Lessons From 20 Years of World Bank Experience

infrastructure AT THE CROSSROADS
infrastructure
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LESSONS FROM
20 YEARS
OF WORLD BANK
EXPERIENCE

THE WORLD BANK
Washington, D.C.
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Foreword

The poet Archibald McLeish once observed that “there is only one thing more painful than learning from experience, and that is not learning from experience.” With this in mind, Paul Wolfowitz became President of the World Bank in June 2005 and asked us to take a step back to examine the work the organization had undertaken in infrastructure over the past two decades.

The objective was to learn from our experiences, to gain greater understanding of what worked well, what worked less well, and how we obtained the results that we did. There has been much to learn, for the Bank’s work during that time period saw sustained growth, relative decline, and then renewed growth as a strategic priority.

Today, infrastructure is again an important and growing part of the Bank’s portfolio, representing one-third of new World Bank lending to developing countries. The staff who work in infrastructure are strongly motivated to take into account the lessons of the past in all that they do. Each day, we are reminded of the 2.7 billion people around the world who live on less than two dollars a day and who look to us to help bring them some of the most basic infrastructure services. These are the people who need access to clean water, sanitation, energy, transport, information, and communication if they are to build productive lives, support their families, and contribute to the economic growth of their country, just like billions of others on the planet.

Over the past two decades, the World Bank was involved in some spectacular infrastructure successes in our efforts to accelerate economic growth and reduce poverty, but we also learned some hard lessons along the way. Based on that, we have re-dedicated ourselves to continually improving the quality of our work. In the pages that follow, I encourage you to learn for yourself what experience has taught us and to see for yourself how we are using those lessons to develop better infrastructure for the people who need it most: the poor of the world, the people we serve.

Katherine Sierra
Vice President
Sustainable Development Network
Acknowledgments

This volume was written by a team of World Bank Infrastructure Network staff, with significant inputs from colleagues in other networks and central units including Development Economics (DEC), Environmentally and Socially Sustainable Development, External Affairs, Department of Institutional Integrity, Legal, Operations Evaluation Department (OED), Operations Policy and Country Services, Poverty Reduction and Economic Management Network, Quality Assurance Group (QAG), and World Bank Institute (WBI). The team relied on project and sector work documents, QAG assessments, OED evaluations and reports, DEC and WBI publications, and also benefited from the generous advice of several former Bank staff.

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Executive Summary

This volume pulls together lessons from the last 20 years of World Bank engagement in infrastructure. It covers the energy, transport, telecommunication, water supply, and sanitation sectors, and the urban development thematic area.*

Evolution of Infrastructure Lending

After a decade of rapid growth, infrastructure lending reached $8.5 billion in 1987, representing half of total Bank lending in that year. It then fluctuated around this volume until 1998, representing on average about 40 percent of Bank lending during the period. In the next four years, infrastructure lending declined sharply to an average of $5.7 billion per year, or less than 30 percent of total Bank lending (an all-time low). The origins of this decline can be traced back to the mid-1990s, when infrastructure was viewed as a “sunset” sector for the Bank. This view reflected a belief that the recent rapid growth in the volume of private infrastructure investments would continue unabated, a growing concern about the public image of the Bank in the face of civil society opposition to large infrastructure schemes, and a strategic shift in the Bank’s focus from “bricks and mortar” to public administration, education, and health.

Infrastructure was placed back in the center of the Bank’s agenda in 2003. This change was motivated by several factors, including the decline in financing available from the private sector and the associated

* The volume primarily focuses on the experience of IBRD and IDA (i.e., the Bank), and only occasionally touches on lessons learned by other members of the World Bank Group.
growth in client demand for Bank support, and the renewed apprecia-
tion—both inside and outside the Bank—of the importance of infra-
structure in enabling growth and poverty reduction. Since 2003, infra-
structure lending has been gradually recovering and approaching the
level of the 1987–98 period.

Overview of Lessons
The Bank’s infrastructure engagement over the past 20 years has yielded
valuable lessons about project design and appraisal, poverty focus, pri-
vate sector participation, environmental and social sustainability, the
issue of corruption, and stakeholder communication. While the Bank
has already been applying most of these lessons in its work, the inter-
nalization of some lessons will require special attention going forward.

Supporting the Right Projects and Producing Results. Critics say
the Bank leaves unproductive, wasteful projects (“white elephants”) in
its wake. Yet, while there have been a few projects with highly unsatis-
factory results, the economic rates of return of most Bank-financed in-
frastructure projects have been fairly high in the last 20 years. Nonethe-
less, a number of recurrent weaknesses in project selection and design
prevented the achievement of an even better track record. Demand esti-
mates tended to be too optimistic, particularly when large price in-
creases were needed to ensure the financial viability of the projects. The
Bank learned that well-designed surveys of intended beneficiaries are es-
ential to understand existing consumption patterns and public percep-
tions of the benefits of improved service quality. Reliance on standard
engineering solutions sometimes led to over-designed systems that com-
munities were unable to maintain. The Bank learned the importance of
tailoring design to local circumstances. Excessive loan conditionality and
project complexity lengthened preparation and implementation periods
and occasionally resulted in projects that “collapsed under their own
weight.” The Bank adopted a more disciplined approach to condition-
ality, streamlined its internal procedures, and changed the promotion cri-
teria for staff to reward client responsiveness and results, not project
complexity. Inadequate attention was paid to monitoring arrangements,
statistical capacity building, and the links between project outputs and higher-order outcomes. The continuity of engagement suffered in some sectors and countries when the Bank’s attention drifted away. The Bank learned that producing results goes beyond the quality of individual projects—it depends on the nature of the engagement between the Bank and the country, including its duration, depth, and breadth.

**Reaching the Poor.** The Bank’s first attempt to reach the poor with infrastructure services, the “basic needs” approach launched in the 1970s, produced mixed results. Starting in the 1980s and gaining momentum in the 1990s, the Bank actively promoted a new generation of initiatives aimed at helping the poor to gain access to infrastructure services. The Bank learned that the needs of the poor in many ways differ from those of the non-poor and are influenced by a variety of factors such as location, density, ethnicity, customs, and literacy. When designed well, pro-poor regulatory policies and subsidy schemes can mobilize the resources and innovations of a wide range of institutions and entrepreneurs to work for the poor. Participatory approaches can also deliver low-cost solutions and can be replicated at a larger scale when the commitment of local and national governments is sustained. Success can be fragile, however, when governments fail to protect the integrity of the micro-level institutional and operational arrangements. The Bank also learned that poverty-focused investments need to be combined with efforts aimed at ensuring an enabling overall institutional and policy environment.

**Managing Expectations about Private Sector Participation.** The events of the past decade have demonstrated that involving the private sector in infrastructure provision is not a universal cure. The Bank learned that the role of government institutions has remained a central one, as no other actors can compensate for government weaknesses in sector strategy, investment and expenditure prioritization, regulation, and risk management. The Bank also learned the importance of understanding the political economy of private participation, adapting regulatory approaches to country circumstances, and properly allocating risks between the public and private sectors. The public sector will remain a
key source of infrastructure investments in developing countries, and the Bank should be engaged along the entire spectrum of public-private solutions.

**Ensuring Environmental and Social Sustainability.** The Bank responded late to concerns about the adverse environmental and social impacts of large-scale infrastructure projects. It was only in the 1990s that safeguard policies and transparency and accountability mechanisms placed environmental and social sustainability firmly in the Bank’s development paradigm. Fear of damage to the Bank’s reputation, however, temporarily translated into excessive risk aversion and rigidity in the application of safeguard policies. Gradually, the Bank learned how to integrate work on environmental and social issues into all the phases of the project cycle and how to better balance efforts to minimize negative impacts with a focus on channeling project benefits to adversely affected people and nature. The Bank also recognized the need for donors to address safeguard issues in a more consistent way and has taken a lead role in moving the harmonization process forward.

**Fighting Corruption.** Infrastructure projects, by their very nature, are vulnerable to corruption, especially in the procurement phase. Since the mid-1990s, the Bank has made considerable progress in strengthening its fiduciary, investigative, and sanctions systems to combat corruption in Bank-financed projects. And going beyond the scope of individual projects, the Bank has also started to assist countries in their sectorwide efforts to reduce corruption in infrastructure. However, the Bank, like the rest of the development community, is still struggling to identify the most effective ways to fight corruption. Recent experience suggests that:

- A uniform approach to fiduciary management across all countries is ill-suited to tackle corruption; special measures, such as the use of third-party fiduciary agents, may be needed in countries with very weak governance.

- Bank staff are crucial players in the anticorruption effort; thus it may be important to strengthen internal
incentives: staff could be rewarded for best practices in identifying specific institutional weaknesses that facilitate corruption and in taking decisive action when they notice corruption during project preparation or supervision.

- Closer interactions between the Department of Institutional Integrity and infrastructure project teams can help to map corruption risks, build anticorruption measures into project design, and ensure that the Bank's project supervision has an explicit anticorruption focus.

- More generally, the Bank's effectiveness in assisting clients to fight corruption would benefit from a systematic effort to analyze the impact of various types of reforms on the incidence of corruption in infrastructure services.

As the example of the Extractive Industries Transparency Initiative demonstrates, it is possible to make headway even when dealing with longstanding and difficult problems. The key is to commit to a multiyear effort; exploit the synergies among the Bank's lending, analytical, and advisory services; and work in close partnership not only across the Bank, IFC, and MIGA, but also with the broader donor and business communities.

Communicating with Stakeholders. In the last 20 years, the Bank's engagement in infrastructure has been the subject of growing scrutiny by civil society organizations, the media, and the general public. As external suspicions worsened and negative campaigns intensified, it became clear that the lack of stakeholder support generated high costs to the Bank and its clients, including not only delays in project preparation and implementation, but also cancellations. As a result, improving communications with stakeholders has become a key priority for infrastructure project teams. The Bank learned that communications should be embedded in political and social analyses and incorporated into
each phase of the project cycle. The Bank also learned the importance of communicating at both the local and global levels, and helping clients to develop and implement their own communication strategies.

Common Themes
Many of these lessons are mutually reinforcing—that is, steps that help in one area are likely to be helpful in other areas, too. For example, listening to prospective beneficiaries' and civil society representatives' ideas about ways to improve project design and sustainability frequently generates useful information about corrupt practices. Monitoring and measuring results facilitates communications both locally and globally. Besides these synergies, though, three common themes run through the volume:

- The first theme is the Bank's tendency to go through pendulum swings. Public versus private provision, growth versus equity, risk taking versus risk aversion, simple versus complex projects, light versus heavy conditionality—the Bank moved back and forth between these extremes in the last 20 years. Finding and maintaining a balanced approach turned out to be a difficult challenge.

- The second is the importance of “covering the bases.” Project design; economic analysis; financial, environmental, and social sustainability; fiduciary arrangements; and implementation capacity are all equally critical for successful outcomes. Ensuring that each of these receives adequate attention during project preparation and supervision (and does not get crowded out by the “flavor of the day”) requires constant diligence from management.

- The third theme is the need to tailor Bank interventions to the specific circumstances in each country. Standardized approaches have proven to be inadequate
in the design of both projects and reforms. Understanding micro-level determinants of infrastructure demand/supply and macro-level political economy constraints requires suitable analytical and survey instruments, in-depth economic and sector work, and sustained engagement.

The volume also identifies gaps in our knowledge of what works and what does not. The most significant gaps are in the area of anticorruption. Until recently, the focus of the Bank’s anticorruption effort has been primarily at the macro (public sector governance and expenditure analysis) and micro (financial management and procurement in specific projects) levels, and only a limited amount of systematic work has been carried out at the sector level. Going forward, a major effort is planned to deepen our knowledge of the infrastructure–corruption interface, with the goal of developing and implementing an effective anticorruption program for the infrastructure sector. Other learning and knowledge-sharing initiatives include partnering with the Inspection Panel to better understand its work while internalizing the lessons from its findings; and reviewing the experiences of high-profile engagements, such as the Nam Theun 2 Hydroelectric and Chad-Cameroon Petroleum Development projects.

**Looking Ahead**

The Bank is well positioned to respond to a growing demand for its infrastructure services. Clients rate highly the effectiveness of the Bank’s infrastructure lending, reflecting recent increases in quality and decreases in processing time and transaction costs. The Bank has a unique ability to combine financing, analytic work, policy advice, and technical assistance in a package that reflects both a global perspective and the specific needs of each country. The history of the last two decades demonstrates that the Bank is able to adapt its infrastructure business to a changing world and learn critical lessons from previous engagements. As the Bank addresses unmet infrastructure investment needs and helps clients to reach broader development goals, self-examination and learning will remain an important part of its operational work.
Abbreviations

BHP       Bumbuna Hydroelectric Project
CSO       Civil society organization
ESW       Economic and Sector Work
GDP       Gross domestic product
IBRD      International Bank for Reconstruction and Development
IDA       International Development Association
IFC       International Finance Corporation
IMF       International Monetary Fund
INT       Department of Institutional Integrity
LAC       Latin America and the Caribbean
MIGA      Multilateral Investment Guarantee Agency
NGO       Nongovernmental organization
OD        Operational Directive
OED       Operations Evaluation Department
OP        Operational Policy
US        United States
WBG       World Bank Group

Unless otherwise noted, all monetary denominations are U.S. dollars.
Chapter One
Introduction

Objective, Scope, and Approach
This volume aims to describe the lessons learned from the last 20 years of World Bank engagement in infrastructure. It covers the energy, transport, telecommunication, water supply, and sanitation sectors, and the urban development thematic area. The volume primarily focuses on the experience of IBRD and IDA (i.e., the Bank), and only occasionally touches on lessons learned by other members of the World Bank Group.

The volume presents a synthesis of existing knowledge—it is not based on new research. It has a self-critical tone and does not provide a balanced assessment of the Bank’s infrastructure record. It probably also suffers from a tendency to believe that “despite the mistakes of the past, we have now discovered the right paradigm.”

Evolution of External Environment and Bank Responses
During the 1960s and 1970s, governments in developing countries undertook major investments in basic infrastructure facilities, and also created new public institutions to manage and operate these assets. The Bank was an important partner in this process, providing not only financial support but also technical assistance and training for the staff of the newly established public entities.

Starting in the 1980s, there was growing disillusion with public sector delivery of infrastructure services. In a number of developing countries,
the large infrastructure investments did not translate into sustained service improvements. The costs of this failure, in forgone growth and poverty reduction, were increasingly seen as being unacceptably high. The Bank responded by calling for changes in the incentives of service providers, initially through commercialization and arms-length regulation, and later through privatization and competition. The Bank also supported experimentation with alternative ways to improve access to infrastructure services by the poor.

The 1980s and 1990s also saw growing concerns with the environmental and social impacts of infrastructure projects, including those financed by the Bank. In response, the Bank tightened its safeguards and achieved significant progress in addressing social and environmental risks in Bank-financed projects, both upstream and during project implementation.

In the second half of the 1990s, the Bank launched a broad (non-infrastructure specific) anticorruption strategy, signaling to the world that corruption was an important issue for development and poverty alleviation. The Bank also strengthened its fiduciary controls in the projects it financed.

The early 2000s were a period of disappointment with private participation in infrastructure in the developing world. Private investment flows, after a rapid growth in the mid-1990s, started to decline in the late 1990s. Soon it became clear that, with the exception of the telecommunication sector, the hoped for replacement of wasteful public infrastructure providers by efficient private companies would not happen in the near future in most developing countries. The effects of the East Asia financial crisis; difficulties with independent power producers in Indonesia, Pakistan and elsewhere; stalled water privatizations in Bolivia, the Philippines, and Tanzania; troubled toll roads in Latin America; and finally Argentina’s default negatively affected financiers’ risk perceptions. Private infrastructure investment in developing countries dropped to a seven-year low in 2003. In response, the Bank widened the range and attractiveness of its risk mitigation instruments, explored new ways to support public-private partnerships, enhanced its efforts to strengthen government capacity, and renewed its commitment to finance public infrastructure projects.
Spatial trends also played an important role in the evolution of infrastructure challenges. Close to 90 percent of population growth in the last few decades was concentrated in urban areas, and the urban population of developing countries more than doubled between 1970 and 2000 (and will almost double again by 2030). The rapid growth of dense urban settlements implied reduced reliance on noncommercial fuel sources, informal sanitation methods, and traditional transport modes. This, in turn, produced large gaps in urban infrastructure provision, which need to be filled in within the context of the growing autonomy of sub-national governments. During the 1970s and 1980s, the Bank provided leadership in demonstrating approaches to affordable urban infrastructure and housing. In the 1990s, the Bank focused on policy and institutional reforms affecting land and housing markets, and on improving the quality of financial management in local governments. Since 2000, the Bank has been scaling up lending for specific urban infrastructure investments and combining this with broad-based support for local government institutional development.

**Bank Lending Trends**

In the first 25 years of the Bank, close to two-thirds of Bank lending went to the infrastructure sectors. Between 1970 and 1975, infrastructure lending grew slowly from about $1.5 billion to $2 billion per year, and represented slightly more than half of total Bank lending. After 1975, infrastructure lending went through a period of rapid growth, reaching about $8.5 billion in 1987, and maintaining a share of close to 50 percent of total Bank lending (see figure 1.1). It then fluctuated around this volume until 1998, representing about 40 percent of total Bank lending in the period. In the next four years, infrastructure lending declined sharply to an average of $5.7 billion per year, or less than 30 percent of total Bank lending (an all-time low).

The 1999–2003 decline in infrastructure lending originated in the mid-1990s, when infrastructure was viewed as a “sunset” sector for the Bank. This view reflected a belief that the recent rapid growth in the volume of private infrastructure investments would continue unabated, a growing concern about the public image of the Bank in the face of
civil society opposition to large infrastructure schemes, and a strategic shift in the Bank’s focus from “bricks and mortar” to public administration, education, and health.

Among the main infrastructure sectors, the decline in 1999–2003 was most pronounced in energy (see figure 1.2), reflecting the particularly high expectation about private participation in this sector. Transportation was the least affected (although the decrease in this sector was still substantial). Looking at the regional composition of infrastructure lending, the decline exceeded 50 percent in East Asia and the Pacific, Europe and Central Asia, and Latin America and the Caribbean (see figure 1.3). Not by coincidence, these three regions attracted the bulk of private infrastructure investments in the developing world. In contrast, Sub-Saharan Africa and South Asia, regions that were less successful in attracting private financing, experienced an increase in infrastructure lending by the Bank. More generally, the infrastructure lending decline was limited to middle-income countries, while Bank infrastructure
Figure 1.2  IBRD/IDA Infrastructure Lending by Sector, FY1970–2005

Note: Includes Guarantees.

Figure 1.3  IBRD/IDA Infrastructure Lending by Region, FY1970–2005

Note: Includes Guarantees.
support to low-income countries expanded even during the 1999–2003 period (see figure 1.4).

Infrastructure was placed back in the center of the Bank’s agenda in 2003. This change was motivated by several factors, including the decline in financing available from the private sector and the associated growth in client demand for Bank support, and the renewed appreciation—both inside and outside the Bank—of the importance of infrastructure in enabling growth and poverty reduction. In a survey of about 6,000 key opinion makers in 35 developing countries, respondents gave top rankings to the importance and effectiveness of the Bank in infrastructure (see figure 1.5). Furthermore, government officials ranked the Bank’s effectiveness in infrastructure significantly higher than other opinion makers (academia, media, NGOs, etc.).

To revitalize the Bank’s infrastructure business, an action plan was adopted by the Bank’s Management and presented to the Board of Executive Directors and subsequently to the Development Committee of the Board of Governors in the second half of 2003. Executive Directors and Development Committee members noted the critical role of infrastruc-
ture in achieving the Millennium Development Goals, welcomed the reinvigoration of the Bank’s infrastructure program, and underscored the importance of learning from past experience. In particular, they emphasized the need to pay close attention to project design and implementation, ensuring the sustainable operation and maintenance of new facilities, helping clients to access private capital, building client institutional capacity, simplifying Bank operational procedures, and not shying away from risky operations. Since 2003, infrastructure lending has been recovering and is approaching the levels achieved in the 1987–98 period.  

**Project Performance**

The Bank’s infrastructure lending quadrupled in volume between 1975 and 1987. This huge expansion took place in the context of rapidly growing Bank membership, increasingly ambitious project objectives,
and a widening range of development priorities. In spite of the relative inexperience of implementing agencies, the Bank’s preoccupation with new lending led to a reduction in the share of Bank resources dedicated to supervision. The performance of infrastructure (and other) projects noticeably deteriorated during the 1980s and early 1990s (see table 1.1), and the issue became the subject of intense scrutiny.

Internal assessments highlighted a number of problems affecting both infrastructure and noninfrastructure projects, including: (a) complex project design; (b) optimistic or unclear economic, financial, and institutional assumptions at appraisal; (c) inadequate implementation monitoring frameworks and arrangements; (d) failure to accurately gauge

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**Table 1.1 Project Outcome Ratings, FY1970–2004**

(Percentage of commitments rated satisfactory or better)

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<tr>
<th>Sector/Theme</th>
<th>Fiscal Year of Completion</th>
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<tr>
<td>Information and communication</td>
<td>100</td>
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<tr>
<td>Energy and Mining</td>
<td>81</td>
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<tr>
<td>Transportation</td>
<td>83</td>
</tr>
<tr>
<td>Water/sanitation/flood protection</td>
<td>81</td>
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<tr>
<td>Urban development</td>
<td>—</td>
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<tr>
<td>Infrastructure total</td>
<td>83</td>
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<tr>
<td>Bank total</td>
<td>82</td>
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*Source: OED.*

*Note: Sector/Theme classification based on responsible Sector Board.

— = not available.
political commitment; (e) lack of attention to sustainability; and (f) un-
willingness to take decisive action in the face of noncompliance, partic-
ularly in relation to financial and audit covenants. Corrective actions
taken by Bank management focused on strengthening accountability
through real time assessment of project quality at entry, quality of su-
pervision, and country and sector portfolio performance. By the end of
the 1990s, project outcome ratings significantly improved, although
they have not yet consistently reached the level of 80 percent or above
typical of the 1970s. Indicators with a shorter lag, such as quality at
entry and projects at risk, suggest that the outcome ratings of infrastruc-
ture projects are likely to improve further.

The rest of this volume presents the lessons learned while addressing
the above problems, as well as a number of broader challenges. Chapter
2 discusses project selection and design, economic and financial analy-
sis, results monitoring, and impact evaluation. Chapter 3 summarizes
lessons from reaching the poor. The challenge of managing expectations
about private participation is discussed in chapter 4, and of ensuring en-
vironmental and social sustainability in chapter 5. Fighting corruption
at the project-level and sector-wide is the focus of chapter 6. Finally,
chapter 7 discusses communications with stakeholders.
Chapter Two
Supporting the Right Projects and Producing Results

The economic rates of return of most World Bank-financed infrastructure projects were fairly high in the last 20 years. Through its broader sector dialogue with governments, the Bank also helped countries to avoid investing in uneconomic, politically or commercially motivated “white elephants.” Nonetheless, a number of recurrent weaknesses in project design, cost and benefit forecasts, financial analysis, and results monitoring prevented the achievement of an even better track record.6

Project Design
The issue of project selection and design has been a long-standing concern of the Bank. Among the many steps of project design recommended in the (by now superseded) Operational Manual, the one most frequently shortchanged was that of identifying and ranking by economic return all alternative uses of Bank resources. Although theoretically feasible, the information demands of such an exercise were simply too great. Instead, Bank staff relied on country strategy documents and economic and sector work (ESW) products to establish the highest priority interventions. ESW proved to be particularly effective in this respect—a statistical analysis of the relationship between ESW expenditures and the development impact of projects during the period 1975–1998 found a strong positive correlation. The evidence indicated that ESW helped Bank staff and clients to identify better projects ex ante, and also helped to improve the design of projects that were already in the Bank’s lending program.
During the prioritization of infrastructure lending options in a given country, the first issue that typically comes up is the choice between investments and maintenance. The 1994 World Development Report concluded that governments spent too much on new investments and not enough on infrastructure maintenance. It found that inadequate maintenance was particularly pervasive in the transport sector—in Africa, for example, an extra $12 billion devoted to timely road maintenance in the 1980s could have saved road reconstruction costs of $45 billion. In addition to the skewed personal and political incentives of government officials that favored new investments, the Bank also contributed to the problem by its reluctance to finance recurrent expenditures. Learning from this, the Bank removed the investment bias from its financing policies.7

**Engineering Design.** Even when new investments represent the right choice, faulty engineering design may lead to project failures. The Bank has a generally good track record in this respect, although there

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### What our critics say

“The World Bank . . . is burdened by high failure rates both in its project and program (adjustment) lending . . . and has poor monitoring capabilities of the sustainability of its projects. . . .” (Walden Bello, Focus on the Global South)

“World Bank staff continues to face pressure to lend and operate in a culture of approvals.” (Manish Bapna, Executive Director, Bank Information Center)

“Figures showing increased quality of lending are absolutely not to be trusted because the Bank has a self interest in showing programme effectiveness.” (Doug Hellinger, Development Gap)

“The World Bank often does not assess how the costs and benefits of its projects are distributed among various social groups. (Friends of the Earth, in Gambling with People’s Lives)
are weaknesses in projects that are not well-suited for standard methods of engineering. Examples are overdesigned roads and water supply systems, with construction and maintenance costs that are higher than what local communities can afford (see chapter 3). By supporting innovative approaches, the Bank occasionally managed to persuade clients to reject internationally accepted engineering solutions in favor of alternative, nonstandard technologies when these fit local circumstances better (see box 2.1). Underengineering, however, could also create problems, as experience from major natural disasters shows (see box 2.2).

Bank staff, in the context of the broader sector dialogue, spend a substantial amount of time steering government officials away from poorly designed projects (for example, solid waste management solutions based on technologies that are inappropriate for a low- or middle-income country). In most cases, these ill-suited designs are “pushed” by foreign suppliers, and the Bank’s advice—coming from an experienced and trusted third party—helps governments to avoid “white elephants.”

**Project Complexity.** In the 1980s and 1990s, many Bank-financed infrastructure projects suffered from overly complex design, with a large number of components, each targeting its own (typically very ambitious) objectives and relying on a different government agency for implementation. Integrated urban development projects, covering several cities and sectors with a plethora of implementing agencies, frequently exhibited this “Christmas tree” problem, but projects in the transport, water, energy, and telecommunications sectors were also affected. The results were long preparation and implementation periods, overwhelmed Bank teams and counterparts, and ultimately poor development outcomes. This “best-as-the-enemy-of-the-good” syndrome was the result of a set of internal incentives that tied promotion to the team leadership of complex operations, a tendency to view each operation as a single intervention that was expected to lead to major and lasting breakthroughs, and multiple reviews with each reviewer demanding that the operation should address the agenda of his or her sector family, too.

The Bank’s current, changed approach includes (a) promotion criteria for team leaders and team members that reward client responsiveness
Box 2.1 Maputo Urban Rehabilitation Project—Asphalt Versus Concrete Paving for Tertiary Roads

This Bank-financed project (approved in FY1990 and completed in FY1997) tested the application of concrete pavers for tertiary roads. The technology proved to be cheaper to build and maintain and more sustainable than the standard asphalt paving.

The concrete paving method was initially resisted by the international engineering firm contracted to design and supervise road construction. The firm argued that the technology’s roughness coefficient was too high. The Bank agreed with the Road Department of the Ministry of Construction to experiment by contrasting the two technologies on two short road segments, each with heavy traffic with comparable axle weights and subsoil conditions.

The asphalt road was built more quickly but relied almost entirely on foreign exchange, which was in scarce supply in post-war Mozambique. It required foreign engineers, foreign asphalt, foreign machines, foreign fuel, and foreign spare parts. The concrete paver road took longer to build, but used more labor inputs and only local materials: sand and cement.

Within a year, lack of periodic maintenance on the asphalt road resulted in potholes that exceeded the standard roughness coefficient. In the meantime, the concrete pavers absorbed the rain through their cracks directly into the sandy subsoil, and required no maintenance. By year three, the rolling carpet of the asphalt road had to be replaced, and by year five, the road had to be virtually rebuilt, more than doubling the original investment cost. In contrast, ten years later, the concrete paver road required only minimal maintenance and was still fully functional.

The experiment paid off and has had impact on policies in Maputo. Although asphalt roads are still being built in parts of Mozambique, a recent ordinance stipulates that all new or unpaved streets in the city of Maputo will be surfaced with concrete pavers in the future.
and results, not project complexity; (b) a single, upstream corporate review process tailored to the level of risks associated with the operation; (c) simplified loan documentation; (d) streamlined processing arrangements for “repeater” projects; (e) timely provision of additional financing to facilitate the rapid scale-up and expansion of successful lending operations; and (f) adaptable, phased lending approaches to support longer-term reform programs that cannot be addressed in the context of a single investment project. As a result, the average preparation time of infrastructure projects was reduced from 28 to 18 months between 1997 and 2005 (the average implementation time of infrastructure projects also decreased during the same period, from 7.6 to 6.8 years).

**Loan Conditionality.** Bank experience in the 1970s and 1980s showed that conducive sector policies and institutional frameworks are often necessary for infrastructure projects to have successful and sustainable outcomes. The resulting concerns about a healthy policy and institutional environment led to the frequent attachment of sectorwide conditionality to investment loans, particularly in countries and sectors that received little or no adjustment lending in the 1990s. This practice, however, produced a number of undesirable side effects:

- The timing of project expenditures and sector policy and institutional reform steps was difficult to align. With loan disbursements linked to the uncertain progress of reforms, projects occasionally suffered painful interruptions in the timely availability of funds. As a result, project costs and implementation times increased, thereby undermining the economic and financial viability of the Bank-financed projects.

- Sectorwide policy conditionality going beyond the scope of the investment projects was seen as Bank imposed, and lacked the strong sense of country ownership that proved to be so critical for successful reforms. When the Bank decided to tolerate delays and noncompliance in order to protect the investment
Box 2.2  Building Hazard Mitigation into Infrastructure Planning and Design

Infrastructure that has not been designed and constructed to be disaster-resilient increases the damage suffered by communities when disaster strikes. This is frequently the case in developing countries, where the bulk of public and private infrastructure is nonengineered. Protecting critical facilities and lifeline infrastructure from the avoidable consequences of disasters is a social and economical necessity. However, experience from recent natural disasters in developing countries—Turkey in 1999, El Salvador and Gujarat, India in 2001; and Bam, Iran in 2003—show that hazard mitigation has generally not yet been effectively integrated into the design of buildings and infrastructure facilities.

The World Bank has systematically documented the lessons from disaster recovery efforts and assisted governments to apply these lessons in the design of reconstruction projects. The Bank is also working with its clients to integrate natural hazard risk management and mitigation into the design of new infrastructure facilities.

The Argentina Flood Rehabilitation Project and the Rio Flood Reconstruction and Prevention Project, financed by the Bank in the early 1990s, demonstrated what can be achieved in this area. The infrastructure built under the Argentina project withstood the El Niño of 1997/98, and the infrastructure built under the Rio project successfully protected Rio’s low-income neighborhoods from the heavy rains of 1996. A more recent example is the Gujarat Earthquake Emergency Rehabilitation Project, which addresses hazard mitigation through the building of disaster management capacities at all government levels, in addition to the construction of hazard-resistant housing and public infrastructure for the affected population.
projects, the credibility of (otherwise appropriate and necessary) reform conditionality in adjustment loans suffered collateral damage.

Learning from this, the Bank issued guidance on the “Disciplined Use of Conditionality in Lending Operations,” which states that investment loans should not normally carry sectorwide policy conditionality, and legally binding conditions should be restricted only to those government actions that are essential for the achievement of the projects’ specific objectives. The conducive policy and institutional frameworks that are needed for longer-term results should be promoted through analytical work, technical assistance, policy dialogue, development policy loans, and other programmatic, sectorwide approaches. If policy and institutional frameworks do not support a major investment operation, Bank staff should consider financing a more modest investment project that does not depend on significant policy changes for its success (for example, a metering project to reduce water losses in a city).

Cost-Benefit Analysis
The Bank played a major role in the development of the methodology of cost-benefit analysis in the 1960s and 1970s. After some experimentation with approaches in the late 1970s and early 1980s that proved to be too demanding (for example, use of distribution weights), the basic methodology of cost-benefit analysis for infrastructure projects became fairly well-established in the Bank and changed little during the last 20 years. By transferring this methodology to developing countries, the Bank greatly contributed to the improvement of project selection and appraisal practices of public works departments, utilities, and municipal funds, thus helping them to avoid white elephants.

From time-to-time, the Bank reviewed the quality of its cost-benefit analysis; the most recent review was undertaken in 2005. Past reviews indicated the presence of an “optimism bias” in the estimated rates of return of infrastructure projects, resulting (on average) in a difference
This bias, however, has largely disappeared in the projects completed more recently (see table 2.1).

While the underestimation of costs contributed to the “optimism bias,” demand forecasts have historically been the weakest part of the Bank’s cost-benefit analysis in infrastructure projects:

Table 2.1 Ex-ante and Ex-post Economic Rates of Return of Infrastructure Projects Completed in FY1999–2003

<table>
<thead>
<tr>
<th>Sector/Theme</th>
<th>Number of projects</th>
<th>Average project amount (millions of U.S. dollars)</th>
<th>Average rate of return at project appraisal (percent)</th>
<th>Average rate of return at project evaluation (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>37</td>
<td>116</td>
<td>19.7</td>
<td>20.7</td>
</tr>
<tr>
<td>Water and sanitation</td>
<td>11</td>
<td>103</td>
<td>18.4</td>
<td>18.6</td>
</tr>
<tr>
<td>Urban development</td>
<td>12</td>
<td>69</td>
<td>26.1</td>
<td>24.9</td>
</tr>
<tr>
<td>Oil, gas, and mining</td>
<td>7</td>
<td>70</td>
<td>33.2</td>
<td>38.6</td>
</tr>
<tr>
<td>Information and communication</td>
<td>5</td>
<td>75</td>
<td>36.5</td>
<td>34.0</td>
</tr>
<tr>
<td>Transport</td>
<td>50</td>
<td>112</td>
<td>39.2</td>
<td>43.3</td>
</tr>
<tr>
<td>Total weighted average</td>
<td>122</td>
<td>108</td>
<td>30.8</td>
<td>35.3</td>
</tr>
</tbody>
</table>

Source: World Bank staff analysis.

Note: Average returns are weighted by loan amount and project classification based on responsible Sector Board.
Relying on consumption levels observed in other countries to estimate demand proved to be problematic when a new type of service was introduced. Demand for piped water, for example, depends on the location and quality of traditional water sources in the area. Similarly, the use of toll roads is affected by the potential for traffic diversion and public attitudes toward tolls. Therefore, well-designed surveys of the intended beneficiaries are essential to understand existing consumption patterns, availability of alternative solutions, and public perceptions of the benefits of improved service quality. While considerable progress has been made in this area lately, achieving consistency across all infrastructure projects has remained a challenge.

Using price elasticity figures obtained from the economic literature led to significant demand forecast errors in projects that required large consumer price increases to ensure financial viability. External research papers typically study the impact of modest price changes, and elasticity estimates derived from these could be highly misleading when prices need to be doubled or tripled over a relatively short period. Project preparation teams did not always have access to practical demand projection tools, tailored to the specifics of each infrastructure sector/subsector and reflecting the experience of major price adjustments. Recently, most thematic groups working in infrastructure have embarked on developing or updating these tools.

Predicting the timing of associated investments that are essential to generate demand for infrastructure facilities was the third cause of erroneous demand forecasts. Toll roads constructed in Latin America in the 1990s, for example, were negatively affected by delays in (or lack of)
regional development projects that would have stimulated traffic growth. Electricity transmission lines designed to evacuate power from new generation plants in a number of countries in Asia became underutilized when the plants were not completed as originally planned.

More generally, Bank assumptions about GDP growth were frequently overly optimistic, and the analysis of demand risks posed by economic downturns for the economic viability of infrastructure projects was not always adequate.

Occasionally, however, the Bank proved to be too pessimistic and refused to finance infrastructure projects because it believed that the high economic growth rates needed to make the projects viable were unlikely to materialize—a major highway proposed for Bank financing in the Republic of Korea represented a well-known example of these “Type II” errors. At a different level, the Bank’s lack of vision about the challenges and opportunities that demographic trends in the 1980s and 1990s posed for urban planners and infrastructure providers—or, perhaps more accurately, the Bank’s inability to turn this vision into action to help cities to “get ahead of the curve”—was another manifestation of “Type II” errors.

Financial Sustainability

The Bank measures the financial performance of revenue earning projects by their financial rates of return. Because of the presence of nonmonetary benefits, the financial and economic rates of return of infrastructure projects have an asymmetric relationship: projects with low economic rates of return virtually never yield a satisfactory financial rate of return, but projects with low financial rates of return frequently produce a satisfactory economic rate of return. A recent OED review of Bank-financed electric power projects, for example, has found that 86 percent of the projects had good development outcomes compared to 72 percent that had good financial outcomes.
Inadequate financial rates of return, however, undermine the sustainability of infrastructure projects, and in extreme cases can produce “white elephants.” Reliable financial projections at the project appraisal stage are essential to avoid this. As in economic analysis, getting the assumptions right is where the real difficulties lie. In addition to demand forecast errors (see above), the quality of financial projections in Bank-financed infrastructure projects suffered from weaknesses in the forecasts of (a) construction, operation, and maintenance costs; (b) technical losses; (c) tariffs (particularly in US$ terms); and (d) payment collection ratios. While each of these weaknesses tended to be quite limited in most infrastructure projects, their combined impact occasionally turned out to be debilitating, as illustrated by the Honduras El Cajon power project from the early 1980s (see box 2.3).
More recent Bank-financed operations with financial projections that proved to be too optimistic include water supply projects in Algeria, Mexico, Morocco, Nigeria, and the Republic of Yemen; power projects in Argentina, Lebanon, Malawi, and Uganda; transport projects in Indonesia and Niger; and a telecom project in Ghana. The lack of political will to impose tariffs sufficient to cover operation and maintenance costs and the inability of infrastructure service providers to collect their accounts payable were recurring themes in most of these projects (see box 2.4).

Box 2.4  Algeria Urban Water Supply and Sewerage

The Algeria Urban Water Supply and Sewerage Rehabilitation Project (approved in 1994 and closed in 2003) illustrates the consequences of inadequate appraisal of technical design, financial sustainability, and implementation capacity. The project failed to achieve any of its objectives: it did not complete the intended rehabilitation of water networks in the cities of Oran and Algiers, the utilities were not turned into self-financing entities, there were no improvements in controlling leakages and reducing the level of unaccounted-for water, and the physical rehabilitation of the wastewater treatment plants had to be dropped because no institutional arrangements for their management were put in place. There were too many poorly coordinated and weak implementing agencies, and inefficient procurement and contract management led to large delays. The engineering studies significantly underestimated the cost of network rehabilitation that the achievement of the targeted water loss reductions would have required. The government failed to increase water tariffs, resulting in the deterioration of the financial situation of the utilities. Low and financially unsustainable water tariffs were a long-standing issue in Algeria at the time of project appraisal, and the Bank’s assessment of the likelihood of future tariff increases was overly optimistic.
Learning from this, the Bank has been paying more attention to the institutional factors necessary to overcome these systematic difficulties in its analytic and advisory services and project preparation work.

Ensuring the availability of funds to pay for the maintenance of non-revenue earning infrastructure projects, such as roads and drainage systems, poses a different kind of challenge. In Bank-financed road projects, the expected cost of maintenance is explicitly noted and loan/credit agreements typically require recipient governments to finance and execute the appropriate level of maintenance. In a few countries, the Bank supports the governments’ resolve with loans dedicated entirely to road maintenance (for example, Albania). More generally, the Bank has led a strong and concerted effort to help governments in Sub-Saharan Africa and other regions to improve the maintenance and management of their road networks. The concept of “commercializing the road sector” was widely promoted by the Bank during the last 20 years, leading to the establishment of instruments such as:

- Road funds financed wholly or partially by road user charges collected as a fuel levy;
- Autonomous national roads boards with substantial or majority private sector representation; and
- Road agencies to plan and manage the implementation of road network maintenance, under the direction of national roads boards or public works ministries.

Progress was often slow, as a result of weaknesses in government commitment and institutional capacity. Earmarking of fuel taxes for road maintenance was not always welcome by finance ministers and the International Monetary Fund (IMF). Although some countries made and adhered to commitments to increase budget allocations for road maintenance (for example, Uganda), in other countries initial improvements were lost during economic crisis (for example, Indonesia). Decentralization of government responsibilities complicated the process in large...
countries (for example, India), though with the prospect of more sustainable outcomes emerging in the long term. The Bank learned that hasty initial reforms should be more firmly underpinned by legislative changes, which usually take years to draft and enact. The Bank also learned the importance of acting in partnership with others, such as the IMF and regional development banks, and in Sub-Saharan Africa, it took the lead in establishing the Transport Policy Partnership.

Performance Monitoring and Results Measurement

In 1977, the Bank’s newly issued Operational Manual Statement 3.55 recommended that investment projects include monitoring and evaluation (M&E) systems. This became a mandatory requirement in Operational Directive 10.70, issued in 1989. In the same year, Operational Directive 13.50 mandated the use of key performance indicators to measure project implementation progress and development impact. Three years later, however, the report of the Portfolio Management Task Force (the “Wapenhans report”) found systemic weaknesses in M&E, and recommended specific actions to remedy these. Subsequent reviews by the Operations Evaluation Department in 1994–95 looked at more detail on M&E practices in the infrastructure sectors. These reviews found that less than half of infrastructure projects had effective M&E systems, and that the infrastructure sectors lagged behind the education, agriculture, and health sectors in this area. A particular weakness was the lack of higher order output and impact indicators.

In response, the central infrastructure unit prepared a comprehensive set of performance indicators and issued these to operational staff. Implementation, however, remained lackluster, with the exception of the monitoring of the financial indicators of utilities. Unfortunately, the internal effort to develop and use performance indicators was not accompanied by efforts to strengthen the M&E capacity of the Bank’s clients. Furthermore, insufficient help was provided to operational staff to adapt the standardized indicators to the specifics of each project and country. Staff also needed support in finding practical solutions to data collection, including the design and implementation of household and
business surveys to collect “before and after” impact data. A few infrastructure projects, however, managed to overcome these problems. The Tunisia North-West Mountainous Areas Development Project—a rural infrastructure development initiative—undertook baseline and follow-up surveys, and included extensive M&E training of local agencies.

While a sector ministry in a typical developing country in the 1980s had statistical data on the physical stock of infrastructure, the technical and financial performance of state-owned infrastructure providers was rarely monitored. Because service providers could scarcely be distinguished from their sector ministries, there was little motivation to develop performance criteria and measurement to strengthen accountability. The performance monitoring problem in infrastructure was made worse in the 1990s, when the prominence of social sectors in development grew and governments focused their efforts on filling gaps in human development. Initially, the wave of sector reforms that began in the 1990s also complicated the task of performance monitoring, as state-owned infrastructure providers were restructured and new providers emerged. Over time, however, the establishment of autonomous regulatory bodies and the development of arms-length relationships between sector ministries and providers have created a need as well as incentives to systematically produce and analyze performance data. Bank-financed water supply projects in Brazil, for example, supported the establishment of the National System for Water and Sanitation that gathers information from about 260 municipal companies with the purpose of benchmarking the utilities and facilitating national planning of investments.

In 2004, as a response to both a chronic lack of resources for statistical work and the sector-specific governance difficulties for statistics reporting, the Bank launched a lending program designed to make investments in statistical capacity easier and more effective. Under this Statistical Capacity Program (STATCAP), governments prepare comprehensive and integrated national action plans for statistical capacity building, and the Bank finances the implementation of selected key actions. A number of recently approved and planned STATCAP projects include infrastructure components. The Burkina Faso project, for example, provides support to
the Ministry of Infrastructure, Transport and Housing for (a) surveys on the use of road freight and passenger transport vehicles; (b) a central database for automobiles and road traffic; and (c) collection of traffic accident data.

In addition, under the Infrastructure Action Plan, the Bank is undertaking a series of country diagnostic studies to collect data on infrastructure performance. Bank-financed infrastructure projects also contribute to this effort—the Nigeria National Energy Development Project, for example, uses surveys to measure the satisfaction of firms with the quality of electricity service. More generally, Bank-supported investment climate surveys now rank the quality of infrastructure services against other factors that affect business competitiveness, and living-standards measurement surveys provide detailed information on households’ access to and consumption of infrastructure services. Finally, the Bank is developing a standardized set of sector-specific indicators that infrastructure project teams can use to monitor each link in the results chain (from Bank input to project output to final outcome), and has launched an effort to use impact evaluation techniques in infrastructure.

**Continuity of Engagement**

Producing results goes beyond the quality of individual projects. It depends on the nature of the engagement between the Bank and the client, including its duration, depth, and breadth. The continuity of engagement, in particular, has been shown to correlate with improved project outcomes and better policy dialogue. Gaining the trust of key decision makers in the government increases receptivity to the Bank’s advice. Knowing the problems in the sector helps the Bank to focus its assistance on the most critical issues. Steady engagement over an extended period enables each project to build on the achievements of the previous one. A recent OED report on the Bank’s urban development program, for example, has found that follow-on projects—defined as those that were less than five years apart from a broadly similar predecessor project in the same country—achieved significantly better outcomes than the rest of the urban portfolio. Building institutional capacity is an
especially long-term endeavor. Decades of continuous Bank engagement in the Chile highway sector and the Brazil urban transport sector helped these two countries to develop institutions that perform well both domestically and abroad. Fostering policy change can also take time. The Bank started a dialogue with China on railways reform almost 20 years ago. It was only in the mid-1990s that the first reform steps were undertaken, and another 10 years were needed for a shared view to emerge on major institutional and regulatory issues.

During the last 20 years, there were many instances when the Bank temporarily or permanently disengaged from the infrastructure sector (or, more frequently, from a subsector) in a country. While disengagement may be the right choice, it is a decision that should not be taken lightly. The costs of discontinuity can be quite high, for both the Bank and the client.

Looking at the specific cases of disengagement, most of these decisions were made on solid grounds. In several countries affected by conflict (for example, in Africa), engagement became, at least temporarily, impossible. In other cases, the Bank chose to disengage when policy or governance weaknesses made positive development outcomes unlikely. This motivated the Bank’s withdrawal from the energy sector in a number of states in India in the 1990s. And some disengagements were a sign of success, when the countries no longer needed Bank support in their infrastructure sectors (for example, in Central Europe).

In some instances, however, disengagement was driven by a different set of considerations. Prominent among these were changes in Bank priorities, as the Bank’s emphasis shifted to other sectors, issues, or approaches. In the late 1980s, for example, the focus on cities as engines of growth turned the Bank’s attention away from area-based, poverty-oriented urban development projects.

In other cases, strategic selectivity and coordination with other donors played an important role in disengagement. In the Philippines, for example, in the context of an agreement with the government on the
In the mid-1990s, it was agreed with the government of the Philippines that the World Bank would focus on rural power and no longer work on broader power sector dialogue. Subsequently, the contracts signed with Independent Power Producers, combined with the effects of the Asian financial crisis, led to severe deterioration in the financial standing of the National Power Corporation and contributed significantly to the country’s deteriorating fiscal situation. The need for structural reforms in the energy sector became rapidly apparent, and the government asked the World Bank to assist with their design and implementation. In response, a number of Bank missions were carried out in mid-2004 to assess the situation, and shortly afterward the Bank re-engaged in power sector policy issues.

The costs to the Bank of having been out of the sector until 2004 have been significant. A major effort was needed to “catch up”—that is, to develop an informed view of the sector and to assist the government with the design of the reform program. It required significant resources in terms of staff and consultant time—approximately three times the cost of conducting sector analysis in countries where the Bank remained engaged. It also took significant efforts from regional management to agree with other multilaterals and the government on a new division of responsibilities among donors.
subsector may also leave the Bank ill-equipped to play a leadership role when worldwide focus again falls on that sector. This has been the case in slum upgrading (see box 2.6).

More important, Bank disengagement may come at a serious cost to clients. Infrastructure investments and reforms are long term, and expensive—in financial as well as in political terms. They require predictability of financing, continued adaptation of sector policy, and sustained

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**Box 2.6  World Bank Support to Slum Upgrading**

The Bank was first involved in slum upgrading in the early 1970s, in connection with Jakarta’s *Kampung* Improvement Program (KIP). Today, the effectiveness of slum upgrading to alleviate urban poverty is widely recognized, and it is high on the Bank’s and the development community’s agenda. However, this has not always been the case at the Bank. Why the Bank’s interest waned in slum upgrading in the late 1980s and the impact of this discontinuity, provide useful lessons.

President McNamara launched the Bank’s urban poverty mandate in the early 1970s, focusing on housing the urban poor. In its first decade, the new Urban Department recruited a core group of specialists with a mandate to innovate and test ways to address urban poverty. This created a centralized, cohesive, and dedicated community of practice that built a substantial capacity to identify and appraise urban projects. Slum upgrading quickly showed promise, and its techniques matured.

By the 1980s, the Bank learned that there was no standard model for upgrading. The essential ingredient was the application of affordable standards, which required involving beneficiaries (a practice in very few other Bank projects at the time). Slum upgrading did not work everywhere, and enabling conditions were important—in particular, political will, implementation capacity, and central government support. Counterpart

*(Box continues on next page)*
funding (usually central transfers to local budgets) was frequently erratic and caused major delays. But in some countries (for example, El Salvador, Indonesia, Jordan, and Tunisia), the sequence of slum upgrading projects did evolve into national programs. The Bank’s urban sector policy and portfolio reviews confirmed that these programs were effective when their design and implementation reflected the lessons learned in the 1970s.

Bank support for slum upgrading started to decline in the late 1980s. The urban sector dialogue shifted toward the policy and institutional requirements for productive cities, and specifically for more efficient housing and land markets, housing finance, and municipal performance. This was accompanied by a shift toward citywide action, and thus policy planning and management, rather than direct assistance to poor areas. Bank support for poverty alleviation was channeled increasingly through the new instrument of social development funds, which were heavily rural oriented and not amenable to promoting longer-term upgrading programs and their institutional requirements. Internal bureaucratic changes and procedures were also an important part of the picture. The reorganization of 1987 dispersed the central core of slum upgrading specialists to the Bank Regions.

During the 1990s, only one Region, Latin America and the Caribbean (LAC), managed to stay engaged at a significant scale in slum upgrading (in Brazil, Colombia, Guatemala, and República de Venezuela). When the Bank’s new urban strategy and the Cities Alliance program were launched at the end of the decade, a concerted effort was needed to disseminate LAC’s knowledge of upgrading and restore institutional memory elsewhere in the Bank.
institutional development. The Bank is ideally suited to help countries throughout this process. When the Bank pulls out, other donors may interpret this as a signal that the sector has become a low priority, and they may also disengage. In Guinea, for instance, the Bank supported a successful highways program in the 1990s, in close coordination with other donors. When the Bank decided to shift its focus to rural infrastructure, other donors who had been supporting the government’s transport agenda also withdrew, leaving the main road network substantially uncovered in policy dialogue and technical assistance, with considerable negative consequences. More generally, an OED review of the Bank’s experience with rural water projects in the 1980s and 1990s found that the Bank’s engagement in a number of countries was not sufficiently long term to leave behind organizations capable of maintaining water points, piped systems, or both and administering schemes in a financially responsible way.
Chapter Three
There are two main views on how infrastructure contributes to poverty reduction: as a precondition and stimulus for economic growth, and as a direct means for the poor to lift themselves out of poverty. Throughout its history, the World Bank moved back and forth in emphasizing one of these two perspectives. Focusing on only one tended to produce mixed results and caused swings in the other direction. This chapter discusses how Bank approaches evolved over time, lessons learned from attempts at doing better than “trickle down,” and the adoption of a strategy of growth with access.

From “Trickle Down” to “Basic Needs”
In the early decades of Bank activity, investments predominantly focused on large-scale infrastructure managed by central government agencies or state enterprises and aimed at facilitating economic growth. Poverty reduction was a secondary objective, which the Bank and its borrowers pursued via indirect “trickle down” benefits.

During the 1970s, Bank lending rapidly increased and shifted to countries where poverty (as opposed to reconstruction) was a central issue and where conditions for successful and sustainable large projects were less favorable. The Bank was gradually redefining itself as a poverty reduction institution. It adopted a “basic needs” approach to infrastructure provision, leading to more dispersed but still centrally driven and
What our critics say

“Rather than expect the highly paid World Bank technocrats who live in the affluent suburbs of Northern Virginia to do the impossible—designing anti-poverty programs for folks from another planet: poor people in the Sahel—it would be more effective to abolish an institution that has made a big business out of ‘ending poverty,’ and completely devolve the work to local, national, and regional institutions better equipped to attack the causes of poverty.” (Walden Bello, Focus on the Global South)

“The [World Bank-backed] deal explicitly states its aim is cost recovery—meaning profit for investors—and stipulates the need to charge the cost of water, even to poor households. As a result, as in many other countries in Africa, many Senegalese citizens are forced to turn to untreated water systems for their water needs.” (50 Years Is Enough, in Water Privatization: The World Bank’s Latest Market Fantasy)

“The Bank is slowly giving up on reducing poverty, preferring instead to focus on lending for infrastructure projects in (comparatively) richer countries.” (Sameer Dossani, 50 Years Is Enough)

“The conditions of people in the poorest countries have worsened because of the ‘adjustment programs’ imposed, privatizations, and cuts in government spending. It is morally unacceptable that people who struggle barely to survive are carrying the burden of these policies on the assumption that the benefits may eventually ‘trickle down.’” (Religious Working Group on the World Bank and IMF)

implemented projects, with large built-in subsidies for the initial blocks of consumption.

In many countries, despite major investments, assets did not generate the quality or quantity of services demanded. Project evaluations started to show deterioration in performance, caused by often intractable institutional and policy constraints. The typically applied subsidy schemes frequently failed to reach the intended beneficiaries. In cities, the poor were buying buckets of water from vendors at prices several times higher
than the price paid by the elite for subsidized piped water. In rural areas, inappropriately designed water supply systems and roads fell into disrepair (see box 3.1). In the electricity sector, generous block tariffs benefited the middle class, while high fixed charges kept the poor away (or resulted in high unit prices, because they consumed little). The Bank became concerned that centrally driven, poverty-focused public infrastructure projects were not producing the intended benefits, and temporarily returned to “trickle down” while searching for alternative approaches with a direct impact on poverty.

Searching for Alternatives
Starting in the 1980s and gaining momentum in the 1990s, the Bank actively promoted a new generation of initiatives aimed at helping the poor: participatory approaches, pro-poor regulation of a wider range of service providers, and improved targeting of subsidies. The application of these initiatives in several countries and across the full range of infrastructure services generated a number of important lessons.

Participatory approaches. These approaches were first developed by NGOs and bilateral and UN agencies during the 1970s. The Bank, working with interested governments, supported these innovations, first in the area of slum upgrading, and later in rural infrastructure (although the Bank’s interest in the former waned in the 1990s, see chapter 2). Over time, the approaches became more community-driven, and the successful ones included partnerships between communities, local governments, and private providers.

A key lesson learned from this experience is the importance of paying close attention to the micro-level institutional and operational arrangements for demand-driven, sustainable infrastructure projects at the local level. Success and failure often relate to the level and consistency of government commitment to protect the integrity of the micro systems and procedures. When done well, such programs deliver low-cost solutions that can be sustained and replicated, such as the Kampung Improvement Program in Indonesia, rural roads projects in Peru, and
the Swajal project in Uttar Pradesh, India (see box 3.2 for more information on the latter). When political commitment weakens in the face of opposition from the bureaucracy attached to the old ways of doing business, and governments revert to centralized planning, line agency provision, and high design standards, sustainability is undermined. In Ghana, for example, in spite of the demonstrated success of low-cost, labor-based rural road rehabilitation under the IDA-financed Road Rehabilitation and Maintenance Project, the government de facto returned to more costly and less sustainable machine-based construction.  

**Box 3.1 Centrally Driven Rural Water Supply and Sanitation in India**

In the 1980s, Bank-financed rural water supply projects in India relied on large government agencies to design and implement water supply schemes. The Maharashtra Rural Water Supply and Environmental Sanitation Project was emblematic of this centrally driven, engineering-dominated approach. In the interest of serving the “basic needs” of the poor, the project provided perverse incentives to higher-level government agencies to build costly water supply systems without much consideration given to community preferences and affordability. Village and district level authorities were unwilling to take over the operation and maintenance of the schemes, arguing that their technical skills and financial resources were not up to the task. Because of the disconnect between service providers and beneficiaries, many of the schemes fell into disrepair after a few years. In the mid-1990s, the Bank began working with the Indian authorities to develop a sustainable approach to the delivery of improved water supply and sanitation to the rural population. The new approach represented a paradigm shift, with government agencies changing from providers to facilitators and rural communities gaining control over financial resources and driving project implementation (see box 3.2).
The Uttar Pradesh Swajal project (approved in 1996) established full cost recovery for the operation and maintenance of rural water supply and sanitation systems, and partial cost recovery for capital costs—a major improvement over past practices in India. Under this project, water supply and sanitation projects and community empowerment activities (for example, health awareness, women’s development, and non-formal education) are implemented by a partnership of village committees, NGOs, and a project management unit housed in the Department of Rural Development. Investment resources are transferred to rural communities, enabling them to procure materials, services, and works by themselves. NGOs assist with community mobilization, establishment of Village Water and Sanitation Committees, and development of design choices. Private firms are hired to provide technical design, inspection and monitoring services. Recent evaluations of sustainability have shown that 92 percent of water supply schemes and close to 100 percent of latrines installed by the project are fully functional and are in use by the beneficiaries.

Principles piloted in the Swajal project are now being replicated throughout India. In Kerala, for example, local governments (Village Panchayats) provide the institutional and financial support for expanding community-managed systems. Investment funds flow through the District and Village Panchayats, which also provide resources to cover periodic capital expenditure and facilitate access to technical assistance. Making the procedures an integral part of the functioning of every local government has enabled rapid scaling up.

**Box 3.2 Community-Driven Rural Water Supply and Sanitation in India**

**Pro-poor regulations.** By increasing efficiency and reducing the cost of infrastructure provision, private participation initiatives launched in the 1990s were expected to free resources for service improvements and network expansion, thereby facilitating access by unconnected (often poor) households. While this approach was successful in some
countries (see box 3.3), in others it failed to generate sufficient resources for private operators to expand networks to poor areas. In La Paz, Bolivia, for example, network expansion financed from internally generated revenue could not keep pace with population growth, particularly after the tariff was frozen in real terms by the regulator (see box 4.3). In response, the Bank actively started promoting pro-poor regulatory schemes, aimed at fostering the kinds of private sector investments that not only are efficient and sustainable but also serve the poor well.

Improved access for the poor can be achieved when commercial performance incentives are tempered by appropriate regulatory design. Access to telecommunication services in rural areas and poor urban

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**Box 3.3  Water Sector Privatization in Argentina**

Argentina’s privatization program of the 1990s included water companies in 30 percent of the country’s municipalities. A recent impact evaluation study found that the increase in the number of connections was significantly higher in the municipalities that privatized than in those that did not. Child mortality fell by 5–7 percent more in areas with privatized water services. The largest gains were seen in the poorest municipalities, where child mortality fell by 24 percent. The study concluded that increased access to the water and sanitation network, and changes in service quality and lower costs paid by customers (due to efficiency gains) had a direct and positive impact on health outcomes among young children, the age group most vulnerable to water-related illnesses. Argentina’s subsequent financial crisis led to the “pesification” and freezing of water tariffs at the end of 2001. The resulting renegotiations of water concessions are still ongoing, and the future of the concessions remains uncertain.

neighborhoods of many developing countries is several orders of magnitude lower than in metropolitan urban areas. In a number of countries, the Bank Group helped telecommunication regulators to design universal access policies aimed at closing these gaps. Combined with the promotion of private sector participation, the implementation of transparent and fair regulatory environments has fostered dramatic growth of service penetration and coverage—even in areas that were previously considered too costly, and often without the need for any public funding.

Regulations should ensure that the range of service levels offered is broad enough to meet the preference and ability of the poor to pay. Most utilities in the developing world strive to provide a single standard of service, where costs are dictated by engineering codes often lifted directly from industrialized countries. Barriers to increased service-level choice are rarely technical, but rather legal and administrative—constrained by minimum service-quality standards, construction codes, and materials specifications. When these standards result in services that are unaffordable for the poor, an alternative service level more appropriate for some households or neighborhoods should be sought. A few water utilities in South Africa have experimented with low-cost delivery systems for water distribution. In Durban, for example, a flow restrictor meter is used in combination with a semipressure system, shallow networks, and individual ground tanks to provide low-income households with 200 liters of water a day.

The right regulatory policies can also mobilize the resources and innovations of a wide range of institutions and entrepreneurs to work for the poor. The needs of the poor in many ways differ from the nonpoor, influenced by a variety of factors such as location, density, ethnicity, customs, disability, and literacy. In many cases, small-scale providers can meet their needs or can help fill a gap that public network monopolies ignore (see box 3.4). However, regulation frequently restricts household choices as well as the activities of independent small-scale providers. Exclusive licenses, for example, prevent household well development or use of generators within network-served areas. While potentially beneficial for the utilities, these policies undermine the objective of providing poor households with access to infrastructure services.
Box 3.4  Entrepreneurs Working for the Poor—Three Examples

In Dar es Salaam, Tanzania, a cholera outbreak in 1996 forced the sewerage and sanitation department to loosen its monopoly on cesspit cleaning to allow private providers in. There is now an emerging market for cesspit cleaning, and households can choose a provider based on price and easy-to-monitor performance.

In Bangladesh, Grameen Phone, an operator offering traditional cellular services in urban areas, also gives loans to low-income women entrepreneurs in rural areas to provide payphone services based on cellular technology. The operators make a profit by reselling airtime to others in the village. Villagers report that the introduction of the service has allowed rural farmers to check livestock prices and coordinate medical needs, and has challenged the traditional power that wealthy landowners and intermediaries have held over rural economies and politics.

A US$75 million IDA credit, combined with a US$8 million grant from the Global Environment Facility, finances small-scale, renewable-based rural power projects in Sri Lanka. These small projects are put forward by private enterprises and are screened by participating credit institutions to ensure they are economically viable and technically sound. The program is on track to meeting its targets, including the electrification of 100,000 rural homes through solar home systems and independent mini grids powered by village hydro, wind, or biomass.

Improved targeting of subsidies.  Encouraging entry of alternative providers suited to serve the poor often requires more than appropriate policies. Subsidies can increase the attractiveness of extending service to low-income consumer segments, if targeted well:

- Subsidies should be targeted to areas where the poor are concentrated and support the types of service that the poor are likely to use.
When most of the poor are not connected, connection subsidies lowering the barrier to access are a more effective means to support them than consumption subsidies.

Subsidy schemes should include performance incentives for providers, such as output-based aid (see box 3.5 for examples in the water sector). Such performance-based...
schemes are also used in the energy, telecommunication, and transport sectors.

Finally, combining subsidies with alternative payment arrangements such as prepayment cards (which limit charges to a predetermined maximum) and phased billing or payments (which spread connection charges over time) can be particularly effective ways to make infrastructure services more affordable.

**Enabling Environment**
While the search for alternatives produced notable successes, the scale of the progress fell short of global commitments to dramatically increase access. The lack of broader institutional and policy reforms often hampered the mainstreaming of innovative approaches. The Bank learned that poverty-focused investments need to be combined with efforts aimed at ensuring an enabling overall institutional and policy environment. In urban areas, this includes policies governing land markets, housing finance, and housing subsidies, as well as genuine partnerships among local and national governments, communities, and the private sector. In rural areas, policies and institutional arrangements must provide communities with ongoing support in the form of information, technical and management capacity building, and financial resources.

**Balancing Growth and Access**
Perhaps the most important lesson is to resist the tendency to over-compensate for disappointments with the latest strategic initiative. Instead of oscillating between growth and access strategies, the Bank has learned to think of growth with access as the overarching objective of infrastructure policies and investments. Infrastructure is essential for economic growth, and without growth there can be no sustainable poverty reduction. For the poor to share in the benefits of growth, they
need access to infrastructure, both to achieve better health and education and to earn higher income as farmers, workers, and small-scale entrepreneurs. The Bank’s infrastructure strategy, therefore, integrates support for growth and access as complementary objectives contributing to poverty reduction (see box 3.6 for an example of a balanced country program).
Chapter Four
Managing Expectations About Private Sector Participation

Evolution of Private Financial Flows and Investments

In the years following the World Bank’s creation, Bank financing of investments in electricity and transport infrastructure initially made up more than 60 percent of its portfolio. The relative importance of infrastructure lending declined in the 1970s, but the Bank’s approach continued to reflect the dominance of governments in the financing and managing of infrastructure. Bank policy was to offer to finance public infrastructure, provided the investment had a sufficient economic rate of return.

Though there were successes, the results on the whole were rather mixed. Political pressures led to artificially low prices, while corruption, patronage, and overstaffing inflated costs. Most public providers were financially distressed and lacked the resources to meet demands for expanding access. Following years of unsatisfactory effort to improve the performance of public providers and increasing concerns about their fiscal cost, governments and donors turned their attention to private provision.

Various arguments were given in favor of private sector involvement. One such argument was that arm’s length relationships between public authorities and service providers would facilitate cost recovery and regulation. Traditional public service providers frequently combined
functions of policy making, regulation, service provision, audit and reporting, resulting in nontransparent objectives and results. Another argument was that by using competitive bidding to choose from multiple private operators, there was a greater chance of finding a more efficient operator. Others saw private financing as a means of reducing the fiscal burden of infrastructure investment.

By the mid-1990s, the Bank became reluctant to lend to governments for public infrastructure projects and, instead, offered its support—both intellectual and financial—for mobilizing private investment. Seeing the rapid growth of private investment in infrastructure, some in the Bank expressed a view that the private sector could eventually replace the public sector as the main financier of infrastructure investments in almost all developing countries. There was a perception that it would be difficult to obtain senior management or Board approval for infrastructure projects that did not involve the private sector in some way.

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**What our critics say**

“Instead of using its massive funds to promote expertise in the public sector, thereby acknowledging that water is a human right and an essential public service, the Bank is forcing countries to commodify their water resources and put them on sale to the highest bidder.” (50 Years Is Enough, in *Water Privatization: The World Bank’s Latest Market Fantasy*)

“The worldwide sale of public assets to private interests is larceny on a grand scale.” (Wayne Ellwood, in *The New Internationalist*)

“When governments cannot deliver services, the private sector steps in to take over, often undermining government accountability, eroding local democratic institutions, exacerbating existing inequalities, and threatening human rights.” (Jubilee South)

“Bank policy infringes on the national sovereignty of lending nations, by pushing for legislative and institutional reform that contribute to unsustainable service delivery, increase in water prices, exacerbate inequity, and increase social conflict.” (Public Citizen, World Bank Watch)
The volume of investments with private sector involvement in infrastructure projects in developing countries expanded greatly in the 1990s, reaching a peak of US$114 billion in 1997 (see figure 4.1). This volume fell to US$56 billion by 2003, before picking up slightly again in 2004 (due mainly to an increase in private telecoms investment). Several points can be made concerning this boom-and-bust episode:

- At its 1997 peak, private investment amounted to about 53 percent of total infrastructure investment in developing countries. Even when private investment was at its highest, there was an ongoing need for a large volume of public investment.

- Private investment was strongly concentrated geographically (although most countries experienced some form of private participation in infrastructure). The top five recipients of private infrastructure investment (Argentina, Brazil, China, Mexico, and Malaysia) received 49 percent of all private infrastructure investment in...
1984–2004. The top 20 countries received 85 percent of all private investment. Less than 10 percent of private investment has been made in low-income countries.

Private investment was also strongly concentrated by sector, with telecommunications absorbing 46 percent of investment, energy 33 percent, transport 16 percent, and water and sewerage just 5 percent.

The 2003 low point in private infrastructure investment amounts to 22 percent of total investment in infrastructure. Although significantly less than at the peak, private investment was still higher than in 1995 or any earlier year. Private investment continues to play a significant role in meeting the developing world’s infrastructure needs, providing about 10 times the financing of the World Bank in recent years.

While private participation has had its successes, particularly in telecommunications, getting it to work well has proven difficult, particularly at the retail interface with electricity and water consumers. Political pressures to keep tariffs low have remained, leading to bitter and costly disputes with private providers seeking higher profits. About 5 percent of private infrastructure projects, including some very-high-profile cases, have been cancelled or are judged to be “distressed.”

While access to infrastructure services has increased, those disputes have often caused the rates of increase to slow. All parties remain concerned about corruption, and private investors have become more wary of the risks of investing in developing countries.

To the extent that private sector participation was seen as the panacea for decades of poor public utility performance, the past decade has shown that merely involving the private sector is not a universal cure. Improving infrastructure services is hard, whether provision is public or private. Great attention to detail is needed in the design of privatization
transactions and regulatory systems. Moreover, infrastructure solutions need to be tailored to countries’ stages of development (for example, middle income, transition, post conflict, failed states, and others).

More recent Bank willingness to finance purely public projects is driven by the decline in private investment and the difficulty of making private participation in infrastructure work in many countries. Developing country governments have limited fiscal resources and face competing demands such as health, education, law and order, and other demands. The goal of expanding and improving infrastructure services to support higher growth and provide access for the poor requires levels of investment that are beyond the financing capacity of most governments. Therefore, government resources need to be supplemented by aid and private investment.

The experience gained in working with governments to engage with the private sector has provided lessons concerning how to improve the performance of public sector utilities. For example, in some countries (for example, India) where private involvement has not advanced as far as had been expected, semi-independent regulators have ended up regulating semicommercialized public utilities, which don’t have the same incentive structures as truly private companies. This system of regulation has led to renewed focus on features of good corporate governance, and on how these features might be employed to improve the functioning of public enterprises (see box 4.1).

The difficulty in making private participation in infrastructure work in practice is not a proof that it cannot work or that the Bank was mistaken to try to shift from its traditional reliance on public enterprises. However, it does impose a duty on the Bank to learn from the past 10–15 years how to improve the prospects for private participation. Three major areas of lessons are (a) understanding the political economy of private participation, (b) adapting regulatory environments to country circumstances, and (c) allocating risks between the public and private sectors.
Box 4.1 Improving Public Utilities—Water Supply in Phnom Penh, Cambodia

The Phnom Penh Water Supply Authority (PPWSA) is the largest water supply utility in Cambodia, serving the Phnom Penh metropolitan area. Supported by the Bank, PPWSA underwent a major turnaround between 1997 and 2004, going through several phases. First, in a short crisis management phase, a new management team was recruited. Their remuneration included incentives on financial performance, collection rates, and reduction of unaccounted-for water. At the end of the first phase, the Bank assisted the government to restructure and corporatize PPWSA. In the second stage of recovery, the corporatized utility introduced customer surveys as well as an automated billing and collection system to replace often-corrupt bill collectors. The new billing and collection system was accompanied by a public information campaign. With financing from the Bank, water meters were installed for all connections. In the third stage of stabilization, the Bank assisted the utility to install an automated accounting and management information system. A long-term projection model was applied to define cost-recovery scenarios. On the basis of these scenarios, the Bank helped the government to develop and introduce a new tariff structure. All stages of PPWSA’s reform were accompanied by capacity-building efforts facilitated by the Bank, including a twinning arrangement with Brisbane City Enterprises, regulatory training for government officials, and seminars on water sector reform.

Political Economy of Private Participation in Infrastructure

Two political economy stories are important in understanding the difficulties of private participation in infrastructure. The first story has been well known since the first experiments with private infrastructure investments. Cost-covering tariffs and determination to act against nonpayers
are required to ensure that the private sector makes a normal risk-adjusted return on the capital it invests. But once investments have been sunk, the government has a strong political temptation to set tariffs at a low level and/or interfere in efforts to enforce payment discipline. Ultimately, the challenge of private financing is how to get the public to accept the principle of paying cost-covering tariffs, so that governments do not face such temptations. The political attractions of low tariffs and lax enforcement of payment discipline are illustrated in box 4.2.

The second story is one that has emerged only recently. Even where private infrastructure appears to be working well to economists, it has not always gained public acceptance. In Latin America, the region with the most experience of private participation in infrastructure, economists’ reviews find the overall impact of private participation to be mixed, but positive overall. Labor productivity has generally increased; service quality and coverage have generally improved, although the impact varies considerably by sector; in general the poor have benefited from reforms; initial job losses tended to be small relative to the total workforce and tended to be reversed in the medium term; and concessionaires do not appear to have made excessive profits. In contrast with these economic appraisals, a survey of public opinion in 2002 found two-thirds of respondents strongly disagreeing with the statement that privatization “has been beneficial” for their country. In all surveyed countries, negative opinions had increased since 1998 (for example, from 50 percent to 83 percent in Argentina, 38 percent to 75 percent in Bolivia, and 48 percent to 73 percent in Peru). Moreover, as the example of Bolivia (see box 4.3) indicates, public dissatisfaction does not show up simply as bad polls, but sometimes as public riots. The Bank is now making an effort to understand whether this disparity occurs because the economic appraisals are somehow faulty, or whether noneconomic factors play a large part in shaping public opinion.

Many of the problems behind the negative public perception could have been avoided with better planning and implementation. Public dissatisfaction is frequently the result of poor transaction design, due to the lack of consultations with affected communities and inadequate
Box 4.2  Electricity Privatization in Georgia

In the mid-1990s, Georgia’s government used the power sector as a substitute for the social safety net and a tool to fight inflation. Low electricity prices and tolerated nonpayment led to a sectoral deficit equivalent to 5–8 percent of the country’s GDP.

In 1996, the Bank Group helped the government to launch a major reform effort aimed at the de-monopolization, commercialization, and privatization of the power sector. Initial reforms included establishing an independent regulatory body; unbundling and corporatizing generation, transmission, and distribution functions; and commencing privatization of generation and distribution. In 1988, Telasi, the distribution company in Tbilisi, was sold to AES Corporation. In 2000, the bulk of Georgia’s thermal generation capacity was also sold to AES. In 1999, a wholesale electricity market was created to manage the flow of payments among sector enterprises (currently, it is managed by a private consortium, under a contract supported by IFC). In 2002, with Bank and IFC assistance, the distribution companies outside Tbilisi were consolidated into one company, whose management was contracted out in 2003.

These measures helped to prevent the collapse of the sector and resulted in improvements in reliability and efficiency. But power outages continued, and the system remained financially unviable. Factors that inhibited a better outcome include political pressure to provide electricity even when prices do not cover costs; tolerance of nonpayment, theft, and corruption; and weak enforcement of regulations. AES reported that 40 percent of the electricity it provided was stolen and could not be billed. As government subsidies ceased upon privatization, AES effectively bore the burden of the 5 percent of GDP being annually transferred from the energy sector to consumers. In 2003, AES sold its holdings in Georgia to RAO UES, a Russian company.

Box 4.3  Privatization of Water Services in Bolivia

In 1990, IDA approved the Bolivian Major Cities Water and Sewerage Rehabilitation project. It covered 60 percent of Bolivia's urban population, located in the three main cities—La Paz, with about 1.2 million people; Santa Cruz de la Sierra, with about 600,000 people; and Cochabamba with about 400,000 people.

Santa Cruz, which operated a consumer cooperative, achieved more than planned under the project. In contrast, in La Paz and Cochabamba, political interference by the mayors hindered decision making on tariffs and contractual issues. These problems were only addressed when the President of Bolivia decided to privatize the La Paz and Cochabamba water and sewerage utilities, a condition for the two-year extension of the IDA credit to 1997. Privatization achieved positive results in La Paz but not in Cochabamba, where political disputes continued.

The results over the period 1988–99 differed markedly across the three cities. In Santa Cruz, water connections increased from 70 percent to 94 percent of households; and sewerage connections and treatment increased by about a third (to 40 percent and 48 percent, respectively). In La Paz, water connections rose from 75 percent to 92 percent; sewerage connections rose from 50 percent to 60 percent, and sewage treatment rose from 0 percent to 15 percent. In Cochabamba, water connections fell from 70 percent to 60 percent, sewerage connections fell by a tenth to 53 percent, and sewage treatment stayed constant at 80 percent.

In Santa Cruz, the consumer cooperative complied with all Bank conditions—efficiently using the loan funds to expand services—and gained additional Bank funds when the project was extended due to delays in the other two cities. Current challenges for the cooperative are the continuing growth of the city and the need to reduce pollution to protect the city’s aquifer.
In La Paz, once the President had decided to privatize water services, the concession transaction went fairly smoothly. Invitations to bid were issued in April 1997 and the contract signed in July. The selection process was simple and quick: the bidder that offered the greatest number of new connections in the predominantly poor area of El Alto was awarded the contract. Average tariffs were increased by 35 percent prior to the transaction, and post-transaction tariffs included a cross-subsidy from existing consumers to pay for new connections, especially in El Alto. But in 2000, the national regulator refused an increase in the La Paz water tariff and instead increased the price for new connections. By 2004, the price for a new connection stood at $450 for water and sewerage, six months’ wages for poor Bolivians. In early 2005, faced with public protests over the high connection prices, the government cancelled the concession. The ultimate failure of the concession can be attributed directly to regulatory decisions increasing the price of connection rather than the price of consumption, but general public attitudes about private utilities also played an important role.

In Cochabamba, farmers opposed the initial project plan to drill four wells, because they feared depletion of groundwater they used for irrigation. The initial project plan also failed to include funding to replace leaking pipe systems, although water losses were as high as 40 percent. Subsequently, the municipality successfully challenged the national government’s transformation of the utility into a state corporation, resulting in the privatization transaction being declared void. The IDA credit agreement expired in December 1997, precluding use of Bank funds. In the following years, municipal efforts to privatize the utility produced a tender for which no bids were received and then, in September 1999, the award of a concession to a consortium, Aguas del Tunari, that submitted an unsolicited bid. Under this concession, tariffs were increased by 35 percent, without improvements in service quality. The tariff increase triggered riots and the rapid cancellation of the concession.

attention to the distribution of benefits. Overstating the benefits of private participation (for example, as a panacea for all the economy’s ills) also induces negative public attitudes when the reality fails to live up to expectations. Carefully analyzing the likely impact of reforms and incorporating measures to mitigate harmful side effects can significantly reduce the chances of failure.

Careful reform sequencing can also help to win over public opinion. Necessary tariff increases may face less public resistance if service improvements can first be demonstrated. For example, when a water lease was established in Conakry, Guinea, in 1989, the tariff faced by consumers was about one-third of the cost-covering tariff to be paid to the private operator. The customer tariff remained at its initial level for two years and then was gradually increased to full cost level (operations, maintenance, and capital) over a further six years. The World Bank supported the transition to full-cost recovery by financing 100 percent of the foreign exchange component of the operator tariff for four years, and then on a declining basis for an additional four years. The subsidy payments to the operator were made on the basis of actual collection of water bills. This provided an incentive to the operator to maximize collections by increasing connections, thus reducing nonrevenue water and ensuring collections of billed quantities. This aspect of the lease worked well, and overall the Guinea lease has been reasonably effective in improving access to safe water.

Perceptions of corruption generate public hostility toward privatization. When contracts are awarded by secret negotiation, rather than open competition, public attitudes tend to be more negative, even in the absence of corruption. Secrecy breeds suspicion, and greater transparency of private providers’ accounts could also help to alleviate public concerns about corruption or excessive profits. When corruption does actually occur, it can fatally damage the effort to promote private participation. During the last 10 years, the Bank learned that certain reform models and steps are particularly prone to corruption, and these should be avoided in countries with significant governance weaknesses (see chapter 6b).

Not all the factors that affect public perceptions of private participation are directly related to the economic and social impacts of specific
infrastructure reforms steps. Public opinions are influenced by the economic cycle: when economic growth is weak, people tend to reject market mechanisms and to see privatization as undesirable. Ideological opponents of privatization have managed to exploit cyclical downturns for political gain in a number of countries. Also, publicity about failed privatization projects can cast a shadow on successful ones. Public opinion in some countries can be predisposed against the concept of foreign involvement in the economy, particularly when foreign investors are seen as the return of the former colonial power. Finally, advocacy or support for private involvement by the World Bank can be seen as an affront to national sovereignty, particularly when governments use Bank conditionality as a basis for pushing through private sector involvement rather than convincing the public of the benefits of private involvement.

This last class of factors affecting public perceptions, factors over which the Bank has little influence, may present the greatest challenge. In retrospect, the Bank did not pay sufficient attention to public opinion in many countries where the Bank was involved in the design and the implementation of reforms. Task managers and country officers lacked the tools to assess public attitudes and had limited understanding of the importance of a proactive communications strategy (see chapter 7).

In sum, the public in many countries has become more skeptical about the potential benefits of privatization. Therefore, building and maintaining political support for privatization is likely to be more difficult in the future. Before reforms are launched, extra attention should be given to (a) analyzing who will win and who will lose, (b) reducing the risks of corruption, and (c) understanding public perceptions and adopting a communications strategy. This will require a lot more than designing pro-poor reforms—the middle class plays a crucial role in the politics of democratic countries.

Adapting Regulation to Country Capacity
Regulation is central to improving infrastructure performance. This applies not only to private firms—the likelihood that public firms achieve
their performance targets is higher when regulatory functions are placed in an outside agency. Demonstrated expertise to regulate public firms also helps to develop confidence in the regulatory regime, which, in turn, makes the task of generating public support for eventual privatization easier.

In addition to the promotion of private participation, the main steps of the infrastructure reform recommended by the Bank in the mid-1990s were to:

- Separate potentially competitive segments of the sector from noncompetitive segments, and build competitive markets in those segments and countries where possible
- Introduce “competition for the market” in remaining monopoly segments (for instance, for the right to provide services, through competitive bidding designed to identify the most efficient providers)
- Establish regulatory systems that balance the competing interests of investors and consumers, while providing incentives for all service providers to improve performance

Although the thrust of the above agenda remains correct, a number of difficulties have emerged with the implementation of each step. Establishing competition in countries with small market size may pose insurmountable challenges. Creating competition for the market rests on the ability of governments and private firms to enter into binding commitments in environments with weak formal commitment mechanisms. Putting in place effective regulatory regimes takes substantially more time than implementing privatization transactions. In hindsight:

- At times, the Bank’s approach has been too “cookie-cutter,” suggesting that the same recommendations
could work across vastly different countries and sectors. Rules and institutions that work well in the United States or United Kingdom do not necessarily work well in poorer countries with low government credibility; widespread corruption and regulatory capture; limited technical expertise; and weak auditing, accounting, and tax systems. Measures to adapt regulatory regimes to local circumstances do exist, including minimizing regulatory discretion or contracting out particular regulatory functions (for example, auditing), but the measures have not always been fully utilized.

The Bank’s expectations of building regulatory capacity or background institutions (such as effective contract enforcement) have frequently been too ambitious. In the United States, for example, regulatory institutions took the best part of a century to develop to their current forms. Even if one assumes that developing countries will manage to avoid some of the mistakes made in North America or Western Europe, one must realize that considerable time and effort will be required to build up regulatory expertise and institutions.

Significant uncertainty exists regarding the choice of the proper industry model for a particular country in a particular sector. Hence, there is a role for experimentation. The Bank has not always acknowledged this uncertainty when recommending a specific model to a client.

Standard lending products are not well-adapted to providing technical support on a sustained basis to newly established regulators. The Bank has explored various mechanisms outside typical loan settings to provide this support, such as the establishment of fora for the exchange of ideas and experience between regulators in Africa, East and South Asia, Central and Eastern Europe, and Latin America and the Caribbean. It has also set up training institutions, such as the Public Utilities Regulatory
Center in Florida that offers two-week training courses for regulators. But capacity building requires more intensive and sustained efforts than these initiatives can provide, and the Bank is now closely integrating its support to regulatory bodies into its country-specific, long-term institutional capacity enhancement programs.

In addition to the challenge of establishing technically adequate regulatory regimes and institutions, there is a further challenge of achieving acceptance of, and compliance with, regulatory decisions. This applies not only to acceptance by the public and private service providers but also crucially to acceptance by the government. In many countries, tariff setting is one of the traditional roles of the prime minister, and changing this tradition requires considerable time and effort. Part of the aim of establishing specialist regulators is to ensure that pricing and other decisions reflect technical criteria and not short-term political incentives. An important aspect of recent Bank interventions is the reinforcement of incentives for governments to respect regulatory decisions.

**Allocating Risks**

To governments wanting new infrastructure investment and a stronger fiscal position, private financing can seem like a powerful tool. But its fiscal effects are not always as they appear. Part of the reason is that contracts between governments and private investors allocate some risks to the government, which, if things go wrong, can require government expenditure. Over the last two decades, the Bank has gained a deeper appreciation both of the true fiscal effects of private financing and of the difficulties of achieving good risk allocation.

Private financing can improve the tradeoff between building new infrastructure and strengthening the fiscal position. First, the concomitant introduction of private management may lead to lower costs and better bill collection. If it does, more infrastructure can be provided for any given level of subsidy from the government. Second, private financing can shift risks from the public to the private sector. If it does, the government’s fiscal position is less vulnerable to shocks to the profitability
of the infrastructure businesses. However, the choice between public and private financing is often more complex than it appears.

First, the real fiscal effect of public financing can be better than it seems. When user fees—or, indirectly, an increased tax take—eventually recover the cost of infrastructure investments, the publicly financed investment is fiscally neutral in the long term, even though the conventionally measured (cash) deficit initially increases. Even when user fees and increased taxes cover only some of the costs, the true fiscal cost is still less than the immediate increase in the cash deficit.

Second, the true fiscal effect of private financing can be worse than it seems. For example, some privately financed projects involve government guarantees that protect the private sector from certain risks. In principle, each risk in an infrastructure project should be borne by the party best placed to manage it. Many risks, including construction and operating risks, are best managed by the private sector. But when the government has considerable influence over an outcome that is subject to risk—as it usually does over permits, tax rates, and the regulated price of the service—the government may be able to lower total project costs if it bears the risk, which it can do by guaranteeing the outcome. Government guarantees are thus sometimes justified. When such government commitments are not very credible on their own, backstopping them with guarantees from a triple-A-rated institution can help. Recently, for example, the Bank has guaranteed commitments in relation to expropriation, permits, and taxes by the government of the Lao People’s Democratic Republic for the Nam Theun 2 Hydroelectric Project. The Bank has also set up a facility that guarantees similar commitments by the government of Peru for a range of privately financed infrastructure projects. Yet the fact that government guarantees can help a project with no immediate measured fiscal cost encourages governments to issue them even when they are not in the best position to manage the risk. And whether justified or not, guarantees can ultimately have a large fiscal cost.

Other privately financed projects involve long-term “take-or-pay” purchase contracts that, in effect, substitute off-balance-sheet financing for ordinary debt, leaving the government’s true fiscal position little
changed. Examples include independent power providers selling to a state-owned power utility and bulk-water suppliers selling to a municipal water utility. Again, such projects can help, but problems arise when governments do not realize that the projects are adding to their effective debts.

Like others, the Bank has sometimes fallen prey to the illusions created by conventional fiscal accounting, focusing too much on the effects of private financing on short-term cash flows and too little on the long term. In the early 1990s, for example, the Bank probably paid too little attention to the implications of power-purchase agreements on the finances of public utilities and the governments that owned them—in countries such as Indonesia, Pakistan, the Philippines, and Turkey. In Latin America in the 1990s, it probably did too little to call attention to the problems created by deficit reductions achieved by cuts in public investment instead of public consumption.

But the Bank has also learned from these experiences. First, it has helped several governments better understand and manage the liabilities they have incurred in privately financed infrastructure projects. In the mid-1990s, for example, it worked with Colombia to help that country develop systems for monitoring the risks created by guarantees for road, power, and telecom projects. Later, it helped Chile monitor the fiscal effects of minimum-revenue and exchange-rate guarantees for transport projects, and it helped Turkey monitor the fiscal risks associated with power-purchase agreements. In Indonesia, it is currently offering to help design private infrastructure projects in a way that takes account of traditionally overlooked fiscal costs.

Second, in the last few years, the LAC Vice Presidency has led a research-driven debate on whether governments targeting the near-term cash deficit have cut back too much on public investment in infrastructure. And all of the Bank’s regional units are more willing than before to support viable public investments in infrastructure with lending products.

The Bank is also seeking to help with one particular risk that has turned out to be more difficult to handle than many expected—the risk of
foreign exchange mismatches. Most infrastructure services generate revenues in local currency. Local currency financing would be the most appropriate way of funding investments. But long-term debt financing in local currency is not available in most developing countries. Borrowing in foreign currency, however, results in a currency mismatch between financial obligations and revenues. Tariff adjustment clauses linking the tariff to the exchange rate have been the traditional approach to the mitigation of this risk. Through this approach, the risk is passed from foreign investors to bulk purchasers or directly to end-users. But bulk purchasers generally have no means of hedging this risk, and attempts to make end-users bear the burden of large exchange rate devaluations have proven economically or politically impossible, resulting in contract renegotiations and cancellations.

The Bank has responded to this issue in various ways. It plays an important role in financial sector restructuring and reform aimed at the deepening of local capital markets, the long-term solution to the problem of currency mismatch. In 2000, the Bank's Board approved a proposal to introduce local currency products, allowing certain loans to be repaid in local currency. These products are, however, only available in a few IBRD countries where a liquid swap market exists. The Bank is currently considering a proposal under which the gap between local currency revenue and foreign currency repayments when a currency crisis occurs could be spread over a longer period by means of a contingent loan or partial guarantee facility rather than being due immediately.
Chapter Five
Ensuring Environmental and Social Sustainability

This chapter first briefly reviews how environmental and social risks became a critical concern for the World Bank’s infrastructure work and then describes the Bank’s efforts to find a balanced approach to the management of these issues.

Increasing Attention to Environmental and Social Impacts and Risks

The development of environmental and social policies by the Bank, and development of similar policies by other multilateral financial institutions, bilateral donors, and export credit agencies, is a process that goes back over 30 years. It was initially the result of widespread concern over the adverse impacts of international development projects, especially large scale-infrastructure, water resources, and forestry worldwide. Despite the early efforts in this direction, however, many project teams paid relatively little attention to environmental and social policies through the 1970s and 1980s, and many borrowers seemed unaware of the policies. Environmental and social impacts were often identified only during implementation, after projects were approved.

There was, consequently, a significant incidence of adverse impacts, with associated reputational consequences for the Bank in a context of growing scrutiny by civil society. Besides the well-known Sardar Sarovar
Project (Narmada) in India (see box 5.1), two projects in Brazil caused significant damage to the Bank's environmental reputation: (a) the North-west Integrated Development Program (Polonoroeste), which earned notoriety for paving a highway through the Amazon rainforest (although Bank funding was employed to pave a road already carved out of the rainforest, the project was strongly associated with the rapid deforestation and social conflict that ensued in the area); and (b) the Itaparica Resettlement and Irrigation Project, which affected more than 150,000 indigenous peoples and, therefore, generated strong opposition from civil society organizations.

Perceived and real mishandling of the environmental and social impacts of high-profile projects led to increasing demand for greater Bank transparency and accountability. The public scrutiny, especially on the Narmada Project, led to the Board's decision to establish the independent

<table>
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<th>What our critics say</th>
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<td>“The World Bank has not learned lessons from its earlier mistakes. It has not strengthened its social and environmental safeguard policies, but rather has weakened them in important aspects. . . . In addition, the Bank has a poor track record of putting its existing policies into practice. . . . Decentralized, participatory, low tech alternatives to destructive mega-projects exist. Yet the Bank has not made participation, social equity, and the environment part of its development model, and therefore is not in a good position to consider such alternatives.” (Friends of the Earth, in <em>Gambling with People’s Lives</em>)</td>
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<td>“Since the Bank is not capable of adequately dealing with high risk, it should not support new high-risk projects.” (Environmental Defense, Friends of the Earth, and International Rivers Network)</td>
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<td>“World Bank managers fail to seek out civil society participation and input at the project preparation stage and pay only lip-service to this requirement in the loan preparation process.” (Public Citizen, World Bank Watch)</td>
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Box 5.1 The Story of Narmada

Perhaps no project has had as damaging an impact on the Bank's reputation as the Sardar Sarovar Project (Narmada) in India. The Bank had failed to appropriately appraise environmental, resettlement, and indigenous peoples issues. Neither the Environmental Assessment, the Resettlement Plan, nor the Tribal Peoples plan were prepared prior to appraisal, as required by Bank policies.

The Bank sent the first resettlement specialist to the field in 1983, after the project was appraised. He found that the three participating state governments in India—Gujarat (where the dam is located), Madhya Pradesh, and Maharashtra—did not know the number of people that would be affected, how many of these were tribal peoples, or where they wanted to relocate. There were no feasible plans for their resettlement and rehabilitation and no institutional capacity for implementing the resettlement of 100,000 people from the submergence area and 140,000 people affected by the canal system. Most of the project-affected people were tribals lacking formal land rights and considered encroachers. Despite the specialist’s severe misgivings, the Bank approved an IBRD loan of US$200 million and an IDA credit of 99.7 million Special Drawing Rights (SDR) to finance the construction of the dam in 1985.

While the Indian state governments did improve resettlement policies and entitlements, they were unable to implement satisfactory resettlement for the majority of those displaced. Land for resettlement proved to be of poor quality, promised assistance did not materialize, and compensation rates for land were inadequate. The lack of consultation with affected people further alienated project-affected people and their allies.

Several Indian NGOs led protests, and the Bank commissioned an independent review of the project (Morse Commission) in 1992. The Commission’s report concluded that the Bank did not comply with its Operational Manual Statements on Environment, Resettlement, and Tribal

(Box continues on next page)
Box 5.1  (continued)

Peoples, and that proper resettlement and rehabilitation was not possible under prevailing circumstances. The Commission recommended that the Bank step back from the project.

The Government of India requested cancellation of the US$165 million undisbursed balance of the loan in 1993. In advising the Bank of its decision, the Indian authorities emphasized that they remained committed to full implementation of the government’s previously announced action plan covering resettlement and rehabilitation of people affected by the project, tighter linkage between progress on resettlement and dam construction, and strengthened environmental planning and monitoring of potential environmental impacts. The government of India subsequently completed the dams with its own funds in collaboration with the three relevant state governments.

Inspection Panel in 1993, providing a recourse mechanism for affected parties. The Panel’s investigations are limited to Bank violations of its own operational policies (excluding procurement). Since its inception, the Panel investigated 16 infrastructure projects, and its findings have led to changes in the Bank’s engagement in many of these operations (see box 5.2).10 By now, similar transparency and accountability mechanisms have been established at many multilateral financial institutions and also at some bilateral development and export credit agencies.

In the mid-1990s, environmental and social sustainability became central to the Bank’s development paradigm. The set of 10 operational policies on environmental and social issues were brought under the rubric “safeguard policies” in 1997, to signal increased emphasis on the integration of environmental and social issues into the design, decision
Box 5.2  Inspection Panel Investigations of Infrastructure Projects—Overview

Initially, Inspection Panel investigations focused on environmental and social safeguard policies and disclosure. Over the last five years, requests for investigation have covered a wider range of Bank policies, including economic evaluation, poverty reduction, and project supervision.

The Panel's first investigation of an infrastructure operation, the proposed Nepal Arun III Hydropower Project, found that the Bank's processing of the project was inconsistent with Operations Directive 4.01—Environmental Assessment. The Panel also expressed doubts about Nepal's capacity to address the environmental and social issues associated with the project. These findings played a role in the Bank's decision to withdraw from the project.

The next infrastructure project investigated by the Panel was the Yacyretá Hydroelectric Project in Argentina and Paraguay (in fact, the Panel first carried out a limited review in 1997, followed by a full investigation five years later). The Panel found major deficiencies in the way resettlement was handled. Although the loans that financed the project have been closed by now, the Bank continues to monitor the project and report to the Board on outstanding issues.

The preparation and implementation of resettlement was also found to be in violation of Bank policies and procedures under the Panel's third infrastructure investigation, the India NTPC Power Generation Project, specifically its coal mining component. A subsequent investigation of coal mining in India, in the context of a sectorwide rehabilitation project, found similar problems with resettlement activities. As in the case of Yacyreta, the Bank continues to supervise the projects, although the loans that financed them have been closed.

The investigations of two recent infrastructure projects, the Chad-Cameroon Petroleum Pipeline and Uganda Bujagali Hydropower, found

(Box continues on next page)
making, and implementation process for Bank-supported projects and programs. Internal oversight also increased significantly, through the establishment of a central quality assurance and compliance unit and regional teams of specialists focused on the management of environmental and social risks. The new proactive approach to environmental and social performance favorably influenced donor support for IDA replenishments, the ability of the Bank to sell its bonds to institutional and private investors, and the support of executive directors for major infrastructure projects.

However, the Bank’s increased emphasis on environmental and social risks generated significant unintended consequences. Safeguard policies were at times applied too rigidly. When the Bank reacted to NGO criticism during the mid-1990s, Bank teams often attempted to “panel-proof”...
their projects and avoided projects with major safeguard issues. The pendulum swung from insufficient concern to excessive risk aversion (focused exclusively on the principle of “do no harm”), with the associated internal “churning” and high transaction costs. This raised the cost of doing business with the Bank and contributed to reducing the Bank engagement in infrastructure, particularly in “high risk/high reward” infrastructure, such as hydropower, but also in other sectors. For example, the pursuit of urban projects, especially urban transport and upgrading, was negatively affected by the risk-averse interpretation of the involuntary resettlement policy. Relocation is an inherent part of urban development, as city growth is dynamic, and is often necessary to rationalize and regularize informal settlements. Upgrading provides a positive alternative to large-scale eviction and removal of slum dwellers, but it frequently involves the relocation of some families (for example, when basic infrastructure—roads, railways, and canals—are so encroached by slum-dwellers that the service degradation far exceeds the cost of relocating the families to another site with better facilities).  

There was a gradual realization in the Bank that we had not struck the right balance between avoiding both Type I and Type II errors—while ensuring that we did not finance harmful projects, we were declining our support to projects with potentially significant development benefits. A number of borrowers also expressed major concerns about the Bank’s approach to social and environmental risk management.

Finding a More Balanced Approach

The Bank’s evolving approach balances a focus on adverse impacts and risks (and their mitigation) with a focus on how project benefits can accrue to both people and nature by the activities the Bank supports. It involves making trade-offs between negative and positive project impacts on the environment. Experience shows that people adversely affected by programs and projects can be turned into supporters if they are given a stake in project benefits and an opportunity to express their views on project design and implementation. The Shuikou Hydropower Project
in China illustrates how project-impacted persons can receive a sustainable stream of project benefits (see box 5.3).

The Bank is actively resolving earlier issues with application of environmental and social safeguard policies, including the high cost and time required for preparation of documents, inconsistent interpretation of policies, conflicts between Bank policies and national legislation especially concerning involuntary resettlement and indigenous peoples, and issues related to mandatory requirements for public consultation and disclosure. The Bolivia-Brazil Gas Pipeline Project (see box 5.4) illustrates how the Bank has learned to apply its safeguard policies more consistently and effectively.

The Bank is gradually moving toward greater country ownership and government responsibility in decision making. However, preconditions
Box 5.4 Bolivia-Brazil Gas Pipeline Project (safeguards)

The Bolivia-Brazil Gas Pipeline Project (approved in 1997 and closed in 2001) constructed the largest gas pipeline in Latin America, through 3,150 kilometers of diverse terrain. Strong measures to address negative environmental and social impacts were put in place in the design and preparation phase; built into implementation contracts; and communicated, monitored, and enforced effectively.

The project created community-based organizations and committees, and consulted the public on draft regulations and the project’s environmental assessment. Resettlement was treated not as a problem but as an opportunity. Affected indigenous people were enabled to negotiate a share of project benefits in exchange for their acceptance of the pipeline passing through their lands. Their priorities were more secure land rights (land titling) and funds they could manage for their own development. The involvement of indigenous people in vegetation recovery in Bolivia was also important. Indigenous people actively participated in sowing and harvesting native plants for their subsequent reintroduction into their natural habitat. The project also supported the conservation of biodiversity. A trust fund of US$1 million was established to protect Bolivia’s Kaa-Iya National Park, which is co-managed by an indigenous NGO in collaboration with Bolivia’s National Protected Areas Agency. Other examples of innovative solutions included the use of semidomesticated birds for pest control, since the application of chemical insecticides was forbidden in the early stages of the construction.

The project received the Environmental Award of the International Association of Impact Assessment in 2001 and International Organization for Standardization (ISO) 14002 and 9001 certification.
for supporting a country-driven approach need to be evaluated on a case-by-case basis. How interested and responsive is the government? What is the state capacity to deal with these issues? And what are the accountability mechanisms in relation to domestic stakeholders? The argument for gradually increasing government responsibility and use of country systems (where appropriate) is that representative governments with adequate mechanisms for accountability are often best placed to consider the tradeoffs among different stakeholder interests and determine what is, on balance, in the best interest of their citizens.

A balanced approach also requires more mature relations with civil society, where positions are based on development impact and sustainability rather than on fear of reputational damage caused by pressure groups. Recent experience with Board discussions of the Water Resources Strategy have shown that it is possible to transparently present a range of perspectives including those of the most radical pressure groups, and to foster adoption of strategies that balance the benefits of infrastructure with thoughtful consideration of environmental and social issues.

Significant efforts have also been undertaken over the last five years, in the context of the donor harmonization process, to address safeguard issues in a more consistent manner across donors. The Paris Declaration on Aid Effectiveness, issued in March 2005, specifically notes the importance of continued work on environmental assessment and the use of country systems. In order to create a “level playing field” concerning safeguard policies, the World Bank and the regional development banks have worked together to develop similar core policies, with complementary work being led by the OECD for bilateral donors and export credit agencies. In the case of the private sector, the success of the IFC-led “Equator Banks” process has resulted in the adoption of the IFC version of safeguard policies by over 30 major commercial banks in developed countries and emerging market countries, which provide over 75 percent of the commercial loans for project-level investments.
Integrating Work on Environmental and Social Issues in the Project Cycle

A key lesson has been the importance of integrating environmental, and social dimensions into project identification, preparation, appraisal, and supervision. Conducting environmental and social analysis and consulting with affected people and other stakeholders upstream in the project cycle provide crucial inputs into project design. The recently completed Pakistan Ghazi Barotha Hydropower Project is a good example of technical, economic, environmental and social analysis by an interdisciplinary team of specialists in the project preparation and appraisal process. Factoring in environmental and social impacts through a holistic approach to cost-benefit analysis when selecting which investment to undertake (for example, with regard to infrastructure concerning people with disabilities) is more effective and sustainable than trying to address these concerns once the infrastructure has already been designed.

Attention to environmental and social outcomes is also critical during implementation. Weak field-based supervision can result in adverse environmental and social impacts. While large, complex projects are generally well supervised, medium and smaller projects often have inadequate supervision. Strong field-based supervision is essential, to adjust project design using an “adaptive approach” based on implementation experience and consultations with local communities and other stakeholders (see box 5.5).

Another lesson learned is the importance of allocating sufficient resources to mitigate adverse impacts such as resettlement. A Bank-wide resettlement review (undertaken in 2004) found that none of the projects with a ratio of per capita resettlement budget to per capita GNP of greater than 3.5 had major difficulties, while almost all projects with a ratio of less than 2.0 had resettlement problems. Inadequate funding for resettlement has consistently resulted in implementation problems, including delays, adverse social impacts and ultimately cost overruns. For example, a one-year delay in constructing a dam or a highway often costs much more in foregone benefits than the costs of resettlement, and
Box 5.5 Involuntary Resettlement—Use of an Adaptive Approach

Two OED evaluations of the Bank’s experience with involuntary resettlement (1993 and 1998) found that some projects handled resettlement issues very well, and resettlers were actually better off after the project than before their relocation. The problem with the unsatisfactory projects was poor planning, implementation, and supervision; inadequate funding; and lack of borrower capacity and commitment to good performance. The key to success was effective monitoring and corrective actions. Resettlement rarely went according to plan; flexibility to adapt project design during implementation was necessary. For example, the highly successful resettlement in the China Shuikou Hydroelectric Project was planned to be land-based but ended up being based mainly on industry and services. Another key finding was the importance of national policies or legal frameworks to govern borrower action. Good performers, such as China, did well mainly because they developed their own systems and institutional capacity and not as a result of Bank pressure.

Two more key lessons emerged from the Upper Krishna Project II (UKP II). First, isolating mitigation activities from the benefit stream project makes it more difficult to achieve rehabilitation of livelihoods. Relocating affected persons to the command area of the project would have been more effective than trying to create new livelihoods in the rainfed zone upstream from the dam. Second, resettlement activities cannot easily be forced into the time frame of infrastructure construction; they need to start early, and livelihood restoration often lasts well beyond the construction phase. In UKP II, rehabilitation activities lasted several years beyond the closing date of the project. Even difficult projects like UKP II can achieve their resettlement objectives through an intensive learning process approach.
certainly more than the incremental costs of an adequate resettlement budget.

Managing High-Profile Engagements
A panel of Bank managers and experts (the “Patel panel”) was convened in October 2001 to identify lessons learned from and for the Bank’s engagement in high-payoff but often controversial infrastructure projects. The panel reflected on the experience of a number of high-profile engagements. The main conclusion of the panel was that the Bank needed to approach risk differently and also needed a more transparent, predictable, and timely decision-making process (see box 5.6). The panel recommended a move from a focus on reputational risk to the Bank to a broader approach that includes development risks of nonengagement by the Bank for people in borrowing countries, and also recommended the broadening of the definition of reputational risks so these cover not only the views of civil society and the media in developed countries but also the views of other key stakeholders—governments in developing countries and the private sector.

This shift is critical because surveys indicate that governments in middle-income countries perceive the Bank to have a rigid, rule-bound, risk-averse approach. They, however, still express a desire to engage with the Bank in cutting-edge, high-reward/high-risk infrastructure, because they believe that the Bank has a unique comparative advantage in helping them deal appropriately with the range of economic, institutional, environmental, and social challenges posed by such projects.

A key lesson learned, with respect to engagement in high-risk projects and programs, is the importance of proactive communications (see chapter 7). External consultations and communications with stakeholders are critical to build trust and to mitigate risks of political controversy. Both critics and supporters often cite a lack of adequate consultation, communication, and support from stakeholders about issues such as privatization, tariff increases, retrenchment, and so forth. Lack of stakeholder support has resulted in high costs to the Bank and its clients in
Box 5.6  Summary of Recommendations of the Panel on High-Risk/High-Reward Infrastructure Projects

A. The project must be central to the development objectives of the Bank and our borrower(s):

- Relevance to overall national development strategies as reflected in the Country Assistance Strategy
- Relevance to poverty reduction
- Relevance to the Bank’s comparative advantage

B. The risk profile must be assessed:

- Development risk of the Bank not engaging (and associated risks so that the project may not be undertaken or that it may be done with lower net benefits)
- Reputation risks to the Bank from engagement or non-engagement from the perspectives of the borrower (and other concerned Part II countries), private developers, and public perception in Part I countries and the related perceptions from NGOs
- Risk implications must be considered by regional and Bank-wide management.

C. Selected projects need to be treated as a special class of Corporate Projects, because of their spillovers that go well beyond the country and the region.

D. Given the large corporate externalities, such projects require special arrangements: review by the Operations Committee at the inception stage, and privileged access to quality enhancement and support services and to additional corporate financial resources in light of the high costs of preparation of risk-intensive projects and the high probability of being subject to an appeal at the Inspection Panel.
terms of monetary loss, time delays, and project cancellations, not to mention the large intangible impacts on reputation, trust, and good will. In some cases, it is appropriate to work primarily with and through the government (in particular, in cases of representative governments with strong mechanisms for accountability to stakeholders). In other cases, it is important for the Bank to directly target a diversity of audiences and to help catalyze debate.
Chapter Six
Fighting Corruption

Infrastructure is particularly prone to corruption due to (a) the presence of natural (and artificial) monopolies, capable of generating large rents; (b) the management of large equipment and civil works contracts by government agencies; and (c) the investments that cannot be redeployed after implemented and become vulnerable to expropriation. Corruption in infrastructure occurs at all levels, from meter readers (petty corruption) to public works ministers (grand corruption). It negatively affects the quality and cost of infrastructure services, hurting the poor and reducing economic growth.

In the last decades, the World Bank made considerable progress in strengthening its fiduciary, investigative, and sanctions systems to combat corruption in Bank-financed projects. Going beyond the scope of individual projects, the Bank also started to assist countries in their sectorwide efforts to reduce corruption in infrastructure. In spite of this progress, anticorruption is the area where the largest gaps remain in our understanding of what works and what does not. A systematic and sustained effort is needed to deepen our knowledge of the infrastructure–corruption interface, with the goal of developing and implementing an effective anticorruption program in the infrastructure sector. The lessons presented in this chapter should be seen as the first, tentative output of this longer-term, cooperative effort between the infrastructure network and other networks and units.
For most of the Bank's history, corruption in Bank-financed projects was not addressed explicitly. Although fiduciary controls existed as part of project management, the Bank’s stance lacked proactivity—allegations of fraud and corruption were investigated only when they were brought to the attention of management, and the Bank’s procurement and financial management policies did not have an explicit anticorruption feature.

In the late 1950s, procurement policies were largely aimed at ensuring that contractors and suppliers had an equal footing in competing for Bank-financed contracts. In the 1960s and early 1970s, changes were made to the procurement guidelines to take account of developing country interests, among other things by introducing preferences for domestic contractors and suppliers. The next sets of significant changes to the guidelines were made in the 1980s, mainly to reflect the changing nature of Bank-financed projects, in particular the increased Bank support to social sectors. The underlying premise was that the Bank’s procurement policies and practices were broadly adequate to deter corruption. Procurement specialists argued that:

**What our critics say**

“Mainstreaming anticorruption has yet to be fully achieved. For example, the World Bank’ 2003 Infrastructure Action Plan makes no mention of corruption, despite the fact that support for ‘high-risk’ projects is to be increased, and despite the known risk of corruption in infrastructure projects.” (Transparency International, *Global Corruption Report 2005*)

“The Bank often does not adequately take into account how corruption and a lack of democratic rights affect the outcome of development policies.” (Friends of the Earth, in *Gambling with People’s Lives*)

“The Bank staff repeatedly emphasized their best intentions in approving these projects in the extractive industries. We do not doubt that. But the road to hell is paved with good intentions.” (Petr Hlobil, CEE Bankwatch Network)
Open, competitive tenders should make firms that pay bribes less competitive, because those firms would have to increase their bid prices to recover the cost of bribes.

Advertisement of upcoming bidding opportunities, public opening of bids, and a venue for bidders to complain when implementing agencies fail to follow the rules should create the necessary level of transparency and accountability in the procurement process.

The prior review of major procurement decisions by the Bank should provide an extra layer of assurance.

Changes in the Bank’s lending patterns led to a similarly gradual evolution of its financial management policies. Historically, the Bank disbursed directly to contractors on presentation by the government of the original documentation (contracts, invoices, and so forth) underlying the expenditure. In this way, the Bank ostensibly obtained assurance that it had discharged its fiduciary obligations because it knew the purposes for which the funds were being spent. The introduction of loan advances through special accounts in the early 1980s and the related disbursement reporting format, (the Statement of Expenditure meant) however, that increasing attention needed to be paid to financial management arrangements on the borrower side. In 1991, the acceleration of changes in project patterns away from large contracts, which could easily be subject to ex-ante checks at the point of disbursement, to smaller contracts with many individual payments, prompted the Bank to issue Operational Directive (OD) 10.60, its first policy statement on financial management. Focusing on borrower control frameworks, OD 10.60 stated that the Bank would seek to understand the accountability environment in which the project would be implemented, assess the financial management system for the proposed project, and monitor its continued adequacy during implementation. The use of the proceeds of each loan was required to be subject to an annual audit.

By the mid-1990s, a growing number of internal and external observers expressed concerns about the prevalence of corruption in Bank-financed
projects. They found a strong ally in President Wolfensohn, and “the prevention of fraud and corruption in projects and programs financed by the Bank” became the first pillar of the Bank’s anticorruption strategy developed and adopted under his leadership in 1997.

In the area of procurement, the Bank ensured that each project team includes a procurement “certified” staff, improved the assessment of the clients’ procurement capacity, strengthened the supervision of the procurement process (for example, by introducing *ex-post* audits of smaller procurement contracts conducted by specialized firms), and added explicit anticorruption provisions to the procurement guidelines: (a) public debarment of firms found to engage in fraud and corruption; (b) the right to cancel loans (partially or wholly) if the government fails to prosecute officials who engaged in fraud and corruption; and, more recently, (c) the inclusion of a bidder’s “no bribery” pledge in the standard bidding document for large works contracts (which are typical in infrastructure projects).

In the area of financial management, the Loan Administration Change Initiative (LACI) mandated the inclusion of a financial management specialist (FMS) in every project team, certification of the project financial management assessment by the FMS, and the regular submission by the borrower of a Project Management Report, in a standard format. Special technical audits became increasingly used as a risk-mitigating measure where concerns about the environment in which the project was being implemented remained high. These technical audits might include surveys of beneficiaries, audits of the databases of recipients, and the use of independent consulting engineers (particularly in infrastructure projects). However, insufficient attention was paid to strengthening the public financial management institutions of borrowers (an omission that has been corrected since then).

In 1998, an Oversight Committee on Fraud and Corruption was established with responsibility for investigating allegations of corruption involving Bank staff and Bank-financed contracts, and a 24-hour international hotline was introduced to enable the report of fraudulent or
corrupt practices. In 2001, the Department of Institutional Integrity (INT) was created to investigate claims of fraud and corruption both within the institution and in Bank-funded projects. This investigative unit has grown considerably since its inception—it nowadays comprises more than 50 specialized staff.

In the last three years, about half of those INT investigations that led to specific corrective actions were linked to infrastructure projects. These investigations indicate that infrastructure projects are vulnerable to corruption throughout the project cycle. Verified contractor claims generated by the pilot Voluntary Disclosure Program show a level of corruption that is well beyond mere facilitation payments. Evidence has been uncovered to implicate both dishonest contractors and government officials in fraudulent and corrupt schemes (see box 6.1). Corruption in the project preparation phase typically involves the choice of project location, choice of design, relocation and resettlement plans, and land acquisition. The majority of cases, however, involve corruption in the project implementation phase: particularly during procurement, but also in the approval and payment of invoices (see box 6.2). In addition to collusion among bidders, infrastructure projects are especially vulnerable to change order schemes (bids are set artificially low to secure the contract, and subsequently adjusted by change orders) and the use of inadequate and/or inferior materials (for example, road construction contractors cut costs by laying insufficient foundation and improper drainage, the results of which might not be exposed until sometime in the future when potholes appear or when portions of the pavement wash away). Seeing less-qualified bidders win by bid rigging, the best firms become discouraged and stop bidding. The quality of all infrastructure projects in a country suffers when the pool of bidders is reduced to second-tier companies willing to pay bribes and kickbacks.

The first lesson drawn from the above is that a uniform approach to fiduciary management across all countries is ill-suited to tackle corruption. On the one hand, current Bank guidelines and operational practices are inadequate to prevent abuse in countries with very weak governance. On the other hand, Bank requirements are frequently seen
Box 6.1 Lesotho Highlands Water Project

Since its establishment in 1998, the Sanctions Committee has reviewed roughly 60 cases of alleged fraud and corruption. No case has attracted greater public scrutiny than the series of proceedings arising under the Lesotho Highlands Water Project, and none better demonstrates both the inherent limitations on the Bank’s powers to investigate and sanction firms alleged to have engaged in corruption, and how these limitations can be overcome if the Bank can count on the cooperation of a government committed to take action against corrupt public officials and firms.

The Lesotho Highlands Water Project was launched in 1986 for the construction of dams and transfer tunnels in the Highlands region of Lesotho; it was implemented by the Lesotho Highlands Development Authority “LHDA” under the direction of its chief executive. Bank funds were used primarily for detailed design work, supervision, and technical assistance. Overall, the Lesotho Highlands project has been a remarkable success.

In the mid-1990s, the new civilian government undertook a series of audits of the LHDA, based on which a civil fraud proceeding was initiated against the LHDA chief executive. Evidence uncovered in this civil action led in 1999 to criminal indictments against a number of contractors and consultants alleged to have engaged in bribery and corruption. The announcement of the action taken by the government of Lesotho in turn triggered an investigation by the Bank’s Department of Institutional Integrity (INT)—limited, by the Bank’s statutes, to those firms that provided services under Bank-financed contracts.

In 2001, the Bank commenced administrative debarment proceedings against three international consulting firms. In each case, however, the
Bank’s Sanction Committee concluded that the evidence gathered by the Bank was not sufficient to show that the consulting firms had engaged in corrupt practices. In January 2002, the cases against the three firms were closed without a sanction. However, the firms were informed that the Bank would re-examine its findings, should “additional relevant information . . . surface from any source, including the public proceedings conducted by the Lesotho authorities.”

In 2002–03, the Lesotho authorities concluded criminal trials against two of the firms, Acres International and Lahmeyer International GmbH. The two firms were found guilty of bribery, with their convictions upheld on appeal to the Court of Appeal of Lesotho. The trial transcripts, the judgments and decisions of the courts, and the underlying evidentiary records were shared by the Lesotho authorities with INT. On the basis of this additional evidence, some of which was entirely new and some of which strengthened the evidence previously made available to the Sanctions Committee, the case against Acres was reopened by the Committee in 2004, resulting in a debarment of three years. The case against Lahmeyer is now being reopened, based on additional information now available to the Bank from the criminal trial.

While the Lesotho proceedings highlighted the inherent limitations in the Bank’s power—including the Bank’s inability to obtain evidence through subpoena of witnesses and documents or through cross-examinations—they also demonstrated that the Bank was ultimately able to rely on the Lesotho prosecutors and the court proceedings to provide missing pieces of evidence in the corruption chain. More importantly, the Lesotho case shows how crucial and decisive is a government’s commitment to support the Bank’s own fight against corruption.
as “overkill” in countries with relatively strong governance, creating a “hassle factor” that hurts the Bank’s ability to engage. A more differentiated approach may be developed along the following lines:

- In countries with very weak governance systems and endemic corruption, the Bank may require governments to use reputable third parties (firms specialized in engineering, procurement, contract supervision,
accounting, and auditing) as their agents during the preparation and implementation of infrastructure projects. Because “ring-fencing” is ultimately not a sustainable solution, the challenge is to combine this approach effectively with support for government capacity building (see box 6.3).

At the other end of the scale, in countries with relatively strong governance and low incidence of corruption, reliance on domestic fiduciary systems is likely to be the most effective approach to enhance client ownership and accountability. The Bank’s efforts could focus on the upstream assessment of the country’s fiduciary systems, followed by support to the government’s own program to address remaining weaknesses.

In countries that fall between the above two extremes, the Bank could build on its recently enhanced country presence to further strengthen the supervision of infrastructure projects. Experience shows that little corruption gets caught simply by reviewing documentation. It is important to “dig deeper,” to seek information through field visits and contacts with government employees, contractors, and suppliers at various levels. Combined with the internal steps described below, more intensive supervision could be an important avenue to reduce the incidence of corruption.

The second lesson is that the Bank’s internal incentives most likely need additional strengthening:

Bank staff could be rewarded for best practices in identifying specific institutional weaknesses that facilitate corruption and taking decisive action when corruption is noticed during project preparation or supervision. This could be complemented by the education of staff about patterns of behavior they need to report.
Box 6.3  Fiduciary Management in Afghanistan

Following the defeat of the Taliban, it was essential for the new Afghan government to manage donor funds efficiently and transparently and to contain corruption. This was key to establish government leadership domestically and vis-à-vis the donors. To this end, and with World Bank support, the government selected through international competitive bidding three firms to support fiduciary management functions.

The firms were operational by June 2002, less than six months after the interim administration was established. Despite a very weak institutional environment, Afghanistan was able to properly administer funds from the Afghanistan Reconstruction Trust Fund (ARTF) and IDA, and made disbursements at a speed higher than other countries in the South Asia Region.

The first firm hired was Crown Agents, with the task to support all ministries with the procurement of major government contracts. In a relatively short time, 200 major contracts were arranged at a combined value of $400 million. However, the focus on executing procurement functions retarded the development of national capacity. The support was restructured in 2004: a contract for procurement execution support was awarded to Rites of India, while a separate complementary
contract is now being bid on to strengthen the legal framework and to build procurement capacity of line ministries. A strategy was also developed to hand responsibility over as local institutions grow stronger.

The second firm was Bearing Point, hired to support the Ministry of Finance in setting up and operating its treasury functions and in carrying out financial management oversight of Bank-financed projects and of other donor funds.

The third firm was PKF (replaced later by Deloittes of India), hired for the external audit function and to build capacity and assist the Auditor General’s Office. Timely financial reports were submitted to donors, and annual statements for the whole Afghan government were prepared in 2004, for the first time in more than a decade.

The World Bank, as administrator of ARTF, hired a monitoring agent to review expenditures from the government’s recurrent budget and ensure that only expenditures that conform with fiduciary standards are paid out of ARTF. The government proactively used the monitoring agent’s reports as internal audit reports, for instance, to assess and monitor on a monthly basis the performance of its own fiduciary controls.

better the “face of corruption” in the particular environments in which they operate.

The third lesson is that results-focused and participatory approaches to project preparation and implementation also help in the fight against corruption. Mapping out the results chain, carrying out baseline surveys, and monitoring progress on the ground requires the kind of continuous and close supervision that is necessary to detect corruption and
take timely action. Listening to intended beneficiaries and civil society representatives frequently generates useful information about corrupt practices. Empowering local communities to design and implement suitable project components mobilizes peer pressure to prevent missteps and opens the door for innovative solutions (see box 6.4).

The fourth, and perhaps the most important lesson, is that effectively tackling corruption at the project level is critical not only for the quality of Bank-financed infrastructure projects, but also for the Bank’s role as a source of advice and technical assistance for the sector-wide anti-corruption efforts of client governments (see next section). Our credibility in the latter role will be undermined if we are not seen as strongly committed to and successful in fighting corruption in the projects that we finance.

Alterning Corruption-Prone Business Models and Practices

Until the mid-1990s, Bank efforts to combat corruption at a sectorwide or economywide scale (for instance, beyond the scope of individual projects) were “hidden” in the Bank’s support for public sector management reforms and economic liberalization. Even those Bank-financed infrastructure projects that succeeded in reducing the incidence of corruption were described and presented as administrative capacity building efforts (see box 6.5). In sector reviews and other publications, references to non-technical “unaccounted-for-losses” in public utilities and unproductive “rent-seeking” associated with artificial infrastructure monopolies were semi-explicit signals that the Bank was concerned about the negative impact of corruption on infrastructure provision.

The adoption of the anticorruption strategy in 1997 made the fight against corruption an explicit priority for the Bank. Initially, the Bank’s efforts were focused on “fighting corruption by fighting corruption,” for instance, assisting governments to establish anticorruption commissions, launching anticorruption campaigns, and drafting anticorruption laws. In the last five years, the Bank’s efforts became progressively wider, encompassing work with public and private sector entities, subnational government, judiciary, and civil society. The Bank’s current integrated
Box 6.4  Bangladesh Rural Electrification and Renewable Energy Project

In Bangladesh, a Bank-financed project (approved in FY02) is supporting the work of the Rural Electrification Board (REB) and its rural electric cooperatives (Pally Bidyut Samities, or PBS) to expand electricity services in rural areas. The REB and the PBSs have protected themselves from the corrupt practices commonly seen in other power sector utilities through a number of innovative arrangements:

Administrative Arrangements: The Board of each PBS is elected by consumers. This Board and REB management approve the salary structure for the PBS, which is usually market based (de-linked from the government salary scale). Because meter reading is a common source of corruption, meter readers are hired on contracts of only one year. With a good performance record, the contract may be extended, but it can never exceed three years—after which the meter reader will have to seek a different career. A good performance record as a meter reader can lead to a linesman or other job with a PBS, and this job expectation is a strong incentive to maintain a good track record as meter reader.

Operational Arrangements: Every year the management of each PBS negotiates a results agreement with REB. This is known as a Performance Target Agreement (PTA). If a PBS meets the PTA, its management receives a bonus. Not meeting the PTA targets results in penalties. A standard PTA has about 20 targets, with high weights given to system loss, collection efficiency, revenue per kilometer of line, cost of supply per kilometer of line, and debt repayment.

Investment Decisions: PBSs use independent consulting firms to survey rural areas to identify potential consumers and to design the electricity distribution network. These firms also calculate the revenue that is expected to be generated by each proposed line, and the lines generating the highest revenue are selected first for construction. The list of lines to be constructed next year is disclosed to the public on the notice board of each PBS. These practices reduce the risk of corruption and nepotism in investment decisions and help PBSs to avoid constructing uneconomical lines.
Box 6.5 Bolivia Municipal Strengthening Project

In the early 1980s, Bolivia was struggling with a national economic crisis, including hyperinflation. The government of the capital city, La Paz, was also in shambles—the national fiscal subsidy to the city had collapsed, the city payroll represented 120 percent of local revenues (yet professional staff received salaries of only $30 per month), and services were in disarray. The city systems for public works, tax collection, permits and licenses, payments, and procurements were overstaffed, hugely inefficient, and a goldmine of corruption.

In 1985, democratic elections brought in a new civilian president and the first elected mayor of the capital in 40 years. The new mayor, Ronald McLean-Abaroa, determined to stake his two-year term on a strategy to radically reform the municipal government. A pivotal support in this venture was provided by the Bank’s Municipal Strengthening Project (FY87 with IDA funds of $15 million). Formally, the project was designed “to assist the Municipality of La Paz in strengthening its institutional capacity to discharge service, administrative and fiscal functions while addressing critical shortcomings in the city’s infrastructure.” The project, and the mayor’s strategy, were not conceived or presented publicly with the main intent of combating corruption, but rather to modernize and rationalize the city administration, streamline staffing, and reform procurement practices, including by outsourcing public works.

Besides providing a timely infusion of investment funding and technical assistance to back the mayor’s program, the project included a novel feature that proved essential to the success of the reforms: a grant approach to capacity building, governance, and anticorruption includes empirical diagnostics and analysis, promoting client ownership through participatory collective action, and knowledge sharing and policy advice.

At the sector level, the Bank’s anticorruption work has been less systematic and intensive, with the exception of extractive industry (mostly oil
component of $1 million that was used to top-up the salaries of high-quality staff recruited for key positions, while some 40 percent of the existing municipal personnel were let go. The grant permitted this critical step to be initiated, but, after the first year, improvements in fiscal administration, coupled with the personnel restructuring, permitted the city government to cover the new payroll from its own revenues, without further external assistance. The reforms in staffing and remuneration of key positions were accompanied by sweeping changes in systems and procedures affecting public works (for example, privatization of the city construction company), procurement (cutting down the 26 steps previously required), tax collection (reducing the number of municipal taxes from 126 to 7), and public information (for example, advertising the requirements to obtain a license). For the first time, citizens were asked to be part of an effort to improve the quality of municipal services. These measures had the salutary effect of dramatically drying-up much of the worst corruption affecting the city government. The evident improvements in the city’s performance won McLean-Abaroa three reelections.

The La Paz experience influenced national government practices to some degree and was well recognized externally. It demonstrated that the Bank can be an effective partner in strengthening the hand of committed counterparts and taking calculated risks that have a high—even though not entirely anticipated—payoff in fighting corruption.

Source: “Municipality of La Paz” Case Study for the Kennedy School of Government, Harvard University, by WBI.
implement sectorwide reforms. In a number of countries, however, Bank-financed investment projects have also generated ideas with wider applicability in the fight against corruption (see boxes 6.4 and 6.5).

The first lesson learned is that the main components of the typical infrastructure reform package recommended by the Bank in the 1990s were consistent with the anticorruption agenda:

- The institutional separation of the government’s policy-making, regulatory, and ownership functions strengthened checks and balances.

- Subjecting public utilities to company law and other laws that apply to private companies made their operations more transparent and increased the accountability of their managers.

- Privatization took this further by creating a truly arms-length relationship between the government and infrastructure service providers.

- Competition among suppliers (where technically feasible) created choice for consumers, reducing the temptation to offer/extract bribes for improved services.

- Rule-based, transparent regulation limited the discretionary power of regulators and reduced the incentives for the regulated entities to “capture” them.

- Modernization of administrative systems, such as land registry and property valuation, made it feasible to post records on the Web, creating a level of transparency that reduces opportunities for tampering and fraud.

- Decentralization of the responsibility for infrastructure service delivery to local governments brought decision
makers closer to the consumers of these services, increasing the accountability of government officials to the public (see box 6.6).

The second lesson is that country circumstances matter and, therefore, the generally positive contribution of infrastructure reforms to the fight against corruption cannot be taken for granted. The Bank’s advice should carefully take into account the opportunities that certain reform steps and models create for illicit gain, as illustrated by the following examples:

- In countries with a history of corrupt practices in infrastructure provision, efforts to mobilize private financing for the construction of major new facilities frequently led to collusion between private investors and government officials. The consequences were government...
preference for noncompetitive solutions, adoption of overly optimistic demand projections, and assumption of huge commercial risks by public entities. Notable examples were independent power generation projects in Indonesia, Pakistan, the Philippines, and Turkey. The elimination of artificial monopolies, the use of competitive tenders with independent expert panels to recommend or decide contract awards, the public disclosure of contracts and licenses, and the use of policies to limit contingent public liabilities could have prevented many of the problems.

In a number of countries with widespread governance weaknesses in Eastern Europe and Central Asia, the sale of electricity, oil, and gas distribution companies to well-connected local investors increased rather than reduced the incidence of bribes, tax evasion, and revenue diversion. When the new owners had an international reputation to protect, however, they did manage to improve financial discipline even in very difficult circumstances (for example, Union Fenosa in Moldova).

Even less-radical reforms backfired when undertaken in corrupt environments. Recommendations to outsource the noncore functions of public utilities prompted the establishment of shell companies, owned by utility managers, that subsequently were awarded service contracts at inflated fees (for example, in Tanzania). By recognizing this risk in advance and ensuring third-party scrutiny of the arrangements, the abuse of an otherwise rational reform measure could have been avoided.

More generally, the Bank’s effectiveness in assisting clients to fight corruption would benefit from a more systematic effort to analyze the impact of various types of reforms on the incidence of corruption in infrastructure services. This analytic effort would then provide the basis for the design
of sector-specific anticorruption programs. As the example of the Extrac-
tive Industries Transparency Initiative demonstrates (see below), it is pos-
sible to make headway even when dealing with long-standing and diffi-
cult problems. The key is to commit to a multiyear effort; exploit the
synergies among the Bank’s lending, analytical, and advisory services;
and work in close partnership not only across the Bank, IFC, and MIGA
but also with the broader donor and business community.

Managing Extractive Industry Revenues

Macroeconomic problems caused by large rents from the development
of oil, gas, mining, and timber resources became a significant concern
for the Bank (and the IMF) in the 1980s. In countries receiving these
rents, the Bank relied on macroeconomic policy dialogue and structural
adjustment loans to address the issues of fiscal balance, public expend-
diture management, dependence on a single commodity, and neglect of
the nonresource sectors of the economy. When providing loans for spe-
cific investment projects in the oil, gas, and mining sectors, however,
the Bank’s typical view was that if a project generated substantial for-
eign investment and revenues, then it should be good for economic de-
velopment. Neither in its macroeconomic dialogue nor project-specific
discussions did the Bank pay much attention to the negative effect of
resource booms on the quality of governance. By the time the link be-
tween the incidence of corruption and extractive industry revenues be-
came better understood, lending to the oil and gas industry shifted
from the Bank to IFC, which was less well-placed to address this issue
on a systemic basis.

In the late 1990s, NGOs launched a campaign against Bank support to
extractive industry projects. While this campaign was led by activists
who viewed oil and gas production and utilization as essentially incompat-
able with sustainable development, the campaign was energized by
the failure of the Bank to demonstrate that it was effectively addressing
problems of governance in resource-rich countries. The culmination
of the campaign was at the 2002 Annual Meetings, when NGOs confronted
the President with strident calls for the Bank to exit from the oil, gas, and
mining industries. In response, the Bank launched the Extractive Industries Review (EIR), as an independent evaluation of the Bank’s past role in this sector. Under the direction of Dr. Emil Salim (former Minister of Environment in Indonesia), EIR conducted wide-ranging consultations and studies.

Parallel to the EIR process, OED also evaluated the Bank’s record. It found that oil, gas, and mining projects performed (on average) as well as other Bank-financed projects. OED’s recommendations included the need for projects to contain means of managing governance risks, or be accompanied by other actions to reduce these risks. OED also recommended more engagement with stakeholders, particularly local communities, and emphasized that such engagement should entail not only consultations, but also increased disclosure and transparency of project investments and benefits.

In January 2004, EIR issued its final report. Unfortunately, the report discounted the input received from developing country governments and represented mainly the views of international civil society activists. It expressed deep skepticism about the contribution of extractive industries to development, and was highly critical of the Bank’s track record and policies. The response of Bank Management to the report was discussed by the Board in September 2004. This discussion established the main directions and modalities for the current involvement of the World Bank Group (WBG) in the oil, gas, and mining sectors, including:

- Using WBG’s convening power to address governance and social issues associated with resource extraction. The WBG is playing a lead role in the implementation of the Extractive Industries Transparency Initiative, with work underway in about 20 countries aimed at improving government accountability for the use of resource revenues. The WBG also leads the Communities and Small-Scale Mining partnership, focusing on alleviating the social and economic problems encountered
among the 100 million poor people who depend on small-scale mining.

- Advising governments (for example, Kazakhstan and Timor-Leste) with the design of revenue management schemes, in close partnership with the IMF.

- Ensuring the integration of improved revenue management and governance into project design. The Chad-Cameroon Petroleum Development Project, for example, includes specific provisions regarding the use of government revenues for health, education, and infrastructure, and applies mechanisms to reduce the risk of corruption. Even the most careful project design, however, will not ensure against all risks, such as an adverse change in government priorities (see box 6.7).

- Requiring the publication of tax payments and main contractual provisions in projects financed by the WBG. Project monitoring reports produced by sponsors are also made publicly accessible (including translation into local languages).

- Promoting consultations and benefit sharing with affected local communities. Projects supported by the WBG typically incorporate direct revenue-sharing schemes as well as assistance with the development of small- and medium-scale enterprises.
Box 6.7 Chad-Cameroon Petroleum Development Project

Although commercial oil discoveries were made in Chad in the 1970s, a combination of political unrest and low oil prices made exploitation impossible for over 20 years. When serious discussions did begin into the development of these reserves, in the early 1990s, sovereign risk remained an important obstacle, and the Bank was called in to provide mitigation. This posed a dilemma for the Bank. Although the project presented a unique opportunity to generate resources for poverty alleviation, significant concerns arose with regard to poor governance, respect for human rights, and potential environmental and social risks. Ultimately, the Bank decided to provide support for the project—the development of three oilfields, a pipeline, and an offshore loading facility in Cameroon. Financial support took the form of IBRD loans to Chad and Cameroon (US$39.5 and US$53.4 million, respectively) in addition to IFC A and B loans (US$100 million each).

At the same time, the Bank agreed with the government of Chad on a transparent framework for the management and allocation of revenues. The Petroleum Revenue Management Law, adopted in 1999, directed the bulk of government revenues from the project to priority sectors (for example, health, education, infrastructure, and rural development) linked to improved living standards and poverty reduction. The Law also created a Future Generation Fund to ensure there would be some benefits to the population once the oil reserves are exhausted. The Bank facilitated the creation of an independent body (the Collège) with wide representation to control and monitor the use of oil revenues. Separate IDA credits were provided to support management of petroleum revenues, capacity building, and environmental management.

Since production began in 2003, the project has generated significant revenues for Chad. The poverty-focus of the revenue management program, however, was substantially weakened by an amendment of the Petroleum Revenue Management Law in late 2005. In response to this breach of the IBRD Loan Agreement, the Bank has recently suspended the disbursement of all active projects in its Chad portfolio.
Chapter Seven
Communicating with Stakeholders

In the last 20 years, the World Bank’s engagement in infrastructure was the subject of growing scrutiny by civil society organizations, the media, and the general public. This chapter first describes how communications became an important aspect of the Bank’s work and discusses specific lessons learned in embedding communications in political and stakeholder analysis, integrating communications in the project cycle, helping governments prepare and implement their own communication strategies, and communicating at both the local and global levels.

Growing External Scrutiny

The Bank is often criticized for overly focusing on economic and technical aspects of development, and for not being astute about political economy considerations. The Bank is also often criticized for not being effective at listening and communicating with stakeholders. While the reality is more complex, there is, however, some basis to these criticisms. Historically, a narrow interpretation of the Bank’s Articles of Agreement made Bank staff reluctant to systematically assess and consider political risks or the political environment in which a proposed project or reform would occur.13

In appraising and supporting implementation of major infrastructure projects, the Bank, therefore, tended not to pay much attention to
political risk considerations. Communications around projects were limited to press releases issued after a project was approved or, in some cases, to efforts to control damage in response to criticisms from civil society organizations (CSOs). Partly as a consequence of this approach, Bank support for large-scale infrastructure projects often became wrought in political controversy.

Over time, external scrutiny intensified, in part facilitated by the rise of the Internet and e-mail, by increasing democratization in the world, by the dramatic growth of CSOs, and by the 24-hour news cycle. As external suspicions worsened and negative campaigns intensified, it became clear that the lack of stakeholder support incurred high costs to the Bank and its clients in terms of monetary losses, time delays, and project cancellations, not to mention large intangible impacts on reputation, trust, and goodwill.

In this context, it became critical for the Bank to effectively engage with CSOs and critics around major infrastructure projects and policy directions, in particular regarding water storage and distribution (hydropower dams and water supply and sewerage systems), extractive industries (oil pipelines and coal mining), and transport (highways). Groups such as the International Rivers Network, founded in 1985, were strongly advocating that dams—and the World Bank by association—were bad for poor countries. When controversies developed, although the nature of controversies varied, in retrospect critics and supporters alike emphasized the need for more adequate consultation and communication with stakeholders. Bank communications were found to often be too reactive, too defensive, and in most cases not introduced early enough in the cycle of preparing controversial projects or policies (see box 7.1).

Over the last 10 years, improving communications with stakeholders became a strategic priority in the Bank. Although the learning process has at times been painful, the new approach has started to produce results. Relations with CSOs have improved, particularly over the last
five years. More importantly, systematic consultations with stakeholders have positively contributed to the development effectiveness of Bank interventions. The next section highlights key lessons learned from this experience, illustrated by relevant examples.

### Strategic Communications

The first lesson is the importance of embedding communications in political risk, stakeholder, and social analyses. A 2004 OED review noted that “the design and implementation of reform initiatives should be based on understanding underlying political and social processes that determine the motivation and behavior of stakeholders.”

### Box 7.1 Brazil Polonoroeste Project

The Bank supported implementation of the Northwest Integrated Development Program (Polonoroeste) during the 1980s to provide an integrated approach to frontier development and avoid further land conflicts and illegal logging. Although a series of complementary activities were included, Polonoroeste was best known for paving highway BR 364, which linked the capital of Porto Velho to the South. Despite the fact that Bank funding was used to pave a road already carved out of the rainforest and designed with social mitigation mechanisms, Polonoroeste is today strongly associated with the rapid deforestation and social conflict that ensued in the state. Opposition to this project led to an international letter-writing campaign by environmental CSOs, numerous meetings, and testimony on Capitol Hill, which eventually culminated in the establishment of environmental and social safeguards by the Bank. However, the Bank’s communications response was too little, too late.
Box 7.2 Bolivia-Brazil Gas Pipeline Project (communications with stakeholders)

The Bolivia-Brazil Gas Pipeline Project (approved in December 1997) presented great challenges due to its complex social impacts. The challenges arose from the cross-boundary nature of the project, involving a gas producer in a small economy (Bolivia) and a huge potential demand in a large country (Brazil), and the execution of a major engineering construction over 3,000 kilometers, cutting across more than 100 small communities in Bolivia and Brazil, including indigenous communities, small rural villages, small towns, and large municipalities in Brazil.

Addressing these challenges involved four main issues. First, it required negotiations with the communities on the alignment to minimize social impacts of the right of way, as well as negotiations with individuals for acquisition of land use rights from land owners for the right of way. Second, it required control and mitigation of social impacts associated with the construction works, such as defining the appropriate location of worker camps to minimize impact on indigenous communities; enforcing safety measures and workers’ code of conduct; responding to damage to private property, community infrastructure, and personal injuries. Third, it required planning and agreeing on compensatory measures for the upstream and long-term impact derived from the operation of the pipeline and induced development. Finally, it required a fluid relationship...
with civil society and full participation of the affected population and other stakeholders in the identification of these issues, the design of appropriate compensation measures, and the monitoring of these measures.

The project developed several innovative strategies to deal with these issues. In view of the sensitive nature of impacts on people and the environment, the proponents undertook a systematic social analysis of the communities along the right of way in order to identify potential impacts, affected groups and to discuss alternatives with them. The analysis and consultations led to the design of a community development strategy involving social compensation plans and a communication strategy to ensure transparency and ownership among local communities. Careful supervision ensured compliance with the identified development objectives, including the social plans and the communication and implementation process. This process allowed a growing understanding of the concerns of different stakeholders, identification of emerging issues that needed attention, better monitoring of the performance of social compensations programs, and an improvement in the environmental inspection and monitoring system, leading to better implementation of agreed actions and continued stakeholder support for the project.
with stakeholders; facilitate the exchange of information; and help identify and mitigate social, political, and technical risks. Other factors identified as essential include: adopting transparency as a principle of project management and ensuring that the broad team is kept informed and accountable for staying on message. The Bank learned several of these lessons painfully, including through its experience with the Yacyretá Dam Project (see box 7.3). The Bank was later able to apply lessons learned from this experience in several projects, including the Laos Nam Theun 2 Project (see box 7.4).

A third lesson is the importance of assisting clients in developing their own communication strategy. Communications by governments and the private sector are as or more important as what the Bank does. At the country level, governments need to communicate in ways that are sensitive to local cultural and social issues of communities directly affected by the program. The Bank has learned the importance of getting agreement up front on information disclosure, on a posture of transparency
Box 7.4 Laos Nam Theun 2 Project

The Laos Nam Theun 2 Hydroelectric Project was approved in 2005, after almost 20 years of preparation and development, during which Bank engagement was on and off on several occasions. The project had been the subject of a long international and regional CSO campaign. Because of past experiences, management saw communications as an integral part of the project preparation team and the Project Oversight Group, which was made up of members of the regional management team, Environmentally and Socially Sustainable Development, External Affairs, and Legal, and led by the East Asia and Pacific Region Vice President. The goal was to create space for regional management to do the due diligence and to make a sound decision on whether to take the project to the Board, while listening to stakeholders but not being driven by external pressures.

The Regional Vice President adopted a policy of transparency at the outset of re-engagement in the project in 2001. This meant that aide-memoires and background studies were published on the Internet, and a rapid response capability was put in place to respond to letters, journalists’ requests, negative articles, and other pieces posted on Web sites or in the press. The communications team placed great emphasis on identifying and maintaining contact with stakeholders, understanding the political environment and pressures on all sides, and ensuring that the broad team working on the project was kept informed. Clear and high-quality spokespeople were identified; rapid clearance procedures were put in place; materials were kept simple and up-to-date; briefings were held frequently, and repeated stakeholder consultation workshops were arranged in Paris, Tokyo, Bangkok, and Washington.

Management was kept informed at all times, alerted to criticisms, and consulted on the Bank’s responses. Communications staff worked closely with project team members to organize briefings for key constituents, including Executive Directors in the lead-up to the Board date, and proactively shared background studies, summaries, and data on the Internet and through e-mail lists. Several external experts on Lao PDR were engaged throughout project preparation to advise the Bank and to comment on various issues that would affect the outcome of the project and the reform program. The experts were given access to all background studies and documentation.
and openness, and on reinforcement of that message through preparation and implementation. Our partners should lead the communication efforts, but the Bank needs to help them build the capacity to do this (see box 7.5).

A fourth lesson is the need to communicate both locally and globally. It has become a fairly common phenomenon in Bank infrastructure

Box 7.5  Sierra Leone Bumbuna Hydroelectric Project

The Bumbuna Hydroelectric Project (BHP) in Sierra Leone demonstrates how assisting the client government in developing its own communication strategy can help ensure smooth progress. The project intended to support the sustainable delivery of quality electricity services at the lowest possible cost within the western area of Sierra Leone and to promote private sector development in the country. The Board approved the project in 2005.

The Bank team assisted the government of Sierra Leone in developing a comprehensive communication strategy from the outset to address a number of cultural and social issues related to the communities directly affected by the program. The strategy included an information dissemination that explained the nature and benefits of BHP and its connection to the country’s economic development, as a way to build social and political support for the initiative. The communication strategy aimed to educate citizens about the importance of Bumbuna as a source of opportunity for the country’s future development. Bumbuna was presented as a symbol of hope and development—rather than simply as a dam or a source of revenue. The communication support was fine-tuned with indigenous knowledge and deliberate attention to local political structures. For example, a community radio station was established under the joint management of two factions in order to effectively reach out to all members of the community.
Box 7.6  West Africa Gas Pipeline Project

A communication assessment was requested in the early stages of development of the West Africa Gas Pipeline Project, a major regional infrastructure initiative aimed at improving the competitiveness of Benin, Ghana, and Togo, by supporting the development of a gas pipeline that would bring gas from Nigeria to those three countries. The involvement of four countries and four separate governmental structures and citizenries raised flags early on to the political complexities involved. Despite many expected positive outcomes, various stakeholders expressed concerns about the possible negative impacts of the project on local communities, the environment, and public finances.

Local concerns found their way into the international networks of CSOs. A communication needs assessment was carried out in order to understand the key issues in each country and the position of different stakeholders. Overall, in both Ghana and Benin, the project garnered widespread public enthusiasm, while in Togo, the population showed little interest, as they did not anticipate any concrete impact on their country. In Nigeria, however, CSOs were mobilizing against the project. Political leaders also differed in their public support for the project. In Ghana, despite the President’s personal support of the initiative, the Ministry of Energy was blamed for not having adequately involved the

(Box continues on next page)

projects for local concerns to find their way into the international networks of CSOs and acquire global relevance. The scope of communication, therefore, needs to be open to helping not only the governments and the project partners in the design and the implementation of communication strategies and program but also the World Bank project teams to develop their own strategies and lead corporate dialogue with global stakeholders (see box 7.6).
parliament nor engaged the public at large. This led to a broad perception of the limited overall involvement and ownership of the project, which, according to some interviewees, was driven by and would benefit the private companies involved.

The communication assessment advised the government of Ghana to take a more proactive stance and “speak for” the project. Recommendations also included a more open and participatory approach to the overall project communication. The Bank also held several meetings with international CSOs and devoted adequate time and resources to address concerns. The communication assessment also advised the World Bank to take a “back seat” in terms of public discussion and to play a strong role as a facilitator of dialogue and consultations at various levels.
## Appendix A Infrastructure Projects Rated Highly Satisfactory by OED (Exit FY1985–2004)

<table>
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<tr>
<th>Entry FY</th>
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<th>Country</th>
<th>Project name</th>
<th>Disbursed loan/credit amount (US$ millions)</th>
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<tr>
<td>1988</td>
<td>1995</td>
<td>Dominican Republic</td>
<td>Power Sector Rehabilitation and Distribution Project</td>
<td>105.0</td>
</tr>
<tr>
<td>1989</td>
<td>1993</td>
<td>Argentina</td>
<td>Housing Sector Project</td>
<td>21.7</td>
</tr>
<tr>
<td>1989</td>
<td>1994</td>
<td>Rwanda</td>
<td>Urban Institutions Sectoral Development Project</td>
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</tr>
<tr>
<td>1990</td>
<td>1996</td>
<td>Nigeria</td>
<td>Telecommunications Project</td>
<td>19.8</td>
</tr>
</tbody>
</table>

(Table continues on next page)
### Appendix B  (continued)

<table>
<thead>
<tr>
<th>Entry FY</th>
<th>Exit FY</th>
<th>Country</th>
<th>Project name</th>
<th>Disbursed loan/credit amount (US$ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>1998</td>
<td>Mozambique</td>
<td>Small and Medium Enterprise Development (SME) Project</td>
<td>32.0</td>
</tr>
<tr>
<td>1990</td>
<td>1999</td>
<td>Tanzania</td>
<td>Integrated Roads Program Project</td>
<td>166.7</td>
</tr>
<tr>
<td>1991</td>
<td>1996</td>
<td>Bangladesh</td>
<td>Liquified Petroleum Gas Transport and Distribution Project</td>
<td>0.8</td>
</tr>
<tr>
<td>1991</td>
<td>1999</td>
<td>Vanuatu</td>
<td>Housing Project</td>
<td>1.6</td>
</tr>
<tr>
<td>1992</td>
<td>1995</td>
<td>Turkey</td>
<td>Berke Hydropower Project</td>
<td>42.5</td>
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<tr>
<td>1994</td>
<td>1999</td>
<td>Pakistan</td>
<td>Sindh Special Development Project</td>
<td>40.5</td>
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<tr>
<td>1994</td>
<td>2001</td>
<td>Indonesia</td>
<td>Surabaya Urban Development Project</td>
<td>93.7</td>
</tr>
<tr>
<td>1994</td>
<td>2004</td>
<td>Algeria</td>
<td>Water Supply and Sewerage and Rehabilitation Project</td>
<td>38.3</td>
</tr>
<tr>
<td>1995</td>
<td>2001</td>
<td>Guinea-Bissau</td>
<td>Transport and Urban Infrastructure Project</td>
<td>19.4</td>
</tr>
<tr>
<td>1995</td>
<td>2002</td>
<td>Haiti</td>
<td>Road Maintenance Project</td>
<td>25.1</td>
</tr>
<tr>
<td>1997</td>
<td>2000</td>
<td>Ukraine</td>
<td>Electricity Market Development Project</td>
<td>76.4</td>
</tr>
<tr>
<td>1997</td>
<td>2002</td>
<td>Lebanon</td>
<td>Power Sector Restructuring and Transmission Expansion Project</td>
<td>46.8</td>
</tr>
<tr>
<td>1997</td>
<td>2003</td>
<td>Turkmenistan</td>
<td>Water Supply and Sanitation Project</td>
<td>6.1</td>
</tr>
</tbody>
</table>
## Appendix C  Inspection Panel Investigations of Infrastructure Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Date of Inspection Panel request</th>
<th>Policies and procedures raised by the request for inspection</th>
<th>Inspection Panel’s key findings*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ORIGINAL RESOLUTION 1993</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Nepal—Arun III Proposed Hydroelectric Project and Restructuring of IDA Credit | October 24, 1994 | • Environmental Assessment (OD 4.01)  
• Involuntary Resettlement (OD 4.30)  
• Indigenous Peoples (OD 4.20)  
• Economic Evaluation of Investment Operations (OP/BP 10.04)  
• Disclosure of Operational Information (BP 17.50)  
• Outline for a Project Information Document (BP 10.00, Annex A) | • Environmental and social impacts of the alternatives have not been systematically analyzed; therefore, a realistic comparison of risks could not have been carried out.  
• Choice of access road has created uncertainties of a serious nature; environmental assessment and processing of loan do not appear to be consistent with OD 4.01.  
• Despite progress with respect to overall disclosure of information, problems remained with timely release of factual technical information in borrowing country.  
• Reservoir was filled prior to completion of the agreed environmental and resettlement measures.  
• EA, prepared seven years after implementation began, failed to consider substantive aspects of project and only synthesized previous project-related studies. |
| **Argentina and Paraguay—Yacyretá Hydroelectric Project** | September 30, 1996 | • Environmental policy for dam and reservoir projects (OD 4.00, Annex B)  
• Environmental Assessment (OD 4.01)  
• Indigenous Peoples (OD 4.20)  
• Involuntary Resettlement (OD 4.30) | |

(Table continues on next page)
### Appendix C  *(continued)*

<table>
<thead>
<tr>
<th>Project</th>
<th>Date of Inspection Panel request</th>
<th>Policies and procedures raised by the request for inspection</th>
<th>Inspection Panel’s key findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>India—NTPC Power Generation Project</td>
<td>May 1, 1997</td>
<td>• Environmental Assessment (OD 4.01)</td>
<td>• The Bank failed to incorporate resettlement planning in the design and financing of the project.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Involuntary Resettlement (OD 4.30)</td>
<td>• Affected people did not have meaningful participation and consultation in the design or implementation of the resettlement plan.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Indigenous Peoples (OD 4.20)</td>
<td>• The Bank failed to ensure that people resettled by the project have maintained or improved their standard of living.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Economic Evaluation of Investment Operations (OD 10.04)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Project Supervision (OD 13.05)</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>• The Bank failed to incorporate resettlement planning in the design and financing of the project.</td>
<td></td>
</tr>
<tr>
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<td></td>
<td>• Affected people did not have meaningful participation and consultation in the design or implementation of the resettlement plan.</td>
<td></td>
</tr>
<tr>
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<td></td>
<td>• The Bank failed to ensure that people resettled by the project have maintained or improved their standard of living.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Essential mechanisms and preconditions for Resettlement Action Plans (RAP) were inadequate.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The Bank did not assure itself that the borrower had the necessary capacity to carry out the Resettlement and Rehabilitation (R&amp;R) component of the project and Environmental Management Plans (EMPs).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Serious violations by the Bank of policies and procedures on participation of and consultation with project-affected persons.</td>
<td></td>
</tr>
</tbody>
</table>
• Serious alternatives for fly ash disposal were not considered during the design phase.
• The Bank failed to promote and give support for inter-agency coordination.
• Supervision of the R&R component and of measures to strengthen NTPC’s monitoring capacity effectively failed.

<table>
<thead>
<tr>
<th>Country</th>
<th>Decision Date</th>
<th>Key Issues</th>
</tr>
</thead>
</table>
| Ecuador—Mining Development and Environmental Control Technical Assistance Project | December 13, 1999 | - Environmental Assessment (OD 4.01)  
- Wildlands (OPN 11.02, OP/BP 4.04)  
- Indigenous Peoples (OD 4.20)  
- Project Supervision (OD 13.05) |
|                          |               | - Spatial/geographic scope of the Environmental Assessment (EA) was too limited.  
- Provision of baseline environmental data in EA was not adequate.  
- Critical recommendation concerning environmental impact of mining not included in EA.  
- Inadequate consultation with project-affected people during project preparation. |
| Chad—Petroleum Development and Pipeline Project, Management of the Petroleum | March 22, 2001 | - Environmental Assessment (OD 4.01)  
- Natural Habitats (OP/BP 4.04)  
- Pest Management (OP 4.09)  
- Poverty Alleviation (OD 4.15)  
- Indigenous Peoples (OD 4.20)  
- Forestry (OP 4.36) |
|                          |               | - Several aspects of EA not in compliance included spatial context/regional EA, cumulative impacts assessment, reports of the Experts Advisory Panel, baseline data linkages to impacts and mitigation, consideration of environmental costs and benefits of alternatives, and institutional capacity. |
## Appendix C (continued)

<table>
<thead>
<tr>
<th>Project</th>
<th>Date of Inspection Panel request</th>
<th>Policies and procedures raised by the request for inspection</th>
<th>Inspection Panel’s key findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economy Project, and Petroleum Sector Management Capacity-Building Project</td>
<td></td>
<td>• Management of Cultural Property in Bank-financed Operations (OPN 11.03)</td>
<td>• Alternatives for economic evaluation not adequate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Disclosure of Operational Information (BP 17.50)</td>
<td>• Sustainability and risks assessment of Petroleum Economy and Capacity-Building Project not adequate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Economic Evaluation of Investment Operations (OP 10.04)</td>
<td>• Accelerated action needed for capacity-building in delivery of poverty reduction program.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Project Supervision (OD 13.05)</td>
<td>• Project not in compliance with provisions concerning risk analysis and institutional design with respect to use of and possible variations in oil revenue inflows.</td>
</tr>
<tr>
<td>India—Coal Sector Environmental and Social Mitigation Project and Coal Sector Rehabilitation Project</td>
<td>June 21, 2001</td>
<td>• Environmental Assessment (OD 4.01)</td>
<td>• Project was not in compliance with requirements regarding consultations on Sectoral Environmental Impact Assessment and Parej East EMP.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Indigenous Peoples (OD 4.20)</td>
<td>• Environmental Impact Assessment (EIA), RAPs, and Indigenous Peoples Development Plan (IPDP) were not properly disclosed; local participation in Parej East IPDP was not in compliance.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Involuntary Resettlement (OD 4.30)</td>
<td>• Preparation of original Parej East RAP not in compliance.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Management of Cultural Property in Bank-financed Operations (OPN 11.03)</td>
<td></td>
</tr>
</tbody>
</table>
• Disclosure of Operational Information (BP 17.50)
• Project Supervision (OD 13.05)

• Land compensation, choice of resettlement site and size of plots in resettlement site, and title to house plots were not in compliance. Compensation process was not transparent.
• Access to potable water was not adequately addressed.
• Traditional land rights were not adequately addressed.
• Compensation was inadequate for loss of access to forest products.
• RAP entitlements (for example, jobs in the mine, land for land, non-farm-based self-employment, transition period, and subsistence allowance) were not in compliance.

• Environmental Assessment (OD 4.01)
• Natural Habitats (OP/BP 4.04)
• Indigenous Peoples (OD 4.20)
• Involuntary Resettlement (OD 4.30)
• Safety of Dams (OP 4.37)

• Sectoral EA and cumulative impact assessment were not prepared.
• IDA failed to ensure the establishment and maintenance of the appropriate and technically justified mitigation measures to protect the natural habitats from the impacts of the project.
• Community Development Action Plan does not meet the requirements of the OD; the interests of people who will be affected as a

(Table continues on next page)
<table>
<thead>
<tr>
<th>Project</th>
<th>Date of Inspection Panel request</th>
<th>Policies and procedures raised by the request for inspection</th>
<th>Inspection Panel’s key findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina and Paraguay—Yacyretá Hydroelectric Project</td>
<td>May 17, 2002</td>
<td>• Management of Cultural Property in Bank-financed Operations (OPN 11.03)</td>
<td>• Inadequate or no EAs for resettlement sites in Encarnacion, no consideration of resettlement site alternatives, and no evaluation of water and sewerage facilities and urban drainage for resettlement sites.</td>
</tr>
<tr>
<td>(formally cited as Argentina SEGBA V Power District Project; and Paraguay Reform Project for Water and Telecom. Sectors)</td>
<td></td>
<td>• Economic Evaluation of Investment Operations (OP 10.04)</td>
<td>• Inadequate assessment and mitigation of effects on host populations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Poverty Alleviation (OD 4.15)</td>
<td>• Inadequate grievance procedures to correct resettlement-related omissions and errors.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Disclosure of Operational Information (BP 17.50)</td>
<td>• Inadequate effort to inform and consult with host populations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Project Monitoring and Evaluation (OD 10.70)</td>
<td></td>
</tr>
<tr>
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<td></td>
<td>• Project Supervision (OD 13.05)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Environmental Policy for Dam and Reservoir Projects (OD 4.00, Annex B)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Environmental Assessment (OD 4.01)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>• Involuntary Resettlement (OD 4.30)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Project Supervision (OD/OP/BP 13.05)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Project Monitoring and Evaluation (OD 10.70)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Inadequate or no EAs for resettlement sites in Encarnacion, no consideration of resettlement site alternatives, and no evaluation of water and sewerage facilities and urban drainage for resettlement sites.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Inadequate assessment and mitigation of effects on host populations.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Inadequate grievance procedures to correct resettlement-related omissions and errors.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Inadequate effort to inform and consult with host populations.</td>
<td></td>
</tr>
</tbody>
</table>
- Suspension of Disbursements (OD 13.40)
- Inadequate consultation and monitoring of property appraisals
- Denial of compensation to some affected people
- Failure to consider acceptable resettlement alternatives
- Inadequate grievance procedures for reservoir level raised to 76 meters above sea level
- Restoration of income earning capacity inadequate
- Resettlement plan, budget, and timetable not functioning as intended
- Analysis of legal issues did not occur or was inadequate
- Inadequate supervision of resettlement activities with respect to standards of design, construction, and implementation
- Lack of adequate technical and social expertise during supervision

<table>
<thead>
<tr>
<th>Cameroon—Petroleum Development and Pipeline Project, and</th>
<th>September 25, 2002</th>
<th>Environmental Assessment (OD 4.01)</th>
<th>Not in compliance on requirements for Independent Expert Panel</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Natural Habitats (OP/BP 4.04)</td>
<td>Lack of baseline data in environment, public health, and geographical scope of project</td>
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<tr>
<td></td>
<td></td>
<td>Poverty Alleviation (OP 4.15)</td>
<td></td>
</tr>
</tbody>
</table>

(Table continues on next page)
### Appendix C (continued)

<table>
<thead>
<tr>
<th>Project</th>
<th>Date of Inspection</th>
<th>Policies and procedures raised by the request for inspection</th>
<th>Inspection Panel’s key findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Environment Capacity Enhancement Project (see above)</td>
<td></td>
<td>• Indigenous Peoples (OD 4.20)</td>
<td>• No cumulative impact assessment was prepared.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Involuntary Resettlement (OD 4.30)</td>
<td>• Project did not achieve the strengthening of local capacity to adequately assess construction impacts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Disclosure of Operational Information (BP 17.50)</td>
<td>• Regional assessment of health risks was absent.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Project Supervision (OD 13.05)</td>
<td>• Baseline surveys were lacking outside the right-of-way of the pipeline on Bakola/Bagyeli use of forest for hunting.</td>
</tr>
<tr>
<td>Colombia—Cartagena Water Supply, Sewerage and Environmental Management Project</td>
<td>April 20, 2004</td>
<td>• Environmental Assessment (OD 4.01)</td>
<td>• Inadequate demonstration of systematic comparative study of all alternatives (in particular, alternatives other than the submarine outfall).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Indigenous Peoples (OD 4.20)</td>
<td>• Lack of consideration of alternatives for disposal of solids.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Water Resources Management (OP 4.07)</td>
<td>• Lack of evaluation of potential impacts on local Afro-Colombian communities in North Zone.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Financial Management (OP/BP 10.02)</td>
<td>• Inadequate consultations with affected communities in area of submarine outfall.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Economic Evaluation of Investment Operations (OP/BP 10.04)</td>
<td>• Inadequate economic analysis and demonstration of project consistency with The Bank’s poverty reduction strategy, as presented in the Project Assessment Document.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Poverty Reduction (OD 4.15)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Project Supervision (OD/OP/BP 13.05)</td>
<td></td>
</tr>
</tbody>
</table>
India—Mumbai Urban Transport Project
(4 requests)
April 28, 2004; June 24, 2004; November 29, 2004; and December 23, 2004

- Environmental Assessment (OP 4.01)
- Involuntary Resettlement (OD 4.30)
- Investment Lending: Identification to Board Presentation (OP/BP 10.00)
- Economic Evaluation of Investment Operations (OP/BP 10.04)
- Project Supervision (OD/OP/BP 13.05)
- Project Appraisal (OMS 2.20)
- World Bank Policy on Disclosure

- Decision to merge two projects (resettlement and infrastructure) into one led to inadequate resettlement arrangements.
- Uneven preparation of rail and road components and assessment of their impact on project-affected-persons.
- Delegation of responsibility to NGOs with inadequate institutional capacity.
- Inadequate risk analysis of resettlement, differing estimates of numbers of people to be resettled, and deficient surveys of project-affected-persons and shopkeepers.
- Inadequate consultation with project-affected-people, access to information, and grievance redress procedures.
- Insufficient income and living standard restoration and improvement (specifically, lack of access to social services and lack of operating water and sewerage connections at resettlement sites).

(Table continues on next page)
### Appendix C  *(continued)*

<table>
<thead>
<tr>
<th>Project</th>
<th>Date of Inspection Panel request</th>
<th>Policies and procedures raised by the request for inspection</th>
<th>Inspection Panel’s key findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan—National Drainage Program Project</td>
<td>September 10, 2004</td>
<td>• Environmental Assessment (OD 4.01)</td>
<td>• Inadequate EA of resettlement and transit sites</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Natural Habitats (OP 4.04)</td>
<td>• Insufficient Bank supervision of resettlement planning and implementation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Indigenous Peoples (OD 4.20)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Involuntary Resettlement (OD 4.30)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Management of Cultural Property in Bank-financed Operations (OPN 11.03)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Investigation report pending</td>
</tr>
</tbody>
</table>

**Notes:**

a. The findings cited are a summary of the Inspection Panel’s key findings and are not a comprehensive list. Detailed information on the panel’s findings for each project can be found in the Panel’s reports at the following Web site: http://www.inspectionpanel.org.

b. This concerns requests submitted under the terms of the original Resolution of September 22, 1993, establishing the Inspection Panel.

c. This concerns requests submitted following the April 20, 1999, Clarifications to the Resolution establishing the Inspection Panel.

BP = Best Practice  
EA = Environmental Assessment  
EMP = Environmental Management Plan  
OD = Operational Directive  
OMS = Operational Management Statement  
OP = Operational Policy  
OPN = Operations Policy Note  
R&R = resettlement and rehabilitation  
RAB = Resettlement Action Plan
Notes

1. For a typical infrastructure project in the mid-1990s, it took three years to move from identification to approval.
5. The establishment of the Quality Assurance Group in 1996 was a key step in this turnaround effort.
6. Appendixes A and B provide the lists of infrastructure projects rated highly satisfactory and highly unsatisfactory, respectively, by OED in the last 20 years.
7. See Operational Policy (OP) 6.00—Bank Financing, issued in April 2004.
8. The guidance was issued by James W. Adams, Vice President, Operations Policy and Country Services, to all Operational Vice Presidents on September 14, 2004.
9. There are large differences across sectors in this project. The water supply and sanitation sector has a particularly high share of distressed projects, close to 45 percent.
10. Appendix C provides the full list of infrastructure projects investigated by the Inspection Panel since its inception.
11. The new resettlement policy (OP 4.12) does not apply to projects where people voluntarily agree to provide small areas of land in anticipation of project benefits, simplifying the processing of slum-upgrading projects.
13. The Bank’s Articles of Agreement prohibit the Bank and its officers from “interfering in the political affairs of any member,” and from making decisions influenced by the political characters of its members.
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