



INTER-AMERICAN DEVELOPMENT BANK

**Environmental and Social Unit
Private Sector Department**

Environmental and Social Value Added in IDB Private Sector Projects



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The PRI Environmental and Social Papers are developed to assist in the management of environmental, social, health and safety, and labor aspects particularly related to private sector and capital market investments in Latin America and the Caribbean. These documents do not necessarily reflect specific requirements for financing by the Inter-American Development Bank nor do they reflect the official position of the Bank.

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TABLE OF CONTENTS

1. Environmental and Social Aspects in the IDB Private Sector Department	1
2. Adding Environmental and Social Value to PRI-Financed Projects	3
2.1 Identifying and Assessing Impact and Risk	4
2.2 Managing Impacts and Risks.....	6
2.3 Stakeholder Involvement.....	12
2.4 Monitoring and Supervision Systems.....	14
2.5 Enhancing Positive Benefits.....	16
3. Improving the Environmental and Social Practice of Private Sector Investment	19
3.1 Environmental and Social Guidance	19
3.2 Technical Studies	20
3.3 Technology Transfer and Capacity Enhancement.....	21
4. Conclusion	23

1. ENVIRONMENTAL AND SOCIAL ASPECTS IN IDB PRIVATE SECTOR DEPARTMENT

The Inter-American Development Bank (IDB), the oldest and largest regional development institution, was established in 1959 to contribute to the acceleration of the process of economic and social development in Latin American and the Caribbean. The IDB focuses on sustainable economic and social development, poverty reduction, and social equality. It works by extending public and private sector loans, grants, and technical assistance and fostering initiatives in a wide variety of sectors, including social development, infrastructure, finance, environment, and state and civil society.

The Private Sector Department (PRI) was created in 1995 to help meet the region's growing demand for capital for infrastructure development. Initially, PRI had the primary operational responsibility for Bank financing of private enterprises, specifically in four key infrastructure sectors (energy, transportation, water and sanitation, and communications), and for the development of domestic capital markets. Today, PRI has primary operational responsibility for the Bank's financing of non-sovereign-guaranteed operations across a broad range of sectors including transactions that contribute to the development of domestic capital markets. In addition, the PRI also promotes the development of international trade and regional integration through the implementation of a trade finance facilitation program aimed to support private sector companies in the region. These efforts are part of the Bank's overall efforts to expand its support for catalyzing increasing amounts of investment in our borrower countries that may include a full spectrum of public-private ownership structures.

The principal financial instruments/products through which PRI carries out its mandate are project and corporate finance lending, political risk and credit guarantees, and capital market initiatives. Since the inception of PRI, the IDB Board of Executive Directors has approved financing of over 90 infrastructure and capital market projects. Their total project cost is approximately US\$26.2 billion, comprising approximately US\$3.5 billion in IDB loans (from its own resources), US\$4.4 billion loans with the participation of private financial institutions (B-loans), and US\$1.4 billion in IDB guarantees.

PRI is committed to ensuring that the environmental, social, health and safety, and labor aspects of every PRI-supported project are fully assessed, approved, and monitored, such that each is environmentally and socially viable. This is especially important because PRI-financed projects are typically large, complex infrastructure projects with potentially significant environmental, social, health and safety, and labor impacts and risks. The fundamental principles for PRI-supported investment in private sector and capital markets projects are:

- Comply with all applicable in-country and IDB environmental, social, health and safety, and labor legal requirements.
- Promote sustainable development projects that maximize to the extent possible the positive project-associated benefits while adequately mitigating project-related negative impacts and risks.
- Promote information disclosure, stakeholder involvement, and transparency.
- Promote use of sound environmental, social, health and safety, and labor practices and management systems.
- Promote local, national, and regional economic and social development by utilizing the human, financial, and material resources of member countries.

All projects financed by IDB must comply with the full range of the Bank's environmental and social policies and procedures. To this end, PRI has adapted the IDB environmental and social requirements to reflect the specific characteristics and realities of private sector projects and their associated impacts and risks. These requirements are applied to the project company (i.e., borrower) as well as other companies or persons who are directly working on the IDB private sector financed project.

There are three categories of requirements.¹ First, all projects must comply with all relevant laws, regulations, standards, permits, and other in-country legal requirements related to environmental, social, health and safety, and labor issues. Second, the borrower must develop and implement the necessary plans to prevent, control, mitigate, and monitor potential negative impacts and risks. These plans must be based upon a project-specific assessment of the environmental, social, health and safety, and labor impacts and risks of the project. Finally, the borrower must implement information disclosure and public consultation actions to allow for adequate stakeholder engagement.

The Environmental and Social Unit (ESU) within PRI is responsible for managing, controlling, and providing leadership related to environmental, social, health and safety, and labor aspects of PRI-financed projects. Specifically, ESU is responsible for:

- Assessing and confirming the feasibility of projects proposed by PRI for financing, in terms of environmental, social, health and safety, and labor aspects.
- Monitoring compliance and performance with environmental, social, health and safety and labor aspects of all PRI executed projects
- Assisting potential borrowers and project sponsors in understanding and complying with the Bank's environmental, social, health and safety, and labor requirements
- Assisting in better understanding and controlling credit/financial and reputation risks related to environmental, social, health and safety and labor aspects.

From a borrower's point of view, the process of ESU due diligence can sometimes seem like many bureaucratic hoops, and compliance with environmental and social regulations is a cost that slows down or complicates project implementation. Yet as shown through the examples and case studies presented herein, the process entails a substantial return to the borrowers themselves, their project, and to the environmental and social conditions in the project area.

The present document presents an array of brief examples to show how this happens. Summarizing years of evaluative studies, staff experience, and continuous feedback from Bank clients, it describes the substantial environmental and social value added that is provided by PRI participation.

The following section shows that value is added not only by mitigating potential negative impacts and risks but also in promoting positive environmental and social benefits in the project. Section 3 shows how this added value occurs more broadly, by promoting more environmentally and socially sustainable private sector investment in infrastructure in Latin America and Caribbean.

1 For a more comprehensive description of IDB requirements, see "Environmental and Social Aspects of IDB Private Sector Department," October 2006. <http://www.iadb.org/pri/environmental.cfm?language=EN&parid=5>

2. ADDING ENVIRONMENTAL AND SOCIAL VALUE TO IDB FINANCED PRIVATE SECTOR PROJECTS

The IDB works hand in hand with borrowers, project sponsors, and stakeholders to ensure that private sector projects financed by the Bank are environmentally and socially sustainable. By working proactively with private-sector project companies, the IDB not only helps to protect environmental and social resources but it adds value that significantly benefits borrowers, sponsors, investors, and local communities. The IDB commitment also serves to mainstream environmental and social concerns into the broader decision-making process. This commitment extends to the supervision of projects in execution. The Bank helps proactively to resolve the kinds of problems and issues that inevitably arise with large private-sector infrastructure projects. Because the Bank is so closely involved, the IDB as a lender is therefore more willing to address difficult issues and potentially controversial projects, thus accepting the potential risks to its reputation.

Within the lexicon of the development community, this kind of value-added is sometimes referred to as *additionality*. Environmental additionality in this sense means that IDB's involvement in private sector projects causes something "better" to happen (for the environment and for human communities) than would have occurred had the investment been made with private capital only.

At a roundtable on additionality in 2002, former IDB president, Enrique Iglesias, explained the Bank's approach to additionality in this way:

"When the Board of Governors authorized an expansion of the lending authority allocated for our Private Sector Investment Program, the Bank adopted a project appraisal framework with a focus on the assessment of additionality of IDB private sector operations. Besides giving an operational definition of this concept, the framework outlines the various types of additionality which IDB private sector operations should foster, encompassing such key developmental dimensions as finance, regulatory setting, risk mitigation, environment, health and safety standards, catalytic demonstration effect, and improved corporate governance. To become eligible for IDB financing, private sector projects must now pass the test of a 'significant presence' of additionality."

Added environmental and social value was highlighted in 2004 in an independent evaluation of IDB private sector projects carried out by the IDB Office of Evaluation and Oversight. The evaluation documented significant environmental and social additionality in these IDB financed projects, and it took note of the IDB Private Sector Department's strong technical environmental and social capacity and its ability in supervising environmental and social aspects in the private sector projects that the IDB finances.²

Private sector clients and financial partners who co-finance private sector projects with IDB have also pointed to the added value. For example, Madeleine Jacobs, head of the reputational risk management for the global banking group ABN AMRO, cited value added by the IDB through reduced risk to loss of reputation.

"Increasingly, society defines economic development not only as a financial bottom-line but also in terms of its impact on people and the planet. For the more challenging projects in particular, IDB plays an important role by ensuring that projects are managed responsibly to mitigate environmental and social impacts. By providing comfort to private financiers that related credit and reputation risks are being adequately addressed, the involvement of the IDB Private Sector Department serves as an important catalyst in mobilizing private sector funding for the region."

² Evaluation was related to operations developed by IDB Private Sector Department

Similarly, Ambassador Alexander Watson, managing director of Hills & Company, an international consulting firm, points out how IDB involvement can add value by helping companies to improve their overall competitiveness. He says, “The PRI has a direct and focused impact on projects’ design and implementation, even when the Bank’s investment is relatively small. It brings international performance standards to bear where the work is actually being done and contributes to broadened respect for those standards.”

The IDB participation can produce not only direct additionality to the project being financed, but can also benefit projects not directly financed by IDB. This happens because private sector companies, financial institutions, governments and civil society experience gained in IDB-financed private sector projects indirectly enhances the overall investment framework and increases capacity laterally. IDB-financed private sector projects adopt sound environmental, social, and health and safety practices, up-to-date management systems, and public consultation approaches that contribute strongly to project success. Through demonstration effect, these can “spill over” to non-IDB financed projects.

There are no hard and fast categories of environmental additionality contributed by PRI, but the diverse range is illustrated through discussion of the examples and “mini case studies” that follow. As shown, additionality is provided in five main areas:

- Identifying and assessing impacts and risks (section 2.1)
- Managing potentially negative impacts and risks (section 2.2)
- Stakeholder involvement (section 2.3)
- Monitoring and supervision systems (section 2.4)
- Promoting positive impacts and benefits (section 2.5).

2.1 Identifying and Assessing Impact and Risk

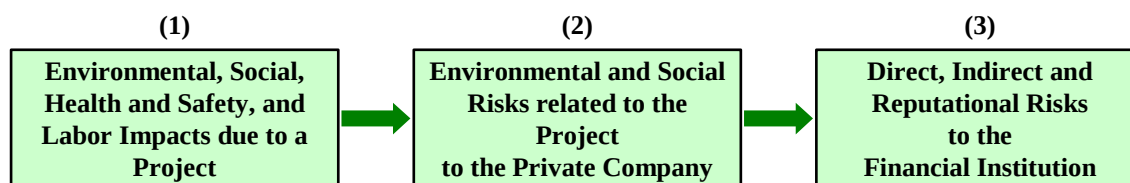
A critical element in creating an environmentally and socially sustainable project is developing the necessary and relevant documentation to properly identify and assess the proposed project’s environmental, social, health and safety and labor impacts and risks. This is the fundamental precursor to designing and implementing the necessary plans and procedures to prevent, control, mitigate and monitor the project-related negative impacts and risks. The IDB brings an expanded vision and capacity related to the analysis of impacts and risks in private sector projects. The assessment of project impacts and risks must include all relevant environmental, social, health and safety, and labor aspects. The type of environmental assessment depends upon the type and characteristics of the project to be financed. For example, for project finance projects (i.e., single large-scale private sector infrastructure projects) the type of environmental documentation normally required is an Environmental Impact Assessment,³ while for corporate finance projects (i.e., multiple works/projects or concessions) the types of environmental documentation normally required are an Environmental Analysis⁴ and an Environmental, Health and Safety Audit.⁵

3 Entails the systematic study, analysis and evaluation of a project's potential environmental and social impacts (both positive and negative) taking into account overall cumulative primary and secondary (indirect) consequences likely to alter significantly the quality of the natural and human environment.

4 Provides an assessment of the potential environmental, social, health and safety, and labor impacts and risks due to the construction and operation of the projects and sub-projects to be financed.

5 Provides an assessment to identify any existing environmental, social, health and safety, or labor regulatory non-compliance or liability related to the project company’s existing operations and facilities and to identify any existing deficiency in the company’s environmental, health and safety management system

The context or framework used by PRI for environmental and social risks is as follows:



In other words, a particular project can have negative impacts leading to environmental and social risks to a project company and its investors, which in turn can translate to direct, indirect, and reputational risks to the institutions that financed the project.

Impact identification and assessment for project companies

The following are a few specific examples where the IDB helped private sector project companies better identify and assess potential project-related environmental and social impacts.

The PRI provided extensive technical assistance to **Agua del Illimani S.A.** in their development of an Environmental and Social Assessment (ESA) associated with the estimated investment plan for the first five years of the concession for the operation, maintenance, and improvement of the potable water and sewerage systems in the cities of La Paz and El Alto, Bolivia. The objective of the ESA was to provide the company, their clients and other interested parties specific information on the environmental and social aspects of the five-year investment program as well as the existing operations that the company assumed with the concession. The ESA included specific sections on project description, legal and institutional aspects, environmental and social impacts, and environmental and social mitigation measures and monitoring measures including risk management and contingency planning. The ESA was made available to the public. The project company then, working with PRI, developed an action plan to properly resolve potential future project impacts and risks. The comprehensive approach taken led to a complete understanding of the present and future impacts and risk, thus facilitating resolution of these issues in the investment plan and under the framework of the concession.

The **Monterrey III Power Project** consists of a natural gas-fired 1,140 megawatts combined cycle power plant on the outskirts of Monterrey, Mexico. In recent years, ambient air quality in the city has deteriorated—in particular, ozone concentration has exceeded ambient air quality standards for Mexico. The primary source of air pollution has been industrial development and urban growth, thus any proposed development that could affect ambient air quality constitutes a risk. Before IDB committed financial support, PRI assisted the project company in carrying out a comprehensive assessment of the power plant’s direct and indirect potential impact on ambient air quality. Meetings were held with governmental environmental agencies; the historic baseline and trends in ambient air quality were reviewed; and a mathematical modeling exercise was conducted to estimate air quality conditions due to the project and other sources of existing air emissions. This assessment helped the company to set its own project emissions standards that were stricter than those set by prevailing Mexican regulations, effectively demonstrating the project’s environmental viability by not negatively affecting the ambient air quality in the city or surrounding the project site.

IDB helped to finance the second phase of the **Yellow Line Road** in Brazil, which comprises nearly 20 kilometers of road connecting neighborhoods in the southwestern and northwestern regions of Rio de Janeiro. The second phase of the project financed by IDB consisted of improvements to the existing stretch and new connections between the Yellow Line and the Red Line roads. These connections involved a bridge foundation and pillars to be built in the heavily contaminated canal Canal do Cunha. In light of the significant potential risk to construction workers, PRI helped the project company to develop a health and safety plan specific to the

potential hazards. The plan included an assessment of risks to health and safety from hydrogen sulfide, methane gases, volatile organic compounds and mud sediment containing heavy metals and volatile organic compounds. Potential oxygen-deficient conditions, fires or explosions presented other risks. In response, the plan spelled out health and safety measures to mitigate such risks, including—procedures for health and safety worker clearance and training, documentation, recordkeeping, site control, requirements for personnel protection equipment, on-site monitoring, contaminate action levels, safety monitoring, emergency response, and medical surveillance. With these measures in place, construction was completed successfully without significant events or negative impact on workers.

Understanding potential environmental and social risks to project companies and financial institutions

The **Quito International Airport Project** (Ecuador) consists of building a new commercial airport, including a 4.2-kilometer connector road, a free trade zone, and interim operation of the existing airport. IDB participated in the financing. The PRI helped the project company to identify potential environmental liabilities at the existing airport. After nearly 65 years of operation, petroleum hydrocarbons from leaks and fuel spills had contaminated the soil and water at several locations. Under terms of the concession, the government was responsible for existing environmental liabilities. A comprehensive study was needed to properly identify and characterize their magnitude and thus avoid future liabilities. Along with other financiers and the project company, PRI helped design site investigations to establish the environmental baseline conditions regarding these liabilities. In addition, IDB and the government began an exchange of ideas and discussion of issues on how the approximately 150 hectares of land could be developed for other uses.

The **Cana Brava Power Project** is a 450-megawatt hydropower plant located in the upper reach of the Tocantins River basin in the state of Goiás (Brazil). The project area is one of the poorest in the region and faced significant economic depression prior to the project initiation. The project included implementation of a resettlement plan to address the impact on both landowners and non-land owners. However, complaints continued to be voiced, particularly from persons not included in the resettlement and compensation program. Despite investigative efforts by the IDB, the social risk worsened; and tension escalated, especially as the Brazilian social movement MAB- *Movimento dos Atingidos por Barragens* (Movement of those Affected by Dams), became increasingly involved. In this context, the IDB/PRI initiated a social audit that would fully investigate complaints. The goal was, first, to provide an additional final opportunity for those claiming eligibility for compensation or resettlement, and second, to help identify programs to address the local economic and social problems in the project area that really had been caused by the Cana Brava project. The social audit adopted a unique approach. Fieldwork was intensive and comprised of interviews with each individual claimant and provision of assistance in identifying and collecting information related to their claim. The criteria for eligibility were based upon a broad interpretation, thus making the results more inclusive. IDB contracted a team of social experts who analyzed 652 individual claims. The project company has implemented the recommendations through a local committee that includes four claimant representatives, a local priest, and a public attorney. The social audit suggested means to address the broader economic depression in Cana Brava. With potential support from IDB, several local companies, including the project company and under the coordination of the Brazilian government, are developing a social fund to help foster economic and social development of the area.

2.2 Managing Impacts and Risks

Sustainable, environmentally sound projects need to have detailed plans to prevent, mitigate, and monitor project-specific environmental, social, health and safety, and labor impacts and risks. These plans must be technically complete, and they must be presented so that workers in the field can make use of them. The Bank's Private Sector Department directly works with project companies to develop effective and efficient plans. The

Bank also takes a leadership role in helping project companies and financial institutions to address difficult and controversial issues—for example, mitigation of impacts and risks in situations where responsibility is undefined, unclear, or mixed. This approach improves environmental, social, and working conditions. It also leads to better community relations, and builds the capacities of project stakeholders.

Potential borrowers and project sponsors are required to prepare adequate written plans and procedures to manage impacts and risks. For private sector project finance, the Bank requires several kinds of environmental plans. These serve to mitigate, control, and monitor the environmental, social, health and safety, and labor impacts and risks related to proposed construction and project operations.

- An environmental and social management plan proposes control and mitigation measures, monitoring programs, and responsibilities. It must be based upon an assessment of project-specific environmental and social impacts and risks.
- A health and safety plan defines the procedures, equipment, training, and responsibilities for project-specific worker health and safety risks to be properly minimized and controlled.
- A contingency plan defines project-specific measures, procedures, equipment, training, responsibilities, and resources required to adequately control, respond to, and remediate potential risks and emergencies.
- A spill prevention and counter-control plan defines the necessary measures, procedures, equipment, training, responsibilities, and resources to adequately prevent, respond to, and remediate potential petroleum or chemical spills.
- For projects involving resettlement, a resettlement plan defines the actions required to fully comply with the IDB Policy on Involuntary Resettlement.

For corporate finance, two plans are needed. First, an environmental, health and safety management plan specifies the project companies' systems to manage impacts and risks from all facilities and operations, including the project works to be financed by IDB. Second, an environmental, health and safety action plan defines how correction will be made for any noncompliance, liability, or deficiency identified in the audit or deficiencies in the existing management system. Finally, if any resettlement or expropriation is involved, a resettlement plan must be provided.

For operations involving financial intermediaries, the environmental requirements are tailored to properly reflect the level of potential impact and risk, ranging from simple procedures to more sophisticated environmental management systems/plans.

Helping develop detailed plans to mitigate and monitor impacts and risks

By helping project companies to properly manage risks and mitigate negative impacts, PRI helps them to avoid problems with regulatory non-compliance, environmental financial costs, and damage to their reputation. The focus is to help develop detailed functional plans that can be readily utilized by the actual project workers, thereby increasing the likelihood of effective and efficient impact and risk prevention and mitigation. The fruits of this proactive approach have been demonstrated in many recent projects.

The **Ecovias Highway System** (Anchieta—Imigrantes Highway System, Brazil) connects the metropolitan area of São Paulo, which includes Brazil's most important industrial region, to Santos, Brazil's largest port and an area where several vacation and holiday resorts are also located. In addition, the system connects the city of São Paulo to the industry complex of Cubatão, which is located near Santos. The road crosses the state park of Serra do Mar, a valuable reserve for tropical flora and fauna, and two important water bodies used to supply water to the Baixada Santista (Cubatão River and the Billings Reservoir). As part of IDB financing to the Ecovias Project, PRI provided significant assistance to Ecovias in developing adequate environmental and social management plans during construction. Special emphasis was placed on minimizing deforestation, erosion and

resultant sedimentation in nearby rivers, and dealing with encroachment of low-income residences in the right-of-way. For the erosion and sedimentation control plan, a detailed alignment adjustment process was performed, resulting in the increased use of tunnels over bridges. Detailed materials flow analysis was developed to ensure that most excess soil was used for landfill of areas in the coastal plain, for subsequent urbanization. A workers' code of conduct was also developed, with special training and environmental education programs for the workers during all the construction period, including State Park regulations, such as restrictions on hunting, collecting of plants, and reducing risk of accidents with poisonous animals. With regard to the environmental, social, and health and safety management plan for operations, PRI assisted Ecovias in developing an emergency response plan for managing the risks associated with the transportation of hazardous materials within the system, with special focus on trained emergency crews to service vehicles transporting hazardous materials and to immediately contain any potential contamination of the water bodies in the state park.

In the **La Chorrera Power Plant Project** (Panama), IDB provided take-out financing to replace short-term bridge financing and helped to reduce the sponsor's costs by covering a portion of the equity. In this role, the Bank was not initially involved in designing the project, which consisted of a 96-megawatt power plant fueled by six oil generators about 35 kilometers southwest of Panama City. The site for La Chorrera, provided by the Panamanian government, had not been planned for industrial use and bordered on rural residential areas. Neither land use classification nor any other zoning was in place to guide urban and industrial development. Shortly after plant operations began, PRI detected potential risks and impacts from plant-generated noise. To mitigate the impact on nearby residents, PRI assisted the project company in designing a comprehensive assessment and then a noise corrective action plan. A comprehensive approach dealt with noise impacts not only in a technical sense, but involved interaction with the affected community and promoted land use planning. A technical fix reduced noise from the plant. After the mitigation measures were implemented, two noise-monitoring events were carried out. Communication was improved, and donations were provided to the small community surrounding the plant. Land use planning was adopted in order to prevent future noise claims from other areas. As a model, the Chorrera noise corrective plan provides an excellent example of how a comprehensive strategy can mitigate adverse impacts, even after a facility has been designed and constructed.

As part of IDB financing a portion of the **Dona Francisca Hydropower Plant** (Brazil), PRI provided significant assistance with the design and implementation of a project resettlement plan. Its purpose was to ensure fair compensation or resettlement to landowners and non-landowners. The project is a 125-megawatt hydroelectric power plant on the Jacuí River in the southern state of Rio Grande do Sul. It was awarded to the consortium Dona Francisca Energética, S.A (DFESA) (90 percent) and the state-owned electrical utility (10 percent). The state utility was responsible for a portion of the expropriation of lands, compensation, and resettlement. However, this responsibility was subsequently assigned to the ministry of agriculture of Rio Grande do Sul. As part of its environmental and social due diligence, PRI helped to develop a plan with clear eligibility criteria and resettlement options that would ensure that project impacts would be properly mitigated. PRI helped the various actors to execute agreements on who was responsible for what. By helping to craft a workable resettlement plan, PRI's involvement was instrumental in helping DFESA to manage potentially volatile social risks. The IDB's comparative advantage was that it could deal evenhandedly with public entities and a social movement, both of which were far less "accountable" than a private company.

During construction of the **Termoeléctrica del Golfo Power Project** (Mexico), which was partially financed by IDB, PRI helped the project company to mitigate a potential impact that was not anticipated during the initial environmental and social impact evaluation and approval by governmental authorities. The TEG project consists of the construction, operation and maintenance of a 230-megawatt circulating fluidized bed petroleum coke (petcock) facility in the state of San Luís Potosí, approximately 10 kilometers northwest of the city of Tamiín. Approximately 15,000 people live in the city, and approximately 40,000 live within the municipality. Construction startup was delayed in TEG project. At the same time, however, construction was significantly accelerated at the adjacent and near-identical project, TEG-II. This caused a significant increase in the number of

temporary workers needed for construction, which could significantly affect the demand for housing and social services in the local communities. The environmental and social management plan, which had originally been prepared by the project company, anticipated a maximum of 900 workers during peak construction. As it turned out, more than 2,400 were needed. To assess the implications for construction workers, the Bank commissioned a social evaluation. With benefit of new information, the project company and PRI developed an action plan to mitigate the social impact of the unexpectedly large number of temporary workers. Worker accommodations were improved, a camp was built on the outskirts of the site, and roads were repaired. Hourly and zone restrictions were put in place to control traffic. Support was provided to the municipality, including planning for additional police during the peak of construction. A code of conduct was developed for workers. State and local authorities were assisted with educational programs for both workers and targeted groups of the local population, including orientation information on sexually transmitted diseases, birth control, and drugs, and support for services at local health centers. An important lesson was demonstrated: Good project supervision adds value because potential problems can be spotted and alleviated with proper actions, thus preventing far costlier environmental and social impacts.

Helping to develop effective and efficient environmental, health and safety management systems

Bandeirante Energias (Brazil) is a leading private electric energy distribution company in the state of São Paulo, distributing electricity through an area of approximately 9,600 square kilometers with a population of 4 million inhabitants in 28 municipalities. The IDB provided financing to support to the Bandeirante 2002-2004 Investment Program. The investment program is aimed at expanding and modernizing Bandeirante's electric energy distribution network and business management support systems, allowing the company to increase productivity gains and reduce costs. The PRI assisted in preparing an environmental analysis report to properly address the potential negative environmental, social and health and safety impacts and risks related to the investment program, and provided guidance to the associated public consultation activities developed by the company. PRI also helped the company identify and assess potential impacts and existing liabilities by assisting in the design and implementation of an environmental audit. As a result of the audit and analysis, the company and PRI developed an environmental and health and safety action plan to properly control impacts and risks, as well as to solve pending environmental liabilities associated with the existing facilities and operations. With supervision and guidance by PRI, the company also developed and implemented an environmental and social and health and safety integrated management system, which contributed to substantial improvements in the company's organization and efficiency. All of these actions helped Bandeirante to reduce the risks associated with the implementation of the investment program and its overall operations. As a measure of the benefits and success of the IDB's role in development and implementation of the integrated system, the company highlighted these initiatives during its annual convention held in May 2005. The company specifically acknowledged the importance of IDB contribution in achieving these enhancements, through its requirements, guidelines, orientation, and supervisory work.

Graña y Montero Group (G&M) is Peru's leading contractor for infrastructure development. G&M is directly involved in several key projects related to transportation, mining, gas, and petroleum. G&M's diverse activities span construction, transportation, mining, gas, and petroleum, encompassing a broad array of potential environmental, social, health, and safety risks. In 2003, IDB provided a partial credit guarantee for an eight-year bond issued in the local capital market. PRI helped G&M to improve its environmental management system (EMS) for consistency with the international standard ISO 14000. An adaptive approach for the EMS was developed, reflecting the multiple activities in which G&M is involved as a project developer and contractor. The EMS has been used successfully to classify company activities in terms of their potential environmental, social, health and safety, and labor impacts and risks; and on this basis, appropriate control and mitigation measures can then be designed. The company has also developed a health and safety management system following the OHSAS 18001 standard.

In December 2003, IDB approved a loan to mobile telecommunications company, **Oceanic Digital Jamaica** (ODJ), which allowed the company to complete its digital mobile communications and data network build-out, thereby providing reliable telephony services throughout the country. ODJ is one of three mobile operators on the island. In conducting the Bank's due diligence, PRI took an active hands-on approach in helping the company to develop an environmental management system (EMS). The EMS included all necessary concepts but was designed based on the ODJ project characteristics and associated risks (i.e. telecommunication projects are considered to have a relatively low environmental and social impact when compared with other infrastructure projects), which resulted in an effective and efficient system. The EMS helped to establish procedures for the handling of cell phone batteries and hazardous waste. A year after implementation of the EMS, the Jamaican National Solid Waste Management Authority recognized the company for its responsible handling and disposal of old cell phones, chargers, and spent batteries. Other Jamaican telecommunications companies were asked to follow ODJ's lead in proper waste management. ODJ management acknowledged the additionality provided by IDB that had led to its recognition for leadership in environmental and social programs.

Management of environmental liabilities - enhancing the identification and management of environmental and social risk

The **Energia Norte** (Brazil) project involved 267 diesel engines generating 125 megawatts of power capacity across 82 isolated and remote areas of the northern states of Pará, Rondônia, and Acre. In taking over the 82 existing plants, the project company was confronted by a range of environmental risks and liabilities, including past fuel spills, excessive waste water discharges, high levels of noise, and inadequate waste disposal. To properly identify the potential risks, PRI worked with the project company to develop a complete environmental, health and safety audit of the facilities. The findings were then used to devise an action plan to mitigate the impacts and risks. The collaborative effort planned a series of actions that could be implemented over time, balancing the degree of risk and financial viability of the project. PRI worked with the project company by monitoring the action plan to ensure effective implementation, thus helping to reduce the risk from environmental liabilities that the company had inherited.

Transportadora de Gas del Sur, S.A. (Argentina) holds an exclusive license from the government to operate the southern portion of the country's main gas transmission line, including multiple pipelines, compressor stations, and the General Cerri gas processing complex. As part of IDB financing of an investment plan, PRI worked extensively with the company to help manage potential environmental risk at the Cerri complex. Located near Bahia Blanca, the complex consists of facilities to recover ethane, propane, butane and gasoline, as well as compressor stations, power generation, and storage facilities. Previous environmental evaluations had revealed two significant environmental risks—nitrogen oxide emissions and soil and ground water contamination. To control and mitigate these risks, PRI then worked with the company to develop an effective action plan, including enhanced monitoring programs and operational enhancements at the site.

Raising performance standards

The IDB has also helped private sector power companies to improve their performance by requiring that they adopt best practices and meet international standards for emissions and effluents, thus minimizing potential environmental and public health impacts and their resultant potential risks to the project company. In IDB financed gas-fired plants—for example, Termopernambuco (Brazil), Bajio (Mexico), Hermosillo (Mexico), Monterrey III (Mexico), and Vitro (Mexico), —PRI worked with project companies to implement higher air quality standards. Plants powered by natural gas generate air emissions, primarily nitrogen oxides and to a lesser extent sulfur dioxide, particulate matter, and carbon monoxide. These can combine with other emission sources to further deteriorate ambient air quality. The Bank's consideration of potential enhancements starts with the review of basic project design parameters, including the manufacturer's performance guarantee for emissions. For example, at the Termopernambuco power plant PRI helped identify that the manufacturer's performance

guarantee for nitrogen oxide emissions was higher than usually achieved for the type of combustion turbine proposed for the project. This assisted the project company to negotiate a lower emissions guarantee for nitrogen oxide, which provides an additional assurance from the turbine manufacturer that the project will achieve stricter air emission limits.

The IDB also promotes the use of air emission limits that comply with international best practice, such as the limits set forth in the World Bank *Pollution Prevention and Abatement Handbook*. These stricter limits help push manufacturers to optimize the design and operation of their combustion turbines. More importantly, they help to reduce impact on ambient air quality and therefore the environmental risks of the project. The Bank also promotes the use of continuous emissions monitoring system (CEMS), which continuously monitors nitrogen oxides, carbon monoxide, and oxygen while simultaneously generating data—for example, on the mixture of air and fuel to optimize the operation of the turbines. Using data and internationally accepted methodologies, the project company can thus more effectively demonstrate the project's actual impact on ambient air quality and the level of compliance with regulatory standards.

Mitigating risks that are beyond the borrower's responsibility—resettlement projects associated with roads

The IDB has also helped private sector project companies to mitigate impacts and risks that are beyond the project's or borrower's responsibility—in particular, assisting governments to fulfill environmental, social, and health and safety responsibilities associated with a private sector project. For example, PRI often helps private companies to deal with the governmental authorities responsible for resettlement related to private sector road concessions.

The **Red Vial 5 Road** (Peru), financed in part by the IDB, is designed to help expand and improve the privately managed toll road system connecting Lima to the north, specifically the 183-kilometer Ancón-Huacho-Pativilca section of the Pan-American Highway known as Red Vial 5. For the government, this project was the first in a series of 11 toll-road networks to be modeled on the same type of concession contract. One problem, however, is that prior to the concession, residential and commercial buildings have gradually encroached into the road right of way, creating both legal and safety issues. A large number of encroachments in urban areas have exacerbated the political and economic difficulties in finding solutions. In this context, PRI is working with the government to find a long-term solution to the problem of right-of-way easement and clearance of roads. Because IDB is involved, the government has agreed to pilot Norvial as an inter-urban test case for developing a coherent strategy to manage road encroachment.

Managing credit and reputation risks

The Bank has also helped private sector financial institutions better manage potential environmental and social risks that affect their credit and reputation. For example, PRI was substantially involved in the development of the Environmental Management System (EMS) for the **Brazilian Infrastructure Investment Fund (BIIF)**, which was designed by the IDB to address Brazil's significant need for basic infrastructure investment. The fund is expected to invest in debt equity and equity-like instruments to be issued by 15 to 20 large scale projects and businesses in the sectors of energy, transportation, water and sanitation, telecommunications, and gas pipelines. Each of these kinds of infrastructure has its own potentially negative environmental, social, health and safety, and labor impacts. These can be diverse and significant depending upon the project. The EMS needs to properly manage both potential credit (financial) risks and reputation risks due to environmental and social issues. Credit risks to the fund can arise when projects incur unanticipated costs, such as environmental clean-up costs, law suits, fines, social actions, and so forth. These can jeopardize the project's financial sustainability, and thus it's capacity to repay the fund, and potentially the fund's capacity to repay the IDB loan. Environmental liabilities lead to reduction in equity or asset values and ultimately to nonperforming loans. Similarly, risks to investors'

reputation are incurred through projects or companies that cause unmitigated environmental and social damage. Poor image and significant public opposition can build in response to the nature of the project or a company's historically poor environmental, social, health and safety, and labor record—and that association can be costly to investors. The EMS developed has provided significant value-added and comfort, both to investors and to the fund manager.

Effective and efficient risk management for financial institutions

The IDB helps private financial intermediaries (FI) involved in investments with less significant, but still present, environmental and social risks. PRI has developed a framework that provides an effective risk management system consistent with the magnitude of risks. This framework focuses on two main categories of potential environmental, social, health and safety, and labor issues and risks. First, FI investment activities could result in environmental credit risk, such as reduction in asset values held as securities due to environmental problems or increased probability of non-repayment of loans due to environmental issues. Risk can also occur due to the FI facilities and operations, such as environmental liabilities in their buildings/offices (e.g., PCB transformers, asbestos, etc.) or FI employees having occupational health and safety problems due to FI working environment. Secondly reputation risks to the FIs can arise, for example, due to: financial involvement in projects or activities considered unacceptable by the FI clients in terms of environmental and social aspects; a loan application, analysis and administration process that is not equitable, fair and unbiased in terms of social factors (e.g., gender, age, sex, ethnicity, or cultural heritage etc.); or unfair internal labor practices (i.e., how FI treats its own staff).

The **IDB Regional Trade Finance Program** provides loans and guarantees to financial institutions for their trade finance operation. With PRI's guidance and training, many financial institutions operating in the region now better recognize the risks associated with environmental and social aspects of trade. Using models developed by PRI, they have been able to implement simple trade environmental procedures to mitigate these risks.

The participation of IDB in providing guarantees to financial institutions for mortgage-backed security operations—for example, **Colpatría** (Colombia) and **Brazilian Securities** (Brazil)—has raised their awareness of the potential environmental risks and liabilities associated with real estate transactions. With assistance from PRI, they have implemented procedures geared to better identify and manage the actual environmental impacts and risk posed by their operations.

2.3 Stakeholder Involvement

Throughout the world—but especially in Latin America—a dramatic shift has taken place toward democratization, decentralization of power, and growth in civil society organizations. Individuals and communities have been given voice that is increasingly integrated into decision-making processes. The IDB views stakeholder participation as essential to the enhancement of development and democracy; thus, it strongly supports efforts to make participatory approaches integral within the companies that it works with.

Experience in private sector projects has demonstrated that the benefits of participation may include better project design, less conflict, more social learning and invention, and strengthening the institutional capacity of local civil society. Participation can also help reduce the financial risks and direct costs of investment, increasing business market share as well as bringing social benefits to local communities. While participatory approaches do require some necessary investment in time and resources, the social and financial benefits clearly justify the additional effort required of the private sector. Building interest among legitimate stakeholders helps to prevent future conflicts, costly delays, weakening of negotiating positions, and damage to public image—a win/win proposition for both communities and investors.

Many of the private sector projects that IDB finances have significant environmental and social implications. Information disclosure, stakeholder involvement, and transparency are therefore fundamental principles that are promoted within all IDB-financed projects. Specifically, the Bank requires that borrowers to engage in public consultation and information disclosure at every project stage. Stakeholders need to be provided with adequate and timely information so they can adequately voice their opinions and concerns. This commitment is translated first through Bank's environmental and social due diligence of private sector projects under consideration, and second, through the implementation of project-specific social communication plans.

IDB provided financing to **Transportadora de Gas del Perú** to support the transportation component of the **Camisea Project** (Peru). The Camisea natural gas project is enabling Peru to become one of the few countries in Latin America able to meet its internal energy needs. It is making natural gas available to industrial and residential customers, providing significant revenues to the federal and regional governments, improving Peru's trade balance, and helping to improve air quality. The Camisea Project consists of three separate components. The Upstream Component undertakes exploration and exploitation of gas deposits, processing, and a fractionation plant and marine terminal south of Pisco for natural gas liquids. The Downstream Component provides transport of natural gas from Las Malvinas to the city gate in Lurín through a 730-kilometer pipeline and transport of natural gas liquids through a 560-kilometer pipeline to the fractionation plant. The Distribution Component provides natural gas to the populations of Lima and Callao.

This massive project spans geographic areas that are environmentally and culturally diverse and fragile. If the project is not properly developed, constructed, and operated, significant environmental and social damage could occur. The Camisea Project has a long and controversial history, and not surprisingly, civil society has often voiced strong negative reservations on its potential environmental and social impacts. In this context, PRI was well aware of the particular necessity for adequate information disclosure, public consultation, and stakeholder involvement to reduce risks.

Prior to the IDB's formal consideration for financing of the Downstream Component, PRI conducted an extensive public consultation program, which was planned in consultation with indigenous organizations, as well as national and international environmental stakeholders. The program included 13 public meetings in local and indigenous communities, as well as in urban areas in the Camisea area of influence. An additional public meeting was held in Washington DC. In addition, numerous other meetings and discussions were held with affected populations, local and international nongovernmental organizations, indigenous communities and organizations, and other project stakeholders. This consultation program by IDB was in addition to more than 400 consultations that took place in the project design phase by the project companies as well as the public hearings undertaken by the government of Peru. The thoroughness of IDB consultation led to significantly increased civil understanding and improved overall support for the project.

Following PRI recommendations, the consortium companies implemented a stakeholder communications program to improve transparency and dialogue with local and international stakeholders. PRI assisted the project companies in creating a website to ensure ongoing transparency and stakeholder engagement. These activities and mechanisms helped ensure that all directly and indirectly affected parties had the opportunity to be fully and adequately informed on the full range of potential impacts—direct and indirect, short-term and long-term, cumulative, positive and negative. These activities included disclosure of the companies' monthly environmental and social supervision monitoring reports, by independent consultants during both the construction and operations phases of the project.

Stakeholder involvement was further supported by involving Peruvian civil society in the definition of environmental performance criteria to be used by the project and review of environmental and social management plans. IDB also expanded disclosure of its own documentation on the project—in particular, the independent consultants' quarterly environmental and social supervision reports, which were carried out during

the construction phase and continue throughout the operational phase. Public meetings are also convened by the IDB semiannually and held in Washington, DC and in Lima. This extensive, systematic stakeholder involvement has included Peru's indigenous and non-indigenous communities and organizations, as well as national and international NGOs. Both positive and negative aspects have been extensively discussed, leading to a great many improvements and changes in the project. The learning has benefited both civil society in Peru and IDB, each of which will be able to more effectively participate in similar projects in the future.

During consideration by the IDB of a loan to **Transredes, S.A.** (Bolivia), PRI helped the project company to develop and implement an information disclosure and public consultation plan. Transredes holds the concession to operate the network of oil and gas pipelines that were formerly run by Bolivia's national petroleum company. International financing was needed for an investment program to expand capacity to transport natural gas and liquids, boosting the country's exports while meeting internal demand. The program includes investments to ensure continuity of services that are essential for the control, integrity, safety, reliability and enhanced environmental protection of the transportation networks.

Transredes' search for external financing occurred at a time in which the company had suffered reputational damages because of a large oil spill as well as the highly publicized scandals surrounding the collapse of the Enron company (one of the principal shareholders of Transredes). Working with PRI, Transredes first prepared an environmental analysis that evaluated the potential environmental and social impacts associated with the proposed investment program and presented the strategy to manage those impacts. This analysis was made public locally; and at the request of the IDB, Transredes conducted public meetings in Oruro, La Paz, Cochabamba, and Villamontes. The proposed investment program and Transredes' plan to prevent, mitigate and monitor the impacts were presented to stakeholders and affected communities. This positive experience helped Transredes recognize the importance of effective and timely communication. The company set up a new unit of Social Affairs, which includes a director and a team of seven community liaisons. This unit has developed a social policy and social communication procedures. These activities also help increase public support and confidence in Transredes, and provide comfort to potential international financiers.

2.4 Monitoring and Supervision Systems

Careful accurate monitoring and supervision of IDB-financed private sector projects provides critical information for decision making related to environmental, social, health and safety, and labor aspects. Without such information, there may be increased impacts and risks. PRI/ESU staff work with companies in designing environmental and social monitoring and supervision systems, and in subsequent review of data that they generate.

In relation to the **Mejillones Port** (Chile), PRI helped develop an innovative approach to the environmental monitoring program in a particularly sensitive environmental setting. A multipurpose, four-berth terminal was to be constructed in the Bay of Mejillones. The bay is home to a rich array of marine plants, fish, mollusks, and crustaceans—in particular, shellfish. It contains one of the principal banks of the scallop *ostión del norte*, a species protected by the government. To construct the port, nearly a million cubic meters of material had to be dredged to provide sufficient draft for ships entering and leaving the port. This consisted mainly of diatomite, a light siliceous sediment filled with air pockets. Dredging the low-density diatomite could potentially create plumes of suspended material in the water, which could eventually settle on the flora and fauna. There is little experience with dredging involving diatomite. To help protect the Bay of Mejillones, a monitoring program was developed that could generate, analyze, and respond to real-time data. This enabled efficient dredging that could be stopped or changed immediately in response to a rising sediment plume. The water-quality program also included comprehensive monitoring at fixed and mobile monitoring stations. Information was generated through standard analytical methods as well as state-of-the-art technologies. These included an acoustic doppler current profiler (ACDP) and infrared radiation scatter optical sensors, which provided real-time data for continuous

monitoring of the plume of suspended material. The program also generated knowledge on how acoustic techniques could be used as a tool to correlate these results with analytical results. Dredging-related information has been shared with the Chilean army, and the project company is considering dissemination of technical results through Chilean universities.

In the **Termoeléctrica del Golfo Power Project** (Mexico), PRI and the project company developed an air-quality monitoring system to reflect unique project characteristics and surroundings. The project consists of the construction, operation, and maintenance of a 230 megawatts circulating fluidized bed petroleum coke (petcoke) facility in the Mexican State of San Luis Potosí. Petcoke is a waste product from petroleum refining and TEG is the first project using petcoke as a fuel in Mexico. The project is located approximately 10 kilometers northwest of the City of Tamiuín, which has a population of approximately 15,000 inhabitants, with a total population of 40,000 within the Municipality. A natural protected area is located about two kilometers east from the power plant. During operations, major sources of emissions at the power plant include emissions from the stack, the ash landfill, and the storage piles for petroleum coke fuel and limestone. The air emissions from the plant stack include sulfur oxides, nitrogen oxides, carbon monoxide, particulate matter, and potentially trace amounts of unburned hydrocarbons and the metals contained in the petroleum coke. While the project represents an innovative waste-to-energy project, there were public concerns about the burning of a waste product that were complicated by the environmental setting surrounding the project (e.g., a natural protected area, another air emission sources nearby - cement plant). Thus a comprehensive ambient air quality monitoring program was designed based on advanced monitoring techniques but considering the limitations and restrictions of the area. For example, due to the lack of energy and the restrictions for construction in the protected area, passive samplers are being used to collect information on ambient air quality in the protected area and to identify any eventual impacts from the project. While passive samplers are a technology used in Canada and the United States, this apparently was the first time they had been employed in a protected area in Mexico. In addition, portable state-of-the-art equipment is used to monitor particulate matter at several areas at the plant site to monitor the various potential sources, especially the handling and storage of petcoke and limestone areas. The monitoring program is complemented by the use of an automatic ambient air quality monitoring station, which provides real-time information on concentration of air pollutants.

The **Camisea Project** (Peru) includes a marine terminal located in the Paracas Bay. Facilities include a product loading platform, mooring dolphins, and four underwater pipelines transporting natural gas liquids from an on-shore fractionation plant to the loading platform. Part of the bay is in the Paracas National Reserve, which is the only coastal marine reserve along this portion of the Pacific Ocean. RAMSAR, the international wetlands convention, has classified the bay as a Wetland of International Importance in view of its rich biodiversity, unique flora and fauna species, and haven to a variety of migratory birds. The bay has been significantly impacted over many years by commercial fishing companies that discharge water effluents, a petroleum-product loading facility, other industrial activities, and discharge of untreated domestic effluents. During construction, the key concern was that dredging and installation of the underwater pipelines could create additional threats to this sensitive marine environment. In light of sensitivity of the marine environment and significant concerns about potential impacts, PRI assisted the project company in designing a comprehensive environmental monitoring program. Surveillance included an early warning system with real-time data on the location and extent of sediment plume during dredging. The purpose was early detection of potential from excessive suspended solids so that construction could be modified and/or temporarily halted to allow the marine environment to return to normal conditions. The detailed plan included 29 transects with 64 monitoring stations, and more than 160 points for sampling biological parameters, water quality and sediment. During the operational stage, monitoring continues to be routinely performed at multiple locations gathering data on a wide range of parameters. Potential indirect impacts on the terrestrial environment are included for shore birds and coastal wetland. Surveillance of the marine environment includes commercially important hydrobiological resources, protected species, benthic resources, and high-biodiversity areas. As the monitoring program demonstrated, dredging and construction activities at the marine terminal were completed with no significant impact on the environment.

Miravalles III (Costa Rica) is a 27-megawatt geothermal power project built on the geothermal field of Miravalles in the province of Guanacaste, about 125 kilometers northeast of San José. This is the third geothermal vapor-energy facility built at Miravalles. The two other projects are operated by the government. At geothermal projects, hydrogen sulfide concentrated in the extracted steam is typically a matter of concern. Hydrogen sulfide is highly dangerous. A few inhalations can lead to loss of the sense of smell. Continued inhalation is toxic and can be fatal. To ensure adequate worker and public safety, PRI and the project company worked together to strengthen how hydrogen sulfide was being monitored. Two mobile stations were introduced to monitor air quality at the plant boundaries, enhancing detection limits of the existing monitoring network. The mobile equipment is also used to assess ambient air quality at the nearest receptors. The strengthened monitoring programs provide more complete and accurate information that helps provide confidence to workers and local communities that the project is not creating a human health risk.

2.5 Enhancing Positive Benefits

The IDB is interested not only in preventing and mitigating negative impacts, but also in enhancing project-related positive impacts (i.e., benefits). Direct project benefits typically include provision of basic services such as water and electricity, increased employment, and economic growth. However, positive environmental and social benefits to local communities can occur too—for example, through the private companies' community investment programs and other corporate social responsibility activities. PRI searches for opportunities to “leverage” PRI-financed projects to enhance the environmental and social sustainability of local communities.

This concept is particularly relevant to private sector projects because of IDB's fundamental goal of sustainable development, poverty reduction, and human development. To their credit, many private borrowers routinely implement their own positive environmental and social components. By working together, PRI and these companies can create enhanced opportunities that help to maximize beneficial effects on local communities.

Promoting local benefits related to PRI projects

Campos Novos Hydroelectric Power (Brazil) entailed construction and operation of a 880-megawatt hydroelectric power plant in the south of Brazil. Although private sector projects of this nature clearly provide economic benefits, they also typically raise questions on the degree to which a private company can and should provide support for *local* economic development—that is, corporate social responsibility for taking actions that go above and beyond mitigation of negative impacts related to the project. The PRI has explored many options and opportunities in this area; and in the case of Campos Novos, PRI and the project company collaborated to create a regional development fund. This fund is now jointly managed with the Brazilian state agency *Serviço Brasileiro de Apoio às Micro e Pequenas Empresas* (SEBRAE). Its purpose is to support small agricultural development projects in the municipalities surrounding the power plant. The fund was created with about US\$1 million and finances up to 50 percent of project costs to a maximum of about US\$17,000. To encourage collective initiatives, projects can include at least 10 participants. Envisaged as a revolving fund, specific projects are expected to repay at least part of the funding received. The fund provides an interesting model for private sector support for local economic development in the case of large-scale infrastructure projects.

The **ISA Bolivia Transmission Project** consists of three high-voltage 230-kilovolt transmission lines and five associated substations to be built and operated between Urubó–Carrasco, Santivañez–Sucre, and Sucre–Punutuma. The Bank and the project company initiated a study to help the Quechua community of Chaquilla propose a sustainable land-management program to the Global Environmental Fund (GEF). In this particular community, about 40 families rely on approximately 220 hectares of high-wetland (“*bofedal*”) for their livelihood. Overgrazing by pigs and goats has exacerbated desertification of the *bofedal*. The consequent loss of land carrying capacity is clearly not sustainable and could eventually force dissolution of this indigenous community. The proposal will be developed in a participatory manner to help ensure ownership by the

community and the long-term success and sustainability of the project. Secondary objectives are to enhance community capacity building skills and enhance the community awareness and technical capacity related to proper land management. If the current proposal of US\$300,000–US\$500,000 is approved by GEF, Chaquilla will implement a pilot program in community-based sustainable land management. In addition, GEF resources would extend land management programs to other communal *bofedales* in the area.

Scaling up sustainability beyond the PRI-financed project

Wherever possible, the IDB attempts to leverage its participation in specific IDB-financed private sector project to promote environmental and social sustainability on a broader scale. The Peruvian **Camisea** project, for example, the IDB provided a US\$75 million loan to **Transportadora de Gas del Perú** for the transportation component; a small fraction of the total project cost of US\$1.6 billion. The IDB has taken on a far greater role than just mitigating the impact of the downstream portion of the project. The consortium of project companies, the government of Peru, and IDB has worked together to develop a series of positive programs to improve the environmental, social, and economic conditions in the area – thus returning benefits to local communities. For example, over 2,300 persons were vaccinated as part of a program for local indigenous communities and an enhanced health protection plan was established. Approximately 925,000 hectares of new protected areas were created including Otishi National Park, Ashaninka and Machiguenga Communal Reserves, and Megatoni Sanctuary. Management plans and financial resources to administer these areas were also established. In addition, a new protection status was established for the Nahua-Kugapakori indigenous area (indigenous people living in voluntary isolation), which is the first and only time in Peru such enhanced legal protection has occurred. Subsequently, the necessary protection plan was established. There have been various public and private sector initiatives implemented to improve Paracas Bay, which is an important resource that has suffered from years of contamination and impacts from other sources, including a strategic plan and creation of specific organization, designation of significant resources (over US\$24 million) to properly manage the national marine park, monitoring programs and implement remedial projects. In addition, the GOP together with the IDB has used resources from the IDB financed Program for Land Titling program to complement TGP's land titling program along the right-of-way, resulting in benefits to present residents and helping to reduce the potential for migration into these areas (over 16,000 properties). Furthermore, IDB assisted in the creation of a development fund as a financial mechanism for returning 13.25 percent of the project royalties to local governments to assist in local development in the areas crossed by the pipelines. IDB also added value via the establishment of specific mechanisms to facilitate communication between the Government of Peru and civil society and by promoting civil society participation in future projects of similar interest and importance to stakeholders.

3. IMPROVING THE ENVIRONMENTAL AND SOCIAL PRACTICE OF PRIVATE SECTOR INVESTMENT

Not all added value goes to benefit projects directly—or even the larger context in which projects are located. The development community is itself a beneficiary of the additionality that the IDB helps to create. Most importantly, the knowledge base upon which development depends is continuously improved by lessons learned. In this regard, the Bank's Private Sector Department (PRI) is implementing initiatives to enhance the environmental and social practice of private sector companies that can broadly be grouped into three general categories.

- Specific guidance to assist in managing environmental, social, health and safety, and labor aspects;
- Research on environmental and social issues related to the best practices in environmental and social management of large private sector projects; and
- Transfer of information and capacity building for stakeholders.

3.1 Environmental and Social Guidance

The PRI's Environmental and Social Unit (ESU) has developed guidance documents to help establish sound environmental and social management. This is intended to benefit both parties external to the IDB, such as the borrowers and sponsors of private sector projects financed by the IDB, as well Bank staff. The objective is to produce clear procedures and advice that are effective and efficient.

Guidance for private sector borrowers has been developed to assist borrowers with specific technical requirements. This includes guidance on the preparation of environmental impact assessments, environmental analyses, public participation in environmental impact assessments, environmental and social management plans, resettlement plans, health and safety management, health and safety plan for projects with hazardous materials and conditions, and social guidance for PRI projects. In addition, written guidance is available to assist potential borrowers, at both the technical and non-technical level, to better understand the IDB requirements and approval process, thus helping the Bank to be more transparent and efficient.

The PRI/ESU has also developed guidance documents to assist the private sector in general, not just its clients, in improving the management of environmental and social aspects and promoting project benefits. For example, guidance is provided to assist private companies in understanding how to design and implement a **community investment program** to enhance local social and environmental conditions (http://www.iadb.org/pri/PDFs/B_CommInvestment.pdf). Additionally, **managing labor issues in infrastructure projects** provides guidance on providing adequate workers rights consistent with good practice and International Labor Organization (http://www.iadb.org/pri/PDFs/Labor_Issues.pdf). Other examples include guidance on environmental and social risk management for financial institutions and environmental and social indicators. Working papers have also been developed on methodologies and approaches that are used for monitoring and supervision of Bank private sector projects related to environmental, social, health, and safety aspects; environmental and social aspects in the transportation sector; and issues associated with indigenous people and the construction and operation of large infrastructure projects (see <http://www.iadb.org/pri/guidelines.cfm>).

The PRI provides other kinds of documents to help promote environmentally and socially sustainable development. For example, a document on PRI and climate change describes PRI activities in this area and provides information on net emissions and the climate footprint for the PRI portfolio.

Tools of this sort are important not only for the projects directly financed by PRI. Experience gained in working on IDB-financed projects—by private sector sponsors, commercial banks, and even government agencies—

increases overall capacity and, thus, the use of sound environmental, social, and health and safety practices and management systems.

3.2 Technical Studies

The PRI/ESU has undertaken a series of research investigations on key issues related to the management of environmental, social, health and safety and labor aspects in large-scale private sector projects.

A framework was developed for **incorporating environmental and social risks** into traditional bank credit analysis. The framework includes a system for identifying, assessing and mitigating the environmental and social risks. This framework assists not only IDB but also private sector companies and financial institutions throughout the region.

PRI contracted a consulting company to develop **an electricity demand-side management program** for the Southern Distribution Company (EDE Sur) and the Northern Distribution Company (EDE Norte) in the Dominican Republic, two privatized electric distribution companies that received PRI financing. The program addressed electricity end-use consumption in the concession area by industrial, residential, commercial, and public sector consumers. It promotes various forms of more efficient electricity utilization. Value was thus added to both the company and its clients.

PRI contracted for a study to develop a financial structure for **potential biomass-fueled co-generation projects** in Brazil. Specifically, the study proposed a financing structure for sugar mills using co-generation facilities. The use of biomass to generate electricity means less import of fossil fuels and reduced carbon dioxide emissions. Steam can be produced for sugar mill processing, and surplus electricity can be sold through the local power grid. The study developed the technical and commercial terms for implementation of such projects. The goal of the facility is to generate economic benefits in the emerging international market for green credits, commonly referred to as “carbon credits.” PRI is presently working on the project financing with the sugar mill companies and potential financiers.

PRI completed a study on **financial products and instruments to promote environmental and social sustainability** in Latin American and the Caribbean. Specifically, it addresses potential financial products and instruments to strengthen capital markets, mechanisms to integrate environmental considerations in financial and contract instruments, innovative fund structures, and project models that facilitate additionality of socio-economic and environmental objectives. The study attempts to provide examples of how financial institutions, via specific products and instruments, can help promote environmentally and socially sustainable development.

PRI will soon release a study on **mechanisms for managing reputation risk** due to environmental and social aspects in private sector projects. Reputation risk to private sector project developers and financial institutions has become a much more significant issue over the past several years. The objective of the study is to provide a framework for understanding and managing reputation risk. The study examines both technical measures and communication techniques to help manage these risks.

A PRI study currently underway is to develop **methods for civil society participation** in environmental and social supervision of large infrastructure projects. The objective is to create a framework for implementing participatory involvement by civil society in the supervision of environmental and social aspects of large private sector projects with the potential for significant impact. The framework will include different potential options for participation and will assist the Bank, other financial institutions, and private sector companies to ensure that stakeholders—especially local communities—can participate in supervising projects that are environmentally and socially sensitive. The study takes an innovative approach to fostering collaborative relationships with local and international stakeholders, especially in private sector infrastructure projects that are both high-risk and high-reward.

Another ongoing study on **streaming carbon finance instruments (CFIs) in private sector financing in Latin America and the Caribbean** is designed to help improve access mechanisms for mainstreaming CFIs associated with the Clean Development Mechanism and other non-Kyoto credit investment activities by private sector projects in Latin American and the Caribbean. This study is evaluating the specific needs of private sector sponsors and financiers relating to CFIs and will explore potential CFI instruments to meet those needs. Opportunities for private sector investment would be presented through support for CFI implementation in the Bank's private sector project pipeline. Finally, help would be provided to build capacity to utilize such CFIs among private sector players in the region.

3.3 Technology Transfer and Capacity Enhancement

ESU has promoted many actions that transfer information and enhance capacity among stakeholders. These include training, seminars, and outreach programs.

PRI investment officers have been trained on environmental and social aspects. This training included an extensive staff guideline that provides specific procedures associated with each step of the IDB private sector project cycle. The procedures provide details on both content (what needs to be done and how) and process (the steps to be taken). A full-day training course was designed and delivered for all PRI staff. The training has helped mainstream environmental and social aspects into the PRI activities and has facilitated addressing these aspects in a more effective and efficient manner.

The PRI also has helped different financial institutions increase their institutional capacity relate to environmental and social impact and risk management by being involved in projects financed by the IDB. This includes methods to better identify and assess impacts and risks, different methods to mitigate impacts and risks, and approaches to supervise environmental and social aspects of projects in an financial institutions portfolio.

In addition, together with the International Investment Corporation (IIC) and the International Finance Corporation (IFC), PRI has provided environmental management training for **financial intermediaries**. This training aims at helping financial institutions to better understand environmental and social impacts and the risks that they pose to operations. Basic management procedures are taught (for example, the use of environmental management systems) as well as specific procedures (for example, environmental procedures for trade and mortgages).

The PRI/ESU sponsors a technical **environmental and social seminar series** that is attended by staff at IDB, other organizations, and private companies in the Washington DC area. The series provides an opportunity to explore innovative solutions and the latest thinking on issues related to large-scale infrastructure projects in developing countries. The seminars have spanned a broad range of topics—fundamentals of air quality impact assessment; environmental risk management and lender liability in Latin America; water quality management of hydropower facilities; environmental management systems for infrastructure concessions; information technology tools for management of environment and infrastructure projects; health and safety management in construction projects; spill prevention control and countermeasure plans; the environmental and social management practices in the construction activities of the Ecovia toll road in Brazil; disclosing environmental liabilities; overcoming obstacles to public participation; tropical disease impacts of large energy projects; harmonization of emission monitoring requirements in thermal power plants; greenhouse gas reduction trading in Latin America and Caribbean; pipeline risk management and right-of-way encroachments; and carbon finance instruments and the Clean Development Mechanism.

PRI/ESU initiated an **outreach initiative** to promote a new type of Bank engagement with NGOs on private sector projects. Its purpose is to enhance mutual understanding of activities and interests and to encourage NGO input into PRI projects. The outreach initiative presently includes participation by Washington-based

international NGOs—World Wildlife Federation, Conservation International, The Nature Conservancy, the Bank Information Center, World Resources Institute, and Environmental Defense.

PRI/ESU staff attends many **professional conferences**. As presenters, their topics have recently included: environmental and social risk management; corporate environmental responsibility; dredging monitoring program in Chilean port project; environmental sustainability in the IDB; environmental and social indicators; independent environmental supervision systems; environmental and social aspects in the Peruvian energy sector; resettlement in private sector projects; implementing environmental and social management plans associated with transmission line projects; and framework for environmental and social responsible development.

Exchange of ideas among peers is critical for any organization to keep working at the highest level of performance. Professional gatherings encourage such exchanges exploring topics of shared interest and concern. ESU staff is continuously involved with interagency working groups and peers at other institutions. These include the other major multilateral development banks, export-credit agencies, and institutional investors; professional groups and NGOs involved in the sectors with which ESU works; and private sector colleagues in businesses, trade associations, and commercial banks. ESU also is involved with the UN Environment Program Financial Initiative, the Global Environment Facility, and the World Commission on Dams and Development.

4. CONCLUSION

This document presents an array of brief examples of the substantial environmental and social value added by the participation of IDB in private sector projects financed by the Bank, both directly in the projects themselves and the communities where they are located but also to the development community in general. Although the environmental and social requirements of multilateral banks may appear to be a bureaucratic imposition or cost that slows down or complicates project implementation, the examples and case studies presented herein show that the process actually can generate significant benefits to both borrowers and their projects. Further, such benefits can be shared with the local communities and the environment.

In terms of managing environmental and social impacts and risks, the IDB applies safeguards to ensure the environmental and social sustainability of all Bank-financed operations. In line with best sustainable development practices, the Bank takes a general precautionary approach to environmental and social impacts. The Bank favors avoiding negative environmental and social impacts; when impacts are unavoidable, Bank-financed operations require mitigation measures; and for impacts that cannot be fully mitigated, compensation or offsets should be implemented. The Bank recognizes that projects have varying degrees of impacts and risks and thus the type of requirements must be commensurate to level of impact and risk. Bank will work with borrowers to manage environmental and social risks effectively, including helping to develop the necessary management capacity, in order to establish and maintain environmentally and socially sustainable projects.

The IDB Private Sector Department (PRI), via the Environmental and Social Unit, works hand in hand with borrowers, project sponsors, and stakeholders to ensure that private sector projects financed by the Bank are environmentally and socially sustainable. By working proactively with private-sector project companies, the IDB not only helps to protect environmental and social resources but also to enhance positive impacts to local populations and the environment, thus adding value that significantly benefits borrowers, sponsors, investors, and local communities. The PRI builds upon its extensive successful private-sector work, experience and knowledge to help establish not only effective, but also efficient, impact and risk management systems. The Bank anticipates and proactively helps to resolve the kinds of problems and issues that inevitably arise with large private-sector projects, especially those controversial projects that generate reputation risk. The IDB approach to stakeholder engagement and supervision of projects in execution assists in increasing knowledge and support for these investments. The IDB commitment also serves to help mainstream environmental and social concerns into the broader decision-making process, and thus helping stakeholders address issues that may not be fully or exclusively the responsibility of the project.

PRI Environmental and Social Papers

Community Investment Programs Associated with Private Sector Infrastructure Projects (February 2006)

Managing Labor Issues in Infrastructure Projects (February 2006)

