



URBAN TRANSPORT PROJECTS: PATTERNS AND TRENDS IN LENDING, 1999-2009



SLOBODAN MITRIC



©2011 The International Bank for Reconstruction and Development / The World Bank
1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000
Internet: www.worldbank.org
E-mail: feedback@worldbank.org

All rights reserved

This volume is a product of the staff of the International Bank for Reconstruction and Development / The World Bank. The findings, interpretations, and conclusions expressed in this volume do not necessarily reflect the views of the Executive Directors of The World Bank or the governments they represent.

The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Rights and Permissions

The material in this publication is copyrighted. Copying and/or transmitting portions or all of this work without permission may be a violation of applicable law. The International Bank for Reconstruction and Development / The World Bank encourages dissemination of its work and will normally grant permission to reproduce portions of the work promptly.

For permission to photocopy or reprint any part of this work, please send a request with complete information to the Copyright Clearance Center Inc., 222 Rosewood Drive, Danvers, MA 01923, USA; telephone: 978-750-8400; fax: 978-750-4470; Internet: www.copyright.com.

All other queries on rights and licenses, including subsidiary rights, should be addressed to the Office of the Publisher, The World Bank, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2422; e-mail: pubrights@worldbank.org.

URBAN TRANSPORT PROJECTS: PATTERNS AND TRENDS IN LENDING, 1999-2009



The Transport Research Support Program (TRSP) is a joint initiative of the World Bank and the Department for International Development of the United Kingdom government focusing on emerging issues in the transport sector. Its goal is to generate knowledge in high priority areas of the transport sector and to disseminate to practitioners and decision-makers in developing countries.

CONTENTS

	ACKNOWLEDGEMENTS	VIII
	SUMMARY	IX
1	INTRODUCTION	2
2	AN OVERVIEW OF THE 1999-2009 URBAN TRANSPORT PROGRAM ...	6
3	LATIN AMERICA URBAN TRANSPORT PROGRAM	10
4	EAST AND CENTRAL ASIA URBAN TRANSPORT PROGRAM	16
5	MIDDLE EAST & NORTH AFRICA URBAN TRANSPORT PROGRAM ...	20
6	SOUTH ASIA URBAN TRANSPORT PROGRAM	22
7	AFRICA URBAN TRANSPORT PROGRAM	26
8	EAST ASIA AND PACIFIC URBAN TRANSPORT PROGRAM	31
9	SUCCESS RATINGS	37
9.1	INVESTMENT RELATED ISSUES	39
9.2	ISSUES IN POLICY AND INSTITUTIONAL INITIATIVES	41
9.3	THE RESULTS FRAMEWORK	44
10	STRATEGIC CONSIDERATIONS	50
	REFERENCES	55
	LIST OF ABBREVIATIONS	57
	ANNEX 1: URBAN TRANSPORT PROJECTS FUNDED BY THE WORLD BANK, 1999-2009	58
	ANNEX 2: PROJECT CAPSULES FOR THE AFRICA REGION	62
	ANNEX 3: PROJECT CAPSULES FOR THE EAST ASIA AND THE PACIFIC REGION	84
	ANNEX 4: PROJECT CAPSULES FOR THE EUROPE AND CENTRAL ASIA REGION	135
	ANNEX 5: PROJECT CAPSULES FOR THE LATIN AMERICA AND THE CARIBBEAN REGION	145
	ANNEX 6: PROJECT CAPSULES FOR THE MIDDLE EAST AND NORTH AFRICA REGION	246
	ANNEX 7: PROJECT CAPSULES FOR THE THE SOUTH ASIA REGION ...	261

LIST OF BOXES

Box 1: INTENDED USES OF THIS REPORT	3
Box 2: STRUCTURAL FEATURES OF URBAN TRANSPORT IN THE LAC REGION	11
Box 3: STRATEGIC APPROACHES TAKEN IN THE LAC REGION'S URBAN TRANSPORT PROGRAM.....	14
Box 4: ECA REGION: URBAN TRANSPORT CONTEXT AND PROJECT PATTERNS	19
Box 5: MENA REGION: URBAN TRANSPORT CONTEXT AND PROJECT PATTERNS	21
Box 6: INDIA CONTEXT AND PROJECT PATTERNS	24
Box 7: STRUCTURAL FEATURES OF URBAN TRANSPORT IN AFRICA.....	27
Box 8: PATTERNS IN AFRICAN URBAN TRANSPORT PROJECTS	30
Box 9: STRUCTURAL FEATURES OF URBAN TRANSPORT IN CHINA.....	32
Box 10: PATTERNS OF URBAN TRANSPORT PROJECTS IN CHINA	34
Box 11: ISSUES BEHIND PROJECT RATINGS	39
Box 12: INVESTMENT-RELATED ISSUES	41
Box 13: FACTORS BEHIND SUCCESS OR FAILURE OF POLICY AND INSTITUTIONAL INITIATIVES	44
Box 14: ISSUES WITH THE RESULTS FRAMEWORK	49
Box 15: URBAN TRANSPORT STRATEGY	51
Box 16: FIT OF PROJECTS WITH STRATEGY	53

LIST OF TABLES

Table 1: Number of operations by region and instrument	6
Table 2: Project costs by region and instrument (US\$m)	7
Table 3: Bank commitments by region and instrument (US\$m)	8
Table 4: Project outcome ratings by instrument type	37
Table 5: Outcome ratings for completed projects by region	38

ACKNOWLEDGEMENTS

The “Urban Transport Projects: Patterns and Trends in Lending, 1999-2009” was prepared for the World Bank Transport Anchor in Washington, D.C., which administers and manages the TRSP.

The TRSP Steering Group would like to thank Slobodan Mitric who was commissioned to provide the conceptual framework for the study and carry out the work. Our thanks are extended to Mauricio Cuellar, Marc Davy, Ajay Kumar, Shomik Raj Mehndiratta, and Andres Pizarro who contributed as peer reviewers, and Jacqueline Dubow, TRSP Coordinator.

SUMMARY

It is almost a decade since the last review of the World Bank's urban transport policies and operations, **Cities on the Move**, was completed. Traditionally, such reviews are done on a 10-15 year calendar, or when developments in professional thinking or practice indicate changes in the strategy may be required. On both counts, the time to undertake another such exercise is approaching, especially because rising twin concerns regarding energy and greenhouse gas emissions are complicating further the governance of urban transport systems. Urbanization, economic growth, motorization and poverty already create a complex and dynamic mix.

This document is the final report of a study that is an initial step towards such a new strategy review. The study aims to consolidate the abundant, but fragmented, institutional memory regarding the Bank's urban transport operations. It establishes a single-stop database of urban transport projects funded in the decade from 1999, thence making a first-pass synthesis of patterns and trends in this program. The database, included in full as an annex to this report, consists of a set of open-format profiles for all free-standing urban transport projects funded by the Bank during the period cited. Some operations from related sectors (urban, transport and energy) also were profiled because they had significant urban transport content --whether this is defined by the scale of investments or by their policy/institutional agendas. Likewise, some projects approved before 1999 or after 2009 were profiled because they formed organic sequences with operations approved within the study period. In all, there are some 55 profiles. Each consists of basic project and loan statistics, followed by a summary of principal aspects of that operation: diagnostics, objectives, measures of performance, investment components, policy/institutional agendas, and related projects. A summary of results upon completion and lessons drawn also is included. In each profile, links are provided to source documents and to relevant sector reports.

THE 1999-2009 PROGRAM OVERVIEW

In the period under study, the Bank funded 50 urban transport projects (of which 46 were free-standing), involving a total commitment of about US\$7.7bn and total project costs of about US\$12.9bn. As was the case in

preceding periods, the predominant lending instrument was the specific investment loan (SIL), amounting to 62% of all operations. There were four adaptable program loans (APLs), only one of which (in Argentina) is entirely focused on urban transport. Several SILs in the Latin America and Caribbean (LAC) and Africa regions evolved into de facto APLs, since the original loans were “topped up” to accommodate cost increases or program expansion. The major growth category, accounting for 22% of the program, involved innovative small-scale grants nearly all of them funded through the Global Environment Facility. These were focused primarily on matters relevant to greenhouse gas emissions, and typically included studies and pilot programs for non-motorized and public transport modes, and air quality management. All were conceived as catalysts, but some were stand-alone operations; others were fully integrated with a complementary Bank-funded SIL. The newest ones, in India and China, were conceived as vanguards of a sequence of SILs, using a self-selection mechanism to involve multiple cities.

Another innovation involved the use of development policy loans (DPL) to support transformative reforms in the urban transport domain. There were only two of these. The first focused on an ambitious public (bus) transport regulatory reform in Santiago de Chile, while the second involved new, green-oriented, national policies and addressed energy, climate change and urban transport in Mexico.

The program in the Latin America and Caribbean (LAC) region was the most active in terms of number of operations, total project costs and loan commitments. Also, nearly all innovative operations, both DPLs and the majority of GEF-funded, green-oriented projects, took place there. However, the single largest country program was in China, with eight operations in six urban areas. Brazil is next with six operations. As for other large and rapidly motorizing nations, there was a single project in Russia early in the decade, without any follow-up operations, and two in India, with potentially a rich sequence of successor projects. The Africa program is the surprise of this study. It has seen its best period since the 1980s, and the outlook is good. This program boasts the sole urban transport investment operation that received a highly successful outcome rating, the Lagos Urban Transport Project.

The profile database and its links make it possible to do a broad range of analyses. For this synthesis, we elected to focus on two themes. The first involves a review of patterns and trends in regional programs from a vantage point of a global urban transport strategy. The second has to do with factors contributing to the success or lack thereof in 20 projects for which completion reports (and a few assessments by the Independent Evaluation Group) were available.

A STRATEGIC REVIEW

Reviewing trends and patterns in regional urban transport programs from a global strategy perspective is not straightforward because the Bank does not have a formal (Board approved) strategy for this domain. A compromise approach was taken herein by provisionally adopting a strategy as put forward in **A Framework for Urban Transport Projects – Operational Guidance for World Bank Staff**, published by the Transport Board in 2008, and in more detail in **Urban Transport for Development – Towards an operationally-oriented strategy** (2008). This provisional strategy was induced from a sample of recent operations, while drawing on the ideas and policy stances contained in **Cities on the Move**. Its key aim, inspired by a set of economic growth, poverty, energy and environmental concerns, is to maintain and increase the competitiveness of non-motorized and public transport modes relative to individual motor vehicles, thus increasing the long-term sustainability of urban transport systems. For public transport modes, the strategic orientation specifically is towards private provision of services, while keeping in public hands the planning and regulatory controls, and ownership of infrastructure (for the rapid transit category and its variants). Interventions in the road and traffic systems are consistent with this strategy as long as the cited key aim is respected, be this in terms of road space allocation between transport modes, or in terms of pricing policies as a means to manage congestion and modal split, and generate revenue.

The dominant thrust in the 1999-2009 lending program was to improve the performance of public transport services, especially in the rapid transit category, within a public/private partnership framework. Projects dealt with two distinct inherited situations. The first one, present in all client cities in the LAC and AFR regions, involved bus-based services in private ownership, operating in mixed traffic at low degree of regulation, following the so-called in-market model of competition, and receiving no public subsidies. Good sides of this arrangement include high levels of availability and (relatively) low fares; weaknesses include low service quality for passengers (travel time, comfort, reliability, ease of transfer to other lines and modes, safety and security), oversupply of services, predatory driving practices, and high levels of harmful emissions. The main Bank approach in the LAC context was to support public investments in bus rapid transit (BRT) infrastructure in a package with reforms that aimed to introduce for-the-market competition between private operators, and a regulatory authority set up to operate the BRT and its feeder/distributor networks, including the management of the tendering process. Projects in Colombia, Peru and Mexico are examples of this approach, in particular the Transmilenio BRT system in Bogota which has acquired a transformative role going well beyond Colombia's borders. Variants of this

approach, with less reliance on exclusive busway infrastructure or with lower design standards, were used in as diverse settings as Santiago de Chile and several African cities – Lagos, Accra and Dar-es-Salaam. The BRT wave is now being extended to other regions, notably to India and China, typically using GEF-funded pilots as precursors.

The second inherited situation is that of public transport operators still in public ownership. In older cities of Brazil and Argentina, such was the case with metros and suburban railway system. They had extensive but long-neglected infrastructure and overage rolling stock, hence infrequent and low-comfort services, poorly aligned with bus-based systems in these cities. Here, the approach in several projects was to support the transfer of ownership of urban rail operators from the national government to state or regional governments, followed by the introduction of long-term operating concessions to private companies, and a program of better integration with bus services through fare unions, schedules and transfer facilities. The Bank loans help fund the renewal of rail infrastructure, power supply and control systems, and terminals. In this context also, all operations supported the establishment and capacity building of some form of public transport regulatory authority. Key examples of this type of projects in the LAC region are those in Buenos Aires, Sao Paulo, and Rio de Janeiro. In Sao Paulo, towards the end of a rich sequence of projects, the Bank financed an entirely new metro line. The Mumbai project in India took a similar approach in supporting the renewal and expansion of the regional railway system, though without the introduction of operating concessions. A different tack relative to the public/private issue was taken in Tunisia and China, where projects made smaller-scale investments in public-owned bus operators in tandem with support for a move towards corporatization, and the entry of private operators into the urban and regional passenger transport market.

The number of operations dealing mainly with traffic management fell in the period under study relative to preceding decades. All such projects (Beirut, Dhaka, Manila and Moscow) continued the past practice of combining largely small-scale investments with explicit institution building. Among them, the Moscow project is a rare case of an operation whose institutional objective --the creation within the city government of an agency whose sole domain of activity would be traffic management-- overshadowed its investment program. Overall, traffic management projects followed the traditional approach of improving the flow and increasing safety, with specific attention to the well-being of pedestrians. The concern for street-based public transport services therein was much smaller, leaving a lot of room for changes that would align these projects substantially with the strategic goal of changing modal split in the sustainable direction.

Urban road projects were concentrated in China and Africa. This is due, in part, to the fact that client countries in the most active region (LAC) rarely borrow from World Bank for road and traffic improvements, or road expansion. This minimizes opportunities for policy and strategy discussions in these matters between the Bank and some of its most advanced borrowers. Projects that did deal with urban roads (outside the Chinese program) fell into two distinct categories. Some used the leverage of investing in road improvements to deal with structural deficiencies in policy, notably that of road funding (e.g. Douala Infrastructure, Lagos Urban Transport) but also that of public transport regulation (Lagos again). The other category includes projects like Botswana Integrated Transport Project and Buenos Aires Infrastructure APL --not nominally urban transport projects-- but which contain quite large urban road investments. They may have substantial policy or institutional agendas, but little or nothing connected with urban transport issues. From a strategic urban transport angle, the latter group of projects are lost opportunities. To show that another approach is possible, a profile of the Bolivia Urban Infrastructure Project is included in the database. A US\$9m roads component in El Alto was coupled with a small but crucial policy agenda involving public transport regulatory reform. It is likely that other urban or transport projects could be designed along the same lines.

The Chinese projects, and to a lesser degree those in Vietnam, were designed to respond to a setting wherein a rise in incomes, motorization and suburbanization led to substantial friction with the traditional bicycle-dominated urban transport, complemented by rudimentary bus-based transport services provided by municipal operators. Urban road infrastructure, traffic control systems and the relevant institutions were not up to the task of handling the rising wave of motor vehicle traffic. In all but the newest Bank-funded projects therein, urban road investments were dominant, including road rehabilitation, upgrading and new construction. This required an effort on a hitherto unprecedented scale to transfer to client governments the know-how regarding project planning, procurement, financial management, environmental protection, involuntary relocation and land acquisition. Extensive training and other capacity-building activities were implemented in each operation. All projects also included smaller-scale components addressing traffic management, emissions monitoring, and public transport. This last typically involved small-scale operational/management aids for municipal bus companies, as well as street priority, stop and terminal facilities. Public transport regulatory reforms, --the corporatization of the public sector and opening the market to private operators-- were included in some projects' agendas (e.g. in Wuhan) but were cancelled during implementation. Generally, the Chinese clients explicitly preferred to maintain a dialogue with Bank staff on the direction and modalities of these reforms, but outside the formal project structure. In some client cities, such reforms actually took place during

the life of and in parallel with the Bank-funded operation, though the stimulus for change came from the central government. The dialogue also addressed institutional changes to accommodate integrative and forward-looking activities required to deal with complexities of today's transport in cities. But progress in this dimension appears to be slow.

Given their limited involvement with public transport services, including both the regulatory aspects and the street priority, the Chinese projects described above are at the strategic fringe. Reflecting the priority of the client governments, these projects are more into accommodating motorization than into fostering non-motorized and public transport modes. In the Chinese context, this was judged to be a necessary stage. The program tended to proceed by working with new cities, and hence was continuously moving forward the wave of capacity-building and idea transfer frontier. The involvement of projects with public transport reforms and the allocation of street space may be seen as limited, but the seeds sowed through the dialogue and technical assistance are likely to facilitate the current emergence in China of a new national approach to urban transport management and planning. A re-positioning to address sustainability concerns is evident. This is best seen in the newest operation in the period under study, the China-GEF-World Bank Partnership Project (2008), which combines strategy building at the national level with pilot BRT projects in 14 cities and one province.

In sum, the majority of projects in the global 1999-2009 program adhered closely to the aim and preferences of the global urban transport strategy as cited above, and the “fringe” Chinese program appears to be on a convergent path. Adherence was at its strongest and most advanced in operations that focused on public transport systems. It was weaker when it came to traffic management, and (with notable exceptions like Lagos) the weakest regarding urban roads. This non-engagement with policies regarding urban roads, notably the geometric design standards, road funding and user charging, is a serious shortcoming from the vantage point of what is sustainable urban transport. The North American and European experiences show that, once the accommodation of individual motorization passes a certain tipping point in terms of modal split, it is very difficult to reverse the course even with public transport services of the highest quality. The time to make decisive moves in favor of public transport and non-motorized modes is when the market share of individual motor vehicles is still low. A similar point can be made in connection with land development policies, a subject nominally outside the urban transport domain but on which transport demand and modal split crucially depend.

SUCCESS RATINGS

Completion reports were available for 20 projects. Ratings for development outcomes, --the key evaluation category-- reflect how difficult it is to conceive and implement urban transport projects successfully. **For the main project group of 15 standard investment loans and APLs, 8 received satisfactory ratings and 1 received a highly satisfactory rating; the rest were marginally satisfactory or marginally unsatisfactory.** Other extreme ratings, one highly satisfactory and one unsatisfactory, went to small, non-investment operations (in Mexico and Algeria, respectively). In line with these results, completion reports dwell mainly on factors explaining delays, cost overruns, and failures to reach targets, much less on what worked and why.

Implementation of investments, across the board, experienced difficulties in procurement, counterpart funding and safeguards. Procurement difficulties were due mainly to reconciling differences between country procurement laws and practices with those mandatory under Bank (and IDA) funded investments. These occurred even in countries with long records as Bank clients, e.g. Brazil and Tunisia. Counterpart funding shortages sometimes were due to chronic funding problems of client cities (the Africa region), macro-economic shocks (the LAC region in early 2000s), or budgetary practices of local governments (China). Safeguard difficulties tend to plague urban transport projects since these often involve construction works in built up areas, requiring land acquisition and involuntary resettlement. Some projects went to great lengths to avoid construction outside available rights-of-way (e.g. the Manila Urban Transport Integration), while others met the challenge head-on and made safeguards management de facto a major development objective of the whole operation (e.g. Wuhan Urban Transport). The Inspection Panel got involved in several resettlement matters (most notably in Mumbai), but also in cases involving complaints of traffic diversion resulting from BRT investments.

Factors behind the success or otherwise of policy and institutional initiatives received comparatively less attention. Processes governing these reforms are murkier and the techniques for handling them less subject to systematic approaches than is the case with investment components. It has become a truism to say that regulatory reforms succeed when there already are strong forces in favor on the clients' side (the policy window) and that Bank funding merely adds weight or helps to accelerate matters. The challenge is to gauge whether a sufficient commitment to reform exists among the decision makers, and relative political strengths of gainers and losers. The Bogota and Lagos experiences suggest that "soft" reforms succeed when they are organically linked to investment components. The Tunisia APL paid the penalty for the absence of such links, while the Uzbekistan project shows that

strength of political commitment sufficed to carry the reforms through without linked investments. An ingredient of success in both Bogota and Lagos projects appears to be the decision to reform a public transport sub-market. The Santiago DPL illustrates how much more difficult is to reform an entire market, without the leveraging assistance of linked investments.

The reading of completion reports suggests a hypothesis that success ratings based on the declared results frameworks may not reflect fully the substance of projects. There are at least three different aspects of this situation. The **first** is that the result frameworks were not well designed. Objectives and indicators were not coherent with project instruments; or there were too many indicators to measure, forecast and interpret; or indicators and targets were arbitrary. The **second** is that relative roles of the results framework vis-à-vis standard methods, (i.e. economic and financial evaluation) have not been thought through for urban transport projects, especially those with major investment components. Economic evaluation and the results-oriented evaluation may give different, even contradictory results. The **third** aspect is that the results approach with its single-point judgments --based on what is formally included in loan agreements-- does not sit well with the complex, interactive and time-variant nature of urban transport systems. Bank-funded urban transport interventions perform alongside those implemented by other actors. Their combined impacts tend to play out over long periods of time.

Because formal success ratings of projects affect in-house resource allocation with multiplier effects in the field, all three of the above cited concerns require management action, not only by regions when they prepare new projects, but in supra-regional discussions and research programs concerning operational policies and strategies. Continuing to use the results framework for urban transport projects, especially in the way this has been done over the past decade, may lead to an intra-Bank bias against these projects.

1 INTRODUCTION

It is an established tradition that, every 10-15 years, an effort is mounted to bring together and examine the urban transport project experience Bank-wide, and review the underlying policies and strategy. The latest of these reviews, **Cities on the Move**, was based on project data from 1990's.¹ The time to undertake the next such review is approaching because the intervening period has seen significant changes with direct relevance for the urban transport domain. The governance of urban transport systems has always been difficult because of highly dynamic interactions between urbanization, economic growth, motorization and poverty. Now the rising twin concerns regarding greenhouse gas emissions and the availability of energy have further raised the stakes and increased the complexity of linkages. Another change has taken place inside World Bank, in fact throughout the development community. What was once a straightforward approach to project evaluation, essentially economic and financial analyses of investments at appraisal and completion, with monitoring of the progress of outputs during implementation, has evolved significantly. Projects are cast as structures of linked objectives, instruments and measures of performance applicable not only to project investments, but also to their policy and institutional initiatives. The emphasis on the achievement of results has increased. Moreover, the inclusion of a wide array of social and environmental impacts in project work, and the global nature of some of them, have underscored the need for links and coherence across multiple themes and sectors. Project evaluation is on the way to be folded into program and strategy evaluation.²

Gathering and consolidating data on urban transport projects undertaken in the intervening period is among the first preparatory activities for the next strategic review. This said, the demand for consolidated information on projects in any given sector goes well beyond the requirements for occasional

¹ World Bank (2002).

² A concise summary of these ideas is in Appendix B of Independent Evaluation Department (2006)

strategic reviews. Internally, in the course of their normal operational work or when doing occasional studies, the staff should have access to the full extent of institutional memory for that sector. Likewise, among Bank clients, partners and watchers, there are many who in addition to knowing its formally declared strategies have an interest in what the institution has been doing in practice. While Bank's policy papers and country/city-specific reports addressing urban transport have been relatively few in number and easy to access, trying to see the patterns in project experience has been more difficult. This is due both to a large number of such operations, 150-200 since the program began in 1973, and the way in which the Bank's information system is set up.³ The retrieval of data on any one project is straightforward, but this is not so regarding project experience across all geographic regions at any given point in time, much less for all projects which addressed urban transport matters over a longer period of time.

The study of which this report is a synthesis was conceived to reduce this lacuna in knowledge and memory. It was done primarily for the use of Bank staff, those who work on urban transport projects, and especially those who will be involved with the forthcoming policy and strategy review. The report follows and is meant to be a companion to the publication **A Framework for Urban Transport Projects – Operational Guidance for World Bank Staff**.⁴ The Framework report contains an assessment of urban transport problems in client countries, the structure and preparation cycle of Bank-funded projects, as well as some strategic considerations.⁵ Since an effort was made in the current report to minimize the repetition, outside readers will need to consult the preceding document.

BOX 1: INTENDED USES OF THIS REPORT

- Resource for regional staff working on urban transport operations;
- Primary database for the forthcoming policy and strategy review (a successor to **Cities on the Move**);
- Introduction to Bank's urban transport operations for outside readers – clients, partners and observers

The study consisted of developing a compendium of profiles for all free-standing urban transport projects funded by the Bank in calendar years from 1999 through 2009, followed by a first-pass synthesis of patterns and trends.

³ The wide range for the cited number of urban transport operations is due to problems of classification. Some operations are free-standing in the sense that they are focused entirely or primarily on transport in cities. Others may be nominally transport, urban or energy projects which contain some urban transport components, sometimes small and sometimes large. The dividing line is fuzzy.

⁴ World Bank (2008b)

⁵ An even more detailed discussion of these topics is in Mitric, 2008.

There were 50 such projects. In addition, profiles were done for several projects from this period which were classified as urban or transport, but with significant urban transport components. Also, profiles were done for several operations approved before 1999 or after 2009, because they formed organic sequences with some operations in the 1999-2009 batch, in the same city or the same country. In all, profiles were done for 56 operations. A list of these projects is in Annex 1. Full profiles are in Annex 2, grouped by the geographic region, and in the chronological order according to the date of loan approval. The sources consulted in writing the profiles included project appraisal documents, loan and project agreements, restructuring papers, and implementation completion reports.

Profiles were done in an open format, easy to access, amend and contribute to. Each profile includes the basic project information, i.e. names of the borrower and the implementing entity (or entities), type of the Bank instrument used, milestone dates, project costs and the financing plan, both the original and final ones. When considering what additional information to include in profiles, it was elected to focus on the developmental “heart” of projects: summary of the client city and its transport features; project objectives and measures of performance; investment programs; policy and institutional agendas; and complementary Bank operations. Having an open format meant that any additional information could be easily added when considered of special importance. For completed projects, profiles also include final costs and disbursements, and summaries of implementation experience, results and lessons. In each profile, links are provided to all principal documents consulted, including the sector reports done for the city or the country in question, when such reports were formally published.

In addition to this introduction, the synthesis report has four chapters. In the next (second) chapter, a brief overview is provided of the batch of projects for which the profiles were done. Chapter 3 reviews urban transport programs by region. Chapter 4 presents outcome ratings for completed projects and issues related to their success or otherwise. Chapter 5 discusses the fit between the projects and a provisional version of the Bank’s urban transport strategy.

2 AN OVERVIEW OF THE 1999-2009 URBAN TRANSPORT PROGRAM

Tables 1-3 show numbers of urban transport operations, total investment costs and Bank commitments, by region and the type of lending instrument used.⁶

TABLE 1: NUMBER OF OPERATIONS BY REGION AND INSTRUMENT

Region	SIL	APL	TAL	DPL	Grant	Total
Africa	5	1	0	0	0	6
East Asia and Pacific	9	0	0	0	1	10
Europe and Central Asia	3	0	0	0	0	3
Latin America and the Caribbean	8	2	1	2	8	21
Middle East and North Africa	2	1	1	0	0	4
South Asia	4	0	0	0	2	6
TOTAL	31	4	2	2	11	50

Total Bank commitments for the 50 free-standing urban transport operations over 11 years amounted to US\$7.5bn.⁷ The Standard Investment Loan (SIL)

⁶ In this report, the usage of terms like operations, investment, projects, and loans follows a less-than-rigorous practice common in development circles. Its origin may be due to two points of view, that of bankers who think in terms of loans and that of engineers who focus on projects. The official terminology is that of the bankers. The most common product of the World Bank is a Standard Investment Loan (SIL), in common parlance "a Bank project." This refers to a set of specified physical investments in works, goods and technical assistance funded in part (or entirely) by the World Bank Group. Funding may be either through a loan from the International Bank for Reconstruction and Development, or a credit from the International Development Association, the Bank's soft-loan window. A similar product is an Adjustable Program Loan (APL), typically a 2-phase operation, in which only investments for the first phase are specified. The second phase is activated once the agreed-on policy triggers are met and its investment program firmed up. A Technical Assistance Loan (TAL) is a SIL with investments only in technical assistance. A grant operation is a SIL with a zero interest rate. A Development Policy Loan (DPL) has no specific investments, only an agreed policy reform program; loan funds are delivered to the treasury of the client government. The term "commitment" refers to both loans and grants, and "Bank commitment" is used even the grant funding comes from a special facility for which the Bank acts as an executing agency.

continues to be the dominant instrument for this category of projects, accounting for 93% of aggregated project costs, and 72% of all commitments.⁸ This said, the past decade has seen an increasing use of lending instruments new to this program, notably development policy loans (DPL) and adjustable program loans (APL). There were two DPLs, both in the LAC region: a city-based one for Santiago (Chile) and a country-based one in Mexico. APLs were used in Argentina, Senegal and Tunisia. Another practice of recent vintage is that of “topping up” existing loans, typically retaining original project objectives but updating the cost and/or disbursement estimates, either for original or redefined investment programs.⁹ Reasons for topping up ranged from cost escalation to expansion of the scope of work for projects whose overall success was demonstrated during implementation. This last situation, in essence, involved a transformation of a SIL into an APL.

TABLE 2: PROJECT COSTS BY REGION AND INSTRUMENT (US\$M)¹⁰

Region	SIL	APL	TAL	DPL	Grant	Total
Africa	967.6	103.0	0.0	0.0	0.0	1070.6
East Asia and Pacific	3215.8	0.0	0.0	0.0	27.0	3242.8
Europe and Central Asia	178.6	0.0	0.0	0.0	0.0	178.6
Latin America and the Caribbean	5349.6	454.1	6.0	0.0	162.9	5972.6
Middle East and North Africa	575.0	57.0	11.3	0.0	0.0	643.3
South Asia	1777.2	0.0	0.0	0.0	38.3	1815.5
TOTAL	12063.8	614.1	17.3	0.0	228.2	12923.4

The main growth category in the 1999-2009 program involved small-scale projects funded by the Global Environment Facility (GEF) grants.¹¹ These projects consisted of technical assistance and pilot investments focused on the reduction of greenhouse gas emissions from urban transport systems. The initial crop of GEF-funded operations were all in the Latin America and the Caribbean (LAC) region, but towards the end of the study period a promising variant of this approach was introduced in China and India. It consisted of a

⁷ Profiles were done for 56 operations, but the summary statistics were done only for free-standing ones approved in the period under study, i.e. during the calendar years 1999-2009. The Framework for Green Growth DPL for Mexico is included in this set, though strictly speaking it is not a free-standing urban transport operation, since it also involves the energy sector.

⁸ This wide divergence between the project costs and Bank commitments for SILs is due entirely to the inclusion of the two DPL's, one of which (in Mexico) is unusually large. DPLs, by definition, have zero entries for costs.

⁹ These involve nominally separate loans, approved following a minimal procedure.

¹⁰ Project costs and commitments are as estimated at appraisal or as revised during implementation when additional loan funds were approved. For multi-sector projects, these tables include total costs and Bank commitments.

¹¹ 9 out of 11 grants involved GEF-funding. Of the remaining two, the Mexico City Insurgentes Project was funded from the Carbon Fund, and the Kabul Roads Project was funded from the Afghanistan Reconstruction Trust Fund.

“lagged tandem” formation: a GEF grant and a standard investment project that the grant operation would help define. In spite of a narrow focus of pilot investments on the climate change, the grant mechanism evidently made these operations much more popular than the conventional, Bank-funded technical assistance loans. There were only two of the latter, in Algeria and Chile.

TABLE 3: BANK COMMITMENTS BY REGION AND INSTRUMENT (US\$M)

Region	SIL	APL	TAL	DPL	Grant	Total
Africa	627.4	70.0	0.0	0.0	0.0	697.4
East Asia and Pacific	1294.3	0.0	0.0	0.0	21.0	1315.3
Europe and Central Asia	111.0	0.0	0.0	0.0	0.0	111.0
Latin America and the Caribbean	2445.6	400.0	4.8	1534.2	43.9	4428.5
Middle East and North Africa	205.7	37.6	8.7	0.0	0.0	252.0
South Asia	882.4	0.0	0.0	0.0	38.3	920.7
TOTAL	5566.4	507.6	13.5	1534.2	103.2	7724.9

3 LATIN AMERICA URBAN TRANSPORT PROGRAM

LAC region has had by far the most active program. In the period under study, LAC's urban transport operations accounted for about 56% of the total Bank commitments in this domain.¹² It was the only region where all five types of lending instruments were used. Also, the region was a pioneer in the use of urban transport DPLs and GEF-funded grants.

One of the most distinguishing features of the LAC program has been its almost exclusive focus on public transport systems. This reflects in part the fact that public transport modes still dominate urban transport in the region, carrying 60-70% of motorized trips. This domination has persisted in spite of inroads made by motorization, and the fact that the performance of the public transport system has left much to be desired.¹³

The underlying problems are complex, and appear on both demand and supply sides. A key feature of the demand for public transport services in the region is that a large proportion of passengers come from low-income households, making for difficult public policy choices in the fare/quality sphere. On the supply side, private-owned, lightly regulated street based bus operations, often with a preponderance of micro-buses, have been urban transport workhorses throughout the region, but with poor performance and high social costs. With road infrastructure chronically unable to keep up with traffic growth, street congestion and fare ceilings made it difficult for bus operators

¹² If DPLs are excluded, to remove the impact of the exceptionally large DPL for Mexico, the LAC region still accounted for 45% of total Bank commitments in the period under study.

¹³ The other reason is that funds for urban roads and traffic improvements are available from other sources.

to provide good-quality services.¹⁴ Regulatory weaknesses in this sector, exacerbated by numerous administrative boundaries in large urban areas, have allowed the proliferation of free-wheeling suppliers based on small bus vehicles, and have acted as barriers against service and fare integration. Only a few older cities (e.g. Rio de Janeiro, Buenos Aires, Mexico City) have public-owned suburban railway lines and metros, but these have had their own problems. Destructive fare/subsidy policies, and downstream effects of inadequate funding under public ownership, had prevented these systems from proper maintenance, renewal and expansion. Needless to say, service and fare integration between bus and rail networks has been weak or non-existent.

Box 2: STRUCTURAL FEATURES OF URBAN TRANSPORT IN THE LAC REGION

On the demand side:

Pressure of motorization on road networks

Competitive pressure exerted by motorization on the public transport market

Large proportion of low-income travelers in the public transport system

On the supply side:

Motorization rates being still moderate, most travel is carried by public transport modes.

In most cities, public transport is limited to street-based bus services, largely in private ownership, with regulation on the light side, and with fragmented regulatory authority, especially in very large urban areas.

In some cities, (Rio, Sao Paulo, Buenos Aires), public-owned, extensive but under-developed and under-utilized commuter rail networks and metros, with weak links to bus networks..

Downward pressure on fares to accommodate low-income passengers, without sufficient compensatory action on the subsidy side; this has had deleterious impacts on public transport modes whether in private or public ownership;

Planning and regulatory institutions fragmented and weak, leading to non-integrated service networks, with low service quality, low safety, and high environmental costs.

Notable exceptions: Curitiba, more recently Bogota,

In this context, the LAC program has taken two different approaches. The first approach, seen most clearly in several Brazilian and Argentine projects, was to pursue public-private partnerships as catalytic instruments leading to improved services on the existing rail-based public transport systems, i.e. suburban railways and metros in Rio, Buenos Aires, Sao Paulo and elsewhere. Leveraged through Bank-funded investments to upgrade infrastructure and the rolling stock, this approach proceeded in stages. The transfer of ownership of suburban rail systems from the national to the state government was sought in the first stage, subsequently introducing long-term concessions with private operators. A complementary intervention under all projects in this group has been to pursue integration between rail-based line-haul services and

¹⁴ Poor road funding and traffic management practices are behind this problem, but not just that. As the experience of other countries has shown, it is not possible to build one's way out of congestion.

the complementary feeder/distributor services provided by street-based bus operators. Projects combined investments in modal interchange facilities with stepwise policy reforms aiming to place intra- and inter-municipal bus services under the same regulatory umbrella, thus enabling a much needed integration of services and fares. In parallel, these projects assisted in the creation and empowerment of some form of metropolitan urban transport institution, be this simply a transport planning department, a coordination body, or a public transport regulatory authority. While most projects following this approach addressed the existing metro and suburban rail systems, the program evolved to financing its first entirely new metro, Line #4 in Sao Paulo, now fully operational.¹⁵

The second approach in the LAC program has been to use investments in bus-based rapid transit (BRT) infrastructure, again in a framework of a public/private partnership, to raise service quality offered by the public transport system, improve its safety and reduce emissions harmful to health and the environment. There have been three variants of this approach. The first variant was show-cased in an unprecedented sequence of projects in Colombia, starting in Bogota then expanding to other cities in Colombia, then elsewhere. It proceeded by constructing a trunk network of exclusive busways, and setting up a public agency to operate this network and regulate service concessions awarded to private operators both on the trunk network and its street-based feeder/distributor system. This gave the agency the power over vehicle specifications (especially the vehicle size and configuration, and engine emission standards), as well as various service parameters, but limited to this sub-system only. The difficult transition from the inherited regulatory arrangement to the new one established on the BRT-related network was managed carefully through provision of vehicle purchase credits and arrangements for scrapping old vehicles. Bogota made complementary improvements, many benefiting bicyclists and pedestrians, and even involving modest motor vehicle restraints. The traditional in-market competitive arrangement has remained on the rest of the city's public transport network, with its low quality fleet and driving practices. The evolution away from the traditional arrangement has proceeded fitfully, due to the resistance of traditional operators. It will likely continue according to the rhythm of constructing new busways.¹⁶ The success of Bogota's Transmilenio BRT system first reverberated inside the country, then throughout the region, e.g. in Lima (Peru) and Mexico. It is now being emulated all over the world: in China, Vietnam, India and several African countries.

There were two regional variants of the BRT-based approach, in Santiago (Chile) and in Mexico. Though Santiago has an unusually successful metro

¹⁵ A follow-up project to finance the Line #5 in Sao Paulo was approved in 2010.

¹⁶ A discussion of prospects for a gradual diminution of the traditional system is in Ardila (2007)

system, the bulk of the public transport demand was carried by street-based buses, with a setup known for an oversupply of over-age and highly polluting vehicles, for predatory conduct of drivers, and for high fares in spite of the competition. The blueprint for the reform of this system, known under the name of Transantiago, differed from the Bogota approach in that it eschewed graduality. The entire bus service network was restructured into a system of trunk and feeder/distributor routes, to which the new concession system was applied, all this without having constructed new exclusive busways, the linchpin of the Bogota case. The new system also included sophisticated arrangements for monitoring and control, fare collection, and funding, all relying on the private sector. The introduction of the reform using this one-fell-swoop approach, laden with complex details, met with enormous difficulties, caused a transport crisis in Santiago, and led to a political uproar. It took several years to overcome problems, and declare the reform successful.

Another innovative feature of the Santiago operation was the type of the lending instrument the Bank used. Under the projects in Colombia and Peru, the use of the standard investment loan allowed for Bank presence throughout the preparation and implementation stages of the reform, and proceeded by building on the success of the preceding experience, inclusive of topping up successful loans. In Santiago, the use of the DPL instrument (i.e. one-time payment of the loan at the start of implementation) and the severity of early implementation problems in effect truncated the Bank's direct participation in what followed. The Bank's presence was reduced to what could be done through the parallel technical assistance loan.

The Mexican variant pursued urban transport objectives within a 2-level, city and national, climate-change oriented framework, addressing both transport and energy sectors. City-level BRT projects in Mexico have been catalysts for change in planning and regulation of public transport systems, but also instruments for mainstreaming the climate concern in all infrastructure-related activities. The program was introduced through several, small-scale operations which provided GEF grant funds for technical assistance and pilot BRT investments. These became full-scale BRT projects financed in entirety by client cities. Once these individual projects, small and large, prepared the analytic basis for BRT-centered initiatives, and demonstrated their transport and climate change potential, the program leaped in 2009 to the national level, with the Framework for Green Growth DPL of US\$1.5bn, the largest amount ever seen in the history of the Bank's urban transport program. This operation aimed at the passage of systemic changes in Mexico's urban transport and energy sectors. Its agenda included the adoption of a multi-sector policy framework for reduction of emissions and stimulating the development of renewable energy sources, an enabling framework specifically for the reduction of emissions in urban transport, and the establishment of complementary national funding mechanisms for urban transport

investments. This operation is reported to have reached all of its objectives, though the ultimate desired outcome –a substantial and sustained diminution of GHG and other pollutants- will require many other actions, by governments, by the private sector and by households, over years to come. Once these national-level reforms were underway, the Mexican program returned to working with individual cities, approving in 2010 a standard investment loan of US\$150m to fund the Transformation of Urban Transport Project. Since this project cites total investment costs of about US\$2.7bn, the loan is evidently meant to play the same catalytic role that the GEF-funded grants did at a smaller scale.

Box 3: STRATEGIC APPROACHES TAKEN IN THE LAC REGION'S URBAN TRANSPORT PROGRAM

Region-wide

- near-exclusive focus on public transport systems (very little involvement with urban roads and traffic);
- pursuit of a public/private partnerships, either to deregulate public-owned systems or re-regulate privately owned ones;
- pioneering use of small-scale GEF-funded grants, with city, national or regional scope, to act as seeds for larger BRT projects and policy reforms

In Brazil and Argentina

- city-based projects
- focus on urban rail (suburban railways and metros)
- 2-phase approach: (1) transfer of ownership from the national to city/state government; (2) introduction of public/private partnerships in the form of long-term concessions
- Bank funds infrastructure and rolling stock, inclusive of inter-modal facilities
- a parallel pursuit of service and fare integration of rail-based and bus-based networks, and of bus system re-regulation
- support for the creation of public transport regulatory agency and/or transport coordination bodies, both with metropolitan scope

In Colombia, Chile and Peru

- city-based projects;
- focus on BRT within a public/private framework to (1) improve transport services and air quality in BRT corridors and their feeder/distributor networks; and (2) serve as catalysts to improve the performance of the overall bus-based system
- **In Mexico**
- focus on BRT to improve services & air quality and act as catalysts for larger change
- move from city-based investments to the national level systemic reforms, then back to cities;
- national-level engagement with the vexing problem of urban transport finance (limited to public transport systems)
- integrated (transport and energy) approach to air quality management

Alongside operations focused entirely or mainly on urban transport matters, there were several infrastructure projects in the LAC region that had urban transport components. Two of these were selected for inclusion in the

database to illustrate different approaches taken to urban transport therein. The Bolivia Urban Infrastructure Project (2006), financed by a \$30m IDA credit, focused on La Paz metropolitan area. Its investment program involves diverse urban services, with roughly a third going for improving main roads in El Alto municipality. In spite of such a small urban transport investment, the project also includes a complementary initiative to reform the regulatory and institutional arrangements for public transport services in El Alto. A completely different approach to urban transport problems was taken under the Buenos Aires Infrastructure Sustainable Investment Development Project in Argentina, a 2-phase APL with a US\$250m Bank participation in the first phase. This project invests in water, sewerage, drainage and roads in the Province of Buenos Aires, including the capital. The road component will involve Bank funds of about \$100m. The “soft heart” of the project focuses on fiscal and public expenditure performance of the provincial government, with sub-sector subjects taking the back seat. For roads, in and out urban areas, the project includes the development of a consolidated and funded program of maintenance, and the use of performance-based contracts for this activity. This is certainly a worthwhile pursuit, but it is a lost opportunity to diagnose and address urban transport problems from a wider perspective. A free-standing urban transport project with a loan of \$100m would normally be expected to have a major policy and institutional content.

4 EAST AND CENTRAL ASIA URBAN TRANSPORT PROGRAM

The urban transport program of the ECA region saw its heyday in the 1990s, a part and parcel of a broad multi-sector effort mounted by the Bank to assist the former socialist countries to adapt their institutions and policies to the new political and economic system being introduced, and soften the blows of the transition on the population. Since public transport modes carried dominant shares of the passenger market in cities, the focus of urban transport projects (approved between 1994 and 1997) in Hungary, Russia, Latvia, Turkmenistan and Kazakhstan was exclusively on the provision of basic public transport services. Projects invested in fleet replacement and infrastructure rehabilitation of state or city-owned public transport companies, helping them to maintain or increase service levels while facing competitive pressures from rising motorization. The main thrust of project reforms was to introduce structural changes in this public-owned sector, but also rebalance the funding arrangement for public transport services, ensuring that travelers carried a bigger burden.¹⁷

Only 3 projects were approved in ECA after 1999, two in Central Asia and one in Russia. They are best seen as the tail end of the program from the preceding decade and took place at the end of the acute stage of the transition process. In making two of these projects, the staff faced a policy dilemma, in essence a tension between the global Bank policy and what was warranted in the regional setting. In essence, the Bank had adopted a policy stance that public transport services worked best when provided by private operators in a framework of regulated “for-market” competition overseen by a public authority.¹⁸ This position was based on a less-than-successful string of Bank-

¹⁷ For an account of the urban transport context in 1990s ECA, and a review of Bank-funded projects, see World Bank (2002b).

¹⁸ World Bank (2002a).

funded projects in 1980s involving the support and reform of public-owned companies in several regions, as well as the catalytic and partially successful experience of privatizing urban public transport services in British cities. In practice, taking this stance amounted to the Bank electing not to lend to public-owned urban transport operators. This applied mainly to urban bus companies, whose fleets operated on city streets, in mixed traffic.¹⁹ All urban transport projects in the ECA region in the 1990s were in contradiction to this stand. The fact that an entire regional portfolio had gone in a direction opposite to that of the Bank policy was justified at the time by the seriousness of the regional context - the need to respond to a crisis in urban services threatening the livelihood of citizens and the functioning of urban economies. The 1990s program was seen as a finite first stage in the sector transformation towards a full private sector operation.

The project in Uzbekistan tried an innovative approach to reconcile the global and regional aspects. A bus leasing company was set up with authority to lease buses purchased from the loan to both public-owned and private operators, the latter already present in large numbers in Uzbek cities. An additional (and minor) investment component involved the rehabilitation of bus vehicles owned by public operators. On the policy and institutional side, the project pursued the regulatory reform very much in line with the Bank's pro-private sector policy in this matter. The loan experienced major schedule delays due to bus procurement, and disbursed less than a half of its nominal amount. This would have doomed any other project, but not this one. Changes in Uzbekistan were faster than anyone anticipated, and other sources of fleet finance became available to private operators. The project received successful ratings, since it reached all of its policy and institutional objectives.²⁰

The making of the Kyrgyz Urban Transport Project went through stages. The initial design envisaged an ECA-standard operation of support to public-owned bus companies. Just before appraisal, when the rapidity of the private operators' entry into the sector became evident, a completely different course was taken. Project investments were diverted to road and traffic improvements, both badly needed. The project thus became the first urban transport project in the region to pursue the missing strategic thrust of the 1990s ECA program – dealing with urban roads. On the policy side, the project left few stones unturned. Its reforms included a shift of road construction activities to the private sector, a complementary effort to build municipal

¹⁹ A differentiated stand was taken regarding rail-based systems, where infrastructure would remain in public hands while operations would be taken by the private sector, as shown in the Brazilian portfolio.

²⁰ This project and the following one are among those where it would be of great interest to find out what happened in the next decade, since large-scale changes rarely follow a steady path. Has the bus market stayed within the "for-market" regulatory framework, or has it decayed to some form of "in-market" competition? Were all the public-owned companies dissolved? The account in the completion report, of course, stops 6 months after the loan closing, in 2006.

institutions to handle planning, budgeting and contract management, and even an attempt (rare in the 1999-2009 program) to set up a stable system to fund urban roads, initially focusing on road maintenance. Finally, in spite of dropping all public transport investments and thus weakening the leverage of the loan in this sphere of activity, the project kept (and delivered on) the policy objective of setting up public transport authorities and introducing regulated competition. Its outcome ratings were all satisfactory, and the institutional impact was seen as substantial. The results in the road funding initiative were limited, but the project was instrumental in inspiring a serious political debate on this subject that apparently continued beyond loan closing.

The Moscow project is one of a kind in the ECA program in that it focused on traffic management. In late 1990s, the capital of Russia, a mega-city, was experiencing motorization growth rates of around 10% per annum, with a road network inherited from the era when public transport modes carried as much as 90% of daily trips. The city government's near-exclusive response to this mis-match between demand and supply was to widen major roads and build new ones, notably the ring motorways. On the public transport side, the Moscow Metro was the prize feature of the system, but street-based services (using bus and trolley-bus vehicles) were neglected. The Bank-funded project was the first, and so far the only project in the ECA region that focused solely on impacts of motorization in cities, a much needed complement to the regulatory reform and investment support of urban public transport services. Unusually, the primary objective of this project was not to improve traffic conditions directly but to introduce a new institution – a traffic management authority - into the municipal government of Moscow. This authority was meant to “collect” functions carried out by other municipal agencies, including traffic police, and add subjects that were not being done by anybody, e.g. introducing street priority for public transport vehicles. The investment program was not fully firmed up at appraisal, taking a cue from adaptable program loans, but the intent was that at least some of the investments would be of the type to demonstrate benefits of the traffic management activity to both the government and the citizens of Moscow. After a turbulent history and long delays, the project succeeded in its primary objective, but failed to implement many of investments expected to demonstrate effectiveness of low-cost traffic management improvements, including those focusing on street-based public transport services. Though the preparatory studies were done, the Moscow government preferred to put funds from the loan into complex urban intersections with major flows of cars, public transport vehicles and pedestrians.²¹

²¹ This is one of very few cases where a Bank-funded project helped set up a traffic management institution with good prospects for longevity. Other cases that come to mind, drawn from 1980-1990s, include projects in Lahore and Tunis, with failures in Cairo and Amman.

Box 4: ECA REGION: URBAN TRANSPORT CONTEXT AND PROJECT PATTERNS

Context:

- second decade of transition to market economies
- state/city owned public transport companies still active, and in difficulties
- mass entry of private sector public transport operators
- rise of motorization

Strategic response:

- geographic focus shift from Central Europe eastwards;
- projects balance between public and private sectors as providers of public transport services
- motorization-induced problems addressed through a combination of road and traffic management instruments

Moscow Urban Transport Project:

- unique case in that institution-building objective (creation of a traffic management authority) trumped the importance of project investments

No new urban transport operations were approved in the ECA region since 2001. Most Eastern European countries became members of the European Union and acquired new and multiple sources of finance for urban services. In central Asian countries, the private sector was poised to take over urban bus operations. As for Russia, the stoppage in Bank-funded urban transport projects probably reflected vastly improved availability of public funding coming from oil and gas exports, in combination with an ambivalence about the direction of further reforms in this sector.

5 MIDDLE EAST AND NORTH AFRICA URBAN TRANSPORT PROGRAM

The program from the Middle East and North Africa region does not exhibit any clear pattern or a regionally defined strategy.²² This reflects sharp differences in country contexts. In Algeria and Tunisia, in spite of the private sector making some inroads in the urban public transport sector, it is public-owned operators that were still dominant in the market, their key structural problems (subsidized fares, unpaid subsidies, rigid management) still unresolved. The APL in Tunisia, in fact its second phase, undertook what had been tried repeatedly in the preceding decades under several bank-funded operations – to liberalize urban transport services by simultaneously working on two fronts: reform the public-owned sector and increase the role of the private sector. The two large public-owned companies serving Greater Tunis were to be helped to reach greater cost efficiency and service quality, through new investments and policy changes, especially in the fare/subsidy dimension. A financial restructuring plan for the largest company (SNT in Tunis) was a condition of Board presentation, and action plans for liberalizing the entire urban and regional passenger transport services were conditions of effectiveness. A regulatory body was to be created for Greater Tunis, decreasing the involvement of the key ministries – transport and interior. A wide array of numerical targets was agreed. Some covered cost efficiency and productivity of companies, and subsidy levels. In an attempt to introduce outcome-oriented thinking, market shares of private operators, and the market share of public transport services in Greater Tunis were added to the list of indicators, with corresponding targets. The project had a rapid start in the policy dimension. The systemic law passed, thus meeting one of the main conditions needed for the loan to become effective, but the legislative reform slowed down thereafter. On the procurement side, major delays marked the experience throughout project implementation, disappointing for a policy-

²² But several sector studies were done: a transport sector study for Tunisia (World Bank, 1997), urban transport strategy note for Cairo (World Bank, 2000) and an urban transport strategy for Morocco (World Bank, 2008c).

laden operation. Ultimately, most investments were carried out, but most of the numerous application decrees, without which the new Transport Law could not be implemented, were not enacted by the end of the project. A public transport authority for Greater Tunis was not set up. The modal share of public transport in the capital fell to about 33% instead of rising from 50%, pushed down by the steady rise of motorization in the country. In truth, the project lacked any instrument to prevent this from happening. In Algeria, the technical assistance project had very similar policy objectives, but without any investment components to back them up. Including a concession for Algiers Metro, then under construction, was not realistic. The results across the board were even more disappointing than in Tunisia. Evidently the political climate in either country was not ready for major reforms, and the projects' objectives (and numerical targets) were too ambitious relative to the instruments and incentives included.

Box 5: MENA REGION: URBAN TRANSPORT CONTEXT AND PROJECT PATTERNS

Contexts:

- Tunisia, Algeria: state ownership of urban public transport services; motorization on the rise with corresponding changes in modal split
- Lebanon, Jordan: public transport services largely in private hands; dominance of individual motor vehicles

Responses:

- Tunisia, Algeria: reform of state-owned public transport sector and facilitating entry of private operators
- Lebanon, Jordan: accommodating motorization and urban growth through traffic management (Beirut) and road construction (Amman)

In Amman and Beirut, individual motor vehicles dominate the scene, and private bus and shared taxi operators are supplying the majority of public transport services. Accordingly, the projects in these cities, both still on-going, focused on urban roads and traffic matters. The project in Beirut has a structure similar to that described above for the Moscow operation, albeit on a smaller scale and in the framework of the post-war city reconstruction program. Its main institutional/policy features were the creation of a traffic management organization for Greater Beirut and the introduction of concession-based parking management in selected urban zones. In Amman, the context was that of economic and spatial growth of the urban area. The investment focused on a ring road, unusual in that it was in part conceived to provide access to a new urban development corridor. Its shorter-term policy ambitions were not in urban traffic and public transport but in the regulatory reform of the trucking industry. Both projects, however, used technical assistance to sow the seeds for public transport interventions in the next stage, including regulatory changes, system integration, and rapid transit investments.

6 SOUTH ASIA URBAN TRANSPORT PROGRAM

Of the five projects making up **the South Asia's urban transport program** in the period under study, those in India and Bangladesh (two in each) illustrate clearly the evolution in thinking (and changes in priorities) from the early stage of the period to more recent operations. The fifth is a simple project to mend the war-related neglect of roads in Kabul.

The two Indian projects both address public transport services, with few other similarities between them. The Mumbai Urban Transport Project was approved in 2002, but –given its very long preparation period, it belongs to a class of traditional Bank projects, notable for their focus on infrastructure and a comprehensive, multi-modal scope. It is a classic of large-scale investment in two public-owned companies – improvements and extensions to the regional railways system that carries about 6m people every day, and fleet replacement for the BEST (bus) company. BEST is an old client of the Bank, known for its effective management and for covering its direct operating costs from the fare revenue. In addition, the Mumbai project included road and traffic improvements. These were selected, at least in part, to benefit street-based public transport services, and included streets, intersections, stations and terminals. It is one of the largest projects in the history of the Bank's urban transport program, with total costs originally estimated at US\$ 945m (later revised to US\$1,100m due to exchange rate shifts). The Bank participated with a loan/credit combination of about US\$550m. The project has involved a very large resettlement program for households and businesses, requiring a major reform of the government policy and practice in this respect. While few transport policy changes are pursued, the institutional agenda of the project is extensive. The key feature was the setting up of a company, jointly owned by the state of Maharashtra and India Railways, to manage the development of the suburban railway system, starting from investments under this project.

This falls short of separating the suburban network from India Railways as was done within the decentralization program under several Brazilian projects (e.g. in Sao Paulo), nor does it involve a Brazilian-style concession with the private sector. But – it is a step in that direction, since at this stage already it involves a separate business and operating plan, and a separate cost accounting system. Also, addressing the fragmentation of responsibilities for transport in Indian cities, the project included the establishment of two more new institutions: a high-powered steering committee for regional transport, perhaps a precursor of a regional transport authority, and a more technical body – a Transport Management Unit in the Municipal Corporation of Greater Mumbai. The project overcame several challenges posed by the resettlement program and fleet procurement, but it had to be restructured to jettison the road component and reduce the traffic management, mainly because the pace of implementation in these activities was too slow. The BEST program was increased, reflecting how much more doable are components under an interested and unified management. The loan will close in the mid-2011, but a follow-up project was approved in 2010.

In the past decade, concurrent with the implementation of the Mumbai project, India has surged ahead with economic growth and urbanization, together with their usual epiphenomenon – rising motorization, in both versions, 2-3-wheeled and 4-wheeled. Cheapness of the former and the appearance of a low-cost, India-produced automobile has meant that motorization is reaching into unusually low income distribution ranges. Changes in modal split have followed, with conventional public transport losing passengers and suffering from congestion. The Indian traffic and transport context was already complex due to the scale of urban poverty. Now the motorization has added to the complexity, both in terms of public transport services and regarding the urban road network. Most recently, the issue of vehicle-generated emissions with their local and global impacts has been recognized, bringing India into major international discussions concerning the climate change. One of early responses to urban congestion was to look at metros, a move consistent with India's strong railway culture. A 190-km, 6-line metro was constructed in Delhi over the last 13 years, a first such project to be realized after the best-forgotten affair of Kolkata Metro and a small failed attempt at rapid transit in Chennai. Following the opening of the first lines of the Delhi metro, several cities tried, not yet successfully, to find ways to emulate that project, especially its financial design.

The newest Bank operation in India, Sustainable Urban Transport Project (2009), introduces a different strategic approach, and a new set of lending instruments, both conceived to fit what appears needed in smaller cities, and is affordable to them. The positive shock-wave generated by Bogota's BRT experience is apparent, as is the overall experience with GEF-funded pilot projects pioneered in the LAC region. The Indian operation combines a hefty

amount of grant-funded technical assistance for 6 medium-size cities, with loan-funded, small-to-medium size investments in 3 of those cities to demonstrate benefits of bus-based rapid transit and facilities for non-motorized travel. Technical assistance components address the institutional structure and capacity for urban transport planning. Since grant funds come from the GEF, the focus of investment components is on demonstrating links between these investments, modal split in passenger travel, and greenhouse gas emissions. This is especially evident in the results framework, where most indicators are in terms of public transport's market share or emissions from urban transport sources. Other Indian cities also are pursuing the bus-based rapid transit option, not necessarily as a counter to the move to construct metros but providing a much needed widening of the array of options.

Box 6: INDIA CONTEXT AND PROJECT PATTERNS

Context:

- The starting position: low motorization; travel by public transport, bicycles
- Presence of extreme poverty
- Public transport operators: mainly state-owned bus companies; suburban rail in Mumbai; small metros in Kolkata, Chennai;
- In 2000s: sharp rise in economic growth, accompanied by motorization, both in terms of cars and 2-3 wheelers
- Modal shift from public transport modes and bikes to motorized vehicles; pressure on urban roads
- Construction of a new metro in Delhi, rush by other cities to emulate Delhi experience

Project patterns:

- Mumbai project: comprehensive approach to improve the suburban rail system (and set the stage for its separation from India Railways), modal interchange facilities, streets and intersections
- Sustainable Transport Project: BRT-focused; GEF grant funded technical assistance and pilot investments in multiple cities followed by a major BRT investment in a subset of cities

Of the two Bangladesh projects, the older one, Dhaka Urban Transport Project (1999-2005) followed a comprehensive approach. A Mumbai-style support of public transport was not possible, since Dhaka's public transport operators are private, many and small. Instead, the project invested in urban roads and traffic management improvements, many of which were selected specifically to benefit street-based operations of public transport and non-motorized modes, and were spatially diffused. The policy agenda was large, including regulatory (fare and market entry) reforms to allow the emergence of higher-quality public transport services, impose restrictions on the use of worst-polluting vehicles (2- and 3-wheel motorized rickshaws), and introduce new vehicle emission standards. More than that, the policy agenda included the initiation of a new system of road user charges that would feed an also new Road and Traffic Maintenance Fund. Institutions to be created under the project ranged from a Traffic Engineering Department in the Municipal Corporation to a Greater Dhaka Transport Planning and Coordination Board. Such an agenda was doomed to failure in Dhaka's weak institutional setting, with major problems stemming from the inexperience and a lack of power of

the Coordination Board, and the political economy of imposing restrictions on a huge sector such as motorized rickshaws. The project had to be restructured considerably, and delivered on only a few of its initiatives.

The name of the follow-up operation (Bangladesh Clean Air and Sustainable Environment Project), approved 10 years later, reflects a significant strengthening of attention on emissions. Its first component is a large technical assistance program addressing capacity for air quality management, not only in relation to urban transport but also industry, especially emissions from brick kilns. The second component pursues street and traffic improvements similar to those in the earlier operation. The policy and institutional agenda is downplayed (no explicit objectives and indicators in the results framework), the effort apparently aiming at better franchising of public transport operations and preparing the ground for a possible introduction of bus-based rapid transit. Thus the Bangladesh program and the Indian program appear to be on converging paths.

7 AFRICA URBAN TRANSPORT PROGRAM

The program in the Africa region shows an upward trend in the number of operations relative to the preceding decade, with an increasing focus on public transport modes. Just like in South Asia, it is a combination of traditional and new style projects, the latter reaching for levels of complex designs hitherto not seen in this region. The early Bank projects in Africa (1976-1987), all in the Ivory Coast, made a major –and not successful- attempt to prop up public-owned transport operators. It was then concluded that the supply of urban transport services in African cities was best left to the private sector.

Accordingly, the next batch of Bank-funded projects (Ghana Urban Transport, 1993; Kenya Urban Transport, 1996) eschewed public transport services, focusing instead on urban roads, with some indirect support for public transport services. The Bank's retreat from this domain contributed to its gradual evolution (if that term is suitable) into a free-for-all, informal market, featuring mini-buses and shared taxis, essentially without regulation, and still carrying a great majority of motorized trips. The results of this process were poor, both on the service side, and in terms of externalities (accidents, emissions). The Bank's road-oriented approach has continued with several projects in the period under study (Senegal Urban Mobility, 2000; Douala Infrastructure, 2002; Botswana Transport, 2009), but alongside these there appeared projects with major public transport content, notably inspired by the Bogota experience but adapted for the African context (Lagos, 2002; Ghana, 2007; Tanzania Second Central Corridor, 2008).

Features typical of the road-focused approach are well illustrated in the Cameroon – Douala Infrastructure Project (2002-2009). Its investments were meant to unblock the motorized mobility to and from the port of Douala, a hub of transport activity of local, regional and national importance. Its policy agenda focused on funding for urban road maintenance, while the institutional

activities were limited to capacity building for urban road management, with a “stretch” move to prepare an urban development strategy. The project was completed with satisfactory ratings and one-year delay, a feat considering difficulties normally encountered under road projects in built-up urban areas. The reform of road maintenance funding was dealt with by introducing loan covenants specifying annual payments into the Road Fund. This did not deal with the root of the problem, and added to the implementation delay whenever the government could not make the agreed contributions.

Box 7: STRUCTURAL FEATURES OF URBAN TRANSPORT IN AFRICA

On the demand side

- Massive poverty
- Rapid demographic growth, intra-urban and from in-migration
- Migrants settling in outlying informal settlements at low density
- Reliance on walking and public transport for the majority of travelers

On the supply side

- Urban road networks under-developed and under-maintained
- Roads serving informal settlements much worse off than average
- Municipal public transport companies gradually failed due to pricing/funding problems
- Dominant public transport system: informal, private, based on many varieties of small buses
- Low-quality services with safety and high pollution
- Weak and fragmented institutions

A different, but even more road-focused tack was taken in Botswana – Integrated Transport Project (2009). The majority of its infrastructure investment, about US\$237m, went to improve rural and semi-urban roads, while its main policy initiative is to introduce performance-based road works contracts. Still, the project included a large (US\$81m) component for road and traffic management improvements in the capital city, Gaborone. The only non-investment initiative in the project’s urban dimension was the preparation of a transport master plan for Gaborone. This neglect of urban transport policy and institutional matters echoes the approach taken under the Buenos Aires Infrastructure Project cited above. With exception of some projects in China, as cited below, it would be difficult to find an urban transport project in any region with costs of \$80m (and a loan of about \$40m) without substantial policy and institutional initiatives to complement the investment.

The auguries of a changing approach to urban transport in Africa are already present in the Senegal – Urban Mobility Improvement Project (2000-2008), structured as an APL. The roads and traffic component was still the largest one in the project (about \$42m), but it was designed to focus on roads with major public transport and pedestrian flows, and the management of accident black spots. Two components dealt with public transport services: upgrading the Dakar-Rufisque suburban railway (\$21m) and purchasing minibuses to be operated under a leasing scheme (\$25m). The railway investment was

complemented by the introduction of a long-term concession. The project also addressed air quality management, investing in monitoring centers and the production of a strategy for this matter. The two public transport components illustrate benefits of regional cross-fertilization, echoing the tack taken regarding urban railways in Brazil, and the leasing scheme introduced in the Uzbekistan project. The project turned out to be too complex for the implementing agency and its institutional environment, ending with a “moderately unsuccessful” outcome rating. All investment components except one (the suburban railway, 90% completed) were done at loan closing, and the bus leasing component was a major success, exceeding expectations and targets. The rating reflects in part the delay for the suburban railway investment and the associated concession scheme, but also the fact that the project failed to reach numerous targets established for the roads and traffic component. All things considered, and subject to what will eventually transpire when the railway rehabilitation is done, the project will be seen in a much better light. At present, it is a cautionary tale of using the results framework in a dynamic environment of urban traffic.

From improving Dakar’s roads that carry heavy public transport flows and introducing suburban rail concessions, and Doula project’s attempt to reform road maintenance funding, it is but a step to what was done in Lagos, and further built on later in Ghana and Tanzania. Lagos has all the features of what urban traffic and transport are like in many African cities, multiplied by its enormous size, with 15m people or more, the majority of them poor. Its road network is weakly developed and ill-maintained, and public transport services are chaotic, delivered by thousands of private operators, using a variety of small vehicles, with few rules to follow. The sheer scale of the urban area is daunting. [The Lagos Urban Transport Project](#) (2002, \$135m original credit, revised in 2007 to add \$50m) was designed as a 4-pillar operation to confront a full array of problems. The first pillar was a program to improve 400km of main roads (out of a total of 630km in the urban area), selected because they carried the heaviest public transport flows. Improvements included geometric, surface, drainage, traffic management and public transport elements. The second pillar was a competitive route licensing scheme set up for the improved network, allowing public control of service attributes and vehicle features. The underlying objective of these two initiatives (road investments and the regulatory reform) was to raise service and environmental quality of the public transport while keeping it affordable. The third pillar was a semi-autonomous agency, LAMATA, set up to manage this operation, but with much larger ambition to become the urban transport authority for Lagos, in charge of road, traffic management, and public transport regulation. The fourth pillar was a stable source of funding for LAMATA’s programs: a dedicated Transport Fund, financed from the Lagos State Government’s transfers and sector-based user charges, with gradual diminution of the former. The loan was topped up in

2007 to compensate for cost increases in road works, and to increase the infrastructure features needed by public transport vehicles, such as bus bays, terminals and bus-only lanes.

The Lagos project became the most successful operation in the history of the Bank's urban transport program in Africa, and is the only urban transport investment operation in 1999-2009 to receive a highly successful outcome rating.²³ The success is evident both on the side of physical investments and their service impacts, and in the institutional/policy sphere, the key being in LAMATA. Once properly staffed and legally empowered, LAMATA acted to fulfill its roles as the project manager and the public transport regulator, succeeding to franchise three times as many bus-km as hoped for (45,000 daily bus-km in 2010) to a demonstrated public approval. It also became *de facto* the strategic transport planning authority for the Lagos State; and it is being emulated by other institutions in the country as a model of effectiveness. In a story reminiscent of what happened under the first project in Bogota, the Bank-funded project in Lagos took a surprising turn mid-way during implementation.

Originally, the project had included funds for the second-stage preparation of a suburban rail line, considered at the time to be a done deal. There were also funds for studies looking into various options to improve bus services. Following one of these, a feasibility study for a bus-based rapid transit system, initiated in 2006, the Lagos State Government took a decision to construct a 22-km "Lite" BRT line.²⁴ The Bank project helped with the requisite technical assistance, and the government provided the entire investment amount (about \$40m). The line became operational in March 2008, after an astounding 15-month period from conception to completion, and by January 2009 its 220 buses carried 200,000 passengers per day (peak flow 10,000 passengers per direction). It is a complete package, from the exclusive busway itself to a regulatory arrangement where private operators compete for service contracts, under the eye of LAMATA. A follow-up Bank loan was approved in 2010, combining the continuation of what was done under the first project with investments to expand and enhance the BRT system. Such turns of events are rare.

The subsequent two urban transport projects in the Africa region, in Accra (2007) and Dar-es-Salaam (2008) went straight for what was proving to be a winning approach, now not just in settings distant from Africa (Curitiba, Bogota), but in Lagos. The Accra project, co-financed by a GEF grant and a

²³ This section is based on a pre-final draft of the Implementation Completion Report.

²⁴ The Lagos BRT is called "lite" relative to the high design standards featured on Bogota's Transmilenio BRT system. The two cases have an interesting aspect in common: the Transmilenio BRT grew out of an already operational Bank-funded project, just like the Lagos BRT "Lite" did; in both cases, the pivotal factor was the strength of the political vision and commitment at the local level.

loan from the French Development Agency, focuses on the construction of a 9km BRT line. The project covers the entire set of busway infrastructure and supporting facilities. Its innovation lies in that, in addition to introducing regulated, for-the-market competition on the BRT trunk line itself, it also introduces a “light” regulatory reform for the rest of the (street-based) public transport system. The reform is limited to compulsory registration and minimum quality standards. The project also contains a large road and traffic improvement component for Accra and Kumasi, but without the Lagos-style links to public transport regulation. Nor is there to be a LAMATA-like institution to manage implementation and evolve into an urban transport authority. The project is run from the Ministry of Transport, through a Project Advisory Office in the Department of Urban Roads. Assistance in policy and regulatory matters is provided by an Urban Transport Advisory Committee. The Advisory Office, it is hoped, will in time evolve into a Center for Urban Transportation.

Box 8: PATTERNS IN AFRICAN URBAN TRANSPORT PROJECTS

Older projects:

- Focus on road and road maintenance improvements, with attempts to secure stable funding for maintenance
- Only minor involvement with street-based public transport services (e.g. bus leasing), reflecting the passage of public transport operations from public to private hands
- Some attempts to improve suburban rail lines in the public/private partnership framework

New crop of projects:

- Maintain focus on road improvements but re-involve with public transport services using Latin American BRT approach modified for the African context, with a strong push for creating regulatory institutions and (even) urban transport funding
- Notable operation - Lagos Urban Transport Project, the only one to receive highly successful outcome ratings in the entire 1999-2009 urban transport program. It featured a four-pronged approach: (1) major package of improvements on main urban roads; (2) competitive public transport service licensing for routes operating on the improved network; (3) creation of a semi-autonomous agency to regulate/manage the licensed operations; and (4) creation of a transport fund fed from user charges and transfers. Served as a catalyst for the creation of a first and successful BRT line in Lagos metropolitan area, with shockwaves spreading to other African countries and elsewhere.

The Dar-es-Salaam BRT is a part of a larger transport project, consisting also of improvements to the Zanzibar airport, and improvements to a trunk road of national importance. The BRT project is considerably larger than those in Lagos and Accra, ultimately expected to include 130km of trunk busways and 200km of street-based feeder routes. The first phase, funded by the project is 21km long, estimated cost of about \$160m. The regulatory reform is limited to operations on the BRT line itself, and some feeder lines. An institution, Dar Area Rapid Transit Agency, was set up to manage the implementation and thereafter operate the BRT network, but without LAMATA’s broader purview over urban roads and traffic.

8 EAST ASIA AND PACIFIC URBAN TRANSPORT PROGRAM

The urban transport program in the East Asia and Pacific region is heavily focused on China, with only 2 projects out of 10 approved in the 1999-2009 period being in other countries (Vietnam and Philippines). This is a pattern holding since the first urban and urban transport projects in China were approved some 20 years ago. The Chinese urban context in this period has been that of unprecedented economic growth, moderate urban population growth, and intra-urban restructuring to move residences and other activities towards the outer perimeter, at a lower density. In urban transport, the context is that rising motorization, with very large modal shifts away from the bicycle towards public transport modes and individual motor vehicles – cars in most cities and motorized two-wheelers in some cities. The pressure on road networks became immense, with a habitual response by cities consisting of road upgrading and constructing new roads. In the public transport industry, historically with low market shares in most cities, the inherited set-up was that of municipally owned, nationally regulated companies, most often with low capacity (due to a low market share of daily trips), low quality of service, and low cost recovery. The pressure has been increasing on city governments to correct this situation, lest passengers leaving bicycles would shift directly to motor vehicles, by-passing public transport on the account of service quality. The transformation proceeded by improving municipal companies and by opening the market to private operators, with one or the other having a primacy in any given city.

Just like in the preceding decade, the urban transport projects in China from 1999 onwards were mostly free-standing, but with a continuing stream of multi-sector municipal projects with substantial urban transport components. All but one of these were standard investment loans and all went to second-tier cities. In structure, these projects were diametrically opposite of those in the Latin America and Caribbean region. Reflecting the state of urban

transport in Chinese cities, and preferences of city leaders, the projects followed a pattern of what in the urban sector used to be called (pejoratively) “Christmas tree” projects: their investments cut across most urban transport sub-domains, though with road-focused ones being dominant. Unlike the older “Christmas tree” projects, however, the Chinese ones turned out to be much more successful.

Box 9: STRUCTURAL FEATURES OF URBAN TRANSPORT IN CHINA

On the demand side:

- Traditionally a dominant reliance on bicycles (owned by all), with modest use of public transport (except largest cities - Beijing, Shanghai, Guangzhou)
- Unprecedented rise in business revenues and incomes in 1990s, leading to accelerating motorization (cars in most cities, 2-wheelers in some cities)
- Intra-urban population shifts to lower-density suburban developments

On the supply side:

- Municipal public transport companies, mostly operating street-bus networks at low levels of service
- Trials with the entry of private sector operators
- Urban road networks and traffic control systems under increasing pressure from motor traffic growth
- Early response from cities: road building (and generally infrastructure building on large scale)
- Plans for massive urban rail investments

Road components in these projects covered the entire range, from road maintenance, through road improvements, often with major structures like overpasses and interchanges, to entirely new arterial roads. The size of some of these investments was quite large, involving major and complex activities regarding procurement, resettlement, environment protection and financial management. The staff from project implementation units was typically new to these matters. Assisting local staff in acquiring and practicing the requisite skills, and resolving conflicts with local laws and practices, was a daunting job for Bank staff. The work load was made heavier by having multiple project units in each client city, since the project management structure mimicked the structure common to Chinese municipal organizations. This work was in addition to what needed to be done regarding the (urban transport) substance of these numerous components, with a corresponding set of objectives, indicators and targets for each, compulsory under the newly introduced results framework. The early projects erred in adopting complicated schemes for the results monitoring, a reasonable tendency given the multi-parametric nature of urban transport systems, but leading to a heavy work load in all sides, and ambiguous evidence of outcomes. The relative weights given during supervision to output-oriented and safeguard activities probably exceeded those given to outcome-oriented ones, but in final evaluations (at completion) it is only the latter that counted.

Another feature of this program was that institutional and policy reforms were either low key, or not included at all. For example, attempts to address the

organization and regulation of public transport services were made under some projects, but –following less than satisfactory experiences- were abandoned under the later operations. Instead, projects went for a much more neutral “capacity building” concept, consisting of massive amounts of technical assistance, mainly studies and training. Cities were left to make their own decisions as to how rapidly and in which direction to pursue changes in the public-owned sector and the introduction of private operators. As illustrated below, some cities were quite capable and willing to introduce innovations, with policy push from Beijing much more effective than attempting to use Bank-funded projects as leverage to “lift” the reform load.

Beside the dominance of road components and the subdued nature of policy and institutional initiatives, a marked feature of the Chinese urban transport program has been a gradual change of outlook, with the passage of years, from a single-minded push to accommodate motorization to the acceptance of the notion of sustainability, and a consequent increase in project sophistication.

A sequence of projects in the Liaoning province provides an apt illustration of the preceding. In the (first) Liaoning Urban Transport Project (1999-2005), involving three client cities, investments included new road construction, road improvements, road maintenance, traffic management improvements, and some public transport infrastructure.²⁵ No specific policy initiatives were included. Likewise, the institutional component did not aim to create any new institution, or re-distribute functions and powers among the existing ones, but it did address a ubiquitous fragmentation of responsibilities by establishing a Transport Management Committee in each client city.²⁶ Otherwise, this component ranged widely, including design studies and tender documents for project investments, a study of options for public transport reform, the preparation of a motor vehicle emissions control strategy; and studies/training needed to establish a road maintenance management system.

The project ended with a satisfactory rating, but had a stormy history, and had to be restructured, dropping several components. The problem *au fond* was a strategic divide between the clients (municipal leaders) and the Bank whereby the former wanted to build as many new roads as possible, and the latter stressed traffic management and wanted to protect bicycles and pedestrians. Predictably, road components had the most satisfactory performance and traffic management ones did the worst. Still, the results were anything but straightforward. For example, a major public transport investment in one city

²⁵ In China, the Bank relaxed its stand against lending to public-owned transport companies, just as it did a few times in the ECA region. By and large, however, the projects in this period did not finance fleet replacement and expansion. Instead, they focused on depots, interchange facilities, stops, and priority lanes.

²⁶ These were established already in the course of project preparation.

was dropped, leading to a low score in the indicators section, but the same city pursued regulatory reforms of public transport (as did the other two cities) not included in the project.

Under the next project in the same province, Liaoning Medium Cities Infrastructure Project (2006), the road investments were still dominant, but the approach showed progress on several fronts. To start with, a strong focus on public participation was visible both during project preparation and during implementation. The list of objectives included a reference to the needs of people without access to private motor vehicles, and a large investment component (\$113m) was included for secondary roads, to improve the “last-mile” access for pedestrians and cyclists. Traffic safety was added to the traffic management component. A public transport component, though miniscule at \$14.5m, included bus-only lanes and interchange facilities. As for regulatory reforms of public transport, local initiatives were assisted through the capacity building component, but were not included amongst the agreed objectives.

BOX 10: PATTERNS OF URBAN TRANSPORT PROJECTS IN CHINA

The “residual” approach:

- Comprehensive (Christmas Tree) projects dominated by road investments with large technical assistance components
- Some (unsuccessful) attempts to reform public transport organization and regulation under project auspices, including entry of private operators
- Major efforts to pass to local staff the know-how regarding procurement, financial management, environmental protection and resettlement

The emerging approach:

- A strategic shift from accommodating motorization towards sustainability (“greener” modal split)
- Use of GEF funded technical assistance and pilot projects in multiple cities as catalysts for a change in thinking and subsequent, full-scale investment operations
- BRT as the backbone investment

A very similar pattern of increased sophistication can be observed by looking at the first Wuhan Urban Transport Project (2004-2009) and its successor, Second Wuhan Urban Transport Project (2010). Indeed, each successive urban transport project in China, though most often in a new city, included incremental refinements. Common additions to later projects included those related to traffic safety (accident data collection, analysis and links to remedial programs), and air quality management – all the way to an up-to-date concern for greenhouse gas emissions. One of the most recent operations, Xi’an Sustainable Urban Transport Project (2008), reflects the change in thinking already in its name. The road component is still the largest in money terms, but the up-front approach is couched in terms of encouraging alternatives to the private car, focusing on air quality and cultural heritage. Approved in the very same year (2008), the China-GEF-World Bank Urban Transport Partnership Program essentially catches up with the world. Its objective is to “achieve a paradigm shift in China’s urban transport and land-use policies and

investments toward the promotion of public and non-motorized transport, modes that are less energy-intensive and less polluting than those fostered by current urban land-use planning and transport systems in China.²⁷ A half of the GEF grant of \$21m goes to technical assistance for strategy development and capacity building at the national level, inclusive of model urban transport strategies for cities, while the other half will fund pilot projects in 14 cities and 1 province to demonstrate benefits of bus-based rapid transit, demand management measures, and public transport oriented land development plans. Follow-up investments in cities are expected to amount to \$560m.

The urban transport context in Vietnam has some similarities with that in China, but at a lower level of economic growth. The inherited, state-owned, public transport operators carry small fractions of the passenger market. The country's explosive motorization is largely based on 2-wheelers, making it very difficult for public transport operators to attract passengers, in addition to problems derived from state ownership. The entry operation, Urban Transport Improvement Project (1998-2005), was a bread-and-butter demonstration of low-cost management measures as a response to street traffic congestion and a rise in accidents. The next operation, Hanoi Urban Transport Project (2007), is already much more complex, with two main features. The first is the use of a new, 40km long BRT project to provide good-quality services, hence potentially causing a modal shift away from 2-wheelers, while also involving private operators within a competitive framework regulated by a newly-established Public Transport Authority. This is the only operation in the entire 1999-2009 time slice to use a BRT as an instrument of deregulation.²⁸ The second feature of the project is that a road investment is being attempted in conjunction with land development, only the second such case in the entire 1999-2009 urban transport program.²⁹

²⁷ Cf. para. II.B.13, China-GEF-World Bank Urban Transport Partnership Program, Project Appraisal Document, World Bank, Washington, DC, May 29, 2008

²⁸ As opposed to re-regulation, as in the LAC and AFR projects.

²⁹ The other case is Jordan – Amman Development Corridor Project (2004)

9 SUCCESS RATINGS

Of all the projects approved in 1999-2009, 20 were completed (in that the corresponding loans were closed by the end of 2010) and implementation completion reports for them were available by the end of June 2011.³⁰ For these projects, Table 4 shows outcome ratings by the type of lending instrument used and Table 5 shows ratings by region.³¹

TABLE 4: PROJECT OUTCOME RATINGS BY INSTRUMENT TYPE

	SIL	APL	TAL	DPL	Grant	Total
Unsatisfactory			1			1
Marginally unsatisfactory	1	2				3
Marginally satisfactory	3			1	1	5
Satisfactory	8			1		9
Highly satisfactory	1				1	2
Total	13	2	1	2	2	20

At a glance, about one half of operations received a satisfactory outcome rating, and 2 operations received a highly satisfactory rating. This said, the only instrument category which is large enough to allow some generalizations is that of standard investment loans, to which adjustable program loans can be added, given the similarity in structure. Of 15 such operations, 9 received satisfactory (or better) ratings, and 6 are hovering on the boundary of unsatisfactory ratings. None amongst regional programs has enough data points to make generalizations.

³⁰ As noted in individual profiles, some ICRs were advanced drafts.

³¹ Ratings are by the originating regional department as shown in completion reports. Individual project profiles also summarize IEG assessments. In one case, Bangladesh – Dhaka Urban Transport Project, the regional assessment of outcomes was satisfactory, while IEG's rated outcomes as moderately unsatisfactory.

TABLE 5: OUTCOME RATINGS FOR COMPLETED PROJECTS BY REGION

Region	U	MU	MS	S	HS	Total
Africa		1		1	1	3
East Asia and Pacific			2	3		5
Europe and Central Asia				3		3
Latin America and the Caribbean		1	3	1	1	6
Middle East and North Africa	1	1				2
South Asia				1		1
TOTAL	1	3	5	9	2	20

The reviewed operations varied widely by instrument type, structure, size, and ambition – both on the investment side and in the reform dimension. It would not be a valid exercise to look at ratings for this entire batch of projects together, as if the variability were not there. On the whole, the only broadly useful finding is that of all standard investment loans and adjustable program loans only one received a highly satisfactory outcome rating, and about 40% of all such projects received ratings lower than satisfactory.

This begs the question as to what contributed to the success or its lack. Transport in cities, in all countries, is known for its multi-layered social, technological, economic and political complexity and its dynamic feedback nature, both of which make most “solutions” partial and temporary.³² On the demand side, the conundrum of massive poverty alongside a rapidly motorizing middle class poses taxing issues that are becoming progressively larger with the emergence of climate change concerns. On the supply side of urban transport, the involvement of several levels of government, and multiple institutions at each level, makes all action difficult. The picture is further complicated when the tension between public and private economic sectors is added in. These generic aspects already suggest that urban transport development projects are not for the faint-hearted.

A practical tack taken in this study is to keep the cited generic problems in the background, while combing project documents for explanatory features and factors of success or otherwise, with 20 available completion reports being the major source of information. What was found therein, in this first pass, tended to dwell more on factors that contributed to projects not doing as well as they otherwise might have done, rather than explaining their successful aspects

³² The term “solution” is placed in quotation marks because it implies a comparative-statics frame of thinking, inappropriate to highly-interconnected systems, with porous boundaries between its inner components and outer social and natural environment. Urban transport problems are not “solved” but managed over time, invoking the image of piloting a kayak through a sequence of rapids.

and/or generalizing beyond the project in hand. For the purpose of this paper, a few oft-repeated issues (see box) were judged to be of special importance, because of the impact they had on the implementation process and, ultimately, on the performance of projects as evaluated at loan closing. These are presented next, while acknowledging the limited nature of the analysis that generated them. It is best to treat the following text as an illustration of how a summary database on urban transport projects can be used to generate an operationally relevant discussion agenda.

Box 11: ISSUES BEHIND PROJECT RATINGS

- Investment-related issues
- Issues in policy and institutional initiatives
- Issues related to the results framework

9.1 INVESTMENT RELATED ISSUES

Differences between the client countries' procurement laws and the Bank's procurement guidelines continue to create implementation blocks, nearly derailing some major projects in countries which are anything but new borrowers (Brazil, China, Tunisia). Individual projects, or even individual sectors, are not well suited to resolve this issue, but the cumulative experience under several projects can be used as catalysts for Bank-level action.

Shortages of counterpart funding continue to plague project implementation. The underlying factors vary between countries, including chronic budgetary difficulties of client governments (Senegal, Cameroon), sudden macro-economic shocks (Brazil, Argentina), and changes in expenditure management practices of individual local governments (China). Some of these had been anticipated in the course of project preparation, while others were unexpected. Reactions to unforeseen shortages of counterpart funds varied from cancellations of components, increases in the Bank's funding rate for relevant expenditure categories (sometimes to full 100%), and restructuring projects to define a reduced but coherent set of investments affordable under the changed circumstances. A common conclusion in these instances was that maintaining a flexible stand as to the project description and disbursement arrangements is of essence. Instruments used for dealing with a known problem of funding urban roads include the use of dated covenants to ensure payments into some type of reserve fund, project-specific or somewhat wider (Cameroon, Kyrgyz Republic, Nigeria). The results were mixed in both approaches, illustrating how difficult is to deal with this structural weakness common to the urban transport sector – a situation where a high-demand activity (use of roads by motor vehicles) does not generate locally available funds to maintain, operate and expand the supply, whether or not a national system of road user charges exists. Over years, considerable efforts have been

expanded under Bank-funded (non-urban) road projects to resolve the funding issue by reforming the charging system, with or without road funds. Such efforts have rarely been made under urban road projects, relying instead on palliative measures of dubious sustainability, a situation calling for discussion and action within the thematic network.³³ A gradualist approach to this matter is to start with placing it on the agenda, e.g. by making diagnostic work on urban road finance a routine part of project preparation.

Safeguard issues are all but ubiquitous under urban transport projects, in particular the social impacts. It is nearly impossible to make a good urban transport *omelette* without breaking many diverse eggs, many of them scarce to their owners. Social impacts include such matters as staff redundancy in state-owned public transport companies; job losses for drivers and operators of informal public transport services in the process of introducing higher service standards; displacement of non-motorized and motorized 3-wheelers from congested arterial roads; involuntary resettlement for residences and firms; involuntary land sales; and increase in congestion and accompanying pollution, noise and accidents, resulting from traffic diversions following the introduction of public transport priority in some corridor. In spite of considerable improvements in the text and enforcement of operational policy and guidelines regarding safeguards (the work on these continuing *in perpetuo*), the Inspection Panel is being involved in a non-negligible number of cases, including such important and highly visible projects as those in Mumbai, Bogota and Lima. Though projects have been increasingly attentive to social and environmental issues in the design process, including various instruments to involve the stakeholders and the public at large already early in the project cycle, and ensuring that proper compensation and grievance procedures are followed, one aspect of this matter calls for more thought. The effort on safeguards required from the clients' and Bank staff under large projects is very large, especially if the client (city) is new. If one adds a similar effort regarding procurement, and tops it by a hefty reform initiative, the load can be unbearable. A case in point is the recently completed Wuhan Urban Transport Project in China. It involved processing about 60 works and goods contracts, its technical assistance component had 28 studies and 29 study tours; and its land take involved resettling 7,850 households, the demolition of 1.5 million meters square of built area, and the acquisition of 373 hectares of land – all done successfully, making Wuhan a place of pilgrimage for other Chinese cities in matters of handling social impacts. And yet, the project received a satisfactory rating only, largely on the account of falling short of a set of traffic-related targets, at least some of them arbitrary, set in an admittedly less-than-prudent

³³ The Lagos Urban Transport Project made the biggest, and the most successful effort of all projects reviewed in this study to handle funding for urban roads in a three-level setting (federation, state, municipalities). Per contra, a sizeable urban roads component (\$80m) under the Botswana Transport Project was not complemented by an effort to deal with urban road finance.

results framework (more below). The question is this: if such a major effort is to be expended under a project on safeguards and fiduciary matters, dwarfing other dimensions of the project, should not this be reflected by allowing the inclusion of these matters into the set of development objectives? If this were done, the Wuhan project would unhesitatingly get the highly satisfactory rating, and be studied as a best-practice case.

Box 12: INVESTMENT-RELATED ISSUES

- **Procurement**
 - divergence of WB mandated approach and national ones
 - persistence even with borrowers of long standing
- **Shortages of counterpart funds**
 - chronic budgetary shortages
 - macro-economic shocks
 - unresolved funding issues for roads & public transport
 - expenditure management practices of local governments
- **Safeguards**
 - Resistance to job losses
 - Involuntary resettlement
 - Land acquisition
 - Transport side impacts (e.g. traffic diversion due to re-allocation of street space to exclusive use of public transport modes)

9.2 ISSUES IN POLICY AND INSTITUTIONAL INITIATIVES

The main policy initiative under the reviewed projects has been the establishment of an urban public transport regulatory regime involving public/private partnerships, and featuring competitive awards of service contracts. This is necessarily coupled with the setting up of specialized public transport authorities to manage this regime. Depending on the country, the direction of the regulatory reform sometimes started from an existing deregulated setting (Chile, Colombia, Peru, Nigeria, Tanzania, Ghana) towards more regulation, with service quality, safety, affordability, financial sustainability and environmental objectives. In other countries, the move was from an existing public sector based service delivery towards involving private providers or private/public partnerships (China, Vietnam, Uzbekistan, Tunisia, Algeria), or from a mixed situation where urban rail operators were in an over-regulated public sector and bus operators were in an under-regulated private sector, all with a scant degree of service integration (Brazil, Argentina). Some of the key projects under which these reforms were pursued are still active, especially those in the Latin America and Africa regions. Based on information available at present, the most successful approach has been where the regulatory and institutional agenda was an integral part of an investment project, notably BRTs in Bogota and Lima, and a “declared road network” in Lagos that spawned a surprise “lite” BRT. This is why similar projects are being tried in Vietnam, India and China, though there the inherited situation is that of a dominant or residual public sector presence. The success was reported

also under projects without BRT content, but with some investments attached and a major effort to build consensus with the decision makers ahead of the loan approval (Uzbekistan). Generally, though, reforming a situation with an inherited, strong public sector presence evidently has been more difficult (very little progress in Tunisia, none in Algeria). The Chinese cases are unusual in that the cities' own initiatives, after a policy shift from Beijing, produced much more regulatory change than a combination of modest investments and a reform blueprint included in some Bank-funded projects.

No matter which approach is taken, it is a conclusion commonly found in completion reports that a policy/institutional reform must involve consensus building ahead of project approval. Bogota illustrates what must be the most desired policy reform setting, since the city's leaders themselves decided what they wanted, in the middle of an active Bank-funded project, and received immediate technical and financial assistance. The subsequent projects in Colombia involved replication, albeit with refinements. The case of Lagos is unprecedented in that a consensus over introducing a public transport regulatory reform applicable on an improved set of roads turned evolved in the course of implementation into creating a BRT system. A rare counter-example is that of Santiago, where there was a strong political consensus for the public transport reform towards better regulation, but it did not suffice: the implementation encountered serious problems in the transition period because the initiative was not technically ready, perhaps even not sound. Fortunately, there was enough flexibility in the design to change course and reach adequate performance, albeit with a delay of about a year or two.

The absence of consensus building tends to doom policy reform initiatives. There were at least three other essential aspects in this matter. First, policy reforms were sometimes included in projects without a sufficient justification for the chosen course of action. The first Wuhan project, for example, includes a public transport regulatory reform without having demonstrated that the local public sector companies had specific problems in either cost, output or service quality, which deregulation and the entry of the private sector would cure. The client signed off on this at the project approval stage but, in due course, informed the Bank of their decision that incremental improvements within the existing structure would suffice. Second, policy reforms tend to have winners and losers, either within the administrative structures, in the relevant industry, or on the demand side. Understanding the likely patterns of gain and loss, and thinking ahead in terms of coalition-building and compensation, or other forms of mitigating losses, may swing the balance in the implementation of a reform initiative. Third, a corollary to the preceding point, is that an early and evident demonstration of success tends to generate support for the continuation of reforms, spreading from beneficiaries to decision makers. This is made much easier when investments have some kind of focus, spatial or otherwise. In Lagos, the fact that investments and

regulatory reforms (in fact a comprehensive package of measures) were applied in a specific corridor, thus generating evident gains to travelers, led to snow-balling of public and political support. *Per contra*, it is difficult for projects with spatially diffused components to demonstrate benefits to large and specific groups of beneficiaries.³⁴

Beside public transport authorities, the only other types of new institutions pursued in the projects under review include traffic management departments and variants of a metropolitan umbrella organization or a forum to provide some oversight and coordination. The Moscow project stands out for its focused effort to introduce the missing traffic management function into the administrative structure of a megacity known for its government's fondness for large capital investments. The project succeeded in this endeavor, but reached only a satisfactory rating, since the client opted out of small-scale projects to demonstrate benefits of traffic management. Results regarding the establishment of metropolitan transport institutions, pursued in different forms under projects in Latin America (Brazil and Argentina) and China, will wait the completion of these projects over the next two years, but it looks like the progress in this matter is slow.³⁵ Lagos, again, provides a counter-example, with LAMATA surging beyond its regulatory role to become a strategic transport planning institution.

Lagos excepted, the completion reports for these 20 projects did not dwell on institutional developments at much depth, possibly because results and outcomes in this domain do not fit easily into the results framework, or because there was little success. Given that a host of projects with explicit institutional objectives will be completed over the next two years, it is warranted to carry out a focused review of what was tried and achieved in this dimension Bank-wide, with field investigations that would go well beyond what is routinely done under individual projects.

Beside policy reforms and institution building, one old instrument has been gaining new currency in project work, and has a potential to be an essential ingredient of successful projects. This is city transport strategy, commonly produced in a major transport planning exercise, followed by public discussions and political negotiations. In its full format, it sometimes precedes the approval of a Bank project, at other times it is developed within such a project (the first Wuhan project, for example). There is not as yet a blueprint for such

³⁴ A classic theoretical construct of this process is in Olson (1971). A different take is in Hirschman (1982).

³⁵ The Chinese projects, most of them following a comprehensive approach, commonly introduce a high-level steering committee to oversee the work of many agency-based project implementation units. The Chinese clients generally eschew the inclusion of specific policy and institutional reforms in urban transport development projects. Institutional components therefore consist of amorphous capacity building activities (studies, training and tours), the hope being that steering committees will evolve into oversight institutions.

strategies, other than a shared idea that it should be a politically agreed, robust statement of preferences and directions, rooted in diagnostic work, with a coherent set of short and long term actions in terms of funding, current and capital spending, policies, and institutional responsibilities.³⁶ The renewed push behind this instrument is coming largely in Chinese projects, some of which suffered when city officials decided to pursue directions (investments) with negative consequences on what was being done under Bank-funded projects, or generally diverging from the strategy implied under these projects (as in the first Liaoning project). An additional inspiration came with the understanding, again in the Chinese context (e.g. two Wuhan projects) that having an agreed strategy made a difference between “Christmas-tree” projects and comprehensive ones, and also made focused projects much more attractive, thus defusing a long-running debate on this subject. Having a strategy also may help resolve a debate regarding projects with fixed investment components versus the programmatic ones.

Box 13: FACTORS BEHIND SUCCESS OR FAILURE OF POLICY AND INSTITUTIONAL INITIATIVES

- Different obstacles depending on whether public transport regulatory reforms were applied to an over-regulated situation (state/municipal ownership) or low-regulated one (paratransit dominated market)
- Success evident in cases where regulatory reform occurred in tandem with a major investment (Argentina, Brazil, Colombia, Nigeria...)
- Conversely, lack of success where modest investments (or none) in reform “losers” were coupled with major reforms (Tunisia, Algeria)
- A rare exception to above - Uzbekistan Urban Transport Project: a successful regulatory reform to liberalize the urban public transport market with only a bus leasing scheme as leverage
- Strong political consensus locally at project conception stage (Lagos)
- Evidence of benefits to the population early in the implementation period
- Concentration of benefits, spatially or by user category
- Relative importance of institutional/policy pursuits (relative to investments) to the Bank and/or client: Moscow Urban Transport Project as a case study in Bank team’s strong focus on institution building

9.3 THE RESULTS FRAMEWORK

The subject that came up most frequently in completion reports, commonly in the section on lessons, was that of performance indicators. There were multiple examples of statements that indicators were: too many, too complicated; costly to measure, difficult to interpret, not coherent with project instruments; and not reflecting the essence of what projects are trying to do. A strong working hypothesis is that, for some projects, poorly chosen indicators led to project outcomes appearing much worse than they actually were.

Project documents indeed provide ample evidence that errors have been made in setting the entire results framework (the chain from objectives through instruments to measures of performance and targets) and carrying out the requisite data collection and analysis. A partial explanation for this lies in

³⁶ Major research work on this subject was done initially by a Leeds university team, subsequently made operational with various partners (May and Roberts, 1995; May et al. 2005)

timing: the majority of completed projects in this sample dates from the period when the use of the results framework in the Bank was in its infancy. Still, the problems with indicators, really with the entire results approach to project evaluation, have persisted to this day. It follows that factors other than inexperience were also in play. The following discussion highlights three groups of problems, most visible in investment components of the set of urban transport projects reviewed in this study: problems of practice in applying the results framework; problems with unifying the results approach with traditional evaluation methods; and the problem of the conceptual fit between the results approach and the nature of urban transport systems.³⁷

Problems of practice

Among weak aspects of practice two appear to have been the most common.

The **first** is that, in urban settings which experience rapid changes in demand for travel, project teams used a before-and-after approach for most parameters included in the results table, rather than make comparisons between with-project and without-project situations. Many if not most projects which invested in road and traffic improvements have done this, choosing before-and-after travel time or travel speed in a given road corridor as a measure of performance, and comparing results against arbitrary targets. It is easy to guess why this was done. In a before-and-after approach to evaluation, data collection is relatively simple (travel time surveys at two points in time) and conclusions are seemingly unambiguous, especially to laymen. If the travel time at project completion is lower than the target chosen at the appraisal stage, the matter is settled. Having to develop a forecasting model for without-project scenarios is avoided. Unfortunately, with few exceptions, such results have little meaning, whether or not the targets selected at appraisal are met.³⁸ For short-term (point) comparisons, travel time (or speed) changes on a road section cannot be interpreted without the corresponding traffic volume counts. For a fully meaningful comparison, of course, long-term forecasts are needed for both with-project and without-project scenarios (more on this subject below). Moreover, in highly connected and interdependent urban road networks, data collection and modeling have to be carried out for the entire sub-network of influence, not just for a given road section or a corridor.³⁹ Added complications arise when there are

³⁷ Issues also arise in applying the results framework to policy and institution-building components of urban transport projects, notably with the stress on quantification where judgement might do much better. The text in this section focuses on investment components because the evidence is much more plentiful.

³⁸ Such an exception is present in the Douala project in Cameroon, where the focus of road improvements is on a corridor ensuring access to the port of Douala.

³⁹ This reflects a fundamental tenet of traffic flow theory (the First Wardrop Principle): when an improvement is done in a road network with multiple routes between the origin/destination zones, the traffic redistributes itself so that average travel times on all route alternatives are roughly

concurrent or partially concurrent road improvements in that network but outside the Bank-funded project.

The **second** common weakness was to posit a direct causal link between what the project was proposing to do and some desired outcome, when the actual situation is that of a long chain of causes and effects with lots of “noise” in between.⁴⁰ Examples of this practice are found most often in projects containing public transport components, especially those containing a program of small-to-medium scale investments for which it is nigh impossible to do an economic evaluation. In the Tunisia Transport Project, for example, investing in a depot of the local public transport company (plus some other smaller investments) was expected to result in a greater market share for public transport modes across the entire metropolitan area. This is an objective of great strategic import, but hardly achievable with instruments that this project had at its disposal. Similarly, in the first Wuhan project, a public transport component included investments in the vehicle monitoring system, and several terminals and interchange facilities, while the selected performance indicator was the aggregate daily bus ridership. In both of these examples, the hoped-for outcomes should have stayed on the supply side of the equation, i.e. focusing on operating costs or service features. The stimuli were too small, and other intervening factors too many, to claim a demand response. The difficulty here is that there are some investments where the available analytical knowledge of cause-effect relationships is simply not sufficient to set a sound results framework (or, for that matter, to carry out standard economic evaluation). Inter-modal terminals, considered to be highly desirable investments in many cities, belong to this group.⁴¹

The results framework and standard project evaluation methods

Completion reports reviewed in this study also reveal an issue regarding the relation between projects’ outcome ratings based on the results framework and results from traditional methods of project evaluation. The latter include economic and financial analyses, done both before investment decisions (i.e. loan approval) and repeated with new data and forecasts after the nominal implementation phase has ended. These methods are still mandatory in Bank work for all investments where there is analytical base (forecasting models and data) to do so.

equivalent. In economic evaluation of urban road improvements, it is a standard approach to consider the entire relevant sub-network.

⁴⁰ This sub-section refers to what is commonly called “specific objectives” of projects. In addition to these, documents often state meta-objectives, e.g. urban economic growth or poverty alleviation, but make no further attempts to show explicit links between what the project is proposing to do and growth or poverty processes. These are rhetorical statements of no operational value and are best left out.

⁴¹ An approach focusing on financial relationships between operators and the terminal authority may be better suited here.

Having two mandatory approaches to project evaluation begs the question as to their relative validity and usefulness. Though elements of the results approach have always existed as a part of common sense, it is only in the last two decades that this method was introduced in a formal way in government and development programs.⁴² The ascendance of the results approach in the development work, with a mantra “outcomes, not outputs,” may have had something to do with difficulties experienced with economic evaluation of investments in some sectors, e.g. health and education. Be that as it may, the results approach has moved to and has become mandatory in sectors where traditional economic analyses are doable, are still done routinely, and do not suffer from a lack of focus on outcomes. Urban transport is one of these fields.⁴³ Having to evaluate urban transport projects in two ways at the very minimum may involve unnecessary redundancy, and perhaps some damage from forcing economic evaluation into the much simpler results box. More seriously, in the case of some urban transport investments, the two approaches may give inconsistent, even contradictory results. Two simple examples are now provided to illustrate this issue.

The first example involves road improvements in a given urban corridor, already discussed above, with travel time by cars and/or public transport used as a measure of performance. Under the results approach, the outcome of this investment is evaluated commonly by comparing the post-implementation travel time with a pre-selected target value. The problem here is that the fact of the target being met has a meaning only for travelers and only at that point in time. This is of course a valuable piece of information, but not sufficient to evaluate the investment. The crucial question is whether this road improvement was attractive as a public investment, over its entire economic life. Indeed, an evaluation method based on travel time alone and at a single point is “blind” to economics of the improvement, in terms of the shadow price of time and relevant resource costs over some time period. The latter, of course, are only calculated if a full economic evaluation is done.

The second example is that of a new metro line, such as the Bank has financed in Sao Paulo, costing hundreds of millions of dollars. Doing economic and financial evaluations for such investments is itself quite costly and complex, especially if done well. At appraisal stage, this includes making construction cost forecasts for different design options, and long-term forecasts of patronage, revenue and operating costs for each. These analyses are revised upon completion, now with freshly available data for the actual construction

⁴² Beyond common sense, there are numerous analytical tools that are results-oriented. A normative approach used widely in command economies belongs here, though with a dim approach to setting objectives. The entire discipline of operations research, with major military and industrial applications, is built around a teleological goals-means structure, with a focus on optimization.

⁴³ No claim is made that it is easy to do rigorous economic evaluation of urban transport projects.

costs, and actual first-year operating results. It may take years to get a good idea of how successful such a project is, not to mention that various means are available to turn an initially poor project into a good one (and vice versa). It is difficult to see whether there is anything that some separate results framework, focused on one point in time (at loan closing), can contribute to evaluating the “results” of such a project.

The fit between the results approach and the nature of urban transport systems

Beyond poor practices in setting objectives, performance indicators and targets linked to investments and other project instruments, there may be a more general difficulty in evaluating urban transport projects using a results approach. It has to do with the nature of transport in cities.

Problems encountered in the development work (and not only there) vary from simple to complex depending on the nature of systems in which they are embedded. The results framework as a theoretical construct rests on a tight fit between objectives, instruments, and outcomes; relies a great deal on quantification; and does not allow loose ends, fuzziness and uncertainty. As such, it may be well suited for addressing some problems (and systems), but less well suited for others. Specifically, it may be well-suited for dealing with what in the planning literature is referred to as “well-behaved” problems, but less so for “wicked” problems that beset open, complex, and dynamic systems, where problem formulation and objective setting are difficult, and outcomes are ambiguous and temporary.⁴⁴ If the results framework is forced on latter type of problems, it gives a false appearance of certainty, and its conclusions are unreliable for decision making and evaluation.⁴⁵ Difficulties with formulating objectives and choosing performance indicators in the urban transport projects reviewed here may stem at least in part from the fact that urban transport systems are complex, and interventions therein cannot be fitted easily (if at all) into a set of one-to-one teleological relations which is the hallmark of the results approach.⁴⁶ If this is true, then the compulsory use of the results framework for these projects constitutes an institutional bias against them, with negative implications for in-house resource allocation, and deleterious multiplier impacts on the development work in this domain.

⁴⁴ On this subject, besides the original paper by Rittel and Webber (1973), it is worth consulting Schon (1983) and Schon and Rein (1995)

⁴⁵ Boulding (1974)

⁴⁶ The fact that difficulties were experienced in proposing core indicators for urban transport, a part of a Bank-wide effort, is in support of this hypothesis. Of course, there are some interventions where a method of having numerical targets can be quite useful, alone or in sets, e.g. diverse operational and financial indicators used by public transport companies.

Box 14: ISSUES WITH THE RESULTS FRAMEWORK

- Inadequate rigor in applying the results framework to urban transport projects reviewed in this study, especially poor match between stated development objectives, project instruments and measures of performance
- Unresolved relations between the results-based evaluation and standard project evaluation methods, economic and financial; this may involve redundant efforts, but the two methods may also be inconsistent and give contradictory judgements on projects
- Poor “conceptual” fit between the results approach and Bank interventions in urban transport systems, due to complexity of the latter; may lead to an institutional bias against development projects in this domain

10 STRATEGIC CONSIDERATIONS

Ever since World Bank and its clients adopted the concept of a country assistance strategy to organize and manage development lending, the strategic approach expanded to more and more domains of activity in the institution, be these economic sectors, cities or rural areas, or themes like poverty and environment. The trend is for further strengthening of this approach, in its two dimensions: the relation of individual projects and the relevant strategies, and evaluation of strategies themselves, in the light of project experience and other developments.

Going beyond the success rating of individual urban transport projects, a 10-year time-slice of the urban transport program is large enough to pose a question on the relation of these projects to the Bank strategy for this domain. Did these projects follow the strategy? A difficulty in answering this question for urban transport lending is that there is no formal Bank strategy for this domain of activity, “formal” in the sense that it was approved by the Board of Directors. In fact, urban transport is not considered a sector, but a “theme” within the transport sector. The latest transport sector strategic document that passed the Board’s muster is *Sustainable Transport – Priorities for Policy Reform*, but urban transport does not get a very detailed treatment therein.⁴⁷ Other milestone documents with strategic aspects include *Cities on the Move* and *Transport for Development - The World Bank Group’s Transport Business Strategy 2008-2012*.⁴⁸ None of these documents, however, contains an explicit urban transport strategy, not even *Cities on the Move*, otherwise a thorough and complete treatment of the subject matter.

For the purpose of this paper, “faute de mieux”, an existing provisional strategy was used as if it were a formal one. This strategy, summarized in the box below, was induced from a sample of recent operations, while drawing on

⁴⁷ World Bank (1996)

⁴⁸ World Bank (2002) and World Bank (2008a), respectively.

the ideas and policy stances contained in *Cities on the Move*. It was published in 2008 by the Transport sector Board, as a technical paper --A Framework for Urban Transport Projects – Operational Guidance for World Bank Staff.⁴⁹ The key objective of this strategy, inspired by a set of economic growth, poverty, energy and environmental concerns, is to maintain and increase the competitiveness and use of non-motorized and public transport modes relative to individual motor vehicles, thus increasing the long-term sustainability of urban transport systems. For public transport modes, the strategic orientation specifically is towards private provision of services, while keeping in public hands the planning and regulatory controls, and ownership of infrastructure (for the rapid transit category and its variants). Interventions in the road and traffic systems are consistent with this strategy as long as the cited key aim is respected, be this in terms of road space allocation between transport modes, or in terms of pricing policies as a means to manage congestion and modal split, and generate revenue.

BOX 15: URBAN TRANSPORT STRATEGY

The dominant strategic objective of the World Bank in the field of urban transport is to increase the competitiveness and use of inclusive and “clean” modes, such as public transport services, walking and biking relative to individually owned and used motor vehicles. The underlying, higher-level objectives include a mix of growth, poverty, energy and environmental concerns.

The approach features a selection of policy, institutional and investment instruments, the highlights being as follows:

1. Allocation of street space in favor of public transport and non-motorized modes, both for the existing urban road system as well as in expansion projects;
2. Pricing policies for parked and moving vehicles, to ration scarce road space and reflect the true cost of private motorized vehicle use;
3. Public/private partnerships in the regulation and provision of public transport services: for-market, regulated competition with privately provided operations and a strong public role to protect the community interest in both the transport and environmental spheres;
4. Objective-based and viability-tested fare/subsidy policies in public transport services, stressing targeting and links to the social assistance system for those in need;
5. Creation of feedback loops from transport demand to resource mobilization (fuel taxation, congestion charges) and other funding mechanisms;
6. Creation and empowerment of a range of city-based institutions, from traffic management departments and public transport regulatory bodies to mechanisms or institutions with area-wide, cross-modal responsibilities.
7. Developments of tools and processes for management and planning of urban transport systems.
8. An array of supporting investments, some in roads and public transport infrastructure and equipment, and others involving capacity building, selected so as to make coherent wholes with the above listed policy and institutional initiatives.

Adapted from: World Bank (2008b). *A Framework for Urban Transport Projects – Operational Guidance for World Bank Staff*. Transport Paper TP-15. Transport Sector Board. Washington, D.C.

⁴⁹ World Bank (2008b).

Seen in this perspective, the majority of free-standing urban transport projects in the 1999-2009 program fits comfortably under the global strategic umbrella. Adherence was at its strongest and most advanced in operations that focused on public transport systems. Hence the highly purposeful and strategically conscious urban transport program in the Latin America and Caribbean region has the closest fit, as do all the newer projects in the Africa, South Asia and East Asia regions. This holds for both strains of public transport projects, those that seek to re-regulate “organic” public transport operators in Latin American and African cities, or those who pursue the unshackling of hitherto public-owned systems, to help them reach their full service potential and “greener” functioning. Individual projects in various regions (Hanoi, Mumbai) also have a good fit with the strategy, as do all projects that use GEF-grants as catalysts to get to larger and multi-city operations with strong public transport, non-motorized and climate change concerns.

Adherence to the strategy was weaker when it came to traffic management operations. These projects, whose numbers are dwindling, worked on improving traffic flow and safety by low-cost means. They did not venture into activities oriented towards sustainability, e.g. modal split management through re-allocation of street space, or traffic control set to give priority to public transport and non-motorized modes. The same observation holds for most projects dealing with urban roads, where concerns for maintenance budgets and performance-based contracts seemed to exhaust the policy agenda. This may be due to the fact that the majority of these projects (China excepted) was done in African cities, where the poor state of roads and weakness of institutions do not leave much space for upper reaches of the policy agenda.⁵⁰ Altogether, road projects eschew topics like the geometric design standards *vis-à-vis* modal split management, the mechanisms of urban road funding and user charging, and the relation between road planning and land use planning.⁵¹

Given their limited involvement with public transport services, including investments in fleet and infrastructure, the street priority and regulatory aspects, the Chinese projects in the 1999-2009 program are at the strategic “fringe”. The overall program in China in this time slice was focused on urban road investments and, a strategy of accommodating motorization. This has been a matter of national development policy, as well as its unprecedented results in terms of incomes and expenditures on motor vehicles. In the non-

⁵⁰ Or urban road investments are used to leverage non-urban transport policies, as seen in large road projects in countries as different as Argentina and Botswana.

⁵¹ The Lagos project made the strongest effort in the 1999-2009 program to address road funding, using an incremental improvement approach. No project included a study to look at urban road funding rigorously, much less attempt a full-scale reform. National studies of road user charges are done routinely, but the routine does not focus on urban road networks. Congestion charging is still off the study agenda. As for urban development, only two projects have components that address land use, the Amman Corridor Project in Jordan, and Hanoi Urban Transport Project in Vietnam.

investment sphere, the Chinese projects were more involved with fiduciary and safeguard matters than with urban transport policies and institutions. This is in part due to a situation where the clients prefer to keep policy and institutional initiatives away from Bank-funded operations, and in part to urban public transport services playing a relatively modest role in most client cities. Also, the program tended to proceed by working with new cities, and hence was continuously moving forward the wave of capacity-building and idea transfer frontier. In the Chinese context, this was a necessary stage. The involvement of projects with public transport reforms and the allocation of street space may have been limited, but the seeds sowed through the dialogue and technical assistance are likely to facilitate the current emergence in China of a new national approach to urban transport management and planning. Now that the country's motorization is entering a more mature phase and the importance of public transport is on the rise, a re-positioning to address sustainability concerns is evident. The "fringe" Chinese program appears to be on a convergent path with the global strategy. This is best seen in the newest operation in the period under study, the China-GEF-World Bank Partnership Project (2008), which combines strategy building at the national level with pilot BRT projects in 14 cities and one province. It remains to be seen whether this initiative, still at an early stage, will lead to successor projects with deeper policy and institutional involvement.

Looking at the presence of individual elements of the global strategy in this set of projects, it is seen that urban transport pricing and funding have had but a modest airing. Examples for public transport services include initiatives for integrated public transport fares under several Brazilian projects, and –most recently- the ambitious attempt to use a large policy loan to leverage a national urban transport fund in Mexico. The fact that some of the most visible projects set around the BRT have only a little to do with prices and sources of funds can be explained by the fact that these systems do not require operating subsidies and the public-sourced infrastructure investment is on a small-to-modest scale.

Box 16: FIT OF PROJECTS WITH STRATEGY

- Overall a good fit between the majority of projects with the strategy
- Latin American and newer projects in Africa and South Asia have the best fit
- Chinese projects on the strategic "fringe" but on a converging path
- But: parts of a strategic agenda barely touched or not at all
 - urban transport pricing and funding
 - motorization restraint
 - urban road user charges both as a means of restraint and source of funds
 - road planning linked to transport sustainability and land development
- if a substantial "green" orientation is wanted (and it may be very much needed on both energy and climate change grounds), a much more aggressive stand relative to the use of individual motorization will be required

The absence of focus on charging and funding for urban roads in project work (and analytic services) is of more concern. Congestion charging, it may be said, is well down the line of priorities. In addition to requiring considerable institutional sophistication, this instrument may not have reached its relevance simply because congestion in many cities with the most ambitious projects does not come from cars but from a plethora of public transport vehicles. The regulatory reforms undertaken in much of this program, if successful, may buy some time before the rising congestion calls for a stronger medicine. This stand should be subject to careful scrutiny. The whole topic of managing and planning urban roads, inclusive of charging, funding and linkages to land development, is on a critical path to sustainability. Focusing on public transport systems is of essence, but it is not sufficient. The North American and European experiences show that, once the accommodation of individual motorization and spread-out development pass a certain tipping point in terms of modal split, it is very difficult to reverse the course even with public transport services of highest quality. Engagement with a broad urban road agenda from a sustainability angle is a must. The time to make decisive moves is when the market share of individual motor vehicles is still low and cities are spatially still in the fluid stage. If a substantial "green" orientation is wanted, and it may be warranted on both energy and climate change grounds, a much more aggressive stand relative to individual motorization will be required.

REFERENCES

- Arturo Ardila (2007). "How Public Transportation's Past Is Haunting Its Future in Bogotá, Colombia". *Transportation Research Record #2038*. Transportation Research Board, Washington, DC, pp 9-15.
- Kenneth Boulding (1974). "Reflections on Planning: The Value of Uncertainty". *Technology Review*, October-November
- Albert O. Hirschman (1982). *Shifting involvements: private interest and public action*. Princeton, N.J.: Princeton University Press.
- A.D. May and M. Roberts (1995). "The design of integrated transport strategies" *Transport Policy*. 2 (2)
- A.D. May et al (2005), *Decision Maker's Guidebook*. Prospects, Report to the European Commission under 5th Framework – EESD.
- Slobodan Mitric (2008). *Urban Transport for Development: Towards an operationally-oriented strategy*. Transport Paper TP-22. Energy, Transport, and Water Department, Sustainable Development, World Bank, Washington, D.C.
- Mancur Olson (1971) [1965]. *The Logic of Collective Action: Public Goods and the Theory of Groups* (Revised edition). Harvard University Press. Cambridge
- Horst Rittel and Melvin Webber (1973). "Dilemmas in a General Theory of Planning" *Policy Sciences*, Vol. 4, pp. 155-169.
- Donald Schon (1983). *The Reflective Practitioner*. Basic Books. New York
- Donald Schon and Martin Rein (1995). *Frame Reflection: Towards a Resolution of Intractable Policy Controversies*, Basic Books, New York.
- World Bank (1975). *Urban Transport – Sector Policy Paper*, Washington, DC
- World Bank. (1986). *Urban Transport: a World Bank Policy Study*. Washington, D.C.
- World Bank (1996). *Sustainable Transport – Priorities for Policy Reform*. Washington, D.C.
- World Bank (1997). *Republic of Tunisia – Transport Sector Strategy Study*. Report No. 14846-TUN, Private Sector Development, Finance and Infrastructure Division, Middle East and North Africa Regional Office, Washington, D.C.

- World Bank (2000). *Cairo Urban Transport Note*. Report 30453. Transport Group, Infrastructure Department, Middle East and North Africa Region. Washington, D.C.
- World Bank (2002a). *Cities on the Move – A World Bank Urban Transport Strategy Review*. Washington, D.C.
- World Bank (2002b). *Urban Transport in the Europe and Central Asia Region: World Bank Experience and Strategy*. Report 25188-ECA, Infrastructure and Energy Services Department, Europe and Central Asia Region. Washington, D.C. December
- World Bank. (2008a). *Transport for Development - The World Bank Group's Transport Business Strategy 2008-2012*. Washington, D.C.
- World Bank (2008b). *A Framework for Urban Transport Projects – Operational Guidance for World Bank Staff*. Transport Paper TP-15. Transport Sector Board. Washington, D.C.
- World Bank (2008c). Royame du Maroc – Secteur des Déplacements Urbains: Note de Stratégie Sectorielle. Rapport No. 40199-MOR. Bureau Regional Moyen-Orient et Afrique du Nord, Groupe Transport et Urbanisme
- World Bank Independent Evaluation Group (2006). *2006 Annual Report on Operations Evaluation*. Washington, DC

LIST OF ABBREVIATIONS

AFR	Africa Region
APL	Adjustable Program Loan
DFID	Department for International Development (UK)
DPL	Development Policy Loan
EAP	East Asia and the Pacific Region
ECA	Europe and Central Asia Region
GEF	Global Environment Facility
IEG	Independent Evaluation Department, World Bank
ICR	Implementation Completion Report
IDA	International Development Association
LAC	Latin America and the Caribbean Region
MENA	Middle East and North Africa Region
SA	South Asia Region
SIL	Standard Investment Loan
TAL	Technical Assistance Loan
TRSP	Transport Research Support Program
WB	World Bank

ANNEX 1: URBAN TRANSPORT PROJECTS FUNDED BY THE WORLD BANK, 1999-2009

ID	Project name	Country	Instrument	WB (US\$m)	cmtmt.	Appr. year	Clsng. Year	ICR	O-Rating
AFRICA REGION									
P055472	Urban Mobility Improvement Project	Senegal	APL		70	2000	2008	a	MU
P074490	Douala Infrastructure Project	Cameroon	SIL		56.4	2002	2009	a	S
P074963	Lagos Urban Transport Project	Nigeria	SIL		150	2002	2010	a	HS
P092509	Ghana Urban Transport Project (2)	Ghana	SIL		45	2007	2012		
P103633	Second Central Transport Corridor	Tanzania	SIL		190	2008	2011		
P102368	Integrated Transport Project	Botswana	SIL		186	2009	2020		
EAST ASIA AND PACIFIC REGION									
P003614	Guangzhou City Center Transport Project	China	SIL		200	1998	2008	a	S
P004833	Urban Transport Improvement Project	Vietnam	SIL		42.7	1998	2005	a	S
P041890	Liaoning Urban Transport Project	China	SIL		150	1999	2005	a	S
P045915	Urumqi Urban Transport Improvement Project	China	SIL		100	2000	2007	a	S
P056596	Shijiazhuang Urban Transport Project	China	SIL		100	2001	2008	a	MS
P057731	Metro Manila Urban Transport Integration Project	Philippines	SIL + grant		61.3	2001	2010	a	MS
P069852	Wuhan Urban Transport Project	China	SIL		200	2004	2009	a	S
P040599	Second Tianjin Urb Dev and Environment Project	China	SIL		150	2006	2011		
P099992	Liaoning Medium Cities Infrastructure Project	China	SIL		218	2006	2011		

ID	Project name	Country	Instrument	WB (US\$m)	cmtmt.	Appr. year	Clsng. Year	ICR	O-Rating
P083581	Hanoi Urban Transport Project	Vietnam	SIL		155.2	2007	2013		
P092631	Xian Urban Transport Project	China	SIL		150	2008	2015		
P090335	China-GEF-World Bank UT Partnership Project	China	Grant		21	2008	2013		
P112838	Second Wuhan Urban Transport Project	China	SIL		100	2010	2015		
EUROPE AND CENTRAL ASIA REGION									
P050508	Urban Transport Project	Uzbekistan	SIL		29	2000	2006	a	S
P050719	Kyrgyz Urban Transport Project	Kyrgyz Rep.	SIL		22	2000	2005	a	S
P046061	Moscow Urban Transport Project	Russia	SIL		60	2001	2009	a	S
LATIN AMERICA AND CARIBBEAN REGION									
P006872	Bogota Urban Transport Project	Colombia	SIL		65	1996	2001	a	HS
P039584	Buenos Aires Urban Transport Project	Argentina	SIL		300	1997	2011		
P043421	Rio de Janeiro Mass Transit Project	Brazil	SIL		230	1998	2009	a	MS
P048869	Salvador Urban Transport Project	Brazil	SIL		150	1999	2007	a	MU
P060221	Fortaleza Metropolitan Transport Project	Brazil	SIL		85	2001	2010	a	MS
P051696	São Paulo Metro Line 4 Project	Brazil	SIL		304	2002	2011		
P059161	Climate Friendly Measures in Transport	Mexico	Grant		5.8	2002	2009	a	HS
P035740	Lima Urban Transport Project	Peru	SIL		45	2003	2011		
P074021	Lima Transport Project - parallel GEF grant	Peru	Grant		7.9	2003	2010		
P073985	Sustainable Transport and AQ for Santiago	Chile	Grant		7	2003	2009	a	MS
P074726	Bogota Urban Services Project	Colombia	SIL		100	2003	2011		
P082466	Integrated Mass Transit Systems Project	Colombia	SIL		757	2004	2012		
P088032	Buenos Aires Infrastructure Susty. Dev. Project	Argentina	APL		250	2004	2013		
P082412	Santiago Urban Transport	Chile	DPL		30.2	2005	2006	a	MS
P086689	Santiago Urban TA Project	Chile	TAL		4.8	2005	2011		
P082656	Mexico City Insurgentes BRT CF Project	Mexico	Grant		2.4	2005	2015		

ID	Project name	Country	Instrument	WB (US\$m)	cmtmt.	Appr. year	Clsng. Year	ICR	O-Rating
P083979	Urban Infrastructure Project	Bolivia	SIL		30	2006	2011		
P106038	Sao Paulo Trains and Signaling Project	Brazil	SIL		663	2008	2013		
P096017	LAC Reg. Sustainable Transport and AQ Project	regional	Grant		2.9	2008	2012		
P114008	Sustainable Transport and Air Quality Project	Argentina	Grant		4	2008	2012		
P095485	Metropolitan Areas Urban Transport Project	Argentina	APL		150	2009	2016		
P111996	Rio de Janeiro Mass Transit Project II	Brazil	SIL		211.7	2009	2014		
P115608	Framework for Green Growth DPL	Mexico	DPL		1504	2009	2010	a	S
P114012	Sustainable Transport and Air Quality Project	Mexico	Grant		5.4	2009	2013		
P114010	Sustainable Transport and Air Quality Project	Brazil	Grant		8.5	2009	2013		
MIDDLE EAST & NORTH AFRICA REGION									
P064082	Transport Sector Project (APL-Phase 2)	Tunisia	APL		37.6	2001	2009	a	MU
P072458	Transport Technical Assistance Project	Algeria	TAL		8.7	2001	2007	a	U
P034038	Urban Transport Development Project	Lebanon	SIL		134.7	2002	2011		
P081505	Amman Development Corridor Project	Jordan	SIL		71	2004	2011		
SOUTH ASIA REGION									
P009524	Dhaka Urban Transport	Bangladesh	SIL		177	1999	2005	a	S
P050668	Mumbai Urban Transport Project	India	SIL		542	2002	2011		
P107101	Kabul Urban Roads	Afghanistan	grant		0	2008	2011		
P098151	Clean Air and Sustainable Environment Project	Bangladesh	SIL		62.2	2009	2014		
P110371	Sustainable Urban Transport Project	India	SIL		105.2	2009	2014		
P100589	Sustainable Urban Transport Project - GEF	India	grant		20.3	2009	2014		

Notes:

1. This study focused on projects approved in 1999-2009, but some earlier or later projects were profiled, being parts of a sequence
2. Project and loan statistics cited in the report are based only on projects approved in 1999-2009

3. Bank commitments are a sum of originally approved loan amount plus subsequently approved additional loans
4. For projects with multi-sector components, the commitments cited are loan totals
5. The closing year is the latest, original or revised, shown in the Project Portal
6. The symbol "a" in the ICR column means that an Implementation Completion Report is available (sometimes in draft version only)
7. O-rating column heading means "outcome rating"

ANNEX 2: PROJECT CAPSULES FOR THE AFRICA REGION

1. Senegal – Urban Mobility Improvement Project (2000-2008)
2. Cameroon – Douala Infrastructure Project (2002-2009)
3. Nigeria – Lagos Urban Transport Project (2002-2010)
4. Ghana - Urban Transport Project (2007)
5. Tanzania - Second Central Corridor project (2008)
6. Botswana – Integrated Transport Project (2009)

URBAN MOBILITY IMPROVEMENT PROJECT (Po55472)	
Country and region:	Senegal, AFR
Borrower:	Government of Sénégal (Ministère de l'Équipement et transports)
Implementing agency and arrangements:	Conseil exécutif des Transports Urbains de Dakar (CETUD) for parts A, D and E cited below ; Société Nationale du Chemins de Fer du Sénégal (SNCS) for part B ; Association de Financement (AF), created under the Project, for part C (leasing scheme). Funds for part B passed as a grant to SNCS, based on a Subsidiary Agreement. Funds for part C relate to AFs (see below).
Concept review date:	February 2, 1999
Board approval date:	May 25, 2000
Effectiveness date:	May 14, 2001
Closing date:	December 31, 2005 (original); September 30, 2008 (actual)
Instrument category:	Adjustable Program Loan
Project structure by sector:	Roads and highways, 64%; railways, 21%; sub-national government administration, 15%
Project total cost in US\$:	103.0m For Phase I of APL; 31.4m for Phase 2
WB commitment in US\$:	70m (credit) for Phase I of APL; 25.0m (credit) for Phase II (indicative)
Co-financiers:	Agence Française de Développement, US\$17.3m, Nordic Development Fund, US\$7.60m; others, US\$4.5m; Government of Sénégal, US\$3.6m
Final project cost in US\$:	156.9m (Phase 1)
Amount disbursed in US\$:	74.3m (Operations Portal); 75.7m (ICR)
Diagnostic highlights	Dakar grew at 4% per annum over last 15 years, reaching 2.2m in 1998, with 3.2m forecast for 2010. Roads and public transport services did not keep up with growth, resulting in congestion, pollution and high accident rates. Situation made even more difficult by topographical constraints of the Cap-Vert peninsula. 4.3m daily trips (1998), of which 56% are motorized, 80% by public transport – public owned buses, private minibuses (cars rapides) and a single suburban railway line; about 27% people walked long distances to work. Poor citizens, who tend to live in suburban areas, were the hardest hit, either as passengers or as pedestrians. Notably poor safety on and along the railway line. Transport system management, investments and policies in disarray, reflecting weak institutions.
Development objectives:	Overall objectives: improve efficiency, safety and environmental quality of urban transport in Dakar, focusing on the urban poor; and improve road safety in Thiès and Kaolack. Specific objectives are to (i) promote private activities in urban public transport; and (ii) improve safety of pedestrians and road users.
Investment components:	(A) Roads and traffic (US\$42.4m): 1. road rehabilitation - rehabilitation and construction of road infrastructure, focusing on pedestrian and public transport routes; 2. traffic safety action plan for Dakar, Thiès and Kaolack – black spot management; speed-reducing devices; sidewalks, pedestrian bridges and other infrastructure for non-motorized traffic; and awareness campaigns. 3. traffic management improvements focused on public transport stops and terminals, intermodal transfer

	<p>facilities; preparation of an action plan to increase commercial speed of public transport services; and preparation of an Urban Mobility Plan for Dakar.</p> <p>(B) upgrading infrastructure of the Dakar-Rufisque suburban railway line (US\$21.1m), incl. construction of a third track; elimination of grade crossings, rehabilitation of signaling and terminals, relocation of a freight terminal; fencing along 24 km of the line; and related studies and supervision;</p> <p>(C) minibus ("cars rapides") purchase, rehabilitation and leasing scheme (US\$25.2m);</p> <p>(D) Air Quality Management program (US\$9.4m) including construction and equipment of monitoring centers, establishment of a pollution observatory, awareness campaigns; and</p> <p>(E) technical assistance for capacity building (US\$4.7m).</p>
Policy components:	<p>(i) introduction of a leasing scheme for minibuses;</p> <p>(ii) concessioning of suburban railway services</p>
Institutional components:	<p>(i) Reformulation of the 1997 law which established CETUD;</p> <p>(ii) preparation of an Urban Air Quality Management Strategy</p>
Performance indicators:	<p>Source: ICR (see comments below)</p> <p>PDO indicators:</p> <ol style="list-style-type: none"> (1) Traffic congestion and travel time in Dakar (2) Market share of public transport and passenger satisfaction (3) Air pollution levels (4) Accidents per capita (5) Cost of externalities generated by motorized transport as % of GDP (regular update of the 1998 study on cost of externalities) <p>Intermediate outcome indicators:</p> <ol style="list-style-type: none"> (1) Increased public transport passenger throughput (measured by commercial speed) (2) CETUD management capacity (3) Effectiveness and efficiency of urban roads (4) Number of buses leased <p>Triggers for Phase 2:</p> <ol style="list-style-type: none"> (1) 75% of Phase 1 civil works carried out (2) Road maintenance budget committed (3) Urban Mobility Plan formally adopted (4) 90% of bus lease payments made (5) 80% of <i>cars rapides</i> financed through the leasing scheme operate under concession agreements (6) Adoption of a coordination plan for public transport services (7) Concessioning of the suburban railway line to a private operator (8) Urban Transport Policy Letter of September 1996 updated relative to Air Quality Management (9) 1997 Law establishing CETUD updated
Additional project features	<p>The minibus leasing scheme involves the creation of "Association de Financement" (AF) – a vehicle leasing cooperative fully owned by groups private minibus operators. AF would purchase 300 new minibuses, or 600 rehabilitated/refurbished vehicles, thence lease them to its members, with up to 6 years leases, interest rates of not less than 6% per annum, and 25% operator participation</p>
Complementary operations	<p>The Project falls within the Sub-Saharan Africa Transport Policy Program (SSATP) coordinated by the Bank. Dakar is one SSATP's pilot cities.</p> <p>The Project is a follow up on the Urban Transport Reform and Capacity Building Technical Assistance Project (Po44383), with a loan of US\$6.6m (equivalent)</p>

	<p>approved in 1997. It closed in 2001. This Project's main objective was to assist in the provision of more affordable, reliable and safer public transport services in the Dakar metropolitan area through: (i) strengthening the institutional and regulatory framework and developing institutional coordination among national ministries, local government, operators, and the private sector industry; (ii) privatization of the public transport company (SOTRAC); (iii) stakeholders' involvement in decision-making and financing the sector; (iv) developing road safety action plans and traffic management measures; and (v) pilot investment targeted at the promotion of public transport services. CETUD was established in 1997 under this Project, as a "professional public organization to implement and monitor the public transport policy," a first such institution in Sub-Saharan Africa. The Project was rated satisfactory at entry and also upon completion.</p>
Results at completion:	<p>Moderately unsatisfactory outcome rating, with substantial risk to development outcomes. Government and Bank performance both received moderately unsatisfactory ratings. Triggers for the Phase 2 were not met.</p> <p>At completion: (i) most of road and traffic investments were completed; (ii) 505 new mini-buses were in operation under the leasing scheme, amounting to about 20% of the total fleet and involving 250 operators; (iii) air quality laboratory was in operation; and (iv) 90% of upgrading works on suburban railway were completed.</p> <p>Results relative to performance indicators:</p> <p>PDO indicators:</p> <ol style="list-style-type: none"> (1) Traffic congestion and travel time in Dakar, measured on 4 axes: target not met; commuters lost 30% more time in 2008 than in 2000. (2) Market share of public transport and passenger satisfaction: target not reached. The market share declined from about 73% to about 60%, relative to the target of 78%. In absolute terms, number of passengers increased by 12%. (3) Air pollution levels: target not reached, due to a surge in number of vehicles, from about 40,000 in 1997 to 98,000 in 2007 (4) Accidents per capita: target exceeded. Injuries dropped by 40% and deaths by 68%. (5) Cost of externalities generated by motorized transport as % of GDP (regular update of the 1998 study on cost of externalities): target not met, in part because of methodological difficulties. Costs of congestion were estimated to have increased by 32% since 2000. <p>Intermediate outcomes:</p> <ol style="list-style-type: none"> (1) Increased public transport passenger throughput (measured by commercial speed): target not met. Commercial speed decreased by 30%. (2) CETUD management capacity: target partially met, based on number of staff, mandate and capacity. (3) Effectiveness and efficiency of urban roads: target 95% met, based on the size of the works program implemented. (4) Number of buses leased: target exceeded by 68%. 505 minibuses were provided vs. 300 planned. Reimbursement rate for loans to minibus operators was 100%. <p>QAG review found the project unsatisfactory at entry, focusing on the insufficient preparation of procurement and financial arrangements, and an unrealistic assessment of CETUD's capacity to manage a project of this size and complexity, including multiple donors. Similarly, minibus operators were not ready to participate in the leasing scheme. These shortcomings, especially CETUD's low capacity (3 technical staff at the outset), took a toll on the pace of implementation. There was acceleration after 2003, and after the mid-term review.</p> <p>The minibus leasing scheme was the most successful component of the project. Ingredients of success: the scheme was designed with operators' input, provided TA programs for operators and drivers, and included an operational restructuring of the service network.</p>

	<p>Outcome indicators assumed a static traffic environment, in addition to being generally complex and difficult to measure, thus dooming the project to nominal failure. Conversely, a parallel road improvement program financed by the Government contributed to positive impacts of actions done under this project. The project actually did better than the indicators suggest. One of key lessons flagged in the ICR is the imperative of having simple and easy to measure indicators.</p> <p>Risks in post-completion phase have to do with the Government and municipalities having low capacity (in terms of staff and funds) to maintain roads and sidewalks improved through the project. The planned Road Fund was not set up. Also, CETUD still has insufficient capacity to coordinate and manage sector funding.</p>
Team	Patrick Bultynck (lending, SPN); Christian Diou (SPN, ICR); Joseph Bredie (ICR)
Profile date and authors:	April 6, 2010; edited October 20, 2010; Slobodan Mitric

Links to key documents of the Senegal Urban Mobility Improvement Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2000/06/05/000094946_00051905305041/Rendered/PDF/multi_page.pdf

Credit Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/AFR/2010/02/25/DD3C5544FB8079B385256F030012B45A/2_o/Rendered/PDF/DD3C5544FB8079B385256F030012B45A.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2009/05/27/000333037_20090527024311/Rendered/PDF/ICR9550P0554721CoDisclosed051221091.pdf

COMMENTS

Performance indicators are discussed in several places in the PAD, each time with variations: Chapter A3 (page 6), Annex 1, Annex 11. It is likely the list went through changes during implementation. The version cited here is from the Implementation Completion Report.

Annex 11 of the PAD and various other documents refer to the objective of improving the financial capacity of the urban transport sector, specifically by increasing resources of Urban Transport Development Fund by 75% 48 months after credit effectiveness (PAD, p. 70). There is no mention of this in the Credit Agreement (i.e. as a dated covenant) and it appears to have fallen out of the indicators table in the ICR

Similarly, it is not clear whether implementing the concession of the suburban railway is a part of the project or not. ICR states (in para. 49) that the suburban railway “received new trains and locomotives” under the Project, but this is not a part of project description, nor is it clear what happened re private concession.

DOUALA INFRASTRUCTURE PROJECT (Po74490)	
Country and region:	Cameroon, AFR
Borrower:	Republic of Cameroon
Implementing agency and arrangements:	Ministère du Développement Urbain et de l'Habitat (Ministry of Urban Affairs), delegated to the Urban Community (Government) of Douala (UCD)
Concept review date:	September 18, 2001
Board approval date:	July 18, 2002
Effectiveness date:	March 21, 2003
Closing date:	December 31, 2008 (original); December 31, 2009 (actual)
Instrument category:	SIL
Project structure by sector:	Roads & highways, 83%; sub-national government administration, 16%; central government administration, 1%.
Project total cost in US\$:	72m
Financing plan in US\$:	Borrower: 15.6m; IDA credit (Credit 36940-CM): 56.4m (equivalent to SDR 42.5m)
Final project cost in US\$:	84m
Amount disbursed in US\$:	63.1m (Source: ICR; Project Portal cites 66.2m). The amount is larger than the committed credit due to foreign exchange variations). The Borrower disbursed 20.5m, and other external partners (City Alliance and French Debt Relief Fund) together contributed 0.4m
Diagnostic highlights	<p>Douala, with about 2m population, accounts for 80% of Cameroon's industrial activities. Both population and motorization are on the rise, the former at very high 6-7% per annum. The city's road infrastructure was neglected during the recession of 1985-95, which added onto already difficult features of climate, soil and topography. Even without the recession, the Urban Community of Douala has meager resources: while it contributes 60% to the country's fiscal revenue, it gets back only 1%. Poor urban mobility for both people and goods has endangered the performance of the city's port, a major domestic, regional and international transport node, at the time when economic recovery has commenced. Especially bad are road connections between the port and the industrial areas of the city, with average daily traffic in relevant corridors ranging from 25,000 to 32,000 vehicles, 50% of which are buses and 8% are heavy trucks. The motor vehicle fleet is old. Public transport consists mainly of shared taxis and moto-taxis, following the demise of the public transport company SOTUC. Traffic situation is chaotic, a combined effect of poor roads, absence of traffic management, and ill-disciplined drivers' conduct in both driving and parking.</p> <p>Projects funded by the European Community and the Bank had helped create a Road fund to finance the works on the main intercity network and capacity building for small and medium transport enterprises, but urban roads were not included therein.</p>
Development objectives:	<ul style="list-style-type: none"> (i) Improve efficiency of Doula's transport system, focusing on connections between port of Douala and its hinterland; (ii) Strengthen the capacity for urban road management and maintenance
Investment components:	<p>The project consists of three components:</p> <ol style="list-style-type: none"> 1. Execution of an urgent urban road rehabilitation program in Douala (\$58.1m). The program covers about 23 km of existing primary roads

	<p>connecting the port and the industrial areas to the other districts of the city and to the intercity road network. The works include rebuilding pavements; rehabilitation of intersections, sidewalks and the drainage system; provision of parking places for buses and taxis; installation of traffic lights and signs; and diverse safety improvements.</p> <ol style="list-style-type: none"> 2. Provision of technical assistance for capacity building for urban road management, rehabilitation and maintenance, and preparation of an urban development strategy and program for Douala and other cities (\$12.9m) 3. Provision of technical assistance for Project implementation and management, monitoring, and audits; and for financial and organizational audits of UCD. (\$0.4m).
Policy agenda:	<p>Reform of urban road maintenance funding by having UCB establish a Road Maintenance Fund with a specified initial transfer <u>from the national budget</u>, thence annual replenishments subject to IDA's clearance (Credit Agreement, Section 4.02). Specific amounts were stated in a side letter signed by the Government and the IDA. Initial contributions were conditions of loan effectiveness.</p> <p>Design alternative of addressing the broader urban sector funding through this Project was considered and rejected in favor of a narrower approach, but technical assistance to prepare a subsequent urban project (see below) was added in 2006.</p>
Institutional agenda:	<ol style="list-style-type: none"> (1) capacity building in urban road management in UCD and line ministries; and (2) preparation of an urban development strategy
Restructuring	<p>The Project was restructured in 2006, under the same objectives, to make use of cost savings that emerged after the main road contracts were signed. The main changes:</p> <ol style="list-style-type: none"> (1) additional road links were added to the Project; (2) a pilot program focusing on a low-income settlement was added, comprising of road paving, walkways, sewage drain, pipe-born water network for public taps, and cables for street lights; (3) the covenant relative to road maintenance budget was amended to reduce the target to FCFA 4.5m, reflecting the reality that amounts initially agreed focused on project roads only, did not consider delays and therefore exceeded the actual expenditures; (4) capacity building components were expanded beyond the UCD, by including the port hinterland concerns in charge of Ministries of Transport and Public Works, addressing on both infrastructure and transport services; and (5) the capacity building component focusing on urban development strategy was expanded by adding various studies related to habitat and urban management; pilot slum upgrading; and the preparation of the proposed Urban and Water Development Project.
Indicators	<p>Key performance indicators:</p> <ol style="list-style-type: none"> (1) length of primary roads rehabilitated in Douala (target: 23km); (2) travel times on the rehabilitated roads (target: reduction by about 42%, equivalent to increasing the travel speed of 30 km/h, leading to a saving of 4.7 million vehicle hours per year); (3) vehicle operating costs on the primary roads of Douala (target: 42.3% reduction, amounting to savings of CEAF 21bn per year); (4) Douala road maintenance budgets and expenditures (initial target: FCFA 6bn in 2008, reduced to FCFA 4.5bn during project restructuring in 2006); (5) Set up of an operational urban road management and maintenance unit in UCD (target: 3 highway engineers plus auxiliary staff); and (6) preparation and adoption of a policy and investment program for the

	urban sector, including urban transport.
Complementary operations	<p>Transport Sector Project (P000393, 1996) invested in the most urgent (national) infrastructure and provided for the requisite pre-investment studies.</p> <p>A subsequent operation, Urban and Water Development Support Project (Projet de Développement des Secteurs Urbain et de l'Eau, P084002, 2007) further pursues the objectives relative to institutional development, city strategy and slum upgrading.</p>
Results at completion:	<p>The credit closed on December 31, 2009, following a single one-year extension. The Project had a difficult implementation experience due, in part, to continuous shortages of counterpart funds, and to a problematic relationship with a politically-connected but underperforming contractor on one of the main road rehabilitation lots. The date of loan effectiveness was postponed twice because counterpart funds were not made available to UCD. This problem was compounded by the level of stipulated payments into the Road Fund being unrelated to the actual absorption rate under contracts being executed.</p> <p>Leadership changes on the Bank team side did not help. (A Quality Assurance Group review carried out in 2004 rated the quality of supervision moderately unsatisfactory, focusing on this aspect).</p> <p>Other difficulties stem from the expansion of the project's scope agreed during the restructuring, which taxed the capacity of the PIU. There were also problems stemming from the fact that UCD was the main implementing agency, including fiduciary responsibility. Thus UCD was controlling the flow of project funds not only for its own works contracts but also for technical assistance contracts with ministries that administratively were higher and routinely refused to fall in line. The components that had least success were those requiring inter-agency coordination. Nevertheless, at the conclusion, the Project did more than anticipated in terms of its road rehabilitation output (improved core urban road network) and the traffic (level of service) outcome. It also had a very successful pilot experience with upgrading infrastructure in the poorest areas. The performance in the institutional and policy dimensions is more dappled, especially with regard to the sustainability of road funding. An arrangement has been made to follow, under the 2007 Urban and Water Project, the UCD's performance re road budgets and expenditures, and some additional institutional initiatives.</p> <p>The ICR gave a satisfactory rating for outcomes relative to development objectives, with a moderate risk for their sustainability. Bank performance was rated moderately satisfactory. The Borrower performance was rated moderately unsatisfactory, mainly because of problems with counterpart funding, political interference in contractual matters, and poor inter-agency coordination.</p> <p>Results re performance indicators:</p> <ol style="list-style-type: none"> (1) 27 km rehabilitated: target exceeded; (2) Travel speed reached 40 km/h, equivalent to 87% reduction in travel time: target exceeded; (3) vehicle operating costs were reduced by 59%: target exceeded; (4) road maintenance budget was FCFA 4.5bn in 2009 (reduction relative to preceding years, but in line with agreements reached at project restructuring in 2006): target met; (5) UCD road management unit recruited 3 highway engineers, an accountant and other staff; (6) Strategies developed for urban development, transport and road maintenance; target met. <p>Lessons cited in the ICR (selectively):</p> <ol style="list-style-type: none"> (1) In a weak institutional environment, avoid project "spread" across multiple agencies. (2) Problems with counterpart funding had dire consequences for implementation of this Project. When counterpart funding is considered risky, it may be better to increase WB financial participation (up to 100%)

	<p>then to set up conditionality which is not respected (or not in time).</p> <p>(3) Indicators for institutional building components should be articulated clearly to help monitoring and evaluation at every stage, and identify corrective actions.</p> <p>(4) Implementation of environmental safeguards would be facilitated if a corresponding set of indicators was defined at the outset, with an eye on measuring environmental aspects that may exceed what the project in question can affect.</p>
Additional project features	This project was one of the first in Cameroon with a successful scheme to compensate people affected by its implementation, essentially those who were resettled.
Team	Abdelghani Inal (lending), Jean-Francois Marteau (SPN), Peter Nqwa Taniform (ICR)
Profile date and authors:	December 6, 2010; written by Slobodan Mitric

Links to key documents of the: Douala Infrastructure Project

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2002/07/19/000094946_02062804005721/Rendered/PDF/multiopage.pdf

Credit Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/AFR/2010/03/03/14ED96969F10A31A85256F03001877FC/2_0/Rendered/PDF/14ED96969F10A31A85256F03001877FC.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2010/08/20/000356161_20100820004421/Rendered/PDF/ICR14130Po74491Codisclosed081181101.pdf

LAGOS URBAN TRANSPORT PROJECT (Po74963 and P102029)	
Country and region:	Nigeria, AFR
Borrower:	Federal Government of Nigeria (credit re-lent to Lagos State under a subsidiary loan agreement)
Implementing agency and arrangements:	Lagos Metropolitan Area Transport Authority (LAMATA); a second subsidiary loan agreement signed between the Lagos State and LAMATA
Concept review date:	July 17, 2001
Board approval date:	November 21, 2002
Effectiveness date:	October 30, 2003
Closing date:	June 30, 2008 (orig); December 31, 2010 (actual)
Instrument category:	SIL
Project structure by sector:	General transport sector, 80%; sub-national government administration, 14%; central government administration, 3%; ports/water/shipping, 3%
Project total cost (US\$):	135m (original); revised in 2007 to 185m
Financing plan (US\$):	Borrower: 35m; IDA: 100m (Credit 37200, original) + 50m added in 2007 (Credit 37201)
Co-financiers:	None
Final project cost (US\$):	265.8m
Final amount disbursed (US\$):	150m
Diagnostic highlights	<p>Lagos metropolitan area has 12.8m-15m population, growing at 6% per annum, expected to double in the next 15 years. GDP per capita US\$317 (country); GDP per capita growth 1.2% per annum; Lagos employs 45% of the skilled manpower nationally. Poverty is estimated at 9.6m in Lagos; deeper and more severe than in the country as a whole; mostly self-employed in street trading and unskilled tasks in the informal sector. Metro area has 18 local governments (out of 21 in the Lagos State), each with its own public works department, some with Traffic Management Units (TMUs); transport matters handled by Lagos State Ministry of Transport. Motorization boomed in 1970-80s at the then peak of oil revenues, then decayed; vehicle fleet is aged and poorly maintained. User charges are limited to vehicle ownership fees, hence the overall cost recovery for the road sector is very low. Road funding is thus entirely out of sync with road use. Major potential revenue source (fuel tax) is in federal hands. The transport system is road-based, with an entry-level development of primary (limited-access) roads; the rest of the network is not differentiated functionally, and is poorly connected to primary roads; overall road density is low (0.4km per 1000 population); many areas are poorly served by roads; road space is commonly used for trade; on-street parking is unregulated. Public transport carries about 77% of motorized travel. It is informal, dominated by small-scale private operators running about 75,000 minibuses, plus diverse other small vehicles, e.g. passenger-carrying motorcycles (okadas). There are some medium-size buses (role diminishing). Private cars and taxis carry about 13%.</p> <p>All public transport vehicles operate in mixed-traffic with no protection, and stop and terminal facilities are inadequate. Fares are set by government; profit margins are low, but at the same time transport expenditures amount to about 20% of household budgets. Overall, transport in Lagos is among the world's worst: high degree of street congestion, highest accident rates in the world; poor and poorly protected street space for non-motorized travel; high levels of air/noise pollution</p>

	and oil dumping; and low-quality and unsafe UPT services. Transport infrastructure and services are considered a major constraint to the city's productivity. It is estimated that more than 100 agencies at local, state and federal level have some role in the transport system, but urban transport regulatory and managerial activities are practically absent. The fragmentation and weakness of institutions is a binding constraint on progress.
Development objectives:	<p>From the PAD: (i) improve the capacity to manage the transport sector in the Lagos metropolitan Area; (ii) enhance the efficiency of public transport network (services) such that it contributed measurably to poverty reduction.</p> <p>From the Credit Agreement: (i) improve the management of the Lagos metropolitan transport sector; (ii) enhance the public transport road network in an environmentally, socially and financially sustainable manner; (iii) enhance bus services; (iv) promote water and non-motorized transport; and (v) prepare future phases of the Program. "Program" refers to the Government's action program for urban transport in metropolitan Lagos described in a policy letter.</p>
Investment components:	(1) capacity building, for LAMATA, Lagos State Ministry of Transportation and other relevant agencies (\$27.6m); (2) road investments: maintenance and rehabilitation of about 400 km main roads (out of 632 km "declared" main network) that carry the most important public transport flows; includes traffic management on these roads and major intersections (\$98.5m); (3) technical assistance for bus serves enhancement (\$0.7m); (4) water transport promotion including rehabilitation and expansion of terminal facilities and technical assistance for privatization of Lagos State Ferry Services Corporation, and for establishment of a new regulatory framework and strategy for water transport (\$2.9m); and (5) preparation of subsequent phases of the Program (\$5.3m): Transport Master Plan for Metropolitan Lagos; Strategy for the enhanced use of intermediate means of transport in the Lagos area; an Institutional reform plan for the transport sector, including the reform of the Motor Vehicle Administration; and studies regarding resettlement for the proposed rail-based line in the Agege to Iddo corridor.
Policy agenda:	<ul style="list-style-type: none"> (i) creation of dedicated Transport Fund from sector based user charges to finance LAMATA's programs, using instruments available to the Lagos State; (ii) new framework for public transport (buses and ferries) regulation, involving the establishment of service specifications; creation of operators' route associations; and implementation of competitive service awards based on franchises or concessions; (iii) a search for new approaches for increasing the quality of public transport services, including (inter alia) route restructuring, and the provision of bus priority and exclusivity; (iv) reform of traffic enforcement; (v) preparation of a long-term transport development strategy, including (inter alia) tests to firm up the propositions to construct an urban/suburban rail network; and (vi) adding a participatory dimension to all of the above activities.
Institutional agenda:	Help LAMATA, a semi-autonomous public agency created in 2002 in the course of project preparation to become an urban transport authority, while initially focusing on the rehabilitation and maintenance of the main road network, and the regulatory reform of public transport services included in this project.
Performance indicators:	<p>Outcome/impact indicators include: (i) travel time and money spent by poor households; (ii) number of accidents per vehicle-kms; (iii) number of person-day of labor created through project-financed works. Baseline surveys to be done within 6 months of credit effectiveness.</p> <p>Output indicators re capacity building: (i) degree of LAMATA's achieving full functionality; (ii) size of financial transfers by Lagos State Government to LAMATA</p>

	<p>budget (Transport Fund), with a target of \$7m; (iii) LAMATA's operating costs as percent of overall expenditure (6% ceiling); (iv) percent of transfers to the Transport Fund coming from road user charges (100% in 2007); (v) number of Traffic Management Units set up in key local government areas; (vi) length of procurement periods per contract (to be kept under 3 months); and (vii) period to pay contractors' invoices (under 1 month).</p> <p>Output indicators re road network component: (i) km of roads rehabilitated; (ii) km of road overlays; and (iii) reduction of total delays at major junctions.</p> <p>Output indicators re bus services: (i) % of bus operations governed by the new regulatory framework; and (ii) implementation of the bus demonstration project.</p> <p>Output indicators re water transport: (i) number of jetties for small boats improved or constructed; (ii) privatization of the Lagos State Ferry Services Corporation; and (iii) award of the first ferry concession.</p> <p>Output indicators re Phase 2 preparation: (i) completion of the transport master plan for Lagos by 2004; (ii) completion and start of implementation of the strategic plan for transport sector institutions by 2004; and (iii) signature of the concession agreement for Agege to Iddo mass transit rail line by 2006.</p>
Related operations	<p>Second Lagos Urban Transport Project (P112956) was approved in June 2010. It involves an IDA credit for US\$190m, and total estimated costs of \$330m. Its development objectives are to: (i) improve mobility along prioritized corridors in Lagos; and (ii) promote a shift to more environmentally sustainable urban transport modes. This will be achieved through a combination of traffic engineering measures, management improvements, regulation of the public transport industry, and expansion and enhancement of Bus Rapid Transport (BRT) system. The project is fully blended and co-financed with a Global Environment Fund (GEF) Grant of US\$4.5m. Some of the components, estimated to cost US\$100m, will be financed and disbursed directly by the French Development Agency (AFD).</p>
Status and results:	<p>LAMATA was created in 2002, and successfully staffed. Otherwise, the Project had a slow start and less than satisfactory performance in its early stages. Counter-part funding was a major weak point. The Project was restructured twice in 2005, involving: (i) re-allocation of credit proceeds for road maintenance from Federal to State roads, following a Federal Ministry of Works decision to improve the federal network in Lagos using their own resources; (ii) dropping the dated covenant stipulating a direct transfer of user charges to the Transport Fund, allowing more flexibility in the funding arrangements and addressing this subject through a performance indicator; (iii) postponing the requirement for Lagos State Government to pay annually US\$7m equivalent from its budget and/or user charges to the Transport Fund; (iv) modifying key performance indicators to reflect the restructuring moves; and (v) increasing the credit disbursement rate to 100%. Afterwards, the Project picked up speed.</p> <p>In 2007, additional loan funds were approved to cover cost increases for road works (85%) and to expand the bus services initiative (15%), i.e. finance bus terminals; lay-byes along each route, bus depots and garages, and priority TSM measures on routes.</p> <p>The credit closing date was extended 3 times, reflecting various implementation delays. Getting LAMATA properly staffed took a few years, as did the process of transferring to it the responsibilities from other agencies. In 2007, the LAMATA law was amended to clarify the agency's functions and specifically empower it to enter into contracts with bus operators. It also took a lengthy period to set up the entire regulatory framework that complied with federal and state laws, and specifies relative roles of diverse agencies. Additional delays were encountered because of the participatory approach taken in the entire operation.</p> <p>While most project activities went as envisaged, there were unexpected but highly positive developments. The project had included preparatory studies for a rail mass transit line in the north-south corridor, with an investment of about \$130m, which had already passed feasibility tests and was considered a priority investment. In</p>

2007, following the completion of another feasibility study supported by the project, the Lagos State Government decided to construct a new Bus Rapid Transit Line. This they did and the new line, now known as Lagos BRT "Lite," became operational in March 2008, with a record breaking 15-month period from conception to completion. It is 22km long, 65% physically segregated and 20% segregated by markings. The \$40m investment costs (about \$1.8m per km) were borne by the State Government, with studies funded by the current Bank loan. Operators are private companies, based on competitively awarded contracts. As of January 2009, the line was carrying 200,000 daily passengers. Its success has been called unprecedented. A follow-up Bank project (see above) will extend and enhance the system.

Altogether, the project was implemented in great part as designed, with amendments essentially trimming it up in line with experience and additions that went beyond what was thought possible. This positive assessment holds both for the investment component and its service impacts, and for institutional/policy changes, the LAMATA being a resounding success. Its scope of activities has transcended public transport regulation and project management, dealing also with the strategy for the entire transport system, and selectively with the most critical issues, e.g. the level of cost recovery in the sector. Ultimately, the LAMATA may be the most enduring outcome of the project, with impacts going well beyond urban transport in Lagos.

Accordingly, the (draft) ICR gives the project highly successful ratings for outcomes with low or negligible risks. All other ratings are highly satisfactory.

Achievement relative to PDO indicators:

1. Time spent by poor households on travel along project corridor per trip: 30min baseline value; 24min target; 20min actual. Target exceeded.
2. Proportion of income spent on bus travel along project corridor: 20% baseline value; 15% target; 12% actual in nominal terms. Target achieved in real terms.
3. Daily bus-km franchised: 10,000 baseline value; 15,000 target; 45,000 actual. Target exceeded.
4. Work days of labor created: 390,000 baseline value; 700,000 target; 1,660,000 actual. Target exceeded.

Achievement relative to intermediate outcome indicators:

1. Functionality of LAMATA: target achieved.
2. Total annual contribution from user charges into the Transport Fund: 0 baseline value; US\$5m original (2002) target; US\$2m target revised in 2005; US\$6m in 2010. Revised target exceeded.
3. Minimal annual counterpart funding from Lagos State Government: 0 baseline value; US\$7m original (2002) target; US\$2m target revised in 2005; US\$*m in 2010. Target exceeded.
4. LAMATA's operating cost as % of overall expenditure: 0 baseline value; less than 6% target; less than 6% actual. Target met.
5. Traffic Management Units set up and operational: 0 baseline value; 4 target; 2 in 2010. Target only half achieved. Budget cuts demanded the reduction. Those that were established were responsible for the area where BRT is situated.
6. Time saved in motorized travel, in minutes per day: 0 baseline value; 10-12 target; 7-12 actual. Target achieved.
7. Passenger satisfaction on pilot bus routes: 70% target; 80% in 2010. Target met.
8. Decrease in average waiting time on pilot bus route: 10 min original target; 4 minutes target revised in 2007; 4 min in 2010. Revised target met.
9. Privatization of Lagos state ferry services: achieved in 2007.
10. Concession of ferry service operational: achieved in 2007.
11. Jetties passengers per day: 6,100 original target; 7,200 target revised in 2007; 7,200 actual in 2010. Revised target met.

	<ol style="list-style-type: none"> 12. Preparation (incl. participation and disclosure) of the transport master plan: target 2007; achieved in 2010 13. Length of roads rehabilitated: 25km target; 47.8km achieved. 14. Length of overlays placed: 68km target; 76km achieved. 15. Number of junctions improved: 70 target; 70 actual. 16. Number of small-boat jetties improved or constructed anew: 20 original target; 4 target revised in 2007; 4 actual in 2010. <p>Lessons drawn in the ICR:</p> <ol style="list-style-type: none"> 1. Setting up a strong institutional basis for coordinated planning and regulation is critical to the success of urban transport projects. 2. Interactions with the borrower (client) should take place in a context of their choosing. Look not for best practice, but for the best fit. 3. Allow a measure of flexibility in the project design and set reasonable targets. 4. Implementation of BRT is a big challenge and requires considerable up-front discussions and consensus building. Use transport planning to sort out BRT and other alternatives. 5. Demonstration of good results is essential to gain support for implementing a reform program. In this matter, implement a comprehensive program in a specific location (e.g. a corridor) rather than piecemeal, diffuse changes not obvious to users (or operators). 6. Strong political commitment and technical competence are both needed to bring about reforms.
Team	Dieter Schelling (lending); Ajay Kumar (SPN, ICR); Olatunji Ahmed (ICR)
Profile date and authors:	June 25, 2011; Slobodan Mitric

Links to key documents of the Lagos Urban Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2002/11/16/000094946_02110604071068/Rendered/PDF/multiopage.pdf

Credit Agreement (2003):

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/AFR/2004/12/15/88586B16735DF36D85256F0300189404/1_o/Rendered/PDF/LagosDCAconf3720.pdf

Credit Agreement for additional funds (2007):

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/AFR/2007/12/17/22FB496FFF7E0D35852573B400789E51/2_o/Rendered/PDF/LUTPoUPDATEDo1conformed1.pdf

Project Paper (re additional finance):

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2007/03/23/000020953_20070323083440/Rendered/PDF/382370NGolDA1R20071005911.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2011/08/09/000356161_20110809011126/Rendered/PDF/ICR18480P074960080501100BOX3618521B.pdf

GHANA URBAN TRANSPORT PROJECT (P100619 and P092509)	
Country and region:	Ghana, AFR
Borrower:	Government of Ghana (through Ministry of Finance and Economic Planning)
Implementing agency and arrangements:	Ministry of Transportation, in collaboration with Ministry of Local Government. Within the Ministry of Transport, Department of Urban Roads will have the line management responsibility. A Project Advisory Office, already set up in the Department of Urban Roads, will advise other institutions and operators involved in the Project. This office will be transformed into a permanent Center for Urban Transportation (expected in January 2010).
Concept review date:	December 6, 2004
Board approval date:	June 27, 2007
Effectiveness date:	October 19, 2007
Closing date:	December 31, 2012 (original)
Instrument category:	SIL
Project structure by sector:	General transport sector, 74%; central government administration, 16%; sub-national government administration, 10%
Project total cost in US\$:	90.0m
WB commitment in US\$:	45.0m, equivalent to SDR 28.9m (IDA credit) + 7.0m (GEF grant)
Co-financing:	20.0m (Agence Francaise de Développement)
Final project cost in US\$:	
Amount disbursed in US\$:	4.2m (from August 2009 FM report); 2.9m (from GEF grant, from Operations Portal)
Diagnostic highlights	<p>Accra's population (3m) has been increasing at 4% per annum, but its area has increased even faster, and in Kumasi (1m) the growth is even faster. This combination of spreading urban sprawl and concurrent motorization (90 vehicles per 1,000 population) has exceeded the capacity of municipal authorities to provide, maintain and manage transport infrastructure and services. This has resulted in congestion, pollution, high accident rates and overcrowding in public transport vehicles. Institutional structures for roads exist, but lack financial capacity, whereas institutions for regulating services do not even exist.</p> <p>Paratransit providers dominate the public transport market, using minibuses (tro-tro) and shared taxis. Some providers belong to cooperatives and unions, others are floaters. Poor traffic environment and problems of fare affordability contribute to para-transit operators' inability to invest in larger and greener vehicles, both highly warranted. Recently, a quasi-private Metro Mass Transit Company has started operating standard-size buses in Accra, with some financial support by the Government. These buses carry only 15% of the market, compared to 53% for minibuses and 12% for shared taxis. Cars carry about 14%. Walking is estimated at about 15% of all trips. The use of bikes is negligible.</p>
Development objectives:	<ul style="list-style-type: none"> (i) Improve personal mobility in Ghanaian cities; (ii) Promote a shift to more environmentally sustainable transport modes, and (iii) Encourage lower transport-related GHG emissions in Accra.
Investment components:	<ol style="list-style-type: none"> 1. Institutional development, \$13.6m: technical assistance, studies training, and equipment to support Ministry of Transportation;

	<p>Ministry of Local Government, Rural Development, and Environment; Ministry of Interior; metropolitan, municipal and district assemblies in Accra and Kumasi; Project Advisory Office; Center for Urban Transportation, and others</p> <ol style="list-style-type: none"> 2. Traffic management and safety improvements in Accra and Kumasi, \$26.9m 3. Development of a Bus Rapid Transit System, \$46.0m: infrastructure for a 2-lane, 9.1km long line with associated terminals and interchange facilities, and supporting engineering, management and public participation activities through initial services. 4. Integration of urban development and transport planning, \$2.0m: production of an urban and transport development plan for Greater Accra, inclusive of a Strategic Environmental Assessment 5. Project outcome monitoring, \$1.5m: studies to measure transport and social development impacts, environmental impacts and capacity development.
Policy components:	<ol style="list-style-type: none"> 1. Introduction of “light” regulatory reform to cover all public transport operators (obligatory registration and minimum quality standards) 2. introduction of service provision on the BRT network and core feeder services by private operators, based on competitive contract awards
Institutional components:	<ol style="list-style-type: none"> 1. Forming an Urban Transport Advisory Committee to advise the government on policy and regulatory framework 2. Establishing a Center for Urban Transportation in the Ministry of Transport 3. Setting-up of Urban Passenger Transport Units in metropolitan, municipal and district assemblies
Monitoring indicators:	<ol style="list-style-type: none"> (i) Average travel time for bus passengers; (ii) Average travel speed for all traffic; (iii) Market share of public transport services (iv) CO₂-equivalent emissions (tons)
Additional project features	The GEF grant is fully integrated with the Bank-funded project
Complementary operations	<p>Global Road Safety Partnership is working with the National Road safety Commission to develop safety standards and guidelines.</p> <p>DANIDA is financing a separate institution development project, focusing on road safety and vehicle emissions.</p> <p>Dutch EIA Commission has a program of support for the Environment Protection Agency.</p>
Status and results:	<p>The latest SPN mission rated the progress on objectives satisfactory, and implementation progress moderately satisfactory. Specifically: (a) Urban Passenger Transport Units were established, and staff have commenced traffic data collection; (b) enabling legislation and by-laws were approved; (c) registration of operators is proceeding; (d) bus operations and service plan were finalized; (e) emissions modeling and air quality standards preparation are advancing; and (f) procurement of area-wide traffic control systems for Accra and Kumasi is at an advanced stage. The BRT component is moving slowly.</p>
Team	Ajay Kumar (lending, SPN)
Profile date and authors:	April 13, 2010; written by Slobodan Mitric

Links to key documents of the Ghana Urban Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2007/06/05/000020953_20070605094319/Rendered/PDF/39750.pdf

Financing Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/AFR/2008/03/07/3C696B6D8F6C9CB58525734500548C5D/2_o/Rendered/PDF/GUTPoFAo1Conf.1.pdf

GEF Grant Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/AFR/2007/08/28/4B3622235BA85DAB852573450053C546/1_o/Rendered/PDF/GUTPoGEFoGAo1oConf..pdf

GEF Project Executive Summary:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2006/12/22/000020953_20061222152659/Rendered/PDF/382780GHoPo92511Mayo50200601PUBLIC1.pdf

SECOND CENTRAL TRANSPORT CORRIDOR PROJECT (P103633)	
Country and region:	Tanzania, AFR
Borrower:	Republic of Tanzania through Ministry of Finance and Economic Affairs
Implementing agency and arrangements:	Primary implementing agency: Tanzania National Roads Agency (TANROADS); (credit funds were on-lent by MFEA to TANROADS on grant basis) Other agencies: Dar Rapid Transit Agency (DART) Zanzibar Ministry of Transport
Concept review date:	October 17, 2006
Board approval date:	May 27, 2008
Effectiveness date:	November 28, 2008
Closing date:	December 31, 2011 (original)
Instrument category:	SIL
Project structure by sector:	General transport sector, 56%; roads and highways, 32%; aviation, 9%; central government administration, 3%
Project total cost in US\$:	264.4m
WB commitment in US\$:	190m (credit), equivalent to SDR115.4m
Final project cost in US\$:	
Final amount disbursed in US\$:	
Diagnostic highlights	<p>Dar-es-Salaam has about 3m people, their numbers increasing by more than 4% per annum. By 2030, it may approach 7 million. It is the country's main industrial and commercial center, and a multi-modal transport hub of prime national importance. Though motorization is still low (30 vehicles per 1,000 people), traffic congestion is order of the day. The road network (1,150km of which 450km are paved) was predominantly radial, but new ring roads have been built in recent years. The public transport system is dominated by 7,000 mini and mid-size (daladala) buses, privately owned and operated in a laissez-faire mode. A residual public transport company operates about 30 standard-size buses, mainly on out-of-town routes. The overall level of service on daladalas is low across the board (frequency, reliability, comfort, safety), with long waiting times apparently the main complaint by passengers. Average commuting times are 95 minutes, for journey lengths under 15km. It is considered that the number of daladalas has reached what the road network can take, and urban transport is seen as a constraint on economic processes in the urban area. The Government has previously stressed urban road construction as a response to congestion, but has amended its strategy to pursue higher-quality public transport systems. The BRT approach in a public/private framework has been selected because it promises to meet three key public objectives: good quality of service, moderate investment costs, and zero operating subsidies. The plan is to arrive at a system of 130 km of exclusive busways, supported by a 200km street-based network of feeder routes. It is expected that travel speed on trunk lines would reach 27 km/h, compared to 10-12 km/h average traffic speeds in Dar-es-Salaam at present. DART was set up to plan and implement the BRT system, and manage its operations afterwards. (More details below).</p>
Development objectives:	From the Financing Agreement: The objective of the Project is to support the Government of Tanzania's efforts to achieve economic growth by providing reliable and cost-effective enhanced transport facilities

Investment components:	<ul style="list-style-type: none"> A. Implementation of Phase I of the bus-based rapid transit system in Dar es Salaam (\$158.2m) B. Rehabilitation/upgrading of the 172 km long Korogwe-Same trunk road, connecting Dar es Salaam with tourist areas in northern Tanzania (\$64.3m). C. Repair/strengthening of the runway at Zanzibar Airport (\$17.6m)
Policy components:	Introduction of public/private partnership for the provision of public transport services on the BRT in Dar es Salaam
Institutional components:	Strengthening of DART (formally set up in May 2007)
Monitoring indicators:	<p>Outcome indicators:</p> <ul style="list-style-type: none"> (i) Rush-hour commuting time for public transport users in Dar es Salaam; (ii) reduced vehicle operating costs on the Korogwe to Same trunk road; and (iii) satisfactory rating of Zanzibar airport facilities by passengers and airline operators
Additional project features	<p>The financial plan for the Phase 1 of the DART system at credit approval stage was as follows: IDA, \$98.2m; GoT, \$10.0m; private operators, \$38.2m (for resettlement); and a gap of \$11.8m. The investment includes: 20.9 kilometers of separate busways, 5 terminals, 29 trunk stations, 6 integrated feeder stations, and 2 bus depots. The Project will also finance the improvement of the upcountry bus station at Ubungu, which will be integrated with the DART. The entire trunk system of 20.9 kilometers will be provided with tree-shaded bicycle and pedestrian ways on both sides of the road. The average distance between bus stops will be 500 meters and system users will be encouraged to either walk or bicycle to the bus stops (privately operated bicycle parking facilities are planned at each bus stop). The plan provides for integration with street-based public transport services provided by <i>daladala</i> minibuses, the Kivukoni ferry, and the up-country bus terminal. One hundred and forty eight articulated new trunk buses with a capacity of 140 passengers will provide both normal (stopping at all stations) and express services (stopping only at connector stations). Additionally, a system of 100 feeder buses with a capacity of 60 passengers will transport passengers to the trunk system through feeder stations. Minibuses will not be permitted to operate on roads where BRT will be located, but they can continue as feeders. Some 400,000 daily passengers are forecast, compared to about 250,000 previously carried by minibuses. Transport services will be run by 2 private operators, who will procure the buses. These will be selected on the basis of a competitive tender. Separate private contractors will be responsible for fare management and for financial management. DART agency will be the system's regulator and infrastructure manager, but infrastructure works will be done by TANROADS. Fares are determined by Surface and Marine Transport Regulator (SUMATRA), an autonomous agency with a board of directors including public and private interests.</p> <p>The main risk: resistance of minibus operators whose 45 routes (out of 192) will be discontinued.</p>
Complementary operations	This Project is a successor to the Central Transport Corridor Project (2004-2009), under which the requisite preparation studies were done, notably the design of the DART BRT. Zanzibar Airport runway rehabilitation was attempted under the Second Integrated Roads Project (closed in 2006), but was cancelled due to contractor failure.
Implementation progress	The BRT component started slowly. A bid for prequalification for the BRT works in 2008 had to be aborted after only three contractors applied for pre-qualification and none of them qualified. Meanwhile the works are being split into 7 packages (1 utility, 2 roads and 4 building packages) and it was planned that works will

	commence in October 2009. Bidding documents for bus operators, fare collector and fund manager are being finalized and were planned to be ready to commence the bidding process in October 2009. Award of these contracts is planned for October 2010. Commencement of operations of the DART system is planned for October 2011. It is now forecast that Phase 1 of the DART BRT will cost \$40m more than forecast at loan approval. The proposed Transport Sector Support Project (US\$250m, Board date in March 2010) will include extra funds to cover these extra costs, and to prepare Phases 2 and 3 of the BRT system.
Team	Dieter Schelling (lending, SPN), Yonas Mchomyu (SPN)
Profile date and author:	February 17, 2011 (rev.); Slobodan Mitric

Links to key documents of the Second Transport Central Corridor Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2008/05/09/000333037_20080509030612/Rendered/PDF/433990PADoP10317372Bo1offouseoonly1.pdf

Financing Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/AFR/2008/08/15/F474E7B5B705AA00852574A6006D2E46/1_o/Rendered/PDF/CTCP21FAoConformed.pdf

Integrated Transport Project (P102368)	
Country and region:	Botswana, AFR
Borrower:	Government of Botswana
Implementing agency:	Ministry of Works and Transport, through a Special Project Management Unit, which contains a Technical Support Group; a Transport Reference Group set up to provide policy guidance and operational oversight
Board approval date:	May 28, 2009 (actual)
Effectiveness date:	May 17, 2010
Closing date:	January 31, 2020
Instrument category:	Specific investment loan
Project structure by sector:	Roads and highways, 55%; urban transport, 25%; railways, 5%; general transportation, 15%
Project cost estimate:	\$385.2 (incl taxes)
WB commitment in US\$:	\$186.0m
Co-financiers:	\$20m sought from OPEC Fund for International Development
Final project cost:	n.a.
Amount disbursed:	n.a.
Diagnostic highlights:	Botswana is trying to diversify its economy away from its mainstay- diamond mining, in order to reduce its high unemployment rate (20%) and sharp income differences wherein one third of the population is under a poverty level in spite the country's high GDP (about \$6,000 per capita in 2007). Because of high transport costs, in part due to poorly maintained roads, the transport infrastructure is seen as a binding constraint in this effort. This does not only include national road, railway and air transport networks, but also roads on the fringes of Gaborone where many of recent migrants have settled. Gaborone has the potential to become a gateway node to Johannesburg, and a second hub.
Development objectives:	Build capacity for road asset management and strategic planning of inter-regional transport, improve critical infrastructure, and empower private sector participation.
Investment components:	<ul style="list-style-type: none"> (i) road sector investment, involving 800km rural and semi-urban roads, \$236.8m; (ii) urban road and traffic management improvements in Greater Gaborone City, \$81.4m; (iii) pre-investment-related studies, \$8.5m; (iv) diverse project implementation and capacity-building activities, \$12.2m
Policy components:	Introduction of output & performance-based road and management contracts (OPRC)
Institutional components:	<ul style="list-style-type: none"> (i) creation of Transport Reference Group Diverse for overall policy direction and project oversight; (ii) preparation of National Transport Master Plan and Greater Gaborone Transport Master Plan
Major indicators:	<ul style="list-style-type: none"> (i) length of roads under OPRC rehabilitation and maintenance; (ii) road users' level of satisfaction;

	(iii) reduction of vehicle operating costs per km on OPRC roads; (iv) decrease in number of annual road accidents on project roads; (v) reduction of average travel time in Gaborone City
Complementary operations:	None
Results at completion:	
Profile date and author:	December 13, 2010; Slobodan Mitric

KEY REFERENCES FOR THE BOTSWANA INTEGRATED TRANSPORT PROJECT

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2009/05/11/000333038_20090511034914/Rendered/PDF/46757oPADoP102101OfficialoUseoOnly1.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/AFR/2009/12/16/65C44A948039EF188525768E006BDBF5/1_o/Rendered/PDF/BW1TransportoProjecto1Conf111doc.pdf

ANNEX 3: PROJECT CAPSULES FOR THE EAST ASIA AND THE PACIFIC REGION*

1. China - Guangzhou City Center Project (1998-2008)
2. Vietnam – Urban Transport Improvement Project (1998-2005)
3. China – Liaoning Urban Transport Project (1999-2005)
4. China - Urumqi Urban Transport Improvement Project (2000-2007)
5. China – Shijiazhuang Urban Transport Project (2001-2008)
6. Philippines – Metro Manila Urban Transport Integration project (2001-2010)
7. China – Second Tianjin Urban Development and Environment Project (2003)
8. China – Wuhan Urban Transport Project (2004-2009)
9. China – Liaoning Medium Cities Infrastructure Project (2006)
10. Vietnam – Hanoi Urban Transport Project (2007)
11. China – Xian Urban Transport Project (2008)
12. China – China-GEF-World Bank UT Partnership Project (2008)
13. China – Second Wuhan Urban Transport Project (2010)

*Some projects approved in the years just before 1999 or just after 2010

Guangzhou City center Transport Project (P003614)	
Country and region:	China, EAP
Borrower:	People's Republic of China
Implementing agency and arrangements:	Guangzhou City Center Transport Project Leadership Group Guangzhou Municipality Urban and Rural Construction Commission Guangzhou City Center Transport Construction Company Guangzhou Municipal Engineering Design and Research Institute Guangzhou Transport Planning Research Institute Guangzhou Road Expansion and Engineering Office Traffic Police Detachment of Guangzhou Public Security Bureau Guangzhou Public Utility Bureau Guangzhou Environment Protection Bureau Guangzhou Municipal Engineering Maintenance Department
Concept review date:	September 28, 1994
Board approval date:	May 29, 1998
Effectiveness date:	September 23, 1998
Closing date:	December 31, 2003 (original); December 31, 2007 (actual)
Instrument category:	SIL
Project structure by sector:	Roads and highways, 75%; general transport sector, 25%
Project total cost at appraisal in US\$:	586.1m
WB commitment in US\$:	200m (Loan)
Co-financiers:	None
Final project cost in US\$:	1203.4m
Amount disbursed in US\$:	152.4m
Diagnostic highlights	Rising population (4.6m city, 8.4m in the metropolitan area, both still rising), incomes and motorization found Guangzhou with a limited and poorly managed road network, and public transport operations still mainly street-based, hence subject to traffic congestion. Cars were increasing at 20% per annum, and motorcycles at 30%. Streets had become a battlefield on which bicycles (yesterday's dominant mode) and buses engage in a losing and dangerous battle for scarce space with a rising tide of cars and trucks. The public transport sector was opened to private operators, resulting in a good level of competition, hence service improvements that would be even better were it not for street congestion. The first metro line opened in 1997 and two other lines were being planned. Otherwise, the main government response to the onset of motorization was to build/enlarge roads, an approach whose limits are soon reached in a dynamic setting. Transport planning and management institutions existed, but were also behind times and unusually fragmented. Strategic traffic management was yet to emerge, and road and public transport finance, as subjects of public policy, were yet to be engaged.
Development objectives:	(i) Improve accessibility of the Guangzhou city center; and

	(ii) Promote efficient use of Guangzhou's transport system in an environmentally sustainable way.
Investment components:	<p>A. Inner Ring Road (\$504.6m): (1) construction of about 15km of an elevated urban expressway and upgrading of existing ground-level roads underneath the expressway; (2) resettlement due to part A(1);</p> <p>B. Traffic management and safety (\$33.2m): works, equipment, training and technical assistance for: (1) a bus lane network of about 5 km; pedestrian facilities (2 km sidewalks, 30 pedestrian crossings); and 2 km of segregated bicycle routes; traffic signal controllers and fixtures at intersections and on the Inner Ring Road; and parking management; (2) program of road safety, inclusive of updating the traffic accident information system, carrying out analytical studies, and implementing accident reduction measures.</p> <p>C. Public transport program (\$22.1): (1) construction of a bus depot and a related waste water treatment plant, including equipment; (2) improvements to public transport operations, including information systems for service planning, bus location, operational and financial control; a pilot system for bus operations and management; testing select bus vehicles for their functional and environmental features to select the best type for fleet renewal; program of bus vehicle maintenance.</p> <p>D. Vehicle pollution control (\$8.5m): initiating the supply of unleaded gasoline; strengthening the vehicle inspection and maintenance system; strengthening of the emission research center; and improvement of air pollution monitoring network.</p> <p>E. Road maintenance management (\$7.3m): carrying out a comprehensive inventory of road maintenance requirements; and updating maintenance expenditure requirements.</p> <p>F. Institutional development (\$10.4m): (1) strengthening managerial, technical, planning and implementation capacity of municipal agencies involved in urban transport; (2) carrying out studies to formulate plans and policies in respect to motor vehicle pollution control, traffic demand management, and bus operations management.</p>
Policy components:	<p>(1) Franchising all public transport operations to autonomous companies;</p> <p>(2) Introduction of parking management;</p> <p>(3) Re-allocation street space to exclusive use of public transport vehicles</p>
Institutional components:	<p>(1) Creation of Public Transport Management Department, a separate agency for public transport administration, planning and regulation,</p> <p>(2) Establishment of Guangzhou Vehicle Emissions Research Center</p>
Additional project features	<p>Non-routine dated covenants for Guangzhou Municipal Government:</p> <ol style="list-style-type: none"> 1. an agreed policy document on traffic demand management to be done by March 31, 2000 and thereafter implemented 2. a parking management (including parking charges) study to be done by March 31, 2000 and thereafter reviewed and implemented 3. traffic management improvements including bicycle routes along several specific roads; channelization improvements on several specific locations, and bus priority facilities along one corridor to be implemented by December 31, 1999
Complementary operations	<p>Several Bank-funded projects in China preceded this operation and provided useful experience and precedents:</p> <ul style="list-style-type: none"> - First and Second Shanghai Metropolitan Transport Projects - Medium-sized Cities Development Project - Liaoning Urban Infrastructure Project - Tianjin Urban Development and Environment Project

Performance indicators	<ol style="list-style-type: none"> 1. level of service and congestion on the City Center road network 2. throughput (in terms of passengers) of public transport corridors within the City Center 3. levels of air pollution 4. levels of accidents per capita 5. effectiveness and efficiency of road maintenance 6. management capacity of municipal agencies responsible for urban transport (proxy: participation in training courses)
Status and results:	<p>The Project was restructured in 2003, stimulated by large cost savings in civil works. A new component, 5.5km of a major radial road (Guangfo) was added, with an estimated cost of \$40m, and \$20m was cancelled from the loan. The loan closing date was extended four times, initially to reflect the inclusion of Guangfo Road, then to permit the completion of three management systems important for development objectives (bus operations, ring road monitoring, and road maintenance) and a strategic transport study, and to compensate for time losses due to the SARS epidemic. Another change involved dropping (in 2006) the vehicle emissions technical assistance, following the national government's decision to phase out leaded gasoline and their full-scale undertakings of the relevant research program. Apart from these changes, the Project was implemented as designed.</p> <p>ICR ratings for outcomes and performance: satisfactory in all categories, with a moderate risk to sustainability. Within the performance category, the quality of supervision was rated moderately satisfactory.</p> <p>Results re PDO performance indicators:</p> <ol style="list-style-type: none"> 1. There was an initial reduction in traffic flows and congestion, but these were swamped by rising economic development, population and motorization. Traffic volume and speed surveys were discontinued after 2001, in recognition of irrelevance and high cost. 2. Bus speed increases were achieved and maintained, and public transport modal share went from 16% in 1998 to 23% in 2006. This is seen as a result of introducing bus lanes and various improvements in bus operations. 3. Both indicators for air quality (NO_x and CO) improved substantially, well beyond the targets. 4. Both traffic safety targets (accidents and fatalities per 10,000 people) were reached and exceeded. 5. Of the three road maintenance targets, the target was reached and exceeded for high-speed and primary roads, but not fully reached for secondary and access roads. 6. All elements of the institutional component were completed, and the desired capacity increase were met. <p>The Project experienced significant cost and time variations relative those forecast at appraisal. The lowest bid price for the Ring Road component was 50% of the estimated price (due to the then Chinese practice of using normative rather than market unit prices) but the final costs were 50% higher than the bid price due to design changes, overtime and bonuses. There were long delays in non-road infrastructure and "soft" components, in fact the heart of the development dimension of the Project. The Quality of Supervision Assessment in 2006 said that these components had not been fully "bought" by the borrower at the preparation stage, which became a major factor in implementation delays. (The same 2006 QSA flagged the need to be much more realistic about indicators). There were other factors behind delays, e.g. technical complexity of writing specifications for traffic control components. In the latter half of the Project, the "soft" components speeded up, a result of the lead project agency (Construction Commission) having more time to focus on these following the completion of the massive Ring Road, and also because loan-funded training increased numbers of qualified staff.</p> <p>The Project met and exceeded requirements for both environment protection and resettlement, both done on a grandiose scale. The use of noise barriers in the</p>

	<p>vicinity of the Ring Road, and double-glazing of windows were the first in China, and are now emulated throughout the country. The resettlement for the Ring Road involved moving 15,000 households and businesses in one year, including the restoration of livelihood. The entire experience had a successful outcome, but its cost (funded entirely by the Borrower) was three times larger than estimated and reduced the internal rate of return for the component by almost 50%. This was in part due to land price increases, but more so to poor management of the program's finance.</p> <p>The lessons cited in the ICR:</p> <ol style="list-style-type: none"> 1. Project design and governance should consider the institutional capacity for each component and recognize that progress may not move at the same speed (reference to "soft" components). 2. Computer-based management systems require exceptional interdisciplinary coordination and specialized experience for procurement. 3. Formulating a comprehensive strategy with government ownership is crucial to institutional reform and implementation of innovative urban transport initiatives. In this Project, a lengthy preparation period involved the production of an urban transport strategy for Guangzhou, which then provided a firm framework for what was in all (and numerous) components
Team	Steven Stares, Richard Scurfield, Edward Dotson (lending); Mehndiratta (appraisal & SPN); George Darido and Graham Smith (ICR)
Profile date and authors	April 16, 2010; written by Slobodan Mitric

Links to key documents of the Guangzhou City Center Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/1998/05/04/000009265_3980624142929/Rendered/PDF/multi_page.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/EAP/2004/12/14/64B54B62EC3303B585256F030000BCE8/1_o/Rendered/PDF/64B54B62EC3303B585256F030000BCE8.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2008/08/05/000333038_20080805014554/Rendered/PDF/ICR00005290ICR1DisclosedAug0102008.pdf

VIETNAM - URBAN TRANSPORT IMPROVEMENT PROJECT (P004833)	
Country and region:	Vietnam, EAP
Borrower:	Government of Vietnam
Implementing agency and arrangements:	People's Committees of Hanoi and HCMC through Project Management Units located in the Transport and Urban Public Works Services (TUPWS) Department.
Board approval date:	August 27, 1998
Effectiveness date:	November 26, 1998
Closing date:	December 31, 2002 (original); December 31, 2005 (actual)
Instrument category:	SIL
Project structure by sector:	General transport sector, 42%; roads and highways, 38%; central gov't administration, 8%; sub-national gov't administration, 12%
Project total cost at appraisal in US\$:	47.2m
WB commitment in US\$:	42.7m (credit)
Co-financiers:	None
Final project cost in US\$:	30.7m
Amount disbursed in US\$:	26.4m
Diagnostic highlights	In both Hanoi and Ho Chi Minh City (HCMC), transport is dominated by 2-wheelers. Within this category, it is motorized vehicles (two-thirds are below 50-cc motorcycles) whose numbers are literally exploding, leading to congestion, high accident rates, and air pollution. Public transport services carry only about 3% of daily passenger trips, and are reduced to skeletal networks with infrequent services. Authorities are planning major road schemes, but in the meanwhile there is little effort to improve the use of the current road infrastructure through traffic management and traffic law enforcement. The capacity of city governments in these respects is low, as is the capacity for strategic planning and for processing large projects.
Development objectives:	The project's overall objective is to increase the operational efficiency and safety of urban travel in Hanoi and HCMC. The specific goals are to: a) increase the capacity and ameliorate operating conditions of major road corridors, central areas and strategic intersections through the introduction of traffic management, traffic engineering and enhanced traffic enforcement; and b) strengthen the institutional capacity in traffic management and traffic enforcement.
Investment components:	<ul style="list-style-type: none"> A. Hanoi City (\$24.3m): <ul style="list-style-type: none"> 1. Traffic system improvements (\$19.6m): corridors and intersections; and central area improvements. 2. Institutional strengthening (\$4.7m): technical assistance, training and equipment for the TUPWS Department and the Traffic Police. B. Ho Chi Minh City (\$22.9m): <ul style="list-style-type: none"> 1. Traffic system improvements (\$17.8m): corridors and intersections; central areas; and area traffic control. 2. Institutional strengthening (\$5.1m): technical assistance, training and equipment for TUPWS Department and the Traffic Police.
Policy components:	None

Institutional components:	Strengthening of existing city institutions (Transport department and the Traffic Police)
Additional project features	None
Complementary operations	None
Monitoring indicators	<ul style="list-style-type: none"> i. Average travel time on project corridors (goal: 10% reduction), but in HCMC barely 10%; ii. Average delays at project intersections; iii. Number of fatalities per xx (???) motorized vehicles; iv. Increased awareness about traffic management among the staff of Traffic Management Department and the Traffic Police
Status and results:	<p>The ICR gave the project outcome a satisfactory rating, with likely sustainability and substantial institutional development impacts. Bank performance was rated as satisfactory, while Government performance was rated unsatisfactory.</p> <p>Performance indicators:</p> <ul style="list-style-type: none"> 1. Travel time reductions were more than achieved in Hanoi, where the before-project state of traffic management was quite bad; in HCMC 10% reduction was achieved only in the central area; reductions on corridors were 1-6% 2. Intersection delays: not measured 3. Targets for fatality reductions were not stated, but the outcome was quite successful: 30-80% reductions in fatal accidents on project corridors per million vehicles. This success was attributed to project-funded investments, better enforcement, and government's own safety campaigns initiated in 2003. <p>The Project was completed with a reduced scope, and with 3 years of delay (relative to the initial forecast of 4 years implementation period). Much of the delay was incurred at the start-up, while responsibilities were being transferred from the national to city governments. 20% of the loan was cancelled at closing. The biggest reductions were for central area improvements in Hanoi and for both corridors and central area improvements in HCMC. In HCMC, one corridor was cancelled (due to overlap with a Bank-funded sanitation project) and quantities on the remaining locations were reduced to account for what was funded by other donors. In Hanoi, corridor improvements were done on all planned roads, and planned redesign, resurfacing, drainage, traffic signals, one-way streets and pedestrian-only streets were mostly done. Channelization, protective islands and some multi-phase traffic signals were dropped or partially done in many locations due to public resistance to changes. Area traffic control sub-components experienced substantial delays in both procurement and implementation and were about 75% complete by loan closing. Per contra, institutional components in both cities went as planned or were enlarged. Both cities now have functioning traffic management institutions. Traffic Police components were especially successful, and the level of traffic law enforcement visibly improved.</p> <p>Generally, implementation suffered from low capacity of city institutions, to whom responsibilities of project management with international funding were newly transferred from the national level the once project preparation stage was done. It did not help that both cities were having multiple projects financed by different international donors, at least some of which were overlapping. Having to learn new approaches to procurement and to handle public relations on a project containing traffic signals and works on congested city streets is always a difficult proposition. The degree of difficulty increased with a faster-than-forecast growth in motorcycle ownership, with newly motorized travelers refusing to accept limitations resulting from channelization and raised sidewalks and islands. Still, the Project ended on a positive note, and the sustainability was rated as likely.</p> <p>Lessons and flags from the ICR:</p> <ul style="list-style-type: none"> 1. Continuity of responsibility from project preparation to execution is

	<p>essential.</p> <ol style="list-style-type: none"> Greater public information (and participation) is necessary. Procurement of traffic signals is complicated, especially when there is a need for compatibility with existing installations; Bank-wide approach is warranted (done in the meanwhile?) Traffic management, though valuable, is messy and difficult to implement. The lesson is not that TM should not be done (it should) but that more realism is necessary when choosing investments, and estimating costs and execution periods. Measuring outcomes of institutional components remains a challenge. In this project, only “output” of this component could be evaluated. Government structure in Vietnam poses considerable implementation challenges. Future operations should focus much more than hitherto done on gauging institutional capacity, and working with the Government to streamline internal processing. <p>The realism of the overall satisfactory rating is backed up by both cities proceeding with TM measures on corridors outside the project. Also, a new Bank-funded urban transport project for Hanoi was approved in 2007, indicating the cities’ satisfaction with the initial project. The new operation takes up matters well beyond the scope of the first project, moving into the public transport domain in both investment and regulatory policy dimensions.</p>
Team	Jitendra Bajpai (lending), Shomik Mehndiratta (SPN), Jacques Yenny (ICR)
Profile date and author:	April 22, 2010; Slobodan Mitric

Links to key documents of the Vietnam Urban Transport Improvement Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/1999/06/03/000009265_3980901130124/Rendered/PDF/multi_page.pdf

Credit Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/EAP/2004/12/15/3FAC71F5F87D333185256F030004ADD3/1_o/Rendered/PDF/3FAC71F5F87D333185256F030004ADD3.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2006/07/25/000090341_20060725102924/Rendered/PDF/35958.pdf

LIAONING URBAN TRANSPORT PROJECT (Po41890)	
Country and region:	China, EAP
Borrower:	People's Republic of China, on-lent to Liaoning province
Implementing agency and arrangements:	<u>Guidance and coordination:</u> Project Leading Group (provincial) <u>Overall project management:</u> Liaoning Urban Construction and Renewal Project Office (LUCRPO) <u>City level (in Shenyang, Fushun, and Anshan):</u> Project Leading Group Project Management Office
Concept review date:	March 29, 1996
Board approval date:	March 30, 1999
Effectiveness date:	December 28, 1999
Closing date:	December 31, 2004 (original); December 31, 2005 (actual)
Instrument category:	Standard investment loan
Project structure by sector:	Roads and highways, 89%; general transport sector, 7%; sub-national government administration, 4%
Project total cost at appraisal in US\$:	383.9m
WB commitment in US\$:	150.0m
Co-financiers:	None
Final project cost in US\$:	338m (the reduction mainly due to restructuring of the Shenyang component, resulting in significantly smaller resettlement costs)
Amount disbursed in US\$:	149.4m
Diagnostic highlights	<p>The Liaoning Province in the north-east corner of China is in the process of restructuring its mining and heavy industrial sector, and moving to diversify the economic base. Lagging behind the growth wave of coastal China, cities in the Province have lived through a period of fiscal austerity. This has left their road infrastructure and public transport services in poor shape. Their institutions have been too weak and too fragmented to deal effectively with challenges of rising motorization and consequential conflicts with hitherto dominant bicycle travel and walking. Road maintenance has been especially deficient, and traffic management is rudimentary at best. High operating costs for vehicles, congestion, accidents and pollution have followed. Aware that low performance of the transport system makes a barrier to economic growth and good living in major cities, the Provincial and city governments are moving forward with investment plans, and reforms involving policies and institutions. Main cities are medium-size (Shenyang 3.3m plus 0.5m floating population; Fushun 1.5m with 30,000 floating population; Anshan 1.4m with 100,000 floating population). Motor vehicle ownership is still quite low, and modal split is dominated by non-motorized modes. Example: Shenyang – 85% of trips are by bicycle or walk (roughly two-thirds of that by bicycle), 10% by public transport (mainly street-based buses and trolley-buses), and 5% by car (mostly taxis). Regulatory experiments in public transport have started in each city, involving restructuring city-owned companies, vehicle leasing, contracting out with other enterprises who own bus fleets, and making franchise agreements with private operators.</p>

Development objectives:	<p>Improve infrastructure and management of urban transport in the cities of Shenyang, Fushun, and Anshan in Liaoning Province (cf. Loan Agreement, Schedule 2).</p> <p>Improve urban transport system productivity so as to facilitate economic and social development within the Project cities (c.f. PAD, A.1)</p> <p>Specific objectives (edited from PAD, A.1):</p> <ol style="list-style-type: none"> 1. Alleviate bottlenecks in the road system 2. Increase efficiency and effectiveness of public transport services 3. Improve road maintenance management 4. Improve environmental impacts 5. Improve operational efficiency and safety of the road system 6. Strengthen local capacity for urban transport system management
Investment components:	<p>Shenyang (\$165.4m)</p> <p><i>Public Transport</i> construction of a bus maintenance repair facility to serve 1,000 buses per annum, a bus terminus which will provide facilities for three bus routes and parking spaces for 150 buses, and provide related equipment for these facilities. Bus priority facilities (including an exclusive center-lane busway).</p> <p><i>Traffic Management.</i> Traffic management improvements to 38 local roads (channelization of intersections, road widening, an area traffic control system, traffic signs and markings, the development of pedestrian facilities and the provision of 18km of NMV exclusive roads.</p> <p><i>Road Infrastructure.</i> Three major east-west corridors (Beiye-Lianhe corridor - the reconstruction of two major east-west roads to form a contiguous corridor, the construction of the Gonghe Railway overpass and the Gonghe Interchange; the Jianshe-Nanwu Road - construction of a 4 km section of elevated road and the Fangxin Square interchange; Pangjiang Jie Street, a four-lane section of the First Ring Road improved to a six-lane standard.</p> <p><i>Road Maintenance:</i> re-surfacing and reconstruction of 43 local roads, and the purchase of road maintenance equipment.</p> <p>Fushun (\$91.3m)</p> <p><i>Public Transport:</i> purchase of modern bus maintenance equipment and 6.7 km of exclusive bus priority facilities on existing and improved roads.</p> <p><i>Traffic Management:</i> improved traffic management facilities along two major road corridors and in one area. Seventeen junctions will be included in a coordinated traffic control system.</p> <p><i>Road Infrastructure:</i> (i) Construction of the 18.5 km Hunhenan expressway along the south bank of the Hun river, and a parallel 18.3 km local service road. The expressway will provide a road for motor vehicles only, and its construction will allow the improvement of the parallel Hunhenan Road as an arterial road for mixed traffic; (ii) the Wanxin bridge and interchange to service a resettlement area on the north side of the river.</p> <p><i>Road Maintenance.</i> The project will finance the reconstruction and paving of 15.5 km of roadway, along four routes and finance modern road maintenance equipment.</p> <p>Anshan (\$119.2m)</p> <p><i>Public Transport.</i> Reconstruction/construction of 6.2 km of tramway and 5.4 km of busway. It will also finance equipment for upgrading of the tramway system. In addition, the project includes a bus transfer station which will serve 17 bus routes.</p> <p><i>Traffic Management.</i> The project will finance channelization of eight junctions, develop 5.6 km of NMV exclusive roads, and finance off-street parking facilities. In addition, the project will provide traffic signal equipment, signs and marking, and specialized management vehicles.</p> <p><i>Road Infrastructure.</i> The project will construct nine facilities including improvements to the principal north-south (Jianguo) corridor in the city, and the construction of an interchange between the primary north-south (Jianguo) and east-west (Yongchang Jie to Huangang Road) corridors, and the Shahe bridge (an improved truck route to the north of the city).</p>

	<p><i>Road Maintenance.</i> The project will reconstruct Hongqi Road (4 km), sidewalks along six roads, and selected improvements to other urban roads.</p> <p>Institutional Strengthening and Technical Assistance (\$6.5m) <i>Public transport:</i> (i) design studies of the bus priority facilities (going beyond those in the Project) and the preparation of operating plans for their use once they are completed; (ii) a review of the options for public transport reform in the three cities. This study will review experience in other cities in China and from other cities around the world so as to permit the development of plans for the development of future policies and regulations in the project cities.</p> <p><i>Traffic management:</i> Design studies of the area control systems, the development of parking policy and management plans, and an analysis of traffic accidents.</p> <p><i>Road maintenance.</i> Establishment of formal road maintenance systems, purchase of equipment and software, and staff training, domestic and international.</p> <p><i>Motor Vehicles Emissions Control Strategy (MVECS):</i> The preparation of a strategy study and action plans for municipalities.</p> <p><i>Project Management:</i> The preparation of bid documentation; construction supervision; and training to improve the quality of project supervision.</p>
Policy components:	All three client cities had already started public transport reforms in the early 1990s, trying to improve services and attract more riders. This is done by making operational improvements (in the public sector) and introducing private operators. The Project includes investments that would increase operational efficiency and the level of service, adopts a reduction of subsidies as a performance indicator, and provides technical assistance regarding diverse operating practices and ownership.
Institutional components:	Transport Management Committees established in each city (during project preparation), with authority to coordinate all aspects of urban transport management, including the development, approval, review and monitoring.
Additional project features	
Complementary operations	A Bank-funded urban infrastructure project in Liaoning (1991-1997), with transport and water supply components, plus precedents of several urban transport projects in China, two in Shanghai, one in Guangzhou and Tianjin.
Monitoring indicators	<p>Numbers correspond to those used above in listing specific objectives:</p> <ol style="list-style-type: none"> 1. Corridor travel time 2. (i) Annual subsidy; (ii) average operating cost per revenue km in service 3. (i) Pavement condition; (ii) maintenance budget; (iii) average cost of maintenance performed 4. (i) Air quality standard; (ii) development of a Motor vehicles Emissions Control Strategy; and (iii) adoption and implementation of the strategy 5. (i) (Volume) throughput measured on screen lines by mode, with occupancy and travel time; (ii) total accidents, (iii) total fatalities; (iv) percent involving pedestrians and bicycles.
Results at completion:	The project had a difficult beginning, when in early 2000 Shenyang announced a decision to build an expressway through the city center, which apart from its strategic discord with the Project as agreed also had very direct impact on some agreed road components. Eventually the Project was restructured in 2002, essentially by dropping Jianshe-Nanwu expressway, while adding the important extension of Beiyi Road westwards to the Second Ring Road. Also in Shenyang, the bus maintenance facility and bus terminal were dropped because of problems with land, reducing the public transport component in that city by 75%. In Fushun, the construction of Wanxin Bridge was dropped and Yongan Bridge was constructed instead. The loan savings from dropped components and from reduced resettlement costs in connection with Jianshe-Nanwu expressway were used to increase road maintenance and road works to a lesser degree. In sum, the loan allocation for road maintenance was tripled and the allocation for public transport

was halved. Once the restructuring was agreed to, by-and-large all components were implemented.

Overall, the road and road maintenance components did well, whereas the traffic management component did poorly. The ICR ratings for outputs of traffic management components was moderately unsatisfactory in all three cities, whereas ratings for road components was satisfactory, and ratings for road maintenance components was moderately satisfactory in each city. Ratings for public transport components were rated satisfactory in Fushun and Anshan, but unsatisfactory in Shenyang. This last reflects the cancellation of the investments components, and the provision of some bus priority at the expense of pedestrians and bicyclists. In the other two cities, subsidies were reduced or eliminated, and travel times and patronage increased.

In the institution development component, the training program (domestic and international) was seen as successful, but the experience with studies was poor, in part because of the performance of consultants, and in part because of the weakness on the receiving side. The consultants did not meet the terms of reference fully, and interactions with officials and stakeholders were not sufficient.

The overall ratings in the ICR ratings: satisfactory outcome; with likely sustainability; and modest institution development impacts.

The most essential problem was a strategic divide between the Borrowers and the Bank, with the former interested primarily in getting more road space for motor vehicles, whereas the Bank valued an approach combining road expansion with the use of traffic management instruments to ensure good conditions for walking and bicycling. The most glaring practical consequence of this divide was when cities pushed bicycles onto the sidewalks in order to re-channelize intersections to process more cars.

Lessons drawn in the ICR:

1. A transport strategy endorsed by the city (and the Bank) is essential to provide a framework for investments.
2. Political risk is not easy to assess or guard against. The Shenyang City's move to construct a major expressway was perhaps a drastic, one-of-a-kind move, but a succession of political leaders in that city showed similar reluctance to implement traffic management and public transport components as initially agreed. It did not help that stipulations of the Loan and project Agreements were legally binding on cities. Perhaps (ICR says) such risks cannot be completely mitigated.
3. Sensitization of key decision makers is crucial for successful implementation of innovations.
4. Foreign consultants should be selected for tasks for which the Borrower recognizes a clear value added. In this project, foreign consultants were heavily used but did not "connect" with the clients. Combined local/foreign teams may have done better.
5. Traffic management concepts require a process that should involve testing and adaptation before they can be fully implemented or expanded.
6. (In Chinese cities) there is an inherent priority given to road construction and improvement that hinders the development of public (and NM) transport. It is recommended to try a different approach where new roads would be designed to mesh better with public transport functions.
7. Knowledge transfer and institutional development process take a long time. Some studies under this Project were finished just before the loan closed, whereas results are expected within the project time frame. Several years may have to elapse before new concepts are adopted.

	In the body of the text, the ICR draws another lesson: that there should be a tight and demonstrable connection between what a project is proposing to do and the performance indicators. Under this project, some of the indicators referred to changes that were not so linked. For example, while public transport components (in Shenyang) were cancelled, the city pursued reasonable public transport reforms not designed under the Project (as did the other two cities). Similarly, the three cities pursued an emissions control strategy developed outside the project.
Team	Richard Scurfield (appraisal); Shomik Mehndiratta (SPN, ICR); Rakhi Basu (ICR)
Profile date and author:	May 3, 2010; Slobodan Mitric

Links to key documents of the Liaoning Urban Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/1999/04/06/000094946_99032505555610/Rendered/PDF/multi_page.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/EAP/2004/12/14/6401437A6A0811B085256F03000ED8EF/1_o/Rendered/PDF/6401437A6A0811B085256F03000ED8EF.pdf

Project Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/EAP/2004/12/14/EE91E3DF8E20DA5685256F03000ED81F/1_o/Rendered/PDF/EE91E3DF8E20DA5685256F03000ED81F.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2006/07/27/000090341_20060727152805/Rendered/PDF/36308.pdf

URUMQI URBAN TRANSPORT IMPROVEMENT PROJECT (Po45915)	
Country and region:	China, EAP
Borrower:	People's Republic of China; loan funds on-lent by Ministry of Finance to Xinjiang Uygur Autonomous Region, which will on-lend to Urumqi Municipality (on same terms)
Implementation arrangements:	<p>Urumqi Municipal Government (UMG) signed the Project Agreement with the Bank & formed <u>UMG Project Leading Group</u> responsible for strategic oversight and policy direction.</p> <p><u>Project Executive Office</u> has overall responsibility for project management and coordination.</p> <p><u>Implementing agencies:</u></p> <ul style="list-style-type: none"> - Urumqi Municipal Ring Road Construction Company - Urumqi Municipal Engineering Bureau - Urumqi Public Security Bureau (Traffic Police) - Urumqi Public Transport Company (UPTC) - Urumqi Environment Protection Bureau - Urumqi Planning Bureau - District Resettlement Office
Concept review date:	November 25, 1998
Board approval date:	December 19, 2000
Effectiveness date:	May 10, 2001
Closing date:	December 31, 2005 (original); December 31, 2007 (actual)
Instrument category:	SIL
Project structure by sector:	Roads and highways, 88%; general transport sector, 4%; sub-national government administration, 8%
Project total cost at appraisal in US\$:	270m
WB commitment in US\$:	100m
Co-financiers:	None
Final project cost in US\$:	251.4m
Amount disbursed in US\$:	98.03m (portal); 97.6m (ICR)
Diagnostic highlights	<p>Urumqi, the capital of Xinjiang Uygur Autonomous Region in China's extreme north-west, had about 1.9m population in late 1990s, with expected 2.3m by 2020. Its underdeveloped and under-managed road network was starting to feel the pressure of motorization, still at a low level of 52 vehicles per 1,000 population and more than half made of trucks. The 2020 forecast was 132 vehicles per 1,000 population, with doubling of car's modal share from 8.6% in 1999 to 15% in 2020. The city wanted to act before congestion became acute. Urumqi's difference from other large cities in China was its low use of bicycles, only about 8% of daily trips, due to its harsh climate. Walking at 45.3% of total trips was the dominant travel mode, followed by public transport at 30% and forecast to remain close to that share. Public transport services were provided by the financially strapped Urumqi Public Transport Company (UPTC) and by an emerging private sector running minibuses at higher fares (subject to light regulation). UPTC has started efforts to upgrade services, and has found local sources of finance for fleet purchases.</p>
Development objectives:	Loan Agreement, Schedule 2: Assist Urumqi in developing and managing a multi-

	<p>modal urban transport system which will facilitate the safe, efficient and healthy movement of people and goods throughout its territory.</p> <p>Project Appraisal Document, A.1: Foster a multi-modal urban transport system which is planned, designed and used for the safe, efficient and healthy movement of people and goods.</p> <p>Detailed objectives (PAD, A.2):</p> <ol style="list-style-type: none"> 1. Develop and manage urban road network to support land use, transport and economic development plans 2. Increase the safety and efficiency of the road network 3. Develop public transport as a viable and sustainable alternative to private car use 4. Protect and improve the environment 5. Strengthen local institutional capacity and integration within the urban transport sector
Investment components:	<p>Part A: Road Network Improvement (\$222.6m, \$84m loan funds)</p> <ol style="list-style-type: none"> 1. (i) Construction of a 29km ring road to link the city center to new development areas, protect the city center from unnecessary traffic, and distribute regional traffic to the urban trunk road network; provision of road maintenance equipment, road traffic control and monitoring facilities required for such ring road, and implementation of environmental mitigation measures such as provision of noise barriers and mechanical ventilation facilities for households. 2. Additional road improvements: (a) construction of additional road links, road widening, provision of traffic management and channelization facilities; and (b) development of one-way road pairs. 3. Road maintenance: (a) the study of road maintenance organization, practices and funding; and (b) provision of equipment required for maintenance of non-ring roads, including information systems. <p>Part B: Traffic Management and Road Safety (\$11.8m; \$7m loan funds)</p> <ol style="list-style-type: none"> 1. Installation of traffic signals, signs and lane markings, area traffic control facilities, and junction channelization. 2. Pedestrian improvements program: provision of facilities to segregate pedestrian and vehicle traffic, development of combined non-motor vehicle and pedestrian facilities, downgrading of center city roads to facilitate pedestrian use, installation and improvement of pedestrian crossing facilities and footways. 3. Parking system improvements: (a) study to establish a parking management policy and accompanying measures; and (b) improvement of signage for parking facilities. 4. Road safety program: (a) study to analyze road accidents; (b) provision of equipment for accident analysis, and equipment for an accident hotline and accident investigation; (c) development and introduction of a driver/vehicle information system; and (d) development and implementation of remedial engineering measures, and of pilot road user education and traffic safety enforcement programs. <p>Part C: Public Transport (\$7.5m; \$3.6m loan funds)</p> <ol style="list-style-type: none"> 1. Support for the UPTC reform program: (a) a UPTC and sector reform studies (see policy box below); (b) implementation of a bus maintenance program, including provision of a vehicle diagnostics center, bus painting facility, laser engine reconditioning equipment and other maintenance equipment; (c) development and introduction of an information system for asset and maintenance management, accounting and financial reporting, and centralized vehicle scheduling and dispatch; (d) development of a wireless communication system; and (e) construction of a communications and training center. 2. (a) Design and implementation of a pilot bus priority route scheme; (b) carrying out of studies on the current bus network, service capacity and public transport demand, and bus priority measures; and (c) development and implementation of measures to improve bus traffic (additional bus priority lanes and construction of passenger transfer facilities).

	<p>Part D: Resettlement and Environmental Improvement (\$4.6m; \$2.5m loan funds)</p> <ol style="list-style-type: none"> 1. Resettlement program designed to maintain or improve the living standards and production levels of all persons affected by project implementation. 2. Urban landscaping program along the road network. 3. Support for further development and implementation of the motor vehicle emission control strategy (see institutional components box below). 4. Environmental action plan. <p>Part E: Institutional Strengthening (\$3.5m; \$1.9m loan funds)</p> <ol style="list-style-type: none"> 1. Support for setting up new institutions (see institutional box below). 2. Carrying out of a transport network and land use development study 3. Development and implementation of training programs.
Policy components:	<ol style="list-style-type: none"> 1. Public transport organizational reform, subject to findings of studies: (a) corporate planning and reform study for UPTC to improve the organization, management, operations and maintenance practices of UPTC, and develop a suitable structure and business plan, including a program of capital investment; and (b) policy study with regard to fare structure and subsidies, and institutional framework including transformation of Urumqi Passenger Transport Management Office into a regulatory and planning agency. 2. Parking policy (subject to findings of the parking management study)
Institutional components:	<ol style="list-style-type: none"> 1. Establishment of an Urban Transport Sector Leading Group – a decision making body for policy making, medium-term planning and development of rolling investment programs. The Group will be supported by a permanent group of technical experts. 2. Creation of a Passenger Transport Management Office under Urumqi Construction Commission (taking over planning and regulatory functions hitherto under UPTC) 3. (a) Establishment of a motor vehicle emissions control center within Urumqi Environment Protection Bureau, and an air pollution automatic inspection system; (b) carrying out of a study on emission control technology and measurement; (c) development and strengthening of emission control standards; and (d) development and implementation of a public education campaign. 4. Development and implementation of a road maintenance management system in the Urumqi Municipal Engineering Bureau
Additional project features	<p>A covenant in the Project Agreement (Schedule 1, clause 7) stipulates (and makes it a condition of procurement for related investments) that the municipality would carry out a study on public transport operating efficiency and service delivery, and thereafter implement its recommendations subject to World Bank views.</p> <p>Similarly, the Project Agreement (Schedule 2, clauses 5 and 6) stipulates the carrying out of parking management and accident analysis studies, except that the implementation is not tied to procurement.</p>
Complementary operations	<p>There were two Bank-funded highway projects in the Xinjiang Region, requiring the establishment of a Regional Leading Group. One of the roads improved under the first project passes through Urumqi.</p>
Monitoring indicators	<p>Indicators shown in the PAD (numbers refer to specific objectives listed above)</p> <ol style="list-style-type: none"> 1. (i) Cross-town journey times on north-south corridors; (ii) traffic flow conditions (speeds) in the "old" CBD area, particularly for buses; (iii) network condition, budget, and unit cost of maintenance by class of roadway 2. (i) traffic speeds in CBD and key north-south corridors; (ii) increased throughput (in person-trips) across screen lines; (iii) reduced incidence of

	<p>accidents and fatalities</p> <ol style="list-style-type: none"> 3. Operating costs as % of revenue; (ii) mode share (across screen lines); (iii) average bus operating speeds 4. (i) Pass/fail rate for vehicle emissions inspections; (ii) proportion of fleet tested; (iii) landscaped area 5. Development and implementation of policies, plans and programs <p>In all, the agreed indicators required at least 29 measurements.</p> <p>During negotiations, this list was revised and baseline values added (shown in a supplemental letter). Further changes were done during the implementation to improve the relevance of indicators and/or to make them easier to measure.</p>
Status and results upon completion:	<p>The project was completed with 2 years delay. The main investment component (Ring Road) was done on time and with quality result, no small achievement given the size of the investment and the complex resettlement involving ethnic and religious minorities. The smaller components –especially non-road components, took much longer than planned, in part because the focus of the implementing agencies was on the Ring Road. The complexity of the Project as designed severely tested the capacity of local government. Especially difficult was implementation of low-cost but technologically complex components, e.g. the traffic signal system and the bus fleet control system. These required a lot of work on specifications, then extensive data collection and radical changes in work organization and practices. At the close of the project, the bus system was operational, but the Area Traffic Control System, the Road Maintenance Management System, and the Emissions Control center were not fully completed and/or operational. Noise mitigation component, traffic safety and bus priority measures were fully implemented.</p> <p>There were cost savings from bids coming below estimates, and from consolidating road maintenance units, thus requiring fewer pieces of equipment. On the other hand, there were increased costs for resettlement. Net savings were plugged back into the Project, the Bank accepting the client's proposal to increase the disbursement rate for works from 48% to 100%. The scope of the public transport component was increased by improving a 5km segment of Xinhua Road.</p> <p>On the policy and institutional front, following the public transport study included in the Project and the national government decree issued in 2005 calling for priority to public transport, UMG issued in 2005 its own note "Implementation Options on Prioritizing the Development of Urban Public Transport in Urumqi." The note presented sound policies viz. expansion of the service network, opening the sector to private operators under an improved regulatory regime, bus priority, fare/subsidy arrangements with regard to poor citizens, and a related institutional design. A permanent multi-agency body to address urban transport issues, an Urban Transport Improvement Office, was thereafter established. In July 2007, UMG established a Municipal Leading Group on Public Transport Priority Development, with the Mayor as chairman and the Director of Urumqi Construction Commission as secretary general. This is the decision making body for which the former office would do the technical work. It is not clear what policy actions followed later on.</p> <p>ICR ratings: satisfactory for overall outcomes; with moderate risk re development outcomes. Ratings for Bank performance were moderately satisfactory for quality at entry, satisfactory for quality of supervision, and satisfactory overall. The main criticism of the project at entry includes too many indicators, not always well matched to what they purported to measure, and a lack of realism in planning non-road and institutional components. The rating for the Government's performance was moderately satisfactory, with the performance during implementation being the weak spot. The risk to development outcome was rated moderate.</p> <p>Referring to specific objectives listed above, the ICR considers that:</p> <ol style="list-style-type: none"> 1. The urban road system in Urumqi was much improved as a consequence of project investments, both in terms of network additions and the

	<p>proportion of roads in fair condition;</p> <ol style="list-style-type: none"> 2. Traffic safety was increased (32% reduction in traffic accidents, and 40% reduction in fatal accidents by 2006) 3. Public transport was improved, as demonstrated by a small increase in its modal share; 15% increase in bus speeds in major downtown corridors, a decrease in staff per bus ratios, and a sufficient increase in cost recovery to eliminate subsidies to UPTC (while keeping the compensation that the city government pays for discounting fares to benefit low-wage passengers). 4. Environment-related indicators were all met, but it was not clear that these resulted from the Project, or that these achievements actually improved air quality. 5. Local capacity to manage and plan the urban transport system was increased, the major success being the 2005 promulgation of a new public transport policy by the Urumqi government. <p>Lessons drawn in the ICR:</p> <ol style="list-style-type: none"> 1. More work is needed to develop appropriate indicators for urban transport projects. The ICR states that "inconsistencies persist between the Bank's internal requirements for measurement and evaluation of results, the ability of the task team to define meaningful and measurable indicators, and the client's interest and capacity in this area." 2. Projects should be designed "not to overwhelm but complement the borrower's implementation capacity as it improves over time". It is proposed to integrate investments and "soft" components, rather than have them as separate activities within the project. 3. Projects such as this one should be replicated in China. <p>The Borrower's comments on the project include a recommendation for implementing agencies under concurrent Bank-funded urban transport in China convene in order to share experiences.</p>
Team	Edward Dotson (appr.); Shomik Mehndiratta (SPN); Graham Smith and George Darido (ICR)
Profile date and author	May 14, 2010; Slobodan Mitric

Links to key documents of the Urumqi Urban Transport Improvement Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2000/12/19/000094946_00121301415063/Rendered/PDF/multi_page.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/EAP/2004/12/14/792A94CE3E34972E85256F0300104E70/1_o/Rendered/PDF/792A94CE3E34972E85256F0300104E70.pdf

Project Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/EAP/2004/12/14/BCDD08857A0EA27685256F0300104B31/1_o/Rendered/PDF/BCDD08857A0EA27685256F0300104B31.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2008/08/05/000333038_20080805020152/Rendered/PDF/ICR00005720ICR1Disclosed0Aug0102008.pdf

COMMENTS

The ICR evaluation of Bank performance under this project appears harsh. For example, the text justifying the satisfactory rating for Bank staff during implementation should have led to a highly satisfactory rating. It is not obvious what else the staff might have tried to do under the circumstances, and the ICR makes no suggestions in that direction. Also, the criticism that the team should have done a better job of forecasting at entry the (slow) speed of non-road and institutional components should have acknowledged that the term “forecasting” is inappropriate for many of the processes involved. There is no analytic method for doing this, not even explicit normative guidelines based on past projects. Perhaps the value of under-estimating how long a time a given “soft” component would take to implement lies in its use as something to strive for. Finally, it matters little whether the implementation of the institutional component took a few months more or less than “forecast.” What matters much more, but is rarely if ever done in ICRs (or PADs), is to make a solid effort to evaluate the institutional capacity as it is found at the end (or beginning) of a project.

SHIJIAZHUANG URBAN TRANSPORT PROJECT (Po56596)	
Country and region:	China, EAP
Borrower:	People's Republic of China, on-lent to Province of Hubei, then on-lent to Municipality of Shijiazhuang, all under the same terms
Implementing agency and arrangements:	Municipality of Shijiazhuang, through two Project Leading Groups, one at the provincial level, the other at municipal level. Shijiazhuang Urban Transport Project Office: set within the Municipality to manage project implementation, with staff seconded from all individual agencies involved in the Project
Concept review date:	November 30, 1999
Board approval date:	March 27, 2001
Effectiveness date:	January 21, 2002
Closing date:	April 12, 2004 (original); December 31, 2008 (actual)
Instrument category:	Standard investment loan
Project structure by sector:	Roads and highways, 91%; general transport sector 8%; sub-national government, 1%
Project total cost at appraisal in US\$:	286.2m
WB commitment in US\$:	100m
Co-financiers:	None
Final project cost in US\$:	268.8m
Amount disbursed in US\$:	100.4m (according to Project Portal);
Diagnostic highlights	<p>Shijiazhuang is a city of 1.5m population (including "floating" workers) in an urbanized area of about 8.6m, grown around two intersecting national railways lines and two major highways. It is growing demographically and economically, the latter reflected in increased motorization. Vehicle ownership is merely 72 vehicles per 1,000 people, but projected to reach 150 per 1,000 by year 2010. Non-motorized modes are still dominant (walking - 34% of trips, bicycles - 54%) and public transport is weak at 6%. Congestion, pollution, conflicts and accidents are in great part due to ill-structured, sparse, poorly maintained and poorly managed road network. Bikers and pedestrians are both being squeezed and need protection from motor vehicles. Public transport services are provided by a city-owned company (1,140 buses and 5,200 staff) and a small number (86) of private minibuses who are allowed to charge higher fares. The company is run along traditional, supply-oriented lines. It generates a small operating loss, which is handled by subsidies from the municipality.</p>
Development objectives:	<p>Develop an efficient and environmentally sustainable urban transport system for Shijiazhuang through:</p> <ol style="list-style-type: none"> 1. Development of a more complete and efficient road network; 2. Improvement in the efficiency and safety of the road system for all modes of transport 3. Development of stronger and more effective public transport services (focusing on the municipal company) 4. Improvement of road maintenance 5. Promotion of environmental protection and improvement activities; and 6. Strengthening of institutional capacity and integration in urban

	transport
Investment components:	<p>A. Road infrastructure (\$204.5m): 1. Construction of new road segments, and upgrading (incl. widening) of existing roads, over 25 km, including sidewalks and about 33 km of bicycle-only lanes; 2. construction of approximately 5 km of new railway overpasses and underpasses, including passageways for bicycles; 3. construction of approximately 3 km of bridges and interchanges; and 4. Installation of road markings, street lighting, surface drainage, noise barriers and greening works in connection with the above road improvements.</p> <p>B. Traffic management and safety (\$29.8m): 1. Construction of approximately 2km of bicycle-only roads; 2. Construction of pedestrian overpasses and removal of other obstacles to walking; 3. (a) installation of traffic signals, road markings and signs, area traffic control systems, and intersection channelization; (b) parking system improvements; (c) undertaking a study of road safety and establishment of a traffic accident data management system; (d) road user education and traffic law enforcement; (e) strengthening of institutional capacity for traffic management, planning, design and operations.</p> <p>C. Public transport (\$12.2m): 1. (a) construction of 5 new bus terminals, including passenger shelters and administrative facilities, and improvement of the existing bus terminal at the railway station; (b) improvement of bus stops (shelters, signs and markings); and (c) construction of 2 bus depots on the second ring road and related parking facilities.</p> <p>D. Road maintenance (\$15.4m): 1. Carrying out a program of road maintenance of the most heavily damaged city roads; and 2. Provision of equipment and installation of a pavement management system.</p> <p>E. Environmental protection (\$2.4m): 1. Carrying out a resettlement program for residents affected in connection with project implementation; 2. Carrying out of an environmental management plan for the Project; 3. Implementation of a vehicle emissions control and air quality monitoring programs.</p> <p>F. Institutions (\$3.5m): (a) provision of training and equipment for relevant agencies; (b) undertaking of specific studies (see below); and (c) development of bus franchise regulations.</p>
Policy components:	<p>No specific policy reform is pursued, but there may be policy reforms stemming out of project-funded studies (see below), as the Project Agreement (in paragraphs 4,5 and 6) contains language requiring that studies' recommendations be implemented.</p> <p>On the subject of public transport, the PAD states (p. 14): "The Bank has found that it can only assist with the formulation and implementation of reform. What happens on the ground is determined locally. Neither the wholesale privatization of companies, nor cost-based competitive tendering for service supply are politically acceptable at the present time in China. There is some on-going experimentation in many cities but the provision of public transport is still largely a public sector activity... WE have found that it is most effective if the Bank's support is designed to make this public sector activity more efficient through the separation of regulatory/service planning functions, the commercialization and corporatization of operating SOE's, the development of the regulatory agencies in the government, and facilitating private sector participation to the extent possible."</p>
Institutional components:	None
Additional project features	<p>Studies funded under the Project:</p> <ul style="list-style-type: none"> - Parking management and control study - Road safety study - Road maintenance study

	<ul style="list-style-type: none"> - Area traffic control system study (incl. institutional design) - Bus priority study (limited to Zongshan Road) - Bus route development and priority study - Regulatory and operational functions of the Shijiazhuang Public Transport Company - Regulatory framework for the franchising of bus operations <p>The Project was reviewed at entry by the Quality Assurance Group panel and rated excellent. Borrower ownership was deemed evident, and the social assessment and resettlement action plan were rated as best practice. The QAG noted, on the negative side, the Bank's practice of one city – one project, involving a high set-up cost for local agencies.</p>
Complementary operations	Several urban transport projects in China precede this operation: 2 projects in Shanghai, two in Liaoning and one in Guangzhou, plus urban projects in Tianjin and central cities.
Monitoring indicators	<p>Indicators are numbered to refer to sub-objectives listed above:</p> <ol style="list-style-type: none"> 1. Cross-town travel times; 2. (i) Mode split across screen lines for vehicles and persons; (ii) trip times along select corridors; (iii) length of dedicated cycle-ways in operation; (iv) bicycle traffic along selected screen lines; (v) incidence and severity of accidents. 3. (i) total bus ridership; (ii) number of routes; (iii) staff/bus ratio; revenue and expenditure per bus and per passenger. 4. (i) road network condition indicators; (ii) road maintenance budget; (iii) road maintenance expenditures. 5. (i) proportion of the vehicle fleet tested; (ii) number of vehicles tested. 6. Development and implementation of policies, plans and programs.
Results at completion:	<p>The Project implemented slowly, in part because the PMO was understaffed. There were major problems with procurement, land acquisition and resettlement. Especially large problems were experienced when dealing with the China Railways in connection with re-managing rail crossings and underpasses, and easements to build overpasses. Railways started their own reconstruction works in the city, which led to several components getting cancelled from the Project. Problems peaked around the mid-term review in 2004, with PMO trying to handle 40 works contracts and 16 study contracts. Implementation progress was rated unsatisfactory for nearly a year, before corrective actions were taken by the Municipality.</p> <p>An amendment to the Loan Agreement was made in December 2006 (original closing date) to re-allocate loan proceeds mainly to benefit civil works (while staying with the type of improvement originally intended), to increase the disbursement ratio for works from 49% to 70%, and to cancel the covenant for studying the possible franchising of bus operations. The loan closing date was extended to December 2008.</p> <p>ICR ratings: moderately satisfactory outcomes; moderate risk to development impacts; Bank performance satisfactory; Government performance moderately satisfactory.</p> <p>Contrary to civil works, where there were many cancellations and substitutions, all planned studies were carried out early in the Project life. ICR notes that most tech assistance contracts went to domestic consulting firms, which may have reduced the transfer of international know-how.</p> <p>The early timing and the overall good quality of studies contributed to all-around better performance of local institutions, the bus company included. One exception to this was the study of public transport regulatory reform, specifically the section on the separation of regulatory from operational functions, which was cancelled at the Municipality's request. The Municipality felt that the bus company was doing well in terms of operational efficiency and output performance, and had only a</p>

	<p>modest operational deficit (5-10%, according to the ICR). The city invested substantial amounts into fleet renewal and diverse operational improvements, and the company's patronage was on the rise. The Bank accepted that restructuring the bus company was not priority, in line with conclusions of its own study of bus companies throughout China.</p> <p>The ICR notes that the project had many outputs and outcomes, "some measured against targets by the agreed indicators, others measured but without targets, and yet others not measured systematically". By and large, according to the ICR, the majority of the performance indicators met or exceeded the targets. The major indicators –cross-town travel times, showed mixed (variable over time) results, since motorization and traffic grew rapidly and improvements were swamped.</p> <p>The experience with the main exclusive bus lane (Zhongshan Street) turned into a roller-coaster ride. Initially installed in the median, the bus lane was a great success for bus passengers, but apparently endangered them after getting off and having to cross traffic lanes. The busway was moved to the curb position, with lower performance and some encroachment. Another busway was designed, but not commissioned, due to the same concerns.</p> <p>In some other categories, e.g. public transport, and traffic management, the municipal government went ahead on their own and made many improvements in the direction that matched that in the design of the Project. The performance on resettlement, after a rocky start, improved greatly, leading in some cases to the government changing designs to reduce the need for demolition, in response to citizens' demands.</p> <p>The moderately satisfactory rating for outcomes reflects the dappled results of the Project's many initiatives.</p> <p>Lessons drawn in the ICR:</p> <ol style="list-style-type: none"> 1. Comprehensiveness leads to unsustainable project complexity, and could be avoided by having a sequence of projects in any given city, with potentially large savings in processing costs for successor projects. Another approach (involving simpler projects) is to have a better agreement on strategy, where some components are done by the client city themselves. The self-selection mechanism used in the 2008 China-World Bank Urban Transport Partnership (GEF) Project does this. 2. A key attribute for managing resettlement is respect for the affected people. 3. Keep down the number of performance indicators and focus on outcomes. The difficulty of evaluating outcomes of institution-building components is flagged. 4. Borrower commitment needs to be sustained. The turnabout of the Shijiazhuang Municipality re median bus lanes could have been avoided through more effective and continuous communication with all affected parties. 5. Number of vehicles subjected to emission test is not a good measure of the desired outcome (less air pollution). 6. The conflict between the international best practice (as embodied in FIDIC rules) and the Chinese law re acceptance of works needs to be resolved. 7. Some of the delays could have been prevented or shortened had the Project been simpler, and if the overall context of the client city was taken into account, specifically the presence of other projects competing for attention and resources.
Team	Richard Scurfield (lending); Edward Dotson and Yan Zong (SPN); Reindert Westra (ICR)
Profile date and author:	November 30, 2010; Slobodan Mitric

Links to key documents of the Shijiazhuang Urban Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2001/03/28/000094946_01030905575383/Rendered/PDF/multiopage.pdf

Loan Agreement:

<http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/EAP/2004/12/14/5932CFFF7C2574B485256F0300133F39/10/Rendered/PDF/5932CFFF7C2574B485256F0300133F39.pdf>

Project Agreement:

<http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/EAP/2004/12/14/3E2B09FEC9F7823585256F0300133D79/10/Rendered/PDF/3E2B09FEC9F7823585256F0300133D79.pdf>

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2009/07/30/000334955_20090730023507/Rendered/PDF/ICR10130Po56591Codisclosed071281091.pdf

METRO MANILA URBAN TRANSPORT INTEGRATION PROJECT AND BICYCLE NETWORK DEMONSTRATION PILOT (Po57731 and Po66509)	
Country and region:	Philippines, EAP
Borrower:	Government of Philippines
Implementing agency and arrangements:	Dep't of Public Works and Highways (DPWH) – designated project executing agency reporting to a high-level project Steering Committee; and Metro Manila Development Agency (MMDA), with its own project Management Office; and City of Marikina
Concept review date:	February 22, 1999
Board approval date:	June 21, 2001
Effectiveness date:	December 6, 2001
Closing date:	For the WB loan: March 31, 2010 (revised); for the GEF grant: December 31, 2007
Instrument category:	SIL + GE
Project structure by sector:	Roads and highways, 81%; general transport sector, 16%; sub-national gov't administration, 3%
Project total cost at appraisal in US\$:	97.6m (ICR cites 97.06m, probably excludes the front-end fee))
Financing plan (US\$):	36.3m Borrower + 60.0m WB (Loan 78580-PH) + 1.3m GEF grant (TF 29804)
Final project cost in US\$:	87m (for implemented components)
Amount disbursed in US\$:	From Project Portal: 51.1m from the WB loan + 1.4m from GEF grant From drfat ICR data Sheet: 49.6m from the WB loan + 1.3m from GEF grant
Diagnostic highlights	<p>Metro Manila is a very large and dense urban area (10.2m people in 1997 and 11.5m by 2010), comprising 17 local government units (cities or municipalities). It produces a third of national GDP. Economic growth in recent years accelerated the pace of motorization (about 6% per annum) and demand for travel. At the time of this project being appraised, some 20% of households owned a car. Modal split was 22% walking, 62% public transport, and 16% private motor vehicles. Within the public transport category, jeepneys were the dominant mode, carrying 41% of motorized trips; tricycles carried 19% and street buses carried 13%. The two light-rail lines carried only about 400,000 trips a day, about 2% of motorized trips. Lagging response in terms of transport infrastructure and services had led to severe congestion and air pollution, second only to Bangkok. Walking and bicycling were being squeezed out by motorized modes. Among the lacunae of the transport system were low extent and connectivity of secondary road network; poor road access to and from developing areas lying outside the main ring road; and low priority given to public transport facilities (stops, transfer points, terminals,..) in the road design practice. The formation of MMDA in 1995 did not lead to a coordinated set of actions by various modal agencies.</p> <p>The Metro Manila Urban Transport Integration Study, completed in March 1999 with funds from the Japan International Cooperation Agency, put together a transport strategy for the metropolitan area, in the form of a Master plan 2015 and a Medium-term Transport Development plan 1999-2004. This Project supports the implementation of the strategy.</p>
Development objectives:	Improve the operational efficiency and safety of the transport system in the Metro Manila, with better opportunities for access to public transport and non-motorized transport, the dominant modes used by low-income residents.

	<p>Specific objectives:</p> <ol style="list-style-type: none"> 1. Provide better opportunities for access to public transport 2. Enhance access from the outer areas to Metro Manila 3. Improve operational efficiency of the road network 4. Increase the use of non-motorized transport modes 5. Improve metropolitan governance in traffic matters <p>The global environment objective of the project's non-motorized transport component is to reduce greenhouse gas emissions by promoting the use of bicycles and walking in the city of Marikina. A second objective is encourage replication of the Marikina component in other parts of Metro Manila and elsewhere in the Philippines.</p>
Investment components:	<ol style="list-style-type: none"> A. Traffic management improvements (\$13.5m) in the LRT Line 3 corridor, the EDSA LRT Line 3 corridor, and the Bicutan and Alabang interchange on the southern corridor. Improvements include interchange facilities, public transport priority, traffic management at intersections (including traffic signals), street lighting, greening and landscaping, control of frontage activities, sidewalks, pedestrian areas, bicycle access facilities, and pedi-cab parking at public transport stations. B. Access improvements in the Marikina Valley (\$39.2m), including the Marikina Bridge and Access Road component, and the Marcos Highway and Ortigas Avenue extension (content similar to component A). C. Secondary roads program (\$23.3m) for 15 road sections, including pavement rehabilitation, drainage and sidewalk improvements, traffic management (as in Component A) and the construction of missing links. D. Non-motorized transport improvements in the City of Marikina (\$1.5m, financed from the GEF grant): 66 km of bikeways connecting residential areas with main trip attractors and public transport terminals; traffic calming and pedestrian facilities measures; street lighting; education and public awareness campaigns; replication campaigns. E. Institution building for MMDA (\$1.1m)
Policy components:	None
Institutional components:	Capacity building in the MMDA and strengthening its coordination role.
Performance indicators	<p>(listed relative to specific objectives cited above):</p> <ol style="list-style-type: none"> 1. Travel time; public transport market share, and satisfaction of public transport users 2. Same as for 1. 3. Same as above 4. Market share of non-motorized modes 5. Effective coordination mechanisms in place between key agencies and local government units; effective traffic management and enforcement measures planned and designed by the relevant agencies. <p>Towards the end of the Project, number of pedestrian and motor vehicle accidents was added to this list of indicators, without changing the development objectives.</p>
Complementary operations	A parallel World Bank funded project, First National Roads Improvement and Management Project (2000-2007), addressed commercialization of the road sector and the separation of policy making and regulation from operation. The project assisted in strengthening the capacity of DPWH for procurement and financial management, and also supported the Environmental Impact Assessment Project Office. A follow-up Second National Roads Improvement Program (APL) was approved in 2008.
Quality at entry	The project was reviewed at entry by the Quality Assurance Group and rated satisfactory. The report praised the Project for its readiness for first-year implementation, and the arrangements made for monitoring its progress. Also

	<p>praised was the resettlement policy and the action plan. Acknowledging past problems in this aspect, the project actually was designed to minimize the need for resettlement. While the QAG report noted with approval the Project's specificity and focusing on practical results, it also noted the absence of any policy initiatives and the failure to engage with wider issues of urban management and development. The PAD does not show that a broad sector analysis was a part of project preparation, an essential activity even if no policy initiative was ultimately included in the design. Also, the report noted a possible flaw in the economic evaluation of individual project components, revealed by unusually high rates-of-return. This was apparently a consequence of comparing the adopted designs against an untenable do-nothing option.</p>
Results at completion (based on draft ICR):	<p>The Project's life was difficult, with delays from the very start (contradicting the main positive finding of the QAG's review at entry), component cancellations, tender repeats, and funding re-allocations. The loan was extended twice for a total of 3 years, and the bicycle pilot had one 9-month extension, all to enable the completion of on-going works. In its first 5 years, the loan accumulated a 30-month disbursement lag, which at the end of the eighth year rose to 53 months. Ultimately, almost \$10m was cancelled from the loan, because there were no counterpart funds and/or because the time had run out. Among other components, traffic improvements along the LRT Line 2 were dropped, as were most traffic signal installations. Some of the cancelled components were implemented using Borrower's own funds, and others were moved to the Second National Roads Improvement Project.</p> <p>The vintage of preparation studies was one of the main factors behind delays was. Since these dated from 1998, design changes to suit new conditions were required. Also, designs for the LRT Line 3 corridor had to wait decisions in the LRT project itself, which literally took years. The age of cost estimates led to very high bids on some tenders, which further exacerbated problems with counterpart funds. The works on Ortiga Avenue, for example, cost five times the original estimate. Other factors behind delays included the slow procurement, problems with right-of-way acquisition, poor coordination amongst agencies, and management changes in the Project Unit. On the Bank side also, there were multiple changes in project leadership. The draft ICR is particularly critical of the team's failure to highlight the risks regarding the availability of counterpart funds, or the possible complications arising from weak interagency coordination.</p> <p>These difficulties notwithstanding, the Project managed to implement the majority of the planned investment program, with good-quality outputs, and largely positive outcomes, with the bicycle path network of 55 km in Marikina seen as the state-of-the-art output and outcome. The management of the environmental safeguards and resettlement aspects were both satisfactory. The main exception to this positive, if reduced-scale, result is the institution-building component, which received unsatisfactory rating in the draft ICR. While traffic management functions were moved to MMDA, including a requisite staff transfer, but MMDA overall has stayed far behind what is seen as necessary to handle accumulated problems of the transport network and services in the metropolis. Specifically, the 20year Metro Manila Physical Framework Plan was not updated, the investments still being approved on a case-by-case basis. Interagency coordination had a good start with the setting up of a Steering Committee, but this was short lived.</p> <p>In evaluating the Project, the draft ICR stresses the problematic side of the performance indicators, including the fact that two sets of indicators are cited in the Project Appraisal Document, and neither base values nor targets were established at the outset. Based on partial measurements available, travel time for public transport users in the urban area's main corridor (EDSA) were reduced from 60min to 50min, and marginally reduced on the Bicutan Interchange. Travel times for trips made to and from newly developed areas were reduced significantly, and the same was true for bicycle travel. Modal share of public transport modes did not decrease and it may have increased. The share of bike travel in Marikina City went</p>

	<p>from 2.4% of all trips to 7.9%. The performance relative to traffic safety has some positive aspects; e.g. in EDSA corridor, there was a reduction in pedestrian accidents and their severity. There was, however, an increase in motor vehicle accidents.</p> <p>The draft ICR rates the overall achievement of development objectives as <u>moderately satisfactory</u> (and satisfactory GEO outcomes), but with <u>high risk to development outcomes</u> (and GEO outcomes), essentially because project interventions did not make any progress in the larger processes of the transport system management and planning in Metro Manila, nor in the specific dimension of road maintenance (and traffic management) funding.</p> <p>The main lesson drawn in the draft ICR is that investment projects that do not address key transport and land use policy issues cannot be expected to contribute to essential changes.</p> <p>The practical lessons drawn in the draft ICR (not all in the lessons section):</p> <ol style="list-style-type: none"> 1. Right-of-way acquisition and mapping of utilities should be completed before any contract award, preferably earlier; 2. Procurement guidelines should be harmonized between the Government of Philippines and lending institutions, and not on project basis; 3. The specifics of internal clearances and counterpart fund releases for approved project components should be treated in detail at negotiations; 4. When there are multiple implementation agencies, the setting up and maintaining a high-level steering committee is of essence; 5. A stronger focus on the proper future maintenance of project-funded infrastructure is warranted; 6. Detailing of technical assistance activities should be available for discussion at negotiations. 7. Dropping highly warranted investments as a way to avoid problems of resettlement, including land valuation and acquisition, compensation, encroachment and others, is counterproductive. Another type of Bank project, adaptable program loan, may be well suited here, with components with problematic aspects placed in a second phase to allow time to deal with these problems. <p>A follow-up project is under preparation, leading the ICR to reflect again about the advantages of an adaptable program loan, helping to maintain continuity of the dialogue during the transition from one phase to another.</p>
Team	Sally Burningham (lending, SPN); Ben Eijbergen, Christopher Pablo (SPN); Peter Ludwig (ICR)
Profile date and author:	December 10, 2010; Slobodan Mitric

Links to key documents of the Metro Manila Urban Transport Integration Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2001/06/27/000094946_01060804031083/Rendered/PDF/multiopage.pdf

Loan Agreement:

<http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/EAP/2004/12/15/36BoEFFC0061B32C85256Fo30013948C/1o/Rendered/PDF/36BoEFFC0061B32C85256Fo30013948C.pdf>

Grant Agreement:

<http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/EAP/2004/12/15/D46E312C62439D2785256Fo300139228/1o/Rendered/PDF/D46E312C62439D2785256Fo300139228.pdf>

Notes:

The section on results at completion is based on the draft ICR dated August 25, 2010, and should be re-visited once the final ICR is available.

WUHAN URBAN TRANSPORT PROJECY (Po69852)	
Country and region:	China, EAP
Borrower:	People's Republic of China, on-lent to Municipal Government of Wuhan
Implementing agency and arrangements:	Municipality of Wuhan through Wuhan Urban Transport Project Office set up in the Wuhan Municipal Capital Investment Management Office, to coordinate the work of line agencies
Concept review date:	August 1, 2002
Board approval date:	March 9, 2004
Effectiveness date:	July 26, 2004
Closing date:	June 30, 2009 (original); June 30, 2010 (actual)
Instrument category:	SIL
Project structure by sector:	General transport sector, 96%; sub-national government administration, 4%
Project total cost at appraisal in US\$:	598.2m
Financing plan (US\$):	Borrower: 398.2m; World Bank: 200m (Loan 47270-CHA)
Final project cost in US\$:	946.46m
Amount disbursed in US\$:	199.7m (as of January 28, 2010)
Diagnostic highlights	<p>Wuhan is the economic and transport hub of Central China. It is divided into three segments by Yangtze and Han rivers. Urban population was about 3.9m in 1998, with prospect of accelerated urbanization, especially if the restrictions on move-in by migratory workers are withdrawn. When last surveyed (1998), modal split was still dominated by non-motorized modes: 37% of all trips were done by walking, 29% by bicycles, 12% by cars and 22% by public transport. Motorization rate was low at 56 cars per 1,000 people. Since that time, car ownership moved to 99 vehicles per 1,000 people (2001 data), and was growing at over 20% per annum. Motorcycles were another growth sector, but were banned in 2002, as were motorized 3-wheelers a year later. Public transport supply consisted of about 5,500 street buses on 244 routes, operated by 6 subsidiaries of a city-owned company and one joint-venture private company. Public-sector bus services were run on normative, supply-oriented basis, at a low level of service, with fare revenues covering about 90% of direct operating costs. City roads were poorly maintained and the network poorly developed. Already traffic was experiencing bottlenecks in the central areas (made difficult by the scale of pass-through regional traffic) and on river crossings. Safety was deteriorating, with about 630 people killed and 12,500 injured in 2001. On major roads, bus volumes exceeded 500 per hour, stimulating proposals for a metro system.</p> <p>The government's initial response to increased traffic was limited to road construction, using ample finance available from local banks. There were no complementary actions on traffic management and road maintenance, or compensating strategic actions regarding public transport services and non-motorized modes. More recently, this approach was widened: construction started on a rail-based line; Wuhan Transport Commission was set up to start a regulatory reform of public transport services. Planning is nominally regulated by a 20-year, fiscally unconstrained Master Plan. The practice settles to what is expedient.</p>
Development objectives:	Assist the Municipality of Wuhan to develop an integrated, efficient and sustainable transport infrastructure in support of the social and economic development of the Municipality of Wuhan.

Investment components:	<ol style="list-style-type: none"> 1. Road network development (\$461.3m): (i) external and cross-town road improvements (Middle Ring Road and Interchanges; Radial roads and key junctions; urban arterials and local roads; (ii) improvements on existing cross-river bridges; (iii) Central area improvements (Inner Ring, urban arterial and local roads; (iv) roads in urban development areas; (v) pedestrian-oriented infrastructure (footbridges and underpasses). 2. Traffic management and road safety (\$33.4m): (i) pedestrian improvements (signs, signals, markings, pedestrian-only streets); (ii) non-motorized priority routes; (iii) bus priority routes; (iv) intersection channelization, signs and markings at 274 locations; (v) area traffic control system (same 274 locations); (vi) traffic safety improvements (management information system, black spot improvements, equipment for traffic police investigation and enforcement activities); (vii) road user education program; (viii) road marking equipment; (ix) technical assistance. 3. Public transport (\$34.2m): (i) management information system for bus companies; (ii) bus vehicle location and control system; (iii) interchange facilities; (iv) terminals; (v) program for bus bays and stops; and (vi) a bus rapid transit pilot (provisional inclusion, subject to outcome of studies). 4. Road maintenance (\$37.5m): (i) road maintenance works; (ii) road maintenance equipment for in-house works; (iii) road maintenance management system; (iv) recurrent costs. 5. Environmental management (\$5.5m): (i) emissions and noise monitoring equipment; (ii) production of an emissions control strategy; (iii) noise mitigation measures; (iv) diverse technical assistance 6. Capacity building (\$7.9m): (i) international training; (ii) domestic training; (iii) consultants' services for construction supervision; road system management (concrete pavement study; safety audit of new roads), traffic management and safety (parking study, design of ATC system and associated channelization at intersections, accident analysis study, travel demand management study, bus priority study); public transport (design of management information system; design of satellite based bus location system; business development planning, incl. the preparation of a 5-year business plan and training in survey techniques; route network planning studies; Bus rapid transit study and preliminary design for a pilot corridor; institutional (regulatory) reform studies); road, bridge and drainage maintenance management system; environmental management; Wuhan Urban Transport Strategy incl. capacity building; travel needs study for disadvantaged and vulnerable population; and the financial management system for the Municipality of Wuhan (iv) office equipment.
Policy components:	<p>Reforms to the regulatory and planning framework for public transport (cf. PAD, p. 11; but see comments in the Additional project features" below):</p> <ol style="list-style-type: none"> 1. Separation of responsibilities between government and operators; 2. Establishment of a new operational and managerial system that encourages competition and provides higher quality services; 3. Improve public transport regulatory framework, especially to introduce a bus route franchising policy; 4. Attract funding from sources other than the municipal government 5. Promote integration of bus and rail services; 6. Promote bus rapid transit in the city
Institutional components:	<p>Development of an integrated approach to transport planning, with output in the form of a Wuhan Urban Transport Strategy:</p> <ul style="list-style-type: none"> - Establishing a policy and institutional framework for integrated urban transport investment and management; - Improving procedures for funding allocation to different modes; and

	developing opportunities that will allow different planning agencies to work together
Additional project features	<ol style="list-style-type: none"> 1. The relatively low ratio of the loan and total cost is due to the fact that Municipality of Wuhan will finance the majority of the roads component from other sources. The Bank loan is focused on public transport, TM, safety, environment and capacity building. 2. The public transport policy reform is addressed through a dated covenant, contained in para. 9, Schedule 2 of the Project Agreement (also cited in PAD, para. 2.3.4, p. 30), saying that (i) Wuhan shall review with the Bank the progress of the Wuhan public transport reform by March 31 in each year, commencing on March 31, 2005, and until the completion of the project; and (ii) Wuhan public transport companies will furnish to the Bank for review a rolling 5-year development plan by March 31 in each year. A corresponding indicator shown in Annex 1, PAD, is "bus route tendering on a competitive basis completed across the bus system by 2008", whereas the Side Letter No. 2 (Performance Indicators) refers to "bus route tendering on a competitive basis introduced."
Performance indicators:	<ol style="list-style-type: none"> 1. Travel times (all traffic) on key external/cross town, cross river and central area routes 2. Travel times for users of most heavily used transport modes 3. Average daily ridership on the bus system 4. Road Management System (RMMS) -- Implementation of annual road maintenance plans based on the Road Maintenance 5. Formulation and adoption of an effective motor vehicle emission control strategy 6. Preparation of a transport policy "White Paper" 7. Identification of 5-year investment programs 8. Completion of bus route tendering on a competitive basis across the bus system.
Complementary/related operations	<p>This project was preceded by or was in parallel with Bank-funded urban transport projects in Shanghai (2), Guangzhou, Liaoning, Urumqi and Shijiazhuang; and urban development projects in Liaoning, Tianjin and Medium-Size Cities (Changzhou, Luoyang, and Shashi).</p> <p>A Second Wuhan Urban Transport Project (P112838) was approved in March 2010. The focus of this operation (as reflected in the distribution of loan funds) is less on road construction and more on public transport development, demand management and road safety.</p>
Results at completion:	<p>The project was rated as "moderately satisfactory" in the 2005 review by the Quality Assurance Group. Implementation proceeded in exemplary fashion until the mid-2005, when it slowed down significantly due to a combination of poor project management and insufficient counterpart funds. Contributing factors included major cost increases (see below) and the move by WMG to centralize funds management for all construction projects in the city (in addition to already existing central budgeting). It took 2 years to resolve these problems and return to a satisfactory implementation pace.</p> <p>The loan closed with 1-year extension, granted to complete the works on 2 road sections and 2 bus terminals; and a study of urban infrastructure operation and asset management. The work on roads and bus terminals was delayed by resettlement issues, which ultimately were all resolved.</p> <p><u>Investment components:</u> The program was implemented largely as agreed (exceptions noted below). Major items include: (1) 41 road schemes, involving 26 road segments, 4 interchanges and 11 pedestrian facilities; (2) maintenance works on about 38 km of roads and bridges (85% of the original program), plus maintenance equipment and maintenance management system; (3) 2 bus terminals/interchanges; the management information and automatic bus location</p>

	<p>systems for Wuhan Public Transport Group Company; (4) equipment for emissions and noise monitoring and equipment for vehicle inspection; and (5) 28 studies and 29 study tours (essentially all as planned). Notable among the studies is a Strategic Environmental Assessment Study focusing on urban transport. Cancellations include 6 pedestrian facilities (out of 17 planned); the pedestrian street; 3 bus priority lanes (out of 9); and 7 public transport interchanges and 5 terminals (due to land acquisition problems). The pilot bus rapid transit scheme did not materialize. In all, road construction and maintenance components represented 95% of the total investment cost.</p> <p><u>Costs:</u> project costs increased by US\$349m, of which \$284m for resettlement (land), the rest due to renminbi appreciation and a rise in labor and materials prices.</p> <p><u>Environmental protection and resettlement:</u> The Project got high ratings for following the environmental safeguards, including public consultations, training, and establishment of guidelines applicable elsewhere. The scale of resettlement was enormous: relocation of about 7,850 households, demolition of 1.5m square meters of structures, and acquisition of 373 hectares of land.</p> <p><u>Performance indicators:</u> Travel times (indicators 1 and 2 shown above) show little change for the motorized traffic (no doubt due to traffic growth), but are somewhat better for pedestrians and cyclists. The increase in public transport ridership (indicator 3) from 2.6m in 2002 to 4.38m in 2009 (the target was 3.1m) is impressive, mainly reflecting the ability of the operators to absorb a large jump in demand, 60% from 2002 to 2009. The Road Maintenance Management System (indicator 4) was established, but with a 3-year delay, thus it was not fully operational at the loan closing in that it lacked input data to produce annual maintenance investment plans. A Motor Vehicle Emission Strategy (indicator 5) was completed in 2007, followed by the issuance of new regulations for emission control, and starting operations of the new Vehicle Inspection & Maintenance System. The Urban Transport Strategy Study prepared what could be termed a "White Paper" and a 5-year transport investment program (indicators 6 and 7). Finally, re indicator 8, the public transport regulatory reform was technically prepared, but not implemented. Municipality of Wuhan decided, for the time being, to keep public transport operations in public rather than private ownership. Indicators apart, the technical assistance component is cited in the ICR for its success, in part because of some key studies and in part for the impact of studies and training on the local institutions.</p> <p><u>ICR ratings:</u> the ICR states that the Project achieved all its development objectives, and gives it a satisfactory rating for outcomes, with a moderate risk to development outcome. Both Borrower's and the Bank's performance is rated satisfactory.</p> <p><u>Lessons drawn in the ICR:</u></p> <ol style="list-style-type: none"> (1) Project design should be simplified to ensure a greater focus and impact of the operation, and to facilitate implementation (2) The number of performance indicators should be reduced (3) Reforms should be based on the borrower's commitment (4) Formulating a comprehensive strategy with local participation and government ownership is crucial for both program planning and for capacity building (5) In the context of rising motorization, borrowers' tendency to focus on road investment should be countered by a more modally balanced approach, as well as a strong focus on management and operations (as opposed to construction) (6) The extensive approach to technical assistance (75 activities under this project) makes implementation difficult. Fewer key activities and more depth are likely to be more effective.
Team	Edward Dotson (lending), Shomik Mehndiratta (SPN); Ke Fang and Emmanuel Py (ICR)

Profile date and authors:

December 2, 2010; written by Slobodan Mitric

Links to key documents of the Wuhan Urban Transport Project:**Project Appraisal Document:**

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2004/02/20/000090341_20040220095902/Rendered/PDF/255900CHA.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/EAP/2004/09/27/5BA96D7408F7AF4485256F0300168D9D/2_0/Rendered/PDF/LAoConformed.pdf

Project Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/EAP/2004/12/14/98F4C2590860A85385256F0300168EDB/1_0/Rendered/PDF/PAoConformed.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2011/04/12/000333038_20110412002548/Rendered/PDF/ICR15900Po69851e0only1910BOX358334B.pdf

COMMENTS

The ICR quotes an urban population of 7.8m in 2003, while the PAD cites a 1998 population of 3.9m and forecast to 4.2m in 2020.

SECOND TIANJIN URBAN DEVELOPMENT AND ENVIRONMENT PROJECT (Po40599)	
Country and region:	China, EAP
Borrower:	People's Republic of China
Implementing agency and arrangements:	Tianjin Municipal Government: Project Management Unit under the Construction Commission
Concept review date:	April 16, 2002
Board approval date:	May 20, 2003
Effectiveness date:	March 10, 2004
Closing date:	December 31, 2009 (original); June 30, 2011 (revised)
Instrument category:	SIL
Project structure by sector:	General transport sector, 20%; sub-national gov't administration, 25%; sewerage, 45%; flood protection, 10%
Project total cost at appraisal in US\$:	335.5m
Financing plan (US\$):	Borrower: 185.5m; WB: 150m (Loan 4695-CHA)
Final project cost in US\$:	
Amount disbursed in US\$:	
Diagnostic highlights	<p>Two decades of a dominant focus on major infrastructure investments in Chinese cities, to serve fast-paced economic growth, are now followed by a period of elevated concern for better operations and maintenance of services, equity and environment quality. Water pollution is considered as a binding constraint on both economic growth and the quality of life. The government has embarked on a major program of water clean-up, re-use and conservation. It is mandated that smaller cities must treat 50% of the wastewater by 2010, and the larger cities must treat 70%. In parallel, the government is promoting full cost recovery and commercialization of infrastructure services, this last requiring an improvement in its regulatory and planning capacities.</p> <p>Tianjin, a city of 5.5m people (10m in the urban area) is a major industrial and transport center in Northern China. Its efforts to add wastewater treatment capacity have been financed by China Development Bank, Asian Development Bank, and Japan Bank for International Cooperation. Their efforts have left some lacunae: insufficient water collection network; refinement of the regulatory framework, especially regarding pricing and funding policies; and underserved suburban areas inhabited by low income households.</p> <p>Motorization in Tianjin, a city built up during the absolute dominance of bicycle traffic, grew at unprecedented pace, from 22,000 cars in 1990 to 250,000 in 2000. The city has moved to create some high-capacity arteries, including ring roads, and to improve traffic control and geometry of the inner city road network. In parallel, the city broke up its bus company into several competing companies, and invited the entry of some private operators. The resulting increase in the level of service has already reversed the decay in public transport patronage evident in the mid-1990s, with the modal share of street buses reaching 8.4% in 2000. Traffic congestion has now become a binding constraint on further service improvements, and calls for the introduction of bus priority measures.</p>
Development objectives:	Assist Tianjin in enhancing the efficiency and equity of wastewater management and transportation systems, thus facilitate sustainable development of Tianjin and serve as a model to other cities in China

Investment components:	<p>Components (A) through (E): wastewater management (\$247m) - drainage, sewerage, water treatment and canal rehabilitation;</p> <p>Component (F): urban roads (\$62.3m) – 2 major interchanges on the Middle Ring Road and traffic management improvements on the Inner and Middle Rings;</p> <p>Component (G) Public transport improvements (\$15.2m)- the provision of bus priority measures on selected corridors;</p> <p>Component (H): Traffic management (\$4.1m) – provision of traffic signals and geometric improvements on 300 intersections, 89 on Inner Ring the rest on streets within Inner Ring; and</p> <p>Component (i): Institutional development (\$4.6m) – technical assistance and training for the development of infrastructure information systems; sewerage regulation; urban transport coordination; urban transport modeling; and design of bus priority measures.</p>
Policy agenda:	<ul style="list-style-type: none"> - Full-scale regulatory reform of the wastewater sector: delineation of functions between the public and private sectors; organizational set-up; pricing and funding policies; - Introduction of an explicit focus on equity aspects of municipal services
Institutional agenda:	<ul style="list-style-type: none"> - Review options for urban transport coordination and introduce the selected option from 2006
Monitoring indicators:	<ol style="list-style-type: none"> 1. Urban wastewater management coverage: collection and treatment of wastewater from 80% of the central city and first 150,000 m³/day of wastewater in suburban towns; average income in districts served 15% lower than areas already served at the project start; 2. Water Reuse: use of about 20,000 m³/day of reclaimed wastewater for urban uses, and 600,000 m³/day for agricultural purposes; 3. Road Transportation: travel time to cross selected points; 4. Public Transportation: increase in the modal share of buses
Complementary/related operations	<p>Tianjin Urban Development and Environment Project (1992-2000) assisted Tianjin Municipal Government to increase efficiency and responsiveness of its infrastructure and environmental management systems, and to finance high priority investments. In urban transport, the project financed road infrastructure and traffic control, as well as operational tools for public transport company. In the policy sphere, the project supported public transport regulatory reform, consisting of a break-up of the municipal company and opening the market to private operators, based on competitive tendering. The project's technical assistance component addressed techniques and procedures for project planning and evaluation, municipal budgeting, and public transport management. At completion, the outcome was rated highly satisfactory, sustainability highly likely, and institutional development impact high. Performances by the Bank, and Borrower are similarly rated as satisfactory, and highly satisfactory, respectively.</p>
Results at completion:	
Team	Songsu Choi (lending, SPN); Suhail Jme'an (SPN)
Profile date and author:	December 17, 2010; Slobodan Mitric

Links to key documents of the Second Tianjin Urban Development and Environment Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2003/05/05/000012009_20030505114932/Rendered/PDF/25184.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/EAP/2004/12/14/28C864C09A5D5DC285256F03000E767D/1_o/Rendered/PDF/LoanoAgreement1CONFORMED.pdf

LIAONING MEDIUM CITIES INFRASTRUCTURE PROJECT (P099992)	
Country and region:	China, EAP
Borrower:	People's Republic of China, on-lent to Liaoning Provincial Government, on-lent to participating cities
Implementing agency and arrangements:	<p><u>At the provincial level:</u> Project Coordinating Group, chaired by Vice-Governor of Liaoning (overall oversight, coordination re policy and institutional issues) Liaoning Provincial Department of Finance (integrated management of the project) Liaoning Urban Construction and Renewal Project Office (day-to-day project implementation)</p> <p><u>In participating cities (Panjin, Jinzhou, Fushun, Benxi, Liaoyang and the town of Dengta):</u> Local Leading Group, chaired by a Vice-Mayor (overall policy guidance and coordination) Local Project Management office (day-to-day project management)</p>
Concept review date:	September 20, 2005
Board approval date:	June 27, 2006
Effectiveness date:	January 1, 2007
Closing date:	December 31, 2011
Instrument category:	SIL
Project structure by sector:	Roads and highways, 70%; general transport sector, 16%; sanitation, 14%
Project total cost at appraisal in US\$:	525.4m
WB commitment in US\$:	218m (Loan)
Co-financiers:	
Final project cost in US\$:	
Final amount disbursed in US\$:	
Diagnostic highlights	<p>The province of Liaoning, 50% urbanized, featuring several medium-size cities, lags behind coastal China in rapid economic growth. Its economic base is made of state-owned mining and heavy industrial enterprises had mixed success in moving to market-based operation, and face depletion of ore lodes. Consequences include budgetary weakness of provincial/local governments, in addition to people's wages. Road infrastructure and services were underfunded for years and now make an obstacle to economic recovery, as well as poorly serving the local population. Especially poor are the secondary roads that link primary roads with final origins/destination of travel, in addition to providing roads where bicycles are safer than on main thoroughfares. Public transport companies also reflect chronic underfunding. The need for highly selective and cost-effective investments is high, countering a hitherto habitual stress on large road projects and vehicle orientation. The regulatory reform of the public transport sector is starting, founded on the provincial government's perception that of potential benefits of private investment and operation against the backdrop of limited public funds available.</p>
Development objectives:	Enhance: (i) the performance and quality of the participating cities' existing urban transport infrastructure in terms of mobility, access, and safety; (ii) the efficiency

	and effectiveness of their urban public transport and road maintenance services; and (iii) the responsiveness of their urban transport systems to the needs of population without access to private motorized vehicles.
Investment components:	<ol style="list-style-type: none"> 1. Road Infrastructure and Reconstruction Component (RI) [US\$330.9m, including resettlement costs of US\$105.1 million] includes road improvements in the primary, secondary and tertiary networks that would address current transport problems and bottlenecks. 2. Secondary Road Rehabilitation and Road Maintenance Equipment Component (RM) [US\$113.4m] will finance rehabilitation of major segments of the participating cities' road network to improve last-mile access to pedestrians and bicyclists, and finance road maintenance equipment. 3. Traffic Safety and Traffic Management Component (TS) [US\$22.2m] supports the implementation of the NRSL through enhanced traffic management, monitoring and traffic control systems (including traffic signals and intersection improvements) to improve safety and traffic flow. 4. Public Transport Component (PT) [US\$14.5m] includes provision of bus priority facilities and improvements in public transport planning and operations in the project cities. It includes investments in public transport infrastructure such as on-street bus priority and transit oriented traffic engineering, shelters, terminals and interchanges. Length of bus lanes varies from one city to another, ranging from 10 to 18 km. 5. Institutional Development Component (ID) [US\$4.9m] supports technical assistance (TA) in transport planning and management, reform in road maintenance practices and in the structure of the public transport industry, and includes project management assistance for Liaoning Urban Construction and Renewal Project Office (LUCRPO).
Policy components:	<ul style="list-style-type: none"> - In all but one city, the public transport investment component includes bus priority lanes. Cumulatively, this amounts to a policy initiative to re-allocate road space to exclusive use of public transport vehicles. - All the project cities are in the midst of restructuring public transport industry to increase the private sector involvement (a provincial directive). The Project will provide technical assistance to cities in looking at regulatory options and designing the reform package, when cities ask for it. Article 9 of the Project Agreement requires client cities to notify the Bank in advance of adopting or implementing any strategic regulatory changes involving the provision of public transport services.
Institutional components:	None beyond the component to strengthen existing institutions
Additional project features	<p>The Project has several innovative features, including but not limited to:</p> <ul style="list-style-type: none"> - Pre-screening investments (on the basis of pre-feasibility exercises) - Explicit treatment of bicycle travel in demand models to increase the people-orientation of transport planning - Major effort at public participation (meetings and surveys), both during project preparation, in the course of implementation, and at the end - A comprehensive approach to traffic safety, linking investments, institutions, and monitoring - Client-driven policy reform agenda for public transport regulation, meant to overcome problems of including specific (project-driven) reforms in previous Bank-funded projects in China
Complementary/related operations	Liaoning Urban Transport Project (1999-2005) plus 3 other urban infrastructure projects in the Province, amounting to a total of \$400m in Bank loans

Monitoring indicators	<p>Indicators relating to the performance of the road network:</p> <ul style="list-style-type: none"> (a) satisfaction levels with transport facilities (mobility, access, safety) expressed by a panel of public participants; (b) the percent of the road network functioning as an all-weather road; (c) weighted travel time for all users (bicycles, cars, bus, pedestrians) over a selected set of travel itineraries; (d) number of traffic accident fatalities; and (e) use of open competitive bidding methods on a pilot basis to award maintenance contracts. <p>Indicators relating to public transport services:</p> <ul style="list-style-type: none"> (a) satisfaction levels with public transport services, expressed by a panel of public participants; (b) competitive award of bus route franchises to multiple independent operators on a pilot basis; (c) improved level of bus service (measured by number of bus passengers and vehicle km of revenue service) in at least one project city; (d) network coverage of public transport, measured in route km per square km; and (e) adoption of effective bus priority measures (as measured by difference in the operating speeds along priority sections).
Status and results:	Active; last SPN ratings (June 9, 2009): satisfactory on achievement of objectives, moderately satisfactory on implementation progress
Team	Shomik Mehndiratta (lending, SPN); Gerald Ollivier (SPN)
Profile date and author	November 10, 2010; Slobodan Mitric

Links to key documents of the Liaoning Medium Cities Infrastructure Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2006/06/08/000090341_20060608155802/Rendered/PDF/35588.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/EAP/2007/02/28/D61C1FC25ED5AB128525726B005CC875/2_0/Rendered/PDF/LoanoAgreement.pdf

Project Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/EAP/2010/04/27/EACC3D7550BD3C7D8525726B005C9F7D/2_0/Rendered/PDF/ProjectoAgreement.pdf

HANOI URBAN TRANSPORT DEVELOPMENT PROJECT (Po83581)	
Country and region:	Vietnam, LAC
Borrower:	Government of Vietnam
Implementing agency and arrangements:	Hanoi People's Committee, through a standing Steering Committee for infrastructure and a Project Steering Committee. A Hanoi Urban Transport Development Project Management Unit has been set up under the Hanoi Transport and Urban Public Works Service (TUPWS) for day to day implementation and coordination activities. The Transport Management Center (also under TUPWS) is designated as the core for the future Public Transport Authority, and will be involved in procurement of BRT buses and equipment.
Board approval date:	July 3, 2007
Effectiveness date:	April 22, 2008
Closing date:	December 31, 2013
Instrument category:	SIL
Project structure by sector:	General transport sector, 33%; roads and highways, 51%; other social services, 12%; sub-national government administration, 4%
Project total cost at appraisal in US\$:	304.7m
WB commitment in US\$:	155.2m (credit)
Co-financiers:	Global Environment Facility; grant of US\$9.8m
Final project cost in US\$:	
Amount disbursed in US\$:	11.4m (as of April 21, 2010)
Diagnostic highlights	Hanoi (3m people) features high-density land use (272 people per ha in urban districts, 404 in the inner center) and an exceptionally sparse road network (7% of land area). Economic growth has spurred rapid, motorcycle-based motorization: from 100,000 in 1990 to 1.5m in 2005, accounting for 70% of motorized trips. Public transport, limited to street-based buses, carries only 10% of trips. Its growth is constrained by street congestion. The government's strategy was to control vehicle ownership, but this did not work. Traffic management and environment protection are still nascent. Hope has been placed in developing some form of rapid transit, and in building roads in the north and north-west to generate development away from congested areas. Generally, transport-related institutions are weak.
Development objectives:	Increase urban mobility in targeted areas in Hanoi by: (i) increasing the use of public transport in two existing and one new corridors [thereby increasing corridor capacity]; and (ii) reducing travel times by all modes between the city center and the west and northwest sections of the city (west of West Lake). GEF strategic objectives are to promote a shift to more environmentally-sustainable transport modes and urban development plans, and to promote the replication of these approaches in the country and region. Its global environment objective is to lower Hanoi's transport-related greenhouse gas emissions, relative to a business-as-usual scenario.
Investment components:	<ol style="list-style-type: none"> 1. Development of the BRT system (\$99.9m): civil works, fleet and equipment for 37 km of segregated right-of-way and 9km of bus priority lanes; 130 bus vehicles, terminals, interchange facilities, maintenance depot, management system, and public information campaign. 2. Road infrastructure and transport land use planning (\$194.3m): section of

	Second Ring Road; resettlement; integrated transport and land use development planning 3. Institutional development (\$10.5m): Traffic safety; Air Quality Management; Public Transport Authority set up costs and technical assistance; national and regional replication; and project management.
Policy components:	Introduction of a market-based operation on the BRT network, based on competitively awarded concessions
Institutional components:	Establishment of a Public Transport Authority
Additional project features	
Complementary operations	This Project was preceded by Urban Transport Improvement Project (P004833, 1998-2005), which focused on traffic management investments and institutions. The Project reflects the recommendations of the Bank's Transport Strategy for Vietnam (2006).
Monitoring indicators	(i) Number of public transport trips in corridors affected by the Project; (ii) Number of car trips avoided (based on user surveys); (iii) A successful establishment of a public transport authority
Status and results:	The Project was declared a problem project in May 2009 because of the delay in finalizing designs for the BRT system and issuing a tender for works. Other components are also experiencing approval delays. The October 2009 mission rated the progress marginally unsatisfactory.
Team	Shomik Mehndiratta (lending); Reindert Westra (SPN)
Profile date and authors:	April 22, 2010, written by Slobodan Mitric

Links to key documents of the Hanoi Urban Transport Development Project:

Vietnam - Transport Strategy: Transition, Reform and Sustainable Management (2006):

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2006/09/06/000160016_20060906122909/Rendered/PDF/371870VNoTransporto1PUBLIC1.pdf

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2007/06/14/000020953_20070614100724/Rendered/PDF/39434.pdf

Project Document (GEF component):

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2007/08/27/000020953_20070827083319/Rendered/PDF/40565.pdf

Financial Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/EAP/2008/01/04/CF6979CC4C37E95A852573C6005FE2D5/1_o/Rendered/PDF/4347FA.pdf

Trust Fund Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/EAP/2008/01/04/CAF4CDC135B50F46852573C600602D60/1_o/Rendered/PDF/TF0582930GEFo.pdf

XI'AN SUSTAINABLE URBAN TRANSPORT PROJECT (P092631)	
Country and region:	China, EAP
Borrower:	People's Republic of China through Ministry of Finance; funds on-lent to Municipality of Xi'an
Implementing agency and arrangements:	Municipality of Xi'an through a Project Steering Committee representing about 15 relevant agencies; a Project Management Office was established to manage project preparation; Upon loan approval, PMO will be transformed into an executive secretariat of PSC to assist with policy guidance, coordination and overall monitoring. Actual implementation will be done by line agencies coordinated by Infrastructure Investment Corporation of Xi'an (later re-named Urban Infrastructure Construction Investment Group Co. LTD.) , a state-owned company set up by the Municipality of Xi'an, under a subsidiary loan agreement
Concept review date:	December 5, 2005
Board approval date:	June 24, 2008
Effectiveness date:	December 24, 2008
Closing date:	June 30, 2015
Instrument category:	SIL
Project structure by sector:	Roads and highways, 50%; general transport sector, 26%; sub-national gov't administration, 9%; other social services, 15%
Project total cost at appraisal in US\$:	414.3m
WB commitment in US\$:	150m (loan)
Co-financiers:	None
Final project cost in US\$:	
Amount disbursed in US\$:	10.4m
Diagnostic highlights	Xi'an, 5m people (8m urban area), is a World Heritage site, attracting many visitors, but also high-tech industries and universities. It is a transport and logistics hub for western China. 21 million domestic and about 0.6m foreign visitors came to the city in 2004. Local economy has been fast growing, but motorization is increasing even faster. Walking and bike trips still account for about 50% of all daily trips, with public transport (street buses) carry 23% and cars & taxis 22%. Spatial development poses the challenge of protecting cultural monuments, while creating favorable conditions for economic processes. This has resulted in a decision to create new satellite towns, with good internal circulation and efficient links to the mother city. The road network is of an undifferentiated type, a scene of a conflict between pedestrians and bicyclists on one side and the ascendant motor vehicles on the other. Traffic management is weak, and there is a trend of letting motor vehicles, moving or parked, to take over the street space hitherto reserved for bikes or buses. Several metro lines are on the drawing board, but the existing public transport fleet and facilities have not been a focus of attention.
Development objectives:	<p>The project development objective is to improve transport accessibility and mobility in Xi'an Municipality while protecting its cultural heritage and reducing the environmental impact of the urban transport system.</p> <p>The underlying ideas are as follows:</p> <p>(a) <i>Reduce the environmental impact of private car traffic in the Ming Wing City</i></p>

	<p>(MWC) by reducing the overall volume of cars, by concentrating them onto well designed and managed main arterials, and introducing traffic calming on other roads where appropriate.</p> <p>(b) Foster a Functional Road Hierarchy, by resolving the incompatible mixed functions of roads and implementing the desired functions through a combination of road infrastructure improvements, traffic management, traffic calming, parking, public transport, and environmental measures.</p> <p>(c) Encourage the use of public transport for travel to the MWC, and for access to newly developed areas outside the MWC, by giving priority to local public transport through the development of bus lanes coordinated with traffic management measures and service development throughout the city, coordinated with the two metro lines under construction.</p> <p>(d) Encourage and give priority to cycling and walking by ensuring continuity and safety of pedestrian and bicycle routes to/from and within the traditional center.</p> <p>(e) Engender a human scale to the MWC streetscapes with road cross-sections related to the desired pre-dominant road functions and adjacent land uses, in proportion to building heights and made visually attractive through urban design, with provision for vulnerable road users, traffic management measures, and new road infrastructure where appropriate.</p> <p>(f) Encourage tourism development by providing a more "livable" environment within the MWC through streetscape improvement, improved conditions for walking and cycling, improving traffic safety measures and recreating the road network in an archaeological site. The cultural heritage component demonstrates how modest transport investments can have a positive impact on individual historic and tourist sites. If successful they can be replicated in other locations.</p> <p>(g) Provide the basis for sustainable improvement in air quality by creating a traffic pollution monitoring and analysis capability which can be developed after the project is completed to permit real time assessment of pollution levels.</p> <p>(h) Manage on-street parking, freeing up space for buses and general traffic and remove parking on sidewalks, freeing up space for pedestrians who are otherwise forced to walk in the street.</p> <p>(i) Facilitate the economic development in the satellite city of Huxian to relieve pressure on the traditional areas by provision of road infrastructure to improve accessibility.</p>
Investment components:	<p>1. Road Network Component (\$230.1m): (i) in Xi'an city improvements to the First and Second Ring Roads and Taibai Nan Road to increase their functionality as major traffic routes; and (ii) upgrading of the road network in (satellite city) Huxian.</p> <p>2. Public Transport Component (\$67.3m): (i) Eastern (Textile City) and Southern City Passenger Transport Terminals; (ii) Integrated public transport priority & traffic management measures on 13 selected bus corridors; and (iii) Xinzhu bus depot.</p> <p>3. Traffic Management (TM) Component (\$39.1m): (i) An Area Traffic Control (ATC) system, with associated junction channelization; (ii) Road safety program to investigate and analyze accidents, and implement remedial measures; (iii) Enforcement and road user education measures; (iv) Parking measures and equipment; and (v) traffic facilities for cyclists and pedestrians, and road marking equipment.</p> <p>4. Air Quality Management Component (\$17.5m) will support the Xi'an Environmental Protection Bureau (XEPB) in developing and implementing comprehensive plans for air quality improvement and reduction of vehicle emissions. It will comprise: (i) A building to house the newly established Xi'an Ambient Air Supervising and Monitoring Center; (ii) Equipment for motor vehicle emission inspection compatible with inspection methods issued by SEPA in July 2005; (iii) Civil works and equipment for two ambient air quality monitoring sub-stations and two traffic air pollution monitoring sub-stations for improvement of</p>

	<p>air quality monitoring network; (iv) Equipment for improvement of air quality assessment and information publication; and (v) Development of a Motor Vehicle Emission Control Plan.</p> <p>5. Cultural Heritage Component (\$54.2m): (i) Han Chang'an Site - recreation of the old Han Dynasty road network (8.4km) in the area of Weiyang Palace; and (ii) MWC – construction of a network of bicycle routes (27 km) linking the main tourist sites.</p> <p>6. Institutional Development Component (\$4.2m) will support Xi'an in developing a capacity in the city for transport planning and policy making. It will comprise: (i) Urban Transport Policy & Comprehensive Planning; (ii) Support for implementation of the TM component; and (iii) Domestic and international training and workshops.</p> <p>Support for public transport planning will be financed by a complementary, but separate GEF Project.</p>
Policy components:	<ul style="list-style-type: none"> - Introduction of preferential treatment for public transport vehicles (by virtue of exclusive bus lanes in 13 corridors); - Parking control (including charges): this is included in the TM component as a subject to be studied, but Borrower did not formally undertake to implement recommended measures
Institutional components:	<ul style="list-style-type: none"> (i) Creating a complete air quality management system (infrastructure, equipment, operational plans); and (ii) Strengthening urban transport planning capability
Additional project features	<ul style="list-style-type: none"> - In previous projects (in China?) the Bank tried to enhance non-motorized vehicle mode share through networks of segregated and exclusive non-motorized vehicle and motor vehicle roads. However, experience has shown that only the exclusive motor vehicle roads got implemented. In this project, it is aimed to maintain and enhance non-motorized vehicle mode share by ensuring that these vehicles are provided with appropriate facilities on as many roads as possible and that there is a spread of routes with non-motorized vehicle facilities across the network; introducing the concept of a functional road hierarchy; and creating a non-motorized vehicles predominant route with a high quality urban design and traffic calming. - There are no non-routine covenants in the loan agreement
Complementary/related operations	<ul style="list-style-type: none"> (i) There is a complementary ADB-funded project focusing on primary roads. (ii) A GEF-funded operation (\$2m grant) will cover public transport planning and management capability
Performance indicators	<p>For achievement of PDO's:</p> <p>(a) Trip modal split (including walking) to and from the MWC; base values: walking 21.7%; bikes 35.2%; public transport 25%; cars and taxis 18%. Xi'an Municipality would like to see the public transport modal split rise to 50% (from Oct 2009 mission Aide-Memoire)</p> <p>(b) Bicycle use and travel times to cultural heritage sites within the MWC.</p>
Status and results:	<p>Active; last SPN ratings: satisfactory for both objectives achievement and progress of implementation. The SPN strategy is to assign responsibilities within a large team, then field smaller missions with specialists needed for a particular task, with a full-scale team visiting once a year. Eight partial missions visited Xi'an since loan approval.</p>
Team	Edward Dotson, Rakhi Basu, John Carter Scales (lending); John Carter Scales (SPN)
Profile date and author:	April 19, 2010, written by Slobodan Mitric

Links to key documents of the Xian Urban Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2009/04/23/000350881_20090423113437/Rendered/PDF/400330PADoP092101OfficialoUseoOnly1.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/EAP/2008/11/14/4F8029F4A18CF778852575010070834C/1_o/Rendered/PDF/LoanoAgreement.pdf

CHINA-GEF-WORLD BANK URBAN TRANSPORT PARTNERSHIP PROGRAM (P090335)	
Country and region:	China, EAP
Borrower:	People's Republic of China through Ministry of Finance
Implementing agency and arrangements:	Ministry of Finance
Concept review date:	September 18, 2010
Board approval date:	June 24, 2008
Effectiveness date:	January 1, 2009
Closing date:	June 30, 2013
Instrument category:	Global Environment Project (structured as a SIL)
Project structure by sector:	General transport sector, 48%; central gov't administration, 20%; sub-national gov't administration, 32%
Project total cost at appraisal in US\$:	27m
WB commitment in US\$:	21m (Global Environment Facility grant)
Co-financiers:	The German Technical aid Agency, <i>Duetsche Gesellschaft f i r Technische Zusammenarbeit</i> (GTZ) is partnering the Project to support all the training related activities in China.
Final project cost in US\$:	
Amount disbursed in US\$:	2.6m (as of Jan 29, 2010)
Diagnostic highlights	China's economic growth and concurrent motorization and suburbanization have brought great increases in mobility for some population groups, but also traffic congestion and high levels of air pollution. People who walk, bike or use public transport have been losers. This is so at a still-low motorization rate (100 cars per 1,000 population in Beijing). It is forecast that emissions of carbon-dioxide will rise to 300 megatonnes in 2020, a 290% increase from 65 megatonnes in 2005. This is a local, national and global concern. The Government's initial strategy of massive road construction (estimated at about \$20bn annually in recent years) is now seen as insufficient on both service and environmental grounds, and a new strategy of strengthening the supply of public transport services and protecting non-motorized modes has emerged. Problems of implementation arise because in China it is local governments that have the authority over urban transport matters. Problems at the local level include a lack of appropriate incentives, outdated urban planning processes, limited public accountability, and weak urban transport institutions. What is needed is for the national government to develop financial and other incentives, including demonstration projects, to get the cities to evolve and follow sustainable transport orientations.
Development objectives:	Achieve a paradigm shift in China's urban transport and land-use policies and investments toward the promotion of public and non-motorized transport, modes that are less energy intensive and polluting than those fostered by current urban land-use planning and transport systems in China. GE objective: slow the forecast growth of urban transport greenhouse gas emissions in China's cities
Investment components:	1. Technical assistance, other services and training for strategy development and capacity building at the national level (\$12.8m): A.

	<p>Development of a national urban transport strategy; B. Capacity building efforts at the national level; C. Dissemination and awareness-raising activities; D. Monitoring and evaluation.</p> <p>2. Investments in works, goods and services for pilot demonstration projects in 14 cities and 1 province (\$13.0m, with follow up investments estimated at \$560.1m): A. development of bus-based rapid transit systems in 7 cities; B. strategic plans for cities; C. development of a short-term, low-cost action plan to increase ridership on Chongqing's urban rail line; D. development of demand management measures in Guangzhou, Jinan and Xian; E. preparation of transit-oriented land development plans in Nanchang and in Xian.</p> <p>3. Technical assistance, goods and services for project management (\$1.3m)</p>
Policy components:	None
Institutional components:	<p>Expected institutional outputs are:</p> <ol style="list-style-type: none"> 1. National urban strategy, submitted for approval and adoption by the Steering Committee. 2. Proposed amendments to legislation and/or regulations needed to implement comprehensive framework, submitted for approval and adoption by Project Steering Committee.
Additional project features	<p>Key covenants:</p> <ol style="list-style-type: none"> 1. The Government shall, by June 30, 2011, and after due consultation with relevant stakeholders, (a) formulate a national urban transport strategy; and (b) take all measures and actions, as may be necessary or required, to facilitate its adoption and implementation; 2. The Government shall: (a) after due consultation with relevant stakeholders, formulate, approve and adopt manuals, guidelines, regulations, standards and training program materials for sustainable urban transport planning to be utilized by local government planners, and officially publish in a freely and easily accessible manner each such document no later than twelve (12) months after its approval; (b) establish and maintain a database of the documents; (c) enter into arrangements with training institutions for developing and implementing the training programs referred to in the preceding clause; and (d) enter into arrangements with universities for developing and offering courses on environmentally sustainable urban transport.
Complementary/related operations	The Bank's lending program for urban transport in China has been large and active. Before this operation, it was focused on single city or a group of cities. This is a first national operation.
Monitoring indicators	<ol style="list-style-type: none"> (i) Urban transport policy-makers in the central government adopt mechanisms and technical products such as guidelines, manuals and standards that produce investments, policies and strategies at the local level that promote public transport and non-motorized transport. (ii) At least 25 cities <i>with a population over 500,000</i> that did not participate in the project's environmentally sustainable urban transport component demonstrate substantive interest in implementing their own urban transport investment development plans that more actively promote public and non-motorized transport, <i>and at least 10 of these demonstrate progress in doing so, during the project period.</i> (iii) Forecast transport Co2 emissions in the demonstration cities that implement more sustainable transport plans developed under the

	project are lower than their “business-as-usual” forecasts
Status and results:	Active: the most recent SPN ratings are satisfactory on both meeting development objectives and progress of implementation
Team	Shomik Mehndiratta (lending); Zhi Liu (SPN)
Profile date and authors	April 15, 2010; written by Slobodan Mitric

Links to key documents of the China-GEF-World Bank Urban Transport Partnership Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2008/06/11/000333038_20080612001424/Rendered/PDF/432490PADoREVI17391Bo1OFFoUSEoONLY1.pdf

The background sector report on urban transport institutions in China:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2006/09/13/000090341_20060913152025/Rendered/PDF/371810CHAOurbantransport01PUBLIC1.pdf

GEF Project Brief:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2007/06/20/000020439_20070620115534/Rendered/PDF/400970ChinaoGEFoUrbanoTransport.pdf

WUHAN SECOND URBAN TRANSPORT PROJECT (P112838)	
Country and region:	China, EAP
Borrower:	Republic of China
Implementing agency and arrangements:	Municipality of Wuhan, through Wuhan Municipal Government Urban Construction Fund Management Office, and its Wuhan Project Management Office, retained from the first Bank-funded operation
Concept review date:	January 21, 2009
Board approval date:	March 30, 2010
Effectiveness date:	Pending as of April 16, 2010
Closing date:	December 31, 2015 (original)
Instrument category:	SIL
Project structure by sector:	General transport sector, 100%
Project total cost at appraisal in US\$:	610.7m
WB commitment in US\$:	100m (loan)
Co-financiers:	None
Final project cost in US\$:	
Amount disbursed in US\$:	
Diagnostic highlights	<p>Wuhan (more than 8m people, with an urban core of 5m) is major economic and transport hub in Central China. It was chosen by the State Council to be a national experimental zone for an environmentally friendly society. Street-based buses (6,500, of which 5,750 operated by the city-owned company) are still the mainstay of the public transport system. Modal split estimated for 2008: walking 38%; bicycles 20%; public transport modes (buses, metro, ferries) 24%; cars and motorcycle 18%. The city has made major public transport improvements including bus priority lanes and a new 10-km metro line but is keen on doing more, conscious of the steady rise of motorization, has updated its strategy and fed it into the 2006 Urban Master Plan, with a horizon of 2020. Four items are key in the strategy: (i) congestion on river crossings; (ii) missing links in the primary road network; (iii) congestion in the city center; and (iv) too low performance and modal share of public transport services.</p>
Development objectives:	<p>Enhance mobility for passenger trips within and to the central area of Wuhan an environmentally sustainable, integrated and safe manner. Judging from performance indicators, the sub-objectives involve: (i) improving the quality and throughput of public transport services; (ii) increasing the modal share of public transport; (iii) reducing fatal accidents; and (iv) improving quality of service on major streets.</p>
Investment components:	<ol style="list-style-type: none"> 1. Public Transport (\$49.4m; \$21.2m from the loan): Supporting priority incremental public transport improvements including: (i) strengthening public transport route rationalization and operations, including providing on-street priority to buses on key selected road corridors in Wuhan Municipality; and (ii) construction of public transport transfer terminals & interchanges to facilitate transfer from private to public transport modes and park and ride for non-motorized vehicles and cars. 2. Road Safety (\$16.0m; \$11.4m from the loan): Improving traffic

	<p>management, safety and mobility through, <i>inter alia</i>, traffic enforcement, education campaigns and engineering measures including installation of additional traffic signals for vehicles, and mid-block traffic signals for pedestrians, facilities for pedestrians and cyclists, and signs and markings in selected road corridors and the area within the Second Ring Road.</p> <p>3. Road Improvements (\$478.3m, \$58.3 from the loan): Carrying out rehabilitation, upgrading, and construction of three key links of the urban road network of Wuhan Municipality.</p> <p>4. Travel Demand Management (\$5.4m; \$4.4m from the loan): Carrying out a program for improving travel demand management through, <i>inter alia</i>, procuring equipment, and carrying out studies, training and capacity building measures for the agency managing Wuhan's roads and bridges.</p> <p>5. Institutional Development and Capacity Building (\$4.9m; \$4.5m from the loan): Carrying out of studies and a comprehensive plan for strengthening the institutional capacity of Wuhan Municipality in developing an urban transport strategy, with particular focus on non-motorized transport, public transport integration, and transport issues related to urban-rural integration.</p>
Policy components:	No specific policies or policy reforms sought under the Project
Institutional components:	Improving institutional tools through studies on critical topics (see component 5 above)
Additional project features	Under the Roads Component, the Loan will finance 2 out of 8 contracts, but all designs and tender documents were treated as belonging to the Project, and the same safeguards apply.
Complementary/related operations	Wuhan Urban Transport Project (2004-2009)
Performance indicators	<p>Achievement of project development objectives would be measured using:</p> <ul style="list-style-type: none"> (i) Bus travel time in minutes per km, from surveys along specific corridors (base 3.35 min; goal 10% reduction); (ii) Daily bus ridership (surveys on specific corridors; goal: 5% increase); (iii) Modal share of public transport (base 24%, goal 28%) (iv) Number of fatalities per year on public transport and specific corridors (base 38 fatalities; goal reduction of 15%); (v) Peak hour travel time (traffic) on a specific avenue (base 27 min; goal 20min)
Status and results:	Project still at an early stage, loan effectiveness pending.
Team	Shomik Mehndiratta (lending); Ke Fang (SPN)
Profile date and authors:	April 20, 2010; written by Slobodan Mitric

Links to key documents of the Second Wuhan Urban Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2010/03/31/000350881_20100331094130/Rendered/PDF/502000PADoCORRIGENDUM00R201010043120.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/EAP/2010/07/30/0A21DB424BB364B98525770006661F7/1_o/Rendered/PDF/WSUTPoLA.pdf

ANNEX 4: PROJECT CAPSULES FOR THE EUROPE AND CENTRAL ASIA REGION

1. Uzbekistan Urban Transport Project (2000-2006)
2. Kyrgyz Urban Transport Project (2000-2005)
3. Moscow Urban Transport Project (2001-2008)

UZBEKISTAN URBAN TRANSPORT Project (Po50508)	
Country and region:	Uzbekistan, ECA
Borrower:	Republic of Uzbekistan
Implementing agency:	Uzbek State Corporation for Automobile Transport - UZAVTOTRANS (orig); later UztransSanoat (ex-Uzavtotrans Taminot), one of successors to Uzavtotrans
Board approval date:	11 May 2000
Effectiveness date:	22 September 2000
Closing date:	21 December 2004 (orig.); 31 March 2006 (act.)
Instrument category:	SIL
Project structure by sector:	Gen Transport Sector, 98%; national and sub-national gov't administration, 1% each
Project total cost in US\$:	31.16m
WB commitment in US\$:	29.0m (loan)
Final project cost in US\$:	11.7m
Amount disbursed in US\$:	11.21m
Diagnostic highlights	Uzbekistan was moving from a command economy to a more liberal one. In the urban public transport services, the inherited setup consisted of a state-owned company, UZAVTOTRANS, suffering from performance and production efficiency problems found in all transition economies of that period, due to a combination of low cost recovery and inadequate subsidy payments by the state. Reforms already initiated before the project started included improvements in services offered to passengers as well as productivity of the existing operators, but also the first moves to change the organization of the sector.
Development objectives:	Increase efficiency and sustainability of urban passenger transports services in 5 pilot cities; more specifically: (i) increase service supply; (ii) improve management of operations; (iii) introduce competitive bidding process for allocation of bus route franchises; (iv) improve service planning and regulatory functions; (v) achieve full cost recovery. Though not formally stated, a shift from a public-owned monopoly to private provision of services was a major objective, implied in (iii).
Investment components:	(i) provision of 350 new buses, US\$23.46m (meant for leasing); (ii) rehabilitation and repair of existing bus vehicles, US\$3.7m; (iii) office equipment, incremental operating costs of project unit, training, and technical assistance, US\$2.37m
Policy components:	(i) introduction of bus leasing to private and public operators; (ii) introduction of competitive bidding for service provision, opened to both public and private operators
Institutional components:	Creation of city transport departments
Additional project features	The Project Preparation Facility was used effectively to initiate the reform program and prepare the ground institutionally. PPF financed the standard preparation studies, but also workshops and visits abroad. The process took 2 years. An unusual feature of the Project was a strong support for reform within UZAVTOTRANS even though that organization was to be dismantled as a part of reforms. The pivotal reform decision, moving from public monopolies to a franchise based service delivery in urban public transport was taken by the Government

	before the loan approval. A major challenge was to have the franchise system and bus procurement get underway in time for the private operators to be ready to lease buses financed under the Project.
Complementary operations	None in Uzbekistan, but there was a batch of projects in the region in 1990s (Russia, Kazakhstan, Kyrgyz Republic, Latvia, Turkmenistan and Hungary) all taking a slightly different tack to problems of urban transport in the transition setting. For a review of these projects, follow the link to: World Bank (2002b). <i>Urban Transport in the Europe and Central Asia Region: World Bank Experience and Strategy</i> . Report 25188-ECA, Infrastructure and Energy Services Department, Europe and Central Asia Region. Washington, D.C.
Main monitoring indicators	<p><u>Indicators to measure services and company efficiency:</u> (i) passenger place-km placed in service on average day; (ii) average waiting times per passenger; (iii) fleet utilization coefficient.</p> <p><u>Indicators to measure the success of the franchise introduction:</u> (i) number of routes tendered; (ii) proportions of routes with no tenders, single tenders and multiple tenders.</p> <p><u>Indicator to measure cost recovery:</u> ratio of operating costs to operating revenues.</p>
Results:	<p>The Project was completed with 15 months of delay, due entirely to problems with fleet procurement. The ICR gave the project satisfactory rating for quality at entry, final outcomes and sustainability, and substantial rating for institutional development impact.</p> <p>Unusually, <u>procurement of buses and spare parts</u> ended being nominally the least successful aspect of the project relative to plans agreed at appraisal, and involved major cancellation. At Borrower's proposal, bus purchases were reduced to 200 buses, since private operators developed faster than expected and could arrange their own fleet purchases. Bus overhaul component was cancelled in line with findings of a feasibility study. Bus prices in the winning bid were substantially lower than estimated at appraisal. In all, about \$17.5m was cancelled from the loan.</p> <p><u>Policy reforms</u> went very well, resulting in a working franchise arrangement with major private sector participation (70% of the market), and a functioning company for bus leasing. Some 30 cities (half of all cities) replicated the franchise approach pioneered by the Project. Transport services were improved, as were affordability to passengers and cost recovery. Fare increases were implemented on time in 3 project cities, while with some delays in 2 cities. City transport departments were created and took over the responsibility for fare policy. The main unresolved policy problems were those of compensation to operators for discount fares and the approach to resolving fare fraud.</p> <p>Main lessons include: (i) the importance of being thorough in project preparation, especially building the consensus sufficient to make critical reform decisions ahead of loan approval; and (ii) the need to anticipate the time penalty when introducing Bank-style procurement new to both the sector and the country. The ICR praised the innovative use of beneficiary assessment as a tool for supervision and evaluation of outcomes.</p>
Team	Jean-Charles Crochet (lending, SPN); Martha Lawrence (SPN, ICR)
Profile date and authors:	January 25, 2011; written by Slobodan Mitric

Links to key documents for the Uzbekistan Urban Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2000/05/16/000094946_00042805302020/Rendered/PDF/multi_page.pdf

Urban Transport in the ECA Region: World Bank Experience and Strategy (Report 25188, December 2002):

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2005/10/18/000090341_20051018160618/Rendered/PDF/25188oECAoUrba1veroPo73788o1public1.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/ECA/2004/12/15/DFoC9FBzAA823D8185256Fo300115F68/1_o/Rendered/PDF/DFoC9FBzAA823D8185256Fo300115F68.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2006/10/02/000090341_20061002103510/Rendered/PDF/35978.pdf

COMMENTS

The project is a rare example where the success of policy and institutional reforms acted to reduce the utilization of the loan.

KYRGYZ URBAN TRANSPORT PROJECT (Po50719)	
Country and region:	Kyrgyz Republic, ECA
Borrower:	Kyrgyz Republic
Implementing agency:	Project Implementation Unit set up in Ministry of Transport and Communications, with policy oversight provided a high-level Working Group under the leadership of the Ministry of Finance
Board approval date:	22 August 2000
Effectiveness date:	17 November 2000
Closing date:	31 May 2004 (orig.); 30 November 2005 (act.)
Instrument category:	SIL
Project structure by sector:	General Transportation Sector (100%)
Project total cost in US\$:	24.22m
WB commitment in US\$:	22.0m (credit)
Final project cost in US\$:	24.3m
Amount disbursed in US\$:	22.14m
Key diagnoses:	Streets and roads in major cities were in ruinous condition, a consequence of a lack of funds for maintenance and rehabilitation, this being a downstream effect of a severe contraction of the country's economy following the drastic changes in the political and economic system. The same factors were behind a near-collapse of state-owned urban public transport operators. In Bishkek, for example, 35 buses were being placed in service in 2000, compared to 600 in early 1990s. Already private operators were starting to fill service gaps in all cities, albeit under an informal regime.
Development objectives:	Provision of reliable, affordable and sustainable accessibility to populations of major cities: Bishkek (1 million population), Osh (450,000 population) and Jalal-abad (100,000 population).
Investment components:	<ul style="list-style-type: none"> (i) road rehabilitation in the three major cities, about 98km in total, US\$21.71m; (ii) diverse equipment and technical assistance, US\$2.51
Policy components:	<ul style="list-style-type: none"> (i) Steps towards introduction of a reliable source of financing for urban roads maintenance and rehabilitation; (ii) Separating road construction activities from road planning, budgeting and contract administration functions; (iii) Shifting road construction activities into the private sector; (iv) Opening public transport service provision to multiple operators
Institutional components:	<ul style="list-style-type: none"> (i) Setting up of city road departments; (ii) Implementation of computerized road maintenance management (iii) Setting up of passenger transport agencies (regulatory authorities) in cities
Performance indicators:	<ul style="list-style-type: none"> (i) Reduction of vehicle operating costs for all vehicles (proxy indicator: length of roads improved); (ii) increased expenditures for urban road maintenance and rehabilitation; (iii) improved quality and efficiency of urban road maintenance and

	<p>rehabilitation (measured by road roughness);</p> <p>(iv) staff trained in road management</p>
Additional project features	<p>QUAG review of the Project at entry gave it a “marginally satisfactory” rating and was especially critical of weak links between project objectives and design features. This is primarily a reference to it being unclear how road funding was to be reformed, but also to the policy component regarding the introduction of multiple operators and setting up of public transport authorities in the participating cities (items iii in the policy and institutional boxes above), without any leverage from the loan. The ICR, on the other hand, gave the Project a “moderately satisfactory rating” for the quality at entry, having looked in more detail at the history of project preparation. Initially, a broader project design was pursued, including a major bus procurement component. This was dropped before appraisal, when seeing the rapidity of the private sector entry, but the policy dimension was kept since so much effort had been already expended to prepare it.</p>
Complementary operations	<p>None in the Kyrgyz Republic, but there was a batch of projects in the region in 1990s (Russia, Kazakhstan, Uzbekistan, Latvia, Turkmenistan and Hungary) all taking a slightly different tack to problems of urban transport in the transition setting. For a review of these projects, follow the link to: World Bank (2002b). <i>Urban Transport in the Europe and Central Asia Region: World Bank Experience and Strategy</i>. Report 25188-ECA, Infrastructure and Energy Services Department, Europe and Central Asia Region. Washington, D.C.</p>
Results:	<p>The project was completed, with 105km of urban roads improved. This more than 98km planned, profiting from costs lower than expected. There were substantial delays due to slower than expected preparation and procurement processes, and problems with the availability of counterpart funds. Contractor performance was a major problem, since the Kyrgyz construction industry was still in its infancy, and led to some works having to be redone. There was a similar lack on the borrower’s side, especially regarding the relation between the owner and supervision engineers. It is a major achievement that, under these conditions, both the length of roads rehabilitated and the resulting roughness exceeded the targets.</p> <p>In the policy and institutional dimensions, the Project did better than its ratings at entry suggested. Municipal Road Departments were set up and have sufficient staff complements. Municipalities retained the capacity for routine road maintenance, while divesting periodic maintenance and all new construction. Passenger Transport Agencies were set up and have functioned to regulate services, now largely provided by private operators. In Bishkek, for example, private operators place 2,900 vehicles in service daily. The regulatory reform is far from over, improvements still needed in tendering and contracting procedures, and in setting up a consistent fare/subsidy policy. An action plan in this matter was completed only towards the end of the Project.</p> <p>The progress on road maintenance funding was the hardest to achieve, since the severe macro-economic state of the country called for the reduction of all spending. Nevertheless, all three cities made major efforts to increase their road maintenance expenditures, and there was a genuine national debate regarding road user charges, continuing through the closing of the loan. The proposal on the table was to set up urban road funds, nourished from city budgets and contributions from the National Road Fund.</p> <p>The ICR rated the Project as satisfactory in all categories, with a substantial institutional impact.</p> <p>Lessons drawn in the ICR (selective):</p> <ol style="list-style-type: none"> 1. The importance of maintaining flexibility was demonstrated by having a radical change in project design made just a month before appraisal (dropping the objective of investing in bus vehicles and the objective of improving the performance of state-owned public transport operators). 2. It is difficult to carry out a reform of urban road funding without engaging

	with municipal finance overall.
Team:	Richard Podolske (lending, SPN); Henry Kerali (SPN); Jacques Yenny (ICR);
Profile dates and authors:	January 25, 2011; written by Slobodan Mitric

Links to key documents for Kyrgyz Urban Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2000/08/25/000094946_00080305305983/Rendered/PDF/multiopage.pdf

Urban Transport in the ECA Region: World Bank Experience and Strategy (Report 25188, December 2002):

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2005/10/18/000090341_20051018160618/Rendered/PDF/25188oECAoUrba1veroPo73788o1public1.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/ECA/2004/12/15/15AA1A1ED7EF42B685256F030011A7A9/1_o/Rendered/PDF/15AA1A1ED7EF42B685256F030011A7A9.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2006/07/25/000090341_20060725135458/Rendered/PDF/34619.pdf

COMMENTS

This Project is among those where substantial policy activities remained to be carried out after the loan closing. It is a good candidate for doing a progress review several years later.

MOSCOW URBAN TRANSPORT PROJECT (Po46061)	
Country and region:	Russian Federation, ECA
Borrower:	Russian Federation, with City of Moscow as a subsidiary borrower
Implementing agency:	Moscow Foundation Project Implementation Unit, acting for the City of Moscow
Concept paper review date:	March 6, 1998 (initial discussions started in 1996)
Board approval date:	February 6, 2001
Effectiveness date:	September 24, 2001
Closing date:	December 31, 2005 (orig.); December 31, 2008 (actual)
Instrument category:	SIL
Project structure by sector:	Roads & highways, 26%; sub-national government administration, 74%
Project total cost in US\$:	123.2m
WB commitment in US\$:	60.0m (loan)
Co-financiers:	None
Final project cost in US\$:	128.6m
Amount disbursed in US\$:	55.5m
City and its transport	City of Moscow reacted to unprecedented motorization growth and resulting congestion, pollution and accidents by constructing major civil works, mainly expressway-standard ring roads. Little attempt was made to manage traffic over the entire network. Similarly, the Moscow Metro received the requisite funding, but much less was invested in street-based public transport services (buses, trolley-buses and trams). Hence these services suffered both from the street congestion and from a lack of investment in fleets and facilities. Traffic safety was another victim of this situation, with children being the majority victims of accidents on street crossings, especially on wide arterial roads.
Development objectives:	Improve institutional capacity of the City of Moscow to plan, design, implement, operate and enforce traffic management measures, with the following sub-objectives: (i) strengthen traffic management in Moscow; (ii) demonstrate value of traffic management through low-cost investments; (iii) strengthen traffic law enforcement; and (iv) enhance planning of surface public transport operations.
Investment components:	<ul style="list-style-type: none"> (i) building and equipment for the Traffic Management Center, US\$11.6m; (ii) corridor improvement program, US\$47.6m; (iii) Central Area Traffic Improvement Program, US\$6.2m; (iv) Reconstruction, Donbassky Bridge complex, US\$39.0m; (v) Traffic enforcement program (equipment, training, tech assistance, US\$10.3m; (vi) Surface public transport study, US\$2.0m; (vii) Strategic advice and assistance to MPIU, US\$2.5m
Policy components:	<ul style="list-style-type: none"> (i) Introducing priority to on-street public transport vehicles (ii) Changing the approach to traffic law enforcement from static to mobile
Institutional components:	<ul style="list-style-type: none"> (i) Setting up, staffing and empowering a Traffic Management Center

	(TMC) in the City of Moscow (ii) Moving the authority over traffic signal systems from Traffic Police to the TMC
Performance indicators:	Indicators changed as the content of the project changed. The final set of indicators referred to completion of various institutional milestones, i.e. that: (i) TMC is created and fully staffed; (ii) TMC is granted lead authority for traffic management by City of Moscow; (iii) police training for mobile law enforcement is completed; (iv) an operational plan for the use of equipment purchased under the project is prepared; and (v) police equipment is purchased and placed into service.
Additional project features	Investment components defined largely as several large programs (envelopes), leaving the definition, feasibility and preparation of individual investments to be done in the course of project implementation.
Complementary operations	The Project was preceded by Russia Urban Transport Project (P008806, 1995-2002), which focused on upgrading public transport services and improving cost recovery of public transport operators in major cities outside Moscow. The regional urban transport program in 1990s focused heavily on public transport services, the sole exception being the project in the Kyrgyz Republic which dealt with urban road rehabilitation (see the profile in this report).
Results at completion:	<p>The project closed with 3 years of delay and a polarized experience. Major investment components (corridors' and central area improvements) meant to demonstrate benefits of traffic management were cancelled at Borrower's request, but the replacement investments (several large-scale pedestrian underpasses) and the Donbassky complex were executed on time and budget, and at high quality. An exception to this was the underpass complex at Preobrazhensky Square, which doubled in cost. Public transport priority initiative was fully prepared, but implementation did not materialize before the loan closing date. Public transport component also was cancelled at Borrower's request, probably as being outside the scope of the TMC. Significant implementation delays in project implementation were due to a long wait for the City of Moscow to issue a decree giving TMC all agreed responsibilities and powers. The last addition to the project – a traffic control system (TCS) for Third Ring Road (US\$32.5m equivalent) was included on the strength of its potential to demonstrate the success of TM approach, an attractive possibility given that other such investments had been dropped. Unluckily, the TCS proved complex to prepare and even more complex to execute, causing substantial additional delays. It was eventually discovered to have had procurement irregularities. It was not completed fully before the loan closed, becoming operational nearly a year later (October 2009).</p> <p>The ICR and the subsequent IEG review rate this Project as satisfactory on the strength of meeting its key development objective, i.e. success in setting up and empowering the TMC and shifting the Traffic Police law enforcement strategy in the agreed direction. The risk to development outcome is considered low, since the TMC's size and authority show an upward trend. The performance rating for Bank and Government is moderately satisfactory, a notch down from the Project overall rating. The factor contributing to lower rating for the Bank is the quality at entry, specifically the team's failure to develop a coherent and stable set of sub-objectives and monitoring indicators. There were promises on matters where the Project could not deliver, such as the reform of street-based public transport. The failure to demonstrate the value of traffic management through project-financed investments also contributed to this rating. The Government was expected to have moved quicker to empower TMC, but the negotiations with agencies losing powers and budgets to TMC were long and drawn.</p> <p>The Project tested a number of important, long-discussed issues. The first of these is the trade-off between a PIU external to TMC, contributing to efficient management of investments, and an internal PIU, linking investments with policy and institutional reforms. The outcome is still uncertain, with some leaning towards</p>

	a PIU inside the institution that is being created or strengthened under the Project. The second lesson has to do with the need for a broader approach to ensure that the job market actually produces staff with requisite skills. The third lesson is thumbs up for the idea of defining programs rather than all individual investments. The fourth lesson was to highlight the need for prior guidance for situations where a project is active but there is an on-going INT investigation.
Team	Richard Podolske (lending, SPN), Ben Eijbergen (SPN), Michel Audigé (SPN); Vickram Cuttaree (SPN, ICR); Elena Chesheva, Slobodan Mitric (ICR)
Profile date and authors:	January 25, 2011 (revision); written by Slobodan Mitric

Links to key documents for the Moscow Urban Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2001/02/02/000094946_01012305303781/Rendered/PDF/multi_page.pdf

Urban Transport in the ECA Region: World Bank Experience and Strategy (Report 25188, December 2002):

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2005/10/18/000090341_20051018160618/Rendered/PDF/25188oECAoUrba1veroPo73788o1public1.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/ECA/2004/12/15/D6C620328499AD6985256F03001060FA/1_o/Rendered/PDF/D6C620328499AD6985256F03001060FA.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2009/11/09/000333037_20091109234326/Rendered/PDF/ICR5030Po460611ICodisclosed01116191.pdf

IEG Review:

<http://wbln1023.worldbank.org/oed/oeddoclib.nsf/DocUNIDViewForJavaSearch/8525682E0068603785257663006E687C?opendocument>

ANNEX 5: PROJECT CAPSULES FOR THE LATIN AMERICA AND THE CARIBBEAN REGION*

1. Colombia - Bogota Urban Transport Project (1996-2001)
2. Argentina - Buenos Aires Urban Transport Project (PTUBA) (1997)
3. Brazil - Rio de Janeiro Mass Transit Project (1998-2009)
4. Brazil - Salvador Urban Transport Project (1999-2007)
5. Brazil - Fortaleza Metropolitan Transport Project (2001-2010)
6. Brazil - São Paulo Metro Line 4 Project (2002)
7. Mexico - Climate Friendly Measures in Transport (2002-2009)
8. Peru - Lima Urban Transport Project (incl. GEF project) (2003)
9. Chile - Sustainable Transport and AQ for Santiago (GEF) (2003-2009)
10. Colombia - Bogota Urban Services Project (2003)
11. Colombia - Integrated Mass Transit Systems Project (2004)
12. Argentina – Buenos Aires Infrastructure Sustainable Development Project (2004)
13. Chile - Santiago Urban Transport DPL (2005-2006)
14. Chile - Santiago Urban Transport TA Project (2005)
15. Mexico - Mexico City Insurgentes BRT System CF Project (2005)
16. Bolivia – Urban Infrastructure Project (2006)
17. Brazil - Sao Paulo Trains and Signaling Project (2008)
18. LAC Region Sustainable Transport and Air Quality Project (GEF) (2008)
19. Argentina - Sustainable Transport and Air Quality Project (GEF) (2008)

20. Argentina - Metropolitan Areas Urban Transport Project (PTUMA)(2009)
21. Brazil - Rio de Janeiro Mass Transit Project II (2009)
22. Mexico - Framework for Green Growth DPL (2009-2010)
23. Mexico - Sustainable Transport and Air Quality Project (GEF) (2009)
24. Brazil - Sustainable Transport and Air Quality Project (GEF) (2009)

*Some projects approved before 1999

BOGOTA URBAN TRANSPORT PROJECT (P006872)	
Country and region:	Colombia, LAC
Borrower:	Bogota District Government
Implementing agency and arrangements:	<p>Overall responsibility: District Secretariat of Finance (Secretaria de Hacienda de Bogota, SHB), through a coordination and Monitoring Unit</p> <p>Implementation responsibilities:</p> <ul style="list-style-type: none"> - Components A.1 and B - Bogota Urban Development Institute (Instituto de Desarrollo Urbano, IDU) - Component A.2 - Traffic Safety Fund (Fondo de Educacion y Seguridad Vial, FONDATT), a revolving fund complementing Secretaria de Transito y Transporte (STT) - Component C - District Secretariat for Public Works (Secretaria de Obras Publicas, SOP); responsibility transferred to IDU after SOP was disbanded as a part of institutional reform - Component D – SHB and District Department of the Environment (Departamento Administrativo del medio Ambiente, DAMA)
Concept review date:	July 7, 1989 appraisal June 18, 1990
Board approval date:	May 23, 1996
Effectiveness date:	October 15, 1996
Closing date:	December 31, 2001
Instrument category:	SIL
Project structure by sector:	General transport sector, 54%; roads and highways, 37%; sub-national government administration, 9%
Project total cost at appraisal in US\$:	141.3m
WB commitment in US\$:	65m (Loan 4021-CO)
Co-financiers:	None
Final project cost in US\$:	183.9m
Amount disbursed in US\$:	65m (final)
Diagnostic highlights	<p>In the mid-1990s, the Bogota metropolitan area comprised about 20 municipalities, with more than 6m people, expected to reach 8m by year 2000. Much of the demographic growth was due to in-migration from the countryside, to avoid the civil war and make use of economic opportunities in a city whose average income was 50% than the national average. The new settlements, largely low-income to extremely poor, tended to be in the south of the area, whereas jobs in productive and service sectors were located in and north of the central city, and well-to-do residential developments were even farther up north. This produced long home to work commutes from the south, exacerbated by poor access that many communities had to the arterial road system and associated public transport services. Circulation within these communities also was bad, due to lagging road and drainage development and low levels of road maintenance.</p> <p>Public transport carried about 77% of all motorized trips, with a downward tendency due to rising motorization and low-quality public transport services. The pace of motorization picked up in the early 1990s, after import restrictions were relaxed. Some 530,000 vehicles were registered in Bogota in 1995, and an additional 300,000 were registered in near-by municipalities. Public transport</p>

services consisted of lightly regulated street buses, some 22,000 in number, split roughly in half between standard size vehicles and various types of mini-buses, pick-ups, and the like. About half of the fleet was more than 20 years old. Services were provided nominally by 63 private companies, themselves loose associations of thousands of owner operators. Companies received licenses from the metropolitan government and had an effective monopoly on given corridors, but with fierce in-market competition between individual operators. Area coverage by the bus network was good (with exceptions in some areas with poor access and subject to floods), but service levels (travel speed, in-vehicle comfort and safety) were low due to street congestion, predatory practices by drivers, and high age of vehicles. This last resulted from import restrictions (relaxed in 1993) and fare regulations mindful of passengers' incomes. In 1990, the city instituted its first corridor with 4 bus-only lanes, on Avenida Caracas, connecting southern areas with the central city. The corridor carried peak hourly volumes of 22,000 passengers per direction at travel speeds of about 18 km/h, a vast improvement over bus speeds elsewhere in the city (10 km/h or less). Road improvements made to accommodate this busway cost only about \$4m, but a similarly low-budget approach to busway operations and maintenance meant that services were not as high-quality as they potentially might have been. Several avenues of making major improvements to the public transport system were explored over time. Proposals to construct Bogota's first metro line to connect the southern part of the city with its center could not be realized with the financial resources available to the city and the country, given low incomes of the majority of potential travelers. Another approach that came closer to implementation was to sign a contract with a private consortium to design, build and operate a busway network of 4 corridors and 92 route km, complementary to the main corridor in which a metro might be built. This effort failed against a determined resistance by the existing bus operators. The challenge was to find an affordable way to improve service to travelers in the context of rising population, incomes and motorization (but with a considerable level of poverty) without reaching for massive road construction.

Since constitutional changes of 1993, the metropolitan area has had an urban government (Distrito Capital), the only one in the country, with revenues (and financial independence) comparable to that of Colombian departments (states). 90% of revenues are from own sources and only 10% are transfers. The District is responsible for all urban transport matters except inter-municipal bus routes, still under the Ministry of Transport. Within the District structure, the urban transport system is handled by several administrative units and some decentralized agencies. The former include the Public Works Secretariat (responsible for road maintenance) and the Secretariat of Transit and Transport (responsible for public transport regulation, driver and vehicle licensing, traffic law enforcement and some traffic management). STT's programs are funded through a revolving Traffic Safety Fund. New urban roads are handled by the Urban Development Institute, a decentralized agency with more autonomy and higher salaries than municipal departments. The District has gone through several stages of improving this institutional set up, trying to get the practice to follow the nominal design. Problems of coordination and inertia remain.

A new urban transport development strategy has been put forward for the short- and medium-term. This includes: (a) restructuring the institutional framework to make it more accountable and responsive to sector needs; (b) optimizing the capacity and use of existing infrastructure facilities through traffic management and focusing on major transit corridors; (c) targeting new investments toward removal of bottlenecks and improvement of access to low-income areas; (d) promoting public transport by giving buses adequate facilities including separating bus and car flows where appropriate; (e) using normative and regulatory powers as tools to promote greater sector efficiency; and (f) promoting the participation of the private sector in concessions such as BOTs for the design, construction, operation and maintenance of mass transit projects, parking facilities, and expressways.

Development objectives:	<ul style="list-style-type: none"> (a) improve major transport corridors by rationalizing vehicle flows and upgrading environmental conditions for users; (b) promote the use of public transport and of non-motorized transport modes; (c) facilitate public transport access to areas with low income population; (d) extend the life of the road infrastructure; and (e) strengthen the District's institutions in charge of planning, managing and maintaining the transport infrastructure.
Investment components:	<ul style="list-style-type: none"> A. Traffic management and transport corridors (US\$57.8m base costs): (A.1) works, equipment and consulting services for an integrated program of low cost improvements to improve flow on major public transport corridors (with at least 10,000 passengers per hour) and associated areas; this includes, inter alia, a new 10-km busway on Calle 8o corridor and upgrading the existing 16.3km busway on Avenida Caracas. (A.2) equipment, training and consulting services to help institutions carry out their mandate; B. Access roads (US\$10.4m base costs): (B.1) design, works and supervision for a program of road improvements in low-income areas (about 22km in total); and (B.2) support institutions in charge of road provision; C. Road maintenance (US\$27.3m base costs): (C.1) 3-year plan to repair or rebuilding about 400 lane-km (200km in Schedule 2 of the Loan Agreement) of arterial and secondary roads used by public transport vehicles (including walkways and green areas); (C.2) institutional support for the road improvement program; D. Institutional support (US\$6.1m base costs): equipment, training and consulting service to support the institutional and policy reform (see institutional agenda below).
Policy agenda:	No specific policy initiatives
Institutional agenda (drawn from the project description in the Loan Agreement, Schedule 2):	<ul style="list-style-type: none"> (a) Reorganization of the District's Transport Authority to absorb IDU and STT, and gather all key functional responsibilities; (b) Defining functional organization and modes of participation of the private sector in urban transport activities; (c) Developing and implementing environmental regulations for the sector (within the jurisdiction of the District); (d) Establishing guidelines for disposal of tires, batteries and waste oil, and the abatement of noise pollution (e) Development of an information system for investment budgeting and monitoring; and upgrading of the tax collection system
Additional project features	<p>Studies included in the Project:</p> <ol style="list-style-type: none"> 1. Traffic signal optimization 2. Facilitation of non-motorized transport 3. Public transport organization and policy 4. Parking plan and policy 5. Traffic accident reporting and analysis system
Complementary operations	Road user charges and gasoline pricing are addressed in the context of the Third National Highway Sector Loan for Colombia (Loan 3453-CO).
Monitoring indicators	<p>The performance of bus corridors: speed, peak hour bus volumes, and the accident rate.</p> <p>Network-wide performance: (a) average time and cost of bus trips between selected points of the city (measured annually); (b) average travel time by car on selected itineraries during peak and off-peak hours; and (c) air quality indicators in select locations.</p>

	All other indicators refer to physical investments, i.e. length of roads and lane-km reconstructed or maintained.
Results at completion:	<p>The long period from the project identification stage (the review of the concept paper) and loan approval was due to fluctuating priorities of metropolitan and national administrations. Once approved, the project was implemented on time. At loan closing, all physical components essentially were implemented as planned, and successfully. Actual costs exceeded appraisal forecasts because of: (i) increase in number of properties relocated and higher land acquisition prices (due to Bank standard of paying commercial prices); (ii) design modifications to Calle 80 and Avenida Caracas busways due to integration into TransMilenio (more below); (iii) addition of a 10.3km bike path; and (iv) addition of sewerage and related works for some elements of the access roads component.</p> <p>ICR rating of the project at entry is <u>satisfactory</u> on the basis of (inter alia): (i) consistency between project objectives and priorities of successive municipal administrations of Bogota; (ii) a high focus on poverty; (iii) flexibility to modify works and technical assistance programs while fully in line with objectives; and (iv) project design based on a thorough analysis of urban development, transport and institutional issues.</p> <p>The key institutional reform that the Project expected to support without this being an explicit objective (the creation of a single urban transport authority), did not take place. The District council opted for a more modest approach, based on the expansion of IDU's functions, the liquidation of SOP, and the reduction in size of STT. Still, in operational terms, the institutional agenda was largely met. Bogota has made and follows a 10-year development plan and shorter-term plans; investment finance is supported through a fuel surtax and contributions from the national government; and the private sector is involved in many dimensions.</p> <p>While the institutional development was slower than hoped for, the opposite happened with the busway component. The new busway on Calle 80 and improvements on the existing Avenida Caracas busway became, at the end of the Project, parts of a 41km system of a bus rapid transit system, which became known as TransMilenio. The name actually refers to a public agency, linked to STT, which owns and operates the busway infrastructure, while transport services (both line-haul and feeder/distributor services) are provided by private operators, based on concessions managed by Transmilenio. The system has 60 stations, and a fleet of 470 articulated, environmentally friendly buses for the trunk line service, plus 258 buses for the feeder network. The design capacity is 40,000 passengers per hour per direction, with an observed passenger volume of 31,000 on Avenida Caracas. The system serves about 750,000 passengers per day at a travel speed of 27 km/h, accounting (in 2010) for about 30% of motorized travel.</p> <p>TransMilenio has been used as central component of a far-ranging urban transport improvement program including pedestrian-only areas, and a bikeway network (the bike master plan was financed by the Project).</p> <p>ICR ratings at completion: <u>highly satisfactory</u> for outcome, borrower and Bank performance; <u>highly likely</u> sustainability, and <u>high</u> institution development impact. This makes it the best-rated urban transport project in the history of the Bank.</p> <p>The ICR singles out the success of the Project in working with 3 different city administrations to leverage key institutional and operational reforms. Initially these involved new financial and organizational changes, and creative initiatives to reduce traffic congestion and involve citizens in transport management and planning. Finally, during the third administration, the Project became an essential foundation stone for the District's decision to create the TransMilenio system and the accompanying elements, for which Bogota has become known on the world scale.</p> <p>Lessons drawn in the ICR (cited selectively):</p> <ul style="list-style-type: none"> - Project activities have to be part of the regular operations of agencies involved (as opposed to special-purpose project implementation units)

	<ul style="list-style-type: none"> - When multiple implementing units are needed, the coordination units must be at an appropriate level of authority and responsibility; they must be kept small and be staffed full-time; - Flexibility should be maintained in project design; - Community involvement is crucial, inclusive of helping overcome class barriers.
Team	Thakoor Persaud (throughout the project)
Profile date and author:	October 20, 2010; Slobodan Mitric

Links to key documents of the: Bogota Urban Transport Project

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/1996/04/26/000009265_3961022104828/Rendered/PDF/multiopage.pdf

Loan Agreement:

<http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2004/12/14/132312C5712CC81485256F0300074530/10/Rendered/PDF/132312C5712CC81485256F0300074530.pdf>

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2002/09/06/000094946_02082804004682/Rendered/PDF/multiopage.pdf

BUENOS AIRES URBAN TRANSPORT PROJECT (Po39584)	
Country and region:	Argentina, LAC
Borrower:	Government of Argentina
Implementing agency and arrangements:	Ministry of Economy and Public Works and Services, Secretariat of Public Works and Transport; Project Implementation Unit would report to Sub-Secretary of Metropolitan and Long-Distance Transport
Concept review:	February 23, 1995
Board approval date:	May 15, 1997
Effectiveness date:	March 18, 1998
Closing date:	December 31, 2003 (original); June 30, 2011 (current)
Instrument category:	SIL
Project structure by sector:	General transport sector, 90%; central government administration, 10%
Project total cost in US\$:	400m (original)
WB commitment in US\$:	200m (Ln 74420); an additional loan of US\$100m (Ln 41630) approved in 2007
Final project cost in US\$:	
Amount disbursed in US\$:	253.22m (May 17, 2010)
Diagnostic highlights	<p>Buenos Aires is a city of 3m people, within a metropolitan area of 12.4m. Outer areas are still growing at high rates. 2.5m cars circulate in the area and the rate of motorization is high and steady in spite of varying economic fortunes of the country (150,000 cars added every year). In the mid-1990s, traffic conditions were very bad, and have led to severe constraints to entering and moving inside the city center. Public transport carried about 61% of all trips in 1994, down from 75% in 1970. Public transport services are provided by privately operated street-based buses, an urban rail company operating 5 metro lines and 1 light-rail (surface) line, and a network of suburban railways. The suburban system carried 209m passengers in 1991 and the metro carried another 144m. Total number of daily passengers was 2.9m. All rail systems are publicly owned but privately operated since about 1994, under long-term concessions. The move to concession-based private operations came after a long streak of inefficiently run all-public rail system (incl. the metro), which provided poor services, had lost half of its passengers and generated unsustainable deficits. Concession agreements required the public budget to pay for rehabilitation and expansion investments in infrastructure and rolling stock. Concessionnaires assumed revenue and operating cost risks, and were chosen based on the lowest Government payment (as stipulated in a bid) to operate any one line and undertake a specified investment program. On a world scale, this represents a rare even unique case of concessions for loss-making urban rail operations. Early years of experience with concessions resulted in a large increase in patronage, but</p>

	<p>also disclosed problems with funding of rehabilitation investments and the need to redefine the priority of investments based on newly emerged demand patterns.</p> <p>Underneath transport problems accumulated by early 1990s were multiple and overlapping jurisdictions divided between the state, the Province and the Municipality of Buenos Aires, with generally weak institutions and a visible lack of coordination in short term actions and in planning, both within and between modal systems (roads and public transport). In 1991, there was an attempt to create a multi-jurisdictional entity for all urban transport matters. The bill failed to pass in the congress, but the working group set up by the Municipality and the Ministry of Economy to prepare for the new agency remained and became de facto regional transport planning agency albeit with a limited mandate.</p>
Development objectives:	<ul style="list-style-type: none"> (a) support the private-public partnership in improving the service quality and coverage of mass transit; (b) support the infrastructure improvements defined in the concession agreement between the Government and the private sector; (c) assist in improving the conditions of traffic safety and environmental quality; and (d) help in developing an integrated urban transport system for the Buenos Aires Metropolitan Area; (e) help in developing integrated urban transport strategies in Argentina's largest metropolitan areas outside Buenos Aires (this objective was added when the Loan Agreement was amended in 2007 (see below))
Investment components:	<ul style="list-style-type: none"> 1. Investment program of the Metrovias concession (\$142.9m): selective rehabilitation of metro lines B, C, D and E (track renewal; renovation of electrical substations and transmission lines; traffic control signals and operations center; station and escalator improvements; ventilation and drainage; workshop improvements). 2. Rehabilitation of metro Line A (\$81.9m) – a complete rehabilitation with items similar to the preceding component. 3. Transport system integration (\$25.5m): improvements of stations and terminals for both rail and bus-based operations, including intermodal transfer facilities. 4. Environmental monitoring and traffic safety program (\$44.9m): equipment for 10 sites to monitor air quality; 1 mobile air quality measurement unit; air quality lab; a data collection and processing center; relevant telecommunications; construction of 10-12 grade-separated road/rail crossings; improvement of at-grade crossings; and a study to define a comprehensive strategy for safety at road/rail crossings. 5. Strengthening institutional framework (\$23.3): (i) carrying out of a transport demand survey and development of a transport demand/supply model to be used to evaluate alternative investment proposals under a common framework; (ii) preparation of a traffic and demand management plan; (iii)

	<p>technical assistance and training.</p> <p>6. Project administration (\$6.7m)</p> <p>7. Taxes and contingencies (\$74.8m)</p>
Policy components:	The project supports further evolution of an already begun effort in public/private partnership.
Institutional components:	Establishment and strengthening of a Transport Planning Unit for the Buenos Aires Metropolitan Region (TUAMBA) (a condition of loan effectiveness). The supporting investments are listed under item 5 in the investment box above. The approach used is to: (i) develop a core group of staff technically competent in urban transport management and planning; this would include staff located in the project implementation unit and the group in TUAMBA; (ii) use the transport planning study as the vehicle for improving cooperation between agencies; and (iii) create a steering committee for the study that would evolve into an urban transport management committee representing all relevant agencies linked to TUAMBA.
Complementary operations	None
Monitoring indicators	The Project was approved before monitoring indicators for outcomes were introduced (and became mandatory). Annex D of the SAR has a table of output-focused performance indicators, and another of quantitative performance targets. Of the former ones, the key indicator was the successful continuance of Metrovias concession.
Status and results:	<p>The Project has had its ups and downs, roughly in line with happenings in the country's economy and politics. The loan was declared effective with a long delay due to ministerial reorganizations. In the first 2 years, implementation went well, but the impact of recession in the national economy slowed things down already in year 2000. The government first reduced then eliminated its counterpart funding allocations. The Project came to a standstill in 2002, and the Loan Agreement was amended to re-allocate \$50m for health and nutrition components of the social emergency program. The Project revived in 2003 following the installation of a new government. Several changes were made in 2003-2005 period, mainly involving disbursement percentages for various components. The implementation gradually speeded up, and received a highly satisfactory rating, but faced a situation where investment components needed to be restructured to reflect changed priorities. This was done in 2007, when an additional loan of \$100m was approved by the Board to compensate for the above cited re-allocation of \$50m away from the original purpose, fund some additional components and cover a funding gap due to cost increases. The Loan Agreement was amended to add an objective expanding the institutional initiative (development of integrated urban transport strategies) to other large cities, e.g. Cordoba, Posadas, Rosario and Tucuman. This amendment became effective in 2008 with a new closing date of June 30, 2010. A 2008 Quality Assessment of Lending Portfolio gave the Project a satisfactory rating. Macro-economic concern led in 2009 to an amendment increasing all disbursement rates to 100%. Another 1-year loan extension was granted in April 2010 to permit the</p>

	completion of on-going contracts, 7 for works and 5 for technical assistance. A summary of Project's achievements at that time included full rehabilitation of Metro Line A, with a consequent increase in patronage; improvement of accessibility at 35 suburban rail stations, the preparation of transport master plans for 5 medium-size cities (cf. April 9, 2010 memo from A. Pizarro to P. Cox). Metrovias concession is functioning as is TUAMBA.
Team	Gerhard Menckhoff (lending); Andres Pizarro (SPN)
Profile date and author:	May 18, 2010; Slobodan Mitric

Links to key documents of the Buenos Aires Urban Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/1997/04/11/000009265_3970818102852/Rendered/PDF/multi_page.pdf

Loan Agreement for the original loan (1997):

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/LCR/2004/12/14/0BD74D64195FD2BC85256F03000DE4D4/1_0/Rendered/PDF/0BD74D64195FD2BC85256F03000DE4D4.pdf

Loan Agreement for the additional loan (2007):

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/LCR/2008/03/07/8AFA8CE45BF7F3F5852573B40074F5E8/2_0/Rendered/PDF/L74421AR010CONFORMEDoLoanoAgreement.pdf

Project Paper (2007):

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2007/03/09/000020953_20070309110158/Rendered/PDF/386970AR0R20071004811.pdf

Project Paper (2010):

http://wbln0037.worldbank.org/852572430067B82D/DOC_VIEWER?ReadForm&l4_KEY=6BF7F42B5AA4596285256BCE0062619BF6FD4DC94114F6BE85256BD6001476BE&l4_UNID=3B83D4756144DB5785257703006C525C&

COMMENTS

Various restructuring documents do not mention what happened to metro investments related to Metrovias concession (item 1 in the investment box above); environmental and safety investments under item 4 above; and the setting up and functioning of an Urban Transport Planning Unit for Buenos Aires (TUAMBA).

RIO DE JANEIRO MASS TRANSIT PROJECT (Po43421, Loan 42910-BR and Loan 75080-BR)	
Country and region:	Brazil, LAC
Borrower:	State of Rio de Janeiro (guaranteed by Federal Government of Brazil)
Implementing agency and arrangements:	<p>Main responsibility: Secretaria de Transportes do Estado do Rio de Janeiro (SECTRA)</p> <p>Implementation management: Companhia Fluminense de Trens Urbanos (FLUMITRENS, suburban railway operator)</p> <p>After the 2001 mid-term review, and subsequent to a concession award for suburban railway network to SuperVia in 1999, CENTRAL (Companhia Estadual de Engenharia de Transportes e Logística) took over as the operator of the segment of the suburban railways system remaining in state ownership and as the implementing agency for the Project.</p>
Concept review:	November 3, 1995
Board approval date:	March 5, 1998
Effectiveness date:	August 3, 1999
Closing date:	June 30, 2002 (original); June 30, 2009 (actual)
Instrument category:	SIL
Project structure by sector:	General transport sector, 98%; central government administration, 2%
Project total cost at appraisal in US\$:	373m
WB commitment in US\$:	186m original loan + 44m additional loan approved in 2007
Co-financiers:	The actual financing plan includes an \$80m contribution from SuperVia, the concessionaire of the suburban railway system
Final project cost in US\$:	426.6m
Amount disbursed in US\$:	230m; others: RJ State \$116.6m; SuperVia \$80m
Diagnostic highlights	<p>Rio de Janeiro Metropolitan Region with its 9.8m population (1997 data) is the main economic engine of its state. (Rio de Janeiro Municipality alone has 5.7m). Some 13m trips are made daily, with public transport carrying 67%, walking 20%, and cars 11%. 1.7m cars are registered in the urban area (1994 data). Within the public transport category, street-based buses carry 77%, para-transit 14.5%, suburban train services 4% and metro 3%. Bus operators are all private. Municipal bus routes are regulated by municipalities, and inter-municipal routes by the State Secretariat of Transport. They receive no subsidies. The suburban rail network belongs to the state of Rio de Janeiro. Fares charged are low but the system not being integrated, many passengers have to transfer to other modes, and quite a few have to transfer more than once. The rail-based system has an extensive infrastructure (241km) but a low level of service (long headways, poor reliability) and low operational inefficiency. Both of these can be traced to chronic problem of funding. The patronage has fallen from a high of 1m per day to less than a half of that, and the resulting subsidies are onerous and unsustainable. Altogether, transport subsidies paid by the RJ state are high (about 8-10% of revenues). The congestion, pollution and accidents on the street network are extreme, and public transport vehicles are overcrowded, though buses manage a decent commercial speed owing in part to some street priority. Better transport system integration and improving the supply of service of the rail-based system in both quantity and quality hold a promise to</p>

	attract many passengers from street-based modes. Such developments are difficult to plan and implement without having institutions to overcome the existing fragmentation of responsibilities between the state, the city of RJ, and other municipalities.
Development objectives:	<p>Main objectives:</p> <ul style="list-style-type: none"> (a) Improve the quality of urban transport services in the Rio Metropolitan Region by enhancing the development of a fully integrated urban transport system; (b) Improve the level of service of FLUMITRENS while reducing the operating subsidies it receives from the sector through substantial participation of the private sector <p>Subsidiary objectives:</p> <ul style="list-style-type: none"> (c) Improve the mobility of low-income population; and (d) Reduce (negative) environmental impacts (air quality and noise) due to road-based vehicles
Investment components:	<ul style="list-style-type: none"> (A) FLUMITRENS infrastructure and equipment (\$358m): rehabilitation and refurbishment of rolling stock (about 140 electrical multiple units); rehabilitation and modernization of 11 stations, construction of 2 new stations, construction of 5 pedestrian over/underpasses, 8 km of fencing near stations; replacement of some 50,000 of track sleepers; installation and repair of transmission lines, rehabilitation/construction of substations; installation of central traffic control; installation of automatic train control in 2 corridors; automatic fare collection system; installation of an integrated telecommunications system. (B) Technical assistance to the State of Rio de Janeiro (\$15m): assistance to the State for its project of concessions and management contracts for FLUMITRENS, Metro, and other hitherto public-owned transport enterprises; assistance to the Regional Transport Coordination Commission (especially regarding the preparation and implementation of FLUMITRENS concessions); preparation of an integrated transport strategy for the metropolitan region; studies of the ongoing vehicle inspection/maintenance program and of traffic accident and violation recording and management system.
Policy agenda:	<ul style="list-style-type: none"> (i) introduction of integrated fares for the public transport system (ii) full or partial concession of the operations and management of FLUMITRENS suburban railway network
Institutional agenda:	Strengthening of the newly established (January 1997) Metropolitan Urban Transport Agency for Rio de Janeiro Region (AMTU-RJ, Agencia Metropolitana de Transporte Urbano), initially focused on making an integrated urban transport, land use and air quality strategy for the region, but with ambition for it to become a Regional Transport Coordination Commission in charge of coordinating and recommending common policies on pricing, financing and project evaluation.
Additional project features	<p><u>Conditions of loan effectiveness (selective):</u> approval by the State legislature of the law that enables the concession contract for FLUMITRENS</p> <p><u>Covenants (selective):</u></p> <ul style="list-style-type: none"> (i) FLUMITRENS concession and operational efficiency: issuance of pre-qualification documents for the FLUMITRENS concession within 60 days after signing the Loan Agreement; issuance of bid documents for the FLUMITRENS concession by April 30, 1998; award of the concession by July 31, 1998 or, if not done, a progression of review and repeat steps; holding of a review of the concession process 1 year after loan effectiveness; and adherence to 3 operational and financial targets for FLUMITRENS – availability of the rolling stock, peak service headways, and operating subsidy (revenue minus direct

	<p>operating costs).</p> <p>(ii) Financial policy and modal integration: State of Rio de Janeiro to be responsible for capital investments and debt service (including this loan) committed prior to signing of the concession; State to be responsible for paying the subsidy to FLUMITRENS (subsidy defined as the difference between total direct costs and operating revenues); State to ensure that, before concession, FLUMITRENS maintenance allocations are adequate; regular payments of subsidy to concessionaire (as agreed under concession contract); preparation within 12 months of loan signature of a plan to integrate the regional transport system in financial, technical and institutional senses; maintenance for the duration of the Project of Metropolitan Urban Transport Agency for Rio de Janeiro Region (Agencia Metropolitana de Transporte Urbano); maintenance for the duration of the Project of State Regulatory Agency for Public Services under Concessions (Agencia Reguladora de Servicos Publicos Concedidos de Estado do Rio de Janeiro).</p>
Complementary operations	<p>A sequence of projects dealing with state and public sector management and reform preceded this Project, creating the systemic laws regarding privatization and restructuring of public sector enterprises, notably Rio de Janeiro State Reform Privatization Project (Ln 4211-BR, P039197).</p> <p>Within the transport sector domain, the Project is a direct follow-up to Rio de Janeiro Metropolitan Transport Decentralization Project, 1993-2000, (P006547; Loans 36330 and 3633A) under which the ownership of FLUMITRENS was transferred from the Federal government of Brazil to the State of Rio de Janeiro. These projects themselves belong to a program of rail decentralization and modernization projects funded by the bank in Brazil.</p> <p>In the policy sphere, the Project follows the 4-pillars agenda put forward by Jorge Rebelo in "Essentials for sustainable urban transport in Brazil's large metropolitan areas" (WPS 1633, 1996): 1) create a regional transport coordination commission in charge of coordinating policies among federal, state, and municipal governments, giving highest priority to major urban transport investments in the metropolitan region and promoting modal integration - all to the end of improving the sector's economic efficiency and long-term sustainability; 2) adopt an integrated land use, urban transport, and air quality strategy that provides a framework in which the community and decision-makers can evaluate future urban transport investments and policies; 3) enact into law formal financing mechanisms that would ensure that long-run variable costs of urban transport systems are covered by operating and non-operating revenues from the systems and by appropriate user charges; and 4) promote private sector participation in the operation, maintenance, and construction of urban transport systems - through concessions or management contracts - as a way to lessen the financial burden on the government.</p> <p>A successor project – Second Rio de Janeiro Mass Transit Project, was approved in 2009 (P111996; Loan 77190 for US\$212m)</p>
Monitoring indicators	<p>This Project was approved before formal performance indicators related to development objectives became mandatory in Bank-funded projects. The approach used for this Project, standard at that time, was to have a set of dated covenants (see above) and also use a set of operational and financial performance targets for FLUMITRENS, with data collected on annual basis (Annex 11, Table 11.1). Three of these targets were "contractual":</p> <ul style="list-style-type: none"> - availability of the rolling stock: base 58%, target 90% - peak service headways: base 13min, target 6 minutes; - annual operating subsidy: base value \$121m, target \$27m (targets not cited in the SAR but in a side letter). <p>During implementation, a set of 7 monitoring indicators (including the three "contractual" ones) was developed and used to evaluate the progress on meeting</p>

	development objectives. Details are in the results box below.
Results at completion:	<p>The Project was implemented during the period of stormy macro-economic and political conditions in Brazil, which affected the effectiveness date of the loan (1.5 years from Board approval), and later on the availability of counterpart funding, causing delays and program changes. Two loan cancellations were made, reflecting the fiscal squeeze: one for \$17.1m in 2000 and the other for \$10.6m in 2004. Matters improved after 2004 and the cancelled parts of the loan were re-instated in 2006. An additional loan of \$44m was approved in 2007 to compensate for the devaluation of US\$ and Korean Won. The project was formally restructured in 2001, but in fact the Loan Agreement was amended several times to change disbursement percentages and category allocations, cancel or add investment components, and extend the closing date. The crucial rolling stock component saw the most significant change, i.e. cancelling the rehabilitation of 55 train sets and adding the purchase of 20 new train sets. This sub-component had long delays, due to procurement disputes between the implementing agency and the Bank, and is the main reason for having to extend the loan by an extra 2-3 years and for failing to reach patronage targets. The transmission lines subcomponent was greatly reduced, and the traffic enforcement subcomponent was cancelled. Among additions to the Project was a set of technical, economic and financial studies for Line 6 connecting Rio with Duque de Caxias.</p> <p>The Project implemented 95% of the agreed infrastructure and equipment component (as restructured) and 100% of the institutional/policy component. At loan closing, there were 7 incomplete contracts for trains to be delivered in 2010 and some smaller works contracts.</p> <p>The key policy initiative of the project – transforming the suburban railway system from a public sector enterprise into a private concession – was formally achieved already before loan signing, in 1999, and subsequently produced all desired outcomes regarding efficiency, service levels, and subsidies. The performance re patronage fell short of expectations for reasons combining delays in placing sufficient trains into service, higher fares, and a lack of full system integration (see below). The concession contract allowed for fare increases by the regulating agency in addition to inflation adjustments. The base fare rose from R\$0.6 in 1998 to R\$2.5 in 2009 (and bus fares were even higher). This allowed the concessionaire to make a 12% financial rate of return and the subsidy to decline, but also led to a less-than-envisaged patronage growth, since many passengers turned to informal public transport services. SuperVia ultimately began operating feeder buses to its main stations. A similar concession was implemented for the metro system.</p> <p>The second policy initiative – integration of the public transport system was achieved in its physical dimension (20% target) between suburban rail, metro and inter-municipal buses (all regulated by the State of RdJ), but not with municipal bus network. Fare integration was formally approved 6 months after the loan closing, but only for the State-regulated services. This subject is being taken up by the Bank-funded successor project.</p> <p>Regarding the institutional initiative, AMTU-RJ was successful in leading the production of an integrated urban transport, land use and air quality strategy (PDTU) for the Region, and continues to use the models developed under the study. By the end of the Project, AMTU-RJ has become an important forum for discussion of new projects, including those to be done in preparation for the Rio World Cup and the Rio Olympics. Its functions also include coordinating fare and subsidy policies.</p> <p>The ICR rated the Project's outcome moderately satisfactory, with a moderate risk, on the basis of the following indicators:</p> <ol style="list-style-type: none"> 1. Percentage of stations with bus/rail and metro/rail integration: base value 0%; target 20%; result 20% 2. Suburban rail share of total trips: base value 4%; target 10%; result 5%

	<ol style="list-style-type: none"> 3. Average headway on the suburban rail system: base value 13min; target 6min; result 7min 4. Daily number of paying passengers on the suburban rail system: base value 124,000; target 1,288,000; result 465,000 (explained above) 5. Suburban rail fleet availability: base value 58%; target 90%; result 90% 6. Staff costs: base value \$131m; target \$26m; result \$25m 7. Operating subsidy for the entire suburban rail system (including the small part remaining in state ownership): base value \$121m; target \$27m; result \$25m 8. Successful concession: base situation – public sector operation with high subsidy and low quality of service; target: private concession with high quality of service and no subsidy; result: private concession with a high quality of service and minimal subsidy. <p>In sum, the two principal objectives, listed as (a) and (b) above, were achieved. Regarding the two subsidiary objectives:</p> <p>(c) the mobility of low income people was increased, given that the majority of the suburban railway patrons come from lowest income groups and suburban railway services were improved and modal integration was somewhat improved. On the other hand, the proportion of lowest-income travelers by rail fell from 89% in 1999 to 74% in 2007, reflecting a flight to cheaper para-transit modes to avoid increased fares on the railway network.</p> <p>(d) the air quality objective was not reached, since the expected modal shift to suburban railways from more polluting modes did not materialize.</p> <p>Lessons drawn in the ICR:</p> <ol style="list-style-type: none"> (i) When the project involves differential social impacts, the monitoring and evaluation framework should permit that these be assessed (reference to the impact of higher-quality and higher-prices services on the lowest income groups). (ii) Risk assessment for projects should be enhanced to consider impacts of cumulative factors. (iii) Rolling stock alternatives need much more depth, inclusive of appraising the technical and management capacity of the beneficiary organization to handle complex issues arising in the procurement for vehicle rehabilitation and impacts of this on signaling, communications and other sub-systems. (iv) Maintaining financial flexibility, e.g. cancelling and adding loan funds, changing categories and disbursement percentages, as it was practiced under this Project, in essential as a response to drastic macro-economic swings that projects may have to live through.
Team	Jorge Rebelo (lending, SPN); George Darido (completion)
Profile date and authors:	May 27, 2010; Slobodan Mitric

Links to key documents of the Rio de Janeiro Mass Transit Project:

Background sector work (Jorge Rebelo “Essentials for Sustainable Urban Transport in Brazil’s Large Metropolitan Areas”):
http://siteresources.worldbank.org/INTURBANTRANSPORT/Resources/563_wps1633.pdf

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/1997/12/02/000009265_3980312102318/Rendered/PDF/multi_page.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2004/12/14/A41513D28A5B3BoC85256F03000F4AC8/1_o/Rendered/PDF/A41513D28A5B3BoC85256F03000F4AC8.pdf

Project Paper (2007):

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2008/01/29/000333037_20080129013616/Rendered/PDF/397200PJPRoP10121464BooR20081001111.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2010/01/08/000334955_20100108020446/Rendered/PDF/ICR13530Po43421ICoDisclosed01161101.pdf

IEG Project Performance Assessment Report:

<http://wbln1023.worldbank.org/oed/oeddoclib.nsf/DocUNIDViewForJavaSearch/8525682E006860378525769Boo5905BF?opendocument>

SALVADOR URBAN TRANSPORT PROJECT (Po48869)	
Country and region:	Brazil (LAC)
Borrower:	Federal Republic of Brazil
Implementing agency:	CBTU & Companhia de Transportes de Salvador (created specifically for this project)
Concept review date	September 19, 1997
Board approval date:	17 June 1999
Effectiveness date:	17 February 2000
Closing date:	31 December 2003 (original); 31 December 2007 (actual)
Instrument category:	Specific investment loan
Project structure by sector:	Free-standing urban transport project
Project cost estimate in US\$:	308m
Loan type and amount (US\$):	150m (IBRD loan)
Other financiers:	Federal Republic of Brasil \$40m; State of Bahia \$68m; private sector \$50m
Final project cost (US\$):	557.7m
Amount disbursed (US\$):	118.0m
Diagnostic highlights:	<p>Salvador Municipality has 2.3m people (2.5m in the metropolitan region), with lower-income people concentrated on urban fringes, requiring long journeys to work. Modal split is about 55% by public transport, of which 98% are by street buses, and only 0.7% by the suburban train line (STU/SAL) (ICR quotes 0.14% as the base value in the table of indicators and 0.26% in the text). Cars carry about 14% and 29% walk. Bus operators are mainly private while the train system is owned by the State of Bahia. Bus operators retain ticket revenue and also get revenue from sales of passes (Vale Transporte) and special tickets for students. This extra revenue is processed through Fundetrans, a clearing house. The road network is congested, in part because of its scarcity and different topography, and in part because rudimentary traffic and demand management institutions cannot cope with pressures of motorization. Journeys by street buses are slow (average round trip times of 2.5 to 3 hrs), and about half require transfers. This is problematic because there is no integration of schedules and fares. Many bus routes operate in street environments at the limit of their capacity. Per contra, the suburban railway line is underused, in part because a lack of investment has meant that service levels are low, including poor integration with the bus network. Behind these problems are weak and fragmented institutions, with especially unresolved issues of jurisdiction and cooperation between the state and the main municipality regarding bus operators.</p>
Development objectives:	<ul style="list-style-type: none"> (i) improve the quality of urban public transport (services) in the Salvador Metropolitan Region (ii) decentralize ownership of commuter rail lines from the national to state/city government
Investment components:	<ul style="list-style-type: none"> (i) construction of a <u>new</u>, 11.9km long rail rapid transit line (infrastructure, all power and communications equipment, and rolling stock; rail/road transfer stations; housing for resettled families); (ii) rehabilitation of Calçada-Paripe link on the STU-SAL (commuter rail)

	network
Policy agenda:	<ul style="list-style-type: none"> (i) preparation of a policy integrating transport, land use and air quality concerns; (ii) operation and maintenance of the metro as a private sector concession
Institutional agenda:	<ul style="list-style-type: none"> (i) transfer of the Salvador subdivision of the Companhia Brasileira de Trens Urbanos (CBTU) system from the Federal Government to the State of Bahia and Municipality of Salvador (ii) establishment of a regional transport coordination commission
Other project features:	<p>The project is anchored on the following economic and sector work:</p> <ul style="list-style-type: none"> (a) Urban Transportation: Issues and Options, which laid the foundations for the CBTU decentralization program; (b) Essentials for Sustainable Urban Transport in Brazil's Large Metropolitan Areas (1996, link provided below)
Complementary operations:	<p>This project belongs to a program that started when, in 1991, Brazil asked the Bank to assist in the decentralization program of its urban rail passenger systems run by CBTU. CBTU itself was created in 1984, when the Federal Government separated passenger from freight operation of the national railways. From 1992-2002, the Bank lent more than US\$1bn for rail decentralization projects in Rio de Janeiro, Sao Paulo and elsewhere. Regional rail networks were transferred (decentralized) from the Federal Government to the local (State and Municipal) authorities. The local authorities would agree to receive the systems as long as they were rehabilitated and modernized but also requested that the Bank acted as "honest broker" between the parties and financed the program. The Bank agreed to embark in this program because it saw an opportunity to revitalize very important trunk corridors of the metropolitan regions which, if properly integrated with the existing bus systems and land use could greatly enhance mobility in the region, particularly for the main users who are low-income. The most recent projects in this program focus on the private sector entry into rail operations and maintenance, e.g. the Rio de Janeiro Mass Transit Project (Po43421).</p>
Major indicators:	<ul style="list-style-type: none"> (i) establishment of a Regional Transport Coordination Commission (achieved); (ii) % of metro stations integrated with bus-based networks: achieved for 40% relative the initial target of 50%, formally revised to 25%; (iii) Increase in the rail share of trips from 0.14% to 7.8%; revised to 0.6%, achieved 0.6% (involves major passenger volume increase in absolute numbers); (iv) Reduction in generalized cost of travel from 96.4 min to 53 min, revised to 94 min; achieved 94 min. (v) Transfer of STU/SAL to city government (achieved); (vi) Concession awarded for metro operations & maintenance (not achieved by loan closing but expected in 2009)
Results at completion:	<p>The loan closed in 2007, with the ICR rating the implementation as moderately unsatisfactory because of less-than-completed status of the project. Other key ratings were more positive: moderately successful rating for the achievement of development objectives, satisfactory Bank performance, and moderately satisfactory borrower performance. Within this last category, the performance of the federal Government was rated moderately unsatisfactory for failing to budget adequate resources for loan disbursements and counterpart funds' payment, contrary to obligations undertaken in the Loan Agreement. The risk to development outcome was rated substantial, mainly on the strength of a Federal Controller's continued intervention in the remaining procurement of the metro project (see below).</p>

The project was affected adversely by deterioration in Brazil's macro-economic and fiscal situation (including 65.7% devaluation over 1.5 years), putting a squeeze on counterpart funds and creating havoc in the concession contract for the suburban train system. The metro component (a turnkey contract) was the main victim of these circumstances and other complications. The Loan Agreement was amended several times to reflect revisions and cancellations, and to change participation rates. There were also design changes leading to a procurement/payment dispute involving federal-level agency, Controller's Tribunal. This pitted Bank procurement guidelines against an established Federal practice, and has remained a threat to the completion of the metro line. In addition to design changes of this component, there was a reduction in scope due to the budget crisis – a reduction of the length of the line from 11.9km to 6.1km (full operation), with partial completion of additional 6km. \$32m was cancelled from the Loan, with the Federal Government agreeing to increase its participation for the reduced-scope project, and the provide funds for the rest when the macro-economic situation improves (as they did in 2006). With all the delays, the originally planned metro component was not finished by the loan closing in 2007, but indications are that it would be completed and the concession contract signed in 2009 (ICR was written in 2008). Capital costs increased to \$42.8m per km because of a decision to elevate some sections, but remained within international experience. The prospect that the metro would not require operational subsidies remains alive. Bus service concessions will be re-bid once the full metro project is complete.

Rehabilitation of the suburban train line (including the retrofit of trains) was also delayed, and was fully finished only in 2008. The transfer of ownership from CBTU to the Municipality of Salvador was completed in 2005. The concession went through a difficult period, since its investment obligations were in dollars and revenue was in local currency which went through a severe devaluation. Eventually the concession contract was amended to include lower investment obligations for the concessionaire.

The project is notable for having detailed year-by-year indicators. Some of these reflected the progress of implementation and others measured outcomes in terms of service levels or modal split.

The stormy history of implementation required changes in the agreed targets, ultimately delaying the achievement dates to 2010 for outcome indicators. This focus on detailed indicators required a major effort by both the client and the Bank, matched only by the time and resources spent on procurement of the physical components and the suburban train concession.

Apart from processes measured by indicators, the Project led to the creation of the Municipal Transport Regulatory Agency of Salvador (AGERT), headed by an Executive Director helped by a consultative council with representatives of the mayor, city council, service providers and users.

In the safeguards dimension, the project excelled in both environmental and social sphere, notably in handling residential relocation.

Lessons drawn in the ICR:

Turnkey contracts: these do not work well if there are design changes, leading to disputes over additional costs. It is recommended in such instances, design changes be done at a highly detailed (construction) level to facilitate cost estimation.

Dealing with national procurement agencies: situations like the conflict with the Controller's Tribunal have arisen or could arise in other countries with a strong national institution having procurement rules that differ from the Bank's Guidelines. It is recommended to mitigate this through systematic and detailed interaction between such agencies and the Bank while projects are being prepared.

Exchange rate risks: the suburban train concession had investment priced in dollars but revenues in local currency. In such mixed-currency agreements, the risk of a major devaluation should be mitigated through provision of one-time transfers from the government. Local currency appreciation should be mitigated by having the concessionaire reduce fares or transfer the windfall profit back to the owner.

Flexibility: being flexible about revisions in investment programs saved this project,

	<p>specifically by de-constructing the metro component into a smaller, operationally coherent section and another one that could be done later on. There are counter-examples (Lima, Medellin) where this was not done, leading to huge sunk investments or to very high completion costs.</p> <p><u>Benefits of decentralization:</u> the change of ownership from the federal to municipal government made suburban railway managers more conscious of what the local population demanded in terms of service or found affordable, but also made the system dependent on the funding strength of the municipality.</p> <p><u>Decentralization and the loss of power:</u> in the case of suburban railways, the city of Salvador was seeing its jurisdiction (and power) increase, but CBTU was losing power. There is a tendency of the loser to work against the change, or fail to support it sufficiently. It is recommended that the design of decentralization schemes should also look at changes required at the “loser” agency.</p>
Profile date and author	June 15, 2010; Slobodan Mitric

LINKS TO KEY DOCUMENTS FOR SALVADOR URBAN TRANSPORT PROJECT:

Background sector work (Jorge Rebelo “Essentials for Sustainable Urban Transport in Brazil’s Large Metropolitan Areas”):
http://siteresources.worldbank.org/INTURBANTRANSPORT/Resources/563_wps1633.pdf

Background sector work (Jorge Rebelo “The Rail Decentralization and Modernization Program in Brazil – Lessons Learned”):
http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2005/10/31/000160016_20051031172123/Rendered/PDF/33898orail1decentralization1rebelo.pdf

Project Appraisal Document:
http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/1999/09/17/000094946_99060706045281/Rendered/PDF/multi_page.pdf

Loan Agreement:
http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2004/12/14/74D6333C55FB670385256F030010DDB6/1_o/Rendered/PDF/74D6333C55FB670385256F030010DDB6.pdf

State Agreement:
http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2004/12/14/59592E9995F5C7DE85256F030010DCD1/1_o/Rendered/PDF/59592E9995F5C7DE85256F030010DCD1.pdf

Implementation Completion Report:
http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2009/02/19/000333038_20090219232107/Rendered/PDF/ICR9290BR0Po48101OfficialUseOnly1.pdf

FORTALEZA METROPOLITAN TRANSPORT PROJECT (Po60221)	
Country and region:	Brazil, LAC
Borrower:	Federal Republic of Brazil (through Ministry of Transportation); loan proceeds and counterpart funds passed to CBTU through annual budget allocations
Implementing agency and arrangements:	Companhia Brasileira de Trens Urbanos (CBTU) & Companhia Cearense de Transportes Metropolitanos (METROFOR); the latter is a Fortaleza State company, CBTU's successor as owner of the regional rail system
Concept review date:	May 19, 1999
Board approval date:	December 4, 2001
Effectiveness date:	September 9, 2002
Closing date:	March 31, 2006 (original); September 30, 2010 (actual)
Instrument category:	SIL
Project structure by sector:	General transport sector, 100%
Project total cost in US\$:	193.8m (original); the work program and costs were amended twice, in 2006 (reduction to 30m) and 2008
Financial plan (in US\$):	91.2m borrower; 85.0m IBRD Loan 7083-BR (equivalent to E98.6m); 17.6m unidentified co-financiers. In 2006, the Loan Agreement was amended to reflect the reduced scope of the project, and to increase the Bank participation from 50% for goods and 65% for works to 100% for both.
Final project cost in US\$:	36m
Amount disbursed in US\$:	34.8m (Project portal)
Diagnostic highlights	Fortaleza Municipality (1.8m), in the State of Ceara, dominates an urban region with 2.6m people living in 13 municipalities. Public transport modes include street-based buses (privately operated and regulated by municipalities) and the suburban rail system (STU/FOR), operated by CBTU, a federal company under the Ministry of Transport. Modal split is 42% walking and 58% motorized. About 63% of motorized trips are by public transport, 23% by car, and 11.5% by motorbikes. 78% of public transport trips are by privately operated buses, and only 3% by the suburban train. The street system is highly constrained and prone to congestion, due to which the bus transport cannot evolve short of drastic curtailment of private traffic. Suburban rail services have potentially a large capacity, but are handicapped by poor integration with the bus system. This has an infrastructure dimension, a regulatory one (e.g. a fare union, schedule matching, investment policies) and a planning one, due to a lack of coordination between state and municipal institutions (essentially those of the largest municipality – Fortaleza). Trips are long and often involve transfers, therefore expensive. The public transport system serves mainly but not entirely the lower-income population, so the poor level of service also inspires the loss of passengers to cars and motorcycles. In addition to level of service and air quality problems, the sector has cost recovery issues, both on cost and revenue side, and generally weak funding arrangements. These stem from a highly constrained fiscal space of Ceara, following a complicated decentralization process for public services (including urban transport) from the federal to state and local levels, and dealing with large shocks to the economy of Brazil in late 1990s and early 2000s (linked to the Argentine debt crisis and national political upheavals).
The Country Assistance Strategy	1. Targeted interventions to reduce poverty, especially through better provision of urban services to low-income communities;

	<ol style="list-style-type: none"> 2. Fiscal adjustment for states aiming at sustainability (including the reform of public enterprises and increasing private sector participation in infrastructure management); 3. Renewing economic growth; 4. Improving government effectiveness; and 5. Improving government management.
Development objectives:	<ol style="list-style-type: none"> (i) Improve the quality of urban public transport in the Fortaleza Metropolitan Region; (ii) Transfer ownership of the STU-FOR/METROFOR suburban rail system (West and South Lines) from the federally owned company CBTU to the State of Ceara; and (iii) Promote private sector participation in the operation and management of this system (iv) Improve mobility of the low-income population; (v) Reduce emissions from road-based vehicles. <p>NB. Main objectives are (i) through (iii), while (iv) and (v) are subsidiary objectives.</p>
Investment components:	<p><u>Part A: Infrastructure and Equipment Investment</u></p> <ol style="list-style-type: none"> 1. Rehabilitation and modernization of the West Line, including: (a) the transfer stations between road and rail based systems, consisting of: (i) about 19 line-kilometers of infrastructure and superstructure works, rehabilitation of about 13 bridges and viaducts, rehabilitation works in the areas surrounding the transfer stations and grade crossings, and road works in the area of influence of such line; (ii) installation of signaling, telecommunications and electrification facilities, escalators and elevators, a central control system, automatic train control equipment, air conditioning, ventilation, fans and ancillary equipment; and (iii) acquisition of rolling stock (eight train sets). NB. Rehabilitation and modernization of the South Line was being done under a US\$268m JBIC loan approved in 1997 (total costs estimated at US\$326m). 2. Provision of technical assistance for: (a) the management and supervision of the carrying out of Part A.1 above; and (b) the strengthening of the capacity of the PCU to coordinate Project implementation. <p><u>Part B: Institutional and Policy Development</u></p> <ol style="list-style-type: none"> 1. Carrying out of studies for the preparation of an integrated urban transport policy, land use and air quality management strategy for the FMR. 2. Provision of technical assistance: (a) for the strengthening of RTCC's capacity to carry out its functions; and (b) if necessary, in matters related to the transfer of ownership, management and operation of the STU-FOR/METROFOR System.
Policy agenda:	<ol style="list-style-type: none"> (i) Transfer of ownership of the regional railway system from the federation to the state of Ceara (condition of loan effectiveness). (ii) Transfer of operations and maintenance functions to the private sector following a competitive bidding process (iii) Fostering service integration between regional railways and bus networks
Institutional agenda:	<ol style="list-style-type: none"> (i) Creation and empowering of the Regional Transport Coordination Commission (RTCC) within Conselho Deliberativo da Regiao Metropolitana de Fortaleza, as a forum for coordination and planning for the State, municipalities that form the FMR, and transport service providers. RTCC's creation was a condition of appraisal for the Project. (ii) Maintenance of Agencia de Regulacao do Ceara (regulatory agency of the State for energy, transport and sanitation services) with responsibilities to supervise and regulate the operation of metropolitan transport systems in the State (covenant in the Loan Agreement)

	<p>(iii) Signature of an Integrated Transport Agreement between the State of Ceara and (at least) municipalities of Fortaleza, Caucaia and Maracanau with regard to rail/bus integration (condition of effectiveness)</p> <p>(iv) Production of an integrated transport, land use and air quality plan</p>
Performance indicators:	<p><u>Re project development objectives:</u> (i) share of rail stations integrated with bus lines (base 0%; target 50%); (ii) rail share of motorized trips (base 2%, target 10%); (iii) generalized cost of travel between Caucaia and Joao Felipe in minutes (base 93min, target 65min).</p> <p><u>Physical outputs:</u> (i) % track works completed; (ii) % of other civil works completed; (iii) % of rolling stock delivered.</p> <p><u>Institutional component:</u> (i) bidding for private sector participation initiated; (ii) delivery of an integrated urban transport, land use and air quality strategy</p>
Additional project features	<p>The project is also anchored on the following economic and sector work: (a) Urban Transportation: Issues and Options, which laid the foundations for the CBTU decentralization program;</p> <p>(b) Essentials for Sustainable Urban Transport in Brazil's Large Metropolitan Areas (1996, link provided below)</p> <p>Also see:</p> <p>Rail Decentralization and Modernization Program in Brazil – Lessons learned (2003, link provided below)</p>
Complementary operations	<p>This project belongs to a sequence of projects which started in 1991, when Brazil asked the Bank to assist in the decentralization program of its urban rail passenger systems run by CBTU. CBTU itself was created in 1984, when the Federal Government separated passenger from freight operation of the national railways. From 1992-2002, the Bank lent more than US\$1bn for rail decentralization projects in Rio de Janeiro, Sao Paulo and elsewhere. Regional rail networks were transferred (decentralized) from the Federal Government to the local (State and Municipal) authorities. The local authorities would agree to receive the systems as long as they were rehabilitated and modernized but also requested that the Bank acted as "honest broker" between the parties and financed the program. The Bank agreed to embark in this program because it saw an opportunity to revitalize very important trunk corridors of the metropolitan regions which, if properly integrated with the existing bus systems and land use could greatly enhance mobility in the region, particularly for the main users who are low-income. The most recent projects in this program focus on the private sector entry into rail operations and maintenance, e.g. the Rio de Janeiro Mass Transit Project (Po43421).</p>
Results at completion:	<p>The Project was nearly stillborn due to the severity of economic crisis hitting Brazil just after the loan approval. In addition to overall austerity, the Project had to compete with other rail projects in Salvador Bahia, Belo Horizonte and Recife, all of which were already ongoing. No counterpart funds were available until 2006, when the Project was restructured, under the same development objectives and outcome targets, reducing the cost to US\$30m, and increasing the disbursement rates to 100%. Electrification was dropped and double tracking was almost eliminated; the number of train sets was reduced from 10 to 6. The Project in essence dropped elements meant to increase the line capacity and quality of service (thus attract new riders), retaining maintenance and rehabilitation aspects. In 2007 and 2009, the State of Ceara provided some additional funds for rolling stock rehabilitation. Another amendment took place in 2008, extending the closing date from 2008 to 2010. At loan closing, the scaled down program was implemented successfully (see below). Various other investment activities proceed for both West and South lines, with a completion horizon of end-2011.</p> <p>The ICR rates outcomes as moderately satisfactory, on the strength of achievements in travel speed and reliability (hence lower generalized cost of travel), and rail/bus integration. The report notes the failure to meet the rail market share</p>

	<p>target and to introduce concessions, but indicates that these follow from delays and scaling down, and may be reached over the next year or two. Still, the risk to development outcomes is estimated as significant with “soft” spots being delays in new train sets becoming fully operational, postponements of fare integration, and problems related to the currently high level of Federal subsidy (40% of variable operational costs of the Metrofor system). This last involves a temporary arrangement, and the subsidy responsibility will in the near future fall on the State. The ICR ratings for performance are moderately satisfactory for both the Bank and the Borrower (Federal gov’t), with a moderately unsatisfactory rating for the latter for its performance during implementation</p> <p><u>Outcomes relative to project development objectives:</u></p> <ul style="list-style-type: none"> (1) Proportion of rail stations integrated with bus lines (physically and in terms of fares): 50% (target met); physical integration is complete, fare integration to be done in full by end 2011; (2) Rail share of transport trips: 2%, target not met; it is forecast that it will be met 20 months after operations start (in 2011); (3) Generalized cost of travel in minutes between Caucaia and Joao Felipe: 70 min (target partially met); (4) Decentralization of STU-FOR (transfer to state ownership): completed <p><u>Intermediate outcome indicators:</u></p> <ul style="list-style-type: none"> (1) Track works completion: 100% (2) Other civil works: 100%; (3) Rolling stock and systems: 70% complete; (4) Private sector participation: the study to revise the concession model has been completed, but the suburban railway system is still operated by the state; outcome not achieved (5) Establishment and strengthening of RTCC: achieved; (6) Integrated urban transport, land use and air quality strategy: achieved (final report completed and discussed in a participatory manner). <p>The lessons drawn in the ICR:</p> <ul style="list-style-type: none"> (1) More effort should be invested to gauge risks in implementing policies like modal integration (specifically fare integration across diverse operators), which involve gains and losses; (2) Dealing with problems caused by macro-economic shocks is difficult on project basis; it may be warranted to evolve a portfolio-based approach; (3) Institutional changes tend to follow fitful timetables, quite different from those for civil works; having time-bound schedules and targets for these initiatives may not be appropriate.
Team	Jorge Rebelo (lending, SPN); Aurelio Menendez (SPN); Shomik Mehndiratta (ICR)
Profile date and author	June 11, 2010 (initial); revised May 27, 2011; Slobodan Mitric

Links to key documents of the Fortaleza Metropolitan Transport Project:

Background sector work (Jorge Rebelo “Essentials for Sustainable Urban Transport in Brazil’s Large Metropolitan Areas”):

http://siteresources.worldbank.org/INTURBANTRANSPORT/Resources/563_wps1633.pdf

Background sector work (Jorge Rebelo “The Rail Decentralization and Modernization Program in Brazil – Lessons Learned”):

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2005/10/31/000160016_20051031172123/Rendered/PDF/33898orail1decentralization1rebelo.pdf

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2001/12/01/000094946_00110305334220/Rendered/PDF/multiopage.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/LCR/2004/12/14/8B072114001DCB8585256F03001478E0/1_o/Rendered/PDF/8B072114001DCB8585256F03001478E0.pdf

State Agreement (between the State of Ceara and the World Bank):

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/LCR/2004/12/14/1031E7B3D8983DB385256F03001479D1/1_o/Rendered/PDF/1031E7B3D8983DB385256F03001479D1.pdf

Implementation Completion Report:

[http://wbln0037.worldbank.org/85256BCE00634BE4/All+Documents/AoEEFCDE6251BE0A8525786300754524/\\$File/ICR-P060221%20Fortaleza%20-%20March%2030%202011%20Final.docx](http://wbln0037.worldbank.org/85256BCE00634BE4/All+Documents/AoEEFCDE6251BE0A8525786300754524/$File/ICR-P060221%20Fortaleza%20-%20March%2030%202011%20Final.docx)

SAO PAULO METRO LINE 4 PROJECT (P051696 and P105959)	
Country and region:	Brazil, LAC
Borrower:	State of Sao Paulo (with Federal guarantee)
Implementing agency and arrangements:	Project coordination and overall responsibility: Secretary of Metropolitan Transport Project management: Companhia do Metropolitano de Sao Paulo (Sao Paulo Metro Company)
Concept review date:	January 11, 2001
Board approval date:	January 22, 2002; additional finance approved April 4, 2008
Effectiveness date:	September 5, 2002; additional loan effective July 31, 2008
Closing date:	June 30, 2007 (original); June 25, 2010 (actual for Ln 4646-BR); March 31, 2011 for Ln-7536-BR)
Instrument category:	SIL
Project structure by sector:	General transport sector, 100%
Project total cost in US\$:	Original: 933.9m; revised in 2008: 1123.9m
Financing plan (US\$):	Original: World Bank 209m (Loan 4646-BR); Borrower (State of Sao Paulo) 332m; Japanese Bank for International Cooperation \$209m; private sector: 183m Revised in 2008: World Bank 304m (95m added, Loan 7536); Borrower 332m; JBIC 304m; private sector 183m
Final project cost in US\$:	
Amount disbursed in US\$:	304m
Diagnostic highlights	Sao Paulo Metropolitan Region, one world's mega-cities, has 16.8m people living in 39 municipalities, of which Municipality of Sao Paulo has 8.5m people. More than 5m have incomes falling under the poverty line, with low mobility identified as one of critical factors. 31.4m trips are made daily in the region, divided almost evenly between walking, public transport and private cars. The motorization rate is about 205 vehicles per 1,000 people. 76% of public transport trips are carried by street-based bus lines (involving some 11,000 vehicles, mostly in the private sector), 16% by the 3-line metro, 6% by regional railways (CPMT), and 2% by vans. One third of public transport trips require one or more transfers. The rail-based network is huge (270 km) but its market share is hampered by a lack of integration with other modes. This has overloaded the road network, resulting in heavy traffic congestion on 80% of roads. Car speeds on arterial roads have fallen to 17 km/h and bus speeds to 12 km/h. Accident rates are among the highest in the world. Public transport services are slow, inconvenient, overcrowded, and costly.
Development objectives:	<u>Main</u> : improve the quality and long-term sustainability of urban transport in the Sao Paulo Metropolitan Region by interconnecting the existing subway, commuter rail and bus networks through the construction of METRO's Line 4. <u>Subsidiary</u> : i) improve the accessibility of the low-income population, main users of the METRO, to employment centers and health and education facilities; and ii) seek private sector participation in the development of Line 4.
Investment components:	A. Line 4 Metro in Sao Paulo (\$898.8m), 12.8km long, double-track, all underground: infrastructure (inclusive of transfer stations) and equipment B. Technical assistance (\$33m): (i) project management and supervision; (ii) cost-efficiency, pricing and financial management study of the Sao Paulo metro; and (iii) follow-up studies of project finance and private sector participation

Policy agenda:	<ul style="list-style-type: none"> (i) introducing public-private partnership approach in large-scale urban public transport systems; (ii) increase in cost recovery (fare revenue to cover operating costs) within the constraint relative to low incomes of majority of passengers (covered by a monitoring indicator, included in the Schedule 5 of the Loan Agreement, referenced in clause 3.07 of the LA but not included as a covenant therein) (iii) fare system integration across municipal and modal boundaries through introduction of a multimodal ticket using smart card technology (Loan Agreement, clause 3.06 (c))
Institutional agenda:	<ul style="list-style-type: none"> (i) Establishment by the State of Sao Paulo of an autonomous entity/commission to be in charge of regulating concessions of metropolitan transport services under its jurisdiction (dated covenant, Loan Agreement, Clause 3.06 (a)) (ii) Maintenance of the Regional Transport Coordination Commission (established under preceding Bank-funded projects) as a forum for discussion of policies for public transportation prices and subsidies in the SP region (Loan Agreement, clause 3.06 (b)) (iii) Introduction of a consultation mechanism with the municipalities in the SP region, especially the Municipality of São Paulo, for purposes of promoting: (a) integration of the different public services, including urban transportation services; and (b) a joint development of financing mechanisms based on land use control (<i>operações urbanas</i>), both with a view to improve public transportation in the SP region (dated covenant, Loan Agreement, clause 3.06 (d)); (iv) Carrying out of two types of surveys: (a) every year during the first 5 years after operations start on Line 4, a survey to gauge the satisfaction of the users of Line 4 with the services provided, particularly in terms of level of service, integration with other means of public transportation, and affordability of the transportation; and (b) after completion of Line 4 and before the start of implementation, a survey to obtain information on the changes in real estate property prices and rents in the area covered by Line 4, and the effect of Line 4 on the construction of new housing and installation of new businesses in such area (Loan Agreement, clause 3.06 (e))
Monitoring indicators:	<ul style="list-style-type: none"> 1. Degree of integration of Line 4 with bus lines, in % of stations: 2006 target 90% 2. SP Metro share of motorized trips: 2001 base – 18%; 2006 target – 23% 3. Generalized cost of travel between Vila Sonia and Luz stations: 2001 base 89 min; 2006 target 51 min 4. SP Metro's working ratio: 2001 base – 0.98; 2006 target – larger than 1.00
Additional project features	The project uses a modified BOT approach: civil works and fixed installations will be built under a turnkey contract, financed by the State and the WB, while the remaining systems and rolling stock would be financed by the private sector concessionaire who will operate the line for 25 years, with fares set by the State. Concession bidders will bid on the amount of investments they will require from the State and the concession fee. The State will set up the ceiling for investments they could finance. No operating subsidies would be granted. The concessionaire would have a right to operate feeder/distributor bus services.
Complementary operations	The Project is Bank's third in Sao Paulo: the program started with Sao Paulo Metropolitan Transport Decentralization Project (\$126m, Loan 3457-BR, P006379, 1992-1998) and continued with Sao Paulo Integrated Transport Project (\$45m, Loan 4312-BR, P006559, 1998-2004). A successor project, Sao Paulo Trains and Signaling Project (P106038, \$550m) was approved in 2008. The first project

	involved the transfer of ownership of the regional rail system (CBTU-SP) from the federal Government to the State of Sao Paulo (renamed into CPTM), its rehabilitation and integration with other modes. The second project aimed to involve the private sector in the operations of CPTM, through a concession for one of its lines.
Results at approval of the additional loan (2008):	The Project overcame an initial delay of 14 months at the start-up, involving litigation on one of the bids and a strike of property valuers which slowed down the process of expropriations. The ratings are all satisfactory. 50% of all civil works were completed and 60% of the institutional component. In 2008, an additional loan of US\$95m was approved to finance cost increases due to devaluation of US\$ relative to the Brazilian Real. In 2006, a 30-year concession was awarded for the system operation, a first private-public partnership of its type in Brazil. Line 4 opened for operations in Spring 2008.
Team	Jorge Rebelo (lending, SPN); George Darido (SPN)
Profile date and author:	June 15, 2010; revised October 22, 2010; Slobodan Mitric

Links to key documents of the Sao Paulo Metro Line 4 Project:

Background sector work (Jorge Rebelo "Essentials for Sustainable Urban Transport in Brazil's Large Metropolitan Areas"):

http://siteresources.worldbank.org/INTURBANTRANSPORT/Resources/563_wps1633.pdf

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2002/01/07/000094946_0112210400580/Rendered/PDF/multiopage.pdf

Loan Agreement:

<http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2004/12/14/09CCF5B8794C963685256F030011EC60/10/Rendered/PDF/09CCF5B8794C963685256F030011EC60.pdf>

Project Paper

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2008/03/20/000333037_20080320000354/Rendered/PDF/392180PJPRoBRoR2008100501100Box0327342B.pdf

CLIMATE FRIENDLY MEASURES IN TRANSPORT GEF PROJECT (Po59161)	
Country and region:	Mexico, LAC
Borrower:	Banco nacional de Obras y servicios Publicos, SNC and United Mexican States
Implementing agency and arrangements:	Secretaria de Medio Ambiente del GDF (Environment Secretariat for the Federal District)
Concept review date:	March 4, 2002
Board approval date:	October 29, 2002
Effectiveness date:	April 11, 2003
Closing date:	March 31, 2009 (actual)
Instrument category:	GEP
Project structure by sector:	General transport sector, 60%; central government administration, 20%; sub-national government, 20%
Project total cost in US\$:	12.2m
Financing plan (US\$):	5.8m (GEF grant) + 2.4m Borrower + 3.0m local sources + 1.0m Shell Foundation
Final project cost in US\$:	5.6m (for the part financed by the GEF grant); other values not available
Final amount disbursed US\$:	5.6m in August 2010
Diagnostic highlights	<p>Mexico City metropolitan area has 19m people, and is still growing at about 2% per annum. Motorization has for years increased faster than infrastructure and services, resulting in road congestion, large fuel consumption, low safety and high emissions. The public transport system consists of a 200km metro system and street-based bus services. Following the deregulation in early 1990s, the bus services are offered by 28,000 concessions, 70% of which are minibuses. There are still about 1,400 public buses. There are about 3.5m cars, accounting for 20-30% of all motorized trips, while public transport carries 20-30%. Mexico City has one of the world's worst accident records (250 fatalities per million people, city only). The area generates several million tons of atmospheric pollutants per year, a serious local and global hazard. In 1995-99 the entire population of the Mexico City metropolitan area was exposed to annual average concentrations of fine particulate pollution (particulates with a diameter of less than 10 micrometers, or PM₁₀) exceeding 50 micrograms per cubic meter, the annual average standard in both Mexico and the United States. Two million people were exposed to annual average PM₁₀ levels of more than 75 micrograms per cubic meter. The daily maximum one-hour ozone standard was exceeded at least 300 days a year. Transport vehicles are among major sources of pollutants, especially greenhouse gases and particulates. The cars' share of daily trips has been steadily increasing since late 1980s, in spite of an increase in the size of the metro network. This has been due in part to problems in the supply of public transport services, including a poor regulatory set-up that led to the proliferation of small-size buses, weak (bus/metro) service integration, a lack of protection from traffic congestion, and generally poor traffic management. Institutions are fragmented, matching multiple administrative divisions (e.g. between the Mexico City, the Federal District and the State of Mexico).</p>
Development objectives:	Contribute to the development of policies and measures that will assist in a long-term modal shift towards climate-friendly, more efficient and less polluting, less carbon-intensive transport in the Mexico City Metropolitan Area (MCMA).
Investment components:	A. Harmonization of sector strategies on air quality issues and Integrated Climate Action Plan for Transport (CAP) in the MCMA

	<p>(\$0.8 million with a \$0.4 million GEF grant).</p> <p>B. Definition of an enabling environment to facilitate the implementation of sustainable transport strategies (\$4.8 million with a \$2.9 million GEF grant).</p> <p>C. Field Test of Climate-Friendly High Capacity Vehicles (\$4.8 million with a GEF grant of \$1.6 million).</p> <p>D. Technical assistance and training for incorporation of climate change and air quality considerations in the design and analysis of transport strategies (US\$0.8 million; funded with a US\$0.4 million GEF grant).</p> <p>E. Public Awareness and Dissemination (\$0.3 million, \$0.165 million GEF grant).</p> <p>F. Project Management (\$ 0.7 million, \$0.335 million GEF grant).</p>
Policy agenda:	The combined urban transport and air quality policy agenda focuses on the creation of a sustainable business environment for public transport services. Its centerpiece is the promotion of a modal shift through the establishment of public transport corridors with exclusivity of use and yet cheaper than the metro. These corridors would only be used by larger, fuel-efficient and low-polluting bus vehicles.
Institutional agenda:	Improving institutional coordination (especially between the governments of the Mexico City and the State of Mexico) regarding urban development, urban transport and air quality management, through joint committees and joint strategies
Complementary operations	<p>This Project is a part of a 10-year, multi-sector program, Third Air Quality Management Plan (Programa para Mejorar la calidad del Aire en la ZMVM 2002-2010) which are consistent with the Global Environment Facility (GEF) Operational Program on Sustainable Transport (OP-11) and the Metropolitan Climate Change Action Plan (MCCAP).</p> <p>Specifically, it is meant to prepare the ground for the forthcoming proposed Bank-funded Second Air Quality and Transport Project, which will focus on the development of bus-based rapid transit, transfer stations and a strengthened linkage to the metro in key corridors of MCMA.</p> <p>Overall, the Project belongs to a long sequence of the Bank's involvement with the subject of urban transport and environment that started in 1993 with the Mexico City Metropolitan Area Transport Air Quality Project (Loan 3543-ME, 1992-1999). This project invested in air quality monitoring and vehicle testing and retrofit equipment, while helping to develop policy and institutional framework to support transport and air quality objectives. Subsequently, under the Medium Cities Urban Transport Project (US\$200m loan, P007648, 1993-2003), the role of the Federal Government was enhanced, several cities developed Integral Transport Plans (ITP), and a line of credit was provided for transport improvements in these cities. The Medium Cities project had a less explicit focus on air quality aspects of urban transport.</p> <p>In the 2000s decade, two other technical assistance operations supported institutional change: Mexico City Insurgentes BRT (P082656, approved in 2005), the first carbon finance operation in the world; and GEF-funded Sustainable Transport and Air Quality Project (P114012, approved in 2009), meant to assist the selected municipalities to reduce greenhouse gas (GHG) emissions growth rates by fostering long term increases in the use of less energy intensive transport modes; and induce policy changes in favor of sustainable transport projects.</p> <p>In 2007-2008, the Bank mounted a fee-for-service technical assistance operation, Mexico Mass Urban Transport Federal Program (P110474), assisting in the design and establishment of Federal Support Program for Mass Transit (PROTRAM). On a different scale, a development policy loan, Framework for Green Growth (P115608, US\$1,504m, approved in 2009) had a twin focus on urban transport and energy, addressing institutional reform to include explicit climate change concerns and reforming funding sources at the Federal level to support this concern. A</p>

	<p>follow-up operation, Urban Transport Transformation Project (P107159, \$150m WB loan and \$200m loan from the Clean Technology Fund, approved in 2010), retains the institutional dimension of the DPL and GEF-funded projects but adds a large investment component to complement funds coming from National Infrastructure Fund.</p>
Monitoring indicators	<p>a) the harmonization of sector planning in the environment, transport and urban development as it relates to air quality measures;</p> <p>(b) the adoption and initiation of a Metropolitan Climate Change Action Plan in transport and associated measures;</p> <p>(c) the adoption of organizational and barrier removal measures to facilitate the implementation of sustainable climate friendly transport strategies;</p> <p>(d) the development and execution of a test protocol of global relevance capable of yielding emissions and cost data of use for better decision making about this type of air pollution abatement measures;</p> <p>(e) the incorporation of climate change issues in the design and operation of transport projects in the MCMA;</p> <p>(f) the increased use of high capacity vehicles, non-motorized modes of transport as well as the increased public awareness of the advantages of transport corridors and climate friendly technologies; and</p> <p>(g) an effective project management.</p>
Status and results:	<p>The loan closed on March 31, 2009. ICR ratings are <u>highly satisfactory</u> for outcomes and for the performance by the implementing agency. All other ratings are <u>satisfactory</u>, and the risk to global environmental outcome is rated <u>moderate</u>. The key achievements of the Project include:</p> <ol style="list-style-type: none"> (1) the formulation and adoption by the Mexico City Government of a first city-wide Climate Change Action Strategy in Latin America, with goals, programs, timetables, and budget requirements. The strategy reflects a commitment by the Mexico City Government to reduce greenhouse gas (GHG), in synergy with local policies for reduction of local criteria pollutants, within the context of the UNFCCC and the Kyoto protocol and as a result of the harmonization of sector policies and climate concerns. (2) Definition and adoption of a reformed regulatory framework, institutions and policies for sustainable, climate-friendly public transport operations in the city, with a bus rapid transit program as its core. The ICR notes (in the lessons section) that the metropolitan dimension of this outcome has not been fully achieved, since political differences between the Federal District and the State of Mexico were not resolved. (3) Following the preceding reforms, the creation of METROBUS, a decentralized (independent) public entity under the Secretary of Transport. Its function is to plan and manage the transport corridor program, also including monitoring and replication. 2 bus rapid transit (BRT) corridors, amounting to 50km with 81 stations, were implemented, and remain in operation, carrying about 473,000 passengers per day. About 15% of these are "choice" passengers, having switched from cars. 102 articulated buses, using Euro IV engines, replaced 350 small buses that had operated in these corridors. Services are provided by two new, efficient transport operators, CISA and RTP, created by former minibus operators, and working under a well-defined regulatory and management structure. METROBUS supervises fare collection and prepayment systems. A private trust fund was established for the administration, distribution and investments of revenues. (4) Adoption of a plan to implement further BRT lines in the Mexico City, amounting to a system of 200km. (5) Successful pilot tests to compare alternative bus technologies (drives and fuels) in technical, economic and emission terms, under conditions prevalent in the Mexico City region. Results were published and have

	<p>been incorporated into fleet purchase processes.</p> <p>Lessons:</p> <ol style="list-style-type: none"> 1. Before implementing BRTs, it is essential to have an integral (comprehensive), long-term transport plan for the urban area 2. A BRT project must be preceded by an enabling regulatory, institutional and technical framework. 3. Good results of this Project notwithstanding, mainstreaming of the climate change agenda into other relevant sectors is of highest priority
Team	Walter Vergara (lending, SPN, ICR)
Profile date and author:	August 17, 2010; Slobodan Mitric

Links to key documents of the Project Introduction of Climate Friendly Measures in Transport:

Background Sector Work: Improving Air Quality in Metropolitan Mexico City – an Economic Valuation (Policy Research Working Paper 2785, 2002):

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2002/03/08/000094946_02022604025131/Rendered/PDF/multiopage.pdf

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2002/10/25/000094946_02101004010261/Rendered/PDF/multiopage.pdf

Grant Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2004/12/15/B31E94A98E6527A085256F0300142890/1_o/Rendered/PDF/766oGEFoGranto1gotiatedoCLEANodraft.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2009/10/21/000333037_20091021004026/Rendered/PDF/ICR12060Po591610disclosed0101191091.pdf

COMMENTS

The ICR states that the total length of BRT lines managed by Metrobus is 50 km. The capital cost is cited as \$3.5m per km. It is not stated where these funds came from.

LIMA URBAN TRANSPORT PROJECT (Po35740 and Po74021)	
Country and region:	Peru, LAC
Borrower:	Government of Peru, passed to Municipality of Lima
Implementing agency and arrangements:	<u>For the WB funded project:</u> Instituto Metropolitano Protransporte de Lima <u>For the GEF grant:</u> Fondo Nacional del Ambiente (FONAM)
Concept review date:	February 20, 2003
Board approval date:	December 9, 2003
Effectiveness date:	December 15, 2004
Closing date:	The WB loan: June 30, 2009 (original); April 30, 2011 (second revision) The GEF grant: June 30, 2010 (actual)
Instrument category:	SIL
Project structure by sector:	General transport sector, 81%; sub-national government administration, 15%; other social services, 4%
Total cost at approval (US\$):	142.3m (in addition, it is expected that the private sector will invest about US\$80-100m for new articulated buses, terminals, workshops and depots)
Financing plan (US\$):	Borrower: 44.4m; WB: 45m loan; IAD: 45m loan; GEF: 7.9m grant (restructured in 2009). The Bank-funded project and the GEF grant are fully blended.
Final project cost in US\$:	262m, plus 206m from the private sector (for buses, fare collection, and the control center)
Amount disbursed in US\$:	43.7m (August 9, 2010) from the WB loan + 8.7m from the GEF grant
Diagnostic highlights	<p>The metro area of Lima-Callao has about 8m people living at medium density (about 110 people per ha). More than half of the population is poor, located at urban fringes. The lack of access to employment is one of major concerns. Motorization advanced throughout 1990s, reaching 1m vehicles in 2002 (roughly 200% increase over the decade, with another 37% in 2000s) Cars carry about 17% of motorized trips and public transport carries 83%. One third of all daily trips is done on foot. Public transport was deregulated in early 1990s, and is provided by free-wheeling private operators using overage buses of different size, with minivans ("combis") being in the majority. It is variously estimated that there are 30,000 and 60,000 such vehicles. There are also about 190,000 formal and informal taxis and 45,000 moto-taxis. For passengers, service frequency and connectivity are, but travel speeds, reliability and security are low, and social costs are high. The oversupply of public transport vehicles, most of them overage, means that Lima's streets are very congested and polluted, and accident rates are high. Air pollution, made even more difficult by topographic and meteorological conditions, is a threat to health and a large source of GHG emissions.</p> <p>The sector is managed by a plethora of institutions, led by the Municipal Directorate for Urban Transport (GTU) of Lima, with overlapping areas of jurisdiction and poor coordination, notably in the matter of issuing service licenses to bus operators. Legal and regulatory frameworks are incomplete, and enforcement is poor. There is no agreed urban transport strategy. The impact of weak institutions is made worse by low professional capacity of transport operators.</p>
Development objectives:	The main objective is to assist the Borrower in enhancing the economic productivity and the quality of life in the Borrower's municipal territory by improving mobility and accessibility for its population, especially in the peri-urban poor neighborhoods,

	<p>through the establishment of an efficient, reliable, cleaner and safer mass transit system.</p> <p>Specific objectives are:</p> <ul style="list-style-type: none"> (i) implement the new, bus-based mass rapid transit system as a public-private partnership; (ii) improve access within low income areas through facilitating the use of low cost transport alternatives, such as bicycles and walking; (iii) strengthen the local institutional capacity to regulate and manage the metropolitan transport system on a sustainable basis; and (iv) reduce the negative environmental impact of motorized transport in Lima. <p>The objectives of the GEF grant are:</p> <ul style="list-style-type: none"> (i) rationalization of public transport capacity by providing financial incentives (Credit Guarantee Fund) to retire old buses; (ii) rehabilitation and expansion of the existing bikeway network in Lima and Callao and promotion of bike use; (iii) delivery of an institutional strengthening program on sustainable transport, targeting municipalities and institutions dealing with environmental issues and/or transport planning; and (iv) assessment and monitoring the GEF project global consequences.
Investment components:	<p>Part A: Mobility and Environmental Improvements (US\$99.9m)</p> <ol style="list-style-type: none"> 1. Construction of about 29 km of segregated busways in a corridor through the coastal Barranco district, connecting Miraflores and Chorillos districts. 2. construction of about 35 bus stops, four bus terminals (2 at end points and 2 intermediate), and two bus depots and workshops; 3. construction of a control center for busway operations; 4. traffic safety and personal security measures along the busways, its feeder roads and its adjacent roads; 5. re-pavement of mixed-traffic lanes and pedestrian facilities adjacent to new busways and improvement of about 50 km of feeder roads and about 30 km of pedestrian and cycling facilities to two bus terminals; 6. implementation of traffic signals and other traffic engineering improvements along and near the busways; 7. improvement of pedestrian and vehicular circulation along the busways and enhancement of public space; 8. relocation of a flower market and assistance to informal street vendors affected by the busway improvements; 9. carrying out of environmental mitigation measures; 10. implementation and initial operation of an improved air quality monitoring system; 11. development and initial implementation of a road safety strategy; and 12. technical assistance for improving vehicle scrapping methods. <p>Part B - Social Mitigation and Community Participation (US\$5.8m)</p> <ol style="list-style-type: none"> 1. Carrying out of community consultations, including with urban transit users and operators, to enhance awareness and ownership of the new transit system, including road safety education; 2. mitigation of negative impacts of the Project on current bus operators; and 3. provision of technical support to operators within the affected routes to strengthen their managerial and professional capacities. <p>Part C - Institutional Strengthening (US\$ 3.7m)</p> <ol style="list-style-type: none"> 1. Development and implementation of a municipal public transport policy, including its regulatory and policy-setting framework, as well as its administration, operation, monitoring and control; 2. provision of technical assistance and equipment to PROTRANSPORTE and training for PROTRANSPORTE personnel;

	<p>3. provision of technical assistance and equipment to DMTU and training for DMTU personnel and police officers in the area of public transport regulations; and</p> <p>4. monitoring and evaluation of the Project.</p> <p>Part D - Studies and Construction Supervision (US\$ 8.6m)</p> <p>1. Supervision of civil works carried out under Part A of the Project;</p> <p>2. carrying out of economic feasibility, environmental and related studies as well as the preparation of engineering designs to expand further the busway network; and</p> <p>3. carrying out of social impact assessments of the Project</p> <p>Part E - Program Administration (US\$ 6.5m): 100% financed by Municipality of Lima</p> <p>Part F - Grade separation of Plaza Grau (US\$ 10m), 100% financed by Municipality of Lima</p> <p>Part G - Reduction on Public Transport Fleet (US\$ 1.7m): GEF financed; includes Credit Guarantee Fund to benefit private bus operators in fleet replacement and programs to mitigate social impacts of job losses due to introducing the busway</p> <p>Part H - Rehabilitation of Lima-Callao Bikeway Network (US\$ 4.2m): GEF financed; includes physical improvements, promotion campaigns and designing a credit program for bike-related businesses (Plan Bici)</p> <p>Part I – Institution Strengthening Program on Sustainable transport (US\$ 1.1m): GEF financed</p> <p>Part J – Monitoring and Evaluation, Replication Strategy and Administrative Costs (US\$ 0.95m): GEF financed; includes user surveys for public transport and bikeway users, street traffic and public transport passenger counts, and accident data collection; dissemination of experience to other cities.</p>
Policy agenda:	<ul style="list-style-type: none"> - Introduction of public-private partnership wherein the public sector will provide the busway infrastructure and the private sector will operate the system, based on concessions. - Bus replacement: future busway concessionaires will be asked to buy and scrap a predefined number of old buses before being formally awarded the concession. The proposed GEF grant will provide financial incentives to bus concessionaires to go beyond the minimum number of buses to be scrapped as required in the bidding documents.
Institutional agenda:	<ul style="list-style-type: none"> - Strengthening of PROTRANSPORTE LIMA in its role as coordinator of all urban transport studies and projects, and links with other relevant agencies; - Resuscitation of PENTNM, agency focusing on non-motorized transport; - Development of a comprehensive, medium-term urban transport strategy meant to form the backbone for the social and economic development of Metropolitan Lima
Additional project features	<ul style="list-style-type: none"> - Once fully operational, the system is expected to carry 600,000 passengers a day. - All buses (308 articulated and 319 feeders) have natural gas engines, a first for a BRT project in Latin America. - 75% of buses were assembled in a local bus bodywork factory, generating 1,300 direct jobs and 10,000 indirect ones.
Monitoring indicators	<p>Outcome/impact indicators:</p> <ul style="list-style-type: none"> - % of low-income population benefited by the project, especially the low-income population living in pen-urban areas (based on surveys). - increased level of urban transport users satisfaction along the corridors (based on traffic and transport counts and surveys). - consolidated Lima urban transport sector by improving planning, supervision & control and management capacity of the participating institutions. - reduction of CO₂ emissions from the transport sector (relative to the GEF

	<p>objective of GHG reduction).</p> <p>Outcome indicators:</p> <ul style="list-style-type: none"> - travel times on bus corridors - vehicle operating costs on bus corridors - bicycle use - number of fatal accidents in influence area - establishment of integrated feeder routes and fares - reduction on CO₂ emissions in project area - inclusion of vehicle emission criteria in vehicle inspection system - number of public transport vehicles operating in the project area and at metro Lima level (target: at least 250 aged vehicles retired by the 4th year of the project) - capacity of units responsible for transport system management (supervision, fare collection, payments) and traffic law enforcement on newly operating corridors
Status and results:	<p>The GEF grant closed (fully disbursed) and the ICR is pending. The WB loan is still active, following the second extension of 6 months (1.5 years cumulatively), but is almost fully disbursed as of August 2010. The bus rapid transit infrastructure (27km of trunk lines) was constructed, with test operations on various segments taking place throughout 2010. The system should be fully operational by the end of 2010. Old buses are being taken out of service gradually, so as to maintain the normal frequency of service.</p> <p>In 2009, there was a request by a group of concerned citizens from the district of Barranco for a review by the Inspection Panel. The request claimed that the Bank failed to follow its operational policies relative to environmental impacts and citizen participation in both design and implementation of the Project, resulting in negative and permanent traffic impacts in addition to changing the character of the neighborhoods in the district. Following a response by the WB Management, the Inspection Panel recommended that an investigation be carried out. This investigation was ongoing at the date of writing this profile (September 2010). The complaint and the Bank response can be found at www.worldbank.org/inspectionpanel.</p>
Team	WB loan: Paulus Guitink, Pierre Graftieaux (lending); Arturo Ardila, Gerhard Menckhoff, Elisabeth Goller (SPN);
Profile date and author:	September 22, 2010; Slobodan Mitric, with comments by Arturo Ardila

Links to key documents of the Lima Urban Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2003/11/19/000090341_20031119100937/Rendered/PDF/272530PE.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/LCR/2004/12/22/1DEDBB5D3851E84485256F72007C57E3/1_o/Rendered/PDF/LoanoAgreement1version10conformed1.pdf

Grant Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/LCR/2004/08/06/850306CF5A7A715885256EE8006E750D/1_o/Rendered/PDF/GEFoTrustoFund1version101conformed1.pdf

Project Paper:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2009/04/10/000334955_20090410035056/Rendered/PDF/480780PJPRoPE0101OfficialoUseoOnly1.pdf

SANTIAGO - SUSTAINABLE TRANSPORT AND AIR QUALITY PROJECT (Po73985)	
Country and region:	Chile, LAC
Borrower:	Republic of Chile
Implementing agency and arrangements:	Executive Commission for Transport in Santiago (Coordinacion General de Transporte Santiago, CGTS). CGTS was renamed (and is referred to in other documents) as Executive Secretariat for Implementation of Transantiago (Transantiago ES)
Concept review date:	December 19, 2002
Board approval date:	November 25, 2003
Effectiveness date:	June 18, 2004
Closing date:	June 30, 2008 (original); September 9, 2009 (actual)
Instrument category:	GEP
Project structure by sector:	General transport sector, 80%; central government administration, 8%; sub-national govt administration, 7%; other social services, 5%
Project total cost in US\$:	14m
Financing plan (US\$):	7m Government of Chile; 7m grant from the Global Environment Facility
Final project cost in US\$:	16.9m
Amount disbursed in US\$:	6.7m
Diagnostic highlights	<p>Santiago grew by 28% between 1991 and 2001, with decreasing densities and increasing spatial extent. With 5.3m people, it holds close to 40% of the country's population. In 1990s Chile has managed a period of sustained economic growth, to which Santiago contributed about 47%. This was accompanied by sharp income inequalities, reflected in the existence and growth of large low-income settlements on urban fringes.</p> <p>Metropolitan Santiago is served by an extensive road system, a 40-km, public-owned metro, and 7,700 privately owned and operated buses. The motorization rate in 2001 was high at 560 cars per 1,000 population, up from 320 in 1977. Trips by car increased 223% between 1991 and 2001. Public transport is in decline, carrying 52% of motorized trips, or less (down from 83% in 1977 and 69% in 1991). The public transport system reflects income polarization. The metro serves 0.75m passengers a day, provides a high quality of service, and covers its operating costs from fare revenue, one of very few such metros in the world. The majority of public transport trips, 4.5m per day, are by street-based buses serving a dense network of the "many-to-many" type. Only about 8% of trips require transfers. Most bus services are franchises awarded on the basis of competitive bids to private entities ("empresas administrativas"), which then pass the actual service functions to smaller operators, who in turn may sub-contract to drivers. The rest of services are essentially free-entry, with considerable route overlap. The situation with taxis is similar. Bus fares are flat, capped at the time of bidding, and operators receive no subsidies. Most bids are based on the maximum allowable fare. Weak entry controls and the need to maximize fare revenue produced an oversupply of services, an aged fleet, low quality of service, poor safety, and excessively high pollution and noise. One death every three days involves public transport vehicles. Concentrations of fine particulates are twice European norms. Buses are responsible for 50% of all transport-generated emissions. In spite of competition, fares did not decline and pose affordability problems to low-income travelers, especially those who need to transfer. A combination of increasing car travel and</p>

the majority of public transport vehicles operating on the street system has resulted in pervasive traffic congestion on all arterial roads, with attendant safety and environmental impacts. A massive investment in urban (toll) expressways has improved the fate of longer-distance travelers, but has further loaded the street system of the central area. A cumulative result is a poor traffic environment for car users and a constrained access of low-income communities to jobs and other opportunities, especially for passengers not having simple radial itineraries.

Behind policies and investment decisions that have shaped the transport situation in Santiago lies a fragmented institutional setting. Santiago has no elected metropolitan government to unify its 34 municipalities, so ministries de facto make local decisions: Ministry of Housing and Urban Development is responsible for urban streets and land use planning; Ministry of Public Works, Transport and Communications is responsible for roads of regional and national importance, and for transport services regulation; Ministry of Planning (through the Inter-Ministerial Transport Planning Agency, SECTRA) for strategic transport planning; and National Environment Commission for the management of urban air quality.

In late 1990s, the Government of Chile formulated a nation-wide program of urban transport reforms, with broad objectives of improving the quality of life in cities, including its environmental dimension, and reducing inequalities that increased during the preceding period of rapid economic growth. In Santiago, where the aim was to help the city become a showcase of urban efficiency, attraction and equity, the government commissioned SECTRA to develop an urban transport reform program for 2000-2010. The public transport part of that program, named **Transantiago**, aimed to lift the quality of service for both car and public transport users, with major improvements in air quality, and to improve the institutional setup and processes. The main aspects of the program are as follows:

1. Allocating and managing road space to give permanent or temporary priority to public transport vehicles;
2. Public transport regulatory reform to introduce gross-cost contracting (aiming for 15 relatively large contracts each requiring between 200 and 500 vehicles);
3. Providing incentives to operators to bring in high-standard buses (low-floor; low-emission,...);
4. Reconfiguring the bus route network into a two-tier system, trunk lines, operating as far as possible on segregated busways, and street-based collection/distribution lines;
5. Introducing a unified fare system, including metro as well as bus services, with fares set to achieve financial equilibrium for the system as a whole without increasing the current average fare level;
6. Separating fare collection as a separate competitively awarded concession;
7. Commissioning a public transport management and information center to control the bus flow;
8. Establishing coordination mechanisms for transport and infrastructure planning at the metropolitan level;
9. Providing training and other transition assistance for bus operators displaced by regulatory reforms;
10. Coordinating land use and urban transport policies;
11. Improving conditions for cyclists and pedestrians;
12. Rationalizing freight-related traffic and improve its environmental performance; and

Promoting a culture of rational private car use so that trip makers perceive the full costs of car travel (possibly through congestion charges).

These will be buttressed by a comprehensive, longer-term package of investments in transport infrastructure, featuring: (i) doubling of the current length of the subway system, compared to its year 2000 extent (public investment of US\$1,600m); (ii) construction of about 7 limited-access, urban toll roads as a public-private partnership (US\$1,800m, mostly private investment); (iii) development over

	<p>a period of 15 years of a system of approximately 300 km of segregated busways, interchange stations, terminals, and underpasses (US\$100m public investment, mainly for land expropriation, the rest private investment within a concession framework). The overall strategy was endorsed by the Committee of Ministers on Urban Transport Planning for Santiago, and some elements were formally adopted and budgeted for by the Government.</p>
Development objectives:	<p>(i) help reduce greenhouse gases (GHG) from ground transport in Santiago through a promotion of a long-term modal shift to more efficient and less polluting forms of transport, and adoption of sustainable low-GHG transport measures.</p> <p>(ii) help improve Santiago's air quality, through reducing emissions of air pollutants like SO_x, CO, PM, and NO_x.</p> <p>In connection with objectives and performance indicators for this Project, please see Notes 4-6 below.</p>
Investment components:	<ol style="list-style-type: none"> Pilot program for bicycle travel (US\$4.6m, US\$2.6m GEF financing): (a) construction of 43km of bikeways; (b) development and implementation of a promotional strategy for greater use of bicycles; (c) development and implementation of a safety strategy focused on bicycles; (d) monitoring and evaluation of the pilot program. Modernization of the bus system (US\$5.1m, US\$1.5m GEF financing): (a) Study to evaluate economic and environmental impact of clean bus technologies (hybrid-electric, CNG and diesel driven); (b) review of organizational and management measures contained in the regulatory reform for Santiago's public transport system; (c) formulation of a program to retrain and re-employ bus drivers; (d) formulation of a framework to monitor and evaluate the public transport regulatory reform; (e) carrying out of a strategic study for the removal of bus vehicles displaced from the streets of Santiago by new vehicles specified for running on trunk lines. Strategic environmental assessment (US\$0.4m, US\$0.3m GEF financing): Development of tools for an upstream integration of environmental management into policies, programs and projects dealing with transport and land use (urban development). Other technical assistance and studies (US\$3.4m, US\$2.2m GEF finance): (a) assessment of land use incentives and policies to reduce motorized travel and environmental impacts in three contexts: proposed housing projects on the Central Ring of Santiago, location of school facilities, and housing policies and regulations; (b) reduction of motorized traffic through traffic calming measures, and a study congestion pricing in the Santiago context; (c) a pilot study of travel optimization through pre-established travel plans for households and other entities; (d) study of options for the (Air) Decontamination Bonds Program. Project management (US\$0.3m)
Key policy and institutional reforms supported by this operation	<ol style="list-style-type: none"> Supporting and accelerating the implementation of Transantiago and other elements of the 2000-2010 Urban Transport Plan. Reducing legal, economic and technical barriers to the introduction of congestion pricing in Santiago, now subject to excessive constraints introduced in a 1996-1997 law. Introducing explicit attention to environmental matters into the urban transport and land use planning and management process.
Performance indicators:	<p>Outcome indicators:</p> <ol style="list-style-type: none"> Number of bike trips in the project area.

	<ol style="list-style-type: none"> 2. Number of bicycle accidents per 1,000 bicycle trips in the project area. 3. Institutional coordination of urban transport and land use policies, incorporating environmental considerations. <p>(please see Notes 4- 6 below)</p>
Complementary operations	<p>The first Bank-funded urban operation in Chile was Urban Streets and Transport Project (P006644), 1989-1995. While this project focused on street rehabilitation and maintenance throughout the country, it had components in Santiago and a few other cities introducing traffic management and exclusive lanes for public transport vehicles and bicycles.</p> <p>In 2005, the Bank approved two operations that make a functional whole with the GEF-funded project: Santiago Urban Transport Programmatic Development Policy Loan (DPL), and the concurrent Santiago Urban Transport Technical Assistance Project (TAL)</p> <p>DPL was designed to support policy and institutional reforms of the TranSantiago plan. It was set up as a sequence of two single-tranche loans of US\$100.2m in total, to be drawn on in the 2005-2007 period. The first of these (US\$30.2m) was approved in July 2005, together with the TAL, and closed in 2006. The Government of Chile did not seek approval of the second loan. After a very difficult start-up period, Transantiago reforms were implemented in full and have had an overall positive outcome.</p> <p>TAL (Po86689, US\$4.8m Loan 73160-CL) aimed to assist the design, implementation, monitoring and evaluation of reform contained in Transantiago; help strengthen local institutions vis-a-vis local safeguard policies related to infrastructure investments; facilitate compliance with the triggers for the second loan of the DPL, and ensure that the Bank safeguard policies are complied with.</p>
Results at completion:	<p>The Project closed with one year's delay, and about two years after the full complement of reforms comprising Transantiago were implemented. Like the other two operations built in support of Transantiago (DPL and TAL), the Project suffered from a very difficult start-up period for the reform program.</p> <p>The bikeway program was implemented and the use of bicycles rose in the project area by 23% in winter and 12% in the summer. The ICR states the implied modal shift to bicycles has led to an annual reduction of GHG emissions of 1,000 tons per year. Bicycle accidents, however, increased in the project area. Overall, the use of bicycle rose in Santiago as has the grassroots movement in support of this activity throughout Chile. In the Santiago metropolitan area, some 190km of bikeways were constructed, and the program calls for another 360km in the urban districts. The non-motorized transport agenda has been imbedded in agendas of the central and municipal governments.</p> <p>Most studies included in the Project were carried out, but without hoped-for implementation. Notably, the Project did not succeed in greater institutional coordination regarding urban transport and land use policies with regard to environmental considerations. The ICR asserts that the study of congestion pricing, which looked at the matter from different angles, brought this subject back on the table (political agenda). On the plus side also, a program has been implemented to monitor operational, social and environmental impacts of the new regulatory system for urban public transport services.</p> <p>The ICR rates the achievement of project development objectives as moderately satisfactory, with a moderate risk to global environmental outcome. The performance of the Bank is rated satisfactory throughout the project cycle, as is that of the Government. All these ratings, however, refer not to this particular Project alone, but to the entire Transantiago reform program.</p> <p>From lessons drawn in the ICR:</p> <ol style="list-style-type: none"> 1. There is a need to be realistic when defining global environment objectives (and development objectives), and to ensure good monitoring and evaluation. These should be linked to project activities.... 2. Broad stakeholder participation in projects is important, but

	<p>implementation suffers unless actual decision makers are included.</p> <p>3. When a development project supports a broad and complex reform, such as Transantiago, the Bank should be more selective in terms of subject matters to be involved with. These should be inter-related and mutually reinforcing.</p>
Team	Juan Lopez-Silva (lending); Elisabeth Goller (SPN, ICR); Carla Della Maggiora (ICR)
Profile date and author:	September 22, 2010; Slobodan Mitric

Links to key documents of the Santiago - Sustainable Transport and Air Quality Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2003/11/05/000090341_20031105131422/Rendered/PDF/26848.pdf

GEF Project Brief:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2003/06/05/000112742_20030605155933/Rendered/PDF/260510CLOTransportoResubmissionoGPB.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2010/04/22/000333037_20100422000219/Rendered/PDF/ICR13170P073981Codisclosed041201101.pdf

NOTES

1. The term Transantiago is used to denote activities contained in the 2000-2010 Urban Transport Plan for Santiago that address the reform of the public transport system (redefined service network, long-term service concessions based on competitive awards; fare unification).
2. The acronym TAL denotes Santiago Urban Transport Technical Assistance Project. This is in line with the usage in all documents related to this operation.
3. The text in the Investment components box is based on what is written in the Project Appraisal Document, but it was edited to increase its transparency.
4. There is an evident mis-alignment of the global environment and development objectives for this Project with its instruments. The former are drawn from the larger reform program (Transantiago). The profile attempts to correct for this, e.g. by introducing a box on policy and institutional reforms supported by the Project.
5. The box entitled "Key policy and institutional reforms supported by the Project" is based on the Project Appraisal Document, Chapter C.2
6. Performance indicators box contains only the three indicators for outcomes. Two are related to the bicycle investment component of the Project, and the third is related to a desired outcome following the completion of diverse environmental assessments. All other indicators cited in the PAD (Section A.2) are either output indicators (e.g. the completion of a given study) or indicators related to the entire Transantiago program. For these and the results at completion, please consult the profile for the Santiago Urban Transport Development Programmatic Policy Loan (Po84412).

BOGOTA URBAN SERVICES PROJECT (Po74726 and P112852)	
Country and region:	Colombia, LAC
Borrower:	Municipality of Bogota
Implementing agency and arrangements:	<p>Municipality of Bogota, through the Project Coordinating Unit, set up for the preceding Bank-financed project (see below) and located in the District Finance Secretariat (SHD). Specific implementation responsibilities are delegated to multiple executing agencies:</p> <p>(i) for the transport component: Transmilenio S.A., Bogota Urban Development Institute (IDU), District Secretariat for Traffic and Transport (STT), Traffic Safety Fund (FONDATT)</p> <p>(ii) for the low-income neighborhood upgrading component: IDU, Social Housing Entity (CVP) and Bogota District Environmental Department (DAMA).</p> <p>(iii) for the institutional development component: IDU, CVP, DAMA, SHD, and Bogota District Planning Department (DAPD).</p>
Concept review date:	February 20, 2002
Board approval date:	March 13, 2003
Effectiveness date:	August 5, 2003
Closing date:	June 30, 2008 (original closing date of the initial loan); July 31, 2010: actual closing date of the initial loan (IBRD 71620-COL); July 31, 2011: current closing date of the additional loan (IBRD 76090-CO)
Instrument category:	SIL
Project structure by sector:	General transport sector, 60%; water supply, 15%; sewerage, 10%; other social services, 5%; sub-national government administration, 10%
Project total cost in US\$:	272.7m
Financing plan (US\$):	Borrower: 172.7m; WB: 100m (loan 71620-CO)
Additional cost in US\$	62.6m
Additional finance (US\$):	30m additional WB loan, approved in 2008 (Loan 76090-CO) + 22.6m borrower + 10m loan from IADB
Final project cost in US\$:	
Amount disbursed in US\$:	100m (September 9, 2010) from Loan 71620-CO
Diagnostic highlights	<p>District of Bogota governs a metropolitan area comprising some 20 municipalities, with about 7m people. Its demographic and spatial expansion is in part generated by the steady migration from rural areas. Migrants flee ravages of the long civil war and seek better economic opportunities. Due to the area's topography, Bogota has been expanding along its north-south axis, with low-income and newly arrived populations located primarily in the south. Distant from employment opportunities, these settlements are informal, lack basic infrastructure and services, and suffer from high unemployment and under-employment, low security and high crime rates. Managing a rapidly growing urban area in the presence of huge economic disparities (half of the population is poor) has been quite a challenge. Since late 1980s, following the passage of laws transferring various responsibilities and sources of finance from the national to local governments, the District has been involved in a process of major institutional and policy reforms, complemented by investments, whose overall goals are to improve the quality of life for millions of its low-income residents while contributing to further economic growth. Major barriers to constructive change include the fragmentation of responsibilities for</p>

	<p>urban services and urban development, and an insufficient effort to utilize local sources of finance made possible by the Law of Urban Reform in 1989. Bogota has done much more than other cities in this regard, but still not enough to match the task imposed by its demographic and spatial expansion.</p> <p><u>In the realm of urban transport</u>, Bogota in mid-to-late 1990s possessed a road system oriented towards the car, even though around 77% of daily trips were made by public transport services. These were provided by lightly regulated, privately owned bus companies organized into loose associations for the purpose of getting municipal service authorizations specific to given routes. In essence, thousands of owner-operators are fighting for passengers within some route constraints. Buses come in various sizes and, given oversupply and low profit margins, are overage, highly polluting, and unsafe. This <i>lasses-faire</i> approach had reached its limits of tolerance in terms of service quality, safety, environmental degradation and road capacity, becoming also a bottleneck preventing the integration of distant urban fringe populations into the city's economy.</p> <p>After exploring several strategic directions, including an increase of reserved bus lanes and looking into the construction of a metro system, Bogota opted in late 1990s for a gradual but comprehensive approach. Its major feature has been the introduction of Transmilenio, a regulated, user-and environment friendly public/private partnership built around a skeleton of bus rapid transit lines and associated, street-based feeder/distributor networks. Transmilenio's infrastructure and associated control systems are public-owned, while service provision is contracted out to private operators. Fares are regulated and no operating subsidies are given. Complementing measures focused on the public transport modes are actions like assigning major street space to bicyclists and pedestrians, and applying restrictions to car use in peak hours.</p> <p><u>In the institutional dimension</u>, the District government has pursued a challenging and still elusive direction – a consolidation of institutions which deal with urban transport infrastructure and services, together with developing planning and policy instruments and engaging the population at large in the decision making process. Following the legislative reforms of 1987 and 1993, most transport sector functions in Colombia were transferred from the national to local governments. At the Bogota District level, the Traffic and Transport Secretariat (STT), is the main regulatory and policy-making entity. STT is also responsible for traffic management, public parking, supervision of public transport, vehicle inspections and the processing of drivers' licenses. There are three other municipal entities which share responsibility for managing the transport sector in Bogota: (i) the Urban Development Institute (IDU), which is in charge of the planning, execution and maintenance of infrastructure projects; (ii) the Public Works Secretariat (SOP), which used to be the main agency responsible for road maintenance; and (iii) Transmilenio S.A., a municipal entity managing the BRT system. In 1997, the District Government transferred almost all of the operations of SOP to IDU but the District Council did not approve the elimination of SOP. The current Administration is considering merging the operations of STT and IDU, and liquidating SOP by placing its residual functions within the administrative structure of this new Secretariat.</p>
Development objectives:	<p>The Project supports the implementation of a 2001-2004 Development Plan for Bogota, itself consistent with a 10year spatial plan. The project adopts a multi-sector approach aiming, with other complementary investments, to raise the standard of living in 14 of the city's poorest districts (planning units), which have about 1.2m people (almost a fifth of Bogota's population). The specific objectives are to:</p> <ul style="list-style-type: none"> (i) Improve quality of life for low-income families in terms of access, coverage, reliability in the provision of basic urban services like transport, water, and sanitation, and increasing environmental quality;

	<ul style="list-style-type: none"> (ii) Improve mobility in the city by providing better access to the public transport system, and improving road safety, traffic management and transport planning; (iii) Strengthen institutional and administrative framework of the Bogota District for an efficient and sustainable delivery of urban services.
Investment components:	<p>A. Urban transport improvements – second phase of the Transmilenio System (US\$180.9): (i) construction of 11km of busways in Avenida Suba from Calle 80 to Avenida Ciudad de Cali; (ii) upgrading and rehabilitation of 265km of feeder routes which connect neighborhoods to the Transmilenio system as part of an integrated system; (iii) construction of bicycle paths and sidewalks as part of non-motorized transport facilities; and (iv) measures for improving public transport, road safety and traffic administration in the city of Bogota.</p> <p>B. Urban upgrading (US\$76.3m): (i) planning and legalization of <i>barrios</i>; (ii) construction of storm water drainage systems, water and sewerage systems (iii) upgrading and rehabilitation of access roads; (iv) resettlement of population located in high risk areas, including flood plains; (v) construction and rehabilitation of public space and community services; (vi) improvement of environmental conditions; and (vii) technical assistance for home improvement and land titling activities. The social activities associated with the physical works include: (i) promoting citizen culture; (ii) strengthening social organizations; and (iii) assisting vulnerable population.</p> <p>C. Institutional strengthening (US\$ 14.5): consulting services and equipment for sector institutions and the Project Coordinating Unit.</p> <p>In 2008, an additional loan of US\$30m was approved to increase the scale of components A and C, under the same development objectives. The additions involve:</p> <ul style="list-style-type: none"> A. Studies and other technical assistance to further develop the design of an integrated mass transit system for Bogota, including all preparatory studies for the city's first metro line. B. (i) technical assistance to IDU for the management, upgrading and further development of Bogota's road network; (ii) development of instruments and other technical assistance to SHD regarding fiscal management, urban planning, land tax valuation, and cadastral update and conservation
Policy and institutional agenda:	<p>The project will support the following key policy and institutional reforms (PAD, Chapter C.2):</p> <ul style="list-style-type: none"> (i) assisting the District to find sustainable low-cost alternatives for upgrading low-income settlements; (ii) reorienting interventions in upgrading work to reflect the comprehensive integrated nature of such activities, requiring greater inter-institutional cooperation and coordination; (iii) increasing private-sector participation in maintenance and street-paving works; (iv) strengthening the capacity of IDU to provide improved access of low-income households to public transport facilities and encouraging greater use of public transport and non-motorized transport alternatives over the use of private cars; (v) assisting the District to develop appropriate sector and regional development policies; and (vi) assisting DAMA in integrating the environmental dimension into urban development planning.
Specific institutional initiatives:	<ul style="list-style-type: none"> (i) development of an information system for road infrastructure

	<ul style="list-style-type: none"> (ii) administration (IDU); (iii) creation of mechanisms to improve the coordination among District institutions, community organizations, NGOs and the private sector for the implementation of neighborhood improvement programs (CVP); (iv) improving air quality management and enforcement and recovering of land-degraded UPZs (DAMA); (v) improving fiscal management and increasing District revenue (SHD).
Additional project features	<p>The District of Bogota's strategy that this Project supports is reflected in the following vision statement for the year 2006:</p> <ul style="list-style-type: none"> a) Increase Transmilenio coverage by building an additional 40 km of busways, and support infrastructure (300 km of additional feeder routes and 80 new stations), maintaining the private participation model for its operation, and involving the public in its planning and control. It is expected that the system will move about 1,800,000 passengers on a typical work day (24% of all public transport trips). b) Increase the use of non-motorized transport, with the widening of sidewalks, bike-paths and malls. It is expected that 19% of total trips taken will be done on foot, and 6% by bicycle. c) Reduce private car use by 10%, applying an array of administrative and economic incentives, disincentives and restrictions. d) Reduce the existing bus fleet by half (from about 21,000 to about 16,500 registered vehicles) through a combination of administrative, economic and financial measures. e) Extend the city mobility strategy to the metropolitan region. <p>For the long-term horizon, the vision for the year 2016 includes a further increase in the coverage of Transmilenio, with the construction of more exclusive busways (388 km) and support infrastructure (1,000 km of additional feeder routes), maintaining the same operational framework. It is expected that by that time, about five million trips would be made on a typical workday on the Transmilenio system.</p>
Complementary operations	<p>The immediate predecessor of this operation is Bogota Urban Transport Project (P006872, Loan 4021-CO), closed in 2001. The BUTP initially focused on improving the existing exclusive busway on Avenida Caracas and constructing a new busway on Calle 80, but in the course of implementation it evolved into a catalyst for and an integral part of what became Transmilenio BRT system. In addition to a large technical assistance component, for transport and other urban services, the BUTP also included improvements on access roads in low-income areas and road maintenance on a 400-km network used by public transport vehicles.</p> <p>A national-scope urban transport project, seeking to replicate the Bogota approach in other Colombian cities was approved in 2004 (Integrated Mass Transit Systems, P082466, Loan 7230-CO for US\$250m). The project finances the time slice of capital expenditures within the National Urban Transport Program, as well as national and local institution building efforts. The success of this approach is reflected in two supplemental loans, US\$207m approved in 2007 and US\$300m approved in 2009, to scale up the investment program under this project, inclusive of land purchases and resettlement costs.</p>
Monitoring indicators	<p>The key indicators for the transport component (cited in the PAD, Chapter A.2):</p> <ul style="list-style-type: none"> (i) accessibility to 14 UPZs; (ii) accessibility of feeder routes to the Transmilenio system; (iii) share of trips made via public transport; (iv) average travel times and vehicle operating cost; (v) accident rate; (vi) length and use of bike paths. <p>Annex 1 (Project Design Summary) distinguishes "indicators" from "milestones".</p>

	<p>For the transport component (objective: improved mobility), the sole indicator is the number of traffic intersections controlled by unified network. The base is 875, and the target is 975.</p> <p>There are 5 milestones:</p> <ol style="list-style-type: none"> 1. number of passengers transported by Transmilenio,; base 750,000, target 1,660,000. 2. Daily passengers on new feeder roads: base 0, target 340,000 3. Length of the bike network: base 264.5km, target 300km. 4. Use of bike paths (% of trips): base value 3%, target 5%. 5. Oversupply of legal public transport vehicles: base value 8,500, target 4,500 <p>A revised set of indicators was adopted during a mid-term review, as follows:</p> <p>Component A: Improved Mobility</p> <ul style="list-style-type: none"> • Construction of physical works in <i>Troncal Avenida Suba</i> (% of completion) • Construction of 338 km Transmilenio feeder routes (% of completion) • Construction of 36 km of bikeways (% of completion) • Completion of an Integrated Mass Transport System and Mobility Master Plan (study) <p>Component B: Urban Upgrading</p> <ul style="list-style-type: none"> • Number of legalized <i>barrios</i> • Number of new water connections • Number of new sewage connections • Length of local roads constructed (target 95km) • Number of families resettled in high risk zones • Number of public works with community participation • Number of environmental mitigation plans • Number of families assisted in urban upgrading zones • Number of land titles finalized (target 440) <p>Component C: Institutional Strengthening</p> <ul style="list-style-type: none"> • Implementation of an information system for road infrastructure administration • Implementation of a monitoring System for the Neighbourhood Improvement Program • Implementation of the city's Clean Air Strategy • Formulation of the strategic directives for the District's resettlement policy • Completion of studies on urban competitiveness • Completion of studies to improve fiscal management and tax collection
Results at completion:	
Team	Thakoor Persaud (lending); Mauricio Cuellar (lending, SPN)
Profile date and author:	September 14, 2010; Slobodan Mitric

Links to key documents of the Bogota Urban Services Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2003/03/11/000094946_03022604021461/Rendered/PDF/multiopage.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2004/12/14/B93BE0D3C026C1D185256F03001883E4/1_o/Rendered/PDF/BOGOTAOURBANoSERVICESoPROJECT1Conformed.pdf

Project Paper:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2008/10/03/000334955_20081003033221/Rendered/PDF/456140PJPRoP111EoONLY1oR20081021411.pdf

Additional Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2009/10/01/445C03267051293B8525757E004F490B/2_o/Rendered/PDF/LoanoAgreement076091COoCONFORMEDoCOPYo.pdf

Inspection Panel Report and Recommendation:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2008/01/15/000020953_20080115091137/Rendered/PDF/42083.pdf

COMMENTS

The project was the subject of an Inspection Panel review, following a complaint regarding the compensation for involuntary resettlement and other economic losses due to the construction of the busway infrastructure along Suba Avenue. The Panel concluded that it cannot investigate the matter since plaintiffs have not fully met the procedural requirement that the subject be brought to the attention of the Bank management.

INTEGRATED MASS TRANSIT SYSTEMS PROJECT (Po82466, P101356 and P114325)	
Country and region:	Colombia, LAC
Borrower:	Republic of Colombia
Implementing agency and arrangements:	Ministry of Transport is the executing agency. Implementation will be overseen by a Technical Committee, with participation by Ministry of Finance and National Planning Department. The Committee will administer the entry of cities into the program and monitor the performance and outcomes. Data collection will be overseen by the National Planning Department, a task later to be transferred to the Ministry of Transport In cities, BRT agencies will be set up and serve as local executing agencies, or this will be done by local Urban Development Institutes.
Concept review date:	September 4, 2003
Board approval date:	June 10, 2004; June 12, 2007 (additional loan approval); August 4, 2009 (second additional loan approval)
Effectiveness date:	January 20, 2005 (original loan)
Closing date:	March 31, 2012
Instrument category:	SIL
Project structure by sector:	General transport sector, 90%; central gov't administration, 5%; sub-national gov't administration, 5%
Project scope:	National; 6 cities: Baranquilla, Bogota, Bucaramanga, Cartagena, Medellin, Pereira and Soacha)
Project total cost in US\$:	464m (at appraisal)
Financing plan (US\$):	At approval (2004): 214m Borrower + 250m Bank (Ln 7230-CO) Added finance (2007): 92.9m Borrower + 207m Bank (Ln 74570-CO) Second added finance (2009): 129m Borrower + 300m Bank (Ln 77390-CO)
Final project cost in US\$:	
Amount disbursed in US\$:	Loans 7230 and 74570 fully disbursed; Loan 77390-CO disbursed \$211m by September 3, 2010
Diagnostic highlights	Colombia is highly urbanized (75%), in part because of the persisting civil conflict in the countryside. Bogota has about 7m people, Medellin close to 3m, Cali and Baranquilla each have close to 2m. Other cities are under 1m. Migration has moved poverty from the countryside to cities, and added to the challenges of absorbing the overall demographic and spatial growth therein. Some two-thirds of people living under poverty line are urban residents, most often located in extensive fringe developments (barrios). These tend to be informal, have insufficient access to basic infrastructure, services and jobs, and suffer from high levels of violence and crime. Urban transport is among the most critical factors in integrating barrio populations into urban economies. Roughly two-thirds of the urban population travel by public transport, including both low-income and middle-income strata, but the prevailing approach to transport planning for years has been to favor road infrastructure development that is car-friendly. Public transport services are provided by lightly regulated, street-based, privately owned and run buses (<i>collectivos</i>). The mode of operation is competition in the market, in the presence of oversupply. The results include the use of overage vehicles, and predatory manner of operations in a desperate fight to get passengers (Guerra del centavo). Service quality and safety are poor, air pollution and noise are excessive, and fares pose affordability

	<p>problems to poor families.</p> <p>The response to these problems was slowed down by the fragmentation of local institutions dealing with urban transport problems, and by weaknesses in the local government funding. Several approaches to improve on the collective-based system were tried, including an aborted attempt to “import” an international operator to run standard-size buses on exclusive busway in Bogota, and a disappointing experience with the construction of a metro line in Medellin. Finally in late 1990s, the District (Government) of Bogota initiated an experiment in public/private partnership wherein efficient, low-polluting and privately owned and operated buses would provide good-quality, line-haul services on exclusive, public-owned busways, complemented by regulated feeder/distributor services. All services are awarded competitively, fares are regulated and no operating subsidies are provided. In addition, a street improvement program was undertaken, focused on bicycles and walking, and some care restraints were introduced. This approach, named TransMilenio, succeeded and has been under expansion ever since. It provides good-level, low-cost and low-pollution transport services, reaching hourly flows in excess of 30,000 passengers per direction at travel speed of 27 km/h. TransMilenio now carries about 750,000 passengers per day. As the size of TransMilenio increases, the size of the network still served by <i>collectives</i> is shrinking.</p> <p>Buoyed by this success, now emulated the world over, the Government of Bogota has re-engaged in urban transport matters by setting up, in 2002-2003, a National Urban Transport Program to assist cities improve their transport systems along the lines of what has been done in Bogota. This was possible due to the passage in 1996 of a law allowing the Government to co-finance mass transit infrastructure in cities. The program is now nested within the National Development Plan. Each participating city (or a group of municipalities comprising a metropolitan area) signs a subsidiary agreement with the Government, featuring an action program and financial flows. The Government commits to providing a grant to match the city's investment, up to 70% of the agreed program, paid on the basis of disbursements already made by cities. The financial contribution from a given city depends on specific project characteristics and on city's fiscal situation, with the main source of funds being revenues from the surtax on gasoline paid by motor vehicle users. Over the last 4 years, Bogota received US\$120m under this program. It is expected that over the next 12 years, total transfers will amount to US\$1,600m.</p>
Development objectives:	<p>The overall objective is to improve long-term sustainability, efficiency and quality of urban transport in participating cities by financing the time-slice of matching contributions made by the Government of Colombia (GOC) to 6 cities in the context of the National Urban Transport Program. Inter-American Development Bank and the Andean Finance Corporation are to finance projects in Cali and other cities.</p> <p>The specific objectives are to:</p> <ul style="list-style-type: none"> (i) implement high quality Bus Rapid Transit Systems (BRTs) in participating cities; (ii) improve accessibility to the poor through fare integration and; (iii) build greater institutional capacity <u>at the national level</u> to formulate urban transport policies and strategies (regulatory, operational, economic, environmental and social aspects), and <u>at the local level</u> for urban transport planning and traffic management.
Investment components:	<p>Component 1 - Capacity Building (US\$2.3 million): This component will provide technical assistance and policy advice to GOC and participating municipal governments.</p> <p>Component 2- BRT Development (US\$459.2 million, US\$247.7 million IBRD):</p> <p>1) Construction of about 57 kilometers of segregated transportation corridors in participating cities, including, among others: (a) construction of segregated busways; (b) repaving of mixed traffic lanes adjacent to new busways; (c)</p>

	<p>construction and installation of bus stations and terminals; and (d) paving of feeder roads, and</p> <p>2) Construction of about 20 kilometers of segregated corridors in the NQS Line of the Bogota Transmilenio, S.A., including, among other: (a) construction of segregated busways; and (b) repaving of mixed-traffic lanes adjacent to new busways.</p>
Policy agenda:	<ul style="list-style-type: none"> • introducing a regulated public transport system, based on the concept of competition for the market and public/private partnership, in opposition to the hitherto prevalent system based on lightly regulated <i>collectives</i> • formulation of a national (urban) transport sector policy • definition of city based strategies for transport and urban development • ensuring public participation in all stages of project development • ensuring fair compensation for involuntary resettlement and other economic losses
Institutional agenda:	In participating cities, setting up of an operational structure (urban public transport agency) able to regulate, program, monitor and administer BRT-based public transport services
Monitoring indicators:	<p><u>1. Improved mobility and quality of public transport services in strategic transit corridors:</u></p> <p>a) Reduction in generalized door-to-door travel cost (fare, time) to users;</p> <p>b) Percentage of people rating the system as being better than the previous system.</p> <p><u>2. Improved accessibility to low-income populations:</u></p> <p>a) Increased use by the poor (two poorest quintiles) of public transport services along the area of influence of the planned corridors, with respect to the baseline without the mass transit system, both in absolute (number of passenger) and relative terms (as percentage of total number of passengers).</p> <p><u>3. Enhanced institutional capacity for urban transport policy formulation and system development:</u></p> <p>a) At the local level, system occupation (average bus loading factors?) per square meter below a given threshold while maintaining no subsidies;</p> <p>b) At the national level, at least three BRT schemes operating successfully in participating cities and GOC systematically monitoring program performance and its impact, in line with the requirements of the National Economic and Social Council (CONPES) documents on <i>Política Nacional de Transporte Masivo</i>.</p>
Additional project features	Participating cities will have to meet eligibility criteria set up within the National Urban Transport Program
Complementary operations	This project follows Bogota Urban Transport Project (US\$65m approved in 1996, Po06872) and Bogota Urban Services Project (US\$100m approved in 2003, Po74726). The BUTP project made the initial investment in what became the TransMilenio BRT system, including both the busway infrastructure and improving the road network for the associated feeder/distributor services. The Project closed in 2001, and received highly satisfactory ratings. The BUSP built on the preceding project but took a multi-sector approach, adding an urban upgrading component. An additional loan of US\$30m was approved in 2007, under the same development objectives, to help develop an integrated urban transport strategy for Bogota and prepare a first metro project therein, and to finance a major technical assistance effort focused on land cadastre and valuation (in the context of reforming the local finance).
Lessons from past operations:	<p>(Source: Project appraisal Document, Section B.4)</p> <p><i>There is a role for the national governments in the implementation of urban transport reforms.</i> Reforms in the sector normally require large investments and complex technical decisions. Given that municipalities lack both financial and technical</p>

	<p>resources, GOC's participation becomes crucial in promoting reforms at the municipal level.</p> <p><i>Reliable funds are key to implement long-term reform.</i> Urban transport financing should be seen as an "integrated whole" (a citation from "Cities on the Move", World Bank, 2002), justifying the use of taxes on auto users to provide a reliable and necessary source of funds to implement public transport projects. In the case of Colombian cities, the gasoline surtax, mostly paid by cars users, is providing about 34 percent of total NUTP cost and is helping the municipalities to leverage funds from GOC.</p> <p><i>The regulatory framework is key in advancing sound reform.</i> Within the different planning stages for urban transport reforms, most of the attention goes to the technical aspects of the projects (engineering designs, technology, equipment, etc.), neglecting the regulatory design of the operation. Given the crucial role of the private sector in the operation of urban transport systems, the planning process should concentrate more on the definition of several policies and processes that regulate the public-private partnership. Efforts should focus on improving the regulatory framework to encourage efficient and competitive bus operations.</p> <p><i>Implementation strategy should have both high political involvement and strong technical support.</i> Of the several lessons that arise from the successful implementation of TransMilenio, two are particularly critical. The first is that the implementation of such an initiative requires visionary leadership, that is willing to take risks and remains closely involved throughout the process. The second is that there is the need to create high-performance implementing agencies with strong technical capacity to design, plan, control and regulate the bus rapid transit systems.</p> <p><i>Transport Projects could have significant urban impact.</i> Another lesson resulting from the TransMilenio experience is that the Project cannot be limited solely to the construction of BRTS. Instead, other complementary actions should be implemented to guarantee the completion of the urban transport strategy within a comprehensive framework (reorganizing routes, implementing traffic management measures, developing measures to reduce the existing fleet, developing sense of community, etc.). This demonstrates that the value added of the TransMilenio Project goes far beyond the transport operation along the main corridors.</p>
Results at completion:	
Team	Mauricio Cuellar (lending, SPN)
Profile date and author:	September 15, 2010; Slobodan Mitric

Links to key documents of Colombia - Integrated Mass Transit Systems Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2004/05/24/000012009_20040524125105/Rendered/PDF/28926.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2005/04/12/22882D3F85B05CD785256F47005524F/2_o/Rendered/PDF/L72311COoCONFORMED.pdf

Project Paper (for 2007 additional funds):

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2007/05/23/000020439_20070523104946/Rendered/PDF/39751.pdf

Loan Agreement for the 2007 additional funds:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2008/03/07/3D5B7668EAFB41AD852573CA006DC90E/2_o/Rendered/PDF/Backup00foL74571CO1CONFORMED.wbk.pdf

Project Paper (for 2009 additional funds):

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2009/07/20/000334955_20090720012029/Rendered/PDF/494000PADoP114101OfficialoUseoONLY1.pdf

Loan Agreement for the 2009 additional funds:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2009/10/09/9670E24F7B8B20BF8525764A0075E50B/1_o/Rendered/PDF/Loan077391CO1CONFORMEDoCOPY.pdf

BUENOS AIRES INFRASTRUCTURE SUSTAINABLE INVESTMENT DEVELOPMENT PROJECT - PHASE 1 (Po88032)	
Country and region:	Argentina, Latin America and the Caribbean
Borrower:	Province of Buenos Aires (PBA), with sovereign guarantee by the Republic of Argentina
Implementing agency and arrangements:	Ministry of Economy of the PBA (lead agency, location of Project Coordination Unit) and Ministry of Infrastructure, Housing and Public Services of the PBA
Concept review date:	December 2, 2003
Board approval date:	December 7, 2004
Effectiveness date:	June 17, 2005
Closing date:	July 31, 2009 (original); December 31, 2013 (revised)
Instrument category:	Adaptable Program Loan, Phase 1 of the Buenos Aires Infrastructure Sustainable Investment Development Program
Project structure by sector:	Water and sewerage, 35%; roads and highways, 43%; drainage, 14%; capacity building, 8%
Project total cost at appraisal (in US\$):	267m (Phase 1) and 200m (Phase 2)
Financing plan (US\$):	Phase 1: 67m B-A province + 200m World Bank (original loan) + 50m additional loan (2010) Phase 2: US\$91.5m B-A province + US\$270m World Bank
Final project cost in US\$:	
Amount disbursed in US\$:	Phase 1 original loan fully disbursed (\$200m);
Diagnostic highlights	<p>Since 1980s, Argentina has gradually decentralized the responsibility for various public services from the national to the provincial level, but without a corresponding enlargement of the taxing authority. This has led to a structural fiscal deficit, exacerbated by the long recession in the country in the 1990s and the severe economic crisis of early 2000s. Downstream consequences in the Province of Buenos Aires, which includes the capital city, include under-investment for the upkeep of key infrastructure sectors, such as roads, water, sewerage, and drainage to control floods to which the Province is prone. A contributing factor has been the failure of provincial institutions to follow prudent practices in budget allocation, investment decisions and design standards. Road infrastructure has become a bottleneck for economic growth, and a barrier to raising the standard of living and economic prospects of poor segments of the provincial society.</p>
Development objectives:	<p><u>From the Appraisal Document:</u></p> <p>The overall purpose of the Program is to improve the provision of infrastructure services in the Province within a framework of fiscal responsibility as a means of supporting the return to a sustainable path of economic growth, to alleviate poverty and increase social equity. To this end, the Province is prioritizing a set of interventions under the infrastructure Program for the period 2005-2010 specifically aimed to:</p> <ul style="list-style-type: none"> (i) Develop a multi-year public expenditure program, in line with the priorities of the Province, to implement the infrastructure program following sound fiscal policies to ensure convergence towards a long-term sustainable fiscal framework. (ii) Improve and maintain high priority segments of the paved road

	<p>network to support the reactivation of the provincial economy and strengthen regional competitiveness.</p> <p>(iii) Enhance water and sewerage services to low-income people living in highly vulnerable areas and to mitigate urban flooding</p> <p><u>From the Loan Agreement, Schedule 2:</u></p> <p>The objectives of the Project are: (a) to enhance the provision of water and sewerage services for the benefit of low-income people, in particular for those people living in highly vulnerable areas; (b) to improve high priority road segments of the Borrower's road network; (c) to mitigate urban flooding; and (d) to support the reactivation of the Borrower's economy and strengthen its regional competitiveness.</p>
Investment components:	<p>Part 1 - Provincial Roads (US\$136.2m of which \$101.2m from the Bank loan):</p> <ul style="list-style-type: none"> (a) Rehabilitation works (such as asphalt concrete overlaying) of selected paved roads on interurban primary road network and semi-urban primary road network within the Buenos Aires metropolitan area. (b) widening selected roads (within the existing right-of-way) on the primary urban and inter-urban paved network; and replacement of intersections by roundabouts in selected critical black spots on the primary paved road network. (c) rehabilitation works: removal and replacement of existing pavements of selected access roads to the Dock Sud port and resurfacing, asphalt concrete overlaying or reconstruction of the existing structure over a recycled base course of selected access roads of the secondary paved network. (a) routine maintenance program of the primary unpaved road network. <p>Part 2 - Water and Sewerage (US\$66.1m of which \$52.3m from the Bank loan):</p> <p>Construction of secondary water and sewerage networks, including in exceptional situations the construction of primary water and/or wastewater facilities.</p> <p>Part 3 - Drainage (US\$14.3m of which \$11.3m from the Bank loan):</p> <p>Storm sewers and other drainage investments in selected urban and peri-urban areas, to mitigate flooding caused by rainfalls of high intensity and relatively short duration.</p> <p>Part 4 - Institutional Strengthening (US\$14.8m of which \$11.7m from the Bank loan):</p> <ul style="list-style-type: none"> (a) Design and implementation of institutional strengthening programs for agencies involved in the Project's investment program, including a diagnosis and recommendations re each agency's organizational structures, staffing characteristics and medium and long term objectives; followed by the preparation and implementation of action plans (b) Design and implementation of a program to strengthen the capacity of agencies whose mandate is to regulate and control the provision of public services. (c) Design and implementation of a program to strengthen the policy design and planning capacity of provincial institutions, including a public investment system to be established within the Ministry of Economy compatible the national public investment system (d) Design and implementation of a program to strengthen the Directorate of Territorial Cadastre, including the installation & digitalization of a new model for cadastral management. (e) Design of an integrated geographical information system for the Province, and its installation in a unified data clearinghouse (f) Design and implementation of a provincial program for economic development, competitiveness and job generation (studies to develop strategic guidelines for productive development and sector specific studies for productive development; the development of territorial policy instruments and guidelines to stimulate growth and employment; identification of physical, social and knowledge infrastructure needs for

	<p>the design of future infrastructure investments; and other.</p> <p>(g) Technical assistance for project implementation.</p>
Policy agenda:	Use of performance based contracts in road maintenance
Institutional agenda:	Development of a multi-year public expenditure program with a convergence path to fiscal sustainability
Indicators:	<p>(h) A set of fiscal indicators for the Provincial Government to be followed during the entire 2-phase program; this was dropped at project restructuring in 2010, the Borrower and the Bank agreeing on an alternative approach to monitoring the fiscal performance of the Province (already used for Phase 2 since 2007).</p> <p>(i) Road roughness on program-improved roads (target: IRI below 3, changed to 3.3 at restructuring); and</p> <p>(j) Reduced waterborne diseases; target: 20% reduction. This indicator was dropped at restructuring, citing "myriad external factors" that contribute to waterborne diseases. It was replaced by the number of people with available water connections.</p>
Additional project features	<p>Non-routine implementation covenants:</p> <ol style="list-style-type: none"> 1. The Borrower will ensure that any investment under Project does not involve resettlement (this was dropped when the loan was restructured in 2010 to allow the possibility of involuntary resettlement under some sub-projects). 2. The Borrower will ensure that a program of routine maintenance is carried out every year on the primary paved road network, valued at no less than US\$15m (from own sources)... 3. The Borrower will design a consolidated and funded maintenance investment plan for the provincial road network and present by December 31 of each year the maintenance strategy for the following year, indicating its coverage, the activities to be carried out, the contractual modalities (including the introduction of performance based contracts) and the resources available to carry out these activities. Quarterly reports on the progress of program implementation will be submitted. 4. The Operational Manual will specify eligibility criteria for water, sewerage, road and drainage projects, including technical, financial and poverty targeting aspects. 5. The Borrower will, under terms of reference acceptable to the Bank, prepare an assessment of the impacts of the Project at the mid-term and at the Project's end. Baseline indicators will be finalized no later than 6 months after loan effectiveness.
Complementary/related operations	<p>Phase 2 of this APL (P105288) was approved in 2007.</p> <p>The Bank has an active lending program for urban transport in Argentina:</p> <p>Buenos Aires Urban Transport Project (P039584, 1997)</p> <p>Sustainable Transport and Air Quality Project (GEF) (P114008, 2008)</p> <p>Metropolitan areas Urban Transport Project (P095485, 2009)</p>
Status and results:	<p>Road works proceeded faster than planned (546km rehabilitated and 26km widened by end 2009 against end-project targets of 457 km and 25km, respectively). Delays were experienced under the water and sewerage component, mainly due to difficulty some operators had in meeting eligibility requirements (poverty targeting, design standards, connectivity to existing networks,...). The project was restructured in 2010, topping the loan by US\$50m to compensate for cost increases in civil works and to scale up the infrastructure program. Some water & sewerage works were re-scheduled into Phase 2, and some road projects brought forward.</p>

Team	Ventura Bengoechea, Marcela Silva (lending)
Profile date and author:	May 27, 2011; Slobodan Mitric

Links to key documents of the Buenos Aires Infrastructure Sustainable Development Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2004/11/16/000012009_20041116105928/Rendered/PDF/294320AR.pdf

Loan Agreement:

<http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2005/08/29/401901058774865085256FCF005720E4/20/Rendered/PDF/72681AR1CONFORMED01Loan1.pdf>

Project Paper (2010):

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2010/07/09/000334955_20100709021927/Rendered/PDF/549460PJPRoPo8101Officialuseonly1.pdf

SANTIAGO URBAN TRANSPORT PROGRAMMATIC DEVELOPMENT POLICY LOAN (Po82412)	
Country and region:	Chile, LAC
Borrower:	Government of Chile (through Ministry of Finance)
Implementing agency:	Inter-ministerial Committee for Urban Transport in Santiago, through Executive Secretariat for the Implementation of Transantiago (Transantiago ES)
Concept review date:	October 2, 2003
Board approval date:	July 5, 2005
Effectiveness date:	November 3, 2005
Closing date:	December 31, 2006 (actual)
Instrument category:	SAL
Project structure by sector:	General transport sector, 100%
Project total cost in US\$:	Not applicable to DPL operations
WB commitment:	This operation is structured as a sequence of 2 single-tranche policy loans, the first tranche for US\$30.2m and the second for US\$70m. Also, please see Note #1 below.
Co-financiers:	None. (Please see Note #2 below).
Final project cost in US\$:	Not applicable to DPL operations
Amount disbursed in US\$:	30.2m (final)
Diagnostic highlights	<p>Santiago grew by 28% between 1991 and 2001, with decreasing densities and increasing spatial extent. With 5.3m people, it holds close to 40% of the country's population. In 1990s Chile has managed a period of sustained economic growth, to which Santiago contributed about 47%. This was accompanied by sharp income inequalities, reflected in the existence and growth of large low-income settlements on urban fringes.</p> <p>Metropolitan Santiago is served by an extensive road system, a 40-km, public-owned metro, and 7,700 privately owned and operated buses. The motorization rate in 2001 was high at 560 cars per 1,000 population, up from 320 in 1977. Trips by car increased 223% between 1991 and 2001. Public transport is in decline, carrying 52% of motorized trips, or less (down from 83% in 1977 and 69% in 1991). The public transport system reflects income polarization. The metro serves 0.75m passengers a day, provides a high quality of service, and covers its operating costs from fare revenue, one of very few such metros in the world. The majority of public transport trips, 4.5m per day, are by street-based buses serving a dense network of the "many-to-many" type. Only about 8% of trips require transfers. Most bus services are franchises awarded on the basis of competitive bids to private entities ("empresas administrativas"), which then pass the actual service functions to smaller operators, who in turn may sub-contract to drivers. The rest of services are essentially free-entry, with considerable route overlap. The situation with taxis is similar. Bus fares are flat, capped at the time of bidding, and operators receive no subsidies. Most bids are based on the maximum allowable fare. Weak entry controls and the need to maximize fare revenue produced an oversupply of services, an aged fleet, low quality of service, poor safety, and excessively high pollution and noise. One death every three days involves public transport vehicles. Concentrations of fine particulates are twice European norms. Buses are responsible for 50% of all transport-generated emissions. In spite of competition, fares did not decline and pose affordability problems to low-income travelers, especially those who need to transfer. A combination of increasing car travel and the majority of public transport</p>

	<p>vehicles operating on the street system has resulted in pervasive traffic congestion on all arterial roads, with attendant safety and environmental impacts. A massive investment in urban (toll) expressways has improved the fate of longer-distance travelers, but has further loaded the street system of the central area. A cumulative result is a poor traffic environment for car users and a constrained access of low-income communities to jobs and other opportunities, especially for passengers not having simple radial itineraries.</p> <p>Behind policies and investment decisions that have shaped the transport situation in Santiago lies a fragmented institutional setting. Santiago has no elected metropolitan government to unify its 34 municipalities, so ministries de facto make local decisions: Ministry of Housing and Urban Development is responsible for urban streets and land use planning; Ministry of Public Works, Transport and Communications is responsible for roads of regional and national importance, and for transport services regulation; Ministry of Planning (through the Inter-Ministerial Transport Planning Agency, SECTRA) for strategic transport planning; and National Environment Commission for the management of urban air quality.</p> <p>In late 1990s, the Government of Chile formulated a nation-wide program of urban transport reforms, with broad objectives of improving the quality of life in cities, including its environmental dimension, and reducing inequalities that increased during the preceding period of rapid economic growth. In Santiago, where the aim was to help the city become a showcase of urban efficiency, attraction and equity, the government commissioned SECTRA to develop an urban transport reform program for 2000-2010. The public transport part of that program, named Transantiago, aimed to lift the quality of service for both car and public transport users, with major improvements in air quality, and to improve the institutional setup and processes. The main aspects of the program are listed in the policy and institutional agenda below. These will be buttressed by a comprehensive, longer-term package of investments in transport infrastructure, featuring: (i) doubling of the current length of the subway system, compared to its year 2000 extent (public investment of US\$1,600m); (ii) construction of about 7 limited-access, urban toll roads as a public-private partnership (US\$1,800m, mostly private investment); (iii) development over a period of 15 years of a system of approximately 300 km of segregated busways, interchange stations, terminals, and underpasses (US\$100m public investment, mainly for land expropriation, the rest private investment within a concession framework). The overall strategy was endorsed by the Committee of Ministers on Urban Transport Planning for Santiago, and some elements were formally adopted and budgeted for by the Government.</p>
Development objectives:	<p>The main objective of the DPL are the same as those of Transantiago. The specific objectives are to:</p> <ul style="list-style-type: none"> (i) Reduce transport costs in their financial, travel time and environmental dimensions and increase transport efficiency; (ii) Improve the coordination of public sector activities in land use, transport planning, infrastructure investment, traffic management, and bus franchising; (iii) Address urban poverty through improving access to jobs and economic opportunities; (iv) Enhance social inclusion through improved access to schools, health facilities, and wider social interaction.
Key policy and institutional aspects of the Transantiago reform agenda:	<ul style="list-style-type: none"> 13. Allocating and managing road space to give permanent or temporary priority to public transport vehicles; 14. Public transport regulatory reform to introduce gross-cost contracting (aiming for 15 relatively large contracts each requiring between 200 and 500 vehicles); 15. Providing incentives to operators to bring in high-standard buses (low-floor; low-emission,..); 16. Reconfiguring the bus route network into a two-tier system, trunk lines,

	<p>operating as far as possible on segregated busways, and street-based collection/distribution lines;</p> <ol style="list-style-type: none"> 17. Introducing a unified fare system, including metro as well as bus services, with fares set to achieve financial equilibrium for the system as a whole without increasing the current average fare level; 18. Separating fare collection as a separate competitively awarded concession; 19. Commissioning a public transport management and information center to control the bus flow; 20. Establishing coordination mechanisms for transport and infrastructure planning at the metropolitan level; 21. Providing training and other transition assistance for bus operators displaced by regulatory reforms; 22. Coordinating land use and urban transport policies; 23. Improving conditions for cyclists and pedestrians; 24. Rationalizing freight-related traffic and improve its environmental performance; and 25. Promoting a culture of rational private car use so that trip makers perceive the full costs of car travel (possibly through congestion charges).
DPL policy triggers:	<p>Triggers for DPL1:</p> <ul style="list-style-type: none"> • satisfactory macro-economic framework; • concession awarded for the Financial Administrator of the system farebox revenues; • the main public transport concessions awarded (14 packages of bus services). <p>Triggers for DPL2:</p> <ul style="list-style-type: none"> • satisfactory macro-economic framework; • startup of the full regime, as envisaged in Transantiago, i.e start of the operation of the rationalized bus routes network, implementation of fare integration between and within the bus and metro network, and use of the smartcard as the main means of payment.
Monitoring indicators:	<p>Indicators for DPL1:</p> <ul style="list-style-type: none"> • Re general urban transport policy: adoption (approval by the Committee of Ministers) of Transantiago as the transport policy for the capital area • Re urban public transport: adoption of a policy to control the number of taxis in Santiago • Re social aspects: <ol style="list-style-type: none"> (i) inclusion in bus functional specifications of facilities for people with reduced mobility (ii) inclusion of citizen participation in Transantiago, incl.: closing seminar with the 34 municipalities and workshops with local non-government organizations. <p>For DPL2:</p> <ul style="list-style-type: none"> • Re general urban transport policy: lanes fully dedicated to public transport on at least 19km of the trunk network • Re urban public transport: 30% reduction in the number of bus-km relative to the base before Transantiago implementation • Re social aspects: <ol style="list-style-type: none"> (i) implementation in terminals and vehicles of facilities for people with reduced mobility (signaling for the blind, chair ramps for access to stations, reserved seats in buses) (ii) 90% of households in each of 10 service areas located at less than 800m from a stop served by at least 5 buses per hour or a metro line; (iii) Application (activation?) of a program of retraining for drivers and others that lose jobs as a consequence of Transantiago

Complementary operations	<p>The first Bank-funded urban operation in Chile was Urban Streets and Transport Project (Po06644), 1989-1995. While this project focused on street rehabilitation and maintenance throughout the country, it had components in Santiago and a few other cities introducing traffic management and exclusive lanes for public transport vehicles and bicycles.</p> <p>Following a 7-year hiatus, Sustainable Transport and Air Quality Project for Santiago was funded in 2003 by a US\$7m grant from the Global Environment Facility (Po73985). Designed in part as one of two operations to complement the preparation and implementation of the DPL, the nominal objectives of the GEF-funded project are to help reduce greenhouse gases (GHG) from ground transport through the promotion of a long-term modal shift to more efficient and less polluting forms of transport, and the adoption of sustainable low-GHG transport measures. In essence, the GEF project adopted the same objectives as the entire reform program.</p> <p>In specific terms, the GEF project financed a pilot program of bikeway construction. In the institutional and policy spheres, the Project financed the next stage of the Strategic Environmental Assessment (SEA) of Transantiago, including: environmental assessment of Transantiago programs; improvement of the participatory approach; development of institutional capacity for environmental assessments and their inclusion into the transport/land use planning process. It also includes design of a social mitigation strategy for transit workers that might have to leave the sector; testing of "clean" bus technologies, and scrapping of buses that would become obsolete through the implementation of Transantiago. A separate component includes an assessment of congestion pricing in the Santiago context.</p> <p>The second operation supporting the DPL is the concurrent Santiago Urban Transport Technical Assistance Project (TAL) approved in July 2005 (Po86689), financed by Loan 73160-CL for US\$4.8m. TAL's general objective is to assist in achieving an efficient and sustainable urban transport system for Metropolitan Santiago. TAL ensures that financing is immediately available to assist the design, implementation, monitoring and evaluation of reform contained in Transantiago; help strengthen local institutions vis-à-vis local safeguard policies related to infrastructure investments; and facilitate compliance with the triggers for the second loan of the DPL, as well as ensure that the Bank safeguard policies are complied with.</p>
Status and results:	<p>Triggers for DPL1 (concession awards) were met and the loan was fully disbursed by January 2006. Owing to better fiscal situation, the Government of Chile did not request the DPL2. The Bank continued to monitor the implementation process sometimes informally, and through the TAL, and the ICR states that triggers for DP2, essentially the full-scale reform launch, were met, with one year delay, in February 2007.</p> <p>The implementation of Transantiago proved to be one of the most dramatic experiences in the recent history of urban transport reforms. In essence, three ingredients were necessary for a successful start-up: political support, timing (low travel season), and managerial and technical readiness. The first two were present, but the third was not. Many of the various technical building blocks had not been completed by the start-up, some of the design choices were not good, some risks were neglected, and the institutional capacity was not up to the task. In the initial weeks and months, the public transport system lived through a chaos which caused a political upheaval. The Government reacted by assigning the highest priority to the matter, and used its financial and human resources to correct, accelerate, and do whatever else was needed. Among the main interventions was the acceleration of the construction program for segregated busways, dedication of 77km of main thoroughfares to exclusive bus use and of additional 17km during peak hours, and improving enforcement. By the time the completion report for the DPL was written (August 2009), the transport system was stable, the overall results of the reform were considered positive, and the reform orientation was deemed sustainable, and irreversible. It is thought that by 2010, all the original reform goals will have been</p>

met. The start-up difficulties, however, left a lingering public hostility that will take time and excellent performance to dispel.

The reform's best achievements include:

- a city-wide, regulated and integrated public transport system is in place;
- 60% of the bus fleet has new, large-capacity and low-emission vehicles (Euro 3 engines);
- travel times have decreased;
- most passengers now pay one fare only; this is especially valuable for low-income passengers who make long, multi-leg trips, especially if they use the metro;
- total number of buses in operation has fallen;
- cumulative bus-km have been reduced;
- traffic safety has increased;
- noise and pollution have decreased;
- employment conditions for bus drivers and mechanics have improved, and the employment opportunities have increased;

On the less successful side:

- The reform start-up had high costs to compensate for poor design choices, and/or incomplete preparations (includes payment to concessionaires for implementation delays and extra investment costs in the metro);
- The proportion of travelers who must transfer has increased;
- While the operators appear to be profitable, the overall public transport system runs an operating deficit that will be difficult to eliminate (a consequence of the flat fare system, free return within 120 min, and the fare freeze instituted during the start-up difficulties);
- A Metropolitan Transport Authority has not been set up (though a draft law proposing to do this was presented to the parliament), leaving Transantiago ES, a technical coordination entity, as a surrogate, without sufficient capacity, authority and resources.

The ICR rates the achievement of project development objectives and its overall relevance as moderately satisfactory, with a moderate risk to development outcome. For performance, the quality at entry is given a moderately unsatisfactory rating, principally for having underestimated the complexity of the reform and the institutional capacity to carry it out in one-fell-swoop fashion, and for opting for a design that gave the Bank little leverage during the reform launch. Supervision effort by the Bank is rated moderately satisfactory, and the overall performance by the Bank is rated the same. The Borrower performance is rated moderately satisfactory. The weakest aspects of the Government's performance include frequent changes in key reform leaders (Minister of Transport, Transantiago ES Coordinator, and important technical staff), underestimation of the need to have segregated busways ready, the insistence of the financial self sufficiency of the system, the decision to let new vehicles operate on old network, and the go ahead in February 2007 in spite of clear indications that preparations were incomplete. As for Transantiago ES, its performance leading to the reform launch was not up to par, but it rose to the challenge following the explosion of start-up problems.

The ICR contains numerous lessons under headings including reform scope, phasing and timing; reform design; system financing; public transport institutions, contracting; and the nature of the Bank operation. This last includes the position that the choice of one DPL with two tranches would have been a better design than two separate DPLs, likely to have given the Bank continuous leverage before and during the reform launch. More importantly, the ICR states that there is a mismatch between a DPL – a short-term operation – and an urban transport reform which requires a long period for fine-tuning and system stabilization. In this matter, elsewhere in the text, the ICR highlights the fact that the chosen triggers were very few, as opposed to a long list of performance measures.

Team	Pierre Graftieaux (lending), Jorge Rebelo (lending, SPN, ICR)
Profile date and author:	December 20, 2010; Slobodan Mitric

Links to key documents of the: Santiago Urban Transport Programmatic Development Policy Loan

Program Document for the 2004 2-part SAL:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2004/05/11/000160016_20040511094149/Rendered/PDF/285200CL.pdf

Program Document for the 2005 DPL:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2005/07/05/000012009_20050705083417/Rendered/PDF/3174302revopdf.pdf

Loan Agreement for the 2005 DPL:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2006/01/26/998750A361060994852570AD00793328/2_o/Rendered/PDF/L73151CH1CONFORMEDo.pdf

Implementation Completion Report for the 2005 DPL:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2009/08/21/000333037_20090821002500/Rendered/PDF/ICR6310Po824121ICodisclosed08119191.pdf

NOTES

A US\$75m deferred drawdown sector adjustment loan and a US\$25m sector adjustment loan was proposed in 2004, but was withdrawn by the Government in order to revise the design of the reform program.

A parallel operation financed by the InterAmerican Development Bank supported the overall concept design for the reform program, the design of bus concession schemes, and pilot training for bus drivers and other transit workers

SANTIAGO URBAN TRANSPORT TECHNICAL ASSISTANCE PROJECT (Po8668g)	
Country and region:	Chile, LAC
Borrower:	Government of Chile, through Ministry of Finance
Implementing agency and arrangements:	Project Coordination Unit located under Executive Secretary of the Committee of Ministers for Urban Transport in Metropolitan Santiago (TRANSANTIAGO SE). The beneficiary institutions in addition to Transantiago SE include: Inter-Ministerial Transport Planning Agency (SECTRA), Ministry of Housing and Urban Development (MINVU) and its implementation arm (SERVIU), and Ministry of Transport and Communications, including its regional office for the Santiago area (SEREMITT-RM).
Concept review date:	October 2, 2003
Board approval date:	July 5, 2005
Effectiveness date:	December 2, 2005
Closing date:	December 31, 2011 (revised)
Instrument category:	SAL
Project structure by sector:	Central gov't administration, 72%; general transport sector, 25%; sub-national gov't administration, 3%
Project total cost (US\$):	6m
Financial plan (US\$):	1.2m Government of Chile; 4.8m World Bank (Loan 73160-CL)
Final project cost and sources (US\$):	
Diagnostic highlights	<p>Santiago grew by 28% between 1991 and 2001, with decreasing densities and increasing spatial extent. With 5.3m people, it holds close to 40% of the country's population. In 1990s Chile has managed a period of sustained economic growth, to which Santiago contributed about 47%. This was accompanied by sharp income inequalities, reflected in the existence and growth of large low-income settlements on urban fringes.</p> <p>Metropolitan Santiago is served by an extensive road system, a 40-km, public-owned metro, and 7,700 privately owned and operated buses. The motorization rate in 2001 was high at 560 cars per 1,000 population, up from 320 in 1977. Trips by car increased 223% between 1991 and 2001. Public transport is in decline, carrying 52% of motorized trips, or less (down from 83% in 1977 and 69% in 1991). The public transport system reflects income polarization. The metro serves 0.75m passengers a day, provides a high quality of service, and covers its operating costs from fare revenue, one of very few such metros in the world. The majority of public transport trips, 4.5m per day, are by street-based buses. Most bus services are franchises awarded on the basis of competitive bids to private entities ("empresas administrativas") which pass the actual service functions to smaller operators, who in turn may sub-contract drivers. The rest of services are essentially free-entry, with considerable route overlap. The situation with taxis is similar. Bus fares are flat, capped at the time of bidding, and operators receive no subsidies. Most bids are based on the maximum allowable fare. Low profit margins and weak entry controls produced an oversupply of aged vehicles, with low quality of service, poor safety, and high noise/pollution. One death every three days involves public transport vehicles. Concentrations of fine particulates are twice European norms. Buses are responsible for 50% of all transport-generated emissions. In spite of competition, fares did not decline and pose affordability problems to low-income travelers, especially those who need to transfer. A combination of increasing car travel and</p>

	<p>the majority of public transport vehicles operating on the street system has resulted in pervasive traffic congestion on all arterial roads, with attendant safety and environmental impacts. A massive investment in urban (toll) expressways has improved the fate of longer-distance travelers, but has further loaded the street system of the central area. A cumulative result is a poor traffic environment for car users and a constrained access of low-income communities to jobs and other opportunities, especially for passengers not having simple radial itineraries. In the context of remaking Santiago into a world class city, and improve the lot of lower-income residents, an urban transport strategy and an associated action plan for 2000-2010, were developed by the SECTRA planners. Public transport portions of that plan are called Transantiago, its objectives being to lift the quality of service for both car and public transport users, with major improvements in air quality, and to improve the institutional setup and processes. The program involves:</p> <ol style="list-style-type: none"> 26. Allocating and managing road space to give permanent or temporary priority to public transport vehicles; 27. Public transport regulatory reform to introduce gross-cost contracting (aiming for 15 relatively large contracts each requiring between 200 and 500 vehicles); 28. Providing incentives to operators to bring in high-standard buses; 29. Reconfiguring the bus route network into a two-tier system, trunk lines, operating as far as possible on segregated busways, and street-based collection/distribution lines; 30. Introducing a unified fare system, including metro as well as bus services, with fares set to achieve financial equilibrium for the system as a whole without increasing the current average fare level; 31. Separating fare collection as a separate competitively awarded concession; 32. Commissioning a public transport management and information center to control the bus flow; 33. Establishing coordination mechanisms for transport and infrastructure planning at the metropolitan level; 34. Providing training and other transition assistance for bus operators displaced by regulatory reforms; 35. Coordinating land use and urban transport policies; 36. Improving conditions for cyclists and pedestrians; 37. Rationalizing freight-related traffic and improve its environmental performance; and 38. Promoting a culture of rational private car use so that trip makers perceive the full costs of car travel (possibly through congestion charges). <p>These policies and reforms will be buttressed by a comprehensive infrastructure program mainly consisting of (i) doubling of the current length of the subway system, compared to its year 2000 extent (public investment of US\$1,600m); (ii) construction of about 7 limited-access, urban toll roads as a public-private partnership (US\$1,800m, mostly private investment); (iii) development over a period of 15 years of a system of approximately 300 km of segregated busways, interchange stations, terminals, and underpasses (US\$100m public investment, mainly for land expropriation, the rest private investment within a concession framework).</p> <p>The strategy was endorsed by the Committee of Ministers on Urban Transport Planning for Santiago (the area has no strong government to unify its 34 municipalities, so the national government is de facto metropolitan government), and some elements of the action plan were formally adopted and budgeted for by the Government.</p> <p>The proposed Project in essence is to support implementation of already agreed actions and further develop other actions contained in Transantiago.</p>
Development objectives:	<p>Cf. Loan Agreement (version retained after restructuring): Assist in achieving an efficient and sustainable urban transport system for</p>

	<p>Metropolitan Santiago</p> <p>Cf. Project Appraisal Document, Section B.2</p> <ul style="list-style-type: none"> (i) Support the implementation, monitoring, evaluation and continuous planning of the urban transport reform program. (ii) Strengthen the capacity and improve the procedures to mitigate potential adverse impacts of transport infrastructure works.
Investment components:	<p>The Project consists of investments in consulting services to address policy and institutional topics, and goods and services to assist institutions (inclusive of project coordination entity). This list is based On Loan Agreement, Schedule 2:</p> <p>Part A: General Urban Transport Studies (US\$1.1m)</p> <ol style="list-style-type: none"> 1. Impact of Transantiago reforms on transport demand. 2. Updating of the socio-economic ESTRAUS submodels and developing a sub-model to forecast the income, motorization rate and size of area households. 3. Transport institutional framework for Transantiago. 4. Management of Metropolitan Santiago road infrastructure maintenance. <p>Part B: Public Transport (US\$1.8m)</p> <ol style="list-style-type: none"> 1. Study for fare optimization for Transantiago's full operation. 2. Designing intermodal stations for Metropolitan Santiago. 3. Developing a pilot to test Transantiago's graphic information system (<i>señalética</i>). 4. Surveying travel times associated with the Transantiago system and developing proposals for an action plan to reduce such travel times. 5. Designing and implementing a Transantiago communication plan. <p>Part C: Environment (US\$0.23m):</p> <p>Designing an environmental, air quality, noise monitoring and information system focusing on public transport in Metropolitan Santiago.</p> <p>Part D: Land Use (US\$0.9m)</p> <ol style="list-style-type: none"> 1. Updating the transport/land use model to reflect recent travel and demographic surveys, and carrying out a social assessment of three congestion pricing alternatives in the framework of Transantiago. 2. Study of urban architectural and operational design of the area of influence of metro transfer stations. 3. Designing tools and procedures to achieve inter-institutional coordination of transport and land use decisions. 4. Study to: (i) update the Graphic Information System of the SIVU; and (ii) upgrade the necessary legal framework to allow application of SEISTU and functioning of the one-stop process (<i>Ventanilla Única</i>) for mainstreaming procedures. <p>Part E: Social Aspects of Transport (US\$1m)</p> <ol style="list-style-type: none"> 1. Implementing the social mitigation program, addressing the needs of existing public transport workers. 2. Carrying out a social assessment of the impact of Transantiago on low-income segments of Metropolitan Santiago. <p>Part F: Mitigation of potential adverse impacts of transport infrastructure works (US\$0.3m)</p> <ol style="list-style-type: none"> 1. Designing and carrying out an institutional strengthening program in the area of involuntary resettlements, including the definition of a revised resettlement policy framework. 2. Harmonizing provisions of guidelines for preparation of Environmental Management Plans for urban works. <p>Part G: Project Management (US\$0.7m)</p> <p>Technical assistance, training, equipment, services (including project audits) and operating cost for the PCU.</p>
Policy components:	<p>The major elements of the policy reform package in Transantiago are:</p> <ul style="list-style-type: none"> (i) re-regulation of street-based public transport services on the basis of gross cost contracting, with incentives to use low-emission vehicles; (ii) creation of a network of trunk lines exclusively for public buses (bus

	rapid transit); (iii) unification of fares over the entire public transport system; (iv) coordination of transport and land use planning
Institutional components:	Creation of an institution to manage the public transport system and a mechanism to coordinate various aspects of urban transport planning
Monitoring indicators:	<p>Indicators relative to project development objectives:</p> <ul style="list-style-type: none"> • Completion of a survey to assess Transantiago impact on transport demand • Design of a monitoring system for the environmental impacts of Transantiago <p>Intermediate Outcome Indicators</p> <p>Outcome 1 - Institutionalization of Transantiago: Completed design of an institutional framework for Transantiago</p> <p>Outcome 2 - Mitigation of negative effects of Transantiago on low-income groups: Completion of an Action Plan for the proposed mitigation measures</p> <p>Outcome 3 - Improved road infrastructure management: Completion of Road Infrastructure Management Plan</p> <p>Outcome 4 - Citizen participation: Dissemination campaign for Transantiago implemented</p> <p>Outcome 5 - Better coordination between land use and transport planning: Completion of a proposal of land use and transport planning coordination mechanisms</p>
Complementary operations	<p>This Project is one of three Bank-funded operations designed to support the Transantiago program.</p> <p>The initial operation, approved in 2003, is Sustainable Transport and Air Quality Project for Santiago was funded in 2003 by a US\$7m grant from the Global Environment Facility (Po73985). Designed in part to complement the preparation of the DPL, the nominal objectives of this project are to help reduce greenhouse gases (GHG) from ground transport through the promotion of a long-term modal shift to more efficient and less polluting forms of transport, and the adoption of sustainable low-GHG transport measures. In essence, the GEF project adopted the same objectives as the entire reform program.</p> <p>In terms specific to this operation only, the GEF project financed a pilot program of bikeway construction. In the institutional and policy spheres, the Project financed the next stage of the Strategic Environmental Assessment (SEA) of Transantiago, including: environmental assessment of Transantiago programs; improvement of the participatory approach; development of institutional capacity for environmental assessments and their inclusion into the transport/land use planning process. It also includes design of a social mitigation strategy for transit workers that might have to leave the sector; testing of "clean" bus technologies, and scrapping of buses that would become obsolete through the implementation of Transantiago. A separate component includes an assessment of congestion pricing in the Santiago context.</p> <p>Approved at the same time as the TAL is Santiago Urban Transport Programmatic Development Policy Loan (DPL, Po82412). DPL was set up as a sequence of two single-tranche loans of US\$100.2m in total, to be drawn on in the 2005-2007 period. The first of these (US\$30.2m) was approved in July 2005, together with the TAL, and closed in 2006. The Government of Chile did not seek approval of the second loan. After a very difficult start-up period, Transantiago reforms were implemented in full and have had an overall positive outcome.</p> <p>Before this batch of projects, there had been only one other Bank-funded urban operation in Chile – Urban Streets and Transport Project (Po06644), 1989-1995. While this project focused on street rehabilitation and maintenance throughout the country, it had components in Santiago and a few other cities introducing traffic</p>

	management and exclusive lanes for public transport vehicles and bicycles.
Lessons from past operations:	<ul style="list-style-type: none"> • Urban transport development and air quality management involve long-term issues that require long term responses. Changes in personal travel behavior - a key element to reduce traffic-generated air pollution - are unlikely to occur unless there is a long-term government commitment to sustainable transport. This long-term vision has been spelt out in the 2000-2010 Santiago Urban Transport Plan and similarly also emerges from Santiago's air quality management plan; • Planning for the long term requires flexibility. The Mexico City experience showed that, despite the best planning efforts in the preparatory stage, the need for adjustments to project activities became evident only during the plan implementation. Similarly, under the Bogota Urban Transport Project, it was concluded that "flexibility should be encouraged in some subcomponents, procedures or new technology areas". • Projects should support an overall Government strategy. • Experience throughout the world demonstrates that there is a need for strong political support in order to achieve urban transport reform. • Capable institutions must be in place to implement urban transport reform.
Status and results:	<p>The Project was restructured in September 2009, having disbursed only about US\$0.5m by that time. The main reason for the delay were severe start-up difficulties in the implementation of Transantiago which created an excessive workload on the PCU staff and resulted in a high staff turnover. They also shifted the focus from strategic and longer-term subjects to those with immediate importance. Urgency of some studies meant that World Bank procurement procedures could not be followed, so some studies were done with local financing, without involvement by Bank staff. The elements added at restructuring include: (i) study for improving Transantiago financial and fare management system (annual turnover of US\$1,600m), including design and implementation (US\$1.9m); and (ii) pilot projects based on a survey of international experience in public transport improvements (US\$2m). Given that the Government of Chile never requested the second loan approved under the DPL, thus precluding the Bank staff's formal participation in Transantiago's implementation post-2006, the restructured Technical Assistance Project became a vehicle to do so.</p>
Team	Pierre Graftieaux (lending), Jorge Rebelo, Elisabeth Goller (SPN)
Profile date and author:	September 20, 2010; Slobodan Mitric

Links to key documents of the Santiago Urban Technical Assistance Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2005/06/14/000090341_20050614090637/Rendered/PDF/31742.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2006/01/26/49C9F5B2A896DD53852570CB00710039/2_0/Rendered/PDF/L73160CHoConformed.pdf

Project Paper:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2009/09/25/000334955_20090925011541/Rendered/PDF/507100PJPRoBox1useoonly10R200910234.pdf

NOTES

The acronym TAL is consistently used in all relevant documents, together with the term “project” in the name of the operation. This nomenclature was retained in this profile to avoid confusion.

A TAL involving a US\$6.1m loan was initially appraised in 2004.

MEXICO CITY INSURGENTES BUS RAPID TRANSIT CARBON FINANCE PROJECT (Po82656)	
Country and region:	Mexico, LAC
Borrower:	METROBUS (independent public agency)
Implementing agency and arrangements:	METROBUS
Concept review:	December 1, 2003
Bank approval:	November 4, 2005
Effectiveness date:	November 19, 2006
Closing date:	December 15, 2015
Instrument category:	CN (Carbon offset)
Project structure by sector:	Roads and highways, 100%
Project total cost at appraisal in US\$:	49.4m
Financing plan (US\$):	47m METROBUS (borrower) + 2.4m (Prototype Carbon Fund)
Final project cost in US\$:	
Amount disbursed in US\$:	0.5m (August 18, 2010)
Diagnostic highlights	<p>With its 19m inhabitants and 3.5m cars (both still growing), Mexico City Metropolitan Area (MCMA) is a major pollutant in terms of greenhouse gases and particulate matter. This has serious local and global consequences. Transport sector alone is responsible for 42% of GHG emissions due to trends in car/public transport modal split and the use of energy wasting and polluting vehicles. Public transport modes include street buses, mostly of small size, and a 200km metro system. They carry about 70% of 30m daily motorized trips, but this share has been falling mainly because street-based buses are poorly regulated, operate in a highly congested and ill-managed street traffic environment, and have low degree of integration between themselves and with other modes. Small buses were involved in 60% of around 1,000 fatal traffic accidents in the City (2004). Behind these problems is a fragmented institutional system, notable for political conflicts between the Capital District and the State of Mexico. The emerging strategy features the establishment of high-quality public transport corridors expected to reverse the downward trend in passengers. Corridors feature energy-efficient and low-polluting bus-based rapid transit services whose infrastructure is in public hands and operations are a mixture of public and private companies. This approach is seen as an alternative to building more limited-access roads and metros.</p>
Development objectives:	<ul style="list-style-type: none"> (i) Contribute to reductions in local airborne pollutants and greenhouse gas emissions from the transport sector in the MCMA through the development of a first bus-based rapid transit line in Mexico City (Insurgentes Avenue); (ii) Develop and demonstrate the use of Clean Development Mechanism to foster technology, regulatory and institutional changes in the public transport sector; (iii) Develop and implement tools to measure and monitor greenhouse gas emissions in the transport sector (thus also evaluate impacts of such innovations as transport corridors)
Investment components:	<ul style="list-style-type: none"> (i) development and implementation of a BRT corridor on Insurgentes Avenue and associated traffic management measures (US\$47m),

	(ii) financed by METROBUS; Planning and monitoring of transport corridors and promotion of non-motorized transport, especially bikes as access mode to BRT (US\$2.4m), financed from the PCF grant
Policy agenda:	(i) inclusion of transport corridors as instruments in air quality management plans; (ii) re-regulation of bus transport; (iii) public transport fare integration; (iv) improvement of work conditions in bus operations
Institutional agenda:	(i) Creation of METROBUS, an independent entity to plan and manage BRT corridors
Additional project features	<p>The project is formulated under the guidelines for the Clean Development Mechanism and is meant to generate GHG emission credits. A monitoring program is included as a part of the contractual agreement between METROBUS and the Spanish Carbon Fund.</p> <p>The Insurgentes Avenue BRT will feature an exclusive-use trunk corridor for large buses and a feeder/distributor network of small buses. The BRT will be 19.3km long, with 34 stations about 450m apart. It will be planned and managed by METROBUS. Infrastructure will be funded by the Mexico City Government. Two companies, CISA and RTP, will operate some 80 diesel-fuelled articulated buses (inclusive of a 10% reserve) to serve a forecast demand of 251,000 passengers per day. RTP (20 buses) is public-owned and CISA (60 buses) is formed from several micro-bus operators. RTP buses will be funded by the city government, whereas CISA buses will be funded through a combination of private money (US\$4m), city government scrapping program (US\$1m), and a US\$15m Volvo credit. A separate fare collection company will be set. Pre-payment will be used to speed up boarding. Fare integration is being pursued lest the transfer from feeders to trunk services becomes financially onerous for passengers. Access by walking and bikes will be included, as will be other traffic management measures in the corridor. The scrapping program is expected to replace about 350 bus vehicles, both public and private owned.</p>
Complementary operations	<p>There is a long history of Bank assistance to Mexico regarding urban transport and air quality. The first was Transport and Air Quality Management Project for the Mexico City Metropolitan Area (P007694, 1992-1999). It invested in air quality monitoring and vehicle testing and retrofit equipment, while helping to develop policy and institutional framework to support transport and air quality objectives. Subsequently, under the Medium Cities Urban Transport Project (US\$200m loan, P007648, 1993-2003), the role of the Federal Government was enhanced, several cities developed Integral Transport Plans (ITP), and a line of credit was provided for transport improvements in these cities. This project had a less explicit focus on air quality aspects of urban transport.</p> <p>The current Project complements the recent, GEF-funded Mexico - Climate Friendly Measures in Transport Project (P059161, approved in 2002), which focuses on the strategy building, and regulatory and institutional changes required for implementation of climate-friendly urban transport interventions, such as bus-based rapid transit. An additional carbon finance project is under preparation (P106305, approval expected in FY 2011).</p> <p>In 2007-2008, the Bank mounted a fee-for-service technical assistance operation, Mexico Mass Urban Transport Federal Program (P110474), assisting in the design and establishment of PROTRAM. On a different scale, a development policy loan, Framework for Green Growth (P115608, US\$1,504m, approved in 2009) had a twin focus on urban transport and energy, addressing institutional reform to include explicit climate change concerns and reforming funding sources at the Federal level to support this concern. A follow-up operation, Urban Transport Transformation Project (P107159, \$150m WB loan and \$200m loan from the Clean Technology</p>

	Fund, approved in 2010), retains the institutional dimension of the DPL and GEF-funded projects but adds a large investment component to complement funds coming from FONADIN.
Monitoring indicators	<ul style="list-style-type: none"> i. Emissions of local and global pollutants in Insurgentes Avenue corridor; ii. Average travel times on the bus transport system in the Insurgentes Avenue corridor (travel speeds are expected to rise from 14km/h to 21km/h); iii. Bus system energy efficiency (liters of diesel per passenger km) iv. Bus productivity (passengers/bus; modal share of large buses) v. Registration of CDM methodology
Status and results:	Active
Team	Walter Vergara
Profile date and author:	August 25, 2010; Slobodan Mitric

Links to key documents of the Mexico City Insurgentes Bus Rapid Transit System Carbon Finance Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer?IW3P/IB/2006/01/24/000160016_20060124171719/Rendered/PDF/340480MXoPAD1Po82656obuffocovero1PUBLIC1.pdf

URBAN INFRASTRUCTURE PROJECT (Po83979)	
Country and region:	Bolivia, LAC
Borrower:	Republic of Bolivia
Implementing agency and arrangements:	Municipality of La Paz, Municipality of El Alto, Saguapac Cooperative
Board approval date:	November 21, 2006
Effectiveness date:	September 12, 2007
Closing date:	November 30, 2010
Instrument category:	SIL
Project structure by sector:	Sub-national government administration, 24%; other social services, 16%; general transport sector, 10%; flood protection, 7%; sewerage, 43%
Project total cost in US\$:	30.4m
Financing plan (US\$):	Borrower: 0.4m; WB: 30.0m (Credit 4247-BO)
Final project cost in US\$:	
Amount disbursed in US\$:	24.5m (as of December 14, 2010)
Diagnostic highlights	<p>Within La Paz metropolitan region, the main urban nodes La Paz (population 790,000) and El Alto (650,000) have been attracting poor migrants from the countryside at very high rates -3.2% per annum on average, and 6.7% per annum in El Alto. Poor households make up close to 40% of the population in La Paz. The urban growth has been uncontrolled and the provision of municipal services has lagged far behind. The road network is not sufficient to deal with intra-urban traffic, much less regional and national flows, whose importance derives from La Paz being a major transport hub of the country. Roads are especially inadequate in El Alto in both density and quality (largely unpaved), while traffic control and law enforcement are lacking. Pedestrians and bike riders as usual pay the highest price in the traffic chaos, followed by public transport passengers. Public transport is based on numerous small-size vehicles competing for passengers without much regulation. This setting precludes the appearance of larger bus vehicles in the market. Poor quality of public transport services acts to fuel further the rise of motorization.</p>
Development objectives:	<p>(a) achieve sustainable improvements in the urban infrastructure and living standards in the poorest neighborhoods of La Paz through comprehensive urban upgrading and neighborhood participation in project implementation;</p> <p>(b) enhance mobility in the city of El Alto, removing infrastructure bottlenecks and introducing measures to modernize public transport services and urban transport management; and</p> <p>(c) expand sewerage coverage in poor areas of Santa Cruz.</p>
Investment components:	<ol style="list-style-type: none"> Urban upgrading in La Paz \$9.45m base cost: road improvements at the neighborhood level, including street paving, sidewalks, public transport stops, street lighting, drainage, sanitation facilities, green area creation, waste collection and disposal, and community recreation facilities. Urban transport in El Alto, \$8.88m base cost: A. about 4.5km of trunk road construction focused on the city's second ring road, including also one bridge, 1.2km long drainage canal, and street lighting; B. modernization of the public transport system through

	<p>improving streets that carry large bus flows; the provision of sidewalks and strategic bikeways; development of a traffic safety strategy; elaboration of traffic management standards (including traffic signal control and bus priority measures). C. capacity building for standard planning and implementation functions in the municipal government of El Alto.</p> <p>3. Sanitation in Santa Cruz, \$8.93m, base cost: the provision of sewerage networks and water treatment plants.</p>
Policy components:	<p>(i) Preparation of a new regulatory strategy and operational plans (route network) for the delivery of public transport services,</p> <p>(ii) Setting the institutional, regulatory and technical bases for the implementation of a bus-based rapid transit system</p>
Institutional components:	No specific institutional reform in the project design, but open to change if the project-financed studies reveal the need, as they are likely to at least in the case of introducing bus-based rapid transit.
Monitoring indicators:	<p>For La Paz component: property values in participating neighborhoods.</p> <p>For the El Alto component, on the newly improved roads:</p> <p>(i) Average traffic speeds;</p> <p>(ii) Traffic flows;</p> <p>(iii) Bicycle use.</p>
Results at completion:	
Team	Alexandra Ortiz, Franz Drees-Gross (lending); Miguel Vargas-Ramirez (SPN)
Profile date and author	February 4, 2011; Slobodan Mitric

Links to key documents of the Bolivia Urban Infrastructure Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2006/11/01/000090341_20061101095705/Rendered/PDF/36796.pdf

Financing Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2008/03/31/0DD025553D07DE8C852572A3006B4234/2_o/Rendered/PDF/C42470BOoCONFORMED.pdf

SAO PAULO TRAINS AND SIGNALLING PROJECT (P106038 and P117122)	
Country and region:	Brazil, LAC
Borrower:	State of Sao Paulo, through State Secretary of Metropolitan Transport (STMSP)
Implementing arrangements:	Project Coordination Unit in the STMSP; Project Management Units in Companhia do Metro de Sao Paulo (METRO) and Companhia Paulista de Trens Metropolitanos (CPTM)
Concept review date:	July 24, 2007
Board approval date:	May 1, 2008; additional loan approved in Sept 21, 2010
Effectiveness date:	July 28, 2008
Closing date:	June 30, 2013
Instrument category:	SIL
Project structure by sector:	General transport sector, 99%; sub-national government administration, 1%
Project total cost (US\$):	1,550m; increased by 161.5m in 2010
Financing plan (US\$):	Borrower: 465m; World Bank: 550m (Ln 7506-BR); Japan Bank for International Cooperation: 535m. An additional loan of 112.9m was approved in 2010.
Final project cost (US\$):	
Final amount disbursed (US\$):	
Diagnostic highlights	<p>Sao Paulo Metropolitan Region, one world's mega-cities, has 18m people living in 39 municipalities, of which Municipality of Sao Paulo has 11m people. The region generates 20% of Brazil's GNP but it also has huge numbers of poor people living in sprawling development distant from locations of work, and generally featuring poor infrastructure and services. Low mobility, with both time and money dimensions, persists as one of critical factors in poverty alleviation. 39m trips are made daily in the region, of which 33% are on foot, 37% by car, and 30% by public transport (23% by street buses, 4.5% by the metro and 2.5% by the regional rail company, CPTM). About 4.3m vehicles operate in the region (the motorization rate about 240 vehicles per 1,000 people). Traffic congestion, accidents and air quality are major problems, since road development has proved unable to cope with traffic growth. The rail-based transport modes, on separate rights-of-way, hold a major promise for improvement. Metro has 4 lines with a total length of 61km and CPTM has 6 lines, with a total length of 261km. In the preceding decade both Metro and CPTM received large investments and have gone through major regulatory changes (transfer of ownership from the nation to the state, then introduction of operation by private concessions). Demand has picked up (10% per annum for CPTM since 2006), but further growth is constrained by the low fleet capacity and the need for many passengers to transfer. Transfers are required for 78% of metro trips and 61% of regional rail trips, compared to 16% of bus-based trips. The current strategy is to keep improving the CPTM system, transforming it gradually into a metro-like mode, especially regarding service frequency. The challenge is to raise the capacity and quality of service on the rail system without making it unaffordable to low-income travelers.</p>
Development objectives:	<ul style="list-style-type: none"> (a) Improve the level-of-service for urban rail users, on Lines A and F of suburban rail (later renamed 7 and 12), CPTM; and Lines 1, 2 and 3 of SP Metro Company). (b) (continue to) strengthen transport management and policy framework in the SPMR.

	In 2010, the statement of objectives was amended to include CPTM's Line 11 (Coral) in the item (a).
Investment components:	<p>a) Purchase of equipment (US\$1,438m): (i) forty trains (Electrical Multiple Units-EMUs) of eight cars each and accessories for the CPTM; (ii) seventeen trains of 6 cars each and accessories for the Metro; (iii) signaling, telecom and electrical related equipment and associated infrastructure for the CPTM; (iv) signaling and telecom equipment and associated infrastructure for the Metro.</p> <p>b) Institutional and Policy Development (US\$12m): (i) studies and technical assistance to support the policy and institutional agendas (see below) and (ii) project management and supervision.</p> <p>The Project was scaled-up in 2010, by adding trains and signaling for 51 km long Line 11 (Coral Line), formerly known as Line E. Additional cost was estimated at US\$161.5m, and the loan was increased by US\$112.9m.</p>
Policy agenda:	Non-specific policy agenda, subject to outcome of project-financed studies of organization and regulation for the urban public transport system, addressing fares, cost-recovery, subsidy, funding and ownership policies, with a particular reference to the adoption of the integrated fare (Bilhete-Único Integrado, BUI).
Institutional agenda:	<ul style="list-style-type: none"> (i) consolidation (expansion?) of the Regional Transport Coordination Commission (CDTI); (ii) updating of the integrated Transport Policy, Land Use and Air Quality Management Strategy (PITU) (iii) increase in private sector involvement in CPTM (with a specific reference to outsourcing)
Performance indicators:	<ol style="list-style-type: none"> 1. Number of trains per peak hour/direction and off-peak in Lines A and F of CPTM and Lines 1, 2, and 3 of Metro 2. Reduction in travel time plus waiting time. 3. Passengers per square meter 4. Incremental demand in Metro's Line 1,2,3 and CPTM's Lines A and F. 5. Number of low-income passengers (up to 4MS) in CPTM lines A and F and Metro Lines 1, 2, and 3. 6. Working Ratio of Metro and Working Ratio of CPTM. 7. Maintaining/Strengthening of the Integrated Urban Transport, Land Use and Air Quality Strategy (PITU).
Additional project features	<p>Non-routine covenants applicable to project implementation:</p> <ol style="list-style-type: none"> 1. The preservation of CDTI and BUI during execution and until the completion of the Project, in the present or other format as long as it continues to enhance the mobility and affordability of metropolitan transport to users particularly those of low-income. In addition, the extension of the BUI to other modes of transportation and expansion of CDTI to include other municipalities of the SPMR. 2. Completion by CPTM of the above cited study of outsourcing options to the private sector not later than 48 months after effectiveness.
Complementary operations	<p>The Project is Bank's fourth in Sao Paulo: the program started with Sao Paulo Metropolitan Transport Decentralization Project (\$126m, Loan 3457-BR, Poo6379, 1992-1998), followed by Sao Paulo Integrated Transport Project (\$45m, Loan 4312-BR, Poo6559, 1998-2004) and Sao Paulo Metro Line 4 Project (\$209m, Loan 4646-BR; Po61596, 2002). The first project involved the transfer of ownership of the regional rail system (CBTU-SP) from the federal Government to the State of Sao Paulo (renamed into CPTM), its rehabilitation and integration with other modes. The second project aimed to involve the private sector in the operations of CPTM, through a concession for one of its lines. The third project financed an entirely new metro line, with subsidiary objectives involving the mobility of low-income population and partnering with the private sector.</p>

Results:	The Project was scaled up in 2010, when fleet investments for Line 11 were added in, and the Loan increased. At that time, the implementation was proceeding well and the progress toward reaching the development objectives was satisfactory. The four main contracts of the original Project for rolling stock and signal systems for both the São Paulo Metro and CPTM had been awarded and were well underway. The first trains were delivered and were being tested before entering into operations. The CPTM project management consultant is in place and all other supervision for trains and signaling consulting services bids have been completed or are underway. As of August 2010, the loan had disbursed about US\$266.75 million (about 48% of the original loan).
Team	Jorge Rebelo (lending; SPN); George Darido (SPN)
Profile date and author:	August 9, 2010; revised October 21, 2010; Slobodan Mitric

Links to key documents of the: Sao Paulo Trains and Signaling Project

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2008/04/14/000333037_20080414001522/Rendered/PDF/408910PADoP106101officialouseonly1.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2008/06/24/D84121A1CCAB1C6F8525747200545DD7/1_o/Rendered/PDF/L75060BRoCONFORMED.pdf

Project Paper (2010):

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2010/09/01/000350881_20100901091053/Rendered/PDF/509870PJPRoP1111Codisclosed09111101.pdf

NOTES

There will be regular annual fare adjustments on the CPTM and Metro to account for inflation (not covered by a covenant in the Loan Agreement)

Note the monitoring indicators addressing CPTM/Metro finances (no covenants, no objective), the incremental demand and the proportion of low-income travelers (also not covered in the list of objectives)

LAC REGION SUSTAINABLE TRANSPORT AND AIR QUALITY PROJECT (P096017)	
Country and region:	Latin America and Caribbean
Recipient of the grant:	Clean Air Institute (CAI) and national executing agencies in each participating country. A grant agreement is signed between the World Bank and the CAI; separate grant agreements signed between the World Bank and national executing agencies in each participating country. Memoranda of understanding signed between CAI, national executing agencies and 11 participating cities
Implementing agency and arrangements:	Clean Air Institute, national executing agencies and participating cities
Concept review date:	April 8, 2005
Board approval date:	October 21, 2008
Effectiveness date:	March 15, 2009
Closing date:	December 31, 2012
Instrument category:	Global Environment Project
Project structure by sector:	Public administration – transport, 100%
Project total cost in US\$:	5m
WB commitment in US\$:	2.9m (GEF grant)
Counterpart funding in US\$:	2.1m
Final project cost in US\$:	
Amount disbursed in US\$:	0.5m (May 21, 2010)
Diagnostic highlights	The transport sector in Latin America contributes more greenhouse gas emissions to the atmosphere than any other region of the world. Given the region's high level of urbanization (75%) and the fact that cities produce most of its GDP, the concern for its impact on global climate change maps into transport concerns in its cities. These are known for their congested and polluted traffic, as well as for some of the most innovative approaches to transport planning, notably bus-based rapid transit (Curitiba, Bogota) and tandem planning of transport and land use (Curitiba). Reducing GHG emissions from the region necessarily implies an engagement with urban transport issues dominated by concerns for accessibility and air quality against the background of sprawling urban development, poverty, and weak and fragmented institutions.
Development objectives:	<ul style="list-style-type: none"> (i) establish a network of local and national government stakeholders, international organizations and private sector entities to promote policies and actions leading towards more energy efficient and cleaner urban transport systems in Latin American cities; (ii) assist cities to develop sustainable urban transport strategies that integrate climate change and air quality components; and, (iii) improve the capacity of cities to quantify the impacts of transport policies on climate change and air pollution emissions.
Investment components:	<ul style="list-style-type: none"> 1. Technical assistance to identify and improve methodologies to assess climate change, air quality and other impacts of transport interventions (\$0.5m GEF + \$0.1m participating cities) 2. Technical assistance and training for the building of regional capacity for preparation of sustainable urban transport strategies and their and

	<p>implementation (\$0.8m GEF + \$0.3m participating cities)</p> <p>3. Technical assistance for mainstreaming climate change and air quality considerations as they relate to transport, land use and energy planning (\$0.8m GEF + \$0.8m participating cities)</p> <p>4. Program management, monitoring and evaluation (\$0.8m GEF + \$0.9m participating cities)</p>
Policy components:	No specific policies pursued
Institutional components:	No specific institutional initiatives pursued
Additional project features	<p>The regional component is structured so that GEF funds will focus on capacity building, while counterpart funds from participating cities will be focused on local investments.</p> <p>A long list of candidate partners includes UNEP, UNDP, other multilateral banks, GTZ, ITDP, WRI/EMBARQ,</p>
Complementary operations	<p>This project is a regional component of a program, also including GEF-funded projects for three countries – Argentina, Brazil and Mexico. The total cost of the program is US\$79.3m, and the total GEF funding is \$20.8m. The regional project will provide the overall coordination for the entire program.</p> <p>Activities to be funded, whether “soft” or actual investments in works and goods, are grouped into 5 thematic windows: (1) Management of urban freight transport; (2) integration of land use planning, transport and environmental management; (3) modal shift to public transport; (4) non-motorized transport; (5) transport demand management.</p>
Monitoring indicators	<p>(numbering follows that used in the objectives box above):</p> <p>(i) formal support and financial resources leveraged to CAI to coordinate activities at the regional level, involving local and national governments, international organizations and private sector;</p> <p>(ii) number of cities with a strategy to reduce Co₂ through sustainable transport strategies;</p> <p>(iii) number of cities applying assessment tools to quantify greenhouse gas and air quality impacts of select transport options.</p>
Results at completion:	
Team	Paul Procee (lending), Elisabeth Goller (SPN)
Profile date and author:	May 21, 2010; Slobodan Mitric

Links to key documents of the LAC Regional Sustainable Transport and Air Quality Project:

Program Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2008/10/08/000334955_20081008045827/Rendered/PDF/430480PGDoPg61NLY10GEFR20081001811.pdf

GEF ARGENTINA - SUSTAINABLE TRANSPORT AND AIR QUALITY PROJECT (P114008)	
Country and region:	Argentina, LAC
Grant recipient:	Government of Argentina
Implementing agency and arrangements:	Ministry of Federal Planning and Public Investment, Secretariat of Transport (Project Implementation Unit initially set up for the Buenos Aires Urban Transport Project)
Board approval date:	November 4, 2008
Effectiveness date:	Pending (May or August 2010)
Closing date:	December 31, 2012
Instrument category:	Global Environment Project
Project structure by sector:	General transport sector, 37%; public administration – transport, 63%
Project total cost in US\$:	11.9m
WB commitment in US\$:	4m GEF grant
Counterpart funding in US\$:	7.9m
Final project cost in US\$:	
Amount disbursed in US\$:	
Diagnostic highlights	In highly urbanized Argentina (89%), urban transport is a major producer of CO ₂ and other greenhouse gases. Urbanization and motorization are both on the rise, the former especially rapid on urban fringes more and more distant from city centers and essentially taking place in lower-income population strata. The battle lines are essentially between individual motorization and public transport modes, the latter suffering from chronic underfunding of infrastructure and equipment and a stress on funding operating losses of operators as a way to keep fares low for social reasons. The lack of sustainable urban transport and land use strategies in Argentina can also be traced to fragmented institutions, a consequence of the country's failure to develop a level of government corresponding to real urban area boundaries, and out-of-date approaches and instruments used to manage and plan urban transport systems.
Development objectives:	<ul style="list-style-type: none"> (i) Reduction of GHG emissions by increasing the use of less energy intensive transport modes in 4 participating cities; (ii) Inducing policy changes in favor of sustainable projects
Investment components:	<ul style="list-style-type: none"> 1. Technical assistance and measures to foster more integrated transport and land use planning (\$0.2m from the grant and \$0.6m from the Government) 2. Pilot investments and technical assistance focusing on modal interconnection, end effectiveness and efficiency of public transport modes (\$2.4m from the grant plus \$6.1m from the Government) 3. Pilot investments and technical assistance focusing on non-motorized transport initiatives (\$1.4m from the grant plus \$1m from the Government)
Policy components:	Increasing market share of public transport modes
Institutional components:	Instituting urban transport and land use plans as instruments towards sustainable transport

Monitoring indicators	<p>(1) an increase in the number of trips in public transportation by 10% in the intervened corridors (sub-projects under Window 3) in relation to baseline data for the relevant corridor;</p> <p>(2) an increase in the number of NMT trips by 5% in areas of intervention (sub-projects under Window 4) in relation to baseline data for the relevant corridor; and</p> <p>(3) a decrease by 5% of CO₂-equivalent tons emitted by ground transport in intervened corridors resulting from improvements to modal split, where applicable.</p> <p>(4) number of transport and urban development plans and regulatory and financial incentives that are in place for sustainable transportation at local and national level; and</p> <p>(5) number of internationally recognized validated methodologies applied to assess GHG and air pollutant emissions as a result of transport and land-use measures.</p>
Complementary operations	<p>In Argentina, this operation belongs to a sequence of projects, which also includes:</p> <ul style="list-style-type: none"> - Buenos Aires Urban Transport Project (1997, P039584) - Metropolitan Areas Urban Transport Project, Phase 1 of an APL (2009, P095485) <p>Regionally, this operation is a part of Latin America GEF Sustainable Transport and Air Quality Program Horizontal APL (2008, P096017). Similar national grant agreements have been reached with Brazil and Mexico.</p>
Results at completion:	
Team	Veronica Raffo (lending)
Preprofile date and author:	May 20, 2010; Slobodan Mitric

Links to key documents of the Argentina – GEF Sustainable Urban Transport and Air Quality Project:

Program Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2008/10/10/000334955_20081010051846/Rendered/PDF/430490PGDoP1141Y10GEF1SecM200810036.pdf

URBAN TRANSPORT IN METROPOLITAN AREAS (Po95485)	
Country and region:	Argentina, LAC
Borrower:	Government of Argentina
Implementing agency and arrangements:	Ministry of Federal Planning, Investment and Services, Project Implementation Unit within the Secretariat of Transport (same as for the Buenos Aires Urban Transport Project)
Board approval date:	October 20, 2009
Effectiveness date:	Pending as of May 19, 2010
Closing date:	February 29, 2016 (original)
Instrument category:	APL (Project is the first phase of the Metropolitan Areas Urban Transport Program)
Project structure by sector:	General transport sector, 80%; public administration – transport, 20%
Project total cost in US\$:	187.1m
WB commitment in US\$:	150m
Co-financiers:	None
Final project cost in US\$:	
Amount disbursed in US\$:	
Diagnostic highlights	<p>Argentina is 89% urbanized, dominated by the Buenos Aires area (AMBA, 13m) which alone accounts for about 37% of the country's population. The City of Buenos Aires exceeds 3m. The next largest group of urban areas are medium-size, with several of their central cities exceeding 1m. The urbanization process continues, most of it in the low-income strata and taking place at urban perimeters in the form of low-density sprawl. Public investment in infrastructure and services has lagged behind the urbanization process and the concurrent rise in motorization, especially so at urban fringes. The lag is mainly due to a series of economic crises, the most recent one in the early 2000s, but also to the political/administrative structure of Argentina with its three layers (national, provincial and municipal) none of which matches the boundaries of urban agglomerations. This has often left the national government to act as a surrogate urban government.</p> <p>Rapid motorization notwithstanding, public transport modes still carry the greatest part of urban daily travel, 60-70%. Street buses account for most of this market. In Buenos Aires alone, there are 17,000 vehicles operated by around 300 companies, all private following a reform of 1995. The area is also served by a 6-line metro and a 7-line suburban railway system. The metro and all but 2 suburban rail lines are operated under concessions, but the infrastructure and rolling stock are still in public ownership, national (metro and all suburban rail lines under concession) or provincial. Bus services are regulated by different levels of government, depending on whether they extend beyond municipal and/or provincial boundaries. The coverage of the transport system is good, though some large pockets of underserved citizens remain or are formed anew at urban fringes. Service levels are low, however, for a variety of reasons including street congestion (for bus services), low investment in infrastructure and rolling stock (for rail-based systems), and low incomes of many passengers (downwards pressure on fares).</p> <p>Significant infrastructure investments are needed if the rise of motorization is to be counterbalanced by good-quality services offered by public transport modes. In Buenos Aires metropolitan area, it was expected that such investments would follow the signing of concessions for suburban railways and the metro, with government investing in infrastructure and concessionaires contributing by other</p>

	<p>investments. These have taken place partially and belatedly, with the metro system getting somewhat more attention and succeeding by the end of the decade to provide a better quality of service. Much more investment is needed and will require other strategic decisions, especially the break away from paying large operational subsidies to operators to compensate for keeping fares low. Imperative during the economic crisis, this has led to operator inefficiencies, and drained funds needed for infrastructure investments and ultimately unsustainable.</p> <p>For strategic shifts to take place, means have to be found to cure the fragmentation of institutional set up for urban transport management, regulation and planning. The need for a transport agency with a multi-modal and metropolitan scope is acute in Buenos Aires but such an agency is also warranted in other cities to overcome local fragmentation.</p>
Development objectives:	<p>The overall development objective of the Metropolitan Areas Urban Transport Program, to be done in 2 phases, is to improve the quality and sustainability of urban transport systems in Argentine urban areas, through the improvement of the decision making framework and by giving priority to public transport modes in the urban transport sector.</p> <p>This Project's (APL, Phase 1) development objectives are to:</p> <ul style="list-style-type: none"> (i) support the creation of a multijurisdictional Metropolitan Transport Agency for the Buenos Aires Metropolitan Area (AMBA); (ii) strengthen the institutional capacity of the transport authorities participating cities in decision making, planning, priority setting, and resource allocation in urban transport; (iii) improve the quality and performance of urban transport infrastructure and/or services in the participating medium size cities; and (iv) improve the physical integration and access to public transport networks in the Buenos Aires Metropolitan Area.
Investment components:	<p>Component 1: Creation of a Metropolitan Transport Agency (MTA) for the Buenos Aires Metropolitan Area (\$28.5m, without contingencies). This component will prepare the legal, technical, financial and institutional conditions for the creation of a Metropolitan Transport Agency (MTA). Among other items, the component includes setting up and equipping an urban Transport Observatory to collect, process and maintain transport and air quality data; and preparatory studies for introducing electronic fare payment for all participating urban areas.</p> <p>Component 2: Urban transport improvements in Argentina's medium size metropolitan areas – Mendoza, Posadas, Tucuman, Cordoba and Rosario (\$62.m, without contingencies). The component will finance: (a) one or more priority projects that are in an advanced state of planning and have been evaluated from social, environmental and economic perspectives, and (b) a set of specific feasibility studies and/or final designs for future projects that result from comprehensive transport studies currently under way and studies to support interested cities in meeting the eligibility criteria so that they may participate in the second phase of the Program. Investments include street paving, storm and water drainage, segregated busway (Posada)</p> <p>Component 3: Public transport access and modal integration in Buenos Aires Metropolitan Area (\$53.6m, without contingencies). This component will include infrastructure works on transfer centers, train stations and grade-separated crossings. It will also feature operational improvements in the current train signaling system.</p> <p>Component 4: Sector training: urban transport planning master (\$2.5m, without contingencies). The component will design a postgraduate course (Masters) in urban transport including all the component disciplines such as engineering, planning, economics, etc.</p> <p>Component 5: Project management (\$4.6m, without contingencies). This component will finance the PIU to carry out the proposed operation.</p>

Policy components:	None
Institutional components:	<ul style="list-style-type: none"> (i) Creation of a multijurisdictional Metropolitan Transport Agency for the Buenos Aires Metropolitan Area (AMBA); (ii) Creation of a post-graduate course in urban transport planning at a local university at master's degree level
Additional project features	<p>The eligibility criteria for a city or metropolitan area to participate in the Program:</p> <ul style="list-style-type: none"> (i) An urban transport policy or strategy that favors public transport; (ii) A Master or Strategic Transport Plan for the metropolitan area that has been adopted, is duly recognized, and has been published; (iii) An origin-destination household survey that provides information on mobility indices in the metropolitan area; and (iv) A working computer-based transport model for the metropolitan area. <p>Triggers for APL-Phase II:</p> <ul style="list-style-type: none"> 1. The creation of the Buenos Aires Metropolitan Area Transport Agency (MTA) 2. Buenos Aires Metropolitan Area sub-projects to be included in Phase 2 are ready to be implemented 3. Medium Size Metropolitan Areas sub-projects to be included in Phase 2 are ready to be implemented 4. Adequate overall progress of the Phase 1 (Project)
Complementary operations	The APL follows and overlaps with the Buenos Aires Urban Transport Project (P039584), approved in 1997, with additional finance approved in 2007. Similarly, the Project is complemented by the GEF-funded Sustainable Transport and Air Quality Project (P114008) approved in 2008.
Monitoring indicators	<p>(numbers refer to the objectives listed above)</p> <ul style="list-style-type: none"> (i) Successful creation of the AMBA Transport Metropolitan Agency (legal creation, adequate staffing, has appropriate offices, equipment and operating budget); (ii) (a) Updated urban transport plans for participating cities (OD surveys, demand/supply models, urban transport/land master plans); (b) AMBA Urban Transport Planning Observatory fully functional; (c) AMBA transport master plan completed; (iii) (a) Tucuman: % high school students absent on low transitivity days; number of medical appointments cancelled on low transitivity days; number of days with no circulation of public buses; average speed of public buses in Barrio 11 de Marzo; (b) Posadas: users' perception of public transport system; average speed of public buses on corridor; (c) Mendoza: availability of public buses along Papagayo corridor; (iv) users' perception.
Status and results:	
Team	Andres Pizarro (lending)
Profile date and author:	May 19, 2010; Slobodan Mitric

Links to key documents of the Argentina - Urban Transport in Metropolitan Areas Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2009/10/22/000350881_20091022105824/Rendered/PDF/504670PADoBox342008B01PUBLIC1.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/LCR/2010/12/15/521EFB30E5E45B93852577FA007D1DCD/1_o/Rendered/PDF/L77940ARoCONFORMED.pdf

RIO DE JANEIRO MASS TRANSIT SYSTEMS PROJECT II (P111996, Loan 7719-BR)	
Country and region:	Brazil, LAC
Borrower:	State of Rio de Janeiro (with a Federal Government guarantee) passed to Central under a subsidiary loan agreement
Implementing agency and arrangements:	<u>Overall responsibility:</u> State Secretariat for Transport (SETRANS) <u>Implementation management:</u> <u>Companhia Estadual de Engenharia de Transportes e Logística</u> (CENTRAL) state agency in charge of the suburban railway system, successor to FLUMITRENS; reports to SETRANS
Concept review date:	October 16, 2008
Board approval date:	July 9, 2009
Effectiveness date:	December 3, 2009
Closing date:	June 30, 2014
Instrument category:	SIL
Project structure by sector:	General transport sector, 100%
Project total cost in US\$:	221m
WB commitment in US\$:	211.7m
Co-financiers:	None
Final project cost in US\$:	
Final amount disbursed in US\$:	
Diagnostic highlights	<p>The City of Rio de Janeiro (5.7m) and the wider RJ metropolitan area (9.8m) suffer from congested urban transport and polluted air, with its low-income population bearing the brunt of poor services and environmental blight, in addition to other problems of municipal infrastructure and services. Since early 1990s, an effort has been mounted to raise the level of services by the area's extensive but faltering railway system (240km network) and integrate it with other public transport modes – the 3-line metro and street bus services, thus improving the lot of travelers overall and increasing the market share of the system (now mere 4%) which has structural advantages of its own reserved track and a potentially great capacity. This was done first by transferring the ownership of the rail system from the Federal Government to the State of Rio de Janeiro, then by turning operational functions to a private concessionaire, making significant rehabilitation and modernization investments, and by introducing new policies re services and fares. The State retained the ownership of infrastructure and fleet and shares the demand/revenue risk with the private operator. The effort had its ups and downs, correlated with the dynamics of the Brazilian economy, but has made major progress in making operations more cost-efficient, increasing the quantity and quality of services, linking with other modes through station improvements and fare integration, and almost eliminating the previously enormous operational subsidies. It also increased the rail ridership substantially (from 236,000 passengers a day in 1999 to 464,000 in 2008), though still falling short of its goal of 1m passengers a day. The size of its fleet is on the critical path, as is further integration with the bus system, a part of which is informal, low-quality and low-price, and predatory. Further developments depend on overcoming political obstacles to fare and services integration due to administrative fragmentation (State, urban region, the Municipality of Rio, and many other municipalities), but also the fundamental tension between the objectives of increasing the public transport level of service, having low operational</p>

	subsidy (or none) and ensuring affordability to low-income residents.
Development objectives:	<p>(a) improve the level-of-service provided to the suburban rail transport users in the Rio Metropolitan Region in a safe and cost-efficient manner; and</p> <p>(b) improve the transport management and policy framework in the RJMR.</p> <p>As can be concluded from indicators cited below, the Project has one implicit development objective, in addition to those stated above:</p> <p>(c) enhance/preserve the mobility of lowest-income population of the Rio Metropolitan Area</p>
Investment components:	<p>Part A: Equipment and infrastructure (US\$187.3m exclusive of contingencies) Acquisition of at least thirty (30) trains (EMUs) of four (4) cars each and accessories for a total of at least 120 cars to be operated on the suburban railway network by the Concessionaire under the terms of the Concession Contract.</p> <p>Part B: Institutional and Policy Development (US\$4.8m exclusive of contingencies)</p> <ol style="list-style-type: none"> 1. Provision of technical assistance to State Secretariat of Transport for the carrying out of studies on policy development, including: <ul style="list-style-type: none"> (a) further development of the Metropolitan Transport Agency (AMTU-RJ); (b) updating the current integrated transport policy, land use and air quality management master plan (PDTU) for the Rio de Janeiro Metropolitan Region; and (c) fare integration 2. Provision of technical assistance to CENTRAL for the management and supervision of the Project.
Policy agenda:	Further fare integration for the public transport system of the Rio Metropolitan Area (suburban railways, metro, inter- and intra municipal street buses, metro)
Institutional agenda:	<p>No new institutions are envisaged. The Project will support further development of AMTU-RJ in terms of skills, scope of the work, and its expansion to include municipalities that have not yet joined.</p> <p>The Project will assist in updating the Integrated Urban Transport, Land Use and Air Quality Master Plan. Dimensions in which special efforts will be made include: air quality, fare/subsidy (cost recovery) issues as they relate to patronage and poverty reduction, and fare integration</p>
Additional project features	<p>In support of policy and institutional initiatives of the Project, The Loan Agreement has the following non-dated covenant (cf. Schedule 2, Section V):</p> <p>The Borrower shall, within the limits of its authority, at all times during the implementation and until the completion of the Project:</p> <ol style="list-style-type: none"> (i) maintain the AMTU-RJ; and (ii) introduce and maintain a type of Integrated Modal Tariff (IMT), in the present or other format as long as it continues to enhance the mobility and affordability of metropolitan transport to users, particularly those of low-income. (iii) undertake its best efforts to extend the IMT to other modes of transportation and expand the AMTU-RJ to include other municipalities of the RJMR.
Complementary operations	The Project is the third in a sequence of urban transport operations in the State of Rio de Janeiro. The first operation (P006547) helped move the ownership of the suburban railways system to the state level, and the second one (P043421) helped shift operational responsibilities to a private concessionaire; both projects invested in infrastructure renewal and fleet improvements of the system. Rio de Janeiro State Reform Privatization Project (P039197) created a legal basis for private operations of a State-owned facility.
Monitoring indicators	<ol style="list-style-type: none"> 1) In-vehicle travel time plus waiting time 2) Passengers per square meter in peak hour

	3) Percentage of low-income passengers on the suburban railway system 4) Bicycle parking facilities installed at railway stations 5) Number of stations on the suburban railways system with bus/rail fare integration 6) Off-peak hours of the day when smartcard-based discounted fare is to be offered
Status:	Active
Team	Jorge Rebelo (lending); Arturo Ardila Gomez (SPN)
Profile date and author	May 28, 2010; Slobodan Mitric

Links to key documents of the Rio de Janeiro Mass Transit Project II:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2009/06/23/000333037_20090623010442/Rendered/PDF/467550PADO111101OfficialUseOnly1.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/LCR/2009/10/21/EA4CE268D5FC0E9185257656005CE790/1_o/Rendered/PDF/L77190BRoCONFORMED.pdf

COMMENTS

The Rio MTP-II has dropped the demand objective that featured so prominently in the predecessor project (Rio MTP) – as measured by the number of daily passengers carried and the modal share of suburban railways.

FRAMEWORK FOR GREEN GROWTH DEVELOPMENT POLICY LOAN (P115608)	
Country and region:	Mexico, LAC
Borrower:	Federal Government of Mexico
Implementing agency and arrangements:	Secretariat of Finance and Public Credit (<i>Secretaria de Hacienda y Crédito Público, SHCP</i>) with the participation of the directorate members of the Federal Mass Transit Program (PROTRAM).
Concept review date	June 26, 2009
Board approval date:	October 20, 2009
Effectiveness date:	December 14, 2009
Closing date:	December 31, 2010
Instrument category:	DPL, single-tranche
Project structure by sector:	Renewable energy, 50%; general transport sector, 50%
Project total cost in US\$:	Not applicable
WB commitment in US\$:	1,504m (Loan 7790-MX)
Amount disbursed in US\$:	1,504m
Diagnostic highlights (urban transport aspects only)	<p>Going well beyond traditional concerns in urban transport (service attributes, and efficiency of provision of infrastructure and services), urban transport in Mexico has two additional critical dimensions, in poverty reduction and in preservation of the environment, including the climate change. The country is 77% urbanized. Around 31m (30% of the country's population) live in the few main metropolitan areas at high densities (5,800 people per km² in the Federal District), and with employment centers distant from lower-density residential quarters. Mexico City Metropolitan Area (MCMA) alone has 19m people. Though the motorization rate is still low at 107 vehicles per 1,000 people, vehicle ownership is increasing by about 10% per annum. Attempts to accommodate this by building more roads especially urban expressways have never caught up. Modal share of public transport modes has slipped beneath 70% in the MCMA and is further decreasing, in spite of having built a 200-km metro system. The problem is even worse in secondary and tertiary cities. The traditional Mexican approach for urban public transport services has been "hombre-camion" i.e. individual owner-operators competing for the market with scant regulations (mainly simple service authorizations by municipalities) and no subsidies. Small vehicles are dominant, and the fleet age is considerable. The cumulative result of this approach has been an oversupply of low-quality services, in an environment of severe congestion, with high accident rates and high external costs, especially air pollution in general and GHG emissions in particular. Mexico is second-largest GHG emitter in the region and 13th largest in the world, with energy and transport sectors accounting for 27% and 18% of the total, respectively. In 2009, the Federal Government of Mexico committed to halving GHG emissions by 2050 and adopted a Special Program for Climate Change, addressing emissions produced by each economic sector, listing initiatives for reduction, and creating a system for monitoring change. It is also trying generally to reduce the carbon intensiveness of the transport sector by switching to clean and efficient technologies.</p> <p>To succeed in this endeavor, Mexico has to tackle the structural problem underlying its street-level urban transport problems. This is a fragmented and complex institutional system not sufficiently capable of the coordinated effort now required. Urban public transport and urban roads are outside the scope of direct responsibility of the Federal Government. This responsibility belongs to states and</p>

	<p>municipalities (inclusive of responsibilities delegated to municipalities by states). Each state has its own transport law. The third (Federal) level of government exists only in the Mexico City. At each level, there are also multiple agencies dealing with various aspects of transport. Engagement of the Federal Government in this sector appears highly warranted for the success of an ambitious program with both local and global ramifications, and has commenced. Beyond the Special Program for Climate Change, the most significant signs of this is the setting up of the National Infrastructure Fund (FONADIN) which provides loans and grants for infrastructure and equipment to municipalities and loan guarantees to private co-investors. FONADIN is nourished from revenue earned on inter-municipal toll roads and from the Infrastructure Investment Fund. It is administered through BANOBRAS. Subsequently, a National Mass Transit Program (PROTRAM) was set up within FONADIN specifically to fund urban mass transit projects (both rail and bus based), with participation by the private sector. PROTRAM's investment decisions are made by the Consultative Working Group headed by the SHCP and with representatives from all relevant agencies.</p> <p>On city level, there is evidence of an emerging urban transport strategy linked to climate change concerns. The strategy features the establishment of high-capacity and high-quality public transport corridors and ancillary service networks which, together, are expected to reverse the downward trend in passengers. Corridors feature energy-efficient and low-emission bus-based rapid transit services whose infrastructure is in public hands and operations are a mixture of public and private companies. A complementary part of the program involves scrapping of aged bus vehicles. This approach is seen as an alternative to building more limited-access roads and metros.</p>
Development objectives:	<p>On the sector side, the objectives were to assist in further development of the regulatory, monitoring and financial framework for low emissions evolution of the urban transport and energy sectors.</p> <p>On the macro side, an implicit objective was to help Mexico get out of the recession that followed the global economic downturn in 2008.</p>
Investment components:	Not applicable to DPLs
Policy and institutional agenda:	<ol style="list-style-type: none"> 1. implement a verifiable, targeted and cross-sector strategy for emission reductions; 2. establish institutions, regulations and monitoring capacity to allow for the reduction of emissions in urban transport, energy generation and efficiency; and 3. institutionalize the appropriate financing mechanisms to allow for the reduction of emissions in, urban transport, energy generation and efficiency.
Operational policy matrix (urban transport aspects only)	<p>Policy area 1 - Comprehensive policy framework for the reduction of emissions across sectors:</p> <p><u>Prior actions:</u> approval and publication of the Special Program for Climate Change (PECC).</p> <p><u>Outputs at ICR date:</u> completion of the National Emissions Inventory and submission by the Government of the 4th National Communication to United Nations Framework Convention on Climate Change (UNFCCC).</p> <p><u>Medium-term outcome:</u> reduction of CO₂ emissions as provided for in the Special Program for Climate Change.</p> <p><u>Monitoring and evaluation indicators:</u> CO₂ emission savings specified in the Special Program for Climate Change.</p> <p>Policy area 2 – Enabling and monitoring framework for the reduction of urban transport emissions:</p> <p><u>Prior actions:</u> resolution for the creation of PROTRAM and its Consultative Working Group, with FONADIN's participation in the latter.</p> <p><u>Outputs at ICR date:</u></p>

	<p>PROTRAM to have adopted guidelines for urban transport planning that mainstream the climate change, and methodology guidelines for developing corridor emission baselines.</p> <p><u>Medium-term outcome:</u> Municipalities' urban transport programs incorporate sustainability and climate change considerations.</p> <p><u>Monitoring and evaluation indicators:</u> (1) number of municipalities that have prepared urban transport programs based on PROTRAM guidelines (baseline 0, target 2); and (2) number of municipalities that have developed emissions baseline for transit corridors based on PROTRAM guidelines (baseline 0, target 2).</p> <p>Policy area 3 – establishment of financing mechanisms to facilitate the reduction of emissions in urban transport:</p> <p><u>Prior actions:</u> Presidential Decree, Fourth Modifying Agreement and Operating Rules establishing FONADIN and its operating principles, which creates the framework for the financing of federal transfers to urban mass transit programs.</p> <p><u>Outputs at ICR date:</u> FONADIN's technical committee approves funding for urban transport programs that incorporate climate change considerations.</p> <p><u>Medium-term outcomes:</u> FONADIN has evolved into a source of funding that facilitates sustainability and climate change considerations for municipalities preparing their mass transit support programs.</p> <p><u>Monitoring & evaluation indicators:</u> Number of requests for funding received by FONADIN for urban transport programs that promote reduction of emissions. Baseline: 0. Target: 10</p>
Complementary urban transport operations	<p>There has been a long string of urban transport and air quality projects in Mexico. The first was Transport and Air Quality Management Project for the Mexico City Metropolitan Area (P007694, 1992-1999). It invested in air quality monitoring and vehicle testing and retrofit equipment, while helping to develop policy and institutional framework to support transport and air quality objectives. Under the Medium Cities Project (US\$200m loan, P007648, 1993-2003), the role of the Federal Government was enhanced, several cities developed Integral Transport Plans (ITP), and a line of credit was provided for transport improvements in these cities that went through the ITP exercise.</p> <p>In the 2000s decade, three other technical assistance operations supported institutional change: GEF-funded Climate Friendly Measures in Urban Transport (P059161, approved in 2002); Mexico City Insurgentes BRT (P082656, approved in 2005), the first carbon finance operation in the world; and GEF-funded Sustainable Transport and Air Quality Project (P114012, approved in 2009), meant to assist the selected municipalities to reduce greenhouse gas (GHG) emissions growth rates by fostering long term increases in the use of less energy intensive transport modes; and induce policy changes in favor of sustainable transport projects. An additional carbon finance operation for Mexico City Low Carbon Bus Corridor Project is under preparation (P106305, approval expected in FY 2011).</p> <p>In 2007-2008, the Bank mounted a fee-for-service technical assistance operation, Mexico Mass Urban Transport Federal Program (P110474), assisting in the design and establishment of PROTRAM. The follow-up lending operation is the Urban Transport Transformation Program (P107159, \$150m WB loan and \$200m loan from the Clean Technology Fund, approved in 2010). Its main objective is to contribute to the transformation of urban transport in Mexican cities toward a lower carbon growth path. It retains the institutional dimension of GEF-funded projects but adds a large investment component to complement funds coming from the FONADIN/PROTRAM, with somewhat broader eligibility criteria. The program has three main components: capacity building, notably the preparation or update of Integral Urban Mobility Plans (including climate change considerations); the development of integrated transit corridors meant to reduce GHG emissions in the context of the National Climate Change Strategy and the Special Program for Climate Change; and promotion of low carbon bus technologies coupled with scrapping of old buses.</p>

Status and results:	<p>The loan was fully disbursed and all agreed activities were carried out. The (draft) ICR gave a satisfactory rating for development outcome, with low or negligible risk. All other ratings are satisfactory.</p> <p>Achievements relative to outcome indicators by policy areas cited above:</p> <ol style="list-style-type: none"> 1. The Government completed its National Emissions Inventory in 2009 and submitted the 4th National Communication to the UNFCCC. 2. PROTRAM adopted guidelines for urban transport planning incorporating climate change and emission baseline measurement that cities applying for funds must comply with; in addition, going beyond agreements under this operation, PROTRAM mandated that cities that apply for federal aid must use MASTU - the safeguards framework prepared for the Bank-funded Urban Transport Transformation Project. 3. PROTRAM's technical committee received 41 grant applications from cities, and approved funding for Mexicali, Chihuahua and Monterrey (Guadalajara was also approved but withdrew after some local disagreements) <p>Among the lessons learned, the draft ICR points out the necessity for a permanent (continuous) follow up of indicators such as those involving GHG emissions, it being of limited value to tie these to such milestones as the completion of an ICR.</p>
Team	Jordan Schwartz (program team leader at approval); Arturo Ardila (lending, ICR - urban transport aspects); Rigoberto Yopez-Garcia (ICR team leader); Roberto Aiello (ICR)
Profile date and author:	June 25, 2011; Slobodan Mitric

Links to key documents of the Mexico Framework for Green Growth Development Policy Loan:

Program Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2009/10/16/000350881_20091016091956/Rendered/PDF/494910PGDoREVI101OfficialoUseonly1.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/LCR/2009/12/21/ADB34A93E7669FA9852576930052E823/1_o/Rendered/PDF/L77900MXoCONFORMED.pdf

SUSTAINABLE TRANSPORT AND AIR QUALITY (P114012)	
Country and region:	Mexico, LAC
Borrower:	Federal Government of Mexico, through Secretariat of Finance and Public Credit (<i>Secretaria de Hacienda y Cre'dito Ptibiiico</i>) – recipient of the grant.
Implementing agency and arrangements:	SEDESOL - Secretariat of Social Development (<i>Secretaria de Desarrollo Social</i>) is responsible for overall project implementation. BANOBRAS - National Bank for Works and Public Services (<i>Banco Nacional de Obras y Servicios Ptibiicos, S.N. C.</i>) is responsible for financial administration of the Project and will manage the Designated Account. In order to benefit from the proceeds of the grant, participating municipalities are required to sign Participation Agreements with implementing agencies.
Concept review date:	April 8, 2005
Board approval date:	December 23, 2009
Effectiveness date:	November 24, 2010 (expected)
Closing date:	December 31, 2013
Instrument category:	Global Environment Project
Project structure by sector:	Public administration – transport, 50%; general transportation sector, 40%; health, 10%
Project total cost at appraisal (in US\$):	37m
Financing plan (in US\$):	Borrower – 31.6m; GEF grant – 5.4m
Final project cost in US\$:	
Final amount disbursed (US\$):	
Diagnostic highlights	<p>The transport sector is estimated to be responsible for more than one-third of all carbon dioxide emissions in Latin America, and is on the increase, due to linked processes of urbanization (involving both demographic and spatial changes), economic growth and motorization. The continent is already highly urbanized (75%), so the majority of vehicle kilometers of travel and transport-related emissions come from cities. In passenger travel, public transport modes are losing passengers in favor of individual motor vehicles, in addition to the structure change in the public transport fleet where small-size, often overage and highly polluting buses have dwarfed standard size ones. Traffic and access problems are compounded by poor road networks and weak traffic management, affecting urban economies, the quality of life (especially that of low-income residents) and local & global environment. This situation is intolerable. Fortunately, motorization levels are still relatively low (around 100 vehicles per 1,000 people) and there is much scope for improvement in the supply of public transport services. Changing the modal split to increase travel on efficient and climate friendly public transport modes, walking and bicycling is expected to have positive impacts all around, ultimately on GHG emissions as well. This requires some conventional and some innovative actions in investments and policies, all of which pre-suppose strong and cooperating institutions, which in turn needs an underlying political agreement now in short supply.</p> <p>Mexico shows these trends clearly. Around 31m (30% of the country's population) live in the few main metropolitan areas at high densities (5,800 people per km² in the Federal District), and with employment centers distant from lower-density residential quarters. Motorization is increasing by about 10% per annum. Modal</p>

	<p>share of public transport modes has slipped beneath 70% and is further decreasing. The traditional Mexican approach for urban public transport services has been “hombre-camion” i.e. individual owner-operators competing for the market with scant regulations. The cumulative result of this approach has been an oversupply of low-quality services with high accident rates and external costs, especially air pollution in general and GHG emissions in particular. Mexico is second-largest GHG emitter in the region and 13th largest in the world.</p> <p>Repairing the fragmentation of institutional responsibilities for urban transport matters in Mexican cities is on the critical path to making progress on the street level. Mexico has an unusual institutional feature, in that urban public transport is outside the scope of direct responsibility of the Federal Government. This responsibility belongs mainly to states, while municipalities are responsible for roads. Each state has its own Transport Law. States may delegate various aspects of urban transport services to municipalities. The third (Federal) level exists only in the Mexico City. Recent signs of Federal Government’s re-engagement is that urban transport projects can draw on resources from the National Infrastructure Fund (FONADIN), set up from toll road revenues, administered through BANOBRAS. A National Mass Transit Program (PROTRAM) was set within FONADIN to fund projects, but restricted to those with private sector participation. In recent years, Mexico has become among the most active states relative to environmental agenda, especially the reduction of GHG emissions and generally reducing the carbon intensiveness of its transport sector.</p> <p>Mexico City, Leon and Monterrey have started actions to improve their public transport systems, using such innovations as bus-based rapid transit as catalysts better to integrate the supply of services and generally to improve the regulation of public transport operations. The challenge is to continue these efforts, address other parts of the large institutional agenda, and expand these processes to other cities.</p>
Development objectives:	<p>Specific development objectives are to assist the selected municipalities to:</p> <ul style="list-style-type: none"> (i) reduce greenhouse gas (GHG) emissions growth rates by fostering long term increases in the use of less energy intensive transport modes; and (ii) induce policy changes in favor of sustainable transport projects.
Investment components:	<ol style="list-style-type: none"> 1. Freight Management (US\$0.12m): Provision of technical assistance to improve the planning, management and control of freight transport in Ciudad Juarez; 2. Land Use and Transport Coordination (US\$0.2m): Provision of technical assistance to develop a sustainable approach to address urban mobility patterns and lessen barriers to better integrated planning in Ciudad Juarez and Puebla; 3. Public Transport Enhancement (US\$3.6m): Provision of technical assistance and training to the selected municipalities to facilitate the improvement of public transport systems (focusing on bus-based rapid transit), the effectiveness and interconnectivity of those systems with other modes of transport, and induce mode switching away from the use of private cars; 4. Non-motorized Transport (US\$1.1m): Provision of technical assistance to the selected municipalities to better integrate walking and biking into the municipalities’ cultural and planning processes and to create incentives for their use as a viable and safe alternative to traditional motorized transport systems; 5. Project Management (US\$0.3m): Provision of technical assistance and financing for short term technical support staff of the PCU for the supervising and monitoring of the implementation of the Project in the selected municipalities.

Policy agenda:	Promotion of bus-based rapid transit, favoring walking and bicycle use, and promotion of private sector participation in urban transport management
Institutional agenda:	The creation of a specialized entity responsible for urban transport planning (a planning municipal institute) within the municipality in Puebla
Performance indicators	<p>Key indicators linked to the first development objective are:</p> <ul style="list-style-type: none"> (i) number of trips in public transportation in intervened corridors compared to corridor baseline (first DO); (ii) number of NMT trips in intervened areas compared to baseline in corridor (first DO); (iii) decrease of Co₂-equivalent tons emitted by ground transport in intervened corridors, all measured within the area of influence of the relevant component or sub-project (first DO); and (iv) number of cities that are integrating environment and climate change components with urban transport, and land use into master plans, and studies developed, including regulatory and financial frameworks that foster sustainable transport systems at local and national level (second DO). <p>These performance indicators are consistent with the Regional STAQ Project.</p>
Complementary/related operations	<p>This Project is a country complement of the regional, GEF-funded program for the LAC region (Po96017, approved in 2008, US\$2.9m grant, with the Clean Air Initiative as the implementing agency). Such complementary projects were also done for Argentina and Brazil. The regional operation is meant to foster exchanges across countries.</p> <p>The approach pioneered by the GEF-funded program is to co-finance studies, technical assistance and some pilot investments (no civil works) aiming at comprehensive urban transport and land use policies in general, and at climate-friendly changes in modal split in particular.</p> <p>Generally, the Project (and the whole regional effort of which it is a part) aims to mainstream environmental concerns into sector policies, programs and investments.</p> <p>In Mexico, there have been several Bank-funded operations focusing on urban transport and air quality. The first was Transport and Air Quality Management Project for the Mexico City Metropolitan Area (Po07694, 1992-1999). It invested in air quality monitoring and vehicle testing and retrofit equipment, while helping to develop policy and institutional framework to support transport and air quality objectives. Subsequently, under the Medium Cities Project (US\$200m loan, Po07648, 1993-2003), the role of the Federal Government was enhanced, several cities developed Integral Transport Plans (ITP), and a line of credit was provided for transport improvements in these cities. This project had a less explicit focus on air quality aspects of urban transport.</p> <p>More recently, two other operations addressed urban transport and climate change: GEF-funded Climate Friendly Measures in Urban Transport (Po59161, approved in 2002), and Mexico City Insurgentes Avenue BRT, the first carbon finance operation in the world (Po82656, approved in 2005). An additional carbon finance project is under preparation (P106305, approval expected in FY 2011).</p> <p>A development policy loan, Framework for Green Growth (P115608, US\$1,504m, approved in 2009) had a twin focus on urban transport and energy, addressing institutional change and funding sources at the Federal level. A follow-up operation, Urban Transport Transformation Project (P107159, \$150m WB loan and \$200m loan from the Clean Technology Fund, approved in 2010), retains the institutional dimension of GEF-funded projects but adds a large investment component to complement funds coming from FONADIN.</p>
Results at completion:	
Team	Arturo Ardila (lending, SPN)

Profile date and author:

August 23, 2010; Slobodan Mitric

Links to key documents of the Mexico Sustainable Transport and Air Quality GEF Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2009/12/10/000333038_20091210235744/Rendered/PDF/428800PADoP114101OfficialoUseoOnly1.pdf

Grant Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/LCR/2010/06/25/D7B76D2A98E431328525774D007479E7/1_o/Rendered/PDF/GEFoGrantoAgreement1Conformedocopy.pdf

SUSTAINABLE TRANSPORT AND AIR QUALITY PROJECT (P114010)	
Country and region:	Brazil, LAC
Borrower (recipient):	Brazilian National Association of Public Transport (ANTP)
Implementing agency and arrangements:	ANTP for overall coordination and procurement; municipal governments of the participating cities (Belo Horizonte, Curitiba, Sao Paulo) for technical supervision. A National Consultative Committee will be formed to be a forum for technical discussions and countrywide dissemination of results. All regional interactions will go through the Clean Air Initiative (implementing agency for the regional STAQ)
Concept review date:	April 8, 2005
Board approval date:	December 28, 2009
Effectiveness date:	July 28, 2010
Closing date:	December 31, 2013
Instrument category:	Global Environment Project
Project structure by sector:	Public administration – transport, 100%
Project total cost at appraisal (in US\$):	25.5m
WB commitment in US\$:	8.5m GEF grant
Co-finance (in US\$):	17m from the participating cities
Final project cost in US\$:	
Amount disbursed in US\$:	
Diagnostic highlights	Brazil is already 85% urbanized. Its cities produce 90% of the country's GDP, but also house half of its low-income people. The country went through a wave of privatization and trade liberalization in the 1990s, making access a critical variable in diversified urban economies. Urban demographic and economic growth brought increased motorization and a modal shift away from public transport services. Still, these services and non-motorized transport remain major transport modes, carrying 70-80% of total daily trips. Some Brazilian cities are world leaders in innovative transport actions, notably Curitiba with its linked land use and transport development and world's first introduction to bus-based rapid transit. Overall, though, planning and managing transport and traffic in Brazilian cities has been quite a challenge, and congestion accompanied by accidents, energy waste and air pollution is at levels that cannot be sustained. The majority of GHG emissions (mainly CO ₂) in Brazil, like elsewhere in Latin America, come from motor vehicles in urban use. Supporting the use of non-motorized modes and climate-friendly public transport services, and improving traffic management of both passenger and freight vehicles are unavoidable strategic commitments in local, national and global terms.
Development objectives:	<ol style="list-style-type: none"> (1) foster a long-term increase in the patronage of less energy intensive transport modes so as to promote a reduction in the growth of GHG emissions, and (2) promote the implementation of policies and regulatory frameworks that foster the development of sustainable transport systems.
Investment components:	Component 1 - Freight transport (US\$1.3m from the grant and US\$0.2 local counterpart): Provision of technical assistance and training to improve the efficiency of freight transport in Sao Paulo, and reduce conflicts and impacts on

	<p>other modes of transport.</p> <p>Component 2 – Better coordination and integration of transport and land-use planning and environmental management in Belo Horizonte (US\$0.6m from the grant and the same amount from the counterpart funds): Provision of technical assistance and training to foster more integrated transport and land use planning and to reduce the use of private motor vehicles, reduce trip lengths, and increase the accessibility to public and non-motorized transport.</p> <p>Component 3 - Enhancement of Public Transport in Belo Horizonte, Sao Paulo and Curitiba (US\$2.5m from the grant and US\$10.6 local counterpart): Provision of technical assistance and of training and carrying out of pilot investments to improve public transport systems, facilitate the effectiveness and interconnectivity of those systems with other modes of transport, and induce mode switching away from private vehicles.</p> <p>Component 4 - Non-motorized transport in Belo Horizonte and Curitiba (US\$1.5m from the grant and US\$2m local counterpart): Provision of technical assistance and of training and carrying out of pilot investments to improve the integration of walking and biking into the municipalities' planning processes and transport facilities and to create incentives for their use as a viable and safe alternative to traditional motorized transport systems.</p> <p>Component 5 - Transport Demand Management in Sao Paulo, Curitiba and Belo Horizonte (TDM) (US\$2.5m from the grant and US\$3.5m local counterpart): Provision of technical assistance and training to support the development and evaluation of transport interventions and policies to rationalize use of private vehicles, and create incentives for more widespread use of public transport and non-motorized modes.</p> <p>Component 6 - Project Administration (US\$0.2m from the grant and US\$0.1m local counterpart): Provision of technical assistance and financing for administrative and technical support staff required for the implementation, supervision and monitoring of the Project in the Selected Metropolitan Regions.</p>
Policy components:	No specific policies are pursued.
Institutional components:	No specific institutional changes are pursued.
Performance indicators:	<ol style="list-style-type: none"> (1) an increase in the number of trips made by public transportation within intervened corridors; (2) an increase in the number of non-motorized transport trips within areas of intervention; (3) a decrease in Co2-equivalent emissions by ground transport within the area of influence of the relevant component or sub-project; (4) an increase in the number of cities that integrate environment and climate change components into urban transport and land use master plans, which include the development of regulatory and financial frameworks, that foster the development of sustainable transport systems at local and national levels.
Complementary/related operations	<p>This Project is a country complement of the regional, GEF-funded program for the LAC region (P096017, approved in 2008, US\$2.9m grant, with the Clean Air Institute as the implementing agency). Such complementary projects were also done for Argentina and Brazil.</p> <p>The regional operation is meant to foster exchanges across countries. Lessons and experience across the region will be made available and shared in a common framework to enable leapfrog advancements and reduce the learning curve for cities undertaking measures similar to those adopted elsewhere. It is expected that after starting with a few Brazilian cities, there can be a ripple effect to influence policy change at the country level. This is especially important as fast growing secondary cities in Brazil and in the rest of Latin America will soon reach unsustainable transport and urban development patterns that will be very difficult</p>

	<p>to change.</p> <p>The approach pioneered by the GEF-funded program is to co-finance studies, technical assistance and some pilot investments (no civil works) aiming at comprehensive urban transport and land use policies in general, and at climate-friendly changes in modal split in particular.</p> <p>Generally, the Project (and the whole regional effort of which it is a part) aims to mainstream environmental concerns into sector policies, programs and investments.</p> <p>In Brazil, the Bank has been active in the urban transport field for many years, with a notable series of investment projects in Sao Paulo. The program started with Sao Paulo Metropolitan Transport Decentralization Project (\$126m, Loan 3457-BR, P006379, 1992-1998), followed by Sao Paulo Integrated Transport Project (\$45m, Loan 4312-BR, P006559, 1998-2004); Sao Paulo Metro Line 4 Project (\$209m, Loan 4646-BR; P061596, 2002); Sao Paulo Trains and Signaling Project (\$550m loan, P106038, 2008); and Sao Paulo Metro Line 5, P116170, 2010). The first project involved the transfer of ownership of the regional rail system (CBTU-SP) from the federal Government to the State of Sao Paulo (renamed into CPTM), its rehabilitation and integration with other modes. The second project aimed to involve the private sector in the operations of CPTM, through a concession for one of its lines. The third and fifth projects financed new metro lines, with subsidiary objectives involving the mobility of low-income population and partnering with the private sector. The fourth project supported fleet and traffic control equipment purchases for the suburban rail and metro systems, while also continuing to strengthen transport management and policy framework in the Sao Paulo Metropolitan Region.</p>
Results at completion:	
Team	Paul Procee (lending), George Darido (SPN)
Profile date and author:	October 19, 2010; Slobodan Mitric

Links to key documents of the Brazil Sustainable Transport and Air Quality Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2009/12/14/000333037_20091214235743/Rendered/PDF/521350PADoP114101OfficialUseOnly1.pdf

Grant Agreement:

http://wbln0037.worldbank.org/852572430067B82D/DOC_VIEWER?ReadForm&I4_KEY=5D586A18742853C385257229005C8713B8F62B52E70049BF852576A6002ECE25&I4_UNID=A1DC9A4821554EDB852576EE0073E3B8&

ANNEX 6: PROJECT CAPSULES FOR THE MIDDLE EAST AND NORTH AFRICA REGION

1. Tunisia Transport Sector Project (APL-Phase II) (2001-2009)
2. Algeria – Transport Technical Assistance Project (2001-2007)
3. Lebanon – Urban Transport Development Project (2002)
4. Jordan – Amman Development Corridor Project (2004)

TUNISIA TRANSPORT SECTOR PROJECT, Phase II (Po64082)	
Country and region:	Tunisia, MENA
Borrower:	Republic of Tunisia
Implementing agency and arrangements:	A Project Management Unit set in the Ministry of Transport. Special Protocols signed between the 4 largest participating companies and the Ministry. SNCFT (national railway company) responsible for the railway component, under a separate Project Agreement. A multi-ministerial Steering Committee, set up under Phase I, responsible for oversight.
Concept review date:	February 2, 2000
Board approval date:	April 19, 2001
Effectiveness date:	March 27, 2002
Closing date:	June 30, 2006 (original); October 31, 2009 (actual)
Instrument category:	Adaptable Program Loan (APL)
APL history	The APL was based on the strategy developed by the Government of Tunisia and the Bank in 1995 (link to the report is provided below). The first phase of the APL, approved June 1, 1998, involved a loan of US\$50m, for a project cost of US\$80.2m. It focused on ports and railways sector, including support for sector investments, policy reforms and institution development. It closed in December 2005, following a 3-year extension. The completion report rates its outcome as satisfactory, with high sustainability and substantial institutional impact. The move to the second phase is justified by the key achievements of the first phase.
Project structure by sector:	General transport sector, 52%; Railways, 30%; Sub-national government administration, 15%; central government administration, 3%
Project total cost in US\$:	57m (equivalent to E61m)
WB commitment in US\$:	37.6m (equivalent to E41m)
Final project cost in US\$:	43.4m (equivalent to E34.8m, but at widely variable exchange rates)
Amount disbursed in US\$:	38.3m (equiv to E30.8m);
Diagnostic highlights (for urban and regional public transport companies):	Urban and regional transport services (SNT and SMLT in Greater Tunis and 12 regional bus companies) have been plagued by operational inefficiencies and poor services, largely due to ill conceived and inconsistently implemented fare and subsidy policies, resulting in underfunded service providers and requiring frequent and costly financial restructuring. In addition, the companies suffer from very restricted managerial autonomy, e.g. in hiring, firing, wages, procurement and fares, due to rigid regulatory regime imposed by the Ministry of Transport following a 1996 law (96-74) on public enterprises. 90% of all transport subsidies are received by urban public transport and the national railways company.
Development objectives:	Objectives of the entire Program are to: (i) upgrade economic efficiency and quality of transport services by streamlining sector management, increasing competition, and developing safeguards against negative impacts; and (ii) reduce the transport sector's financial burden on the national budget by greater privatization, and – for the remaining public enterprises- cost cutting, reforming fare subsidies, and improving management. Focus of this second phase operation will be on urban transport services, with an addition (relative to the original design of the program) regarding railway services to the phosphate industry. Also, the second phase returns to a matter residual from Phase I – deregulation of inter-urban passenger transport (a condition of

	<p>effectiveness).</p> <p>The Loan Agreement cites the objectives as being: (i) to create an institutional framework to support sustainable growth of public transport in major cities, and (ii) to enhance the profitability of railway operations in the phosphate sector. The Appraisal Document further details the first objective citing the needs to “nest” urban transport planning within a broader urban development framework, have good coordination of all transport modes to maximize their effectiveness; have a stable funding system to cover the costs of public service obligations; and aim at improved quality of services at affordable costs through better management of public companies and subcontracting some of their services to private providers.</p>
Investment components:	<p>(i) Maintenance facilities and equipment of eligible companies, and severance payments to redundant staff, US\$36.2m; this includes bus depots for SNT (Tunis), STS (Sousse) and SORETRAS (Sfax), and modernization of depots for other companies; traffic control, fare collection and maintenance management systems for SMLT (Tunis rail operator); fare collection systems</p> <p>(ii) Technical assistance for regulatory reform and project preparation, and training, US\$3m;</p> <p>(iii) Infrastructure and operational improvements in the railway lines serving the phosphate industry, US\$17.4m.</p> <p>During implementation, the following studies were added: design studies for a rapid railway project for Greater Tunis (Réseau Ferré Rapide du Grand Tunis); master plans and traffic management plans for several cities; and study of student transport.</p>
Policy agenda (for urban transport only):	Two-pronged reform for urban and suburban passenger transport, directed at (i) management of public-sector companies (managerial freedom, full compensation for public service obligations) and (ii) private sector entry, respectively. In addition, a parking action plan for Tunis was required, aiming to improve bus circulation and promote the use of public transport modes.
Institutional agenda (for urban transport only):	Setting up of public transport authorities in Greater Tunis and governorates outside Greater Tunis
Conditionality:	<p>Condition of Board presentation and loan effectiveness:</p> <p>(i) Approval by the Government of a financial restructuring plan for the SNT was a condition of Board presentation for this Project (met). Financial restructuring of regional bus companies already achieved by 2000</p> <p>(ii) Submission of an Action Plan for a regulatory reform of the public transport sector was a condition of effectiveness</p> <p>(iii) Submission of an action plan for the liberalization of inter-urban passenger transport sector (residual from Phase 1) was a condition of effectiveness. Its implementation was included as non-dated covenant in the Loan Agreement.</p> <p>Milestones included in the Loan Agreement:</p> <p>(i) By December 31, 2002, submission of a draft Transport Law to the Chamber of Representatives;</p> <p>(ii) By December 31, 2002, establishment of appropriate management and regulation mechanism for urban transport in Greater Tunis area;</p> <p>(iii) By December 31, 2002, all sub-contracts between public bus companies and private operators have been entered into; and</p> <p>(iv) Commencing with year 2001, tariffs of the national railway company and 4 major public transport companies (SNT, SMLT, SORETRAS and STS) are set in a manner that allows the companies to meet their financial obligations.</p>

Monitoring indicators:	<p>For the urban transport component, there were 3 groups of agreed indicators;</p> <p>Group 1 (Tunis area): (i) public transport share of motorized trips to be maintained at its 2000 level of 50%; (ii) share of bus-rail transfers to rise from about 3% in 2000 to 10% in 2005 (revised in 2008 to 8.5%); and (iii) bus passenger density to decrease from 10 per m² in 2000 to 8 per m² in 2005.</p> <p>Group 2: (i) subsidies to SNT (Tunis Public Transport Company) to decrease from 35% of total operating costs in 2000 to under 30% in 2005 (revised in 2008 to 27.8%); (ii) subsidies of regional transport companies serving other cities to decrease from 40% of total operating costs in 2000 to under 30% in 2005.</p> <p>Group 3: (i) share of bus-km in Greater Tunis Area subcontracted to private operators to increase from 3% in 2003 to above 5% in 2005 (revised in 2008 to 3.5%); and (ii) share of bus-km subcontracted by regional operators to increase from 5% in 2003 to more than 10% in 2005 (revised in 2008 to 0%).</p> <p>Group 4: (i) staff reduction (target 907 for SNT and regional companies together); (ii) number of passengers per staff (baseline 73 for SNT, 60 for STS and 46 for SORETRAS; targets: 80 for SNT, 76 for STS and 60 for SORETRAS); (iii) fleet availability (base 89% for SNT, 79% for STS and 90% for SORETRAS; targets: 91% for SNT, 88% for STS and 93% for SORETRAS, revised in 2008 to 90%, 88% and 83%, respectively); (iv) annual km in operation per bus, in 1,000 (base 60 for SNT, 68 for STS, and 50 for SORETRAS; targets: 65 for SNT, 76 for STS, and 60 for SORETRAS); (v) annual km per SMLT trainset (base 45,000; target: 54,500 revised in 2008 to 50,000).</p>
Additional remarks:	<p>The loan had two tracks for public transport enterprises: one consisting of extensive regulatory reform, the other consisting of an investment program with multiple implementation entities.</p>
Complementary operations	<p>There is a long history of the Bank's involvement in the urban transport sector in Tunisia. Two free-standing urban transport projects were implemented in 1970s and 1980s. The first, Tunis District and Urban Planning Project (P005614), 1973-1977) financed SNT fleet replacement and expansion, and the rehabilitation of the suburban rail network (TGM). Second Tunisia Urban Transport Project (P005658, 1984-1993) focused on arterial roads, streets and parking in Greater Tunis, though its original design included an investment and regulatory reform program for the SORETRAS company in Sfax, reminiscent of that envisaged in this APL.</p> <p>Several of the public sector reforms addressed in the APL were initiated during the preparation of the Tunisia Public Enterprises Restructuring Loan (PERL, P005710, 1989-1993), but omitted at approval stage, because it was felt that the sector was not ready for major changes.</p>
Results at completion:	<p>Implementation moved at varying speeds for the reform and investment components, with the former having a rapid start, and the latter suffering from long delays – the main factor in extending the loan by 3 years, and still leaving several investments unfinished and the others cancelled. Delays were in great part due to the tense and unpredictable interactions between national High Commission for Procurement (Commission Supérieure des Marchés) and the many implementing entities. An additional factor contributing to implementation delays for investments was the slow completion of design studies. A major factor contributing to both investment delays and policy outcomes was a 2002 decision by the Government to fuse the two public transport companies serving Greater Tunis (SNT and SMLT), without in-depth restructuring.</p> <p>At loan closing, depots were completed for SORETRAS and STS, and depots for SNT and SRTG were nearly completed. The traffic control and fare collection systems for SMLT were cancelled. These delays meant that many service and cost improvements did not materialize, nor did some key outcomes.</p> <p>The study for rapid railway network for greater Tunis was finished, and the Government has approached bi-lateral and European sources for financing this project.</p>

	<p>On the reform side, the systemic transport law was adopted, but most of the 27 needed application decrees, especially those for key financial and institutional provisions of this Law, were not yet enacted. This had downstream impacts on the financial status of companies, especially that of SNT/SMLT, and their ability to improve efficiency and make necessary renewal investments in fleet and equipment. (NB: financial restructuring of regional companies was carried out before the start of APL Phase 2). The private participation in the public transport sector increased in Greater Tunis, but not for regional companies. The urban transport authority for Greater Tunis was not set up, due to the resistance of the Ministry of Interior. In sum, the development objectives were only partially achieved and the prospects for the completion of the reform remained low.</p> <p>The ICR rates the achievement of outcomes as moderately unsatisfactory, with a substantial risk to development outcome. Both Bank and Government performance are rated moderately satisfactory.</p> <p>Regarding monitoring indicators: (a) the public transport share in Greater Tunis could not be maintained at 50%, falling to about 33%; (b) subsidies as % of operating costs decreased marginally for SNT (33.4%) and somewhat more on average for regional companies (30%); (c) the share of sub-contracted services in Tunis reached 7%; and (d) staff reductions at 1271 exceeded the target of about 900 staff.</p> <p>Lessons drawn in the ICR:</p> <ol style="list-style-type: none"> 1. Urban transport reforms are intrinsically difficult to achieve, and projects must be more realistic in both the content and the time schedule. 2. In the presence of major public service obligations, the financial reforms tend to collide with social policies that transcend the urban transport sector, hence the power of the interlocutor institution (Ministry of Transport in this case). 3. Setting up new institutions may involve difficult decentralization issues also transcending urban transport. It is recommended to tackle the process of generating options, having them debated fully with the stakeholders, and having an agreement on the course of action before the implementation starts. 4. Design studies and procurement must not be allowed to create bottlenecks in what is a major process of institutional and policy change. They should be handled early in the project cycle. <p>Another lesson is stated elsewhere in the ICR (Section 2.3): the design of monitoring and evaluation was "somewhat complex" and proved to be too difficult to monitor the achievement of development objectives.</p>
Team:	Michel Loir (lending, SPN); Michel Bellier (SPN, ICR)
Profile date and authors:	October 20, 2010 written by Slobodan Mitric

Links to key documents for the Tunisia Transport Sector Project – Phase II:

Tunisia Transport Sector Review:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/1997/02/01/000009265_3970716145240/Rendered/PDF/multi_page.pdf

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2001/04/27/000094946_01041906223361/Rendered/PDF/multiopage.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/MNA/2004/12/15/639A0B4467B843CB85256F030014F79B/1_0/Rendered/PDF/639A0B4467B843CB85256F030014F79B.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2010/07/02/000334955_20100702015737/Rendered/PDF/ICR13350Po64081Codisclosed061301101.pdf

TRANSPORT TECHNICAL ASSISTANCE PROJECT (Po72458)	
Country and region:	Algeria, MENA
Borrower:	Government of Algeria
Implementing agency and arrangements:	Project Management Unit in the Ministry of Transport, overseen by Coordination and Steering Committee (called "Task Force" in the Loan Agreement) presided by the Secretary-General of the Ministry of Transport, with representatives from other MoT directorates, other interested ministries (Finance, Reform) and Wilaya of Algiers. The Committee also provides a liaison with Ministry of Participation and Coordination of Reforms. A special task force is also set to oversee urban transport aspects of the project for Greater Algiers. Its creation is a condition of disbursement for the loan.
Concept review date:	December 12, 2000
Board approval date:	August 23, 2001
Effectiveness date:	August 27, 2002
Closing date:	December 31, 2005 (original); December 31, 2007 (actual)
Instrument category:	TAL
Project structure by sector:	Roads & highways, 32%; railways, 34%; ports & water & shipping, 24%; aviation, 10%
Project total cost in US\$:	11.3m
WB commitment in US\$:	8.7m
Co-financiers:	None
Final project cost in US\$:	8.6m
Amount disbursed in US\$:	6.5m
Diagnostic highlights	Poor public transport services, with the supply still chained to the public monopoly arrangement
Development objectives:	<p>General objectives are:</p> <ul style="list-style-type: none"> (i) set up a policy and institutional framework encouraging competition and private participation in infrastructure; (ii) mainstream transport concessions by two demonstration projects: Algiers Metro and Djendjen Port; (iii) strengthen the Government's capacity to manage and regulate the transport sector; and (iv) rehabilitate the railways to achieve greater cost efficiency
Investment components:	<ul style="list-style-type: none"> (i) TA to ports, US\$2.4m; (ii) TA to airports, US\$0.4m; (iii) TA to Air transport, US\$0.6m; (iv) TA to SNTF (railways), US\$3.7m; (v) TA for urban transport, US\$3.8m
Policy components:	<ul style="list-style-type: none"> (i) Establishment of a new institutional and financial framework of urban transport in Greater Algiers; (ii) Award of a private concession for Algiers Metro (then under construction);
Institutional components:	<ul style="list-style-type: none"> (i) establishment of an autonomous public transport authority for

	Greater Algiers ("Urban Transport Management Authority")
Monitoring indicators	<p>Relevant to urban transport:</p> <ul style="list-style-type: none"> (i) urban transport (bus) services to be awarded based on a concession approach, by 2005; (ii) concession contract awarded for Algiers Metro; (iii) Transport Authority for Greater Algiers established; (iv) Modal share of public transport services in Algiers to exceed 60% (v) Number of trips per day per inhabitant to exceed 1 (base 0.7)
Complementary operations	<p>This project grew out of a Transport Sector Strategy Note for Algeria, done by the Bank in 1999 (not located in the Image Bank). Several concurrent or overlapping TA projects were made to support reforms in diverse sectors: energy and mining, communications, banking, state-owned enterprises, and others.</p>
Status and results:	<p>The ICR rated the project outcome as unsatisfactory, with substantial risks to development outcome. A quality-at-entry review assessed the project as moderately unsatisfactory essentially for under-rating political risks, hence adopting over-ambitious objectives. The project had a slow start, the country still grappling with post-conflict traumas and trying to initialize a transition from a command economy. During the early period, there were several government changes with corresponding wavering of commitment to ideas underlying the reform program. An even more difficult stage came when Algeria's energy exports brought higher state revenues, which contributed to a decrease of interest in liberalization and the reduction of state-owned enterprises. At the mid-term review, the Project received a renewed support by the government, owing to a new Minister of Transport, but never really picked up speed. Slow pace of implementation was also due to an inexperienced project management unit and cumbersome procurement laws of the country.</p> <p>Overall, few intended reform objectives were achieved. Specific performance in the urban transport domain:</p> <ul style="list-style-type: none"> (i) Some concessions in bus services have been awarded, but the replication has been limited; (ii) The concession approach for Algiers Metro was rejected; instead, an operating contract was signed with a private company, the revenue risk remaining with the public sector; (iii) Transport Authority for Greater Algiers was not established. A law was passed to define a geographic boundary (perimeter de transport) for such an authority, and the work on drafting the actual law on transport authorities was essentially done, but the law was not enacted. (iv) Modal share of public transport modes exceeded 65% in 2006, the ridership is still considered low, but was expected to rise when the metro is fully operational, especially if it is combined with re-organization of bus services; (v) Trips per inhabitant increased to 1.69 (2007) <p>Lessons:</p> <ul style="list-style-type: none"> (i) Need for much more care when designing reform programs in turbulent environments; (ii) Need to focus more on consensus building in situations of conflicted interest groups; (iii) Need to react to unexpected catalytic events, such as a jump in export income; when absorptive capacity is low, reform will tag behind investments.
Team	Michel Loir (lending); Michel Bellier (SPN, ICR); Yves Duvivier (ICR)
Profile date and authors:	January 14, 2010, revised February 25, 2011; Slobodan Mitric

Links to key documents for the Algeria Transport Technical Assistance Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2001/08/04/000094946_01072004311352/Rendered/PDF/multiopage.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/MNA/2004/12/15/A30329D9059801B185256Fo30017BF68/1_o/Rendered/PDF/LAoENG2.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2008/11/11/000333038_20081111225038/Rendered/PDF/ICR746oICRoPo72458oBox334091Bo1PUBLIC1.pdf

COMMENT

Note the long (much too long) cause-effect chain between the project instruments and the two last indicators (modal share of public transport, and personal mobility).

URBAN TRANSPORT DEVELOPMENT PROJECT (P034038 P110956)	
Country and region:	Lebanon, MENA
Borrower:	Republic of Lebanon; subsidiary loan agreement with Council for Development and Reconstruction (CDR)
Implementing agency and arrangements:	CDR is the main implementation agency and houses the Project Management Unit. Steering Committee includes ministers of Finance, Interiors, Public Works and Transport, and CDR President. Ministry of Environment; and the Ministry of Culture through its General Directorate of Antiquities will be invited to Steering Committee meetings. Other partners, on consultative basis include: Traffic Management Organization (see below); Traffic Police Department; Governorate of Beirut; Beirut Municipality and 15 Greater Beirut area municipalities; and Ministry of Public Works and Transport through its Directorate General for Land and Maritime Transport.
Concept review date	January 22, 1998
Board approval date:	June 13, 2002
Effectiveness date:	July 31, 2003
Closing date:	June 30, 2009 (original as per LA; PAD gives December 31, 2008); December 31, 2011 (current)
Instrument category:	SIL
Project structure by sector:	Roads & highways, 94%; central government administration, 6%
Project total cost in US\$:	115.2m (original); revised in 2009 to 231m
WB commitment in US\$:	65m (Loan 71230-LN)) + 69.7m additional (Loan 76420), approved in 2009
Co-financiers:	Loan of US\$17.9m (unidentified sources)
Final project cost in US\$:	
Amount disbursed in US\$:	65m (as of March 12, 2010)
Diagnostic highlights	The long conflict that started in 1970s and lasted through 1990s damaged the road infrastructure, prevented traffic management and public transport regulation, in fact having all but destroyed once vibrant public transport delivery system. This resulting in poor services to all transport users, with a major shift to using private cars and shared taxis. What remains of once standard, scheduled public transport services in fact operates competing on-street with shared taxis and minibuses. Traffic congestion is judged severe, parking is chaotic, and air pollution is excessive. All these act as a barrier to economic recovery, essential for an urban area that accounts for two-thirds of the country's economic output (value added). The recovery program so far focused on reconstructing main city boulevards and building a new network of new expressways to feed the central business district. A Transport Regulatory Unit was set up in the Ministry of Public Works and Transport to address public transport supply, as well as maritime transport and civil aviation.
Development objectives:	PAD: (i) provide the City of Beirut and Greater Beirut area an institutional structure (for handling its urban transport system), which it now lacks, and (ii) maximize the efficiency of Beirut's transport infrastructure through critical investments LA says: "improve urban transport infrastructure for the Greater Beirut Metropolitan Area"
Investment components:	(i) Traffic management program, US\$27.7m: layout improvements and traffic signals at 200 intersections of which 64 integrated, video surveillance at 30 sites at 4 corridors, traffic police equipment

	<ul style="list-style-type: none"> (ii) (towing trucks, motorcycles, communications equipment, vehicles); (iii) Corridor improvement program (grade-separation on 7 main corridors), US\$75.4m; (iv) Parking program, US\$6.7m: installation of about 780 pay-and-display dispensers to control 6,500 parking spaces; (iv) Technical assistance and training for institution development (MPWT, TMO, Traffic Police Dep't) and project management, US\$4.7m
Policy components:	(i) managing on-street paid parking through a concession
Institutional components:	<ul style="list-style-type: none"> (i) Establishment and empowerment of a Traffic Management Organization (TMO) to be the lead agency for all traffic and parking matters in the urban region. (ii) Setting up, within TMO, a Traffic Management Center, responsible for traffic (signal) control (iii) Completing an Integrated Urban Transport Strategy for Greater Beirut
Additional project features	<p>Key effectiveness conditions:</p> <ul style="list-style-type: none"> (i) Signing application decrees re TMO's organization, staffing and operations; (decree establishing TMO as a public agency with managerial and financial autonomy under tutelage of the Minister of Interior, issued October 14, 2000) (ii) Appointments made of TMO directors for traffic engineering, parking management and coordinating officer for traffic surveillance and law enforcement (iii) Signing of a concession agreement between TMO and Municipality of Beirut for the operation of Beirut's on-street paid parking programs
Complementary operations	Numerous projects, funded by the World Bank, EU Saudi fund, and other sources, some focusing on reconstructing infrastructure, others focusing on re-building institutions
Monitoring indicators	<p>Original (2002):</p> <ul style="list-style-type: none"> (i) Completion of a functioning, area-wide traffic control system; (ii) Traffic congestion, measured by average traffic speed on corridors and level-of-service on critical intersections; (iii) Effectiveness of on-street parking management, measured in 14 select zones by number of violations and average occupancy of 6,500 metered spaces; (iv) Setting up of an effective TMO; (v) Approval of an integrated transport strategy for Greater Beirut, and of accompanying transport plans <p>Revised (2009):</p> <ul style="list-style-type: none"> (i) Average travel times on major project corridors; (ii) TMO in operation; (iii) Revenue from parking meters; (iv) Number of parking violations
Status and results:	An additional loan of US\$69.7m was approved in 2009 to cover the following: (i) cost overruns under on-going contracts for the traffic management system, the on-street parking system and grade-separated facilities; (ii) increase in the disbursement rate to 100%; and (iii) financing gap due to not finding co-financiers for upgrading 3 intersections, installation of parking meters, and the traffic police component (equipment and training).
Team	Mohammed Feghoul (lending, SPN); Abdelmoula Ghzala (SPN)

Profile date and authors:

March 12, 2010, revised October 20, 2010; written by Slobodan Mitric

Links to key documents of the Lebanon Urban Transport Development Project:**Project Appraisal Document:**

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2002/07/02/000094946_02060604004798/Rendered/PDF/multiopage.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/MNA/2004/12/15/F80B775E8FCD1FBB85256F03000BDA19/1_0/Rendered/PDF/UTDoLA.pdf

Project Agreement (additional loan, 2009):

http://wbln0036.worldbank.org/852572430067B82D/DOC_VIEWER?ReadForm&l4_KEY=AD34ACDEABA9702185256BB400618BBEF709AA5D87976B7B85256BBF007ECDA7&l4_UNID=C752FB607A2121D68525756A006B2DB7&

AMMAN DEVELOPMENT CORRIDOR PROJECT (Po81505 and P110954)	
Country and region:	Jordan, MENA
Borrower:	Hashemite Kingdom of Jordan
Implementing agency and arrangements:	Ministry of Public Works and Housing, home of the Project Management Team, the latter assisted through a technical assistance contract with a private firm experienced in project management (construction, procurement and finance). Signature of this contract is a dated covenant. A Steering Committee and an Executive Committee, with representatives from concerned ministries and the Prime Minister Office, will be established for activities related to the Amman Development Corridor (ADC). An Urban Development Technical Unit will be established to support the Steering Committee.
Concept review date:	December 18, 2003
Board approval date:	June 3, 2004
Effectiveness date:	December 6, 2004
Closing date:	December 31, 2011 (current)
Instrument category:	SIL
Project structure by sector:	Roads & highways, 76%; central government administration, 16%; general transport sector, 8%
Project total cost in US\$:	161.0m; revised in 2008 to 343.6m to reflect cost over-runs due to price increases and design changes.
WB commitment in US\$:	38m (Ln 7228-JO); US\$33m additional loan (Ln 7634-JO) approved in 2009, reflecting the new cost estimate
Co-financiers:	Arab Fund for Economic and Social Development, US\$39.4m (loan); EIB, US\$32m (loan) and US\$.5m (grant). In 2008, these amounts were increased in parallel with the WB's Ln 7634-JO, as follows: Arab Fund, US\$41.4m; EIB, US\$48.3m
Final project cost in US\$:	
Amount disbursed in US\$:	44.4m through April 14, 2010
Diagnostic highlights	Amman Metropolitan Area has become a road transport bottleneck, hampering metropolitan, national and international traffic and trade, and dampening Jordan's plans to be the transport hub of the region. Traffic is congested, and accident rates are too high for a country with Jordan's fleet and income levels. Road funding not successful, since implementing the Road Fund legislation, approved in 1997, would mean increasing costs of truckers in an oversupplied industry with low profit margins. Rapid population and spatial growth of the area collide against scarcity of vacant, zoned and accessible land.
Development objectives:	<ul style="list-style-type: none"> (i) Increase efficiency of transport and logistics (infrastructure and services; (ii) Provide access to affordable land for productive investment and urban development in the Amman Development Corridor.
Investment components:	<ul style="list-style-type: none"> (i) Amman Ring Road, Phase 1 (40km), US\$106.9m; this will be a dual carriageway built to expressway standards (ii) Inland port and Customs Depot infrastructure and access (in ADC), and trucking industry support US\$8.06 (iii) Technical assistance for traffic and public transport planning (inclusive of a possible bus rapid transit line); development planning

	for the ADC, investment studies; and project management, US\$4.7m; (iv) Land acquisition and resettlement compensation, US\$40.9m
Policy agenda:	Restructuring of the trucking industry, following the passage of Road Freight Transport law in 2002 and subsequent supporting regulations, including: (i) Consolidation of industry; (ii) Creating competition to improve service quality and reduce prices; (iii) Renewing the trucking fleet
Institutional agenda:	No specific institutional initiatives
Monitoring indicators:	(i) Travel times and traffic diversion from Greater Amman road network onto ARR (traffic counts and modeling arrangements made) (ii) Trade flows through the new Customs Facility; (iii) Number of trucking firms registered under new trucking regulations; (iv) Type and number of urban and industrial transactions within ARR-1 zone of influence PMT and its technical assistance consultants will be responsible for all surveys and reporting
Additional project features	A multi-year, performance based contract for the maintenance of ARR-1 will be considered, but is not a part of the project.
Complementary WB operations	In the 1980s, the Bank was active in funding several urban development projects in Amman. Amman Transport and Municipal Development Project (1983-1993) financed, inter alia, some improvements on primary roads in Amman. There is an on-going Logistics and Trade Facilitation Study whose results may contribute to the current Project.
Status and results:	The most recent supervision mission (November 2009) rated the progress on objectives as satisfactory, and the same for implementation progress. Road works are proceeding. The master plan for Amman Development Corridor was completed. The launch of two key studies is imminent: (1) a feasibility study and detailed design for priority BRT lines; and (2) a feasibility study and preliminary design for 3 rail-based rapid transit lines. Technical assistance for the reform of the trucking industry is proceeding using funds made available by the EU.
Team	Mohammed Feghoul (lending, SPN); Abdelmoula Ghzala (SPN)
Profile date and authors:	April 14, 2010; revised December 17, 2010; written by Slobodan Mitric

Links to key documents of the Amman Development Corridor Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2004/05/14/000012009_20040514123659/Rendered/PDF/28251.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/MNA/2006/03/21/051E2F5DB96EE45C85256F1E0061827A/2_0/Rendered/PDF/AmmanoCorridorLA01CONFORMED1.pdf

Additional Loan Agreement:

http://wbln0036.worldbank.org/852572430067B82D/DOC_VIEWER?ReadForm&l4_KEY=34E5F8D13032408385256BB40060A79620671A623EAAAA6D85256C690016B8CE&l4_UNID=F1431702F4D4355B852575D10051B5A9&

ANNEX 7: PROJECT CAPSULES FOR THE THE SOUTH ASIA REGION

1. Bangladesh – Dhaka Urban Transport Project (1999-2005)
2. India – Mumbai Urban Transport Project (2002)
3. Afghanistan – Kabul Urban Roads (2008)
4. Bangladesh – Clean Air and Sustainable Environment Project (2009)
5. India – Sustainable Urban Transport Project (WB loan + GEF grant) (2009)

DHAKA URBAN TRANSPORT PROJECT (Po09524)	
Country and region:	Bangladesh, SA
Borrower:	Government of Bangladesh, represented by Ministry of Finance; 75% of the loan passed to Dhaka City on grant basis
Implementing agencies:	Ministry of Communications and Dhaka City Corporation, with numerous sub-implementing agencies, mostly DCC-related; Project Coordination Unit linked with Greater Dhaka Transport Planning and Coordination Board (see below)
Board approval date:	January 19, 1999
Effectiveness date:	June 16, 1999
Closing date:	June 30, 2004 (original); June 30, 2005 (actual)
Instrument category:	SIL
Project structure by sector:	Roads and highways, 75%; sub-national government administration, 13%; central government administration, 11%; other social services, 1%
Project total cost in US\$:	234.2m
WB commitment in US\$:	177.0m (credit)
Co-financiers:	Japanese TA grant of \$1.7m
Final project cost in US\$:	124.9m
Amount disbursed in US\$:	90.6m
City and its transport	Demographic growth of Dhaka outpaced capacity of infrastructure and services. Chaotic and unsafe traffic environment, and low-quality public transport services, dominated by 3-wheel (non-motor) cycle rickshaws and motorized 3-wheelers using highly polluting 2-stroke engines. Factors contributing to this situation on the demand side include widespread poverty, while on the supply side weak policies and insufficient investments stem in part from a plethora of agencies, overlapping jurisdiction and poor coordination.
Development objectives:	<ul style="list-style-type: none"> (i) Improve urban transport infrastructure and services, and (ii) address long term transport planning, coordination and institutional issues
Investment components:	<ul style="list-style-type: none"> (i) Infrastructure development: traffic management and parking improvements at about 30 intersections (US\$50.1m); improvements on about 60km of arterial roads (US\$30.7m); bus route improvements (US\$2.7m); non-motorized traffic route improvements (US\$5.4m); rehabilitation of 3 bus terminals (US\$17.2m); construction of sidewalks and footbridges (US\$5.4m); flood damage rehabilitation of roads and drainage (US\$20.0m); two grade-separated interchanges (US\$46.8m); (ii) Technical assistance and training (US\$34.4m), and equipment and vehicles (US\$10.9m), both to benefit normal functions of implementing agencies and project management; (iii) Resettlement action program including land acquisition (US\$10.7m)
Policy components:	<ul style="list-style-type: none"> (i) Preparation/adoption of an integrated urban transport strategy for Dhaka Metropolitan Area; (ii) deregulated market entry by premium-quality bus operators; (iii) market-based fare policy for premium-quality bus services; (iv) restrictions on the use of highly polluting vehicles esp. 3-wheelers

	<p>with 2-stroke engines (discontinuation of imports and new registrations, phasing-out existing vehicles);</p> <p>(v) preparation of new emission standards for all vehicles</p> <p>(vi) preparation & implementation of a system of road user charges</p>
Institutional components:	<p>(i) Setting up of Greater Dhaka Transport Planning and Coordination Board (created during project preparation);</p> <p>(ii) Setting up of a Traffic Engineering Department in Dhaka City Corporation</p> <p>(iii) Establishment of Road and Traffic Maintenance Fund</p>
Monitoring indicators	Key outcome measures included: (i) traffic speeds along project corridors; (ii) bus & mini-bus ridership along project corridors; (iii) number of pedestrian accidents on project corridors; (iv) levels of motor vehicle pollution (lead, PM ₁₀ , and HC); (v) frequency of DTC Board meetings, following adoption of urban transport policy for DMA
Complementary operations	Clean Air and Sustainable Environment Project (P098151) was approved in 2009, consisting of a traffic improvements component that is a follow-up of the Dhaka Urban Transport Project, and an air quality management component focusing on both urban transport and industry.
Results:	<p>The project had a difficult start and was restructured in 2002, without changing the Credit Agreement, essentially to trim it and focus on the most important initiatives. Scattered road and intersection improvements were re-grouped into integrated corridor improvements. Responsibility for implementation was moved to Roads and Highways division in the Ministry of Communications. Many small components were dropped, including some underpasses, emissions lab and other equipment, and cost estimates of other components were revised downwards relative to those at appraisal.</p> <p>The loan closed with 1 year delay. Investments implemented included: channelization at 27 intersections and traffic signals at 69 intersections; 22,000m² of parking; 64 of road rehabilitation and 40km of sidewalks; 31.3km of integrated corridors; 3 bus terminals improved and private operators appointed; 42km of flood damage rehabilitation; and 1 flyover. The other planned flyover (Jatrabari) was cancelled from the project since design changes and procurement delays made it impossible to complete before the loan closing date.</p> <p>Outcomes regarding institutions and policies: Traffic Engineering Department was created in DCC; major training completed, including 450 traffic policemen; strategy and policy document still under preparation as the loan closed.</p> <p>The Completion Report gave the Project a satisfactory rating, with likely sustainability and modest development impact. Government performance was rated unsatisfactory.</p> <p>The subsequent IEG assessment adjusted these ratings downwards: outcome was rated moderately unsatisfactory; sustainability was likely; Bank performance was rated unsatisfactory; as was the Borrower performance.</p>
Lessons:	<p>Lessons drawn in the Implementation Completion Report:</p> <p>The project as designed was too large and too complex, with numerous participants on the national and metropolitan level. It placed project coordination responsibility on the newly created, weak and untested Dhaka Transport Coordination Board, and a major share of implementation responsibility on a financially weak institution (DCC) with no prior experience of ICB contracting. Also, in an effort to insulate the DCC project unit from corruption, the Project placed it outside the mainstream institutions. Division of responsibilities and powers among many participating agencies was not clear. High level of borrower commitment and ownership was required for a project of this size and complexity, but this was not demonstrated before loan approval or during implementation. Greater consultation and participation of stakeholders should have been organized when dealing with</p>

	<p>changes such as elimination of 3-wheel cycle rickshaws from certain corridors, or phasing out vehicles with polluting engines, mainly old buses and motorized 3-wheelers with 2-stroke engines.</p> <p>Lessons from the IEG's assessment:</p> <ol style="list-style-type: none"> 1) Where institutional capacity is known to be weak, as in the Dhaka Metropolitan Area, it is important to ensure that the enabling legislation for the executing agencies is enacted, lines of responsibility are clearly defined and key staff appointments are made. These steps could be either an objective of the project or conditions to be met prior to project effectiveness; the exact mix would have to be customized according to the specific circumstances prevailing in the project; 2) It is also important that project design is not overly complex when serious institutional weaknesses are evident. In an environment with weak institutional capacity, it is unrealistic to expect a new organization to take on project implementation responsibility in addition to other functions; 3) The banning of rickshaws from certain intersections and corridors had a negative impact on rickshaw drivers and some users. It is important in projects with potentially negative social impacts, to ensure timely communication with those affected, by making them aware of likely project impacts and proposed social protection measures. In the Dhaka case the risks were identified, but the implementation of the mitigation measures was delayed; 4) Outcome was measured against the original objectives, indicators and scope whereas many components were dropped or simplified without formally restructuring the project. It is important when a major re-scoping of a project is carried out, that all parties (including the Board) are made aware of any changes in scope, direction and performance benchmarks.
Team	Thampil Pankaj (lending); Navaid Qureshi (SPN, ICR); Mitsuyoshi Asada (ICR)
Profile date and authors:	February 25, 2011 (rev.); written by Slobodan Mitric, with contributions from Navaid Qureshi

Links to key documents for the Bangladesh - Dhaka Urban Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/1999/07/22/000094946_99030406213668/Rendered/PDF/multi_page.pdf

Credit Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/SAR/2004/12/14/5F4C17748701359B85256F03000ABBA1/1_o/Rendered/PDF/5F4C17748701359B85256F03000ABBA1.pdf

Implementation Completion Report:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2005/12/21/000160016_20051221180517/Rendered/PDF/34544.pdf

IEG Project Performance Assessment Report:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2007/05/15/000020953_20070515132917/Rendered/PDF/39323.pdf

MUMBAI URBAN TRANSPORT PROJECT (Po50668)	
Country and region:	India, SA
Borrower:	Government of India, on-lent to State of Maharashtra and Mumbai Railway Vikas Corporation Limited
Implementing agencies:	Mumbai Metropolitan Region Development Authority (MMRDA) – lead agency; Mumbai Railway Vikas Corporation Limited (MRVC, suburban rail network); Municipal Corporation of Greater Mumbai (MCGM); Maharashtra State Road Development Corporation (MSRDC), and Brihan Mumbai Electrical Supply and Transport (BEST) company.
Board approval date:	June 18, 2002
Effectiveness date:	November 6, 2002
Closing date:	June 30, 2008 (original); June 15, 2011 (revised)
Instrument category:	SIL
Project structure by sector:	Railways, 57%; roads & highways, 28%; other social services, 15%
Project total cost in US\$:	945.0m; revised in 2008 (restructuring) to 1,123m
WB commitment in US\$:	463.0m (loan) plus SDR 62.5m (credit) equivalent to US\$79.0m
Co-financiers:	None
Final project cost in US\$:	
Amount disbursed in US\$ as of December 13, 2010:	428m from the loan/credit plus 2.7m from trust funds
Diagnostic highlights	Mumbai region at 14m people is among the largest in the world, and still growing. It is a commercial and financial center of India. Still at low level of car ownership, but with substantial number of motorized 2- and 3-wheelers, street traffic in Mumbai is congested, with high air pollution and accident rates, the latter falling largely on pedestrians and cyclists. The suburban rail network carries 6 million passengers a day, in severely overcrowded trains and (until this project) slowed down by encroachments. Transport infrastructure and services are considered to be a bottleneck for further development of Mumbai. Street buses carry another 4.5m passengers, 60% of which eventually transfer to rail. Buses are prisoners of street congestion, and also suffer from overcrowding. These problems are linked to weak traffic management, low funding for road maintenance, and network/fleet investments across all modes. Public transport operators are well-managed and cover operating costs but not capital costs. Generally, pricing and funding are weakest aspects of regional transport, and can be traced to fragmented and weak institutions, with an overpowering presence of the public sector.
Development objectives:	Facilitation of urban economic growth and improving the quality of life in Mumbai Metropolitan Region by fostering the development of an efficient and sustainable urban transport system including effective institutions
Investment components:	(i) improvements and extensions to Mumbai suburban railway system, including track infrastructure, stations, level crossings, traffic control systems, power supply, fleet, maintenance facilities and equipment, and technical assistance (US\$654.3m); (ii) traffic management improvements in city of Mumbai, including an area traffic control system with associated improvements at 250 intersections; program of pedestrian improvements, traffic improvements railway station areas and black spots (US\$59m); (iii) reconstruction of major roads

	(including widening, re-alignment, and traffic management), intersections and road-rail flyovers (US\$77m); (iv) additions to BEST's bus fleet (644 vehicles), and technical assistance to the company (US\$25m); (v) technical and material assistance to all implementing agencies for institution building (US\$17m); and (vi) resettlement and rehabilitation, essentially the construction of housing and provision of services for more than 17,000 households and 2,500 businesses (US\$100m). Scope of item (ii) was reduced when the project was restructured in 2008.
Policy components:	Preparation, adoption and execution of a resettlement and rehabilitation policy for all households and businesses affected by transport investments.
Institutional components:	<ul style="list-style-type: none"> (i) establishment of a separate company, jointly owned by the State of Maharashtra and the India railways, in charge of the suburban rail system development (achieved as a part of project preparation); (ii) establishment of a high-powered steering committee for regional transport, backed up by a multi-agency working group; (iii) establishment of a Transport Management Unit (in MCGM); (iv) development of a Comprehensive Transport Strategy for Mumbai Metropolitan Region; (v) development of a Motor Vehicles Emissions Control Strategy
Monitoring indicators	Indicators were selected to reflect 4 specific objectives of the project, i.e. meeting passenger needs, improving system efficiency, bringing about sustainable improvements, and making institutions more effective. The corresponding key indicators measure: (i) suburban rail travel comfort and incidence/severity of pedestrian traffic accidents; (ii) suburban rail service frequency and reliability, road journey times and junction delays; (iii) public transport cost recovery and success in resettling poor households; and (iv) technical capacity for planning, traffic management, road safety, road maintenance, air quality monitoring and vehicle emissions control.
Additional project features	<ul style="list-style-type: none"> (i) Bombay Municipal Corporation Act had to be amended to allow the creation of the traffic management function within MCGM and to permit the principle of charging for parking (done in the course of project preparation). (ii) Unusually for a project approved in 2002, the Loan/Credit Agreements include 51 covenants. By December 31, 2009, 33 were met, 5 were not due and 1 was not met
Complementary operations	Bank funded a Bombay Urban Transport Project (1976-1984) with a loan of US\$25m, with BEST as the main beneficiary. A follow-up to the current Project (MUTP-2A) was approved in 2010. MUTP-2A is a streamlined version of MUTP, focusing solely on the suburban railways, aiming for further improvements in capacity, operational efficiency and level of comfort to passengers.
Status and results:	Eight years into the implementation period, activities focused on suburban rail have done the best, while on road and traffic management components the processing speed has been slow. Interagency coordination and land acquisition have been major problems. Conflicts over resettlement of shopkeepers led to a review by the Inspection Panel and suspension of road components in 2006. This experience slowed down the implementation, but helped MMRDA gain knowledge on resettlement and rehabilitation, potentially useful to other Indian cities. The project was restructured in 2008, without changing development objectives: several traffic management improvements (including pedestrian subways and station areas improvement) were cancelled as were some technical assistance activities, both because they were slow moving and because of the falling value of the US\$

	necessitated cuts; on the other hand, investments in BEST were increased, including a efficiency monitoring system to be installed on buses and a management information system for the company. The Project has been effective in improving environmental conditions through a combination of new trains (lower CO ₂), new bus engines (Euro 3), and a tree planting program.
Team	A.K. Swaminathan and Edward Dotson (lending); Hubert Nové-Josserand (SPN); Atul Agarwal (SPN)
Profile date and authors:	May 24, 2011 (rev.); written by Slobodan Mitric, with inputs from Hubert Nové-Josserand and Atul Agarwal

Links to key documents for the India - Mumbai Urban Transport Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2005/07/19/000112742_20050719101432/Rendered/PDF/2400401Bomultiopage.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/SAR/2004/12/14/76AD4EC9DE19C49485256F0300119C09/1_o/Rendered/PDF/MUTPoLA8.pdf

Credit Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/SAR/2004/12/14/C7F6C80A34D769A385256F0300119B65/1_o/Rendered/PDF/MUTPoDCA8.pdf

Project Paper:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2008/09/23/000333037_20080923004710/Rendered/PDF/455640PJProBox11027001OFFoUSEoONLY1.pdf

KABUL URBAN ROADS (P107101)	
Country and region:	Afghanistan
Borrower:	Islamic Republic of Afghanistan
Implementing agency and arrangements:	Kabul Municipality
Concept review date:	June 25, 2007
Board approval date:	December 19, 2008
Effectiveness date:	February 25, 2009
Closing date:	December 31, 2010 (orig.); December 31, 2011 (revised)
Instrument category:	SIL (Recipient executed)
Project structure by sector:	Public administration – transport, 20%; roads and highways, 70%; general transport sector, 10%
Project total cost at appraisal in US\$:	\$18m
WB commitment in US\$:	0
Co-financiers:	18m grant from Afghanistan Reconstruction Trust Fund (TF-93632)
Final project cost in US\$:	
Amount disbursed in US\$:	9.7m (as of December 31, 2010)
Diagnostic highlights	Kabul has experienced much destruction during two decades of warfare, while also seeing a huge influx of population from the countryside (17% per annum between 1999 and 2002). The city now has 4 million population, half of the entire country. About 60% of the city consists of informal developments without communal infrastructure. Much of the existing road network is not paved. 60% of roads are damaged and 50% water drains are not functioning. Some 450,000 vehicles are used in the city. Adding to insufficient and poor infrastructure, traffic management and law enforcement are mainly serving military-related objectives. The cumulative impact of these factors on traffic flow is quite deleterious.
Development objectives:	Improve traffic flow on priority corridors or segments of urban roads in Kabul
Investment components:	<p>A. Road investments (\$15m): (i) rehabilitation of about 12km of existing roads (ii) construction and rehabilitation of roadside drains and walkways; (iii) construction of roundabouts at key intersections; and (iv) installation of street lights.</p> <p>B. Technical assistance to Kabul Municipality to plan, design, and manage the implementation of investments funded under the Project (\$3m). Includes funding of the Project Management Unit.</p>
Policy components:	none
Institutional components:	Establishment of a Project Management Unit in Kabul Municipality
Monitoring indicators	(i) Length of roads repaired/rehabilitated; (ii) length of roadside drainage repaired; and (iii) travel time of beneficiaries
Additional project features	The Project was prepared under OP-BP 8.00 Rapid Response to Crises and Emergencies
Complementary/related	Several other road rehabilitation projects are underway or planned, with funding

operations	from the German Ministry for Economic Cooperation and Development, the Turkish Government and the Abu Dhabi Fund for Development of United Arab Emirates.
Results at completion:	
Team	Mesfin Wodajo Jijo
Profile date and authors:	February 11, 2011 Written by Slobodan Mitric

Links to key documents of the Afghanistan - Kabul Roads Project

Project Information Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2007/07/05/000104615_20070709114947/Rendered/PDF/PID1ConceptoStage0161271071.pdf

Project Paper (restructuring, 2010):

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2010/12/21/000333037_20101221004703/Rendered/PDF/585640PJPRoP10111010KURIPoRPoDeco16.pdf

CLEAN AIR AND SUSTAINABLE ENVIRONMENT PROJECT (P098151)	
Country and region:	Bangladesh, SA
Borrower:	Government of Bangladesh
Implementing agency and arrangements:	<p>Ministry of Environment and Forests (MoEF), through its Department of Environment is in charge of the overall coordination of the project. A Project Steering Committee is chaired by Secretary, MoEF and membership drawn from key agencies.</p> <p>Implementing agencies:</p> <ul style="list-style-type: none"> (1) Department of Environment (responsible for Part A of the project) (2) Dhaka City Corporation (responsible for Part B1) (3) Dhaka Transport Coordination Board (responsible for Part B2)
Concept review date:	July 10, 2007
Board approval date:	May 12, 2009
Effectiveness date:	August 19, 2009
Closing date:	December 31, 2014 (original)
Instrument category:	SIL
Project structure by sector:	Central government administration, 16%; public administration – transport, 14%; general transport sector, 61%; general industry/trade sector, 9%
Project total cost at appraisal in US\$:	71.3m
WB commitment in US\$:	62.2m credit, equivalent to SDR 42.2m (credit)
Co-financiers:	None
Final project cost in US\$:	
Amount disbursed in US\$ as of April 14, 2010:	4.9m
Diagnostic highlights	<p>Dhaka houses 12m people, an eightfold increase since 1970, and forecast to reach 20m by 2020. Transport investments (capital and current) and policies have not kept up with the growth of demand, so the metropolitan region is severely under-served in terms of road infrastructure and its quality, traffic management, and the supply of public transport services. The modal mix includes numerous non-motorized and motorized 2- and 3-wheelers, with consequent friction and conflicts in the traffic stream. Congestion is chronic, as are dangerous conditions for pedestrians and high levels of air pollution, especially the particulate matter. Transport and industry are two sectors that emit most pollutants.</p> <p>The underlying causes of these problems include weak and fragmented institutions at both the national and local levels, overlapping functions and low degree of coordination, and inadequate public transport regulation.</p> <p>A Strategic Transport Plan for Dhaka was prepared under the preceding Bank-funded project (see below) and approved by the Government following a broad consultative process. On the investment side, the Plan contains new roads, bus rapid transit and a metro, all capital intensive and currently not affordable. In the interim, the Government opted to focus on smaller-scale investments, mainly of the traffic management type, while carrying out preparatory studies for more ambitious actions (notably a BRT line), policy reforms and institution building.</p>
Development objectives:	<p>Improve:</p> <ul style="list-style-type: none"> (i) air quality; and

	<p>(ii) safe mobility, both in Dhaka.</p> <p>Main instruments for achieving these objectives are demonstration projects in urban transport and brick making</p>
Investment components:	<p>Component 1, Environment (\$16.2m):</p> <ul style="list-style-type: none"> A. Capacity building for air quality management (support to Air Quality Cell in the Dep't of Environment; additions to air quality monitoring network; strengthening of standards, and controls and enforcement for emissions (\$8.6m) B. Capacity building and demonstration projects for brick kilns emissions management (\$4.9m). C. Communication campaigns and studies (\$1.6m). D. Project management (\$1.2m) <p>Component 2, Transport (\$4.6m):</p> <ul style="list-style-type: none"> A. Small-scale street and traffic control investments to improve traffic flow and pedestrian mobility; technical assistance to develop a parking strategy, carry out an institutional review of Dhaka City's Traffic Engineering division regarding the setting up of cells for traffic signals and safety; and other capacity building matters (\$39.3m) B. Preparation of a public transport regulatory reform regarding bus route network rationalization and franchising, preparation of a BRT project; diverse studies; capacity building for Dhaka Transport Coordination Board; and project management (\$6.7m)
Policy agenda:	<p>Though not among the declared development objectives and associated outcome indicators, the Project includes 4 potentially major regulatory initiatives (covered in a Policy Letter from the Government):</p> <ul style="list-style-type: none"> (1) revision of the Brick Burning Act; (2) revision of emission standards for key polluting industries; (3) revision of the Motor Vehicles Act as regards vehicular emissions and fuel quality standards; and (4) revision of the Dhaka Transport Coordination Act to strengthen this institution's authority for transport planning and coordination in Dhaka, and to empower it to introduce bus franchising and options such as bus rapid transit. <p>In addition, a parking management strategy will be developed (not included in the Policy Letter)</p>
Institutional agenda:	<p>The project will support the creation of a Traffic Management Committee linked to Dhaka Transport Coordination Board (not included among development objectives and associated outcome indicators)</p>
Monitoring indicators and targets	<p>For the environmental component (addressing brick making activities): for brick kilns adopting a cleaner technology, decrease in particulate emissions by 20-30% per kiln and GHG emissions by 15-20% per kiln.</p> <p>For the transport component: increase traffic flow at project intersections by 10% and reduce traffic accidents at project locations by 10% by end of project).</p> <p>Intermediate outcome indicators for the Transport Component include:</p> <ul style="list-style-type: none"> (i) outputs of the investment program (numbers of overpasses constructed, numbers of traffic signals installed, length of 1-way streets implemented, etc.) (ii) completion of studies for bus network rationalization and for the BRT project; (iii) revision of Motor Vehicle Act and Dhaka Transport Coordination Act completed and submitted to the Cabinet for Approval.
Additional project features	<p>The project is trying a co-benefit approach, addressing at the same time both transport and multiple-source environmental issues. Since the approved Strategic Transport Plan for Dhaka consists of undertakings exceeding the financial capacity</p>

	of the Government, the current Project focuses on smaller investments and capacity building. It can be seen as a bridge towards a more substantive operation, such as a bus-based rapid transit system.
Complementary/related operations	<p>Dhaka Urban Transport Project (P009524, 1999-2005) addressed traffic management and public transport operations; institutions building and coordination (details in the profile).</p> <p>Air Quality Management Project (P057833, 2000-2008), a small-scale learning and innovation loan, with Department of Environment in the Ministry of Environment and Forests as the main counterpart and client, and Dhaka as the main testing ground. The project included air quality measurement, formulation of air quality management plans, identification of options for reduction of emissions, establishment and enforcement of fuel and emission standards, pilot testing of options, raising public awareness and institution building.</p>
Results at completion:	
Team	Sameer Akbar (lending); Maria Sarraf (lending, SPN)
Profile date and authors	May 25, 2011 Slobodan Mitric with inputs from Maria Sarraf

Links to key documents of the Bangladesh - Clean Air and Sustainable Environment Project:

Project Appraisal Document:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/IB/2009/04/27/000334955_20090427065754/Rendered/PDF/450550PADoP098101OfficialoUseoOnly1.pdf

Financing Agreement:

http://imagebank.worldbank.org/servlet/WDSContentServer/IW3P/SAR/2009/06/05/E0766BC5377BAF8B852575CC006C03C5/2_o/Rendered/PDF/FA01conformed1.pdf

SUSTAINABLE URBAN TRANSPORT PROJECT (P110371 and P100589)	
Country and region:	India, SA
Borrower:	Government of India
Implementing agency and arrangements:	A central Project Management Unit in the Ministry of Urban Development (MUD), headed by a Project Director, and Project Implementation Units in each participating state, each one within a designated Project Implementation Agency. A high-level Steering Committee chaired by secretary, MUD, including Project Director, senior MUD officials, and representatives of other relevant ministries
Concept review date:	March 21, 2006
Board approval date:	December 10, 2009
Effectiveness date:	May 3, 2010
Closing date:	November 30, 2014
Instrument category:	Standard Investment Loan & GEF grant
Project structure by sector:	General transport sector, 100%; Operations Dashboard gives : Public administration – transport, 69%; general transport sector, 31%
Project total cost at appraisal in US\$:	348.7m
Financing plan (US\$):	105.2m WB (Loan 78180) + 20.3m GEF grant + 223.1m Borrower
Final project cost in US\$:	
Amount disbursed in US\$:	7.3m from the loan and 2.3m from the GEF grant (as of August 9, 2010)
Diagnostic highlights	<p>India has 3 mega-cities, 4 cities between 4 and 10m population, and another 28 with more than 1 million. The urbanization rate is still low, but rises inexorably. Last 20 years have seen substantial economic growth, which acts to accelerate urbanization. These processes have contributed to increased motor vehicle ownership and use in cities, especially in terms of motorized 2- and 3-wheelers, with negative downstream impacts on modal split, street congestion, accidents and pollution. This trend cannot be sustained over the long term, but already has become problematic because of inadequate institutional capacity. Major responsibilities for urban transport matters are divided between state (public transport, major roads, urban development) and municipal governments (local roads and traffic management). Key features: fragmentation and overlap of functions, shortages of skilled professionals, a lack of local knowledge bases, poorly defined project development cycles, and low interaction between transport providers, users, and government institutions. The small role left to the national government in urban transport matters was due to the legislation being adopted well before recent changes in urban dynamics. Given that cities contribute 60% of the national economic growth and 90% of government revenues, and recognizing that urban transport problems have moved to the critical path to well-being of city residents, rich and poor, and have started to constrain economic development, the Government of India promulgated a new National Urban Transport Policy in 2006. The Policy signifies a re-engagement of the Government in urban transport matters. It aims to correct the binding constraints on the institutional side, and support policies and investments likely to move urban transport to a sustainable transport future. This essentially means capacity building for the relevant institutions at local, state and national levels, and supporting the traditional modes - walking, bicycling and public transport. In parallel, through the National Urban Renewal Mission, the Government set up a system of financial assistance to states</p>

	and cities (35-85% of infrastructure costs), as an incentive to move in line with the new policy.
Development objectives:	<ul style="list-style-type: none"> (i) promote environmentally sustainable urban transport – non-motorized and public transport modes; and (ii) improve the usage of environmentally friendly transport modes in participating cities.
Investment components:	<ol style="list-style-type: none"> 1. Technical assistance to Ministry of Urban Development (US\$7.8m) for capacity building relative to urban transport at national, state and local level; 2. City demonstration projects (US\$336.8): <ol style="list-style-type: none"> A. Demonstration projects (bus-based rapid transit) and technical assistance for capacity building, studies, project planning, design and implementation in 3 Indian cities: Pune and Pimpri-Chinchwad (Maharashtra), and Naya Raipur (Chhattisgarh) – US\$262.5; B. Technical assistance to states and cities for capacity building, and project planning in further 3 Indian cities: Jalandhar (Punjab), Indore (Madhya Pradesh), and Mysore (Karnataka) – US\$74.3m C. Project management, US\$2.0m
Policy components:	No specific policy agenda other than strategic support for sustainable urban transport decisions as expressed in objectives.
Institutional agenda:	<p>The establishment of a transport planning process in the participating cities and the creation of project management units at the national and state levels. Annex 3 provides a checklist of what is a desired output of a transport planning process:</p> <ol style="list-style-type: none"> 1. Constitution of a unified metropolitan transport authority 2. Setting up of a dedicated urban transport fund 3. Preparation of a comprehensive mobility plan 4. Formulation of a parking policy, and 5. Formulation of advertisement (tendering?) policy
Additional project features	<p>This project is a part of the Sustainable Urban Transport Program, a partnership between the Government of India, the UNDP and the World Bank. The roles are as follows:</p> <p>Part 1 -national, state and local capacity building initiatives: executed by the UNDP and financed out of the GEF grant; and</p> <p>Part 2 -design and implementation of demonstration projects in selected states and cities: the GEF grant will finance technical assistance (planning and design) activities in all 6 cities, while the WB loan will finance the implementation of demonstration projects in 3 cities (Pune, Naya Raipur and Pimpri-Chinchwad).</p>
Monitoring indicators	<p>Outcome indicators:</p> <ul style="list-style-type: none"> - Number of cities that by the end of the project develop an identifiable urban transport planning process (i.e., are managed by professional units of government, following agreed procedures and guidance, and involving various level of analytical work). Target: 6 cities - Public transport mode shares in Pimpri-Chinchwad,. Target increase from 4.2% to 8% - Public transport mode share between Raipur and Naya Raipur. Base: 0%; target 50% - Transport Co2 emissions in the demonstration cities, relative to “business-as-usual” or “without-project” forecasts (GEF-related indicator). Target: decrease by 128,000 tons

	<p>Intermediate outcome indicators:</p> <ul style="list-style-type: none"> - Ridership on BRT corridors in Pimpri. Target: 75% of anticipated ridership; - Percent increase in bicycle access to BRT stations in Pune (target increase 2%); - Number of public transport corridors in operation between Naya Raipur and Raipur (target: 2 corridors); - Safe sidewalks and cycle tracks provided in Naya Raipur by the end of the project
Complementary/related operations	The design of this operation emulates the approach used in some capacity building projects, such as the India Road Infrastructure Development TA Project, which link capacity building directly with preparation and implementation of investments. This approach has proven to be able to motivate the implementing agencies and sustain their commitment to implementing the required institutional reforms, and also to ensure learning-by-doing opportunity for them to practice and sustain their strengthened capacity.
Results at restructuring and/or completion:	
Team	Ke Fang (lending), Nupur Gupta (SPN)
Profile date and authors:	February 11, 2011; Slobodan Mitric

Links to key documents of the India Sustainable Urban Transport Project:

Project Appraisal Documents:

- For the WB loan:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2010/04/05/000334955_20100405231534/Rendered/PDF/511450PADoP1101TP1IBRD1Nov0901final.pdf

- For the GEF grant:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2009/11/24/000333038_20091124235405/Rendered/PDF/511440PADoP100101OfficialoUseoonly1.pdf

Loan Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/SAR/2010/03/02/23ED6B2E2763EA70852576DA0050398C/1_o/Rendered/PDF/LoanoAgreement.pdf

Grant Agreement:

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/SAR/2010/03/02/76E6AD2D630E8272852576DA00548514/1_o/Rendered/PDF/GEFoGrantoAgre10Feb0201forosigning1.pdf

Policy note: Towards a Discussion of Support to Urban Transport Development in India

http://imagebank.worldbank.org/servlet/WDSCContentServer/IW3P/IB/2005/07/27/000160016_20050727171237/Rendered/PDF/331230whiteoc01701ForoOFFICIALoUSE1.pdf



Transport Division

Transport, Water and
Information and Communication
Technology Department

The World Bank

1818 H Street NW

Washington DC 20433

USA

www.worldbank.org/Transport

DFID Department for
International
Development

