

PPIAF Assistance in the Republic of Colombia

The Republic of Colombia (Colombia) is an upper middle-income country, with a population of approximately 46 million people and a GDP per capita of \$7,131 in 2011. Colombia has a stable economy and a large endowment of natural resources. The Government of Colombia has identified infrastructure as one of the key challenges for Colombia's development and competitiveness. PPIAF has supported 17 activities in Colombia worth \$2.9 million since 2000. Four of these activities are ongoing.

Technical Assistance for Colombia's Transportation Sector

Roads

In 2000 the Government of Colombia requested PPIAF assistance to develop a strategic framework for structuring road network concessions within the context of the country's legal and institutional framework. Colombia began an ambitious program of private sector participation in road infrastructure in 1994, and granted several concessions as part of these efforts. The Government wished to increase private sector investment and requested PPIAF assistance to analyze options for Colombia's concession program.

This activity's objective was to develop a strategy that would allow the Government to concession the road network in a programmatic manner and increase the sustainability of the concessions. The existing structure of Colombia's road concessions was analyzed, and lessons were drawn from this experience and several international case studies. The PPIAF-funded final report noted that while the existing concession framework allowed for concessions on particular projects, it lacked clear definitions on strategic aspects that would permit the Government to create a long-term, sustainable program for concessions. The report also drew lessons from case studies in Spain, Chile, South Africa, and New Jersey, United States, to provide the Government with additional recommendations on its concession framework. Finally, the study reviewed the Botogá–Buenaventura Corridor, highlighted critical issues with the corridor's physical geography and traffic flows, and noted additional factors the implementing agencies should take into consideration when designing the concession.

The study's findings were presented to Government officials during a one-day conference in Bogotá in February 2003. The workshop was attended by about 30 people, including the Minister and Vice-Minister of Transport, the Director of Infrastructure of the National Planning Department, and high-level officials from the National Road Agency (INVIAS), the Transport Superintendency, the Regulatory Commission, and the Ministry of Finance. The National Road Agency commented on the draft report and worked closely with the PPIAF-funded consultants. However, it is unclear to what extent the report's recommendations were adopted.

In 2008 the Government of Colombia requested PPIAF support to help the National Concessions Institute (INCO) prepare the concession for the Ruta del Sol highway. The largest infrastructure project in Colombia and one of the largest in Latin America when it was announced in 2007, the Ruta del Sol concession was seen as the first under the Government's "fourth generation" concession program. Beginning with the first generation of concessions in the mid-1990s, the Colombian government had incorporated lessons learned into subsequent projects to incorporate aspects such as risk sharing and performance-based contracts.

The International Finance Corporation (IFC) was appointed as the transaction advisor for the concession in 2007. To support the efforts of the Colombian government and the IFC, PPIAF funded a comprehensive analysis of road users and traffic levels on the highway. The traffic study was used to structure the concession and to provide information for potential bidders.

Due to the economic crisis the project was restructured and broken up into three concessions. The first section was awarded to Consorcio Vial Helios in December 2009. The requested contribution from the Government was \$770 million, a 20% savings over the maximum-approved contribution for this concession. The second section of the concession was awarded to Concesionaria Ruta del Sol SAS in December 2009 for 6.5% less requested contributions from the Government than the maximum-approved

amount. The final section of the concession was awarded in July 2010 to Yuma Concesionaria S.A. PSF, a consortium of Italian and Colombian firms and the pension fund Protección for \$1.039 billion, 9.5% less than the maximum-allowed bid.

Although Colombia had considerable experience in road concessions and a concession program dating back to 1994, a weak institutional framework had contributed to the renegotiation of several contracts at a high cost to the Government. Previous generations of concession contracts were less efficient than anticipated and led to project delays and cost overruns. In early 2011 the Government of Colombia requested PPIAF assistance to improve the planning, structuring, award, implementation, management, and regulation of road concessions, and strengthen INCO's capacity.

An initial diagnosis of the concession program examined the roles of INCO, the Ministry of Finance and Public Credit, the National Planning Directorate, and the Ministry of Transport in implementing the program. The institutional framework for private sector participation was also assessed, and five areas for improvement were identified: i) INCO's management and operational processes; ii) structuring of projects; iii) regulatory framework; iv) contractual design; and v) assignment of roles between the various institutions.

A second report analyzed several options for the institutional arrangements of the concession program, as well as options to structure the National Infrastructure Agency (ANI), an institution that would be created to replace INCO. The report noted the operational and managerial issues in INCO and highlighted the need for greater accountability and institutional memory within the institution. The Government addressed issues raised by the two reports by implementing some of the recommendations, such as enhancing the role of the PPP unit at the Ministry of Finance and Public Credit/National Planning Directorate and providing more resources to attract high-level experts to the concession agency.

To increase its capacity to implement and regulate projects, the Government approved the creation of ANI to replace INCO in November 2011. ANI began operations on January 1, 2012, and is responsible for the regulation of PPPs and implementation of the fourth generation of concession contracts. Following this decision, PPIAF provided assistance to help strengthen the capacity of ANI. A practical guide to contract renegotiation was produced for ANI officials to assist them with the renegotiation process. A discussion paper on the supervision of concession contracts was also produced. In addition to examining Colombia's concession program, the paper discussed international best practices and lessons learned from the experiences of Chile and Peru. A second discussion paper examining the use of private sector sources of finance and capital markets to finance infrastructure activities was also produced under this activity.

Finally, comments and recommendations were provided on the draft PPP law. The PPP law, Law 1508 of 2012, was passed on January 10, 2012 and strengthens the institutional framework for concession contracts.

Ports and Airports

Located close to the Panama Canal, with ports on both its Atlantic and Pacific coasts, Colombia has the potential to attract a larger share of regional shipping activity. Port infrastructure is also critical for Colombia to maximize its benefit from trade agreements; however the bottlenecks at the country's ports were identified as a key infrastructure restraint. El Dorado airport, which accounts for nearly 40% of external trade value (excluding raw materials) and generates 60% of Colombia's airport revenue, was also identified by the Government as a key development priority.

In 2005 the Government of Colombia requested PPIAF assistance to develop a new strategic vision for ports, in order to increase private sector investment, competition, and efficiency. The Government also requested assistance to identify the key strategic elements of the El Dorado Airport concession and provide advice on these elements. A seminar was held with government officials in early 2005 to discuss the strategic options for ports. The limited depth of most ports, congestion, and lack of transparent management were identified as key challenges for the sector. A seminar on the El Dorado Airport was

held in March 2005 and discussed four elements of the concession: i) commercial risks under the current concession; ii) the need to establish investment and logistical plans for the airport; iii) the characteristics of the new operator; and iv) the financial and regulatory structure of the new concession. These elements, particularly the investment and logistical plans, must be addressed if the airport is to become a freight hub. A report outlining the findings of the two seminars was also produced in this activity, and made several recommendations for the Government's strategic approach to airport and port infrastructure. The Government did not decide on a favored strategy for airports, but a consensus was reached on the need for additional port reform.

The Government requested follow-up assistance for a second activity in the port sector in late 2005. This activity aimed to build upon the previous PPIAF assistance and support the Government's port modernization program. Colombia's institutional framework for ports is a mix of both tool and landlord ports schemes. In the tool port model, the port authority owns, develops, and maintains the port infrastructure, while private firms operate the terminals. In a landlord port, the authority acts as a regulatory body, while all of the port operations are carried out by private operators. Colombia's mixed model resulted in a lack of coordination between the port authority and private operators, reducing the efficiency of port operations.

Analyses of the institutional, regulatory, legal, and contractual frameworks for Colombia's port concessions were conducted to determine the necessity and feasibility of renegotiating the concession agreements. A pre-feasibility study for a second port on Colombia's Pacific coast was also conducted, in line with the recommendations made in the first PPIAF activity. In addition, financial assessments of the main port concessions were conducted and a new methodology for calculating compensation was proposed. The Government was very satisfied with the outputs, and is currently deciding on a way forward on how to work more efficiently with the private sector based on the recommendations in the PPIAF-funded studies.

Public Transportation

In the late 1990s and early 2000s several studies found that the public transportation services in Colombia's largest cities were of low-quality and inefficient. The low quality of service affected all users, and had a disproportionately negative impact on the urban poor. In 2002 the Government launched the National Urban Transit Programs to improve the quality of public transport services and provide competitive, efficient, affordable, safe, and environmentally sustainable methods of transportation for the rapidly growing urban population. PPIAF assistance was requested in 2008 to assist the Government of Colombia to analyze existing regulatory structures and design an appropriate legal framework to improve the delivery of public transportation services.

A diagnostic of the legal framework for urban transportation services was conducted and changes to the regulatory framework to increase the sustainability of the services were recommended. A review of the tariff policy was also conducted, which examined affordable and sustainable pricing structures. In addition, a mass communications strategy was prepared to assist transportation agencies to present their projects to local media in a more effective manner. A seminar was organized to describe the initial recommendations of the regulatory analysis to public authorities and receive feedback on developing the legal framework.

The Ministry of Transportation drafted a new legal framework to assist with the implementation of the National Urban Transit Programs. Several institutional reforms, including the creation of a Vice Ministry of Transport to support the Government's comprehensive sustainable mobility agenda, were also implemented.

Metro

In 2009 the Government of Colombia requested PPIAF assistance to support the National Planning Department's technical evaluation of a proposed metro line in Bogotá. PPIAF's assistance helped the National Planning Department to form a partnership with experts at a local university, Universidad de Los

Andes, to evaluate the technical soundness of the proposed metro line. PPIAF's support also permitted the university to include several international experts and incorporate international best practice into the report.

The technical assessment evaluated the current corridor and line design, design alternatives, ridership and use, and the implications for urban development. The assessment also examined political and public considerations, and recommended that greater public consultation be incorporated into the planning process.

The District of Bogotá has initiated the detailed engineering design of the metro line. The engineering studies are expected to be completed by 2014.

Results of PPIAF's Activities in Colombia's Transportation Sector

Category	Outputs
Enabling environment reform	
<i>Analyses/assessments prepared</i>	<ul style="list-style-type: none"> • Options for Strengthening the Road Concession Program in Colombia, May 7, 2003 • Diagnostic report on the institutional and regulatory framework for port concessions, 2006 • Contractual analysis of Colombian port concession contracts, 2006 • Diagnostic report and evaluation of a multiport expansion on Colombia's Pacific coast, 2006 • Strengthen the regulatory framework of urban transportation in Colombia, 2009 • Towards a National Infrastructure Agency Specializing in Public-Private Partnerships: Initial Diagnosis, 2011 • Institutional Proposals for the National Agency of Infrastructure, 2011 • Discussion paper on the supervision of infrastructure concessions in Colombia, 2011 • Discussion paper on private infrastructure financing through the capital market in Colombia, 2011
<i>Plans/strategies prepared</i>	<ul style="list-style-type: none"> • Recommendations for the Design and Renegotiation of Concession Contracts in the Port and Airport Sectors in Colombia, 2006 • Mass Transit Communication Strategy, 2009
<i>Policies prepared, or legal or regulatory changes recommended</i>	<ul style="list-style-type: none"> • Comments on the Draft PPP Bill, 2011 • Practical recommendations for the renegotiation of concession contracts, 2011 • Strengthening the urban transportation regulatory framework in Colombia and the institutional capacity for its implementation, June 11, 2009

Project cycle-related assistance	
<i>Transaction support</i>	<ul style="list-style-type: none"> • Financial assessments of the Regional Port Companies, proposed methodology for a new compensation formula, financial models for the main Colombian ports, and a preliminary assessment of a new Pacific port, 2006 • Traffic demand study for Ruta del Sol concession, 2009 • Support to the Government of Colombia during the bidding process for Ruta del Sol, 2009–2010 • Review of the Los Andes University Study of the Bogotá Metro, 2010 • Assessment of Proposed Bogotá Metro Line, 2010 • General Assessment of Bogotá's First Metro Line, 2010
Capacity and awareness building	
<i>Workshops/seminars</i>	<ul style="list-style-type: none"> • Workshop with Government stakeholders to present and discuss the findings of the report “Options for Strengthening the Road Concession Program in Colombia,” February 2003 • Seminar on Port Concessions, 2005 • Seminar on El Dorado Airport Concession, March 2005 • Seminar to discuss proposed regulatory framework for public transport, 2009

Category	Outcomes
Enabling environment reform	
<i>Policies adopted, legislation passed/amended, or regulations issued/revised</i>	<ul style="list-style-type: none"> • Ley 1508 passed January 10, 2012 • Recommendations on the institutional framework of Colombia's concession program, 2012
Institutions created or strengthened	
<i>Institutions created or strengthened</i>	<ul style="list-style-type: none"> • Instituto Nacional de Vías, Departamento Nacional de Planeación, and the Ministry of Transport were strengthened, 2003 • Ministry of Transport strengthened, 2009 • National Planning Department strengthened, 2010 • National Infrastructure Agency strengthened, 2012
Project cycle-related assistance	
<i>Transactions facilitated or supported</i>	<ul style="list-style-type: none"> • Concessions awarded for the three sections of the Ruta del Sol highway, valued at a total of \$2.856 billion, 2009–2010
Capacity and awareness building	
<i>Consensus achieved</i>	<ul style="list-style-type: none"> • Consensus reached on the need for additional port reform, 2005

Technical Assistance for Colombia's Energy Sector

The Government of Colombia established a wholesale electricity market in 1995 as part of its comprehensive reform and liberalization of the power sector. Transactions between electricity generators and large consumers, such as distribution companies, were conducted in the wholesale market through medium-term bilateral contracts and a daily spot market. Although trading in the market was fairly

successful, the volatility of spot market prices concerned market participants and the Commission for the Regulation of Energy and Gas. To improve the performance of the market and attract new investors, the Commission for the Regulation of Energy and Gas developed a framework for introducing derivative instruments into the energy market. These instruments would improve the management of generation resources and prices by reducing pricing risks for investors.

Before implementing the new framework, the Commission for the Regulation of Energy and Gas decided to simulate the derivatives market to assess the implications of the proposed mechanism and identify potential problems. In 2001 the Government of Colombia requested PPIAF assistance to simulate market operations under the proposed changes. A computer-based model of the derivatives market was produced and used to simulate trading under the new market conditions. The model was assessed against the previous system, and modifications to the framework were recommended.

The final report highlighted several benefits of implementing the new trading model, including the establishment of competitive prices, reducing risk for investors in generation projects, and increasing market efficiency. Resolution 071 of 2006 came into effect in December 2006, establishing a new spot market for energy futures.

Results of PPIAF's Activities in Colombia's Energy Sector

Category	Outputs
Enabling environment reform	
<i>Analyses/assessments prepared</i>	<ul style="list-style-type: none"> • Computer-Based Simulation of Auctions of Option Contracts and of Futures Contracts in the Colombian Wholesale Electricity Market, 2003
Capacity and awareness building	
<i>Workshops/seminars</i>	<ul style="list-style-type: none"> • Stakeholder workshop to discuss findings of the report, February 14, 2003

Category	Outcomes
Enabling environment reform	
<i>Institutions created or strengthened</i>	<ul style="list-style-type: none"> • Comisión de Regulación de Energía y Gas strengthened, 2003
Capacity and awareness building	
<i>Consensus achieved</i>	<ul style="list-style-type: none"> • Consensus on use of derivative instruments in the energy market achieved, 2003

Technical Assistance for Colombia's Water Sector

The Government of Colombia introduced regulatory reforms and a new tariff model for the water supply and sanitation (WSS) services in 1994 to encourage private investment in the sector. This policy introduced market competition to the sector by awarding concessions to private operators. In 2001 the Government proposed a new regulatory framework for WSS services, opening water supply services and treatment of wastewater to market competition. Under the reforms, only water distribution and the collection of wastewater would be regulated.

The main sector stakeholders, however, failed to reach a consensus on the proposed reforms. In early 2001 the Colombian government requested PPIAF assistance to implement a high-level seminar to build

consensus for policy, regulatory, and institutional reforms. An international water and sanitation regulation seminar was held in Bogotá, Colombia on March 15–17, 2001 and had approximately 275 participants. The presentations and panel discussions analyzed various regulatory approaches, identified regulatory priorities, and examined the domestic market for WSS services. Governance issues, financing, and the role of the private sector were also discussed. An action plan for regulatory and structural reforms was prepared with government stakeholders, international experts, and representatives from multilateral organizations. The action plan was endorsed by the Comisión de Regulación de Agua Potable y Saneamiento Básico, the water and sanitation regulator.

In 2007 PPIAF assistance was requested to assess the impact of private sector participation in Colombia's WSS sector. Colombia presented a unique case study because the decentralized nature of its WSS sector and flexible institutional framework has produced a variety of partnerships between utilities and the private sector. Data was analyzed from 77 utilities in 118 municipalities to determine the effects of private participation on consumers and firms. A workshop was held in Medellín in June 2008 to discuss the study's preliminary findings with stakeholders.

The study found that private participation resulted in a significant expansion of WSS services over time, in addition to higher levels of output, productivity, efficiency, and quality of service. Average tariffs were also found to have increased as a result of private participation. The final report provides a framework to apply lessons learned from Colombia to other developing countries, contributing to international best practice on WSS sector reform.

In 2011 PPIAF assistance was requested to provide transaction support in coordinate with a World Bank pilot project in the Department of La Guajira. The project's objective is to increase the department's planning and oversight of the WSS sector, and to expand private sector participation service delivery. The PPIAF activity is providing transaction support to help municipalities obtain a private sector operator, and will disseminate the lessons learned from this activity to other departmental governments in Colombia. This activity is ongoing.

Results of PPIAF's Activities in Colombia's Water Sector

Category	Outputs
Enabling environment reform	
<i>Analyses/assessments prepared</i>	<ul style="list-style-type: none"> • Charting a New Course: Structural Reforms in Colombia's Water Supply and Sanitation Sector, 2010
<i>Plans/strategies prepared</i>	<ul style="list-style-type: none"> • Action plan for regulatory reforms, 2001
Capacity and awareness building	
<i>Workshops/seminars</i>	<ul style="list-style-type: none"> • International water and sanitation regulation seminar, March 15–17, 2001 • Stakeholder workshop on private sector participation in WSS services, June 2008

Category	Outcomes
Capacity and awareness building	
<i>Consensus achieved</i>	<ul style="list-style-type: none"> • Consensus achieved on proposed action plan and regulatory reforms, 2001

Technical Assistance through the Sub-National Technical Assistance (SNTA) Program

Development finance institutions manage and source financing for infrastructure investments in several Colombian municipalities. These institutions were created to meet the increasing demand for regional infrastructure financing and are critical to spurring growth. In 2007 La Promotora, a development finance institution owned by the city of Pereira, explored raising market-based funds to finance infrastructure investments in the municipality. PPIAF assistance was requested in 2008 to help La Promotora improve its creditworthiness and credit rating, to allow the institution to borrow at a lower cost.

PPIAF's technical assistance to La Promotora consisted of three components: a strategic planning exercise; developing and implementing an operational risk management system; and creating and implementing an activity-based costing system. A three- to five-year strategic plan was developed for La Promotora through the planning exercise, which identified the institution's strengths and weaknesses, outlined its strategic objectives, and articulated an action plan to achieve these objectives. An operational risk management system was also created for the institution, which established internal controls to mitigate and control risk. An activity-based costing system was also developed to assign La Promotora's costs to specific activities and services, allowing the institution to understand its sources of profit.

After implementing the three components, La Promotora received a new credit rating of BB+ in 2008. The rating company noted that the institution had taken critical steps to strengthen its mission, objectives, and develop a risk management plan. La Promotora's creditworthiness improved further in 2009, and the institution received a rating of A. La Promotora also began to grant credits and financing in 2008, issuing a loan of \$6.5 million to the municipality of Pereira to improve urban transport and health services. A \$6.5 million loan was also issued to Empresa de Telecomunicaciones, Pereira's telephone company, to finance its 2008 investment plan. In July 2009 La Promotora held a public event in conjunction with the Mayor of Pereira to disseminate the findings of the studies and its new institutional model.

In 2008 the municipality of Bucaramanga requested PPIAF assistance through its SNTA program to evaluate the feasibility of using cable cars to expand the city's mass transit system. The municipality wished to expand the system, Metrolínea S. A., to offer a fast and safe connection between zones with limited transit access. The proposed cable car corridors would connect Bucaramanga's economically depressed areas with the metropolitan area through an integrated transit system, reducing the commuting costs for the region's poorest populations.

A feasibility study for the integrated system was conducted to determine the financial sustainability of the proposed cable car corridors. A financing and implementation plan was also produced, which examined the costs of the proposed cable car corridor, identified and assessed sources of financing for the expansion, and analyzed the expansion's expected impact on the overall finances of Metrolínea. The plan was adopted by Metrolínea, and the municipality is in the process of securing funding for the project.

The municipality of Barranquilla requested PPIAF assistance for its transportation system in 2008. Barranquilla needed to improve the efficiency and safety of its urban transport services and provide reliable access to the poor, but the municipality's weak financial situation prevented it from financing improvements to the system. Transmetro S.A., a government-owned transit authority, requested assistance from PPIAF's SNTA program to fund a strategic plan to address urgent transportation concerns, including funding for a bus rapid transit system.

PPIAF funded a detailed diagnostic study of Barranquilla's public finances and evaluated scenarios to improve the municipal's financial standing. A strategic plan was also produced and proposed several measures for the municipality to improve its finances. Barranquilla adopted the recommendations and obtained two credit lines with Davivienda, a local commercial bank, amounting to COP 25 million and COP 30 million respectively.

There are two ongoing SNTA activities in Colombia, which are developing innovative financing instruments for municipalities. PPIAF is helping the municipalities of Bogotá and Medellin to develop financial instruments to capture estimated future increases property tax income from urban

redevelopment projects. These tools will allow the municipalities to leverage private investment to finance their infrastructure redevelopment strategies. PPIAF is also providing assistance to Bogotá to analyze the feasibility of using tradable development rights as a tool to finance infrastructure investments. Development rights refer to the maximum floor area in a zoning lot. If the building is less than the maximum area, the unused rights can be auctioned off to other private investors, allowing development beyond what is already permitted by the city's zoning legislation.

Results of PPIAF's SNTA Program's Activities in Colombia

Category	Outputs
Enabling environment reform	
<i>Analyses/assessments prepared</i>	<ul style="list-style-type: none"> • Credit rating for La Promotora by Duff & Phelps Colombia SA, 2008 • Financial Diagnostic of Barranquilla, 2008
<i>Plans/strategies prepared</i>	<ul style="list-style-type: none"> • Three- to Five-year Strategic Planning Exercise, 2008 • Operational Risk Management System (Internal Controls), 2008 • Activity-Based Costing System, 2008 • Strategic and Implementation Plan for Barranquilla's Fiscal Consolidation, 2008 • Financing and Implementation Plan for integrated cable car corridors in Bucaramanga's Metropolitan Area, 2009
Project cycle-related assistance	
<i>Transaction support</i>	<ul style="list-style-type: none"> • Feasibility study for the implementation of integrated cable car corridors in Bucaramanga's Metropolitan Area, 2009
Capacity and awareness building	
<i>Workshops/seminars</i>	<ul style="list-style-type: none"> • Public dissemination of study results and new institutional model of La Promotora, July 2009

Category	Outcomes
Enabling environment reform	
<i>Institutions created or strengthened</i>	<ul style="list-style-type: none"> • Barranquilla was strengthened and its creditworthiness improved, allowing the municipality to obtain two credit lines from Davivienda, 2008 • La Promotora was strengthened and its creditworthiness improved to a rating of A, 2009
<i>Plans/strategies adopted or implemented</i>	<ul style="list-style-type: none"> • Three- to five-year Strategic Plan adopted, 2008 • Operational Risk Management System (Internal Controls) adopted, 2008 • Activity-Based Costing System adopted, 2008 • Strategic and Implementation Plan for Barranquilla adopted, 2008 • Metrolínea tested the feasibility of implementing cable car corridors in Bucaramanga's Metropolitan Area, 2009
Project cycle-related assistance	
<i>Transactions facilitated or supported</i>	<ul style="list-style-type: none"> • \$6.5 million loan issued to the Municipality of Pereira, 2008 • \$6.5 million loan issued a loan to the Empresa de Telcomunicaciones, 2008