



MAKING INFRASTRUCTURE WORK FOR WOMEN AND MEN

A REVIEW OF WORLD BANK
INFRASTRUCTURE PROJECTS
(1995-2009)



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FOREWORD

This report reviews fifteen years of infrastructure lending at the World Bank. Unlike most stock takings of projects supporting water, roads, energy, and other infrastructure development, this one applies a gender lens. In doing so, it reveals important progress on the integration of gender concerns into infrastructure lending operations.

More and more infrastructure projects now provide arenas for consultation with local women and men, undertake analysis of how gender-based differences in norms, roles, and responsibilities may shape project implementation and benefits, and incorporate actions in the design to address gender based disparities. A growing number of projects also strengthen capacities to monitor their gender-differentiated impacts. This report presents evidence that such measures do lead to better projects -- especially projects that anticipated and removed barriers that can prevent women and men from accessing new infrastructure services.

A rising share of infrastructure projects includes measures to enhance women's and men's equal opportunities in formal sector employment and entrepreneurship. Numerous projects, for example, now ensure women's and men's participation in project-related construction jobs and oversight and maintenance groups. Some projects also provide skills training, improve access to information and markets, and facilitate access to micro-credit.

In particular, the report highlights many innovative actions across the World Bank's regions and sectors that are working to ensure both women and men's participation in opportunities provided by infrastructure projects. For example, a transport project in Mumbai, India requires joint titling for resettled households, enabling women to access the formal banking system with their own collateral. A rural water supply project in Morocco included women in water user associations and on social mobilization teams, reduced women's and girls' time fetching water by at least half, and increased school enrolment for girls from 30 to 50 percent. A water project in Peru found that women were more effective in mobilizing the community to carry out maintenance tasks, and ensured that project contractors provided quality work in a timely manner. Several projects also included direct measures to empower women, often by working with or mobilizing local women's organizations. There is evidence that these measures enhance women's earnings as well as their social standing and decision making in their communities. The review repeatedly finds that supporting gender equality and women's empowerment in infrastructure operations has significant benefits for local communities. Moreover, these

actions not only increase women's opportunities but also enhance project effectiveness, efficiency, and sustainability.

Challenges were also identified in this review. Implementation is uneven across regions and sectors, and monitoring and evaluation of gender-responsive activities are often weak. Hard work remains to be done to consolidate and extend the gains in gender coverage across the infrastructure portfolio. But overall, this portfolio review indicates that the payoffs for more inclusive development are likely to be very high. I encourage you to go through this report to appreciate the opportunities available to us all.

Inger Andersen
Vice President
Sustainable Development
The World Bank

ACKNOWLEDGEMENTS

This report was prepared by a team at the World Bank led by Nilufar Ahmad (SDV). Patti Petesch and Mari Clarke were the lead researchers and supported drafting of the report. Caroline Mendizabal-Betancourt (SDV) conducted the document review and drafted case studies. Hiska Noemi Reyes (PRMGE), Michel Tingry and Kristen Norton assisted in the review of documents in the initial phase of the portfolio review. Dominique Lallement advised on the review methodology. The SDN Gender Group members – Julie Babinard (ETWTR), Doreen Kirabo (ETWWA), Sandra Cointreau (FEU), Samia Melhem (CITPO), Adriana Aftimie (COCPO), Vanessa Lopes (ETWES), Koffi Ekouevi (ETWEN), Hilde Refstie (Cities Alliance) and Eija Pehu (ARD) provided on-going support with inputs and comments. Sector Directors, Managers, task team leaders and staff from the Sustainable Development Network provided valuable guidance, documents and support to the team. The team is grateful to many, especially, Jamal Saghir (Director AFTSN), Laszlo Lovei (Director, MNSSD), Hartwig Schafer, (Director, Strategy and Operations, SDN), Jose Luis Irigoyen, (Senior Manager AFTSN), Salman Zaheer (Program Director, SARVP), Jonathan Walters (Program Director MNAV), Junaid Ahmad (Sector manager AFTUW), Karin Kemper (Sector Manager LCSEN), Guang Zhe Chen (Sector Manager LCSUW), Jonathan Halpern (Advisor, MIGOP), Philippe Dongier (Sector Manager TWICT), Gylfi Palsson (AFTR), Malcom Cosgrove Davies (SASDE), Mohammed Feghoul (MNSSD), Nicholas Peltier Thieberge (LCSTR), Makino Midori (AFTUW), Marie Laure Lajaunie (LCSEN), Miguel Vargas Ramirez (LCSUW), Ruth Llanos (LCSSO), Kimberly Vilar (LCSUW), Jie Tang (EASTS), Andrea Liverani (MNSSD), Awa Seck (AFTEG), Maria Cruz (AFTCS), Antoine Lema (AFTCS), Chris Bennet (EASTR), Luz Caballero (LCSSO), Bhuvan Bhatnagar (SASDS), Maria Elena Castro-Munoz (LCSSO), Jennifer Solotaroff (SASDS), Gillian Brown (EAP), Sarosh Sattar (ECSP3), Helene Carlsson Rex (EAP), George Banjo (ECSS5), Satoshi Ishihara (ECSS4), Jean-Noel Guillossou (SASTR), Shomik Mehndiratta (EASTR), Stephen Brushett (LCSTR), Jean Charles Crochet (MNSTR), Simon Ellis (SASTR), and John Strongman (COCPO). The study was partially financed by the Gender Action Plan (GAP) funds. Mayra Buvinic, Director, PREM Gender and members of the Gender and Development Board provided valuable guidance and comments.

The work was guided and supervised by Andrew P. Norton (SDV). Guidance from Steen Jorgensen (Sector Director, MNA), Caroline Kende-Robb (Sector Manager, ECA), Ian Bannon (Sector Manager, AFR), Cyprian Fisiy (Director, SDV) and Elisabeth Huybens (Sector Manager, SDV) are gratefully acknowledged. The team is grateful to the peer reviewers - Wendy Wakeman, (MNA); Gita Gopal (IEG) and Arianna Legovini (DECOS); and others for their excellent comments that helped finalization of the report. Finally, the team is grateful to Marianne Fay (Chief Economist, SDNVP) for her support in the finalization of the report.

ABBREVIATIONS

ADB	Asian Development Bank
AFR	Africa Region
ARD	Agriculture and Rural Development Network
EAP	East Asia and Pacific Region
ECA	Europe and Central Asia Region
ESMAP	Energy Sector Management Assistance Program
FIAS	Foreign Investment Advisory Service
GAP	Gender Action Plan
GENFUND	Trust Fund for Gender Mainstreaming
GICT	Global Information Communication Technologies
GIS	Geographic Information System
IBRD	International Bank for Reconstruction and Development
ICR	Implementation and Completion Report
ICT	Information Communication Technologies
IDA	International Development Association
IEG	Independent Evaluation Group
IFC	International Finance Corporation
INFRA	Infrastructure Recovery and Assets Platform
IT	Information Technology
ITES	Information Technology Enabled Sector
LCR	Latin America and Caribbean Region
LGED	Local Government Engineering Department

MDG	Millennium Development Goals
MIGA	Multilateral Investment Guarantee Agency
MNA	Middle East and North Africa Region
OECD	Organization for Economic Cooperation and Development
PAD	Project Appraisal Document
PDO	Project Development Objective
PREM	Poverty Reduction and Economic Management Network
PRSP	Poverty Reduction Strategy Paper
SAR	South Asia Region
SDN	Sustainable Development Network
SIAP	Sustainable Infrastructure Action Plan
SIDA	Swedish International Development Cooperation Agency
SMEs	Small & Medium Enterprises
TTL	Task Team Leader
UNDP	United Nations Development Program
WID	Women in Development
WSS	Water Supply and Sanitation

EXECUTIVE SUMMARY

This report provides a gender review of a decade and a half of World Bank infrastructure lending for 1,246 projects. The objective of this review is to assess the status of and trends in gender integration in the World Bank infrastructure portfolio, and to establish a baseline for monitoring and enhancing gender integration in line with commitments made for the 2006 Gender Action Plan.

The portfolio review reveals important progress on gender integration in infrastructure operations. While an average of 14 percent of infrastructure projects in 1995 applied some attention to gender concerns in 1995, this climbed to 36 percent by 2009. The global average, moreover, hides large strides made over time in four regions. In 2009, East Asia and the Pacific, Middle East and North Africa, South Asia, and Africa all included gender concerns in the design of at least 50 percent of their infrastructure projects.

A smaller, but also growing, share of the infrastructure portfolio implemented targeted gender activities. These activities are designed to make infrastructure projects more gender-responsive by addressing the needs and constraints of women and men, and include measures such as quotas for project jobs to enhance women's opportunities in formal sector employment; investments in skill training, market information, and improved market access; social mobilization for greater "voice" for women; decision making roles



Children walking to school on the road in Kwa-Zulu Natal, South Africa

Trevor Samson/World Bank

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The review methodology entailed a desk review of Project Appraisal Documents (PADs) and Implementation Completion Reports (ICRs) for the 1,246 projects, and an in-depth review of 51 projects with extensive treatment of gender concerns. All projects were screened systematically for the presence of six gender methods. *Gender inclusive consultation* is the most common tool, and approximately one in five projects used this method over the review period. Other gender methods, in order of their prevalence, include: *activities to reduce gender disparity* such as rules requiring women's participation on project committees, *indicators for monitoring progress towards gender equality* with gender disaggregated data collection, and *gender analysis* in the design phase. Only a small fraction of projects specified gender goals as a core *project development objective* or contained a *budget* line item to finance a gender-responsive activity.

The review finds uneven progress in the regions and sectors on integrating gender concerns as well large differences between the IBRD and IDA portfolios. The South Asia region and the water and sanitation sector spearheaded attention to gender concerns, but other regions and sectors were making important progress by the closing years of the review. IBRD sharply lags IDA in the share of infrastructure projects with gender

dimensions, but most of the growth in gender inclusion over the review period occurred among the IBRD projects.

The review of project experiences uncovered many innovative actions across the regions and sectors that are working to ensure both women and men's participation in the opportunities provided by infrastructure projects. Such measures included, for instance, a transport project in Mumbai, India that provided joint titling for resettled households, and an energy project in Bangladesh that invested in women entrepreneurs to provide alternative small-scale energy technologies. Several projects took direct measures to empower women, often by working with or mobilizing local women's organizations; and there is evidence that these measures enhanced women's earnings as well as their social standing and decision making in their communities.

Difficulties with implementation of gender-responsive activities also emerged from the review. A comparison of project planning and completion reports suggests that while some projects added gender-responsive activities during implementation based on ground realities; some also dropped gender activities during implementation. In addition, numerous projects employ gender analysis and consultations but there is no indication of how these inputs may have shaped actual project activities; and few projects incorporate gender dimensions into project supervision and evaluation. Under these circumstances, the gender methods cannot contribute as effectively to projects or to improving women's and men's lives.

Hard work remains in consolidating and extending the gains in gender coverage across the infrastructure portfolio. This will require stronger management commitment, concerted efforts, a plan with targets to achieve sustainable results, resources, specialist staffing, and capacity enhancement of staff. The portfolio review repeatedly found that supporting gender equality and women's empowerment in infrastructure operations have large benefits for the communities; the actions not only increased women's opportunities but also enhanced project effectiveness, efficiency, and sustainability.

SECTION I: LENDING TRENDS



Introduction

A nation's infrastructure provides the basic scaffolding for rapid and equitable development. An estimated 884 million people in developing countries are without safe water; 1.6 billion are without electricity; 2.5 billion have no sanitary facilities; and nearly 1 billion lack access to an all-weather road (World Bank 2010). The heaviest burdens of poor infrastructure fall on the shoulders of women and girls due to gender inequalities in household maintenance and caretaking responsibilities and in access to assets and opportunities that might ease infrastructure shortages. It is women and girls who haul the water and fuel, and risk injuries or attacks from lack of sanitation facilities, smoky cook stoves, and traveling long distances by foot with heavy loads.

Why is gender important for infrastructure policy and operations? Infrastructure development is not simply a technocratic question. It requires combining supply-side issues of technical design specifications for provision of infrastructure services with demand-side dimensions of who uses infrastructure, for what purposes, how it is paid for, and with what impacts on individuals, households, and communities. In this respect, infrastructure development is not gender-neutral. It affects development patterns and outcomes, economic opportunities, and resource allocations in ways that are often markedly different for men and for women. Essentially, this is because men and women have different roles and responsibilities, and often face different cultural, institutional, physical, and economic constraints, many of which are rooted in systemic biases and discrimination. These differences in how men and women use infrastructure services have important implications for sector policies, investment priorities, and program designs.

There are now growing initiatives to address gender dimensions in infrastructure, and these are part of a much wider shift now underway across the development field. Indeed, the importance of women's contributions to development has never before received such high-level attention from the world's global leaders and institutions. Most significantly, gender equality stands as a key Millennium Development Goal (MDG), and inadequate infrastructure is well recognized as a significant barrier to meeting this and other MDGs.

The tight links between gender and infrastructure figure prominently in recent World Bank strategic planning. The Gender Action Plan (GAP), launched in 2006, commits more than \$65 million over 4 years to catalyze activities that strengthen women's economic empowerment. This includes infrastructure that meets women's as well as men's needs. Moreover, financing for infrastructure began scaling up dramatically in 2008 as part of a four-year Sustainable Infrastructure Action Plan. This plan complements the GAP by calling for operations to meet a "triple bottom line"—social inclusion and environmental sustainability along with more traditional economic and financial goals. On the social

front, gender is prioritized. Adding to this momentum, World Bank President Robert Zoellick has championed the need for gender integration with innovative commitments to strengthening the economic roles of women.¹



Scott Wallace/World Bank

Women and men commuting to work in Delhi, India face different constraints.

According to the OECD Development Assistance Committee, truly integrating gender into infrastructure development requires a shift in mindsets from seeing gender as “*requiring attention*” to viewing women and girls as the “primary clients whose satisfaction is a critical factor in ensuring the project’s success and sustainability. When gender equality issues are not taken into account, women can become worse off—both absolutely and in relation to men” (OECD n.d., 3). Guided by these concerns, the pages that follow take stock of World Bank infrastructure operations over the past fifteen years to

reduce gender disparities and support women’s empowerment.

The portfolio review reveals important progress on gender integration in infrastructure operations. While an average of 14 percent of infrastructure projects applied some attention to gender concerns in 1995, this climbed to 36 percent by 2009. The global average, moreover, hides large strides made over time in four regions. In 2009, East Asia and the Pacific, Middle East and North Africa, South Asia, and Africa all demonstrated some concern for gender in at least 50 percent of their infrastructure projects.

A smaller, but also growing, share of the infrastructure portfolio implemented targeted gender activities. These are designed to make infrastructure projects more gender-responsive by addressing the needs and constraints of women and men, and include quotas for project jobs, investments in skill development and access to market information, or support for micro credit institutions. Interventions such as these provide a more reliable indicator of the projects that are taking steps to support women’s as well as men’s full access to project benefits. A quarter of the projects met this standard in 2009, up from 4 percent in 1995.

Hard work remains in consolidating and extending these gains. Yet, project experiences highlighted in this review indicate that the payoffs for these actions would be very high. There is accumulating evidence in project reports and evaluations that by supporting gender equality and women’s empowerment in infrastructure operations, these measures

not only increased women's opportunities but they also enhanced project effectiveness, efficiency, and sustainability. However, systematic assessments of such impacts remain limited, and this also requires attention.

Objective, Scope, and Approach

This report provides a fifteen year portfolio review of the status of gender in World Bank infrastructure programs. The review team assessed 1, 246 infrastructure projects financed by World Bank loans and grants between fiscal years 1995 and 2009.² Section I of the report presents trends in the integration of gender dimensions across the portfolio, section II explores project experiences with using gender methods, and section III reflects on lessons from the review.

The overarching objective of this FY1995-2009 gender and infrastructure portfolio review is to assess the status of and trends in gender integration in the World Bank infrastructure portfolio as a basis for monitoring and enhancing gender integration in line with commitments made for the 2006 Gender Action Plan. This review documents good practices in gender integration in infrastructure, especially strategies that worked. It also explores challenges with and strategies for addressing gender concerns, and identifies strategic entry points to enhance gender integration in project designs in the pipeline. Finally, the report also provides a FY2007-2009 baseline for monitoring progress on this agenda over time.

The infrastructure documents that were compiled for the assessment included project documents (investment and technical assistance), analytical reports, and sectoral strategies recorded under the respective Infrastructure Sector Boards during FY1995 – FY2009. Analytical reports and infrastructure strategies were reviewed first to assess gender integration and indicators for monitoring progress, as suggested actions from these are taken forward into infrastructure investment programs. It was found that infrastructure strategies—especially in the transport, water, and urban development sectors—performed well on including gender dimensions, especially the importance of gender inclusive participation of beneficiaries in the preparation and monitoring of projects.

Unfortunately, project-level output and outcome data on gender dimensions are too sporadic to be used to assess the large portfolio. Instead, the review is confined mainly to assessing project inputs, although some evaluation results are reported. The review methodology was designed to understand not only whether infrastructure projects were integrating gender, but also how this was being done. The review team employed a two-pronged approach. In the first phase, the team conducted a desk review of project appraisal documents (PADs) and implementation completion reports (ICRs), and rated all 1,246 projects systematically for the presence of six methods for integrating gender into projects. The often limited information in project documents, however, made it challenging to assess the contributions of the methods to the projects and their beneficiaries.

Second, the review team identified a subset of 51 projects that applied three or more methods of gender integration. For this subset, the team interviewed task team leaders and members, corresponded with counterpart government officials, and examined other available project documents such as mission aide memoires, mid-term reviews, and evaluation reports;. A qualitative database was created that describes project design and process features, and where available, outputs and outcomes of relevance to the review. Highlights from this portion of the review are presented in section II, and further details of the review methodology can be found in the annex.

Below is a brief description of the six methods used to evaluate the projects in the first phase. Each provides a useful tool for integrating gender into the design, delivery, or performance monitoring and evaluation of projects.

- *Consultation* refers to a public meeting held with local women and men directly affected by an infrastructure project. The method is most often applied during project preparation and appraisal phases, although consultations may be convened throughout the life of a project in community-driven development schemes. In countries where women are segregated mostly within households, the preferred approach is to conduct consultations separately with women and female facilitators because women are unlikely to speak freely if men are present.
- *Gender analysis* is conducted in the context of social or environmental assessments, in resettlement action planning, or reported as separate studies. In a few cases, projects were informed by existing analysis from country gender assessments or other analytic work.
- Gender equality goals in *project development objectives* indicate gender-based results that the project will aim to achieve at completion.
- *Gender activities* are either gender-responsive or specific gender targeted activities designed in the projects to reduce potential gender based inequalities in access to services, risks, benefits and opportunities, and in some cases, to empower women directly to better their lives. On a transport project, for example, a gender-responsive activity may include separate toilets for women and men in bus stations, or street lighting and walkways that make roads safer for women to use; and a targeted gender activity may involve the application of gender quota requirements in hiring for road construction or in the membership of road maintenance committees.
- *Budget* refers to the presence of a line item in the project documents indicating that resources have been earmarked for targeted gender activities.³

- *Monitoring and evaluation* (M&E) requires early planning to include gender responsive indicators to monitor progress towards gender equality of benefits in project outcomes and to collect gender-disaggregated data.

After spending time with the PADs and ICRS, the review team became increasingly concerned about limitations in the use of the different gender methods. These weaknesses, discussed in section II, led the review team to screen project documents especially for the presence of gender activities to ensure that inequitable risks and access to services were being reduced, and women and men were being reached by the new service. Some projects also used these activities to empower women by investing directly in their individual and collective assets and capabilities. The measures included, for example, a transport project in Mumbai, India that required joint titling for resettled households for displaced women and men, and an energy project in Bangladesh that invested in women entrepreneurs to provide alternative small-scale energy technologies.

In short, the projects with gender activities were the ones that the review team felt most confident were genuinely trying to address existing gender disparities and take actions to support equitable access to project benefits for women and men. Hence, these projects receive special treatment in this review of portfolio trends and project experiences.

Rising but Uneven Gender Coverage

The review of infrastructure operations from 1995 to 2009 reveals significant progress on the integration of gender into the portfolio. Yet, this progress was uneven across time, across the different regions and infrastructure sectors, and between the two lending windows for the middle- and low-income countries.

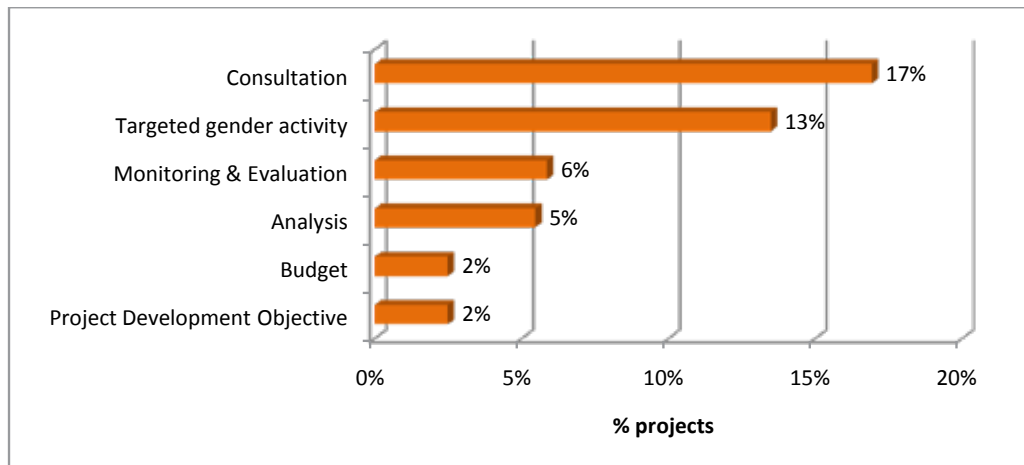
Use of Gender Methods

Figure 1 presents the prevalence of the six gender methods across the portfolio. Consultation is the most widely used method. It featured in 211 projects, or 17 percent of all projects. The next most frequently applied method is targeted gender activities, at 13 percent of projects. Monitoring and evaluation and gender analysis were used in 5 and 6 percent of projects, respectively. There was limited attention to gender in project development objectives and budgets.

The trends in the use of gender methods provides a more promising picture. Figure 2 displays the yearly rates of gender coverage, and illustrates an upward trend marked by large swings. Projects that applied at least one gender method grew from 14 percent of the infrastructure portfolio in 1995 to 39 percent in 2008 and 36 percent in 2009. The weakest year came in 2000, when just 9 of the 68 infrastructure projects that began operating included any gender method. As discussed further below, this was also a period of major reduction in World Bank infrastructure financing.

The lighter area in figure 2 indicates the share of projects with targeted gender activities, again the ones that the review team considered to be addressing gender substantively. The trend for projects with targeted activities largely mirrors the upper trend line, providing an

Figure 1. Use of Gender Methods in Infrastructure Projects, FY1995-2009



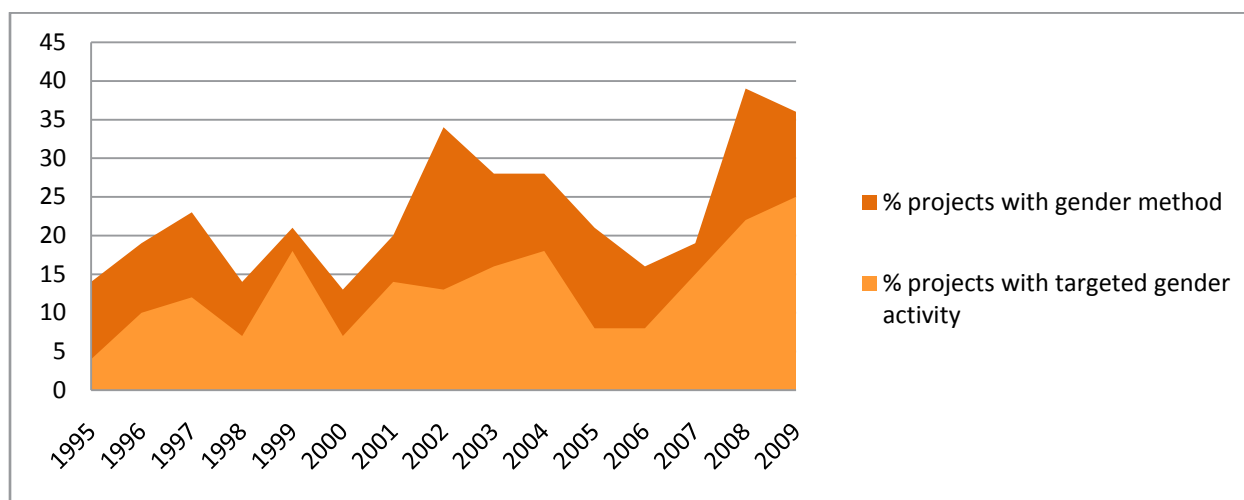
Source: Authors' analysis from World Bank PADs and ICRs for 1246 infrastructure projects.

Note: The combined methods exceeded the 293 projects with gender coverage because many projects applied more than one method.

encouraging sign that the presence of meaningful action on gender coincides with more gender work of any kind. The projects with targeted gender activities grew from 4 percent in FY95 to 25 percent in FY09.

It is significant that the two highest peaks in gender coverage closely trailed the new gender policy and strategy (FY2001) and GAP (FY2007), and the creation of new trust funds dedicated to gender work. The Norwegian government, with additional support from the Netherlands, financed a trust fund for mainstreaming gender (GENFUND) in World Bank

Figure 2. Infrastructure Projects with One or More Gender Methods, FY1995-2009



Source: Authors' analysis from World Bank PADs and ICRs for 1246 infrastructure projects.

operations in 2001, making available more than \$3 million in grants. While infrastructure only received a small portion of the funds, the number of projects with gender methods in 2002 nearly doubled from the previous year. Gender coverage continued to remain relatively high until 2006, and an evaluation of the trust fund concluded that providing even small grants can catalyze extensive thinking and action on gender among Bank staff.⁴ The highest peak in infrastructure projects with gender followed the GAP's launch to provide over \$65 million in grants for mainstreaming gender in the economic sectors, however, infrastructure sector received only 4 percent of GAP funds⁵.

Table 1 provides a preliminary analysis of project outcome ratings for infrastructure projects that employ gender methods. While data constraints (see note below table) do not permit a direct comparison, the results nevertheless suggest that the integration of gender methods contributes to project performance.

Table 1. Project Outcome Ratings, FY1995- 2004 (Percentage of commitments rated satisfactory or better)

<i>Period</i>	<i>Outcome ratings for infrastructure projects with any gender method</i>	<i>Outcome ratings for infrastructure projects</i>	<i>Outcome ratings for the World Bank overall</i>
1995 to 1999	84	74	79
2000 to 2004	86	81	81

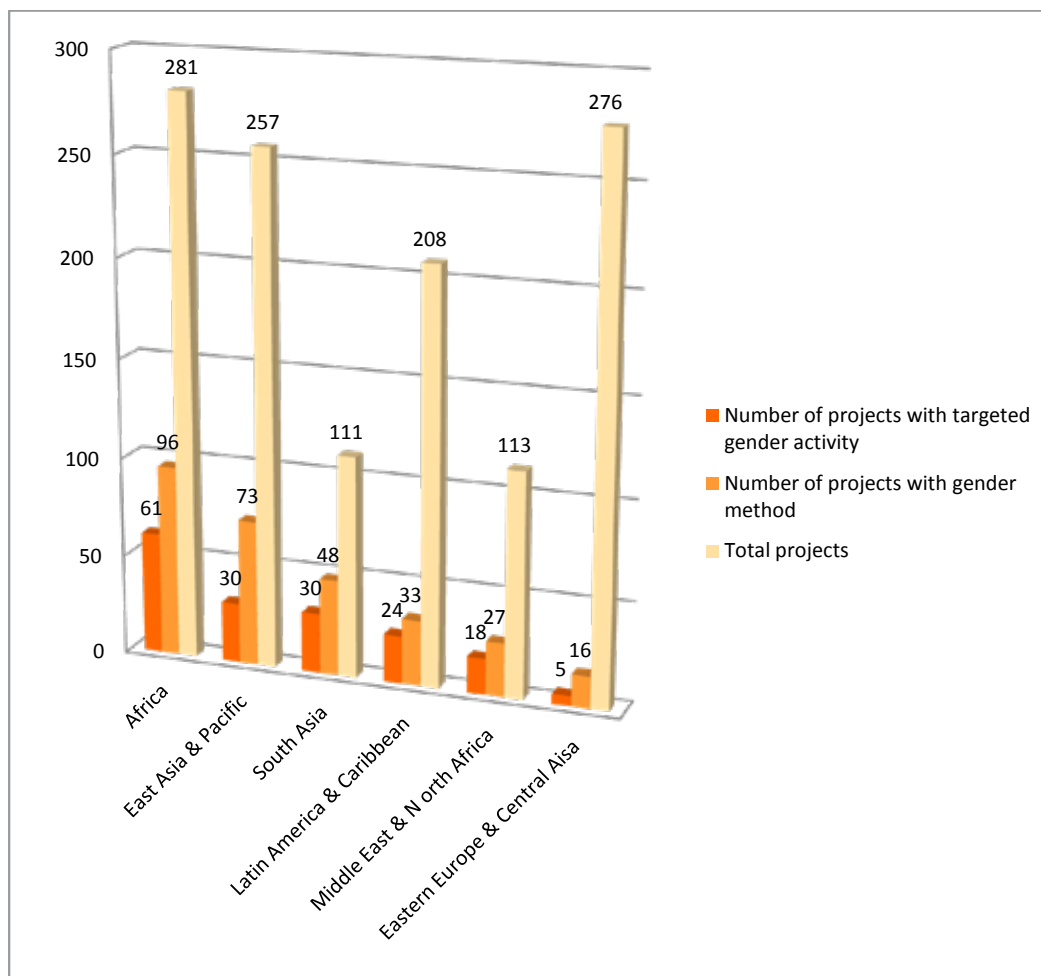
Note: Column 2 is based on authors' analysis of available outcome data for 66 projects in the first period and 24 projects in the second period; and the period indicates when the projects were started. Columns 3 and 4 are from data provided in a World Bank (2006) infrastructure portfolio review, and the period indicates when the projects were completed.

Regional Trends

There was large variation in the extent to which the different regions incorporated gender into their infrastructure operations (see figure 3). With an average gender coverage of 43 percent over the review period, the South Asia region outpaces the others overall. Other regions, however, made major strides over the review period. By the final year of the review in 2009, East Asia and the Pacific, Middle East and North Africa, South Asia, and Africa were all integrating gender into at least half of their projects. Latin America and the Caribbean showed some progress as well, reaching 20 percent of projects in 2009. The weakest region to incorporate gender was Eastern Europe and Central Asia.⁶ Some staff stressed in interviews that gender issues were more obvious in South Asia and Sub-Saharan Africa, and thus easier to make a case with client governments for gender approaches.

Staffing changes seem to be especially important for understanding portfolio trends. The Bank office in New Delhi, India holds the largest social development team outside of headquarters, and social development and gender specialists there and in other SAR field

Figure 3. Regional Coverage of Gender in Infrastructure Projects, FY1995-2009



Source: Authors' analysis from World Bank PADs and ICRs for 1246 infrastructure projects.

offices championed gender strategies, policy dialogues, analytic works, and operational activities.⁷ The Africa region, with the most numerous countries, also accounts for the largest number of infrastructure projects. Social development and infrastructure staff, especially in the transport sector, spearheaded a large action agenda that integrated concerns for women's time poverty, transport, energy, water and HIV/AIDs (Blackden 2003). Increased technical backstopping and funding from the World Bank's central gender unit were also very important in Africa. In East Asia, a dynamic regional gender coordinator with operational experience was able to use GAP-funded studies to influence the agenda.

It is important to note that there were also swings in gender coverage in the regions. As regional leadership and staffing changed in the field and headquarters, so did attention to gender.

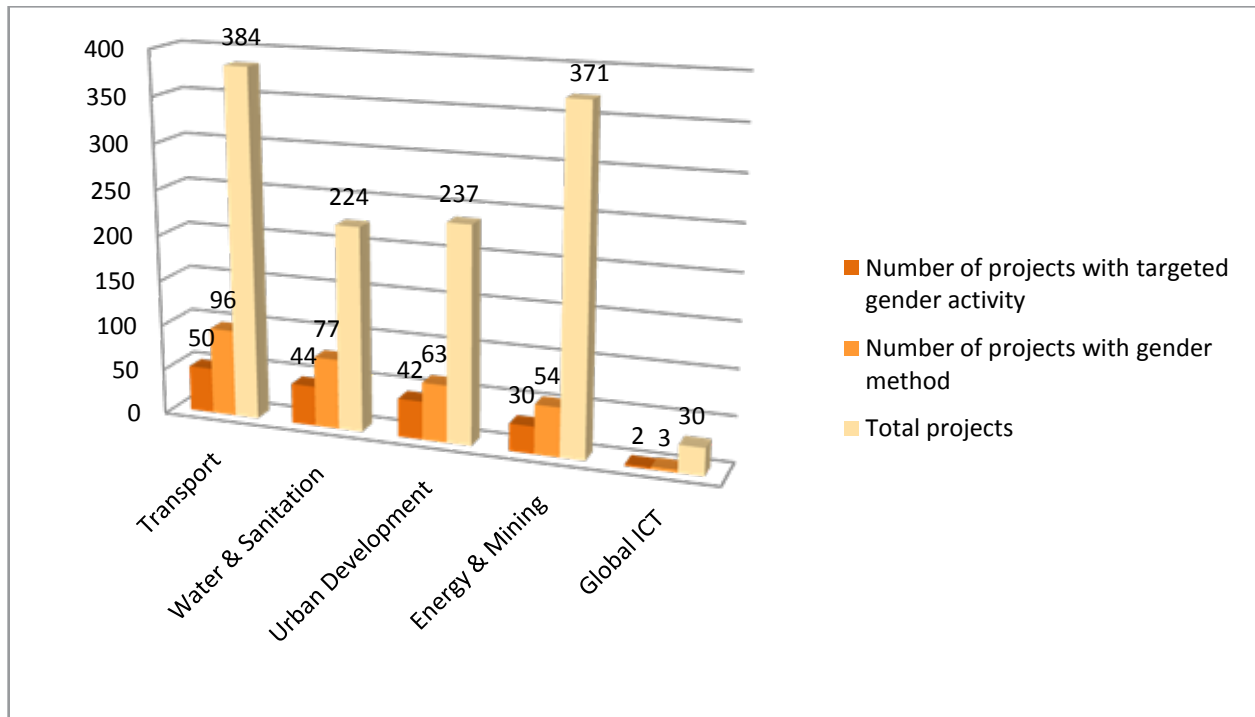
Sectoral Trends

The World Bank’s infrastructure lending portfolio is organized into five sectors identified in figure 4. Water and sanitation is a clear leader on gender, with slightly more than a third of its projects incorporating gender over the review period. Again, the averages mask upward trends. In 2009, for example, the water and sanitation sector was using at least one gender method in 57 percent of its projects, and large gains could also be found in transport (48 percent in 2009) and energy (30 percent in 2009). Urban development averaged 27 percent over the review period.

Project staff observed in interviews that water and sanitation is a sector where women are well known to play an integral role, and this has been recognized in project designs dating back to the 1970s. It is also where more participatory and accountable community-driven development approaches have been widely used, and these are usually gender responsive. Similarly, many urban development projects feature more participatory and gender-sensitive project designs, and staff suggest this is because they entail multi-sectoral and community-based interventions.

Until more recently, the other infrastructure sectors have been viewed as gender-neutral. The assumption was that roads, electricity, and information technologies benefited all. Yet, studies increasingly indicated important socio-economic and gender differences in access to services. Time use studies especially revealed the onerous burdens on women and girls

Figure 4. Sectoral Coverage of Gender in Infrastructure Projects FY1995-2009



Source: Authors’ analysis from World Bank PADs and ICRs for 1246 infrastructure projects.

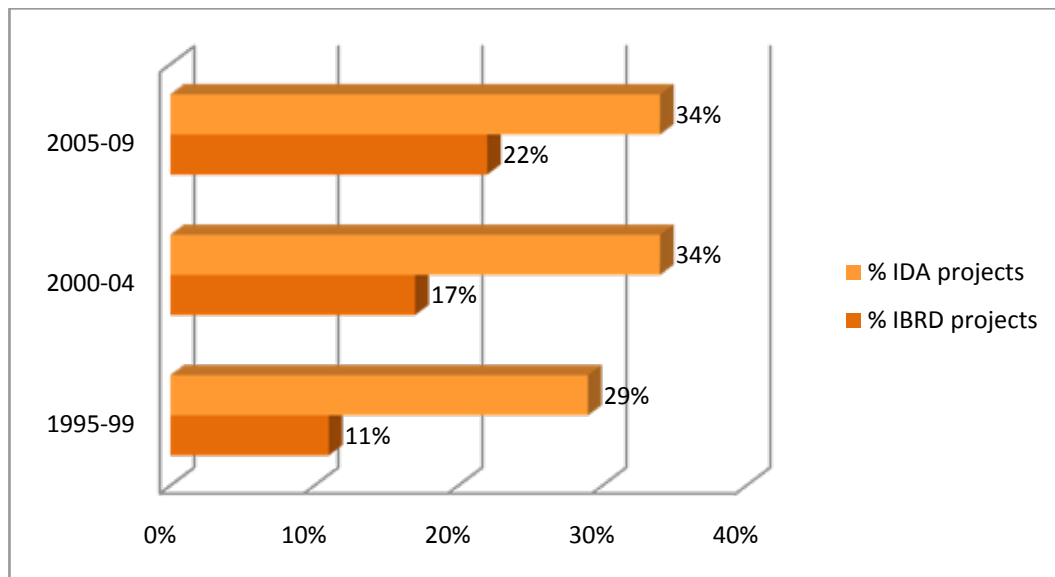
spending hours every day collecting fuel and water. The higher risks and lower benefits of mining projects for women than men also emerged. Increasingly, transport, energy, mining, and ICT projects are designed with a better understanding of gender differences.

Initiatives to foster more action on gender in the infrastructure sectors also grew with changes in staffing, and outreach. In the mining sector, for example, a mining engineer was appointed as the gender focal point and led the development of guidelines for gender mainstreaming in extractive industries.⁸ Thematic learning groups also play an important role in stimulating more work on gender across the World Bank. Staff mobilized communities of practice around issues such as: gender and transport; gender, agricultural and rural development; and most recently, the gender group in the Sustainable Development Network (SDN). The groups monitor the progress of gender integration in SDN, provide technical support to strategy formulations, sponsor learning events and user-friendly toolkits, and share good practices and information on trust funds.

Trends in IBRD/IDA Infrastructure Lending

The 1,246 projects in the portfolio review amounted to \$113.6 billion in loans and grants between 1995 and 2009. The IBRD lending window for middle income borrowers allocated 70 percent of this financing, but the smaller IDA delivered many more projects with gender. Overall, the number of infrastructure projects funded by the IBRD and IDA during this period was roughly the same (578 IBRD projects compared to 571 IDA projects⁹). Figure 5 uses five-year periods to compare the trends in gender coverage between the two lending windows.

Figure 5. IBRD and IDA Infrastructure Projects with Gender Methods, FY1995-99, FY2000-04, FY 2005-09



Source: Authors' analysis from World Bank PADS and ICRS for 578 IBRD projects and 571 IDA projects. Analysis excludes 97 infrastructure projects funded with grants.

There are several reasons why the gap in gender focus between IDA and IBRD may exist. IBRD loans are for middle income countries, and for large infrastructure projects, e.g. trade corridors, electricity generation/transmission, and water treatment plants, where the immediate relevance of gender responsive design may be less clear. Also, many IBRD countries have good CPIA ratings on gender (for example, in much of Eastern Europe), leading to a reduced perception of the need to include gender equality actions in the projects. Nevertheless, the IBRD has much greater financing, gender inequalities persist among many of its borrowers, and the political demands and institutional capacities for gender inclusion are presumably stronger there. Thus, it is a hopeful sign that the IBRD countries are responsible for most of the growth in the share of gender coverage during the fifteen years under review (while figure 5 indicates relatively little change in the rates of IDA's gender coverage). The continued expansion is notable in IBRD's second period, when its total volume of lending fell by nearly half due to an (unfulfilled) expectation that the private sector would begin providing financing for infrastructure development.

The gender coverage for IDA over the last two periods was 34 percent. This is the same rate reported for 2008 in a separate gender review of IDA lending for all of the economic sectors, in which infrastructure figures prominently.¹⁰ This review, conducted by the central gender unit of the World Bank, found a much higher rate (76 percent) of gender integration in IDA's social and related sectors. The social sectors, which include health, education, and social protection, have been integrating gender concerns in most of their projects for many years, partly because these services interact so closely and continuously with beneficiaries.¹¹

The two lending windows, although very different in size, practically mirror one another in the levels of resources provided to infrastructure projects with gender in each of the three periods (see figure 6).

On average over the 15 years, IBRD allocated 17 percent of its financing to infrastructure projects with gender, compared to 41 percent for IDA.

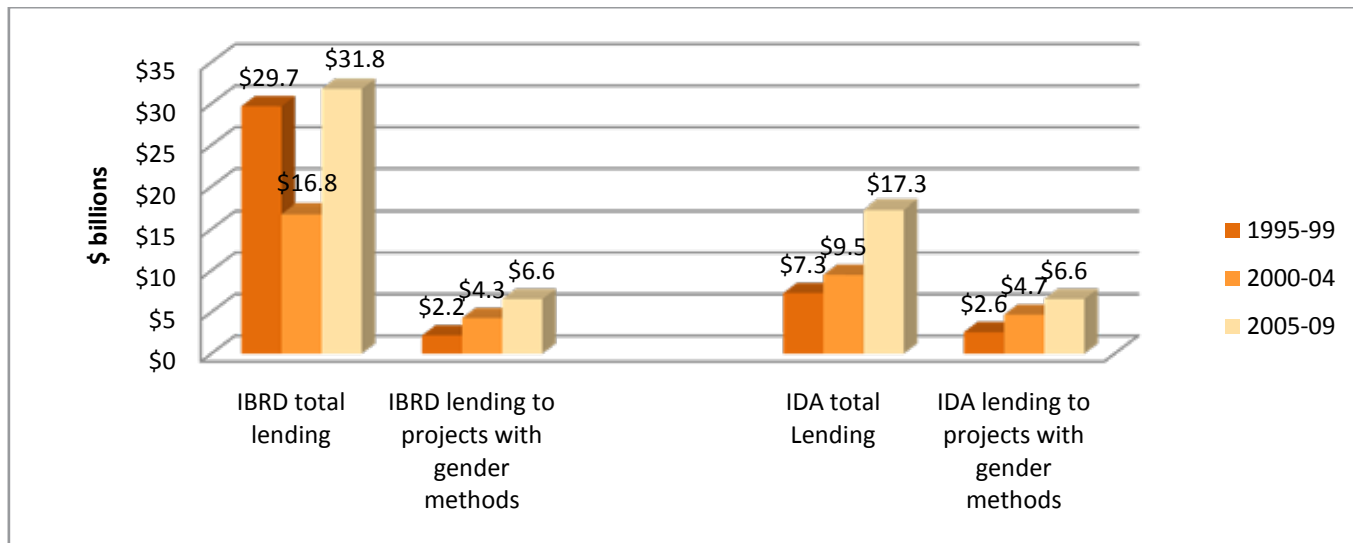
Together the trends in the portfolio indicate that gender coverage is increasing in the infrastructure portfolio but with variation over time, across regions and sectors, and between IBRD and IDA. The years with the strongest performance followed closely



Piped, safe, potable water in Mali saves lives as well as time for girls and boys.

Curt Carnemark/World Bank

Figure 6. IBRD and IDA Total Infrastructure Lending and Lending to Projects with Gender Component, FY1995-99, FY2000-04, and FY2005-09



Source: Authors’ analysis from World Bank PADS and ICRS for 578 IBRD projects and 571 IDA projects. Analysis excludes infrastructure projects funded with grants.

on the heels of strategies and trust funds dedicated to advancing gender, while the best regional performer, South Asia, benefited from a strong group of social development and gender staffing in the region. The importance of country conditions and needs, however, should not be discounted altogether. The leadership of water and sanitation in addressing gender likely reflects that sector’s urgent need to provide services that can reach disadvantaged groups and be maintained locally in areas with weak institutions. While IDA’s greater integration of gender methods is shaped in part by the smaller types of projects in its portfolio, as well as by borrower concerns for gender equality goals in countries such as India, Bangladesh, and Nepal.



Dominique Lallemand/World Bank

Women in Senegal carry water in tires and use donkey carts that save them time and energy.

SECTION II: PROJECT EXPERIENCES WITH GENDER METHODS



Below we highlight experiences from World Bank infrastructure projects that integrated gender concerns.¹² For the projects themselves, the benefits included improved designs, more efficient implementation, greater transparency and accountability in construction and maintenance, as well as better and more sustainable outcomes. We also present various benefits of these approaches for women and men in communities.

Project teams apply gender methods with two broad objectives. *The first objective is to ensure that women as well as men can benefit from and are not harmed by the new infrastructure.* Again, the most common methods for achieving this are to convene consultations and incorporate activities that reduce specific barriers that women and men may face in using the infrastructure. For instance, a project component to improve market facilities in Bangladesh included the installation of separate restrooms for women and men after consultations with women. This made it easier and more socially acceptable for women to spend time at the markets, both as vendors and consumers. The following sections provide other examples of how gender methods can improve projects.

The second and harder objective is to support gender equality in access to new opportunities created by the infrastructure. The arrival of roads, potable water, electricity or other services can open up important new economic opportunities, but diverse gender inequalities may exclude women from taking advantage of these opportunities—even with dedicated attention to gender concerns. Strategies that worked in this area reduced inequalities by investing directly in women’s assets and capabilities—or their empowerment. Where women’s social and economic status is very low, project activities may focus initially on raising women’s awareness of their rights and entitlements, and on building their self-esteem and aspirations for a better life. In all regions, interventions include measures to strengthen women’s economic roles by providing them with information, skills, assets, or income-earning opportunities. Many projects also actively advance women’s collective agency by working with grassroots women’s organizations and leaders where present, or by actively mobilizing them where such organizations are not available. Mobilization builds women’s solidarity and voice, supports them in pursuit of economic activities and helps make them more profitable.

In the next sections, we examine how projects are applying the different gender methods more closely. Because only a small number of projects specified gender goals in their project development objectives and budgets, we focus most of our attention on project experiences with the other four methods. Before moving into those projects, however, box 1 presents a case of a project that earns the distinction of applying all six gender methods. Especially strategic, women’s empowerment was identified as a project development objective that shaped the project from start to finish. As discussed below,

a few other successful projects were also launched with a clear vision of empowering women.

Learning from Below: Gender Analysis and Consultations

Gender analysis and consultations provide tools for delivering projects that are more responsive to gender-specific needs, priorities, and usage of infrastructure services. The methods are also important for reducing potential problems caused by a project. Consultations is the most common method applied, with its use rising from 10 percent of infrastructure projects in 1995 to 26 percent in 2009. By comparison, gender analysis is applied much less frequently, averaging at 5 percent of projects over the review period, and rising to 6 percent in 2009.

The project experiences below highlight the use of innovative and diverse methods for collecting gender-disaggregated data at the local level. Grappling with complex information about local conditions across numerous communities is never easy for projects. There is mounting evidence, however, that projects with the capacities to be demand-oriented improves greatly the chances that services will perform better, as well as be more likely to reach and benefit disadvantaged groups such as women.¹⁵

The Nepal project, featured in Box 1, conducted detailed, community-level fieldwork to identify the different social groups that were present and their needs and priorities. The analytic work and consultations enabled project staff to tailor support services to enable the most disadvantaged groups, including illiterate women, to participate in and benefit from the local water and sanitation schemes financed. Similarly, preparations for a participatory energy project in Senegal included an in-depth gender analysis to understand women's roles, responsibilities, and constraints. The analysis informed several project components, such as gender training for project staff, gender targets, skill building for women's support groups, and transport measures to improve market access for women traders.

Many other projects sought to gain a better understanding of variations in local conditions across the project area. A follow-up rural roads project in Ethiopia, for example, conducted district-level studies with participatory data collection tools to understand men's and women's roles and needs as well as local social and economic conditions.¹⁶ A transport project in Lesotho piloted a participatory mapping activity, and the data was incorporated into a geographic information system (GIS). The GIS provided community-level information on transport services, healthcare, schools and other services, as well as how women, men, children and the elderly used existing roads, paths, and services, and what bottlenecks existed. Community meetings, interviews and focus group discussions held in all communities provided information on differences in men's and women's priorities for the transport project's activities (Walker et. al. 2005).

Box 1. The Six Gender Methods in Practice: A Water and Sanitation Project That Did it All



In June of 2004, the World Bank approved a \$25.3 million loan to the Government of Nepal to extend water supply and sanitation to over 800,000 people in rural areas of the country. The project, a follow-up to a similar one begun in 1997, is highly participatory and supports communities to form inclusive water supply and sanitation user groups that can plan, implement, and operate their own drinking water and sanitation infrastructure. Among other aims, the *project development objectives* affirmed that adequate and sustainable water supply could only be achieved by “empowering and providing opportunities to women and girls as the primary beneficiaries by involving them in planning, implementation and management of the schemes.”

A *gender analysis* was carried out in the design phase. The fieldwork involved social mapping of different groups in each community, as well as separate *consultations* with women, men, indigenous people, and with members of “low” castes to determine their needs and make the project applicable to all. This laid the groundwork for marginalized and disadvantaged dalit and janajatis as well as illiterate women to benefit from the project (Fund Board 2008).

The project required and closely *monitored* women’s inclusion in water users committees.¹³ Other *targeted gender activities* promoted women’s access to credit and business development support, school enrollment for girls, and informal education to improve literacy, self-confidence, and community mobilization. The *budget* dedicated \$.4 million for the gender activities.

An *evaluation* of the first project concluded that its strong community ownership, and particularly the participation and empowerment of women, is contributing importantly to the sustainability of local water and sanitation services (World Bank 2004). More than 49,000 women participated in 1,366 local microcredit groups. The groups have in turn mobilized diverse ventures, including vegetable farming, goat raising, poultry farming, kitchen gardens, pig raising, savings and credit, and iron-working for local blacksmiths.¹⁴ Three years after project completion, over 80 percent of the microenterprises were fully functional. Also as a result of the project, many women have assumed new leadership positions in their villages, as members in their local water user committees and health groups, and as treasurers for rotating credit schemes. These roles, and their new income-earning activities, have enhanced women’s status in their communities. In addition, the project strengthened local level institutional capacities to manage projects.

Eliciting the priorities of women was challenging for a rural roads and transport project in Yemen because women seldom speak publicly and their physical mobility is limited by the practice of seclusion. The project team invested in training local women to serve as facilitators, who then organized separate consultations with women. Among other actions, the consultations identified the need for safety features -- such as speed signs and speed bumps near schools -- as well as the idea of small reservoirs to collect run-off water from roads for agriculture, which did not emerge in consultations with men (Crochet 2009).

Focus group discussions with women and men were also conducted separately in Tanzania, and adequate representation of women on the local water user organizations emerged as an important concern. Gender balance became required in the water user groups, and was identified as an important factor for effective operation of the systems and management of water funds.¹⁷ Consultations and user surveys for an urban transport project in Liaoning, China resulted in a dramatic redesign from a focus on large ring roads for vehicles to more attention to pedestrian needs. The changes included safety measures such as street lights and lighted underpasses, pedestrian crossings, and reduced waiting times at bus stops. The safety of crosswalks was of particular concern to women since their travel often involved children (Chen et. al. 2006).

Gender analysis and consultations in a participatory urban upgrading project in Bolivia led to investments in sidewalks that eased the foot travel of women, the elderly, and children. Daycare facilities and community centers freed up women to engage in economic activities. New sanitation facilities and street lights, also provided by the project, reduced women's exposure to crime and violence because they had fewer reasons to make trips outside in the dark.

Many other projects included gender analysis and consultations with women and men; however, project documents often did not discuss how their projects were addressing concerns raised by these inputs. The reasons for these gaps are not clear, but the experiences above suggest that project planners may be overlooking valuable opportunities for improving the relevance and impacts of their projects.

Leveling the Playing Field: Targeted Gender Activities

To assess whether a project was addressing gender dimensions substantively, the portfolio review team especially looked for the presence of targeted gender activities. The good news is that use of this method jumped sharply over the review period, from 4 percent of projects in 1995 to 25 percent in 2009. These project activities were extremely diverse, but most often supported local employment and entrepreneurship opportunities for women as well as men. Some project documents indicated that inclusion of women in project-related construction jobs and local user groups increased accountability and

efficiency during implementation, and also sustainability of the infrastructure after project completion.

Below are illustrations of the varied ways that targeted gender activities can make project benefits more widely accessible:

- An energy project in the Niger Basin provides enterprise services targeting women and youth to facilitate their access to the new economic opportunities provided by new hydropower from dams along the river. The initiative supports income generating activities involving fisheries, watershed management, ecotourism, and maintenance of dams and irrigation canals.
- An urban development project in Pakistan supports extensive outreach to women, engaging female community organizers and mandating representation of women in community groups. The project also invests in women's skill development and economic opportunities by organizing local savings groups and non-formal education.
- A transport project in Honduras includes an HIV/AIDS plan to prevent the spread of the disease along the improved roadways. Commercial sex workers and housewives have been identified as some of the vulnerable groups to be targeted by the project's outreach.
- An ICT project in Sri Lanka established specific hours for women and girls to visit internet centers and also recruited more women managers. The measures were informed by a consultation with young women who revealed a reluctance to visit the centers because they were perceived as "boys clubs."
- A rural water supply project in Morocco included women in water user associations and on social mobilization teams, and reduced women's and girls' time fetching water by at least half.¹⁸
- A rural energy project in Yemen is investing in social mobilization and training activities to build women's capacities to participate fully and become decision makers in new local cooperatives that are being set up to manage the new schemes and collect user fees.

A section below on women's empowerment provides additional examples of targeted gender activities that are being applied in infrastructure projects.

Many infrastructure projects set gender quotas to raise women's participation in project staff jobs, local construction works, and membership in local user, maintenance, or oversight committees. For example, a rural roads and markets project in Bangladesh set specific targets of women's participation at 30 percent of construction jobs, 30 of

percent the memberships of market management committees, and 30 percent of vendor spaces in markets. An urban upgrading project in Bolivia followed through on project commitments to hire women at all levels. Project documents recognized that women's presence was higher in the lower paid project opportunities; however, there is a strong indigenous tradition of women engaging in heavy labor in Bolivia (including road construction), and project hiring opportunities have been sensitive to providing interested women with these jobs.¹⁹

Several projects report important benefits from using gender quotas.²⁰ A Peru water project, for example, found that women outperformed men in the quality of their construction work and in their efforts to maintain the pumps. Women were also more effective in mobilizing the community to carry out maintenance tasks, and were strong advocates for timely results from project contractors. Similarly, Ruiz-Abril (2002) reports that women's engagement saved costs on materials and contractors for an urban upgrading project in Caracas, Venezuela. Nevertheless, women's participation in construction and maintenance works may bring some additional costs in the beginning, but yield higher community benefits at the end. The Peru water project found that, relative to men, the women needed more training and were able to maintain fewer pumps.²¹ In a rural roads project in Peru that set requirements for women's employment, it was necessary to accept women's agricultural experience as relevant for road tasks and to drop the literacy requirement.



In Bangladesh and elsewhere women are often preferred as financial managers.

Project documents also indicate a strong presence of women in sensitive financial positions. In the Nepal rural water and sanitation project, for example, 72 percent of the treasurers for the water users groups were women (Fund Development Board 2008). A rural roads project in Peru reported that women, who served as treasurers in 42 percent of roads committees, were seen to be more transparent than men with records keeping, more effective at negotiating payments, and more trusted to ensure that the road works met technical standards (World Bank 2007c). Similarly, Caballero (2009) reported that women played important roles in managing the water user associations and safekeeping the

money collected for the operating costs of the water systems in a water and sanitation project in Peru.²² Whether women's strong performance in these roles reflects women's greater altruism or greater need for effective services is a topic of some debate.²³

Counting What Counts: Performance Monitoring and Evaluation

As reported above, six percent of projects identified indicators for monitoring and evaluation of gender activities and outcomes. This greatly limits our learning about what works. The absence of strong monitoring systems also limits assessment of whether the gender methods in the design were being applied effectively. In the projects with gender-responsive monitoring and evaluation, however, the results are encouraging.

The portfolio review also included a comparison of PADs and ICRs of 90 completed projects approved between FY1995 and 2009 which contained gender integration methods in one or both of the documents. An important caveat also needs to be mentioned here that these findings are based on what is reported in the ICRs. Usually, ICRs have to be quite concise, and may not have reported everything that took place concerning gender actions. The comparison indicates that 66 percent of the projects implemented and documented gender activities in the ICRs. The analysis reveals that 24 percent of the projects implemented the gender actions proposed in their PADs; another 42 percent of the projects actually added gender actions during the implementation based on needs identified on the ground; and 34 percent may not have implemented or some or all of the proposed gender actions, as these were not documented in the ICRs. Box 2 summarizes the regional differences in projects that added, reduced, or maintained the gender actions presented in the PAD. The results indicate that East Asia and the Pacific clearly added more and dropped fewer gender actions than the other regions.

These performance gaps, moreover, do not speak to the quality and effectiveness of the gender actions that the projects have been and may be implementing. This is of concern because there is now a large gender literature reporting that development interventions that target only women, without understanding gender roles and norms and taking appropriate measures, may have limited and unintended impacts.²⁴

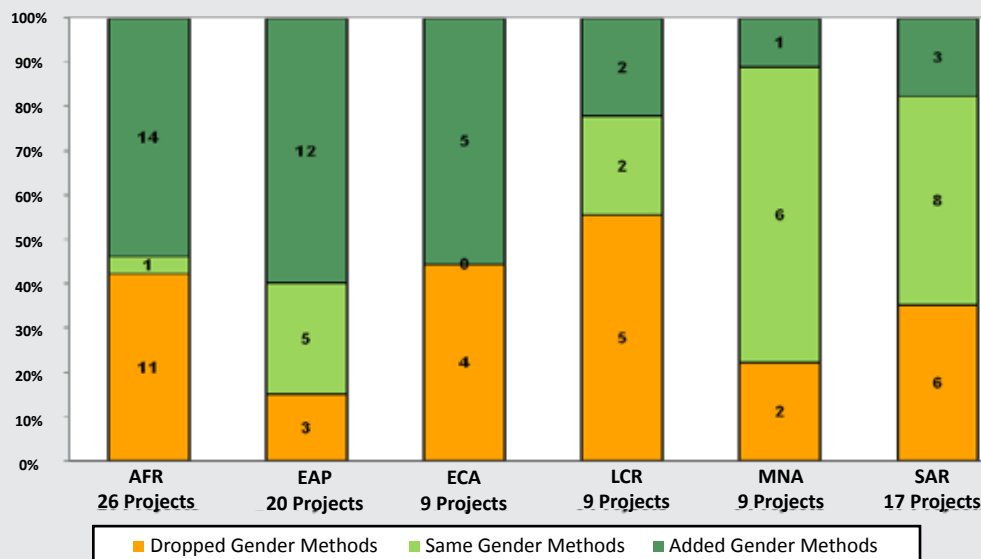
Box 2 presents some encouraging news that many projects added gender actions during implementation. For example, a slum-upgrading project in Caracas Venezuela added outreach measures to promote more awareness of opportunities for men and women's participation in project activities; training workshops on women's rights, leadership and domestic violence; and stronger requirements on women's participation in maintenance committees and supervisory roles. While implementing a mining project in Poland, the task team leader organized a conference on women and mining to understand gender specific risks and vulnerabilities due to mine closures. After the conference, the team added a component that included skill development training, access to credit and community development activities,

providing equal opportunities to both women and men. In rural roads projects in Peru and Bangladesh, project staff took the step of formulating gender action plans to ensure strong follow through on the various gender activities established for their projects.

Box 2. Gender Methods: Lose Some, Win Some

For the set of projects between FY1995 and 2009, the review team traced whether the gender actions found in PADS were still present in ICRs -- and thus actually implemented. It also screened completed projects for whether gender actions were added during implementation.

Figure 7: Regional Differences in Gender Integration in Completed Projects, FY 1995-2009



In addition to supporting mid-course corrections, M&E can sometimes galvanize agency commitments to improving their services further. A pilot roads project in Morocco found very positive results for girl’s school enrollment, and officials used this study as a rationale for investing in more road construction. They also requested additional research and began a database to monitor girls’ and boys’ school attendance and women’s and men’s activities in the zone of the road.

A rural electrification pilot in Lao PDR provided a revolving loan fund to subsidize household connection costs for the poorest households in twenty villages. In this country, female-headed households account for 43 percent of poor households (but only 8 percent of households overall), and the subsidy is estimated to have raised the connection rates among this group by 63 to 90 percent (and from 78 to 95 percent overall) across the participating villages. Households repay their loans through the

regular monthly billing process; and the large savings incurred from foregoing the use of traditional fuels (estimated at more than twice the monthly electric bills) eases the repayment. The national power company is now rolling out the project to three other provinces.

On the evaluation front, it remains a struggle to incorporate gender-disaggregated samples into the research designs.²⁵ The outcomes described in box 1 and the gender-responsive impact assessments for rural roads projects in Bangladesh and Peru indicate quite favorable outcomes for women. In the Bangladesh case, the labor force increased by more than 13 percent in the



Access to electricity enables poor women in Lao PDR to make and mend fish nets at night to increase their incomes.

project area, with most of the growth due to increased female participation.²⁶ The impact assessment of the rural roads project in Peru found that 43 percent of women reported that the project enabled them to obtain additional income, including from opportunities provided by road maintenance needs and other project activities (such as training and assistance with planning and resource mobilization).²⁷ Household surveys in 2000, 2004 and 2006 revealed that the Peru roads project created 6,000 one-year-equivalent unskilled jobs, 24 percent of which were held by women. Primary education enrollment for girls was increased by 7 percent. The survey in Peru was complemented with a qualitative gender impact assessment in 2007 which found that 77 percent of the women traveled more frequently and 65 percent felt they traveled more safely as a result of the project (World Bank 2007c).

Below we reflect more on the empowerment achievements of projects. To fully capture these dimensions requires measures of the social and political impacts of projects on women's lives in addition to the more standard economic and human development outcomes.²⁸ In general, there is a large need for more understanding of the role of women in project and wider development outcomes, and how local conditions may shape this. As discussed below, a potentially fruitful area to evaluate is whether infrastructure projects may provide a more favorable context for interventions that target women and their empowerment than when such interventions are done in isolation.

It must be stressed that this gender method requires far more attention. The share of infrastructure projects with gender-responsive M&E rose during the review, but only to 9 percent by 2009. Women and men on the ground, and project staff at all levels, know very well that what really counts is watched closely.



Indigenous women and men rehabilitating roads in rural highland Peru.

PROVIAS, Peru

Empowering Women and Men to Access Opportunities Created by Infrastructure

Local participation, men’s and women’s, is a powerful resource for delivering and sustaining water supply, sanitation, roads, and other public services. Here, however, we step back from concern for project outcomes to focus more directly on how infrastructure projects can and do transform people’s lives, and especially those of women. Fundamentally, this is about women’s empowerment.

Kabeer (2001, 19) defines women’s empowerment as the “ability to make strategic life choices in a context where this ability was previously denied to them.” Infrastructure projects with gender methods proactively support women’s empowerment through measures such as: gender analysis and consultations that recognize women’s contributions and amplify the value and importance of addressing their needs; gender targeted actions such as quotas that provide paid jobs in construction works, and that position them alongside men in infrastructure user and maintenance groups; diverse enterprise development and asset-building activities; and social mobilization that buttresses women’s awareness, solidarity, and collective voice. In many rural contexts where the World Bank operates, all of these activities represent important deviations from local gender norms. Yet without these measures, women would be excluded in many contexts from the significant social and economic opportunities that can accompany new infrastructure.



Bolivian indigenous women empowered by literacy and collective voice.

The review below of project experiences with investing in women's empowerment is framed around the two most common—and often tightly linked—actions that projects used: enterprise development and collective action.

Economic Empowerment

In projects that conducted gender inclusive consultations, a majority highlighted strong local concerns for the lack of economic opportunities for poorer and other vulnerable social groups. Poor women in most developing countries lack skills, most often work in the informal market, and receive wages that are usually half that of male workers. Therefore, there were often strong demands from women to have greater economic opportunities to enter formal labor markets through infrastructure programs.

To respond to these concerns, many projects included gender targeted actions such as skill development training, affirmative action measures to improve access to formal employment, and revolving loan funds or credit schemes, such as microcredit institutions, to foster entrepreneurship. A few projects, such as in the cases of the Peru and Bangladesh roads projects, are investing in small and medium enterprises in the formal sector. Many also invest in complementary services that promote savings and provide information on markets, or management and financial training. Some projects are building daycare or recreation centers that ease women's childcare needs. A few urban programs with joint property titling schemes are helping women to gain control over a substantial asset and access to formal banking system loans.

Wider evaluations of microcredit programs have found mixed outcomes for women.²⁹ Nevertheless, the evaluations for the rural water and sanitation project in Nepal, and the rural roads projects in Peru and Bangladesh indicate that investing in women's economic empowerment may be more successful when combined with infrastructure improvements. Additional evidence from the infrastructure portfolio of the potential synergies between infrastructure investments and women's empowerment are highlighted below.

With increased access to micro-credit services, a large number of women have been major producers and traders in Bangladesh since the 1980s; however, due to social norms, they could not travel to markets and had to use middlemen to purchase inputs and sell their goods. This yielded very limited profits, and they could not expand their enterprises and move out of poverty. The Bangladesh Rural Road and Market project transformed these

dynamics, providing multi-faceted benefits to women, men, boy, and girls. The project provided not only improved women's and men's access to markets, but also ensured women's equal participation in employment and market opportunities created by the new road and market. This was accomplished by applying quotas for women's participation in construction and maintenance jobs, promoting the formation of women's labor contracting agencies, reserving 30% of the shops for women in the market, requiring 30% women's participation in the market management committee, and establishing separate toilets for women and men in the marketplace. These measures enabled women to enter the formal labor force market and earn an equal income. In addition, female microentrepreneurs were able to go to the marketplace themselves to buy inputs and trade openly, obtain market information on new and emerging demands, and expand to small and medium enterprises. A major social transformation had taken place, as not only are women now visible in the marketplace, but they have now become the major traders.

An urban development project in Jordan awards loans and grants to female and male entrepreneurs, investors, and community groups to encourage businesses around new cultural heritage tourism and other development that the project is creating. The project also provides business and management training and consulting services, including for many women working in the informal sector. One of the goals of the project is to bring women into the formal sector to increase the productivity and profits of their businesses. Local NGOs and community groups provide training for women entrepreneurs on handicraft and food production, as well as business management and development (World Bank 2007a). Handicraft and food production, common trades for women, may often

be saturated and unprofitable; but the new tourist business offers promise as their first step to economic opportunities and empowerment.

Other projects are helping to link women to profitable new technology ventures where women traditionally have little presence. A pilot in 2000 supported a women's micro-enterprise cooperative that provided decentralized rural electricity services on the remote coastal island of Char Montaz, Bangladesh. The 35 cooperative members received seed capital and



Scott Wallace/World Bank

Women working with men in Bangladesh road construction.

capacity building in the manufacturing and sale of energy products. Working together, the women were able to provide battery charged lamps and solar home systems to thousands of households, shops, and boats outside the power grid. The project was also linked to microfinance institutions so that poor households could obtain modern electrification. The energy project demonstrated that technology transfer and skill training of women can make a significant contribution to rural electrification in Bangladesh. It also verified that with appropriate training, energy enterprises can be operated by



Dominique Lallement/World Bank

Women members of the Char Montaz, Bangladesh Cooperative assemble battery operated lights.

rural women, and provide good service at an affordable price. Evaluations indicate that the project significantly empowered the cooperative members—increasing their income, knowledge of marketing and sales, use of modern technology and business management practices, and their decision-making authority and status in their households and community.³⁰ An assessment in 2009 revealed that the small cooperative has become a medium enterprise, serving most of the coastal areas and employing 170 people³¹. The small island has become a bustling commercial area and communities acknowledge the women's cooperative as the initial spark for the modernization process.

Equitable land/asset titling to both women and men is another activity used in some projects, and this is a strategic approach for empowering women. In the Bolivia urban upgrading project, women who are heads of households receive a land title in their own name, and married women have joint titles with their husbands. A resettlement project in Mumbai, India and a post-Tsunami reconstruction project in Indonesia also provided joint titling as part of a much wider set of measures to empower women. The limited gender-disaggregated research on property ownership finds that secure tenure increases women's access to services and credit, and raises their economic productivity—although not to the same extent as for men.³² There is also promising evidence in other countries that women's property ownership may reduce their risk of domestic violence (Panda, et. al. 2006); and the Bolivia project documents indicate that this is an urgent problem for women there.

Collective Empowerment

In contexts where women have limited presence in public spaces, mobilizing them into groups is often the cornerstone of strategies to begin raising women's awareness and aspirations and investing in their assets and capabilities. In his work covering

poor women's networks in Mumbai, India, Arjun Apparadai draws attention to the importance of the capacity to aspire, a concept that he defines as an individual's internal forward-looking navigational capacity to conceive of and chart out a different and better life. Appadurai argues that the capacity to aspire is unequally distributed, with the rich enjoying "diverse experiences of exploration and trial" in their initiatives to get ahead; yet, the poor encounter scarce chances for "practice, repetition, exploration, conjecture and refutation" (2004, 68 and 69). By mobilizing women into groups, projects provide pathways for women to connect and organize, and together marshal the courage to try out new ways to better their lives.

Many projects are mobilizing innovative, multi-sectoral partnerships to buttress their efforts to reach and support local women to thrive. The Bangladesh rural roads and market project facilitated the formation of women's trader associations, labor contracting societies, micro-enterprises for tree plantation and maintenance, savings groups, and self-help groups. To support these groups, the implementing agency, the Local Government Engineering Department (LGED), recruited women mobilizers, social scientists, gender specialists and female engineers. The new partnerships catalyzed new savings and credit opportunities, and positioned numerous women at the grassroots to take the first step toward new opportunities created by the project's improved roads and markets. While the project mandates that thirty percent of the new shops in the markets will be for women, in some rural markets women own more than half of the shops. Women also diversified their products, and engage in trading electronics, grains, and other agricultural commodities. LGED also established a gender forum for advocacy, training, and monitoring. Women's voices in the project and local governance increased.

To make way for a transport project in Mumbai, India, two networks led by community women played pivotal roles in a participatory resettlement scheme involving 60,000 people. The Railway Slum Dwellers Federation negotiated for a suitable resettlement location and security of tenure. *Mahila Milan* (Women Together) supported the mobilization of savings and loan groups that women organized and ran themselves. Community-based organizations also carried out a series of baseline socio-economic surveys that were used to group households into clusters of 50 for collective resettlement. The clusters fostered continued neighborhood cohesion, which is important for women because their social interactions are frequently limited to their households and nearby neighborhood. The resettlement plans ensured that the women could continue the support systems and economic activities that they had prior to resettlement. Working together, women were able to empower themselves and minimize the disruption caused by the displacement and resettlement (Dickenson, n.d.).

Other infrastructure projects are working with national and international women's NGOs, and this can be strategic for both the projects and women's collective voice. A water project in Azerbaijan collaborated closely with the Women's Committee, a national

NGO that identified opportunities to improve the design and sustainability of the project, including by contributing to a consumer outreach program that raised awareness and mobilized local communities for water conservation and maintenance of the new systems. Large membership groups such as the Self-Employed Women's Association (SEWA) in India and the Shack/Slum Dwellers International are playing valuable roles by supporting grassroots women's organizations to grow in size and to connect and federate from the local to the global levels. SEWA, for instance, is assisting local women's groups to access new input, product, and insurance markets on more favorable terms, and to change discriminatory laws and regulations (Chen 2005).

There is a growing literature indicating that gender concerns have been excluded from most participatory development initiatives and diagnostics, thus leading to policies and interventions that often reflect a poor understanding of the nature and capacities of women's groups. Relative to men, women's networking is more constrained due to the greater limitations they face in physical mobility, resources, and time. Hence, women's networks are typically small, informal, and often oriented to daily coping and voluntary community activities.³³ As such, these groups by themselves are unlikely to improve women's economic and social wellbeing. But infrastructure projects seem to be well positioned to help women overcome some of these barriers because within a relatively short period they reduce women's time constraints, connect them to new economic opportunities, *and* invest in strengthening their collective action and linkages to wider networks.

Yet, it is important for planners to recognize that projects come and go, providing limited vehicles for fostering and sustaining healthy associational life at the grassroots and beyond. The Moving Out of Poverty study suggests that sustained and strong state support for self-help groups in Andhra Pradesh, India was important for these groups to play a significant role in poor people's upward mobility in the 60 rural villages visited for the study.³⁴ Thus, infrastructure projects that invest in diverse women's networks and support strong state-civil society ties may also be contributing importantly to more rapid and equitable development over the long haul.

SECTION III. REFLECTIONS ON LESSONS

ITISSALAT AL-MAGHRIB



There are two overarching findings that emerge from this fifteen-year portfolio review of gender coverage in World Bank infrastructure operations presents. The first is evidence of significant momentum in the use of gender methods, especially gender analysis and consultation leading to actions. The share of projects that featured a gender method of any kind rose from 14 percent of projects in 1995 to 36 percent of projects by the year 2009. Also good news, the share of projects with gender activities—or the projects that were likely to be addressing gender dimensions the most substantively—jumped from 4 percent at the start of the review to 25 percent by the end. Furthermore, many projects added gender actions during implementation based on local needs.

A less promising finding is that some of the projects that took on board gender measures were not able to implement some of the actions. Thus, while important progress should be noted, there remains important scope for continued improvement in both the coverage and quality of gender inclusion in infrastructure projects. Five lessons emerge from these findings that have important implications for infrastructure policy and programs.

1. There is now extensive documentation indicating how infrastructure projects that supported local women's and men's meaningful participation improved project effectiveness, efficiency, and sustainability. Section II presents an array of innovative actions that enabled projects to better understand women's and men's needs and priorities, and that marshaled diverse local contributions to foster the success of their projects. Some may view poor women's and men's participation as outside the World Bank's mandate, experience, and competence. But decentralized infrastructure projects that need to reach disadvantaged groups may encounter significant problems of sustainability and coverage if delivered without the full participation of local women and men. A review of 12,000 standpipes in 49 developing countries around the world showed that when national water agencies assumed maintenance responsibilities, the standpipes broke down 50 percent of the time; when communities control their maintenance, these rates plunge to 11 percent (Narayan 1995).

The importance of incorporating gender issues is not only to reach women, but to reach *all* beneficiaries that are targeted by the investment. People are not one homogeneous group, however, but are formed of various social groups, men and women, young and old, poorer and better off, and so forth. To design and deliver infrastructure services effectively, service providers need to know their real clients—the various social groups, and their needs, constraints, and preferences. This is the case for both centralized and decentralized services. In many sectors, women and men may have different needs, preferences, and opinions regarding services, and they may be affected differently by a lack of services and benefit differently by the provision of improved services. Knowing these gender differences helps to plan and implement projects that better match client preferences



Bolivian women and men work together on an urban development project.

and needs, and thus projects can be more effective and sustainable. Men and women are more likely to pay for services that match their preferences, and this helps sustainability as well.

The project experiences reviewed in section II help to explain these striking results. If women and men think their participation can make a difference, they spend the time. They get involved.

However, women's time

constraints combined with inequitable gender norms surrounding economic and civic participation mean that in very many contexts women likely will need extra support to engage meaningfully. But one finding to emerge from the portfolio review is that women not only have a great stake in getting infrastructure delivered and keeping it maintained, they may also be the most trusted in many communities to get these jobs done.

2. Difficulties with the implementation of gender methods mean that women's and men's equal inclusion in project benefits needs to be a guiding objective throughout the design and delivery of projects. There are many signs pointing to the fact that implementing gender methods can be challenging, and use of a more explicit results framework at the outset maybe necessary for more successful inclusion of gender goals and methods. Also difficult, a comparison of project planning and completion reports suggests that a sizeable share of projects plan to apply gender methods, but they subsequently drop them during implementation. In addition, numerous projects employ gender analysis and consultations but there is no indication of how these inputs may have shaped actual project activities. Also difficult, few projects incorporated gender dimensions into project supervision and evaluation. Under these circumstances, the gender methods will remain a token and ineffective toolkit unless the meaningful inclusion of women as well as men is a clear and overriding goal with implications for all phases of projects.

The Nepal rural water and sanitation project and the Bangladesh rural energy project described in section II both established women's empowerment as an overriding goal in their project development objectives. The projects then reaped strong synergies by applying diverse gender methods, including gender analysis and consultations with women that then informed targeted gender activities. Both projects also involved close supervision and evaluation of their diverse components to support gender equality

and women's empowerment. This meant that important lessons on integrating gender could be applied to follow-up projects in the two countries. The consistent attention to gender throughout the projects also sent clear signals to project staff and participating communities that the activities targeting women mattered.

3. Projects with gender dimensions require specialist staffing, flexible designs, and close monitoring. Interventions that cannot be standardized to serve and reach the needs and preferences of diverse social groups are inherently unpredictable. There are simply too many local complexities and dynamics to factor into project plans to ensure that they will work as intended.³⁵ This includes, for instance, decentralized water or energy systems, urban upgrading schemes, or rural road construction and maintenance activities. These types of projects require mechanisms that enable the intended beneficiaries to tailor the interventions to their needs and capacities, and to hold service providers accountable to results. In the absence of strong local-level institutions that support participatory development and good governance, however, measures such as social and gender assessments, inclusive consultations, participatory project activities, and strong monitoring and evaluation systems provide second-best alternatives for getting services delivered successfully.

The design of activities that foster meaningful participation of women and men from different social groups requires an understanding of the local social, institutional, and cultural context, and the relevant gender-related social patterns. The best projects build on mutual assistance traditions and the most trusted local leaders and organizations, working through them to increase and sustain women's and men's participation. It is often necessary to strengthen the capacity of NGOs and women's organizations to mobilize communities in ways that reach the most disadvantaged groups, and to provide capacity building (in areas such as leadership, literacy, and strategic planning) in order to enable broad-based participation in infrastructure decision-making and management. The best projects also forge new partnerships and capacities for participatory development and gender inclusion between governmental implementing agencies and women's and men's intermediary and grassroots associations.

4. Infrastructure projects seem to provide promising contexts for pursuing women's empowerment and gender equality. By applying gender methods systematically, infrastructure projects can reduce at least three significant barriers that fuel gender inequalities: women's scarce free time; their exclusion from many, and certainly the most promising, local economic opportunities; and their lower presence, if not absence altogether, in well-resourced networks and important decision making arenas. The few impact evaluations available suggest that by hitting on all of these fronts simultaneously, the projects can sometimes contribute to breakthroughs in women's lives in ways that interventions focusing on just one area may be unable to do. Clearly, however, the wider enabling environment is also important. The governments of Nepal and Bangladesh, for example, have declared

women's empowerment as a leading objective, and other complementary forces are likely to have contributed importantly to the project outcomes highlighted above.

Findings from the field of innovation diffusion reveal that the early adopters who benefit the most, say from a new technology or business practice, tend to be male, better off, more educated, and more endowed with advantageous social networks beyond their localities (Rogers 1995). The early adopters are also more likely to access new opportunities opened up by an innovation and to derive its benefits for longer periods. The projects with extensive gender coverage proactively strengthened women's individual and collective assets and capabilities in strategic areas of their lives, and they did this when new opportunities created by the infrastructure made it valuable for women to get in on the ground floor, and perhaps easier for projects to reduce gender inequalities. The evidence basis for these processes is still weak and limited to a small set of projects, but they seem to be promising areas for further investigation. Of relevance for project staffing as well as project development objectives, the innovation literature also signals the importance of women's participation and gender goals upstream in the design phase.

5. The time is ripe for the World Bank to make a major investment in ensuring that women as well as men can shape and benefit fully from infrastructure projects. World Bank infrastructure lending is poised to grow significantly in the period ahead, providing the global community of nations with a strategic opportunity to invest in gender equality and women's empowerment.

Nevertheless, initiatives to mainstream gender in infrastructure operations face numerous competing priorities (see box 3 below). Human and financial resources will both need to grow if the World Bank is to rise to President Zoellick's challenge of becoming a leader in gender mainstreaming. The two periods in the portfolio review with the strongest performance on gender coverage closely trailed the launch of new strategies and trust funds to advance gender. Although the trust funds were limited, they leveraged significant action. Many of the projects with the best gender coverage in the portfolio received trust fund support. These resources are currently too limited, however, to redirect the large and rapidly expanding infrastructure portfolio around the gender agenda.

Unfortunately, there are few shortcuts to building commitment, capacities, and constituencies in the World Bank and client countries that support women's effective engagement in infrastructure operations. Strong management support and adequate staffing are necessary. Gender input into project design is not enough. Hands-on technical assistance is needed to assist implementing agency staff in the delivery, monitoring, and evaluation of gender components.³⁸ The best overall regional performer, South Asia, was buttressed by a strong group of social development and gender staff who were out in the field playing a leadership role. In the final years of the review, East Asia and the Pacific, Middle East and North Africa, and Sub-Saharan Africa also greatly increased their attention to gender—

BOX 3. Challenges Faced by World Bank Infrastructure Task Teams

Interviews conducted for the portfolio review identified five challenges faced by World Bank task teams in integrating gender in infrastructure projects:

Time constraints: Task Team Leaders in the infrastructure sectors are faced with the tension between the timely project preparation within the allotted timeframe, and the time required for consultations and social and gender analysis. Within tight timeframes, the mandatory analyses, such as those for procurement, financial management and safeguards, take precedence over social and gender analysis. While evidence indicates that participatory, inclusive approaches are more sustainable, they are also more management and resource intensive. The perception of many infrastructure staff is that addressing social and gender issues increases the complexity of projects that are already challenging. In the energy sector, household energy – an important subsector with significant gender issues – is seen as too labor-intensive, particularly the need for on-the-ground capacity, and it is considered too small scale (Blackden 2008).

Financial constraints: There are limited resources available for social and gender analyses of infrastructure projects. Task teams are often asked to address multiple, competing themes (e.g. gender, HIV/AIDS, climate change, governance) with no extra funding. Client countries are reluctant to invest loan funds in social and gender activities. The 2005 evaluation of the GENFUND outcomes identified the lack of Bank budget for gender work in operations and noted that as a cross-cutting issue there is often no operational or analytical work to which staff can charge time (Tomqvist and Lam 2005). The Gender Action Plan funds are extremely valuable and have produced significant changes in a few projects. However, in the context of the large and growing infrastructure sector, they are not adequate to institutionalize gender integration.

Expertise constraints: Country level expertise in gender and other social dimensions of infrastructure is usually very limited. Social Development staff are most often deployed to address narrowly defined social safeguards, not gender issues. The dramatic increase in Bank lending for infrastructure is likely to intensify this limitation in the use of social development skills in project design.

Client country reluctance: Gender and infrastructure is often a “hard sell” to ministers of infrastructure and other government officials in client countries. Decision-makers often lack gender awareness. The social dimensions of infrastructure are rarely a priority and are viewed as marginal. Social development counterparts are rare in infrastructure agencies.

Few incentives for infrastructure staff to integrate gender: The reward structures that enable infrastructure staff to advance within their organizations focus largely on the economic bottom line rather than the social bottom line -- gender equity and social inclusion. The GENFUND evaluation noted that there were no organizational rewards for innovative gender work (Tomqvist and Lam 2005). The 2008 gender portfolio review of Energy Sector Management Assistance Program (ESMAP)³⁶ had similar results. Energy task team leaders stressed that lending carries more weight than addressing the impact of energy projects on poor people; and the size of lending matters.³⁷



Information communication technologies offer opportunities for women and men in Africa.

World Bank

and supportive managers and dedicated staffing in the field and headquarters are important to this progress as well.

Below are additional approaches that can help:

- *Develop a Business Plan with targets for Accelerating Gender Integration into SDN Operational Work*, especially for infrastructure and environment to achieve sustainable results. Within SDN, the Agriculture and

Rural Development Department (ARD) was able to enhance gender integration into its portfolio by developing a plan and taking concerted efforts; such as establishing a Gender and Rural Development Thematic Group, drafting of thematic gender guidance notes and sourcebooks; annual portfolio monitoring, documentation and dissemination of monitoring results; and capacity building of staff. SDN should follow the successful lessons from ARD, and develop and implement a Business Plan with targets.

- *Integrate gender into results framework* to hold World Bank managers, client governments, and implementing agencies accountable for infrastructure impacts on poor women and men and other often excluded groups. In some cases, it may be useful to develop gender action plans with indicators to guide the integration of gender dimensions throughout the project.
- *Documentation and dissemination of good practices and research* that catalyze learning and action. Given competing priorities and scarce time, project planners need to be able to call on social development and gender experts to assist them. Unfortunately, toolkits do not seem to be able to substitute for this technical backstopping, although shorter, more sector-focused guides seem to be more useful.³⁹
- *Integration of gender and infrastructure across operational activities* is needed, including upstream into country assistance strategies and country gender assessments as well as into sectoral and regional analytical work, strategies, poverty and social impact assessments, environmental and social impact assessment,

environmental management plans, and resettlement action plans. This requires development of Guidance Notes and capacity building of infrastructure and social development specialists on gender integration. *Capacity building for infrastructure implementation agencies* is perhaps the most critical for success on the ground. The challenge is to reach not only infrastructure related ministries, but also infrastructure businesses in the private sector as well as unions, professional associations, NGOs, and other infrastructure-related institutions.⁴⁰

- *Awards for excellence to task teams* in delivering projects that build women’s capacities to influence and benefit from infrastructure development.

A review of gender and economic analyses finds that investments in gender equality and women’s empowerment makes sense on efficiency grounds: “increases in opportunities for women lead to improvements in human development outcomes, poverty reduction, and—although evidence on this last point is relatively weak—potentially accelerated rates of economic growth” (Morrison, Raju and Sinha 2007: 1). The business case for addressing gender issues in infrastructure is not only efficiency but effectiveness and sustainability, and this requires tailoring services to the needs and preferences of both men and women. Aside from this instrumental value of empowerment, women and girls who can walk with dignity, feel respect, and live without fear is intrinsically valuable to all societies. Infrastructure investments would do well to contribute to this.



Ethnic minority children in Lao Cai Province, Northern Vietnam, walk to school on a road maintained by mothers.

Le Thi Xuan Nguyen/World Bank, Hanoi

ENDNOTES

¹ On April 11, 2008, for example, Mr. Zoellick announced six new commitments on gender equality around issues of agricultural development, commercial credit access, young women's economic development, a private sector leaders forum, and increased IDA investments.

² The review includes 578 IBRD projects, 571 IDA projects, and 97 projects funded with grants. The data on grants in 2009 was not available at time of analysis.

³ The budget data provided in PADs is often very general. Projects that included line items were financing inclusive consultations, targeted gender activities, and sex-disaggregated M&E.

⁴ Also noteworthy, the small grants leveraged additional resources in 70 percent of the activities funded, and 57 percent of the activities informed World Bank investments (Lomqvist and Lam 2005).

⁵ GAP Third Progress Report, April 2010.

⁶ By comparison with other regions where the World Bank works, women in Eastern Europe and Central Asia are more integrated into the education system and labor markets. Nevertheless, there does seem to be scope for greater action given signs that increased gender inequalities accompanied the transition, and problems of women's exclusion and vulnerability persist in some Central Asian countries (Sattar 2008, Paci 2002).

⁷ See Van Willikin 2002 and Basu 2002 for discussion.

⁸ The work in Papua New Guinea, for example, created arenas for women's voices to be heard by mining companies, and led to the establishment of gender desks in the mining companies, and the adoption of a Women and Mining National Plan by the government.

⁹ A total of 97 projects were funded with grants.

¹⁰ See Wiczorek-Zeul (2009, 4). It is important to note that this IDA review assessed projects with different criteria. The score for each project based on an average for ratings of quality in four areas: the project's use of gender analysis, gender actions, and gender in M&E, and implications of the project for women's empowerment.

¹¹ Another contributing factor may be that infrastructure occupations, which are heavily in engineering, are dominated by men compared to the social sectors (Sida 2004).

¹² For rich treatments of the importance of and wider evidence for addressing gender in infrastructure, see Module 9 of the *Gender and Agriculture Sourcebook* (World Bank 2008) and chapter 5 of Grown, Rao Gupta and Kes's (2005) report for the United Nations Millennium Project.

¹³ As of 2008, 11 percent of the chairpersons and 72 percent of the treasurers were women, which has contributed to the effectiveness and efficiency of the program (Fund Board 2008).

¹⁴ Groups used NRs 8,964,400 (US\$129,000) provided by the Fund Board and saved an additional amount of NRs 1,976,056 (US\$28,000) of their own money.

¹⁵ A quantitative evaluation of 121 completed rural water supply projects in 49 developing countries across regions found that the "proportion of water systems in good condition, overall economic benefits, percentages of target population reached, and environmental benefits rose significantly in projects with participation" (Narayan 199 5, 1). A 15-country water and sanitation portfolio review by Gross, Van Wilk and Mukherjee (2000) also found participatory projects to be more sustainable.

¹⁶ This project was building on initiatives in the first project that increased the participation of women in local transport planning after a survey revealed that women dedicated three times of much effort and twice as much time as men in their daily travel and transport tasks (Riverson et. al. 2005).

¹⁷ Other benefits reported include women's increased participation in other community affairs, girls increased school enrollment (with reduced time required for collecting water), and reduced risk of rape and attack from wild animals, including snakes, while fetching water (World Bank 2002).

¹⁸ It also raised the school enrollment of girls from 30 to 51 percent.

¹⁹ For further information on the project and many of the details reported here, see World Bank (2006) and LLanos (2008).

²⁰ There is also growing evidence that groups with both men and women perform better. Econometric analysis of determinants of success in 104 peasant cooperatives in Paraguay found that cooperatives featuring women's effective participation enhanced their performance (Molinas 1998).

²¹ This is the Peru National Rural Water Supply and Sanitation Project (FY2003-11). Project documents cited that women had more restricted mobility than men and thus more difficulty servicing pumps, but did not indicate whether this was due to their greater time constraints or gender norms that may restrict their movements, or perhaps both.

²² Data on the sex of the project managers were not available, but of the approximately half of the water user managers in Piura who attended a training workshop for the project, nearly 40 percent were women (Caballero 2009).

²³ A comparative study (Westermann, Ashby and Pretty 2005) of women's and men's social capital in the field of natural resource management found women's groups to be distinguished by greater capacity for forming autonomously (e.g. without external incentives), sustaining cohesion and collective action, managing conflict and problem-solving, and working pro-actively to conserve resources. Rather than attributes of greater altruism, as some literature has suggested, the authors (2005, 1795) conclude: "This situation more likely reflects women's potentially higher dependence on CPR [common property resources] and their limited access to external inputs."

Data on the sex of the project managers were not available, but of the approximately half of the water user managers in Piura who attended a training workshop for the project, nearly 40 percent were women (Caballero, 2009).

²⁴ Mayra Buvinic's seminal 1984 article, "Projects in the Third World: Explaining their Misbehavior," raised the issue of how gender stereotypes about women's economic participation led to unproductive development projects that further marginalized women participants. Since then, numerous studies and evaluations have raised critiques of Women in Development (WID) and Women and Development (WAD) approaches to targeting, calling for the need to analyze gender relations and takes men's and women's different needs, roles and responsibilities into account. For somewhat more recent reflections on the difficulties of delivering interventions that genuinely reach women, see Cheryl Doss's twenty-five review of gender and agriculture technology programs in Africa. Doss found that men typically move into and take over the most profitable crops, including crops that may be traditionally produced by women but which a new technology or market opening has made more lucrative. She presses the large agricultural research community to appreciate that the impacts of new technologies are subject to diverse and changing forces related to quite local factors shaping control over labor, land and other farming inputs. Moreover, outcomes are unpredictable: "Often those individuals with greater power and access to resources are able to take initial advantage of a change in circumstances, regardless of who are the targeted beneficiaries" (2001, 2076).

As of 2008, 11 percent of the chairpersons and 72 percent of the treasurers were women, which has contributed to the effectiveness and efficiency of the program (Nepal Rural Water Supply and Sanitation Fund Development Board 2008).

²⁵ Even rarer are datasets and analyses of social group differences among women. However, when empirical studies are able to account for variations in women's education, marital status, age, class, race, ethnicity, caste, or religion, these differences very often provide a fuller understanding of development outcomes.

²⁶ A total of 78,000 person years of employment were created by the civil construction and maintenance, out of which 25 percent were filled by women. Improved roads also contributed to a 1.5 percent increase in food consumption in the project area and an increase in employment diversification from agricultural to non-agricultural employment. Poverty was reduced in the project area by two percent, as compared with a four percent increase in poverty in the control areas (World Bank 2003i).

²⁷ Women's participation in road work microenterprises increased from 3.5 percent in 2001 to 24 percent in 2006. Women's participation in micro-enterprises and local development window activities (40 percent) exceeded initial targets (World Bank 2007c).

²⁸ Malhotra and Schueler (2005, 83) provide a useful framework and set of indicators that include variables such as changes in women's access to and visibility in social spaces, and in women's involvement in local politics.

²⁹ See, for example, Malhotra and Schuler's review (2005, 82). Among other issues, they flag studies indicating that contextual conditions can be very important for outcomes. For instance, they indicate that studies in Bangladesh are showing more favorable outcomes for women than studies in India, Bolivia, and Cameroon.

³⁰ The project has become a model for other low cost rural energy projects. This model has been scaled up in Bangladesh rural electrification projects, where women have decision making roles in rural cooperatives, function as treasurers and technicians. The approach has also been replicated in India and widely disseminated by UNDP (Ahmad 2009, ESMAP 2004). The public-private partnership and use of rural women's networks to diffuse the new technology is very similar to the innovative model launched with the Grameen Village Payphone.

³¹ Lallement, D. (2009) *An Assessment of Women's Opportunities in Renewable Energy Technology Projects*.

³² See Morrison, Raju and Sinha (2007, 18-22) for a useful review of this literature.

³³ For a helpful overview of the gender and social capital literature see Westermann, Ashby and Pretty (2005). For discussions of barriers facing women's effective participation in participatory and gender-targeted schemes, see Agarwal (2001 and 2000), Molyneux (2002), and Goetz (1996). See Healy et. al. (2006) for useful discussion that women's local networks may be primary oriented to providing much needed social support services, much of which may be diffuse and informal and poorly recognized in the social capital literature.

³⁴ See Narayan, Prennushi and Kapoor (2009). In the other 240 Indian villages visited for the study (across West Bengal, Assam and Uttar Pradesh), community groups have helped people cope with daily life and provide solidarity, but these groups have not benefited from as much state support and do not yet seem to be contributing significantly to poverty reduction.

³⁵ See Pritchett and Woolcock (2004) for a thoughtful discussion of when participatory approaches may be more or less necessary for effective service delivery.

³⁶ The Energy Sector Management Assistance Program (ESMAP) is a global technical assistance program that provides innovative solutions to governments and the private sector and focuses on pre-investment activities. It complements the work of other development partners and private sector institutions. ESMAP activities are World Bank executed . (<http://www.esmap.org/>).

³⁷ The five challenges presented here are consistent with those of other gender portfolio reviews in transport and energy (Blackden 2008, Clarke 2007).

³⁸ For example, the World Bank Africa Transport Department has "embedded" social scientists among the staff to ensure that social inclusion and gender issues are addressed. This has influenced project designs as well as monitoring and evaluation and resulted in a World Bank Social Inclusion Award for the Ghana Urban Transport Project in 2008. Europe and Central Asia added a social development person on the transport team more recently. GAP funding is supporting the Capacity Building in Gender Mainstreaming in Transport Initiative which provides sector-knowledgeable gender technical assistance to selected transport projects during implementation.

³⁹ An evaluation of UNDP gender mainstreaming found that excellent toolkits on *Mainstreaming Gender in Water Management* and *Gender and Energy for Sustainable Development* have been disseminated but there is little evidence of their use in operations (UNDP 2006). Similarly, a Sida evaluation of agency gender mainstreaming found "a multitude of tools and instruments but few examples of good practice on the ground" (SIDA 2004).

⁴⁰ The Africa Region Transport Division of the World Bank is incorporating social development and environment staff in project implementation units and transport agencies. The Latin America and Caribbean Region is incorporating social and environmental specialists in rural agencies as a part of institutional reform. In the Second Rural Roads and Markets Project in Bangladesh, gender was mainstreamed in the Local Government Engineering Department (LGED), the government implementing agency for the project, through the recruitment of women community organizers and gender specialists; a Gender Forum within the Department; partnerships with NGOs and microfinance institutions for strategic planning, staff training, and mobilization; and gender awareness training for local government leaders and contractors.

REFERENCES

- Agarwal, Bina. 2000. "Conceptualizing Environmental Collective Action: Why Gender Matters." *Cambridge Journal of Economics* 24: 283-310.
- _____. 2001. "Participatory Exclusions, Community Forestry, and Gender: An Analysis for South Asia and a Conceptual Framework." *World Development* 29 (10): 1623-1648.
- Ahmad, Nilufar 2009. The Gender Action Plan: Implementation Status in Infrastructure Portfolio and Achievement towards Six New Commitments on Gender Equity. Report FY95-07. Internal Report. World Bank.
- Ahmad, Nilufar, 2009, Enhancing Women's Empowerment: Bangladesh Women's Electrification Project, presentation made at the Workshop on a Gender Sensitive Approach to Energy Projects, World Bank, April 7, 2009
- Appadurai, Arjun. 2004. "The Capacity to Aspire: Culture and the Terms of Recognition." In *Culture and Public Action*, ed. Vijayendra Rao and Michael Walton, 59-84. Stanford, CA: Stanford University Press.
- Asian Development Bank (ADB). nd. Checklist on Urban Development and Housing.
- Asian Development Bank. 2004. Lao PDR: Gender Poverty and the Millennium Development Goals.
- Barwell, Ian. 1996. Transport and the village: Findings from African village-level travel and transport surveys and related studies. World Bank Discussion Paper 344. Africa Region Series. Washington, D.C.: World Bank.
- Basu, Ananya. 2002. India: Evaluating Bank Assistance for Gender Equality in the 1990s. A Country Assistance Evaluation. World Bank Operations Evaluation Department. Washington DC.
- Blackden, C. Mark. 2003. "Too Much Work for Too Little Time: Gender Dimensions of Transport, Water, and Energy," Paper Presented at World Bank-sponsored Training event, Arusha, Tanzania, February 3-7, 2003.
- Boatman, Mette Kirstine Rohr & Vilaythong Chanthalin, 2009, Rapid Assessment of "Power to the Poor" Pilot Project, Lao PDR Rural Electrification.
- Caballero, Luz. 2009. *The Gender Experience in a Water and Sanitation Project: PRONASAR in Peru*. World Bank.
- Chattopadhyay, R., and E. Duflo. 2004. "Women as Policy Makers: Evidence from a Randomized Policy Experiment in India." *Econometrica* 72 (5): 1409-43.
- Chen, Marty Alter with R. Khurana and N. Mirani. 2005. *Towards Economic Freedom: The Impact of SEWA*. Ahmedabad: Self-Employed Women's Association.
- Chen, Wenling, Shomik Mehndiratta, Xiao Yun Li, Dianshong Shen, 2006. Lighting Up her Way Home: Using Participation Techniques to Improve Urban Transport Design in Liaoning Province, China, World Bank.
- Clarke, Clarke, Mari. 2007. Progress Report on Dissemination of Gender and Transport Good Practice. Internal Report Prepared for the World Bank Transport Anchor.
- Crochet, Jean Charles. 2009. Gender and Transport in Yemen. Presentation the Working Session for Transport Task Teams on Gender Mainstreaming. World Bank Transport Forum. April 3. Washington DC.
- Dickson, Eric. Nd. Community participation in Resettlement: An Alternative to Eviction. London School of Economics.
- Doss, Cheryl, R. 2001. "Designing Agricultural Technology for African Women Farmers: Lessons from 25 Years of Experience." *World Development* 29 (12): 2075-92.

- Ivens, Saskia. 2008. Does increased Water Access Empower Women? *Development* 51: 63-67.
- Fund Board. 2008. *Newsletter*, Year 9, Vol. 23. Nepal Rural Water Supply and Sanitation Fund Development Board.
- Gross, Bruce, Christine van Wilk, and Nilanjana Mukherjee. 2000. Linking Sustainability with Demand, Gender and Poverty: A Study of Community Managed Water and Sanitation Projects in 15 Countries. International Water and Sanitation Center.
- Grown, Caren. Geeta Rao Gupta and Aslihan Kes. *Taking Action: Achieving Gender Equality and Empowering Women*. New York and London: Earthscan and Millennium Project.
- Hausmann, Ricardo, Laura D. Tyson, Saadia Zahidi. 2009. *Global Gender Gap Report, 2009*. Geneva: World Economic Forum.
- Healy, Karen. Michele Haynes and Anne Hampshire. 2006. "Gender, Social Capital and Location: Understanding the Interactions." *International Journal of Social Welfare* 16: 110-18.
- Kabeer, Naila. 2001. "Reflections on the Measurement of Women's Empowerment." In *Discussing Women's Empowerment: Theory and Practice*. Sida Studies 3. Stockholm: Swedish International Development Cooperation Agency.
- Khandker, S., Bakht, Z and Koolwal, G. 2008. The Poverty Impact of Rural Roads: Evidence from Bangladesh. Policy Research Working Paper No. 3875. Washington, DC: World Bank.
- Llanos, Ruth. 2008. "Acompañamiento y Asistencia Técnica en Género a Proyecto de Desarrollo: La Experiencia del Proyecto Barrios de Verdad" DFID/World Bank/Unifem. http://www.wikigender.org/index.php/Gender5_Equality_in_Bolivia
- Lallement, Dominique. 2008. Evaluation of Women's Energy Cooperative in Char Montaz. Washington, DC: World Bank.
- Levy, H. 2004. Rural Roads and Poverty Alleviation in Morocco. Paper prepared for Scaling Up Poverty Reduction: A Global Learning Process and Conference, Shanghai May 25-27, 2004.
- Malhotra, A., & Schuler, S. R. (2005). "Women's Empowerment as a Variable in International Development." In *Measuring Empowerment: Cross-Disciplinary Perspectives*, ed. D. Narayan, 71-88. Washington, DC: World Bank.
- Mayoux, L. 2001. "Tackling the Down Side: Social Capital, Women's Empowerment and West African Micro-Finance." *Development and Change* 32 (3): 435-64.
- Mehndiratta, Shomik. 2008. Lighting Up Her Way: Addressing Gender Concerns Using Public Participation Techniques. Presentation at the Asia-Pacific Regional Meeting on Mainstreaming Gender Equality in Infrastructure Project. Panel on Taking Stock of Institutional Experience. 10-11 November 2008. Manila.
- Misra, K. and N. Kudva. 2008. "En(Gender) Effective Decentralization: The Experience of Women in Panchayati Raj in India." In *Planning and Decentralization: Contested Spaces for Public Action in the Global South*, ed. V. Beard, F. Mirafitab, and C. Silver, 175-87. New York: Routledge.
- Molinas, José R. 1998. "The Impact of Inequality, Gender, External Assistance and Social Capital on Local-Level Cooperation." *World Development* 26 (3): 413-431.
- Molyneux, Maxine. 2002. "Gender and the Silences of Social Capital." *Development and Change* 33 (2): 167-188.
- Morrison, Andy, Dhushyanth Raju and Nistha Sinha. 2007. "Gender Equality, Poverty and Economic Growth." *Policy Research Working Paper* 4349, Gender and Development Group, PREM, World Bank.
- Nam Theun 2 Power Company Ltd. 2007. Resettlement Action Plan. 2004. Social Development Plan.
- Nam Theun 2 Watershed Management and Protection Authority. 2004. Social and Environment Management Framework and Operational Plan.

- Narayan, Deepa. 1995. *The Contributions of People's Participation: Evidence from 121 Rural Water Supply Projects*. Environmentally Sustainable Development Occasional Paper Series No. 1. Washington, DC: World Bank.
- _____, Giovanna Prennushi and Soumya Kapoor. 2009. "People's Organizations and Poverty Escapes in Rural Andhra Pradesh." in *Moving Out of Poverty (volume 3): The Promise of Empowerment and democracy in India*. ed. by D. Narayan. Washington D.C. and Basingstoke: World Bank and Palgrave MacMillan.
- OECD Development Assistance Committee. 2004. *Why Gender Matters in Infrastructure*. Organization for Economic Development, Working Group on Gender Equality.
- Paci, Pierella. 2002. *Gender in Transition*. Human Development Unit, Eastern Europe and Central Asia Region, World Bank, Washington D.C.
- Panda, Pradeep; Gupta, Jayoti; Bulankulame, Indika; Bhatla, Nandita; Chakraborty, Swati; Duvvury, Nata. 2006. *Property Ownership & Inheritance Rights of Women for Social Protection-The South Asia Experience: Synthesis Report of Three Studies*. Washington, DC: ICRW.
- Pritchett, Lant and Michael Woolcock. 2004. "Solutions When the Solution is the Problem: Arraying the Disarray in Development." *World Development* 32 (2): 191-212.
- Pulley, Tulin et al, 2003, *Making Infrastructure Work for Women and Men in Bangladesh*, Asian Development Bank.
- Rathberger, E. (1990) "WID, WAD, GAD: Trends in Research and Practice." *The Journal of Developing Areas*. 24 (4). 489-502.
- Riverson, John, Mika Kunieda, Peter Roberts, Ngede Lewi, and Wendy Walker. 2005. *Challenges in Addressing Gender Dimensions of Transport in Developing Countries: Lessons from World Bank Projects* Rogers, Everett. 1995. *Diffusion of Innovations*. New York: Free Press.
- Ruiz-Abril, Maria Elena. 2002. *Gender in Urban Infrastructure Projects: the Case of the Caracas Slum- Upgrading Project*. World Bank, Latin America and the Caribbean Gender Unit.
- Sattar, Sarosh. 2008. "The Business Environment for Women in ECA." Workshop on Expanding Women's Opportunities through Entrepreneurship: Europe and Central Asia, Brussels, October 23, 2008, World Bank.
- Sida. 2004. *Integrating Gender Equality into Development Cooperation – Lessons Drawn from the Recent Evaluations by Sida and the European Commission*. Joint Seminar. Brussels, November 2003. *UTV Working Paper 2*.
- Tuhumwire, J. 2009. *Integration of Gender in the Mining Sector in Uganda*. Presentation at the Gender Seminar during World Bank Energy and Extractive Industries Week, March 2009.
- UNICEF and World Health Organization. 2008. *Progress on Drinking Water and Sanitation: Special Focus on Sanitation*. New York and Geneva.
- Van Wilkin, Warren. 2002. *India: Evaluating Bank Assistance for Social Development in the 1990s: a Country Assistance Evaluation*. World Bank Operations Evaluation Department. Washington D.C.
- Walker, Wendy et. al. 2005. *Ground Truthing: Mapping Mobility and Access in Rural Lesotho*. World Bank and Lesotho Ministry of Public Works and Transportation.
- Westerman, Olaf, Jacqueline Asby and Jules Pretty. 2005. "Gender and Social Capital: The Importance of Gender Differences for the Maturity and Effectiveness of Natural Resource Management Groups." *World Development* (33) 11: 1783-1799.
- Wieczorek-Zuel, Heidemaria. 2009. "IDA 16 and Gender Equality: Is a Breakthrough Possible?" *Gender Equality as Smart Economics: A World Bank Group Action Plan Newsletter*. Gender and Development Group, World Bank. www.worldbank.org/gender

World Bank, FAO, and IFAD. 2008. *Gender and Agriculture Sourcebook*.

World Bank, 2001, Project Appraisal Document, Tanzania: Mineral Sector Development Technical Assistance Project, Washington DC

World Bank. 2002. Project Appraisal Document United Republic of Tanzania Rural Water Supply and Sanitation Project. February.

_____. 2003. Implementation and Completion Report: Republic of Yemen Second Public Works Project. Washington DC

_____. World Bank 2004, Opportunities for Women in Renewable Energy Technology Use in Bangladesh, ESMAP, Washington DC.

_____. 2004. Project Appraisal Document for Nepal Second Rural Water Supply and Sanitation Project. Washington, D.C.

_____. 2005. Implementation Completion report, Senegal Sustainable Participatory Energy Management Project (PROGEDE), Washington DC

_____. 2005. Project Appraisal Document for a Proposed Grant and Guarantee on the Nam Theun 2 Hydroelectric Project.

_____. 2006. Project Appraisal Document for the Bolivia Urban Infrastructure Project. Washington, D.C.

_____. 2007. Update on the Lao PDR: Nam Theun 2 Hydroelectric Project.

_____. 2007a. Project Appraisal Document on Jordan Cultural Heritage, Tourism and Urban Development Project.

_____. 2007b. Project Appraisal Document for Niger Basin Water Resources Development and Sustainable Ecosystems Management Program.

_____. 2007c. Implementation Completion and Results Report for the Second Peru Rural Roads Project.

_____. 2008, Project Appraisal Document, Mongolia Mining Sector Technical Assistance Project, Washington DC

_____. 2008. Project Appraisal Document for Republic of Honduras Second Road and Rehabilitation Project.

_____. 2009, Project Appraisal Document, Yemen Rural Energy Access Project, Washington DC

_____. 2010. Infrastructure. Web page: <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20127296~pagePK:64257043~piPK:437376~theSitePK:4607,00.html> (accessed February 16, 2010)

_____. 2010, Project Appraisal Document, Senegal Sustainable Participatory Energy Management Project -II, Washington DC.

ANNEX 1: PROJECTS SELECTED FOR IN-DEPTH REVIEW

Fiscal year	Sector Board	Region	Country	Project Type	Proj ID	Project Title
FY95	Urban Dev.	AFR	Guinea-Bissau	IDA	P035915	Transport and Urban Infrastructure
FY96	WSS	SAR	India	IBRD	P010484	Uttar Pradesh & Uttaranchal Rural Water
FY96	WSS	LCR	Bolivia	IDA	P006206	Rural Water and Sanitation
FY96	Urban Dev.	SAR	Pakistan	IDA	P010478	North West Frontier Province-Community Infrastructure
FY96	Transport	LCR	Peru	IBRD	P037047	Rural Roads Rehabilitation and Maintenance
FY97	WSS	SAR	Nepal	IDA	P010516	Rural Water Supply & Sanitation
FY97	WSS	MNA	Yemen, Republic of	IDA	P043367	Taiz Water Supply Pilot
FY97	Transport	SAR	Bangladesh	IDA	P009518	Second Rural Roads & Markets Improvement
FY98	Urban Dev.	MNA	Jordan	IBRD	P035997	Flood Protection
FY98	WSS	AFR	Lesotho	IBRD	P001409	Second Tourism Development.
FY99	Urban Dev.	MNA	Yemen, Republic of	IDA	P060132	Hiland Water Project
FY99	Transport	EAP	Lao People's Democratic Republic	IDA	P042237	Fourth Rural Water Supply & Sanitation
FY99	Transport	SAR	Bangladesh	IDA	P009524	Second Public Works
FY99	Transport	SAR	Bangladesh	IDA	P065148	Provincial Infrastructure
FY01	WSS	SAR	India	IDA	P055454	Dhaka Urban Transport
FY01	WSS	LCR	Ecuador	IBRD	P049924	Kerala Rural Water Supply & Sanitation
FY01	WSS	MNA	Yemen, Republic of	IDA	P005906	Public Works & Employment Creation
FY01	Transport	LCR	Peru	IBRD	P044601	Rural Water Supply & Sanitation
FY02	WSS	SAR	India	IDA	P050653	Rural Water Supply & Sanitation
FY02	Urban Dev.	EAP	Indonesia	IDA	P072852	Second Rural Roads Project
FY02	Energy Mining &	SAR	Bangladesh	IDA	P071794	Rural Water Supply
FY02	Transport	AFR	Mozambique	IDA	P001785	Karnataka Rural Water Supply & Sanitation II
FY03	Transport	AFR	Ethiopia	IDA	P044613	Second Urban Poverty Project
FY03	Transport	SAR	Bangladesh	IDA	P071435	Rural Electrification and Renewable Energy Development.
FY04	WSS	SAR	India	IDA	P073369	Roads & Bridges Management and Maintenance Project

Fiscal year	Sector Board	Region	Country	Project Type	Proj ID	Project Title
FY04	WSS	SAR	Bangladesh	IDA	P086661	Road Sector Development Project APL1
FY04	Urban Dev.	EAP	Vietnam	IDA	P070197	Urban Upgrading
FY04	Transport	LCR	Peru	IBRD	P035740	Lima Transport Project
FY04	Transport	AFR	Kenya	IDA	P082615	Northern Corridor Transport
FY05	Urban Dev.	EAP	Indonesia	IDA	P084583	Third Urban Poverty Project
FY05	WSS	EAP	Vietnam	IDA	P073763	Water Supply Development.
FY05	Energy Mining &	EAP	Lao People's Democratic Republic	IDA	P076445	Nam Theun 2 Hydroelectric Project
FY05	Global ICT	SAR	Sri Lanka	IDA	P081771	E-Sri Lanka Development
FY05	Energy Mining &	AFR	Sierra Leone	IDA	P086801	Bumbuna Hydroelectric Environment and Social Management
FY05	Energy Mining &	ECA	Romania	IBRD	P087807	Mine Closure Environment & Socio-economic Regeneration
FY06	Urban Dev.	EAP	Indonesia	Grant	P096647	Aceh Urban Poverty Project
FY06	WSS	MNA	Morocco	IBRD	P086877	Rural Water Supply and Sanitation
FY06	Urban Dev.	EAP	Indonesia	Grant	P100218	Aceh-Infrastructure Reconstruction Enabling Program
FY07	Urban Dev.	LCR	Bolivia	IDA	P083979	Urban Infrastructure Project
FY07	WSS	EAP	China	IBRD	P095315	Western Provinces Rural Water Supply, Sanitation & Hygiene
FY07	Urban Dev.	EAP	Indonesia	Grant	P101785	Uttaranchal Rural Water Supply & Sanitation
FY07	WSS	SAR	India	IDA	P083187	Punjab Rural Water Supply & Sanitation
FY07	WSS	SAR	India	IDA	P090592	West Java and Yogyakarta Community Based Settlement Rehabilitation.
FY07	Urban Dev.	EAP	Indonesia	Grant	P103457	Integrated Transport
FY07	Transport	AFR	Lesotho	IDA	P075566	Decentralized Rural Transport Project
FY07	Transport	LCR	Peru	IBRD	P095570	Road Maintenance
FY07	Transport	LCR	Paraguay	IBRD	P082026	Second Mining Sector Institutional Strengthening Technical Assistance
FY08	Energy Mining &	EAP	Papua New Guinea	IDA	P102396	Urban Poverty Reduction Program
FY08	Urban Dev.	MNA	Djibouti	IDA	P088876	National Program for Community Empowerment in Urban Areas (PNPM UPP)
FY08	Urban Dev.	EAP	Indonesia	IDA	P096921	Nicaragua Rural Water Supply and Sanitation Project
FY08	WSS	LCR	Nicaragua	IDA	P106283	Priority Infrastructure Investment Project
FY08	Urban Dev.	EAP	Vietnam	IDA	P086508	Integrated Energy Services

Fiscal year	Sector Board	Region	Country	Project Type	Proj ID	Project Title
FY08	Energy & Mining	LCR	Mexico	Grant	P095038	Lake Titicaca Local Sustainable Development
FY08	Urban Dev.	LCR	Bolivia	IDA	P101426	Mining Sector Technical Assistance Project
FY08	Energy & Mining	EAP	Mongolia	IDA	P108768	Agriculture & Infrastructure Development Project
FY08	Transport	AFR	Liberia	IDA	P104716	Second Road Reconstruction & Improvement
FY08	Transport	LCR	Honduras	IDA	P109058	Pro-Routes Project
FY08	Transport	AFR	Congo, Democratic Republic of	IDA	P101745	West Africa Regional Transport and Transit Facilitation Project
FY08	Transport	AFR	AFR	IDA	P079749	Port-City of Limon Integrated Infrastructure Project
FY08	Transport	LCR	Costa Rica	IBRD	P085539	Fourth Roads Sector Development
FY09	Transport	AFR	Ethiopia	IDA	P106872	Dakar Diamniadio Toll Highway Project
FY09	Transport	AFR	Senegal	IDA	P087304	Transport Sector Project
FY09	Transport	AFR	Ghana	IDA	P102000	Integrated Transport
FY09	Transport	AFR	Botswana	IBRD	P102368	Rural Energy Access
FY09	Energy & Mining	MNA	Yemen, Republic of	IDA	P092211	Water & Sanitation Sector Modernization
FY09	WSS	LCR	Paraguay	IBRD	P095235	Second Water & Sanitation Sector Investment
FY09	WSS	MNA	Tunisia	IBRD	P095847	Sustainable Management of Mineral Resources
FY09	Energy & Mining	AFR	Tanzania	IDA	P096302	Additional Financing Mali Household Energy and Universal Access Project
FY09	Energy & Mining	AFR	Mali	IDA	P111018	Public Works and Urban Management Project
FY09	Urban Dev.	AFR	Burundi	IDA	P112998	Public Works and Urban Management Project

ANNEX 2: HIGHLIGHTS OF SOME INNOVATIVE APPROACHES AND GOOD PRACTICES

Energy sector

Bangladesh: Opportunity for Women in Renewable Energy Technology (1999-2002)

An ESMAP-financed project piloted a community-driven, decentralized rural electricity delivery service, operated as a micro enterprise cooperatively owned by women, on the coastal island of Char Montaz, Bangladesh. The objectives of the project were to: increase opportunities for women in commercial energy sector; improve the quality of life in remote, marginalized areas by creating employment and income opportunities through technology transfer and electrification; and provide an expandable, replicable business model for off-grid service delivery. A Coastal Electrification and Women's Development Microenterprise was established. The 35 cooperative members received skill development in technology for manufacturing and sale of energy products. They also received technical assistance in the operation of small and medium enterprise. Working together, the women were able to provide battery charged lamps and solar home systems (SHS) to thousands of households, shops and boats outside the power grid. The project was linked to microfinance institutions so that poor households could obtain modern electrification.

The project has demonstrated that the private sector can make a significant contribution to rural electrification in Bangladesh. It also verified that such efforts can be operated by rural women and provide good service at an affordable price. The project has empowered the cooperative members as evidenced by their increased income and knowledge, use of modern technology and business management practices, change in traditional roles, enhanced decision-making authority in their households and community, and improved performance in production, marketing, and sales. Women's role in bringing light to communities changed gender norms and community perceptions of women's capabilities, has given the women greater confidence and improved their status in the community. The project has become a model for other low cost rural energy projects. This approach has been replicated in other countries and lessons were taken into the Bangladesh Rural Electrification and Renewable Energy Development Project (RERED). (Ahmad 2009, World Bank 2004, where women have decision making roles in rural cooperatives, work as treasurers, accountants and technicians.)

Skills development, technology transfer, public-private partnerships, and use of rural women's networks to disseminate new technology have been vital to the success of this initiative. An assessment revealed that this women's cooperative has become a medium-

sized enterprise, employing 170 staff and serving most of the coastal areas (Lallement 2008). As a result, Char Montaz is now a bustling commercial area, and communities acknowledge the women's cooperative as the initial spark for modernization. A scaled-up version of the project model has been used in other low-cost rural energy projects and replicated in other regions.

Bangladesh Rural Electrification and Renewable Energy Development Project (FY2002-10)

The Rural Electrification Board (REB) implements the grid system through a rural cooperative mechanism, while the off-grid component is being implemented by both REB and the Infrastructure Development Company (IDCOL) and their 23 partner NGOs. The off-grid system, mostly solar, uses a microfinance system that supports the initial high connection cost, and consumers pay by installments over a period of two years. IDCOL and some of their partners also introduced an enhanced gender-responsive energy program that responds to the total household energy. This new strategy focuses on (i) electricity for lighting and productive uses; (ii) clean cooking solutions, including biogas and improved cookstoves; and (iii) enhancing economic and social opportunities for women and men. The program targets both men and women in skills development training; as a result, many women are now working in the energy sector. REB claims that by reserving certain jobs at REB (e.g., billing, collection and accounting) for women, cost recovery and governance has improved. To meet growing demand for solar home systems (SHS), the off-grid program is installing nearly 25,000 systems every month. The 97-percent repayment rate for both grid and off-grid components is one of the highest in the developing world. IDCOL's partner organizations - Grameen Shakti and other NGOs have promoted good income-earning opportunities for village women by training them as technicians. In addition, thousands of village women are now employed in newly established textile, knitting, and garment industries powered by grid electrification

Lao PDR Rural Electrification project (2006-2012) and Power to Poor Pilot program (2008-2009)

The Lao PDR Rural Electrification project did not include gender-responsive actions at the initial stage. During the mid-term assessment of the project, a survey revealed that around 40 percent of rural households were not connected as they could not afford connection fees (about \$100) to the rural grid. These households represented the poorest group of beneficiaries, and 43 percent of the households were headed by women. This led the project team to design a pilot component, known as Power to the Poor, which targeted the poorest, especially the women-headed households. With initial support from the Global Environment Facility (GEF), Aus-AID, and Gender Action Plan funds, the national electricity company, EDL, set up a revolving loan fund to provide these households interest-free loans to cover 80 percent of their connection and wiring costs. All women-headed households were eligible for support. Within a few years, electrification rates in pilot areas increased by about half (from 63 to 90 percent) and

more than a quarter for women-headed households (from 75 to 96 percent) (Boatman, J. et al. 2009).

Mali Household Energy and Universal Rural Access (HEURA) Project

This project initiated efforts to increase the access of isolated low income populations to basic energy services, and it included expansion of the Multifunctional Platforms, facilitation of cooperatives for rural wood market, nurseries and improved cookstoves. The multifunctional platform, initiated by UNDP, consists of a diesel engine and various associated tools: grinding mills, huskers, alternators, battery chargers, pumps, welding stations, and carpentry equipment. It can also be used to distribute water and electricity. The results from Sub Saharan Africa indicate that this simple machine have helped save time and drudgery for women, and to generate additional income. The monitoring results of HEURA indicate that women represent about 45% of the established cooperatives in rural wood market membership, and women are the key providers of nurseries. About 422,000 improved stoves have been distributed out of the 510,000 targeted by the end of the project. The multifunctional platforms generally frees up 2-6 hours of a rural women's day. It also provides income-generating opportunities, raising owners' annual incomes by US\$40 to US\$100. These platforms also provide electricity to health centers in rural areas and small public lighting provides security of movement, children's education, and markets to have longer business hours (<http://www.ptfm.net/mfpwhat.htm>).

Senegal Sustainable Participatory Energy Management Project (FY1997-2004)

The objective of the project was to meet an important part of the rapidly growing urban demand for household fuel without the loss of forest cover or the ecosystem's sequestration potential and biodiversity. To achieve this, the project implemented and monitored 300,000 hectares of environmentally sustainable community-managed forest resource systems, promoted inter-fuel substitutions and private sector and NGO based improved stoves initiatives, strengthened the institutions involved in management of the sector and promoted civil society participation in the operation. Community-base micro enterprises were established including beneficiary-operated improved carbonization units, apiculture cooperatives, collective and individual agricultural diversification units/systems; livestock and poultry-raising, arts and crafts units, etc. While woodfuel and large livestock activities were mostly led by men, all other activities were generally managed and operated directly by women (groups and individually); The project established a sustainable incremental income generation base (wood and non-wood products) of about \$12.5 million per year, equivalent to a \$40,000 average per participating village. This corresponded to 418% achievement with respect to the appraisal target. Of that total more than US \$3.7 million (30%) resulted from women-led economic activities. More than 20% of Senegal's current energy supplies are now derived effectively from renewable resources in the form of sustainable fuelwood. The project's comprehensive, community-driven approach to address fuelwood supply and demand has included monitoring and

mapping of community-managed forest resources, promotion of private-sector inter-fuel substitution and NGO-based improved stove initiatives, and strengthening of institutions in sector management. Owing to well-targeted and gender-balanced capacity development, organizational and institutional support, and direct investment financing to rural communities, the project demonstrated that absorptive capacity was not an issue. Given the success of the previous project; a follow up project (\$19 million) was approved by the World Bank's Board in June 2010, with the objectives to increase the availability of diversified household fuels in a sustainable way, and to increase the income of affected communities while preserving the forest ecosystems (World Bank 2005, 2010)

Yemen Rural Energy Access Project (FY2009-14)

The Yemen Rural Energy Access Project (FY2009) used all six methods of gender integration in preparing the project. The project conducted an Economic and Social Impact Assessment (ESIA) that was prepared in a participatory manner, by consultations with community men and women, community leaders, relevant governmental agencies, NGOs and the cooperatives. The social and gender analysis identified the needs and constraints of women and men; consultations with women and men revealed in-depth understanding of ground realities and identified solutions. Actions were included in the design to reduce gender disparity and enhancing women's opportunities in participation, and access to economic opportunities and safety. The design includes a participatory implementation and M&E process and both men and women will be involved throughout the implementation, and budget was allocated for gender targeted activities; and gender responsive for monitoring progress indicators.

Safety of women and children from electric shocks were identified as a serious issues and an awareness raising and safety campaign was included in the design that will be carried out in different rural communities where the project will be implemented. For improving access to electrification, mechanism will be in place so that poor female headed households can receive micro-finance services through NGOs for the initial connection cost. For internalizing gender and social considerations within the PMU, gender and energy training will be provided and budget has been included in the design. Furthermore, based on the lessons of successful Water Users Associations in the Bank portfolio, Electricity Associations/Cooperatives will be established for improved governance and management at the local level, especially for fees collection, maintenance, monitoring and evaluation, etc. Special social mobilization and training will be provided so that women can participate fully and become decision-makers in these cooperatives (World Bank. 2009).

Sierra Leone: Bumbuna Hydroelectric and Social Management Project (FY2005-2009)

The project aims to expand the capacity of Sierra Leone to increase the supply of electricity services at least-cost, and in an efficient and environmentally and socially sustainable manner. Despite an almost 20 year delay due to the civil war, the Bumbuna Hydroelectric dam is now nearing completion. There have been several changes to

the project implementation plan, including the incorporation of a more participatory approach to the resettlement component. Some of the gender inclusion components are : the formation of Village Resettlement Committees comprised of 50 percent women; increasing women’s access to labor markets through targeted livelihood restoration programs for women, inclusive agriculture and rural development and inclusive private sector development; involvement of women in infrastructure decision-making (energy and project related infrastructure); participation of women in allocation of food aid; and the formation of women’s self-help groups.

Lao PDR: Nam Theun II Hydroelectric Dam Project (2005-2017)

The objective of the project is to generate revenues, through environmentally and socially sustainable development of the hydropower of Nam Theun II that will be used to finance priority poverty reduction and environmental management programs. A gender assessment found that women and girls, particularly those from certain marginalized ethnic groups and those living within disadvantaged households, are the most vulnerable and over-burdened group among to be resettled. They have limited access to education, off-farm employment, production markets, cash assets, and socio-political empowerment. Extensive family level surveys were carried out to determine whether the land or property originally belonged to the husband, the wife or both. Special care was taken to identify female-headed households and other vulnerable and marginalized groups. Specific actions to promote empowerment and skill-building for women include reduction of women’s heavy labor (rice-milling, water, and carrying loads); increased opportunities and facilities for women to attend non-formal education classes; village-based workshops to build women’s public confidence and leadership skills; provisions for female technical specialists to work closely with women; training on setting up Women’s Groups for Micro-Savings and Loans; support for childcare facilities during resettlement; and vocational training for young female and male adults in semi-skilled and skilled occupations needed during the Nam Theun II construction and for sustainable economic and social development of the areas.

Mining Sector

Tanzania: Mineral Sector Development Technical Assistance Project 1994-2002

In 2001, small scale artisanal mining in Tanzania—primarily gold and Tanzanite—employed over 500,000 people living in remote areas, and practicing subsistence agriculture. The employment provided a significant source of income for the local population. Potential environmental impacts of this mining include deforestation, soil erosion, and contamination of water in sensitive ecosystems such as the Serengeti and Lake Victoria. The government of Tanzania aimed to regularize and improve small-scale mining, improve social conditions, gender equality, and social impacts, as well as to establish support systems for artisanal and small scale men and women miners. This

World Bank financed project prepared a comprehensive and detailed diagnosis of the artisanal and small-scale miners, with emphasis on their working, social, environmental, and health conditions, as well as their organizational structures and trading practices. Consultation with other mining countries and with small scale miners guided project planning. The project established support systems for small scale miners including extension service providing advice on mining methods, mineral processing, health, and safety. The project also assisted in the creation of cooperatives. One of the outcomes of the project was the formalization of the Tanzanian Women Miners Association - TAWOMA. This group includes representation from most of the country. Its significant advocacy initiatives address support and recognition of women in mining, provision of training and technical needs, and development of financing mechanisms. They also contributed to improving international markets for Tanzanian gemstones and provided demonstrations of mining and processing equipment. Many women miners lack formal education, access to credit, and combine mining with heavy household burdens. The Tanzanian Women Miners Association is addressing these gender issues (World Bank 2001).

Poland Hard Coal Social Mitigation Project (FY 1999-2004)

The aim of the project was to improve the efficiency of Poland's hard coal sector by supporting employment restructuring within the Program of Restructuring of the Hard Coal Mining Sector for 2003-2006. Social mitigation was necessary to prevent unnecessary suffering due to loss of jobs and negative impacts on the affected communities. Although most of the employees of mines were men, it became clear that women would bear the brunt of the restructuring due to loss of income, social support, and sources of income that are dependent on the operation of the mines, such as stores and restaurants. In order to assess women's opinions on the effect of the mine closures, a "Women in Mining" conference was convened. Several activities emerged as a result of the conference including workshops and seminars on starting and operating a micro-business, and providing support to other women in the community. Training programs aimed to increase income sources in the area were also organized. Two women's associations were established as well for providing ongoing networking and support to the women in the mining communities.

Mongolia Mining Sector Technical Assistance Project (FY2008-2012)

During the transition to a market economy, many nomadic people adopted artisanal and small scale mining as a livelihood strategy. Approximately 100,000 nomadic people are engaged in this mining which contributes over US\$23 million to the national economy. Women and men do the same work and women play key leadership roles and are instrumental in conflict mediation. The artisanal and small scale mining sector in Mongolia is unregulated and the extraction processes, tools and conditions present risks to the well being of both women and men miners and the fragile steppe environment.

The objective of the first phase of Mongolia Mining Sector Technical Assistance project is to assist the Government to develop policy; fiscal, legal, regulatory and institutional frameworks for the mining and extractive sector that meet the needs of government, industry, and civil society. The social and gender assessment found that there are opportunities and risks for local communities affected by both large-scale mining and ASM activities. The opportunities relate to the benefits from mining, which typically consist of direct and indirect employment, mining-related financial transfers, and improved access of mining communities to services including, in particular, health and education services. The risks relate to environmental harm, loss of pasture for grazing, loss of traditional livelihoods, social disruption, increased crime, domestic violence, and cultural harm. A gender bias also generally exists whereby the bulk of the benefits accrue to men, but the risks fall upon women and children. These also led to discrimination against women, a persistent wage gap across all sectors, inefficiencies in investments in education. Employment opportunities remain limited, and the small, peri-urban slums have a high proportion of increasingly poor and often female-headed households. To manage and mitigate these social and gender based risks, the project funds pilot activities to improve the quality of life of disadvantaged groups in mining areas. This includes support and networking groups and training programs for women and youth. To reduce the dependency of communities on mining activities, tripartite partnerships (communities, government and private investors) are being established to support diversification of economic activities in mining communities. The project is also supporting gender-sensitive reforms in the mining sector to reduce gender discrimination in the workplace and promote employment equity including affirmative action steps to increase the proportion of women in decision-making positions. It also encourages separate consultation with women in communities affected by mining so that their needs and interests are addressed in planning policies and in implementing and monitoring programs at the local community level. (World Bank 2008).

Papua New Guinea Mining Sector Technical Assistance: Women in Mining Initiative (2008-2013)

The Women in Mining Initiative was developed during the implementation of a World Bank-funded Mining Sector Technical Assistance Loan, based on the recognition of the lack of voice of women in mining areas. The initiative sought to address this lack of voice and the many challenges faced by women. Two international Women in Mining conferences (2003 and 2005) focused on developing strategies to empower women to have a stronger voice to gain more equitable mining benefits, enhanced roles in planning, and inclusion in the decision-making processes. The mining companies quickly recognized that listening to women's views enabled them to ensure that their community development initiatives reached the poorest people and were sustainable. The 2005 Women in Mining conference led to the establishment of a government Women in Mining Steering Committee which, together with local women's associations, developed local Women in Mining Action

Plans, which were then integrated into a Women in Mining National Action Plan for 2007 – 2012. Strengthening women’s networking has been critical, bringing the skills needed to build the capacity of the women’s organizations at local level across a broad range of subjects including planning, monitoring, and community mobilization.

Uganda: Sustainable Management of Mineral Resources Project (FY2001-FY2011)

Promotion of gender is seen as one of the key tenets for the development of the mining sector in Uganda. Productive engagement with women’s groups has been a key to success in this area. Based on a multi-step, consultative social and economic assessment conducted by the Department of Geological Survey and Mines (DGSM), in preparation for the World Bank financed Sustainable Management of Mineral Resources Project, the Department decided that an Action Plan for the Promotion of Gender was needed. This Action Plan outlined a framework for consultations and policy analysis of the gender dimension in mining. This provided a foundation for the design of a gender-inclusive extension services program for artisanal and small scale miners. Gender training materials were developed and training of trainers provided to 180 men and women. These trainers organized community based training workshops in 17 strategic artisanal and small scale mining areas in 13 districts. Of the 1000 miners trained, 40 percent were women. Based on priorities expressed by communities, training included financial management, basic geology, mining technology, workplace health and safety, gender, HIV, malaria, sanitation, sexual and gender based violence, alcohol and drug abuse, community organization, conflict resolution, and procedures for obtaining small scale mining leases. A two-day gender workshop was conducted in 2006 and a Women in Mining conference was organized in 2007 to identify ways to advance women in all types of mining. This capacity building process made the government aware of the need for a National Strategy for the Promotion of Gender Equality (Tuhumwire 2009).

Transport Sector

Bangladesh Second Rural Roads and Markets (1996-2003)

The Second Rural Roads and Markets Improvement and Maintenance Project aimed to increase rural employment and incomes and reduce rural poverty. This project enabled women to access labor, product, and financial markets for their own economic empowerment where they previously could not leave their houses to earn income. Consultations with village women, women leaders, and NGOs revealed a demand for a mechanism that would provide women access to income earning opportunities in formal labor and product market; opportunity to earn equal wages, and access to community decision-making. The project reserved for women a certain portion of job in the road construction, membership in market management committee and shops in the market. The project also facilitated the formation of women’s labor contracting societies, trade associations, self-help groups with savings and revolving loan funds, and microenterprises

for road rehabilitation. Partnerships were forged with local government institutions, especially women members of Union Parishad (rural local Government) for scaling up and strengthening activities.

As a result, women's participation in road construction and maintenance has grown from near zero to about 50 percent over the past decade. Women's increased mobility and self-esteem have helped them to diversify income-earning opportunities (e.g., development of labor-contracting societies, road maintenance SMEs, and trading of electronics and agricultural commodities in rural markets). Women's bargaining power was increased through their trade associations and contracting societies. Girls' and Boys' school enrollments increased dramatically as well (Ahmad 2007, Pulley et al 2003). In addition, a gender forum for advocacy, training, and monitoring has been established by the Bangladesh government. A recent evaluation shows that the magnitude of the project's impact on women's non-farm and agricultural activities has been similar to that for men. Data also shows a 5-percent reduction of poverty in project areas (Khandker, Bakht, and Koolwal 2008). Currently, nearly 50 percent of road workers are women, most of the tree plantation and maintenance work is done by women.

India: Mumbai Urban Transport Project (FY 2002-2009)

The project aimed to facilitate urban economic growth and improve quality of life by fostering the development of an efficient and sustainable urban transport system including effective institutions to meet the needs of the users in the Mumbai Metropolitan Region. This required resettlement of a large number of people, living in the slums around the rail tracts. A participatory resettlement process for 60,000 people was facilitated by two organizations, Mahila Milan (Women Together) and the Mumbai Slum Dwellers Association. Mahila Milan, formed in the 1980s, focused on establishing savings and loan groups that women organized and ran themselves. It has been instrumental in providing loans and credit assistance to women to facilitate the resettlement and rehabilitation process. More importantly, its membership and leadership was made up almost exclusively of slum community women. Working together, women were able to empower themselves. Community-based organizations carried out a series of baseline socio-economic surveys which were used to group households into clusters of 50, to be resettled collectively, to ensure continued neighborhood interaction, which is particularly important for women, because their interactions are frequently limited on the household and the nearby neighborhood. The resettlement plans ensured that the resettled women could continue the support systems and economic activities that they had prior to resettlement. Other important aspects of the resettlement plan included joint titling of final resettlement properties between husbands and wives, which has given women more security in their new residences and access to formal banking system (Dickenson n.d.).

Ethiopia Rural Road Sector Development Program (FY1998-FY2009)

The objectives of the First Road Sector Development Program Support Project (FY1998-2005) were to contribute to Ethiopia's economic development by improving trunk and regional rural road access and utilization to meet the agricultural and other economic development needs; building up the institutional capacity in both the public and private sectors for sustainable road development and maintenance; and providing economic opportunity for the rural poor both through increased employment in rural road works. A village level transport and travel study in 1999 was conducted in preparation for the Ethiopian Rural Travel and Transport, a component of the Rural Road Sector Development Program. The study revealed that women spent three times as much effort on travel and transport tasks and twice as much time on household related travel, collecting fuel, water and food which took up to 20 to 25 percent of adult women's working time. None of the households in the study area owned motor vehicles, carts or bicycles. Donkeys were the most widespread form of transport. Based on these surveys, transport planners aimed to reduce the transport burden by consulting with women and increasing their representation in transport planning and decision-making. They also used these findings to sensitize policy makers and local people about the gender aspects of transport.

The objective of the Second Road Sector Development Project was to restore and expand Ethiopia's road network to reduce poverty and increase employment through promoting growth and access in a socially and environmentally sustainable manner. The project incorporated gender responsive monitoring and evaluation. Local transport development studies conducted at the lowest local government level (Wereda) used a participatory approach to assess the socio economic situation, including gender issues, to guide interventions at the local level and inform policy at the regional and central level. To address high rates of maternal mortality associated with poor access to health professionals due to limited infrastructure, Ethiopia's transport agency is also planning innovative pilots, such as the introduction of emergency access cards, to enable the rapid transport of women in obstructed labor to the nearest capable health facility. Work with NGOs, the Red Cross, and technical schools will introduce intermediate means of transport to help transport emergency patients. Communities will receive tools for labor-based construction activities, including culvert and bridge construction and maintenance, to help ensure year-round access for emergency transport. These transport activities will be complemented by a pilot reproductive health care access activity that will be supported by a Japanese Social Development Trust Fund. (Riverson et.al. 2005; World Bank Nd.c).

Lesotho: Integrated Transport Project, FY2007-2011

The Lesotho Integrated Transport Project aims to reduce the isolation of Lesotho's citizens and improve their access to services and market opportunities through a more complete, safe and affordable transport system and more coordinated transport sector management. A GENFUND grant supported a pilot project of a participatory mapping that was incorporated into a geographic information system (GIS) used for

local development planning. The GIS 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 used existing roads, paths, and services, and what bottlenecks existed. Community meeting, interviews and focus group discussions held in all communities provided information on differences in men's and women's priorities for transport project activities. 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. (Walker et al 2005). Gender is also included in the monitoring and evaluation plan (Walker 2005, World Bank 2006h).

Honduras Road Reconstruction and Improvement Project (FY2008-2013)

The project aims to provide improved all-season access within agriculturally productive zones and improve living conditions and quality of life for the participating communities. This project received funds from Gender Action Plan to formulate a gender-responsive project and develop capacity of the implementing agency. Workshops will be conducted to understand women's constraints and opportunities for participation. In addition, a gender balanced approach will be utilized to ensure that women as well as men have access to the opportunities generated through this program. The ongoing micro-enterprises program is expected to generate about 200 direct employment opportunities and cover about 380 km of roads. The micro-enterprise program for road maintenance consists of 70 micro enterprises, 36 of them financed by the World Bank through the end of 2006. The purpose of such enterprises is to provide regular maintenance to the roads in Honduras. Women represent less than 2 percent of the micro enterprise labor force and they perform the same work tasks as men. The project has set a target of at least 10 percent women in the micro-enterprise labor force. The micro enterprise program requires employers to avoid discrimination against women in hiring laborers. These employers also asked to promote mutual respect in the work environment, and in particular, respect for women working in mixed-teams. Employees of the micro enterprises receive a five month literacy training course. All members of the worker's family can participate in this training with no age restriction. Workers and their families also receive training in environmental issues. Women's income from work in microenterprises helps them pay for school costs for their children can now attend school. It has also enabled them to invest in remodeling their houses. An HIV/AIDS plan is also being implemented to prevent the spread of the disease via the improved roadways; commercial sex workers and housewives have been identified as some of the vulnerable groups to be targeted (World Bank 2008).

Peru Rural Roads II (FY2001-FY2006)

This was one of the few projects that included gender in the project development objective (PDO), which states that the "objective is 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.” One of the gender-responsive results indicators was - increase in the number of community organizations and or microenterprises, with more than 30 percent women’s participation, engaged in local development initiatives/income earning. 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 seven percent. About 100 community organizations engaged in local development; 500 microenterprises were established and performed routine road maintenance. This created 6000 one-year unskilled jobs, 24 percent of which were held by women. Twenty-four percent of the members of rural roads committees and 45 percent of the rural road committee treasurers were women. Largely due to consultations with women about their transport needs, 3465 km of non-motorized 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 percent of the women traveled more frequently and 65 percent 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’s and Women’s perceptions of women’s value in the household and community improved significantly (Cabellero 2008, Clarke 2008, World Bank 2007c).

China: Liaoning Medium Cities Transport Project (FY 2006-FY2012)

The objective of the project was to assist the project cities in enhancing: the performance and quality of their existing urban transport infrastructure in terms of mobility, access, and safety; the efficiency and effectiveness of their urban public transport and road maintenance services; and the responsiveness of their urban transport systems to the needs of population without access to private motorized vehicles. The initial project design proposed by the country counterparts entailed construction of multi-lane ring roads to expedite motor vehicle flow. A participatory urban travel and transport survey conducted in 1999 revealed that most people in Liaoning walked, used bicycles, or used public transport. Women-only focus group discussions were conducted, in addition to mixed group discussions, to ensure that needs and issues specific to women were properly identified. In addition, questionnaires were designed to allow disaggregation of data by gender. Analysis showed that women’s predominant modes of travel were cycling or walking. Women raised more concerns than men about safety issues related to the lack of street lights, poorly designed underpasses, and long waits at bus stops. The lack of late evening (off-peak) bus services, combined with the street light issue, created a

barrier for many women to access employment opportunities. The long waits for buses, combined with the location, design, and poor facilities at bus stops, contributed to women's transport vulnerability. The safety of pedestrian crossings was of particular concern to women since their trips often involve children. After receiving the results of the assessment, city officials readily agreed to address these relatively low cost transport needs in the project design (Mehndiratta 2008).

The Western Africa HIV/AIDS Project for the Abidjan-Lagos Transport Corridor (FY2004-FY2008)

This project aimed to increase access to HIV/AIDS prevention, treatment, support, and care services for underserved vulnerable groups (truck drivers, female traders, and sex workers) in the transport corridor. The project distributed information about HIV/AIDS as well as male and female condoms, trained health officers, and promoted free movement of people and goods by reducing cumbersome border-crossing procedures. The project informed female traders of their rights and the documentation required for crossing borders to avoid harassment at border checkpoints. It trained female sex workers about HIV/AIDS prevention and provides free female condoms and grants to take formal jobs. The project also helped strengthen women's organizations' capacity raising awareness of the rights and needs of people living with HIV/AIDS (World Bank 2007c).

Urban Development

Yemen Second Public Works Project, FY1999-2003

Yemen Second Public Works Project was a follow-on to the first Public Works Project with a more gender-responsive approach. The project helped to mitigate the adverse effects of economic adjustment through poverty alleviation measures by targeting vulnerable communities. These measures included job creation and infrastructure provision, with an emphasis on improving services and environmental conditions affecting women and children. To ensure the sustainability of project outcomes, there was community involvement in project selection, preparation, and implementation. Local contracting and consulting firms were also developed.

The project created labor-intensive, small-scale civil works programs in order to produce employment for unskilled laborers. At the end of the project, women held about 20 percent of the permanent jobs created by the project and girls' school enrolment in participating communities increased by 182 percent by FY2003 (World Bank, 2003).

Jordan Cultural Heritage Tourism and Urban Development Project (FY2007-2012)

The Jordan Cultural Heritage Tourism and Urban Development Project aims to develop tourism in historically and culturally important cities in Jordan to promote local economic development. One of the goals of the project is to bring women into the formal business sector to increase the productivity and profits of their businesses. The

project provided loans and grants to entrepreneurs, investors, and community groups to encourage tourism and cultural heritage related business development. It also provided training on business development and access to management consultancy services. At the start of the project the businesses at the targeted sites were micro-enterprises, many of which operated informally. Women made up the bulk of the informal labor force. Local NGOs and community groups provide training for women entrepreneurs on handicraft and food production, as well as business management and development. (World Bank 2007).

Benin Second Decentralized City Management Project (FY2006-2011)

The Benin Second Decentralized City Management Project aims to increase access to infrastructure and basic services for residents of primary cities (Cotonou, Porto-Novo, and Parakou) and selected secondary cities (Abomey-Calavi, Lokossa, and Kandi). Key activities include strengthening municipal management, rehabilitation and construction of basic urban infrastructure, finances for community participation and construction of schools, community centers, health centers and markets, and solid waste management in Porto-Novo. Project design includes women in many decision making activities. Women's organizations play an important role in identifying poor households for service, managing water kiosks, agreeing to service levels and tariffs, and overseeing the private operator for water supply (World Bank 2008). Additionally, the project works closely with the Multi-Sectoral AIDS Program (MAP), so that gender issues in HIV/AIDS are assessed and addressed in project implementation (World Bank 2006).

Bolivia: Urban Infrastructure Project (FY 2006-2010)

The project aims to achieve sustainable improvements in the urban infrastructure and living standards in the poorest neighborhoods of La Paz through comprehensive urban upgrading and neighborhood participation in project implementation. It aims to enhance mobility in the city of El Alto, removing infrastructure bottlenecks and introducing measures to modernize public transport services and urban transport management, and to expand sewerage coverage in poor areas of Santa Cruz de la Sierra. Women's needs have been incorporated into every step of this project, from design and job creation, to empowering women through titling and community organization. Project monitoring reports indicate that due to improved lighting and sanitation facility within homes, women are safer as they do not need to go outside in the dark. Also the building of childcare facilities and community centers has enabled women to improve their income generating capabilities. In addition, including women's names on the land titles has given them access to credit, employment and enterprise opportunities that were previously closed to them (World Bank 2006).

Costa Rica Port City of Limon Integrated Infrastructure Project, FY2008-2014

The Port City of Limon Integrated Infrastructure Project aims to improve the protection and management of Limon's cultural and natural heritage; increase access to the sewage

system and reduce urban flooding in the area of Limoncito; foster a more efficient, accountable and credible local government; create new employment opportunities through small and micro-enterprises; and support the port modernization process and improve freight transport access to the port terminals.

One of the project approaches for revitalizing the Port City of Limon is to support income generation for women and youth through small and micro-enterprises. This initiative taps into the growing cruise tourism and the historical and cultural richness of the city. It was felt that small and micro-businesses are a low risk way to stimulate entrepreneurship, increasing income and productivity. Female-headed households are targeted because they tend to have higher levels of extreme poverty, especially Afro-descended females. Incentives to stimulate entrepreneurship by women and youth include technical assistance grants to access non-financial support services (such as on-the-job technical assistance and business support centers) a competitive, development market-place type fund for the promotion of new cultural businesses, and small and micro-enterprises run by youth and women. Training includes topics such as: English, culinary arts, ecotourism, computerized business accounting, and handicrafts. There is also formal training in public universities for prospective entrepreneurs in strategic planning, business administration, legal procedures, financing, and website development (World Bank 2007).

Vietnam Da Nang Priority Infrastructure Investment Project, FY2008-2013

The Da Nang Priority Infrastructure Investment Project in Vietnam aims to improve the efficiency, effectiveness, and sustainability of urban services in the city through investments in urban upgrading, environmental improvement and strategic road access, as well as institutional strengthening for management of urban services. The Da Nang Women's Union (DNWU) is involved in project implementation and funds disbursement. The project includes a housing improvement loan program providing up to \$1,000 per household for low-income recipients who are otherwise not eligible for traditional loans to improve their houses. The DNWU will disburse the funds, based on its prior experience with administering savings and loans programs under the Three Cities Sanitation Project. The project will also include a capacity building plan for the DNWU, part of which will involve gender and development training workshops for project staff (World Bank 2008).

Indonesia National Program for Community Empowerment in Urban Areas Project, FY2008-2011

The overall objective of the project is to ensure that the urban poor benefit from improved socio-economic conditions and local governance. The approach to achieve this objective is through the formation of elected, representative organizations that are accountable to communities; direct, transparent grants to communities for poverty alleviation activities; and enhancing the capacity of central and local governments to partner with community organizations in service provision. A gender mainstreaming strategy was developed and

incorporated in the project design to ensure women's participation at the project and community levels. Within the community, activities to enhance women's participation include: conducting focus group discussions for women in project cycle activities; support for women as members of revolving loan fund (RLF) groups; and conducting training on gender awareness. The project mandates a minimum of 30 percent women members in community groups and 35 percent women voters for the BKM (Badan Keswadayan Masyarakat [Community Boards of Trustees]). (World Bank, 2008).

Uganda: Small town WSS Project (1994-2003)

This project was the first in the country and the region to apply a demand-driven model based on international best practice. Services to the poor are ensured by providing varying levels of service, subsidizing connection cost, and providing poor people with a voice as stakeholders and customers. The lessons and knowledge generated by the project have been replicated country-wide in over 45 towns and in other countries in the region. The project also empowered women by ensuring their representation on water supply and sewerage boards at the Town Councils, including them in training financed under the project, and providing them with opportunities as managers/caretakers of water kiosks and yard taps. This helped some of the women to raise capital from water sales to diversify into other economic activities. The assessment also showed that women were employed in key positions with the private operators managing the systems. An impact assessment of the Small Towns WSS project concluded that the project had contributed to poverty reduction and improvement of conditions for women through: reduction in the average prices paid for water in the towns and reduction in time spent collecting water. Seventy percent of the households spent about 15 minutes or less and within 50 meters of a safe water source. The study found that the main collectors of water were women and children, who benefited most from the investments, which allowed more time for children to study. (World Bank 2008j).

Azerbaijan: Baku Water Supply Project (1995-2006)

The primary objectives of the Greater Baku Water Supply Rehabilitation Project were to: make emergency short term improvements in the water supply system to restore the water supply to Baku, in particular to the poorer elements of the population; improve the water supply system as a whole; and provide the basis for longer term planning and recovery. Prior to the project, the city of Baku faced a water supply crisis. Water quality was poor, system losses were high, and cost recovery inadequate. Although nearly all of the city's 2.5 million people were officially connected to the public water system, many households received water only six hours a day, 14 days a month. The poor suffered the most. Women spent hours each day locating and collecting water for their households. Women also reduced the amount of water they consumed to cope with the shortage. In 1995, the World Bank approved assistance for a project to improve the quality, quantity, and reliability of Baku's water supply. Several strategies were used to facilitate gender and

social inclusion. A participatory social assessment to identify stakeholders, evaluate social impact, and design mitigation measures for groups experiencing negative impact (involving 800 households, neighborhood groups, the academic community and NGOs) was critical in building community ownership and increasing women's participation. Involvement of the Women's Committee, a large women's NGO, in the social assessment, the evaluation of social and environmental project costs, the project design, and project implementation was also very important. The Women's Committee identified approaches to alleviate the water burden on women and increase sustainability, and participated in the design of the consumer outreach program raising awareness and mobilize local communities for water conservation, repair and prevention of leaks and meter repair (World Bank 1996).

Caracas Slum Upgrading Project (CAMEBA) (1998-2006)

The Caracas Slum Upgrading Project aimed to improve the living conditions of people living in the barrios in Caracas through community driven infrastructure improvement. There was broad outreach to promote women's widespread participation. Women residents make up the majority of the people attending CAMEBA meetings, initiating proposals for infrastructure projects and serving on project-related activities. Women's participation enhanced the project by improving the quality of public works through their supervision, guaranteeing the maintenance of these works, increasing the efficiency of field staff work, and enhancing project effectiveness. Women's participation has helped build institutional capacity in the slums and increase receptivity to government programs. This participation has also improved household livelihoods and well-being through employment generation for women. Women's have a more equal voice in household decision-making as a result of these activities (Ruiz-Abril 2002; World Bank 2007).

Community Recovery Project through Urban poverty program in Earthquake-Tsunami Affected Areas on Aceh and north Sumatra (2005-10)

The project aims to reduce urban poverty by increasing the voice of the urban poor and establishing inclusive, representative community organizations. The project promotes the active participation of women in community meetings and consultations and promotes qualified women for employment in the project as consultants, facilitators, community cadre participants, and Financial Management Unit candidates. A gender mainstreaming strategy and manual were developed to provide guidelines on locally acceptable approaches to ensure women's participation in the program as well as effective dissemination of information to all groups of women. Separate focus group discussions held for women and men and all training events (for consultants, facilitators and community cadre participants) addressed gender issues including gender inclusive meeting techniques, scheduling and facilitation, as well as the specific concerns of local women. As part of the Gender Action Plan, the monitoring and evaluation plan includes collection of data on women's participation in all stages of the project and sex disaggregation of data for the management information system (MIS). Additionally,

targets were set in the gender action plan, specifying that 30 percent of the community cadres should be women, and at least 50 percent of participants in the community self-survey should be women (World Bank, 2005).

Water and Sanitation:

Nepal Second Rural Water Supply and Sanitation Project (2004-2009)

The Government of Nepal created the Rural Water Supply and Sanitation Fund Development Board to promote sustainable and cost-effective, demand-led rural water supply and sanitation services through non-governmental and private organizations. There was a strong emphasis on community ownership. The design of the Board was based on JAKAPAS (People's Water Supply and Sanitation Program), a three-year pilot executed by the World Bank with funding from UNDP and JICA. Taking lessons from the pilot, this second project was developed and implemented by the Board. The project included community development activities to promote behavioral change for adoption of healthy practices and technical support services for women. The project also incorporated several effective mechanisms for involving women in the design of community water and sanitation initiatives that were developed in the first project. Project design also included a strategy and action plan specifying how women would participate in the design and management of drinking water initiatives. This included measures such as reserving positions for women on the water and sanitation user committees.

This project also supported literacy training and improved access to the formal credit system for women. The project promoted women's participation in planning and implementation of water and sanitation schemes, operation and maintenance of resource mobilization activities, collection of user charges, and monitoring and evaluation. In addition, the Women's Technical Support Services component facilitated women's access to professional business development services to increase their market linkages and economic opportunities (World Bank GENRD 2004).

Indonesia: Second Water and Sanitation Project for Low Income Communities (FY2001-2006)

The Second Water Supply and Sanitation for Low Income communities Project was a community driven development project aimed at improving health status, income, and quality of life for low income communities in eight provinces covering 35 districts and 2500 villages with funding from the World Bank, AusAID, the Government of Indonesia, and the communities. Funds are channeled directly to villages with 20 percent community contributions (4 percent in cash and 16 percent in kind). Communities have full responsibility for managing and maintaining water and sanitation services.

The GENFUND supported the development and implementation of a gender- and poverty-sensitive community action plan for water supply and sanitation interventions in the

Second Water Supply and Sanitation for Low Income Communities Project in Indonesia. The project's gender mainstreaming strategy aims to promote equal participation of women and men at all stages of planning, decision-making, and management of water and sanitation. It also seeks to improve women's capacity to participate in these processes, ensure that women and men have a voice in selection of preferred options, and to increase stakeholder understanding of the importance of women's participation in the projects. The project implemented participation targets for women: 50 percent of the consultants and 30 percent of the community participants. Pro-poor and gender-inclusive community planning processes were utilized that included social mapping of households, separate women's meetings, project approval by community members, gender equity in water committees and project processes, and gender inclusive facilitation. Results show that the use of gender and social inclusion tools enabled the poor, particularly poor women, to have greater voice in community decisions and a more equitable sharing of project benefits. Poverty targeting in development planning has become more transparent, making community monitoring easier. Implementing agencies have also become more sensitized to the need to monitor projects for social inclusion and gender equality to achieve greater poverty reduction impacts. The third project began in FY2006 and runs through FY 2013. (World Bank, AusAID, ADB, DFID and Government of Indonesia 2008, World Bank Nd.b)

India: Uttar Pradesh & Uttarakhand Rural Water Supply and Environmental Sanitation Project (Swajal) (FY1996 – FY2003)

The Swajal (our own water) project aimed to deliver sustainable health and hygiene benefits to the rural population through improvements in water supply and environmental sanitation services. It also aimed to promote the long term sustainability of the rural water supply and sanitation sector by providing assistance to state governments to identify and implement an appropriate policy framework and strategic plan. The project tested an alternative to the current supply-driven service delivery mechanism, and promoted sanitation and gender awareness. The Swajal project was instrumental in introducing gender inclusive components to water supply and sanitation projects in India. The project encouraged women to take advantage of the women's development initiatives program, which provided skills and management training to increase the scope of income generating activities to help women gain access to formal credit systems. Self help groups were organized to assist women in accessing micro-credit systems. Women formed groups to collect monthly operation and maintenance fees, which have improved the management of the water supply (World Bank 1996).

Tanzania Rural Water and Sanitation Project (2002-2006)

The development objective of the Rural Water Supply and Sanitation Project for Tanzania is to ensure access to improved and sustained water and sanitation services in rural communities. Tanzania Rural Water and Sanitation Project included only gender sensitive

consultation during the preparation, but added gender analysis and a gender-responsive activity during implementation. Separate focus groups discussions with women and men were conducted during implementation to assess project benefits. A key lesson learned was that, as major beneficiaries, women must be adequately represented in water user organizations. The gender balance in the Water Committees was identified as a remarkable success for operating and managing water funds. Women's participation in other community affairs increased as well. School attendance of girls also increased with the reduced time required to access water. Risks of rape and attack from wild animals and snakes while collecting water was also reduced (World Bank 2002).

Morocco Rural Water Supply and Sanitation, Project FY2006-2013

The Morocco Rural Water Supply and Sanitation Project aims to increase sustainable access to potable water supply in rural areas, and promote improved wastewater management and hygiene practices. Each water and sanitation scheme under the Project has a Social Mobilization Team (SMT) comprised of a social scientist and a hygiene specialist including one female and one male. The SMT is responsible for disseminating information on the project and ensuring women's involvement, both in the consultative process and in the Water Users Associations (World Bank 2005).

Information and Communication Technologies

e-Ghana Project (FY2006-11)

The objective of the project was to (a) generate growth and employment by leveraging Information and Communication Technologies (ICT) and public-private partnerships to develop the country's IT enabled services industry; (b) improve efficiency and transparency of selected government functions through e-government applications; and (c) provide training and ICT jobs for women at all levels, especially at management.

A business analysis conducted by the World Bank showed women are predominating in ICT-related business in Ghana, as the secure work in business technology outsourcing environment and flexible hours attract women. Women are accounting for nearly 70 percent of employees (total about 2200), but mostly at the lower level, while there are hardly any women managers. The project has a particular focus on providing management training, so that women can become decision-makers in IT enabled services industry sectors. This will reduce the potential of "feminization of ICT" that is characterized by low wages, high risk, poor working conditions, as evidenced in many export oriented industries dominated by unskilled women workers at the lowest levels in developing countries.

The project is expected to (a) increase ICT-based jobs from 2,000 currently to potentially 40,000 over five years with equal opportunities for women, (b) increase in export-led revenues generated by ICT/ITES industry by about US\$750 million; and (c) 50% of the

new jobs created by the project will be held by women. The proportion of managerial to non-managerial positions held by women will be tracked during implementation.