Improved road access to health and education services, employment opportunities, and markets, financial, and other services can bring significant benefits to women. However, traditional rural transport planning has tended to focus on improving rural road networks and long-distance transport of goods, often at the expense of enabling rural women or the rural poor to benefit.

Rural women often travel by foot, concentrated around their households, and their multiple tasks may restrict mobility or add to their travel times. For example, a World Bank survey in the Mekong Delta, Viet Nam, found that women's travel times are longer because they walk more than men, even though men travel longer distances (Figure 2). Women made more journeys per month to farms and markets, while men made more journeys to telephone and postal facilities.

Figure 2 Gender Patterns in Mode of Transport Usage in Mekong Delta



Source: World Bank. 2011. Building Capacity to Make Transport Work for Women and Men in Vietnam: Gender and Transport Challenges. *East Asia and Pacific Region Social Development Notes – Innovations, Lessons and Best Practice*.

Travel in the close vicinity of the home on feeder roads, footpaths, and footbridges is very important to rural women (Box 17) due to their reliance on walking. Facilitating safe travel on foot in rural areas should be addressed through the repair of potholes and providing sufficient footpaths, footbridges, small bridges, foot trails and safe pedestrian crossing areas, traffic lights, and general lighting on rural roads.

Box 17 Gender Equality and Empowerment of Women Project in Nepal

Community-based infrastructure was supported under the social empowerment component of this project. This included the rehabilitation of local trails and bridges to improve access for women to existing rural access roads, markets, and social services. An estimated 9,200 women (and an equal number of men) will benefit from rehabilitated trails and accrue economic benefits from marketing their local produce and goods. Infrastructure investments under the project are independently selected and implemented by women's groups with the aim of reducing women's work burdens and time poverty.

Source: ADB. 2004. *Nepal: Gender Equality and Empowerment of Women Project*. Manila.

Consulting and involving women adequately in project design and implementation can help ensure that rural road development benefits women and supports their daily mobility needs. Rural road development projects can include provisions for increasing women's employment through the project, especially in areas where income-earning opportunities are limited. For example, the India Rural Connectivity Investment Program is involving women in transect walks with project staff and design consultants to inform the alignment of proposed rural roads, and has a target for women's employment in roadside tree plantations (Box 18). There may also be opportunities to provide training for women in ancillary employment, such as simple repair of rickshaws and bicycles.

Rural women rely more on NMT and intermediate modes of transport (IMTs), such as bicycles or animal-drawn carts. Even simple wheelbarrows can significantly reduce a rural woman's or girl's burden and time spent on water or firewood portage. Hence, rural road design should consider provision of adequately wide road shoulders, different pathways, and sealed surfaces for NMT and IMT. For example, a rural roads project in Cambodia included road shoulders specifically designed with sealed surfaces to enable carts with wheels to reduce the burden on women and girls who haul water (Box 19). Although women tend to use public transport more than men, public transport services in rural areas are often infrequent and unreliable, requiring long waiting periods or long walks to pick-up and drop-off points. Hence, it is becoming increasingly understood that roads alone are not enough, and there is a need to also address transport services and links between motorized transport, NMT, and IMT.

Box 18 Rural Connectivity Investment Program in India

This investment program aims to reduce poverty and deprivation, and promote inclusive socioeconomic growth in the communities served by the program roads in the states of Assam, Chhattisgarh, Madhya Pradesh, Orissa, and West Bengal. The development of these state roads will provide access to markets, health, education, and administrative services. The gender action plan (GAP) prepared for the first tranche includes

- participation of not less than 40% of women in transect walks,
- participation of women in road safety awareness sessions,
- at least 33% female labor for tree plantations along roads and unskilled work for road construction, and
- rural connectivity training and development and use of gender-sensitive training modules.

The state rural roads development agencies will be responsible for GAP implementation.

Source: ADB. 2012. *India: Rural Connectivity Investment Program*. Manila.

Box 19 Making Roads Work for Women in Cambodia

This project aims to rehabilitate 505 kilometers of rural roads in seven provinces of Cambodia and includes a labor and gender action plan (LGAP). Key features of the LGAP include

- a 40% target for women as unskilled construction laborers;
- a 50% target for women as road maintenance workers, and training for contractors on labor-based appropriate technology and gender; and
- a 50% target for women as road safety community mobilizers.

Road shoulders are designed with sealed surfaces to enable carts with wheels to reduce the burden on women and girls who haul water in rural areas. Targets for women's employment will ensure that rural women can access opportunities to earn cash income from the project, and results to date are already indicating that these numerical targets are achievable. To address potential downside impacts, the project also includes an HIV/AIDS and human trafficking prevention program to be conducted during and after construction. Vulnerability mapping, emergency management, and climate change adaptation activities will involve women in the planning and operation of the systems, as well as planting and caring for roadside trees.

Source: ADB. 2010. *Cambodia: Rural Roads Improvement Project*. Manila.

Key Gender Planning and Design Features for Rural Road Projects

- Collect and monitor sex-disaggregated transport and travel pattern statistics (with baseline) and carry out periodic surveys of public transport user demands in rural areas.
- Conduct community consultations with women and men (separately as appropriate), to identify and respond to local transport needs (Box 20).
- Use gender analysis to plan and locate road alignments, including feeder roads, footpaths, and footbridges.
- Invest in feeder roads, footpaths, and footbridges where need exists.
- Design and implement gender-sensitive road physical designs (e.g., roadside rest points, roadside market facilities, and wider and sealed road shoulders for walking and NMT).
- Facilitate gender-responsive and affordable local public transport along improved roads (e.g., with safe pick-up/drop-off points conveniently located for women's access, schedules to suit women's different needs, and affordable and flexible fares).
- Prioritize NMTs and IMTs in transport planning and design IMTs to fit women's size and strength, and train women on how to operate, maintain, and repair IMTs.
- Where socially acceptable, consider provision of bicycles for improving women's mobility and making it easier for girls to safely reach and attend school with reduced risk of gender-based violence en route.
- Plan and design rural roads for safe pedestrians use (walking lanes and crossings).
- Promote the use of community-based labor (e.g., roadside maintenance).
- Train women in areas for ancillary employment, e.g., rickshaw or bicycle repairs.
- Set targets for women's employment during construction and post-construction.
- Ensure gender targets and physical design features are specified in bidding documents for contractors, considering equipment-based versus labor-based techniques.
- Establish community road maintenance and safety committees with quotas for involvement of local women.

Box 20 Community Empowerment Through Road Improvement in Timor-Leste

The Timor-Leste Road Sector Improvement Project is an example of a gender-equitable, pro-poor community empowerment component. It aimed to improve road transport for economic and social activities. Women's participation in planning was ensured by holding separate women-only focus group discussions, and ensuring that 30% of 500 respondents of small-sample surveys were women. A community empowerment initiative closely involved women to include

- identification of community-based and gender-inclusive modalities for the rehabilitation and maintenance of rural feeder roads adjacent to project roads,
- HIV/AIDS prevention and road safety awareness programs, and
- monitoring of employment targets for women.

Women contributed to the selection of roads for upgrading, comprised more than 50% of the members of work teams, and benefited from targeted training on broad subjects of practical relevance and in technical skills.

Sources: ADB. 2005. *Asian Development Fund Grant to Timor-Leste for the Road Sector Development Project*. Manila; ADB. 2001. *Independent Evaluation Department Validation Report for Timor-Leste: Road Sector Improvement Project*. Manila.

- Encourage women into higher-skilled jobs through provision of on-the-job training, e.g., as surveyors, road safety auditors, and heavy equipment operators.
- Provide gender-responsive, HIV/AIDS, and human trafficking awareness-raising to contractors and local communities.
- Target women for road safety awareness and implement road engineering measures to enhance road safety, e.g., traffic-calming devices such as speed humps, use of local area traffic management devices, traffic signage, and manual or controlled pedestrian crossings.¹⁰

Community-Based Rural Road Construction and Maintenance

Road development can provide important employment opportunities for unskilled or low-skilled women in rural areas where there are few other cash-earning options. Experience has shown that with small amounts of practical training inputs, combined with numerical targets, rural women are keen to take on this work, and are proving to be very effective and organized road construction and maintenance workers. This can have a transformational long-term impact on the incomes and lives of rural women.

Box 21 Yunnan Integrated Road Network Development Project in the People's Republic of China

This project, which aims to develop an efficient, safe, sustainable, and environment-friendly road transport system in Yunnan Province, benefits women through key gender design features in a gender action plan, including

- establishing 55 road maintenance groups to undertake routine road maintenance,
- training the groups in routine road maintenance activities, and
- engaging and contracting the village maintenance groups (40% members of women's groups) for undertaking routine road maintenance.

A small grant project linked to the Yunnan Integrated Road Network Development Project (YIRNDP) was piloted to support community-based rural road maintenance. It focused on employing poor women and ethnic minorities to (i) improve the road access of selected ethnic minority villages in Dehong Prefecture, (ii) establish and strengthen women's groups for rural road maintenance, and (iii) provide technical and entrepreneurship skills to women's rural road maintenance groups. The pilot project resulted in successful maintenance of 165 kilometers of rural roads with improved road surfaces that facilitated year-round access to markets, schools, and health facilities. At the same time, 163 ethnic minority women received cash incomes from road maintenance work. The wages obtained have provided a major boost to household incomes and gave women greater decision-making power in their households. The flexible nature of the output-based payment system enabled women to easily combine this work with other household and farm responsibilities. The project's success has led to replication of the pilot by the government in other regions and projects and in 650 kilometers of road under the YIRNDP. The road maintenance cost was reduced from CNY5,250 per kilometer in 2010 to CNY2,600 in 2012. This was achieved by excluding all major emergency maintenance and successfully applying performance-based contracts. A regulation in support of the replication of the approach was issued in 2012. Accessible and user-friendly manuals for local authorities and women's groups have been developed and distributed to enable wider application of lessons learned. Road maintenance funding provided by Dehong Prefecture also increased from CNY2.8 million in 2010 to CNY7.8 million in 2011, reflecting greater confidence in the quality results that derive from this approach.

Source: ADB. 2010. *People's Republic of China: Yunnan Integrated Road Network Development Project*. Manila.

¹⁰ See <https://www.onlinepublications.austroroads.com.au/items/AGTM08-08>

Prior to the Yunnan Integrated Road Network Development Project, sections of the remote Dehong Prefecture in Yunnan Province were inaccessible during the rainy season due to lack of maintenance and the poor condition of the roads. This meant that district services and authorities were unable to reach ethnic minority villages due to a lack of passable roads. In this remote district, women lived a largely subsistence lifestyle, with few employment and income-generating opportunities. A small-scale pilot project linked to the loan project was designed and implemented to assist ethnic minority women establish road maintenance groups, provide them with road maintenance training, and facilitate the contracting of these groups to carry out regular roadside maintenance. As a result, many kilometers of rural roads in the district were maintained, ethnic minority women provided with a regular source of cash income and year-round road access to markets, schools, and health facilities. This project demonstrated the efficacy, adaptability, replicability, and sustainability of adopting a labor-based approach for village road maintenance (Box 21).

Similarly, the Bangladesh Second Rural Infrastructure Improvement Project specifically targeted poor rural women for employment creation and income generation, by providing them with training and pilot contracts to plant, nurse, and protect roadside greenery along a specified section of the road during and after the road construction period (Box 22). As women were keen to continue their employment and had demonstrated their abilities on-the-job, the Local Government Engineering Department (LGED) absorbed them as ongoing LGED roadside maintenance workers. In fact, this approach of hiring local women for ongoing and regular roadside maintenance proved so effective and successful, that LGED has replicated this approach nationwide in all LGED road improvement projects.

Box 22 Second Rural Infrastructure Improvement Project in Bangladesh

This project covered 23 districts in north and central Bangladesh, providing rural roads, markets, union council complexes, local governance capacity development, and project management support. The rural roads component ensured women's participation in the construction, operation, and maintenance of roads, including through the formation, engagement, and training of women labor contracting societies in roadside tree plantations and routine maintenance. Poor women were provided with training and initial 2-year contracts to plant, nurse, and protect roadside tree saplings. Each woman was allocated a 0.5-kilometer section of the road to maintain. Labor contracting society women were also trained in leadership and skills development and income-generating activities such as poultry raising, gardening, tailoring, and other trades. Women were also supported to save, with a requirement that a small portion of their earnings from the roadside maintenance work be kept aside in a joint bank account with the Local Government Engineering Department (LGED), which they could withdraw at the end of their employment, for utilization in income-generating activities of their choice. This successful model has been replicated in other wide-reaching LGED projects funded by the government.

Source: ADB. 2006 *Bangladesh: Second Rural Infrastructure Improvement Project*. Manila.

Gender-Responsive Rural Road Construction and Maintenance

- Establish at the outset whether women in the community are already employed or engaged in unskilled manual labor in construction or comparable work; their willingness to undertake this type of work; ability to travel to work sites, especially if they have far to travel; etc.
 - Set targets for women's employment that reflects women's current level of participation in this type of labor in the project area, plus an achievable increase to provide a measure of affirmative action.
 - Ensure commitment from community and private sector managers to equal wages and working conditions, and adequate facilities for healthy and safe work (e.g., separate rest areas and toilets).
- Investigate the existence of any national employment generation programs that mandate equal access to jobs for unskilled female labor.
- Mobilize women early at the community level to inform them about upcoming employment opportunities, develop a community-based list of interested female workers, and mobilize women into community-based roadside maintenance groups.
- Increase the use of rural community-based labor approaches for ongoing repair and maintenance of rural roads, in collaboration with local bodies, as opposed to mechanized repair and maintenance (Box 23).
- Promote women's employment across other higher-skill road construction and maintenance job, e.g., construction supervisor, surveyors, and machine operators.
- Include female employment targets and gender-responsive working conditions as requirements in contractor bidding documents.
- Divide road into shorter sections, where feasible, for allocation of construction and maintenance employment, to allow for more equitable distribution of income-earning opportunities and provision of work sites closer to home.
- Provide training to women on basic construction and maintenance skills, and how to organize themselves as a working group.
- Provide women with basic working tools and protective clothing.
- Provide gender-sensitivity training for contractors and local authorities.
- Create a level playing field for women contractors (road construction and maintenance) by earmarking a proportion of bids for smaller-scale providers.
- Fund exposure visits for partner agencies and community leaders on experiences elsewhere with women's employment in community-based rural road maintenance.

Box 23 World Bank Third Rural Transport Project in Viet Nam

The project implemented a pilot in 2010 that successfully trained 1,533 ethnic minority women to maintain roads in remote, mountainous area where contracting firms were reluctant to take their equipment. Women and a few men road workers received wages to cut trees, shrubs, and grass; clear culverts and drains; fill potholes; and clean roadsides on 51 kilometers of roads. The Viet Nam Women's Union (VWU) managed and monitored recruitment, while the Provincial Department of Transport (PDOT) provided hands-on road maintenance capacity building to women. Trainers addressed ethnic minority barriers through demonstrations and hands-on practice. Evaluation of the pilot found that road maintenance provided accessibility to previously isolated communities and increased community awareness of the importance of road maintenance. Women road workers used their income to contribute to family livelihoods and children's education, and increased their voice in community and household decision-making. Close coordination between VWU and PDOT was a critical success factor.

Source: World Bank. 2011. Building Capacity to Make Transport Work for Women and Men in Vietnam: Gender and Transport Challenges. *East Asia and Pacific Region Social Development Notes – Innovations, Lessons and Best Practice.*

National Highways

Key Gender Issues

National highways provide a network of roads that connect different parts of the country (and sometimes neighboring countries) to enable faster and easier movement of people and goods. National highways can vary from two-lane highways passing through villages to multilane expressways. They facilitate the growth of towns and commercial developments along the road corridor and provide easier access to markets, social services, employment, and other income-earning opportunities. Hence, new and upgraded national highways can result in rapid social change by enabling opportunities for mobility that were previously hindered. However, to maximize the benefits of connectivity for all, national highways and arterial roads need to be designed to be gender-responsive.

Increased connectivity through an integrated network of national highways, and provincial and rural roads can mean that social service delivery is able to reach communities that were previously isolated and marginalized from the benefits of development and that people in communities can also access nearby services that were previously beyond their reach. This can bring significant gender benefits if national highways and provincial roads are aligned to pass schools, health care centers, hospitals, and markets. For example, improved connectivity can improve family health outcomes and reduce women's care burden, by increasing access to vaccination and health care services for young children and the elderly. It can enhance women's access to antenatal care during pregnancy and childbirth, which can directly reduce the risk of maternal mortality, maternal morbidity, and lower birth weight of newborn babies. Similarly, it can enable more children to attend school by reducing travel time and simplifying the journey, especially for girls.

Improved road networks open up interaction between villages and nearby communities, which can promote trade, provide greater access to markets, and increase the availability of goods. In some cases, the national road networks connect to border countries, facilitating international trade, commerce, tourism, and the mushrooming and growth of border towns that provide services and employment opportunities. However, women often lack the capacity and skills to utilize the enhanced marketing and employment opportunities from improved road access and connectivity. Therefore, support for women's capacity development and skills training can be pursued through an associated grant or linked technical assistance project, to be implemented in the transport project area to maximize gender benefits. Alternatively, transport projects can collaborate with local nongovernment organizations or community groups to link women in project areas to other skills training programs. Box 24 provides examples of dedicated capacity and skills development support for women to benefit from larger transport investments.

National highways connecting different parts of the country or different countries inevitably also generate and result in increasing migration and influx of foreign workers. These changes can also bring increased risks, such as sharp increases in land prices; forest clearance; alienation of customary land; greater spread of HIV, sexually transmitted infections, and other communicable diseases; and human trafficking. Women are often disproportionately affected by these risks (see Chapter 5).

Box 24 Gender Design Features in National Highway Projects

Uzbekistan: Central Asia Regional Economic Cooperation Corridor 2 Road Investment Program Multitranche Financing Facility – Project 1

The project aims to support better connectivity and an efficient transport system along the Uzbekistan section of the Central Asia Regional Economic Cooperation (CAREC) Corridor 2, through reconstruction of the A380 highway section with improved travel time. A community and gender action plan was developed to support isolated and vulnerable communities along the highway by orienting local leaders and residents of Sarimoy prior to the start of road construction; building a community complex; providing livelihood training for men and women; forming groups among women entrepreneurs; improving women's health services and the health post in Sarimoy; and effectively monitoring and collecting sex-disaggregated data. In a short period of time, the community (particularly women) has witnessed their practical needs being met through provision of an ambulance and pharmacy. Existing skills and local demand for women's skills development have been identified for training in areas such as carpet weaving, baking, sewing, hairdressing, and shoe repairs.

Source: ADB. 2010. *Uzbekistan: CAREC Corridor 2 Road Investment Program Multitranche Financing Facility – Project 1*. Manila.

India: Capacity Building and Livelihood Support for Women along the Jharkhand State Roads Project

The small grant aims to support women to capture the economic opportunities associated with road development brought about by the Jharkhand State Roads Project. This will be pursued through provision of pilot skills development and livelihood enhancement training for farm (e.g., rice intensification, sweet potato processing, integrated crop management, horticulture, agroforestry), nonfarm (e.g., fish farming, poultry and goat raising, meat processing), and skills-based activities (e.g., handicraft and handloom). Needs-driven training livelihood activities will be identified based on skills assessments and discussions with women, and self-help groups will be formed and linked to the National Rural Livelihood Program.

Source: ADB. 2011. *India: Capacity Building and Livelihood Support for Women along the Jharkhand State Roads Project*. Manila.

Viet Nam: Strengthening Capacity of Women along the Central Mekong Delta Connectivity Project

Phase 2 of the project will involve construction of high-class road infrastructure between My An and Cao Lanh, which will in effect be a regional road that connects to larger regional transport corridors. A grant is supporting preconstruction activities to maximize economic empowerment and income opportunities for women from the increased physical connectivity. Currently, most poor women along the route are engaged in casual labor, petty trade, rice farming, and running small businesses. Hence, the grant project was designed to provide training for women in locally marketable skills and enhance their income-earning opportunities. Specifically, it will (i) build skills for employment/livelihood in local enterprises for women, (ii) provide women with access to credit, and (iii) provide women with access to employment in local industries. In addition, women from households along the route will be targeted for HIV/AIDS and human trafficking awareness programs.

Source: ADB. 2011. *Viet Nam: Strengthening Capacity of Women along the Central Mekong Delta Connectivity Project Phase II*. Manila.

Key Gender Design Features for National Highway Projects

- Consider setting targets for women and/or women's groups to be consulted in preparatory surveys and assessments to inform project design.
- Plan highway and provincial road alignments to link to feeder roads, or directly pass close to schools, health centers, markets, and other key facilities of importance to women's gender roles and daily activities.
- Include female targets for all employment opportunities generated by the project (e.g., percentage of women to be employed in civil works, toll collection staff, and supervisors).
- Incorporate gender-responsive physical designs along highways such as road humps and roundabouts in populated areas, well-lit separate toilets at rest stops, and community complexes (see program in Uzbekistan in Box 24).
- Avoid unnecessary relocation of roadside economic activities and promote economic opportunities for women, such as provision of small and safely designed market stall areas at rest stops.
- Promote bus services to maximize use of national highways and provincial roads by wider population.
- Identify opportunities to include a separate component or complementary project to benefit women, such as rural access roads, and income-generation or skills training to maximize the benefits of connectivity for women (Box 24).
- Improve and rehabilitate access routes to highways, focusing on pedestrians and two-wheelers, for example, dedicated pedestrian and/or two-wheeler lanes close to settlement areas.
- Provide separate human trafficking and HIV/AIDS awareness and behavior change communication programs for contractors and surrounding local communities, targeting young women, entertainment workers, truck drivers, and other at-risk groups (see project in Viet Nam in Box 24).

Railways

Key Gender Issues

Gender mainstreaming in railway projects should begin with consultations in the planning stages to determine gender differences in the requirements of the public. Consultations (surveys, interviews, forums) should be planned to identify the different existing and likely railway use patterns of women and men, so that design measures are included to address their different needs. Baseline data on railway passengers and personnel in railway agencies and organizations should always be sex-disaggregated. These data will enable better planning and design of physical facilities (e.g., design of stations), services, and safety provisions that meet women's and men's specific needs, such as the risks of sexual harassment for female passengers. Where railways play an important role in enabling women to carry goods to markets, the physical design of carriages should provide ample storage space. Gender patterns in railway passengers should also inform appropriate pricing of rail ticketing to take into account, for example, women traveling with dependents or as part of a larger family group, and women traveling off-peak.

Smaller railway stations in rural areas can promote access to services or employment for local people, or have intermodal links to connect rural people. Therefore, station area development plans should promote access to economic opportunities for local women (e.g., reserved spaces for women-owned small businesses at stations). Opportunities for promoting women's employment or other gender issues within railway organizations should also be considered, as well as gendered dimensions of social risks. As railways are often significant providers of reliable state jobs, employment reforms that lead to a reduction in workforce may have a disproportionate impact in terms of focusing on low-paid female employees more than men and hence may need to be approached in a gender-responsive manner (Box 25).

Box 25 Addressing Gender Impacts in the Privatization of Kenya Railways

As part of the privatization of the Kenya Railways Corporation (KRC), a procedure was developed for retrenching a group of temporary workers which complied with all legal requirements. However, an analysis of the workforce revealed that all retrenchees were women who would face serious economic problems after retrenchment. Many were single heads of households raising several children and had outstanding loans of amounts exceeding the retrenchment payments. While some were reemployed by KRC on social grounds (i.e., consideration of their family situation), others faced difficulties in finding new jobs. The International Finance Corporation worked with KRC to consider length of service when calculating the severance payment; provide counseling; offer a 3-month business management training to those aged over 40 to start small businesses; offer training in administration, business, accounting, or human resources to increase their chances of finding jobs; and consider use of job placements or temporary agencies to help retrenched workers find employment.

Source: International Finance Corporation. 2005. Managing Retrenchment: Addressing Gender Impacts in Privatization of Kenya Railways. *Good Practice Note*. No. 4, August.

Key Gender Design Features for Integration into Railway Projects

- Consult with potential female passengers on appropriate alignment of train line, location of train stations, and access to stations for their convenience and needs.
- Provide safe and secure rail stations and station access, with appropriate lighting and emergency panic buttons on trains.
- Provide separate female spaces where appropriate (e.g., separate ticketing queues, waiting areas, and train seating or carriages).
- Provide other gender-responsive physical design and universal access features for passenger carriages (e.g., space for parking baby carriages, appropriate height steps or level-entry onto trains, and handle bars suited to average height of women).
- Introduce flexible and affordable ticketing and train schedules for off-peak and multiple use to accommodate trip chaining patterns of women.
- Provide separate male/female toilets and larger capacity female toilets at railway stations and on trains.
- Incorporate a gender perspective into station development plans, including promoting economic opportunities. For example, allocate reserved shop spaces in railway stations for female-owned businesses.
- Train railway and station staff on sexual harassment awareness, how to respond to observed situations of sexual harassment, and how to address complaints of harassment from the user public.
- Implement gender-sensitive sexual harassment campaigns for the public.
- Set targets for female employment in construction (Box 28).
- Set targets for female employment in new railway jobs and provide women with equal access to on-the-job training, for example, as railway station attendants, ticket booth operators, station managers, train drivers, ticket collectors, and in railway operations and maintenance (Box 26).
- Ensure that railway-related resettlement ensures equal rights for women and special assistance for women who may be particularly vulnerable (see Box 28 and Chapter 5).
- Provide support to women workers during privatization of railway operations through up-skilling training for reemployment (Box 26).

Box 26 Promoting Gender Benefits through Railway Development in the People's Republic of China

Railway projects financed by the Asian Development Bank have promoted women's employment in construction and ensured women's participation in land acquisition and relocation processes in the People's Republic of China. Women laborers working on construction of the Ganzhou–Longyan Railway Project (2001) were engaged in cleaning and maintaining trucks, cooking for construction teams, and ensuring sanitation of construction sites. Women also actively participated in the resettlement process, by constructing houses and managing compensation funds. The project also facilitated increased access to women's employment in nearby enterprises. More recently, the Lanzhou–Chongqing Railway Development Project (2008) design has included hiring preferences for women in project-generated jobs during construction and operation of the railway, and special assistance for widows and households headed by women during land acquisition and resettlement.

Sources: ADB. 2001. *People's Republic of China: Ganzhou–Longyan Railway*. Manila; ADB. 2008. *People's Republic of China: Ganzhou–Longyan Railway Project Completion Report*. Manila; ADB. 2008. *People's Republic of China: Lanzhou–Chongqing Railway Development* (formally Lanyu Railway). Manila.

Bridges

Key Gender Issues

Bridges come in many different sizes, and their locations and capacity to carry different types of road users vary depending on their design. Bridges are also integral parts of road networks which can provide significant time and cost savings if they provide increased connectivity for local people, when properly designed. This has implications for gendered patterns of bridge access and benefits from bridge connectivity. Gender planning for bridges must therefore begin with consultations in the planning stages with existing and potential users of the bridge, whether by foot, nonmotorized transport (NMT), intermediate mode of transport (IMT), or different forms of conventional private or public motorized transport, and a thorough understanding of gender patterns in existing and future bridge traffic.

In urban areas, since women are more likely to cross bridges as pedestrians (including with children), bridge design should include ease of access to walking lanes with handrails for pedestrians. Women are also more likely to use NMT or IMTs, such as bicycles, when transporting fresh produce from surrounding rural farming areas to urban markets for sale. Hence, bridge design should incorporate dedicated bicycle and motorbike lanes where this is a major mode of transport. Ensuring safe access on and off the bridge for users is also essential, particularly in congested urban areas with heavy traffic and erratic driving behaviors. The need for road safety awareness campaigns targeting bridge users on different modes of transport and in the vicinity of the bridge (e.g., roadside signs and billboards) is also critical.

In rural contexts, bridges are often designed with the main road in mind, without considering local needs. Large roads that are built adjacent to rivers can potentially open up opportunities to improve rural connectivity if bridges are constructed on feeder roads, including footbridges for NMT. Access to/from bridges and surrounding areas can be important to enable women to carry out their daily tasks. For example, women may require access to a river flowing under a rural bridge as a water source or for washing clothes. Without careful design, bridge development may inadvertently interfere with daily tasks or put women and children at greater risk of road crashes. The design of a bridge replacement project in Papua New Guinea includes concrete stairways for women to access rivers and improved walkways on bridges for women and children, and will ensure at least 50% women's participation in road safety awareness (Box 27).

Like other transport projects, bridges can provide a source of employment for women during construction and ongoing maintenance. Bridge development may also provide new livelihood opportunities for women if their access to markets is improved and/or physical spaces for women to sell fresh market produce are provided in the nearby vicinity of the bridge.

Key Gender Design Features for Integration into Bridge Projects

- Consult with existing and potential women and men users of the bridge and bridge areas on appropriate and functional bridge design.
- Ensure bridge development does not negatively impact women's and men's daily activities in line with prevailing gender roles, particularly in rural settings (e.g., for washing, bathing, recreation, etc.) and provide access to rivers in the bridge design.
- In the bridge design consider inclusion of walking paths for pedestrians; and separate lanes for NMT and motorbikes, especially in countries where the latter is becoming the major form of transport.

Box 27 Bridge Replacement for Improved Rural Access Sector Project in Papua New Guinea

Women in Papua New Guinea play an important economic role, especially in rural areas where women are engaged in subsistence farming and marketing home produce at local markets. Women also manage most household tasks, including fetching water and collecting fuel. Compared with men, women are more likely to walk to their destinations than use public transport. Therefore, this project, which is expected to improve road access by replacing and relocating bridges, will not only reduce women's housework burdens but also ease their access to local markets and enhance income-earning opportunities. Improved road accessibility and safe road travel will also promote school attendance among girls and facilitate more frequent use of health facilities for women's reproductive health care.

A gender action plan has been prepared that will

- improve access to water in rivers for women through concrete stairways included in the bridge design,
- improve pedestrian walkways on bridges for women and children,
- provide income opportunities by engaging at least 50% of women in routine maintenance of bridges, and
- ensure participation of at least 50% women in road safety awareness.

Source: ADB. 2011. *Papua New Guinea: Bridge Replacement for Improved Rural Access Sector Project*. Manila.

- Invest in improving rural bridge access through upgrade of feeder roads and/or footpaths, steps on/off bridges, or stairways to riverbank access.
- Set targets for women's employment in bridge construction and ongoing maintenance.
- Target women and children for provision of community awareness on road safety when using bridges and general bridge safety to reduce crash risks.
- Promote women's livelihood opportunities and access to markets by providing physical space for women to sell market produce near and around bridge access areas.
- Ensure that any bridge-related resettlement ensures that women access equal financial compensation and property rights, that special assistance is provided for women who may be particularly vulnerable, and that support is provided for any previous water transport economic activities (e.g., ferry services and shops) (see Chapter 5).

Water-Based Transport and Ports

Key Gender Issues

Gender planning for water-based transport should include public consultation with passengers, shipping operators, port authorities, port users, and other related stakeholders to take into account different views of women and men, their different water transport needs, and different gender roles among and within these groups—for example, as passengers, boat owners and operators, traders on boats or shores, fishers, seafarers, contractors, laborers, and employees in ports and water transport services.

Consultation with fishers should examine gender differences in onshore and offshore fishing activities. In most countries, women are active participants, sometimes the major participants, in fish-buying, processing, and marketing. Therefore, projects to upgrade or establish new fishing ports and related port infrastructure can offer many opportunities to enhance women's role in onshore fishery activities by providing enabling marketing facilities. In addition, it is possible to pursue providing skills training and access to credit for women to improve small-scale value-added fish processing, or facilitating linkages for women's decent employment in large-scale fish canneries in urban areas that develop as a result of improved port infrastructure.

Improvement of inland waterway transport infrastructure and services can support women's livelihoods through provision of transport for trade, fishing, and marketing. It can also provide women and children with greater daily mobility access to basic services (e.g., health care and schools) and markets in areas where river transport is the main form of mobility, such as in large river delta areas. Ferry services for river crossings can be an important cost-effective and employment-generating alternative to bridges for enhancing rural connectivity. In such contexts, the location and physical design of boat landing points in relation to basic services and markets, availability and scheduling of water taxi services, and physical safety features are important to consider. For example, in some urban contexts, river transport can be a very important form of public transport (e.g., Bangkok, Thailand) and should be designed to support the needs of all users.

Female passengers may also have different safety and physical infrastructure needs, particularly in larger-scale shipping, interisland transport vessels, and port infrastructure and services. Larger passenger vessels should include gender-responsive features such as reserved seats for women and children, separate toilets, and appropriately sized life jackets. Market spaces for women to sell local produce and handicrafts or run small businesses can be incorporated into the design of ports or smaller landing areas. There are also opportunities to promote women's employment as water transport operators and within waterway or port authorities.

Box 28 Lae Port Development Project in Papua New Guinea, 2007

The project is expected to catalyze industrial and commercial development and promote trade for Papua New Guinea by relieving a binding constraint on key port infrastructure in Lae. The increased mobility and influx of outside workers associated with the port development may potentially increase HIV/AIDS risk. Hence, the project provides gender-responsive AIDS behavior change and awareness campaigns, establishment of AIDS site committees and women's help desks at police stations around the port, and pilot-testing of modalities for the sustainable reintegration and rehabilitation of people living with HIV/AIDS (e.g., female sex workers, destitute single mothers, and female heads of households) in the project area. With additional grant funding, the project is also supporting training for women in child care, health, hygiene, and vocational skills, and providing opportunities for women to avail themselves of microcredit to start a business.

Source: ADB. 2007. *Papua New Guinea: Lae Port Development Project*. Manila.

Where port development is likely to lead to a significant influx of workers to highly populated areas, there may also be a need to invest in gender-responsive HIV/AIDS and STI awareness and behavioral change campaigns for the local community, port operators, and workers, such as in the case of the Lae Port Development Project in Papua New Guinea (Box 28).

Key Gender Design Features for Water-Based Transport Projects

- Establish targets for women and/or women's groups to participate equally in preparatory surveys of passenger services, assessments, and design.
- Use gender livelihoods analysis to inform project interventions (e.g., vocational training) to promote women's livelihood development alongside water-based transport and related activities (Box 29).
- Explore provision for water transport licenses for women operators.
- Design passenger terminals and boats with universal access and gender-specific features such as women's waiting areas, reserved seating, additional storage space, separate toilets, and lighting (Box 29).
- Incorporate gender-specific design features, such as market trading spaces with access to water, as well as separate toilets for women.
- Set targets for women's employment in new jobs created in port operations, including maintenance and operations staff, ticketing staff, and supervisors and inspectors.
- Adjust ticketing and scheduling in response to women's needs and demand.
- Provide gender-responsive human trafficking and HIV/AIDS awareness for contractors, transport operators, and general public users.

Box 29 Water-Based Transport Projects

Vanuatu: Interisland Shipping Support Project

Vanuatu depends on water transport, but its economic growth and service delivery are restricted by inadequate infrastructure. Poor facilities and practices compromise women's responsibility for children's schooling, health care, economic opportunities, and safety. This project, which aims to provide a reliable, safe, and adequately frequent interisland shipping services through private sector operators, addresses gender issues by providing separate waiting areas and amenities for women at all landing points. It also includes a target for at least 25% of shipping coordinators and at least 25% of staff in the project management unit to be women.

Source: ADB. 2010. *Vanuatu: Interisland Shipping Support Project*. Manila.

People's Republic of China: Hunan Xiangjiang Inland Waterway Transport Project

The project aims to develop an efficient, safe, affordable, and sustainable inland waterway transport system in Hunan Province. It includes several gender design features in a gender action plan, with a focus on consultation with women and their involvement in nonfarm training. Among other things, it will provide nonfarming vocational skills training to 500 women, which will open up new job opportunities in the project's two port improvement areas. It will ensure at least 20% women's employment in physical works, provide training for women to receive water transport licenses, and incorporate livelihood restoration measures for women in the resettlement plan. Gender awareness training will be provided to 80% of water management agency staff, and a qualified staff member will be appointed as responsible for the dissemination of information, implementation, and monitoring of the project gender action plan.

Source: ADB. 2011. *People's Republic of China: Hunan Xiangjiang Inland Waterway Transport Project*. Manila.

Chapter 5

Mitigation of Social Risks

Well-designed road networks and transport infrastructure can have significant gender benefits through improved access to critical social services; faster, easier, and cheaper travel; increased access to jobs and income-earning opportunities; and improved health, such as decrease in respiratory tract infections due to less dust. Better transport networks and services can make journeys that previously took an entire day be completed in a matter of hours. Villagers can reach district health services in nearby towns or neighboring villages more readily, children can travel to schools more easily, mothers can access maternal care services more regularly, and social networks with other villages and towns can be maintained on a more regular basis. Alternatively, government services can reach communities more effectively. In addition, a myriad of new economic and employment opportunities open up for villagers as petty traders, laborers, commercial agriculturalists, and food and drink vendors to cater for the influx of workers to the area or increasing passing traffic.¹¹

At the same time, large infrastructure projects, including upgraded roads, improved road networks, and increased physical connectivity, may result in potentially adverse social impacts such as loss of land and livelihoods, dramatic social changes, introduction of negative social influences, and the spread of HIV and other infectious diseases. While these social impacts affect both men and women, the consequences can be more pronounced for women given existing gender inequalities and vulnerabilities. For example, improved connectivity and mobility can trigger higher levels of HIV transmission and/or increase the risks of female trafficking and unsafe migration in the region. Improved road infrastructure brings heavier traffic levels, which can lead to more road crashes and increased care burden for women. Transport improvements may also adversely impact the logistical advantages of existing businesses. These social risks associated with transport infrastructure need to be identified, managed, and mitigated.

Gender-specific vulnerabilities and risks that need to be addressed in transport projects include

- a. HIV/AIDS, sexually transmitted infections (STIs), and other communicable diseases
- b. Human trafficking and unsafe migration
- c. Road safety
- d. Resettlement impacts
- e. Impacts on existing businesses.

¹¹ ADB. 2011. *People's Republic of China: Yunnan Integrated Roads Development Project (Long-Rui Highway)*. Manila; ADB. 2006. *HIV/AIDS Prevention and Road Transport Sector Projects in the PRC (RETA 6321, Subproject 7)*. Manila.

Addressing Vulnerability to Sexually Transmitted Infections, HIV/AIDS, and Other Communicable Diseases

Key Gender Issues

The links between infrastructure development, connectivity, mobility, migration, and HIV/AIDS are now well recognized. Better roads and improved connectivity facilitate greater movement of people into and out of previously “unconnected” areas leading to an influx of outside workers, mainly males, during the infrastructure construction phase; increased opportunities and likelihood of circular migration of villagers to towns and neighboring countries (leaving to temporarily seek work, sometimes on a repeat basis); and a flood of people from rural areas migrating to the economic hubs and growth centers that sprout along the new corridor and border points. The interrelatedness of these factors present a unique confluence of HIV risk factors that need to be identified, managed, and mitigated.

Large transport infrastructure construction draws an influx of workers from other localities that are predominantly male, migrant, have a regular supply of money from their work, and are more likely and able to access commercial sex. These “mobile men with money” are identified as an “at risk” group, along with young women from surrounding areas in search of income opportunities and female sex workers. As connectivity improves, risks of infection increase among transport workers, truck drivers, and crew working along major road corridors, and the commercial sex workers they patronize. The new transport corridors give rise to border towns, localized economic hubs, industrial and special economic zones, and growth centers. These centers are the magnets to rural migration that attract mobile males and females and become centers of high-risk behaviors and concentrated risks. Young men and women who have left traditional community structures are socially disconnected and have money, all of which can quickly lead to risk behaviors (alcohol, injecting drug use, unprotected sex) that fuel the spread of HIV infection.

There is a particular need to identify high-risk infrastructure projects for transmission and spread of HIV/AIDS, STIs, and other communicable diseases. Factors that often contribute to high risk include new and upgraded highways; border area locations; areas with high concentration of ethnic minority and/or poor populations; large-scale construction workforces; and preexisting prevalence of HIV/AIDS, STIs, and/or communicable diseases (e.g., tuberculosis, hepatitis, malaria, and dengue).

Women from local communities near transport development hubs (e.g., road corridors, truck stands, and construction worker temporary accommodation) are especially vulnerable to being drawn into unsafe practices, including compensated and transactional sex, particularly where they work in close proximity with male transport workers (e.g., beer and karaoke bars; entertainment workers, and cooks on construction sites). Women and girls from vulnerable groups (the poor, ethnic minorities) living in remote cross-border locations are at a significantly higher risk of HIV infection. Women can also be at risk of infection by their husbands who may work as mobile drivers or construction workers and return home infected, and may take on the additional care burden for their sick husbands.

Therefore, it is important for transport projects to include associated HIV prevention interventions, such as educational and behavior change communication (BCC) campaigns; social marketing of condoms; STI testing and case management; voluntary counseling and testing for HIV; harm reduction options for injecting drug use; and capacity development of

Box 30 Supporting HIV Prevention in Yunnan Province

Baolong Highway is a 77-kilometer expressway that was built in 2005–2007 along the major thoroughfare from Ruili, on the Myanmar border, to Kunming, the provincial capital of Yunnan, People’s Republic of China. Construction passes supported by the Asian Development Bank (ADB) through Baoshan and Longling prefectures in Yunnan, which is bordered by the Lao People’s Democratic Republic, Myanmar, and Viet Nam, a poor area that includes approximately 26 ethnic groups, and has high HIV prevalence statistics, especially among drug users near the Myanmar–Yunnan border. Along with significant economic opportunities, increased connectivity and mobility has potential to aggravate the spread of HIV and sexually transmitted infections across and within borders. To respond to this risk, ADB provided a grant for a Baolong Healthy and Safe Action (BHSA) technical assistance project to implement a 3-year HIV prevention program in association with the highway construction. BHSA used an innovative “settings” approach for advocacy, behavior change communication, access, and promotion of health services and products in five priority settings: construction workplaces, entertainment establishments, transport corridors and truck stops, local communities in 21 villages, and health services. Rigorous monitoring and evaluation was carried out under the direction of Kunming Medical College. As of mid-2007, the project had reached over 2,000 people with HIV-related messages, 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/distributed over 80,000 condoms. BHSA positively impacted on knowledge and behavior change compared to the control site, with most significant changes occurring among the most at-risk groups. In addition, it was found that over 80% of surveyed construction and entertainment workers had been exposed to BHSA, which exceeded the project’s original goal. Although the Baoshan government, managers of construction companies, and sex work establishments initially resisted the project, they are now convinced that similar HIV projects should be part of all future large infrastructure construction.

Sources: ADB. 2001. *People’s Republic of China: Western Yunnan Road Development Technical Assistance (Baoshan–Longling)*. Manila; ADB. 2003. *People’s Republic of China: Western Yunnan Roads Development Project (Baolong Highway)*. Manila.

government agencies, HIV-implementing nongovernment organizations (NGOs), and local organizations. Transport projects should budget and plan sufficiently for HIV/AIDS and STI prevention in the preconstruction, during construction, and post-construction phases, and to consolidate appropriate implementation arrangements in partnership with NGOs and local authorities that are already working in this area.

Mitigating Risks of HIV and Other Communicable Diseases

- Provide tailored training and awareness for contractors.
- Integrate HIV/AIDS and STI prevention in contractor occupational health and safety programs.
- Distribute free condoms to ensure sufficient availability on-site.
- Conduct social marketing of condom use to high-risk groups.
- Implement public awareness, education, and BCC campaigns, targeted at and tailored for construction workplaces, entertainment establishments, transport corridors, and at-risk local communities (e.g., women cooks in construction sites and ethnic minority women).
- Provide counseling and treatment services for transport workers, sex workers, wives, and other female partners of transport workers.

- Collaborate with local AIDS authorities (where they exist) to maximize coordination.
- Build partnerships with local health providers for community awareness and referrals.
- Build capacity of the executing and implementing agencies and transport sector institutions on mainstreaming HIV prevention in transport projects, including development of guidelines.

These can be budgeted as a specific project component or separate technical assistance as in the case of the Western Yunnan Road Development Project example in Box 30. Since then, ADB has worked with the Department of Transport in Guangxi and Yunnan provinces to mainstream HIV awareness into the regular induction training for staff and all construction workers on new transport projects, including those that are domestically funded. This is gradually being expanded to also cover other communicable diseases.¹²

Women's and Girls' Vulnerability to Human Trafficking and Unsafe Migration

Key Gender Issues

Improved connectivity can lead to a sharp increase in illegal trade, including human trafficking and unsafe migration practices. Geographic information system mapping in the Greater Mekong Subregion clearly shows increased human trafficking vulnerability near major border crossing and market points, linked to poorer source areas. Cross-border corridors and major highways potentially connect vulnerable source and destination areas. The risk is greatest where poverty is widespread, where women have low social status, and there is a general lack of awareness about the risks of human trafficking and unsafe migration. Where trafficked women and girls are laborers, domestic servants, or commercial sex workers, these groups require particular attention. To address these issues, risk of human trafficking and unsafe migration needs to form part of the preparatory social assessment to inform appropriate transport project responses.

Addressing Vulnerability to Human Trafficking and Unsafe Migration

- Carry out social, gender, and poverty analysis to assess the likely vulnerability of local communities, particularly women and children, to human trafficking risk.
- Build capacity of border control officials and transport project executing and implementing agencies to identify cases, including on adequate preparedness and equipment for inspections.
- Conduct public awareness campaigns on human trafficking and unsafe migration using a range of appropriate media.
- Build partnerships and coordination with human trafficking programs of NGOs and local authorities, focusing on cross-border areas.
- Provide helpline information targeted at young girls and working-age men, both in source and transit/destinations.
- Provide alternative employment opportunities for high-risk groups.

¹² ADB. 2011. *People's Republic of China: Yunnan Integrated Roads Development Project (Long-Hui Highway)*. Manila; ADB. 2006. *HIV/AIDS Prevention and Road Transport Sector Projects in the PRC (RETA 6321, Subproject 7)*. Manila.

The Kunming–Hai Phong Transport Corridor project tackled the risks of human trafficking by preparing and implementing a prevention program that targeted the at-risk local population during the construction and post-construction phases (Box 31).

**Box 31 Kunming–Hai Phong Transport Corridor:
Noi Bai–Lao Cai Highway Project**

The Noi Bai–Lao Cai highway is an integral section of the eastern link of the Greater Mekong Subregion Northern Economic Corridor, connecting Kunming in Yunnan Province of the People’s Republic of China with Ha Noi, and Hai Phong and Cai Lan ports in Viet Nam. Initial social assessments indicated that injecting drug use, commercial sex, and trafficking of women and children were rapidly increasing in the Lao Cai border town. To tackle the social risks associated with improved connectivity and mobility, a technical assistance project on HIV/AIDS and human trafficking prevention was prepared and linked to the loan project to minimize exposure of the local population to these risks during the construction and post-construction phases. The project focused on advocacy and capacity building through tailored workshops, development of construction workplace policies, and strengthening of cross-border cooperation; information, education, and behavior change campaigns through use of culturally and linguistically appropriate materials and methods; coordination with organizations working on human trafficking prevention in project areas; provision of medical packages for local communities; and regular monitoring and evaluation of the incidence of HIV, drug, and human trafficking cases.

Source: ADB. 2005. *Greater Mekong Subregion: Kunming–Hai Phong Transport Corridor – Noi Bai–Lao Cai Highway Project*. Manila.

Road Safety

Key Gender Issues

In the last 5 years alone, over 22 million families in Asia and the Pacific have had a death or permanent disability from a road crash, and in the next 5 years a further 32 million families will have to cope with a death or permanent disability resulting from road crashes if we do not take action.¹³ In response, ADB adopted the 2012 Road Safety Action Plan to guide efforts to strengthen road safety capacity and support road safety across ADB projects.

There is considerable evidence confirming the predominance of young males in both traffic injury and traffic offense behavior. However, gender issues have often not been considered a significant factor in road safety or traffic psychology and, subsequently, within road safety interventions, and gender-specific road use behavior has not been specifically targeted.

In the majority of transport sector projects, there is a wider issue relating to vulnerable road users (pedestrians, cyclists, motorcyclists), in particular women and children, since they are more likely to be on foot or nonmotorized transport (NMT), and sharing the road space with larger vehicles. From a gender and transport perspective, physical design of roads for enhanced safety should take into consideration the wider needs of vulnerable road users, by encouraging the use of local area traffic management (e.g., use of traffic-calming devices such as road humps, creating lower-speed environments, and roundabouts) and safer road crossings (e.g., marked pedestrian crossing, controlled pedestrian crossing, and pedestrian

¹³ ADB. 2012. *Road Safety Action Plan*. Manila. Appendix 4.

overpasses or underpasses). Road safety awareness programs should be targeted to change driver behaviors and increase driver responsibility for crashes, rather than blaming victims. In addition, road safety awareness needs to go beyond targeting drivers to also target vulnerable groups and be integrated into school curricula.

Road safety responses should also consider the specific vulnerabilities of women as pedestrians, including the needs of rural women who may regularly walk on rural paths and trails, and who may be carrying out domestic tasks (Box 32). Separate paths should be developed for pedestrians to remove the need for them to walk on the edge of roads with vehicles passing at high speeds. Improving the condition and safety of rural paths and trails can have significant positive impact on the daily transport of rural women.

Box 32 Gender and Road Safety Issues

Research on Uganda's rural transport found the following:

- Women's head-loading is contributing to women's vulnerability—their peripheral vision and ability to hear approaching vehicles is impaired, especially when footpaths make it hard to balance.
- In addition to crashes with motor vehicles, women can be injured by falling, hazardous plants, or animal bites when walking on rural footpaths that are in poor condition.
- Women find it difficult to afford bicycle maintenance, contributing to their vulnerability to risk.
- Women are more involved in crashes as pedestrians, while men are more involved in motor and other vehicle crashes.
- Road crashes of family members put women under disproportionate pressure for care of the injured.

Source: P. Kwamusi. 2002. Safety and Gender Issues in Rural Transport in Busia District, Uganda. In P. Fernando and G. Porter, eds. *Balancing the Load: Women, Gender and Transport*. London: Zed Books. pp. 57–64.

Research has also highlighted the potential of road crashes to increase poverty. Over half the households in Bangladesh who had family members involved in serious crashes and were now poor, were not poor prior to the incident.¹⁴ When a wage earner dies or a family member is severely disabled, their household suffers hardship. Much of the hardship is borne by the women of the household as they often have to become full-time caregivers, perhaps having to give up work or school in order to do so. As women are primary caregivers of sick or injured family members, any increase in the incidence of road traffic crashes will increase the care burden of women. If the disabled person is a child, the mother or sister may have to spend the rest of her life looking after the person, limiting her own chances of leading a productive and fulfilling life. Improvement of road safety could therefore be particularly beneficial in improving the situation and life chances of women, especially in poorer households.¹⁵

¹⁴ A. Aeron-Thoma, G. D. Jacobs, B. Sexton, G. Gururaj, and F. Rahman. 2004. *The Involvement and Impact of Road Crashes on the Poor: Bangladesh and India Case Studies*. Published project report prepared for the Global Road Safety Partnership.

¹⁵ ADB. 2012. *Road Safety Action Plan*. Manila. Appendix 4.

Gender-Responsive Approaches to Improving Road Safety

- Conduct adequate community consultation to assess road safety needs (Box 33).
- Provide traffic-calming devices (e.g., road humps and roundabouts) to slow traffic passing through villages and settlements, as well as adequately controlled pedestrian crossings where villages are divided on two sides of the road.
- Train women as active community mobilizers for road safety awareness.
- Target and reach out to women and schools for road safety awareness training.
- Provide physically segregated and sufficiently wide and separate lanes for pedestrians and NMT from other motorized vehicles.
- Include awareness and respect for pedestrians and NMT in driver training and associated campaigns targeting drivers.
- Encourage greater use and enforcement of penalties by traffic police for reckless drivers.
- Conduct awareness campaigns and enforce use of personal protection clothing, including motorcycle and bicycle helmets.
- Provide safe and adequately controlled pedestrian crossings at key road sections.
- Provide adequate street lighting along pedestrian walkways.

Box 33 Soliciting Women's Views to Improve Project Design

A World Bank project to improve urban transport design in the People's Republic of China drew on gender-sensitive public needs assessments techniques. In surveying public opinion on transportation, the project surveyed different groups of users (pedestrians, drivers, bus, three-wheeler and bicycle users, disabled people, migrants, poor people), or surveyed mixed groups of men and women. The surveys documented gender differences in the frequencies, type, and purpose of mobility in five cities. It showed that women relied most heavily on walking, cycling, and public transport and that they mainly traveled to make a living. In identifying transport issues, women respondents placed major emphasis on safety and security, and expressed more dissatisfaction than men with most existing transport conditions, particularly intersection safety, sidewalk quality, streetlights, pavement condition, and lack of bicycle lanes. This drew planners' attention to the different concerns and priorities of men and women. The study resulted in shift of emphasis to secondary road improvements, traffic management, and stronger attention to sidewalks and pedestrians' needs, street lighting, and public transport services.^a This approach is now being used to plan other urban transport projects.

^a See <http://siteresources.worldbank.org/INTRANETSOCIALDEVELOPMENT/Resources/244329-1164641479884/3197423-1182372041462/2.pdf>

Source: World Bank. 2004. *PRC: Wuhan Urban Transport Project*.

Resettlement and Rehabilitation

Key Gender Issues

Many large-scale transport projects invariably involve some degree of land acquisition, displacement and resettlement, and loss of livelihoods for people living in the vicinity. Women are often more vulnerable to negative impacts of resettlement, such as loss of land and access to resources, because they often do not have equal land ownership rights, may not be recognized as having different needs, and may not be equally compensated. For example, payment of compensation is often to the head of household who has a land title in their name, which is usually the husband. Too often, it is assumed, that this compensation will be shared with women and other household members, but this is not always the case. Women's lost livelihoods may also not be fully recognized because they lack voice in resettlement consultations. Hence, it is very important to determine lost livelihoods and assets for women as well as men, and to promote women's equal participation and equal property rights through the resettlement process.

Resettlement surveys, censuses, asset inventories, and participatory planning tools must include gender analysis specifically related to resettlement impacts and risks. Data on economic and sociocultural conditions of displaced persons must always be sex-disaggregated. Resettlement plans and provisions must pay adequate attention to gender concerns, including specific measures addressing the needs of women, gender-inclusive consultation, information disclosure, and grievance mechanisms, to ensure that both men and women receive adequate and appropriate compensation for their lost property and resettlement assistance. Efforts should be made to ensure that women's names are equally reflected in new land titling and that they have equal access to compensation funds. For many households that are resettled to make way for new roads and other transport infrastructure, the reestablishment of livelihoods is a real challenge. As poor households depend on the contributions of both women and men, both need support in reestablishing businesses or finding new employment or other income sources.

Participation of women throughout all stages of the resettlement process should be maximized. When involved as equal participants, community mobilizers, and decision makers, the resettlement process can be an empowering process for women, and can help mitigate complaints and conflict, as well as help to ensure that relocation sites are well planned for the whole community.

Good Practices for Gender-Responsive Resettlement Planning and Design

Gender-Responsive Resettlement Planning

- Design transport infrastructure that minimizes land use and physical displacement.
- Provide training and support to executing and implementing agencies to better understand the importance of addressing gender in resettlement and rehabilitation.
- Develop a consultation strategy that addresses barriers to all women's participation (including female heads of households, widows, married women, and single women) by holding separate consultation meetings at appropriate times and locations.
- Require equal participation of women and men in all consultations, inventory, disclosure, negotiation, selection and planning of resettlement sites, design and construction of new housing, and any other steps in the resettlement process.

- Ensure that all resettlement surveys and data collection is sex-disaggregated, including information on property rights and asset inventories.
- Include gender analysis questions in resettlement surveys on household division of labor, household decision making on finances, women's and men's formal and informal income sources, extent of women's and men's dependence on natural resources, etc.
- Ensure that resettlement planning gives due consideration to improving basic services that disproportionately affect the daily lives of women, such as health centers, schools, child care, adequate and affordable transport, and any other disrupted services.
- Consult adequately with women on the physical planning and design of relocation sites, particularly in relation to site selection, location of basic services (school, health center, etc.) and basic infrastructure (e.g., housing, water, sanitation, and waste), and housing design.
- Include information on government commitments to nondiscrimination, women's equal property ownership, and women's land rights in consultation sessions, wherever applicable, to inform women about their equal rights.
- Promote restoration and rebuilding of social and community networks in planning.

Gender-Responsive Resettlement Plans

- Require both the husband and wife to jointly witness and sign all steps in the process.
- Require both the names of the husband and wife on land titles and land use certificates, or issue separate titles and certificates to both husband and wife with equal property rights.
- Ensure women's equal entitlement to compensation under compensation plans.
- Ensure joint bank accounts for husbands and wives to receive compensation or open separate bank accounts for them to receive their equal share of compensation payment.
- Provide ample time for relocation and transition, particularly for more vulnerable groups such as widows, households headed by women, or the elderly.
- Ensure interim access to basic services and facilities during transition (e.g., schools, health clinic, water, and sanitation).
- Prioritize women's livelihoods in livelihood and income restoration support through provision of tailored skills training or access to credit for women.
- Encourage women into nontraditional and leadership roles through resettlement-related training to promote maintenance and sustainability in new sites (e.g., as plumbers, extension workers, health workers, and community leaders).
- Ensure that grievance redress mechanisms address affected people's concerns and complaints promptly, using an understandable and transparent process that is gender-sensitive, culturally appropriate, and readily accessible to all segments of affected people.

The Kunming–Hai Phong Transport Corridor Project provides an example of how some of the above gender-responsive design features can be applied in the resettlement process (Box 34).

Box 34 Gender-Responsive Design Features in the Kunming–Hai Phong Transport Corridor: Noi Bai–Lao Cai Highway Project

It was anticipated that a large number of households (5,458), 20% of which were headed by women (1,083 households), would be affected by this highway project, and many women would lose their productive assets and/or livelihoods as a result of relocation. In response, the project developed a gender strategy and included specific actions to ensure that women benefited equally from the resettlement process, including

- capacity building for local officials and men and women in households about the resettlement process, including delivery in ethnic minority language and for female heads of households;
- ensuring participation of women in the preparation of inventory of losses and consultation meetings;
- payment of compensation to men and women, and priority payment to poor households headed by women;
- joint registration of land rights in the names of the husband and wife; and
- active involvement of women in planning livelihood activities and conducting separate needs assessments for households headed by women.

Source: ADB. 2005. *Greater Mekong Subregion: Kunming–Hai Phong Transport Corridor–Noi Bai–Lao Cai Highway Project*. Manila.

Impacts on Existing Businesses

New transport infrastructure can alter the logistical advantages of existing businesses, so consideration must be given to avoid or mitigate such adverse impacts. There may even be elite capture of land value improvements next to transport corridors at the expense of current businesses. The best solution is to ensure that transport improvements are inclusive for all, which may require some measures for existing businesses, such as improved signage, parking, and traffic management in their vicinity. If businesses are adversely impacted, they can also be given priority and assistance to relocate next to the new roadway or planned market areas. This consideration is particularly helpful for small roadside businesses that are often owned and run by local women entrepreneurs.

Chapter 6

Gender in Design and Monitoring Frameworks for Transport Projects

Key gender provisions of the gender action plan (GAP) should be included in the design and monitoring framework (DMF), to describe the gender deliverables and results that are expected from the project. Gender performance targets and indicators should be incorporated at different levels of the DMF as appropriate, with the greatest emphasis usually at the output level.

Sex-disaggregated baseline information is essential to demonstrate changes over the life of a project and provide a reference point for assessing gender equality results. It is important to bear in mind that while quantitative indicators are more easily measured, it is also worthwhile considering qualitative indicators for a more nuanced understanding of gender results, as well as to triangulate and validate quantitative data. It often helps to factor in the need for some awareness raising and capacity building on the importance of sex-disaggregated data and how to collect and analyze them.

Impact Level

Gender equality and women's empowerment is not usually identified as an impact in transport sector projects or programs unless women are a key target group and/or a major measurable overall gender impact is expected from the project. If the project goal is to improve female access and mobility, or share of employment, this may be stated as an impact. If gender impacts are expected, they must be defined against a baseline. For example, if the baseline data show 20% of users or employees are female and the impact of the project is expected to be an increase in the number of female users or employees to 50%, then a special recording and reporting mechanism will be required to monitor progress. Similarly, sometimes Millennium Development Goal (MDG) indicators are included at the impact level, if the project is envisaged to contribute toward universal education (MDG 2) or improve maternal health (MDG 4) due to improved access to health and education services as a result of improved access and mobility. For example, the Rural Roads Improvement Project¹⁶ in Cambodia includes the following impact-level gendered indicators:

- maternal mortality rate of 461 deaths per 100,000 live births decreases to 230, and
- rural girls' lower secondary school net enrollment rate increases from 30.8% to 40.0%.

¹⁶ ADB. 2010. *Cambodia: Rural Roads Improvement Project*. Manila.

Outcome Level

Gender equality outcomes are usually only expected in transport projects that include expansion and improvement of rural and provincial roads, sometimes national roads, and urban mass transit services. These projects are designed to directly address gender inequality and concerns in access to, use of, and benefits from transport infrastructure and services. For example, expected gender equality outcomes might be to directly improve women's access, and reduced travel times, to social and public services, markets, or employment. All-weather rural or provincial roads can significantly reduce women's travel time and make travel faster, easier, and cheaper. Safe, affordable, regular, and reliable urban mass transit services can contribute to women's enhanced mobility and access to employment and income-earning opportunities. Gender-responsive urban transport services can also make travel for women safer, more secure, and more comfortable. However, for gender equality outcomes to be derived from transport projects, these outcomes need to be measurable and monitorable, and included in the DMF.

Outcome Level Performance Targets or Indicators

If a gender equality outcome is anticipated, an outcome target(s) should be identified, for example:

- increase of x% in women who give birth in a medically supervised facility;
- reduced average travel time for women and men to essential services (e.g., health care services, hospitals, schools, and government offices); markets, jobs, and other income-earning opportunities;
- increase in utilization of health services (assisted births and emergency care);
- increase in use of public transport;
- increase of x% in girls who enroll in secondary school;
- decrease in average travel time for girls and boys from home to school;
- increase of x% in women selling produce in town markets or working in towns;
- increase of x% in women in paid employment away from the vicinity of their home;
- gender mainstreaming into transport-related policy, strategy, or planning procedures; and
- increase of x% in women in transport sector employment.

Example of Gender Outcome and Gender Outcome Targets or Indicators in a Design and Monitoring Framework

The expected impact of the Japan Fund for Poverty Reduction project Improving Connectivity to Support Gender Equality and Livelihoods¹⁷ in Sri Lanka is for poor people to enjoy improved access to markets and services. The project outcome specifies gender equity in project provisions for maintenance work and in livelihood and skills training. This is stated in the DMF as follows:

¹⁷ ADB. 2009. *Sri Lanka: Improving Connectivity to Support Livelihoods and Gender Equality*. Manila.

Design Summary	Performance Targets or Indicators	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
Outcome: Livelihood opportunities for rural poor communities are increased through the rehabilitation and maintenance of rural access roads	2,340 local community members, including 2,080 beneficiaries and 260 skilled workers (target of 50% women) trained in the maintenance of rehabilitated rural access roads. At least 900 local community members (target of 50% women) trained in alternative livelihoods and skills development	Quarterly progress reports by the project implementation unit Midterm and end-of-project evaluation reports by the project implementation unit	Assumptions: Local communities want to engage in community-based rehabilitation and maintenance of rural access roads. Target mechanisms implemented effectively Women have the ability to freely engage in the cash-for-work program

Output Level

The output section of the DMF should include gender targets or indicators for each of the outputs, as appropriate, indicating how they will be monitored and reported. GAPs should include gender performance targets and indicators for all project outputs of effective gender mainstreaming (EGM) projects. Baseline data and progress data should always be sex-disaggregated, wherever possible. Gender performance information and results should be collected and reported in all periodic project reporting, as well as reports of supervision missions.

Output Level Performance Targets or Indicators

Project preparation and planning
<ul style="list-style-type: none"> - Proportion (%) of women consulted in project planning and design and attending project meetings from different socioeconomic groups - Number of meetings with local women organizations to mobilize women's participation - Number and proportion (%) of women and men in stakeholder and road user consultations - Number and proportion (%) of women represented on tender boards, in road prioritization and decision making related to the planning, implementing, monitoring, and evaluating of projects - Number and proportion (%) of women and men in stakeholder and transport user groups - Number and proportion (%) of male and female facilitators tasked to work with communities and transport user groups on transport design, planning, and consultation processes
Improved transport services
<ul style="list-style-type: none"> - Number of trips made by women and men in a defined period, by mode of transport - Travel time saved (hours per day) by women and men - Lower proportion of income spent on public transport by women and men - Average cost of trips made by women and men, by mode of transport used - Increase in sale and usage of flexible and multiple-trip tickets by male and female passengers

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Table *continued*

<ul style="list-style-type: none"> - Number and percentage of women and men who are satisfied or dissatisfied with new transport infrastructure and services, and reasons why - Number of male/female separate queuing systems at stations - Number of assaults or harassment on public transport reported by women and girls - Number and proportion (%) of male and female security officers at stations - Number and proportion (%) of transport service staff (drivers, inspectors, supervisors) trained in sexual harassment awareness and appropriate response
Project-generated employment and capacity development
<ul style="list-style-type: none"> - Number and proportion (%) of women to be employed in different types of project-related jobs <ul style="list-style-type: none"> • in unskilled and skilled construction • routine community-based maintenance • supervisors or site foremen • heavy machine operators • engineers • as drivers or conductors or inspectors • as public transport ticketing staff • as operations and maintenance staff • in transport sector executing/implementing agencies or • other forms of employment - Number and percentage of women and men who receive training from the project in <ul style="list-style-type: none"> • construction of transport facilities • surveillance or site management • driving or operating heavy machinery • operation and maintenance • skills and enterprise development • leadership • road safety audit or • other training
Gender-responsive physical design features
<ul style="list-style-type: none"> - Kilometers of sealed and separate pedestrian and nonmotorized transport lanes on road shoulders alongside highways or roads - Number of pedestrian crossings provided by kilometer road distance - Number of women's market spaces constructed along highways or by bridges - Number of separate male/female toilet and larger capacity female toilets at stations - Number of separate male/female toilet and larger capacity female toilets on trains and vessels - Number of separate waiting and rest areas at stations, roadside stops, and ports - Number or proportion of women-only train carriages or buses - Number or proportion of reserved seats for women - Volume of additional space incorporated for parking of baby carriages or shopping storage on trains - Number of panic buttons installed at stations, roadside stops, and ports - Number and proportion of reserved shop spaces for women-owned businesses at stations - Number of street lighting provided by kilometer road distance

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Table continued

Project management and process indicators*
<ul style="list-style-type: none"> - Full-time gender specialist/focal point employed/appointed by the project - Gender-awareness training materials developed for project management - Number of training sessions for executing and implementing agencies on gender and transport - Gender action plan implementation training delivered to project management - Number and proportion (%) of female project staff who participate in capacity-building workshops and activities - Number and proportion (%) of women employed by project office by professional level - Development of gender strategy for executing or implementing agency or transport subsector - Study tours or lateral learning between executing and implementing agencies of gender-responsive transport projects
Mitigating social risks
<ul style="list-style-type: none"> - Number of HIV/AIDS, sexually transmitted infections (STIs), and communicable diseases, human trafficking and safety prevention, outreach and training activities, or public awareness campaigns conducted for high-risk men and women (e.g., sex workers, transport workers, migrant workers, contractors, laborers, and vulnerable youth) - Number and percentage of women and men participating in HIV, STI, and human trafficking prevention and outreach activities - Number of male and female government local officials and police who have participated in information and awareness about HIV, STI, and human trafficking risks - Incidence of reported HIV, STI, and human trafficking cases in project area - Reduction in number and percentage of road crashes and traffic injuries/fatalities by sex and age - Number of cases where provision of social assistance was provided to crash victims or their surviving families - Number of traffic-calming devices (e.g., speed humps) and pedestrian crossings provided by the project on road sections - Reduction in average speed of motorists in residential areas by sex - Increased usage of motorcycle and bicycle helmets by sex - Number of participants in road safety awareness training by sex - Number of female facilitators involved in community meetings with affected persons - Type and amount of resettlement compensation provided by sex (male, female, and joint male and female recipients) - Percentage of households headed by women and by men who receive compensation - Number and percentage of new land or home titles in the names of women, men, or joint titles - Number and percentage of women and men involved in decision making, preparation, and review of resettlement plans and compensation options - Number of existing businesses with restored profits or receiving relocation support

* Process indicators are often better included in the milestone activities of a design and monitoring framework (DMF), particularly where there are space limitations on DMF content.

Rural Roads: Example of Gender Mainstreaming in Design and Monitoring Framework Outputs

The DMF for the Yunnan Integrated Road Network Development Project¹⁸ in the People's Republic of China identified the following gender-specific design and monitoring arrangements in two outputs:

Design Summary	Performance Targets or Indicators	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
Improved unpaved village and township roads in Dehong Prefecture	Number of road maintenance women's groups established	Project administration manual, progress reports, and government statistics and household survey	Commitments by official agencies to implement new regulations
Institutional development and capacity building in the road subsector strengthened	At least 1,000 poor trained in rural road maintenance, of which 40% are women under the community-based rural road maintenance output. More than 10,000 workers aware of HIV/AIDS risks		Rural road maintenance groups established Staff at provincial and lower levels assigned and available for project management, social safeguards, health education, environmental monitoring-related training Trainees have opportunity to apply in their daily work what they have learned

Urban Transport: Example of Gender Mainstreaming in Design and Monitoring Framework Outputs

The DMF for the Kathmandu Sustainable Urban Transport Project¹⁹ identified the following gender-specific design and monitoring arrangements in four outputs:

Design Summary	Performance Targets or Indicators	Data Sources and/or Reporting Mechanisms
Public transport improved and upgraded, capacity of the executing agency strengthened	Training of executing and implementing agency staff on pro-poor and gender aspects in urban transport carried out	Pilot routes users, and public perception of urban transport services survey
Traffic management improved	Capacity development plan for the Metropolitan Traffic Police Division prepared and training conducted, including modules on gender-related aspects of urban transport	Pilot routes users, and public perception of urban transport services survey

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¹⁸ ADB. 2010. *People's Republic of China: Yunnan Integrated Road Network Development Project*. Manila.

¹⁹ ADB. 2010. *Nepal: Kathmandu Sustainable Urban Transport Project*. Manila.

Table *continued*

Design Summary	Performance Targets or Indicators	Data Sources and/or Reporting Mechanisms
Walkability in the city center improved	Participatory consultation with urban poor carried out on-site selection for urban infrastructure (33% target for women's participation)	Project progress and review reports, annual reports Pilot routes users, and public perception of urban transport services survey
Monitoring of air quality enhanced	Awareness campaign with information and data dissemination launched on air quality, together with associated impacts on social, gender, and health-related issues	Pilot routes users, and public perception of urban transport services survey

Data Sources or Reporting Mechanisms

For any gender-related performance indicators identified in the project GAP and/or DMF, baseline data will be required to monitor progress. This will provide data against which changes can be monitored. On project completion, data should be available to measure and report on overall project contribution against these indicators.

Responsibility for designing and conducting data collection and reporting to collect the baseline data, regular monitoring data, and project completion data should be clearly specified and understood. If, as is usually the case, the executing agency contracts this responsibility to another agency, or to a consultant or nongovernment organization, it will be important to ensure that there is provision in the budget to pay for this work. If the executing agency is expected to bear the cost, it must be specified in the legal agreements for the project.

ADB supervision missions should ensure that any outstanding gender baseline data have been collected and analyzed in the early stages of implementation and review gender indicators against baseline data during the midterm review. The project completion report should refer to the results of surveys or other sources of gender data.

Assumptions and Risks

The assumption that the responsible agency will implement the recording and reporting arrangements for assessing gender performance at all relevant levels (impact, outcome, output) should be clearly stated.

Activities with Milestones

In the section of the DMF on activities with milestones, timing arrangements for implementation of each activity of the project are specified, if required. Key GAP provisions and implementation arrangements should be included as milestone activities for transport projects categorized as gender equity (GEN) or EGM.

Gender Action Plan Monitoring

During monitoring, it is vital to regularly liaise with executing and implementing agencies and project implementing teams to confirm that the mechanisms, strategies, and targets included in the GAP are being implemented and remain relevant and achievable. Progress against GAP activities and targets compared with baseline data should be closely tracked, and targets and activities refined, if needed. GAP implementation progress and gender results should be reported using a GAP implementation monitoring matrix. GAP progress, any recommended actions, and/or GAP revisions should be included in review mission aide-mémoires and mission back-to-office reports.

For Rural Roads: Examples of Gender Activities and Milestones

Baseline and Performance Monitoring System	Gender activities and milestones
	<ul style="list-style-type: none"> ➤ Recruit the researchers and design baseline surveys (months 1–3) ➤ Carry out sex-disaggregated baseline surveys and capacity needs assessments (months 3–6) ➤ Gender analysis included and measures and targets for women applied and monitored for indigenous people and for mitigation arrangements for HIV/AIDS and human trafficking (years 2–4)
Civil Works	Gender activities and milestones
	<ul style="list-style-type: none"> ➤ Contractors required to apply gender core labor standards (year 2) ➤ Bidding documents include numerical gender targets for employment and reference to required physical design features (years 1–2) ➤ Community maintenance contracts with quotas for women’s participation in place (year 2) ➤ Road designs include footpaths, sealed road shoulders for carts, minor access-way improvements to villages, safety features, and/or other features identified to benefit women
Livelihood Enhancement	Gender activities and milestones
	<ul style="list-style-type: none"> ➤ Recruitment of nongovernment organizations or other training agencies (months 6–7) ➤ Training and capacity development for women or women’s groups (years 2–5) ➤ Targets for women in provision of livelihood skills training for income-generation skills of local communities (months 3–27)

For Urban Transport Systems, Passenger Terminals in Railways and Ports: Examples of Gender Activities and Milestones

Baseline and Performance Monitoring System	Gender activities and milestones
	<ul style="list-style-type: none"> ➤ Recruit the researchers and design baseline studies (months 1–3) ➤ Carry out capacity needs and training assessments and develop related plan for gender provisions and targets (months 3–6) ➤ Implement public consultations ensuring 50% women’s participation, by type of transportation (e.g., pedestrians, cyclists, rickshaw, bus, train, three-wheelers, and private cars) (months 6–7) ➤ Identify and include gender-specific features in services (e.g., women’s sections in public transport) and inclusion in infrastructure (e.g., women’s waiting areas, washrooms, toilets, ramps for baby carriages or shopping carts, and safety lighting) (months 8–9) ➤ Studies of public perceptions on safety issues identify information requirements for women (year 2) ➤ Gender analysis included and measures and targets for women applied and monitored for resettlement people and for mitigation arrangements for HIV/AIDS and human trafficking (years 1–5)
Civil Works	Gender activities and milestones
	<ul style="list-style-type: none"> ➤ Bidding documents include numerical gender targets for employment and reference to required physical design features (years 1–2) ➤ Specifications for gender-specific features included in final designs (year 2) ➤ Contractors required to apply gender core labor standards (year 2)
Public Awareness	Gender activities and milestones
	<ul style="list-style-type: none"> ➤ Public awareness included information targets for both women and men

Appendix 1

Sample Gender Action Plans

People's Republic of China: Jiangxi Fuzhou Urban Integrated Infrastructure Improvement Project, 2012

Background. Gender analysis and community consultations during project preparation demonstrated that the project will have positive benefits for both women and men in terms of improved mobility and the urban environment. However, women have particular transport needs due to their multiple roles and unique patterns of mobility, for example, in combining farm-based work and/or urban employment with ease of access to markets or taking children to/from school. Women are also more likely to have personal safety concerns when using public transport. This has important implications for the physical design and operation of public transport systems. Improved transport infrastructure can also increase access to employment opportunities for women in new transport-related jobs, transport construction and urban greenery, ongoing operation and maintenance, as well as industrial jobs by reducing travel time from nearby villages to urban factories and other potential employers. Land acquisition and resettlement under the project will disproportionately affect women who attend to their farms while their husbands work in urban jobs, by reducing the women's ability to generate agricultural income and increasing distances between their homes and farmland. The project will proactively facilitate income restoration and reemployment for these women.

In order to maximize positive gender impacts of the project, the project has been designed to meet the Asian Development Bank's effective gender mainstreaming categorization, and a project gender action plan (GAP) has been prepared, which focuses on (i) ensuring women's equitable participation in project-related public consultation, (ii) incorporating gender-responsive physical design features in the design of urban transport infrastructure, (iii) promoting increased employment opportunities for women, and (iv) building executing/implementing agency institutional capacity for gender mainstreaming.

Project Output	Activities and Performance Indicators/Targets	Responsibility
Output 1: Bus rapid transit (BRT) system	BRT system physical design will include the following: <ul style="list-style-type: none"> • Priority seating for people with special needs (i.e., pregnant women, parents with young children or baby carriages, the elderly, and people with disabilities) in all buses and stations • Safe pedestrian access, including for people with special needs • Installation of “help buttons” and security cameras on all BRT buses and at all stations • Well-lit buses and bus stations <ul style="list-style-type: none"> ✓ Employ at least 25% women in new jobs including BRT drivers, ticketing and fare collection works, and administration work ✓ Ensure reemployment of female bus drivers from preexisting bus routes that are replaced by the BRT system ✓ Ensure equal pay for work of equal value for all BRT jobs 	Executing/implementing agency, design institute, contractors, municipal bus company, and the All-China Women’s Federation (AWCF)
Output 2: Urban transport hub and bus terminal	Transport hub and bus terminal physical design will include the following: <ul style="list-style-type: none"> • Priority seating in waiting areas and accessible walkways for people with special needs (i.e., pregnant women, parents with young children or baby carriages, the elderly, and people with disabilities) • Installation of “help buttons” in key locations • Well-lit areas in and around the hub and terminal • Higher capacity female toilets and bathrooms <ul style="list-style-type: none"> ✓ Employ at least 30% women in all kinds of new jobs (e.g., terminal attendants, cleaners) 	Executing/implementing agency, design institute, contractors, municipal bus company, and ACWF
Output 3: Fenggang River greenway	<ul style="list-style-type: none"> • Provide adequate number of male/female toilets in the greenway • Ensure well-lit paths around and within the greenway after dark • Employ at least 50% women in greenery maintenance and landscaping jobs 	Executing/implementing agency, design institute, contractors, responsible municipal bureau, and ACWF
Output 4: Station access roads	<ul style="list-style-type: none"> • Employ at least 20% women in all types of new jobs at equal pay for work of equal value • Ensure pedestrian walkways along access roads and crossings are accessible and safe—including for people with special needs—and have sufficient roadside lighting 	Executing/implementing agency, design institute, contractors, and ACWF
Output 5: Institutional strengthening and capacity building	<ul style="list-style-type: none"> • Recruit gender consultant(s) to support gender action plan (GAP) implementation • Appoint a project staff responsible for gender mainstreaming and GAP implementation and reporting • Provide GAP orientation/training to key executing/implementing agency staff • Provide training for bus drivers and conductors on women’s safety needs 	Executing/implementing agency, municipal bus company

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Project Output	Activities and Performance Indicators/Targets	Responsibility
Gender design features of resettlement plans	<ul style="list-style-type: none"> • Ensure at least 50% female participation in public consultation • Include 50% women in livelihood restoration training for affected people. To reach these targets, implementing agency will publicize these provisions during public consultations and encourage the women to participate in the training • Ensure that women and men are equally entitled to new house registration, and both names are reflected on titles, if requested • Provide additional support to women whose farmland becomes remote from their home due to the displacement (e.g., transport allowances and training priority) 	Executing/implementing agency/AWCF/village committees resettlement bureau/women's federations/civil affairs bureau/Jinchao Development District Management Committee/local town governments

Budget and implementation arrangements. Gender specialist consultant support will provide guidance for implementation of the GAP, which will be financed through the project budget and implemented over the life of the project. With support from the gender specialist(s), the project management office will be responsible for coordinating implementation of the plan and will assign responsible staff.

Monitoring and evaluation. GAP monitoring and evaluation will be incorporated into the overall project performance monitoring system. The gender specialist consultant(s) will work with the project management office and implementing agency staff to orient them on GAP requirements and develop a detailed implementation and monitoring plan for gender activities. The gender specialist(s) will also provide guidance to drafting first gender plan implementation progress report, and review the subsequent reports prepared by the implementing agencies. Updated information on the status of GAP implementation should be included in all project progress reports. ADB staff with expertise in gender and social issues will participate in the midterm review. The local women's federation will participate in monitoring of the GAP implementation along with the gender specialist.

Viet Nam: Ho Chi Minh City Urban Mass Rapid Transit Line 2 Investment Program, 2010

Output and Gender-Related Objectives	Activity/Strategy	Performance/Target Indicators	Tranche/Time Frame
Preparatory Stage			
To ensure due consideration of gender issues and analysis in program planning, design, and implementation procedures	<ul style="list-style-type: none"> Appoint a gender focal point (GFP) in executing agency responsible for oversight and reporting against the gender action plan (GAP) Gather baseline sex-disaggregated data and gender analytical information as part of any preparatory surveys, feasibility studies, or assessments Facilitate the equal participation and consultation of women affected by and participating in the program GAPs developed for Tranches 1 and 2, consistent with the content of this overall program GAP 	<ul style="list-style-type: none"> GFP appointed in executing agency and reports periodically on progress with GAP implementation Preparatory reports include reference to sex-disaggregated data and gender analytical information Number of women's representatives and groups consulted during preparatory surveys, assessments, and design GAP for Tranches 1 and 2 developed 	Tranche 1, Dec 2011
Tranche 1			
Output 1: Initial site works and office facilities at depot <i>To ensure that gender analysis informs infrastructure design and construction to maximize women's equal access and benefits</i>	<ul style="list-style-type: none"> Civil works designed and constructed in consultation with women and with gender-specific features Establish targets for female employment generation and regulate adherence to gender-specific core labor codes Include information on potential negative impacts through awareness and information campaigns to construction workers and general public, e.g., gender dimensions of human trafficking and HIV/AIDS Ensure that affected female heads of household (FHHs) are prioritized through resettlement plan implementation 	<ul style="list-style-type: none"> Gender-specific physical design features evident in new facilities 20% of jobs generated by mass rapid transit (MRT) civil works are filled by women All construction contracts for MRT civil works include gender-specific core labor codes Information and awareness campaigns developed and delivered with gender-related content 100% affected FHHs access equal compensation and livelihood restoration support 	Dec 2013
Output 2: Capacity development program <i>To support transport sector staff to mainstream gender into MRT program delivery and operations</i>	<ul style="list-style-type: none"> Provide gender awareness and GAP implementation training for the Ho Chi Minh City People's Committee and the Management Authority for Urban Railways program staff 	<ul style="list-style-type: none"> Gender awareness and GAP implementation training materials developed, and training delivered with sex-disaggregated attendance records 	Dec 2015

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Output and Gender-Related Objectives	Activity/Strategy	Performance/Target Indicators	Tranche/Time Frame
<p><i>To promote the role of women in the transport sector and ensure the participation of women transport sector staff in capacity development activities</i></p>	<ul style="list-style-type: none"> • Include <i>all</i> executing agency female program implementation staff members as participants in capacity development activities • Integrate gender-related substantive content into capacity development activities and communication strategies wherever appropriate • Proactively encourage and promote women's employment in the transport services sector 	<ul style="list-style-type: none"> • Number of female program staff participants per capacity development activity • Gender-related substantive content reflected in all training materials where appropriate 	
<p>Output 3: Social development and gender mainstreaming program (SDGMP)</p> <p><i>To ensure due consideration of gender issues and the incorporation of gender analysis in the selection and implementation of consulting services and consulting service deliverables</i></p>	<ul style="list-style-type: none"> • Commissioning of SDGMP to determine a detailed program to address social and gender issues identified and a program to implement the measure 	<ul style="list-style-type: none"> • SDGMP implemented and report delivered with clear action-oriented recommendations implemented • Marketing campaigns and materials for metro use designed to target women as clients • 30% of newly hired executing agency staff are female 	Dec 2014
<p>Output 4: Integrated sustainable urban transport study (ISUTS)</p> <p><i>To ensure due consideration of gender issues and the incorporation of gender analysis in the selection and implementation of consulting services</i></p>	<ul style="list-style-type: none"> • Include responsibility for consideration of gender issues and gender analysis in terms of reference for ISUTS consultants 	<ul style="list-style-type: none"> • Gender analysis reflected in ISUTS consultancy reports and other deliverables from consulting services. Design includes and responds to gender dimension of intermodal transport, e.g., street-lighting around MRT stations 	Jun 2013
Tranche 2			
<p>Output 1: Construction of MRT2 main line and depot facilities</p> <p><i>To ensure that gender analysis informs MRT infrastructure design and construction</i></p> <p><i>To maximize women's equal access and benefits</i></p> <p><i>To mitigate against potential negative impacts from new MRT construction</i></p>	<ul style="list-style-type: none"> • Civil works designed and constructed in consultation with women and with gender-specific features, e.g., women-only waiting spaces, safe lighting, separate toilets, child-friendly access and facilities, and shop spaces for female-owned small businesses • Establish targets for female employment generation and regulate adherence to gender-specific core labor codes in construction company contracts for all MRT civil works (e.g., equal work for equal value and nondiscrimination) 	<ul style="list-style-type: none"> • Gender-specific physical design features evident in newly constructed MRT infrastructure facilities • 20% of jobs generated by MRT civil works are filled by women • All construction contracts for MRT civil works include gender-specific core labor codes • Information and awareness campaigns on issues, such as human trafficking and HIV/AIDS, developed and delivered with gender-related content • 100% of affected FHHs have equal compensation and livelihood restoration support 	Dec 2016

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Output and Gender-Related Objectives	Activity/Strategy	Performance/Target Indicators	Tranche/Time Frame
	<ul style="list-style-type: none"> • Include information on potential negative impacts through awareness and information campaigns to construction workers and general public (e.g., gender dimensions of human trafficking and HIV/AIDS) • Ensure that affected FHHs are prioritized through resettlement plan implementation 		
<p>Output 2: MRT2 Electrical and mechanical (E&M) systems and rolling stock and operation of metro services installed</p> <p><i>To promote women's role in transport sector operations and service delivery</i></p> <p><i>To ensure that E&M systems and rolling stock equipment are designed to ensure women's equal access to the MRT service</i></p>	<ul style="list-style-type: none"> • Establish targets for female employment generation from new E&M systems and rolling stock equipment (e.g., maintenance and operations staff, ticketing staff, station attendees, and supervisors) • E&M systems and rolling stock equipment designed with gender-specific features (e.g., women-only carriages, child-seating, and additional storage space for baby carriages or shopping) 	<ul style="list-style-type: none"> • 30% of jobs generated by MRT E&M systems and rolling stock equipment filled by women • Gender-specific physical design features evident in newly installed E&M systems and rolling stock equipment 	Dec 2016

Bangladesh: Greater Dhaka Sustainable Urban Transport Project, 2012

Output and Gender-Related Objectives	Activities and Targets	Time Frame
<p>Outcome: The public transport system is improved in Gazipur City Corporation (GCC), benefiting a population of 1 million</p>	<ul style="list-style-type: none"> • Bus rapid transit (BRT) achieves a ridership of 100,000 passengers per day (at least 30% women) in first year of operation • BRT achieves at least 85% client satisfaction on safety and efficiency of BRT system <p>(Target: at least 50% of clients surveyed are women)</p>	Q4 2007
<p>Output 1: GCC's main urban transport corridor is restructured</p>	<ul style="list-style-type: none"> • 20-kilometer corridor, including BRT system, is restructured as per design and international standards, including safety and comfort features for women, children, and the disabled • Employ women (at least 20% of workers) in BRT construction and maintenance work • Bus stations and vendor areas designed to include safety facilities for women (lighting, security, separate toilets for women, etc.) • Ensure adherence to gender-specific core labor standards in contract codes related to the operation and management of BRT, such as equal wages for equal work 	Q1 2012 to Q4 2015
<p>Output 2: Project management is effective, and BRT operations are sustainable</p>	<ul style="list-style-type: none"> • 75% of Dhaka Transport Coordination Authority/special project organization (SPO) trainees (at least 30% women) get 80% high score in final test • At least 70% of garment workers (majority of whom are women) using BRT receive subsidized monthly travel passes • 50% of students receive subsidized BRT monthly passes (Target: 60% female students) • Recruit female staff in SPO (Target: At least 20% of total staff are women) • Reserve 20% of seats for women with young children, pregnant women, children, the elderly, and people with disabilities, and enforce availability of reserved seats by the targeted population in BRT operations • Ensure separate queuing system for male and female passengers at BRT stations and priority boarding of pregnant women, the elderly, children, and people with disabilities • Reserve and allocate at least 15% of the vendor area to female vendors • Employ at least 10% female staff (e.g., drivers, crew, etc.) in BRT operations • Ensure that the awareness materials for BRT incorporate specific issues of women and children, and use a methodology that ensures targeting of women and girls • Conduct a feasibility study on reestablishing women-only buses, or women sections in existing buses, or similar women-friendly design features, for recommendation to the Roads Division of the Ministry of Communications <p><u>Project Management-Specific:</u></p> <ul style="list-style-type: none"> • Gather baseline sex-disaggregated data and gender analytical information as part of any preparatory surveys, feasibility studies, assessments, and reports • Develop gender-sensitive training modules for use in training project implementation unit (PIU) staff 	Q1 2012 to Q4 2016

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Output and Gender-Related Objectives	Activities and Targets	Time Frame
	<ul style="list-style-type: none"> • PIUs appropriately staffed (with at least 20% women) and trained • PMU and PIU have gender focal points • Include women with proper experience of gender and transport issues in trainer team • Incorporate gender indicators in the project management information system 	
Output 3: Urban quality of the corridor is improved	<ul style="list-style-type: none"> • Consider safety of women/children while selecting location of street lighting in corridor • Awareness campaigns conducted on improving road safety and traffic behavior (Target: At least 30% women participation) • Female traffic police in GCC attend the traffic management training program • Training for traffic police to include gender-sensitive issues • Ensure participation of women (Target: at least 30% women)—either in the design, construction, operation, and/or maintenance—in the improvement of local markets and feeder roads for nonmotorized transport 	Q1 2012 to Q4 2015

Appendix 2

Sample Terms of Reference for Consultants

Sample Terms of Reference for Gender Specialist for Project Design

Qualification: The gender specialist should have a postgraduate university degree in social sciences or public administration (an additional degree in engineering will be an advantage). She/he should have formal training in gender analysis and gender planning and demonstrated experience, skills, and expertise in mainstreaming gender in infrastructure, especially in the transport sector in Asia and the Pacific. Experience in conducting primary gender research is needed, and she/he should be familiar with gender analysis tools and methodologies in the transport sector. She/he should have consulted for international or nongovernment organizations (NGOs) supporting gender and development work in the transport sector.

More specifically, she/he will be responsible for the following key tasks:

- Review Asian Development Bank (ADB) documents on the requirements for gender mainstreaming such as Policy on Gender and Development (1998), Operations Manual C2 on Gender and Development in ADB Operations (2010), and Guidelines for Gender Mainstreaming Categories of ADB Projects (2011).
- At the outset, agree with ADB and the executing agency on the intended gender category.
- As part of the poverty and social analysis, conduct a detailed gender analysis as guided by ADB's Gender and Transport Tool Kit.
- Identify the socioeconomic profile of key stakeholder groups in the target population and disaggregate data by sex. Analyze the link between poverty and gender.
- Assess and identify potential gender-differentiated impacts of the project.
- Collect sex-disaggregated baseline data that could be used to monitor potential project gender benefits and impacts.
- Assess and recommend key gender elements in mitigation measures (e.g., resettlement, HIV, and trafficking in women).
- Identify government agencies, NGOs and community-based organizations, and women's groups that can be utilized during project preparatory technical assistance and project implementation. Assess their capacity.
- Review the related policy and legal framework, as necessary.
- Based on gender analysis, develop a gender action plan (GAP) that mirrors the design and monitoring framework (DMF) outputs and includes gender-inclusive design features, gender targets and indicators, time lines, assigned responsibilities, and implementation arrangements.
- Provide cost estimates for GAP implementation.
- Integrate GAP or gender design features in the project design and relevant project documents.

- Prepare terms of reference for gender specialist services to implement GAP or project gender features, including for any NGOs to be recruited for implementation.
- Prepare other documentations related to gender required in the report and recommendation of the President (e.g., DMF gender targets, implementation arrangements of the project administration manual, summary poverty reduction, and social strategy).

Sample Terms of Reference for Gender Specialist for Project Implementation Support

Gender Action Plan

The main responsibility of the gender specialist is to support the implementation of the project GAP. The specific tasks include the following:

- Provide the necessary support to the executing agency and/or implementing agency for GAP implementation, including orientation and training on the role of the GAP in enhancing project effectiveness, in GAP activities and implementation mechanisms, and the implementing agencies' responsibilities in ensuring GAP implementation.
- Provide training for project staff at all levels on GAP and implementation of GAP activities and maintain the desired level of gender awareness.
- Assist in the recruitment of project staff to ensure gender equality in recruitment and a gender focus in staff experience to support GAP implementation.
- Provide the necessary support to the local NGO and/or community-based organizations for the implementation of GAP activities.
- Conduct regular field trips to monitor GAP implementation, collect data reflecting progress on GAP targets and indicators, and prepare progress reports.
- Amend and/or develop GAP activities based on monitoring inputs.
- Provide support for ADB review mission teams to ensure that GAP implementation is being adequately assessed and reported on.
- Act as the main focal point/contact for all gender-related activities between the project, the implementing agency, the ADB resident mission, NGOs, and other consultants.
- Prepare and conduct before-and-after surveys to assess project gender impacts.

Risk Mitigation

- (Where no gender specialist is assigned, this task may be assigned to the social safeguards specialist.)
- Provide support to the implementing agency to ensure the gender-inclusive implementation of project resettlement plan and/or indigenous peoples/ethnic minority development plan.
- Monitor and ensure implementation of GAP risk mitigation activities and/or risk mitigation activities identified in project assurances/loan covenants, based on gender-sensitive approaches.
- Monitor and collect gender data, as relevant, on risk mitigation in relation to climate change impacts, prevention of HIV and sexually transmitted infections, and the trafficking of women and girls, and road safety.

- Monitor to ensure that gender equality labor standards/laws are being effectively implemented.
- Monitor project implementation with the view to identifying any unanticipated risks and/or negative gender impacts. If such risks and/or impacts eventuate, adjust, adapt, and/or develop project activities to implement appropriate mitigation measure.
- Support/provide training for gender mainstreaming in risk mitigation for the implementing agency and relevant project consultants and staff.

Appendix 3

Selected Resources on Gender and Transport

- Aeron-Thoma, A., G. D. Jacobs, B. Sexton, G. Gururaj, and F. Rahman. 2004. *The Involvement and Impact of Road Crashes on the Poor: Bangladesh and India Case Studies*. Published project report prepared for the Global Road Safety Partnership. <http://www.dfid.gov.uk/r4d/pdf/outputs/R7780.pdf>
- Anand, A., and G. Tiwari. 2006. A Gendered Perspective of the Shelter–Transport– Livelihood Link: The Case of Poor Women in Delhi. *Transport Review*. 16 (1). pp. 63–80. <http://tripp.iitd.ernet.in/publications/paper/planning/Anvita%20tansp%20rev%2005.pdf>
- Arora, A. and G. Tiwari. 2007. *A Handbook for Socioeconomic Impact Assessment of Future Urban Transport Projects*. New Delhi: Transport Research and Injury Prevention Program, India Institute of Technology.
- Asian Development Bank. 1998. *Policy on Gender and Development*. Manila.
- . 2007. *HIV and Infrastructure: ADB Experience*. Synthesis paper and case studies. Manila.
- . 2007. *Socially Inclusive and Gender-Responsive Transport Projects: A Case Study of the Timor-Leste Road Sector Improvement Project*. Manila. <http://www.adb.org/Documents/Reports/Gender-Responsive-Transport-Projects/default.asp>
- . 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila.
- . 2010. *Operations Manual C2 on Gender and Development in ADB Operations*. Manila.
- . 2011. *Changing Course in Urban Transport: Walkability and Pedestrian Facilities in Asian Cities*. Manila.
- . 2011. *Community-Based Routine Maintenance of Roads by Women’s Groups: Guide for Communication Bureaus*. Manila. <http://www.adb.org/publications/community-based-routine-maintenance-roads-womens-groups-guide-communications-bureaus>
- . 2011. *Community-Based Routine Maintenance of Roads by Women’s Groups: Manual for Maintenance Groups*. Manila. <http://www.adb.org/publications/community-based-routine-maintenance-roads-womens-groups-manual-maintenance-groups?ref=themes/gender/publications>
- . 2011. *Empowering Women Through Rural Infrastructure: Mainstreaming Gender in Transport*. Manila.
- . 2011. *Guidelines for Gender Mainstreaming Categories of ADB Projects*. Manila.
- . 2011. *Sustainable Transport Initiative*. Manila.
- . 2012. *India Gender Equality Diagnostic of Selected Sectors – Draft*. Manila.
- . 2012. *Performance-Based Routing Maintenance of Rural Roads by Maintenance Groups: Guide for Communications Bureaus*. Manila.

- . 2012. *Performance-Based Routing Maintenance of Rural Roads by Maintenance Groups: Manual for Maintenance Groups*. Manila.
- . 2012. *Road Safety Action Plan*. Manila.
- . 2013. *Gender and Development: Project Gender Action Plans*. Manila. Available at <http://www.adb.org/themes/gender/project-action-plans>
- Babinard, J. 2011. World Bank Gender Transport Surveys: An Overview. *World Bank Transport Notes*. TRN-43. September.
- Cities Development Initiative for Asia. 2010. *Green and Pro-Poor? The Role of Informal Public Transport in India*. Metro Manila, Philippines: Cities Development Initiative for Asia.
- Duchène, C. 2011. Gender and Transport. *International Transport Forum Discussion Paper*. No. 2011-11. <http://www.internationaltransportforum.org/jtrc/DiscussionPapers/DP201111.pdf>
- Engineers Against Poverty. 2011. Briefing note on *Maximizing the Social Development Outcomes of Transport Projects*. London: Engineers Against Poverty.
- Fernando, P., and G. Porter, eds. 2002. *Balancing the Load: Women, Gender and Transport*. London: Zed Books.
- GTZ. 2007. *Gender and Urban Transport: Smart and Affordable*. Eschborn, Germany: Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH.
- International Finance Corporation. 2005. Managing Retrenchment: Addressing Gender Impacts in Privatization of Kenya Railways. *Good Practice Note*. No. 4. August.
- Kwamusi, P. 2002. Gender and Safety in Rural Transport: Busia, Uganda. In P. Fernando and G. Porter, eds. *Balancing the Load: Women, Gender and Transport*. London: Zed Books. pp. 57–64.
- Litman, T. 2013. *Evaluating Transport Equity*. Victoria, BC, Canada: Victoria Transport Policy Institute.
- Lucas, K., D. Halden, and S. Wixey. 2010. Transport Planning for Sustainable Communities. In T. Manzi, K. Lucas, T. Lloyd Jones, and J. Allen, eds. *Social Sustainability in Urban Areas: Communities, Connectivity and the Urban Fabric*. London: Earthscan. pp. 121–140.
- Mann, R. 2011. *Inclusive Transport: A Tool for Urban Projects*. Manila: Asian Development Bank.
- Mitra-Sarkar, S., and P. Partheeban. 2010. Abandon all Hope, Ye Who Enter Here: Understanding the Problem of “Eve Teasing” in Chennai, India. In *Women’s Issues in Transportation: Summary of the 4th International Conference, September 2009. Vol. 2: Technical Papers*. Washington, DC: Transportation Research Board. <http://onlinepubs.trb.org/onlinepubs/conf/cp46v2.pdf>
- Molesworth, K. 2006. *Mobility and Health: The Impact of Transport on Provision of Direct and Indirect Determinants of Access to Health Services*. London: Mobility and Health.
- Mukherjee, M. 2002. From Dawn to Dusk: Transportation of Rural Women to and from the Metropolis: Calcutta, India. In P. Fernando and G. Porter, eds. *Balancing the Load: Women, Gender and Transport*. London: Zed Books. pp. 225–234.
- Peters, D. 2011. Gender and Transport in Less Developed Countries: A Background Paper in Preparation for CSD-9. Background paper for the Expert Workshop “Gender Perspectives for Earth Summit 2002: Energy, Transport, Information for Decision-Making.” <http://www.earthsummit2002.org/workshop/Gender%20&%20Transport%20S%20DP.pdf>

- . 2013. *Gender and Sustainable Urban Mobility*. Prepared for the Global Report on Human Settlements 2013. www.unhabitat.org/grhs/2013
- Rao, N. 2002. Cycling into the Future: The Pudukkottai Experience: Tamil Nadu, India. In P. Fernando and G. Porter, eds. *Balancing the Load: Women, Gender and Transport*. London: Zed Books. pp. 151–168.
- Transport Research Board. 2007. Research on Women's Issues in Transportation. Conference report. Chicago, Illinois. <http://onlinepubs.trb.org/onlinepubs/conf/cp35v2.pdf>
- Whitzman, C. 2012. Women's Safety and Everyday Mobility. In C. Whitzman, C. Legacy, C. Andrew, F. Klodawsky, M. Shaw, and K. Viswanatheds, eds. *Building Inclusive Cities: Women's Safety and the Right to the City*. New York: Routledge. pp. 35–52.
- World Bank. 2001. *A Gender Responsive Monitoring and Evaluation System for Rural Travel and Transport Programs in Africa*. Washington, DC: World Bank.
- . 2003. *Bangladesh Case Study: Third Rural Infrastructure Development Project*. Washington, DC.
- . 2005. *Gender-Responsive Social Analysis: A Guidance Note*. Washington, DC.
- . 2007. *Gender and Transport Resource Guide*. <http://www4.worldbank.org/afr/ssatp/Resources/HTML/Gender-RG/index.html>
- . 2009. *Transport against HIV/AIDS: Synthesis of Experience and Best Practice Guidelines*. <http://siteresources.worldbank.org/INTTRANSPORT/Resources/336291-1227561426235/5611053-1229359963828/tp-25-HIV-AIDS.pdf>
- . 2010. Mainstreaming Gender in Road Transport: Operational Guidance for World Bank Staff. *World Bank Transport Papers*. TP-28. <http://siteresources.worldbank.org/INTTRANSPORT/Resources/336291-1227561426235/5611053-1229359963828/tp-28-Gender.pdf>
- . 2010. *Making Transport Work for Women and Men: Tools for Task Teams. Practical Manual*. <http://go.worldbank.org/UW1GDCX260>
- World Health Organization (WHO). 2011. *Health Economic Assessment Tools for Walking and Cycling*. <http://www.euro.who.int/en/what-we-do/health-topics/environment-and-health/Transport-and-health/activities/promotion-of-safe-walking-and-cycling-in-urban-areas/quantifying-the-positive-health-effects-of-cycling-and-walking/health-economic-assessment-tool-heat-for-cycling-and-walking>

