

**PROJECT INFORMATION DOCUMENT (PID)  
APPRAISAL STAGE**

Report No.: AB2120

<b>Project Name</b>	Bolivia Urban Infrastructure Project
<b>Region</b>	LATIN AMERICA AND CARIBBEAN
<b>Sector</b>	Sanitation and flood protection sector (65%); Sewerage (35%)
<b>Project ID</b>	P083979
<b>Borrower(s)</b>	REPUBLIC OF BOLIVIA
<b>Implementing Agency</b>	Ministry of Planning (executing agency)
	Gobierno Municipal de La Paz, Bolivia (Component 1)
	Gobierno Municipal de El Alto, Bolivia (Component 2)
	SAGUAPAC cooperative, Bolivia (Component 3)
<b>Environment Category</b>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined)
<b>Date PID Prepared</b>	June 15, 2006
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## 1. Country and Sector Background

### *National context*

With a gross national income per capita of only US\$910, Bolivia is the second poorest country in Latin America. The country has passed through a period of uncertainty since 2000 in which the existing economic model's ability to deliver sustainable poverty reduction has been challenged. In December 2005 a new government headed by Evo Morales was elected with an absolute majority (54 percent of voters), the first ever indigenous president of Bolivia. With a strong mandate for a new approach to address the country's long-standing social problems, the new government has announced its intentions to prioritize constitutional reform and poverty reduction. At the local level the most pressing priorities, including basic urban infrastructure, transport and sanitation, have reflected higher level developmental problems such as urban marginality, urban vulnerability to natural disasters, urban transport congestion and limited access to and quality of basic urban services.

The new National Development Plan (NDP), "Dignified, Sovereign, Productive and Democratic Bolivia, a plan for living well: 2006-2010" has three pillars: (i) productive development and employment generation; (ii) justice and social inclusion; and (iii) macroeconomic stability.<sup>1</sup> The NDP states that the indigenous communities will be the main actors and beneficiaries of the plan. The first pillar includes five sectors: (a) surplus-generating activities such as hydrocarbons, mining, electric energy, forest, water, and biodiversity, areas in which the national government will have a stronger role; (b) job creating activities such as industry, tourism, agriculture, housing and the financial system, areas where the private sector will have a predominant role; (c) infrastructure for production, including

<sup>1</sup> The following description of the NDP has been based on an unwritten presentation by the government on May 23, 2006.

irrigation, science and technology, information, and animal and plant health; (d) financial services for production and science and technology.

The second pillar stresses the importance of social protection, health and education, water provision, sanitary services, housing, land, justice and national security. The Bolivian youth is expected to play a key role in the literacy and nutrition programs. The third pillar will enforce existing macroeconomic policies. In the short run Bolivians expect to reach a zero deficit in current expenses and a reduction in public external debt. Regarding international cooperation, the NDP states that in the long-run its financing should be completely based on internal resources. In the short run the government will seek external financing to priority areas. The NDP will be founded on a respect for interculturality and support to community development. Transversal themes are: gender, culture, society and environment.

With a 64% urban population, Bolivia is not as urban as some of its South American neighbors (Argentina 89%; Chile 87%). However two characteristics of the urban population are noteworthy. The first is that the levels of urban poverty in Bolivia are extremely high both in relative and absolute terms. Despite fluctuations in the urban poverty rate during this period, it was higher in 2002 at 53.9% than it had started in 1993 at 52%. In terms of absolute numbers, over half the poor (2.9 million) and 43% of the extreme poor (1.4 million) lived in urban areas in 2002, up from one third (1.8 million) and one fourth (800 thousand) in 1997, respectively.<sup>2</sup> The second is that the country's rate of urbanization is rising remarkably, from 56% in 1990 to 64% in 2005. This is due to the increased rural-to-urban search for opportunities as well as migration from small cities and mining areas to main urban centers since the late 1990s. From 1997 to 2002 urban migration doubled, as metro areas drew in low-income migrants coming from all regions at a current average annual growth rate of 3.2%.

Although service coverage in transport, electricity, gas, water and sanitation and telecommunications has increased in the past 15 years, Bolivia's per capita GDP is no higher today than it was fifty years ago.<sup>3</sup> This implies that the level of the existing infrastructure is not sufficient to sustain the economic growth necessary for the country's growing population.<sup>4</sup> Accordingly, despite coverage increase, significant challenges remain in terms of reaching the urban poor and unserved rural areas. The new Morales administration has announced that its public infrastructure investment policy will be to strengthen the role of the state by using revenues from hydrocarbons in lieu of the private investment that accounted for over half of Bolivia's investments in transport, water and sanitation and other public services between 1993 and 2003.

### *City context*

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<sup>2</sup> 2005 World Development Indicators

<sup>3</sup> Namely, as a percentage of GDP, Bolivia's investment in transport, electricity, gas, water/sanitation and telecommunications has fluctuated between 3.5 and 8.5% while other South American neighbors remained under 6% and Colombia reached 7%. The public investment has represented 43% of total investment and has been directed towards roads (66%), electricity (15%) and railways (13%), while private investment has occupied the remaining 57% and has been divided between electricity (39%), telecommunications (37%) and water and sanitation (17%).

<sup>4</sup> Easterly, William and Luis Servén, editors. 2003. *The Limits of Stabilization: Infrastructure, Public Deficits, and Growth in Latin America*. Co-publication of Stanford Social Sciences, an imprint of Stanford University Press and The World Bank

The municipality of **La Paz** occupies a total of 2,012 km<sup>2</sup> of which 1,832 km<sup>2</sup> are classified as rural and 180 km<sup>2</sup> as urban. Urban La Paz has a total population of 790,000<sup>5</sup> inhabitants (compared with only about 3,700 inhabitants in rural areas), and is situated inside 5 major and some 200 minor drainage basins. About 35% of La Paz's population is classified as poor and is concentrated on the northern, eastern and western slopes of the city where a lack of physical infrastructure compounds the risks associated with steep gradients. About 32% of the population living in these areas resides on slopes in excess of 45 degrees where frequent mud slides result in significant loss of life and property.<sup>6</sup> Overall, about one quarter of La Paz's urban population (almost 200,000 persons) are thought to live in areas at risk, with very limited access to basic services.

In 2000 the Municipal Government of La Paz initiated an integrated urban upgrading program with the objective of improving these living conditions in the city's lowest-income and most risk-prone neighborhoods. Beginning with five marginal neighborhoods, the program subsequently expanded both in numbers as well as in scope, by addressing risk prevention and disaster management after a large scale landslide in 2002. Today the municipality's urban upgrading program known as *Barrios de Verdad* program (meaning *real neighborhoods*) is in its fourth of a total of seven phases that will ultimately upgrade 105 neighborhoods. The program's intervention is based on a selection mechanism whereby neighborhoods present proposals that are evaluated according to their social and economic impact. This public competition for urban upgrading programs encourages wide-spread community participation and ensures that investments in public works respond to resident demand.

Within the same metropolitan region, the municipality of **El Alto** is adjacent to La Paz. Its current population totals 650,000, 81% of whom identify themselves as indigenous of predominantly Aymara origin. Yet it is one of the fastest growing areas in the southern hemisphere, with an average yearly growth rate of 6.7%, unlike La Paz whose population growth is constrained by its geography<sup>7</sup>. Given its flat topography and due to deficient land-management policies, rapid and uncontrolled urban sprawl in El Alto has been a constant over the last decades. As a result, El Alto is facing strong pressures and demands for the provision of public services, including transport services and road infrastructure. However, towering 3,962 meters above sea level, El Alto also controls the slopes and access into the capital, which is located at 3,597 meters in a deep depression. Thus it is naturally a vital transport hub that features an international airport within its city limits (serving La Paz), and connects via four highways with important regions of the country (La Paz, Desaguadero and Copacabana on the border with Peru, Oruro, Cochabamba and Santa Cruz and the municipality of Viacha). However, this system relies on the municipal urban road network which is often poorly planned and developed.

The municipal transport system is characterized by chaotic traffic flows and congestion in the main arteries, with pedestrians, hucksters and vehicles sharing the roads in many critical points (La Ceja for instance, which concentrates most of the economic activity of the city and is the main entry point from La Paz). Contributing factors to this situation are: (i) inadequate infrastructure; (ii) increasing vehicle motorization; (iii) an over-supply of small capacity public vehicles; (iii) a business scheme in the public transport industry that promotes competition in the market and not for the market; (iv) lack of adequate infrastructure for non-motorized transport; (v) inadequate institutional management of the public

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<sup>5</sup> 2001 Census data

<sup>6</sup> Very recently in January 2006, for example, torrential rains caused severe mud slides on the slopes of western La Paz.

<sup>7</sup> 2001 Census data

transport system including weak enforcement of transit laws and a lack of coordination mechanisms among different jurisdictions.

In **Santa Cruz**, it is the sanitation sector that faces the most immediate challenges. Santa Cruz has a population of about 1.3 million, growing at an annual rate of over 6%.<sup>8</sup> Sanitation services in Santa Cruz are provided by 10 cooperatives of which the largest is SAGUAPAC, serving 65% of the city's area. Sewerage coverage in SAGUAPAC's service area is only about 50%, giving Santa Cruz an overall level of sewerage coverage of only 32%. In addition to the immediate public health and environmental effects associated with low sewerage coverage, sewage infiltration into the city's main aquifer will result, within a few years, in irreversible damage. There is therefore an urgent need to increase the coverage of Santa Cruz's sewerage system to avoid the much larger investments associated with developing an entirely new water supply source for the city.

The cooperative has served the city for more than twenty years and has been recognized as one of the best managed in Latin America. It is run by a general assembly that names the top directors and their regulations grant the supervision council a veto right over the management council, which contributes to its stability. The cooperative has already received two Bank credits and technical assistance to train its staff, both of which have been used very effectively. Although its achievements have been impressive, its long term sustainability has been hindered by the city's constant growth as well as its need to protect the aquifer by reducing the infiltration of raw sewage from housing units not connected to the sewerage system.

## **2. Objectives**

The Project Development Objective is to improve the access to basic services to the urban poor in Bolivia's major cities through targeted infrastructure investments and the provision of technical assistance to municipalities in the planning, expansion and sustainability of urban service delivery.

Specific Project Objectives are: i) to achieve sustainable improvements in the urban infrastructure and living standards in the poorest neighborhoods of La Paz through comprehensive urban upgrading and neighborhood participation in project implementation; ii) to enhance mobility in the city of El Alto, removing infrastructure bottlenecks and introducing measures to modernize public transport services and urban transport management; iii) to expand sewerage coverage in poor areas of Santa Cruz de la Sierra.

Although the project covers three separate urban areas and three different infrastructure sub-sectors there is a common framework to the intervention. First, as reflected in the project's objectives, Bolivia's major cities are committed to developing sustainable urban growth policies. The current project will therefore be particularly instrumental in building a long-term relationship between the Bank and the municipal governments of these cities. Second, the infrastructure investments in the three cities have been targeted by sector and geographical area according to these cities' most vital needs, given that it is impossible to intervene in every sector due to limited resources. Third, pressing actions will be complemented by long-term planning efforts rooted in technical assistance to municipalities as well as incentives for community participation. Fourth, in order to foster enabling conditions for a sustained

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<sup>8</sup> Op Cit.

and transparent process that will build on this initial specific investment credit, cost recovery and monitoring and evaluation will be emphasized.

### **3. Rationale for Bank Involvement**

In Bolivia, the Bank has experience supporting service delivery and infrastructure projects at the local level as well as through central government institutions. The urban focus of the proposed project also lends to the rationale for Bank involvement, as the Bank brings operational experience in urban development from Latin America and elsewhere, especially urban upgrading in poor neighborhoods, urban transport and sanitation. This experience allows the Bank to offer a flexible, comprehensive and articulated menu of investments and technical assistance at the city level. Benefits to the country will therefore derive from the Bank's comparative advantage in these sectors as well as the finance provided.

Since the early 1990s the Latin American region of the World Bank has been actively pursuing projects of integrated upgrading of low-income human settlements, urban transport and sanitation. The upgrading projects have typically focused on the city level, taking a geographic approach to poverty targeting, and emphasizing the physical and social improvement of slum conditions. The Bank's city-based urban upgrading projects take a macro perspective to effectively integrate often isolated, low-income communities into the overall fabric of the city.

Regarding urban transport both the Bank's lending and research programs have played a key role in the implementation of innovative solutions in client countries to deal with common urban transport issues experienced by most Latin American cities, with notable experiences in Bogotá, Lima and Santiago de Chile. Bank involvement in this project would allow bringing worldwide knowledge and best practices to: (i) structure transport systems that will provide direct benefits to the community and especially the poor; (ii) develop the institutional capacity of urban transport authorities; (iii) enhance the regulatory frameworks to improve the quality of services; and (iv) strengthen the integration and coordination between transport, land-use and environmental policies, among others.

Lastly, in the area of sanitation, the Bank is one of the financial institutions with the longest lending history in Latin America. After a decrease in the late 1990s, lending has tripled over the past three years. In the LCR, assistance is being provided to 13 governments in the form of 34 projects (18 of which are underway), amounting to US\$3 billion. The aim of these projects has been to improve the quality of life, health and environmental conditions through the provision of sustainable services through partnerships with governments, the private sector, and community organizations.

### **4. Description**

The proposed lending instrument is a Specific Investment Credit

**Component 1: Urban upgrading in La Paz** (US\$10.4 million, of which US\$10.0 million IDA credit and US\$0.4 million in local counterpart financing)

- Sub-component 1A: Preparation (US\$0.49 million of which US\$0.47 million IDA credit). Sub-component activities include: (a) sub-project designs; (b) preparatory studies; (c) development of a communication strategy and operational manual; and (d) basic equipment.<sup>9</sup>
- Sub-component 1B: Strengthening Community Organization and Development (US\$0.96 million of which US\$0.83 million IDA credit). Sub-component activities include (a) community participation during the entire project cycle, including the key operations of sub-project selection, maintenance and operation; (b) regularization of land tenure rights for area residents; (c) contingency planning for responding to disasters; (d) eligible resettlement costs; and (e) supervision and audits of community development activities.
- Sub-component 1C: Physical Infrastructure (US\$8.95 million of which US\$8.7 million IDA credit). The sub-component would finance a package of demand-driven local investments at the neighborhood level, comprising (a) basic access, i.e. primarily low-cost road paving, sidewalks, and public transport stops; (b) street lighting; (c) improvements to existing drainage infrastructure, new drainage networks, street drains; (d) risk mitigation works; (e) installation of sanitation facilities; (f) environmental protection through green area creation, reforestation and solid waste collection and disposal; (g) community recreation facilities including community services and childcare; and (h) supervision and audits of physical infrastructure activities.

**Component 2: Urban transport in El Alto** (US\$ 10 million, of which US\$10 million IDA credit)

- Sub-component 2A: Trunk Infrastructure Development (US\$ 4.17 million). The sub-component would finance infrastructure investments for trunk roads and associated drainage works in El Alto to remove bottlenecks and enhance the links between the southern and northern parts of the city. Investments would be directed towards the completion of the city's second ring road through: (a) the construction of a 3.7 km long trunk road (Avenida Litoral); (b) the construction of a 0.76 km long trunk road (Avenida Costanera), and (c) the construction of a 2-lane bridge over the Río Seco at the intersection of Av. Litoral and Av. Costanera. The road investments would include typical ancillary works, such as improved road drainage and street lighting.

These interventions would improve the communication between the main radial avenues in the city, (Av. 6 de Marzo towards Oruro, Av. Ladislao Cabrera towards Viacha, and Av. Juan Pablo II) and provide an improved link for heavy goods traffic between the outer parts of El Alto and long-distance movements between the Bolivian hinterland and Peru. In addition, these improvements would promote the development of new economic and productive zones and reduce the concentration of activities in the congested "La Ceja" zone.

- Sub-component 2B: Modernization of Public Transport Services and Urban Transport Management (US\$ 4.66 million). This sub-component would finance the design and implementation of a series of initiatives to enhance public transport services in the city and increase efficiency with regards to urban transport management. Said initiatives include:

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<sup>9</sup> Most of this sub-component is financed with a Project Preparation Facility (PPF).

- (i). Modernization of the Public Transport System (US\$ 2.47 million). This initiative includes the paving of dirt or gravel streets that currently carry high volumes of public transport vehicles. It would also include capacity building and technical assistance activities to support the preparation of a public transport modernization strategy for the municipality establishing the institutional, regulatory, social and technical bases for the implementation of a high-capacity transit system in the metropolitan area of La Paz-El Alto (Bus Rapid Transit-BRT- system). Several initiatives are being initially financed through a Project Preparation Facility (PPF) including: (a) a six-month study to assess the needs of the city (street improvements, reorganization of routes, institutional measures, etc) and future steps required to transform and reorganize the current system of public transport with an aim to develop a transport strategy based on mass transit systems and (b) a series of technical assistance activities to initiate a process of consultations with public transport operators and community leaders.
  - (ii). Non-Motorized Transport (US\$ 1.3 million). A strategy is being developed, with funding from the Project Preparation Facility, to establish a policy and investment strategy for improving the conditions for pedestrian and bicycle movement in El Alto. Aside from ensuring the construction of paved sidewalks along Avenida Litoral (which has not been common practice in new road projects in El Alto until now), this sub-component would finance strategically located bikeways and improve sidewalk conditions in areas with many pedestrians.
  - (iii). Other Road Network Improvements (US\$ 0.9 million). These improvements include (a) low-cost and labor intensive pavements to improve all-weather access to residential streets, (b) the definition and initial implementation of a traffic safety and citizen's education strategy, and (c) the elaboration of traffic management (including traffic signals) standards and implementation of priority traffic engineering measures.
- Sub-component 2C: Capacity-Building and Institutional Strengthening (US\$ 0.7 million). This sub-component would strengthen the institutional capacity in El Alto for urban development and transport management (in areas such as planning, budget execution, project evaluation, design and supervision of works, maintenance of assets, environmental management, traffic engineering, monitoring and administration of public transportation services, etc). It would also include a long overdue re-engineering of the internal procedures and urban transport regulations of the municipality.
  - Sub-component 2D: Project Implementation (US\$ 0.48 million). This sub-component would finance the contracting of a Project Director, a Civil Engineer, an Economist and a Traffic Engineer, as well as support personnel, equipment and training to provide support to the Municipality for the implementation of the project. All these will be contracted as part of project preparation and will continue working within the municipal offices throughout the duration of the project.<sup>10</sup>

**Component 3: Sanitation in Santa Cruz** (US\$ 10.0 million, of which US\$10.0 million IDA credit)

- Sewerage and Wastewater Treatment (US\$ 10.0 million of which US\$10.0 million is IDA credit). The component would finance: (i) the construction of secondary sewerage networks in

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<sup>10</sup> PPF funds are assigned for this purpose.

neighborhoods UV-106 (partially), UV-114, UV-115, UV-118, UV-119, and UV-140 of Santa Cruz, which are of the poorest areas located between *Anillos 4 and 5*, thereby expanding service to 37,500 additional residents of the city; (ii) the construction of main collectors and a sewage pumping station in the neighborhoods to which the service is being extended, and interceptors which would connect these areas to the existing main conveyance systems which will transport the wastewater to the existing wastewater treatment plants; and (iii) execution of works for increasing the capacity of the three wastewater treatment plants of Santa Cruz so as to enable them to process the increased wastewater flow which would reach them in the future.

## 5. Financing

Source:	(US\$M)
BORROWER	0.4
INTERNATIONAL DEVELOPMENT AGENCY (IDA)	30.0
Total	30.4

## 6. Implementation

### Partnership arrangements (if applicable)

The project has several strategic partners whose contribution will complement the Bank's core investment: (i) IDB is supporting Phase 1 of the *Barrios de Verdad* program and has provided valuable information for the Bank's project design; (ii) Cities Alliance would be contributing towards developing a technical, institutional and financial strategy for *Barrios de Verdad*.<sup>11</sup> The strategy would aim to address both the stock of existing settlements and to develop land management policies to increase the supply of affordable serviced land and thus prevent the formation of new slums; (iii) The Andean Promotion Corporation (CAF) has provided to SAGUAPAC two loans each of US\$ 5 million for expansion of secondary and primary sewerage networks, the first of which is about to be completed and the second one of which is under implementation; (iv) The EU is financing the construction of sewerage networks in poor areas under the concession of other sanitation cooperatives in Santa Cruz; and (v) The Swedish International Development Cooperation Agency (SIDA) is interested in funding sanitation works in the poorest neighborhoods in Santa Cruz. They are currently defining, together with their partners -SAGUAPAC, World Bank and other sanitation cooperatives in Santa Cruz- whether to fund works within SAGUAPAC's concession area or in areas covered by the other cooperatives, with SAGUAPAC's support.

### Institutional and implementation arrangements

The Republic of Bolivia, through VIPFE within the Ministry of Planning, will be the recipient of the proposed IDA Credit, which in turn will transfer credit proceeds to the Municipalities of La Paz, El Alto and SAGUAPAC, through Subsidiary Credit Agreements (SCAs). Each individual SCA, will establish the terms and conditions under which proceeds are going to be transferred to each jurisdiction and the distribution of responsibilities and functions of Municipal entities and SAGUAPAC to manage the

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<sup>11</sup> The Cities Alliance proposal is complete though it requires an additional partner. GTZ has expressed preliminary interest.

transferred resources and execute the components. The transfer of funds will be made under the same IDA conditions.

Each implementing agency will manage a special account. There is a law for water and sanitary drainage service providers (Law 2649) that allows the transfer of public resources to public or private system operators, allowing for transfer of public funds directly to SAGUAPAC.<sup>12</sup> The Bank will use project agreements between the Bank and the participating agencies in order to introduce a direct relationship with them and therefore facilitate solving problems and general supervision.

The Ministry of Planning through the Vice-Ministry of Public Investment and External Financing (VIPFE) will be responsible for acting as a permanent link between the Bank and the Municipalities of La Paz and El Alto and SAGUAPAC. VIPFE will be in charge of requesting, on behalf of the executing agencies, project extensions, amendments, changes in disbursement categories, and other operational processes, to the World Bank.

Each agency has assigned its own staff to carry out the implementation of its component, which is in line with Bank guidelines (refer to Annex 6 for more details). In the case of La Paz, the longstanding unit of the *Barrios de Verdad* program is staffed by the municipal government that assigns a program coordinator, three managers in charge of supervising existing projects, overseeing the preparation of new projects, and ensuring that social accompaniment takes place throughout project preparation and implementation, respectively. A general secretariat unit is in charge of legal aspects, monitoring and evaluation, administration and finances, and communication. In the case of El Alto, municipal staff from the Urban Development and Environment Department (*Oficialía Mayor de Desarrollo Urbano y Medio Ambiente*, ODUMA) has been assigned to the project. Four consultants (civil engineer, architect, economist and administrator) will be financed through a project preparation facility (PPF) to complete component preparation activities. Later on, a Project Coordinating and Advisory Group (PCAG), to be financed with credit proceeds, will support ODUMA in the coordination and management of project activities. The PCAG will be headed by a Project Director who will report directly to the Official Mayor. The Project Director will be assisted by professional staff (a Civil Engineer, an Economist and a Traffic Engineer) and other administrative staff. SAGUAPAC in Santa Cruz has designated its Planning and Systems Manager as the Project Coordinator.

### **Monitoring and evaluation of outcomes/results**

A results framework and monitoring strategy were developed in close collaboration with counterparts and support from Bank's monitoring and evaluation experts. Each implementing agency will submit monitoring indicators to the Bank twice a year. The primary sources of data include consultant reports, minutes of community meetings, financial reports, and surveys. In addition, an impact evaluation for the La Paz component will be implemented using a Norwegian Trust Fund and a grant from Cities Alliance. The impact evaluation comprises two studies. The first is a simple comparison of gains and losses within two of the three *macrodistritos* (larger groups of neighborhoods) targeted by the program. The baseline of this evaluation will be combined with the socio-economic assessment commissioned by the municipality as part of project preparation. The second will be a randomized evaluation of one of the program's key components: titling. This complementary design will address the substantial

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<sup>12</sup> Law 2649, Article 1, (April 8, 2004), states that EPSAs may receive public credit and may benefit directly from external funding for investment infrastructure development.

difficulties that evaluating the program as a whole poses by providing reliable estimates of the causal impact of one of the program's components. These studies are intended to produce results that could help the municipality of La Paz in designing subsequent phases of *Barrios de Verdad*, which it definitely envisions.

## **7. Sustainability**

There is clear evidence of project sustainability. First, the municipal governments of La Paz and El Alto have expressed their strong political support through their request for a PPF. This was supported by the national government, and a PPF legal agreement was countersigned by the new government in January 2006. Second, the project was designed on the basis of existing expertise and/or experience with the infrastructure sectors addressed. In two out of the three cities where the project will be implemented it will work towards the expansion of services of previously existing endeavors, namely *Barrios de Verdad* in La Paz and SAGUAPAC in Santa Cruz. Third, the project components are designed in such a way as to generate cost recovery which will not only create profitable investments but also ensure their sustainability and thus lasting impact for project beneficiaries.

## **8. Lessons Learned from Past Operations in the Country/Sector**

### **Urban Upgrading**

(i) **Community participation and cost recovery.** Shared decision-making processes promoted by the *Barrios de Verdad* urban upgrading program (BdV) have been very effective in ensuring allocation efficiency, community ownership of program deliverables, creation of local knowledge, better cost recovery, and ultimately improved operation and maintenance over time. Likewise, in this initiative and others, NGOs and CBOs have been valuable intermediaries for the community, assisting in articulating needs and preferences, sorting through tradeoffs and promoting cost recovery. Specifically, the program has also learned to promote participation more effectively and extensively by creating incentives based on resident preferences, for instance, postponing unrelated community activities during the project and eliminating narrowly defined requirements or "minimum coverage" practices.

(ii) **Land titling.** Improving titling practices by reducing delays (as per the presentation of documents) and increasing the coverage of settlers has also proven effective in terms of promoting participation in the BdV program. Furthermore, the Bank's ongoing experience in urban upgrading projects in other countries in the LAC region in the last decades has shown that granting full property rights to informal land occupants to the sites that they currently occupy generates the following six beneficial outcomes: (a) the value of the property rises and contributes to increasing the value of the assets of the poor; (b) house improvements follow with security of tenure; (c) the liquidity of the property rises, enabling easier buying and selling transactions, and therefore empowered command of the land market; (d) access to bank loans becomes possible due to use of property as collateral; (e) the possibility of passing it on the next generation as inheritance; (f) increased citizenship rights and other qualitative benefits of formality.

(iii) **Comprehensive upgrading.** The present component design was based on the BdV's experience regarding the advantages of comprehensive neighborhood improvement in contrast with sector-specific investments: (a) comprehensive, cross-sectoral coverage of service deficiencies in given geographic areas; (b) reaching all residents within target neighborhoods; (c) creation of community ownership (d) on-the-spot coordination and execution of investments across sectors (re: installation of pipes, road works, drainage channels, etc.) which reduce costs and improve efficiency; and (e) high-visibility improvements across a targeted area. In the present project the focus on neighborhood improvement will be implemented in component 1, to maximize the advantages of a comprehensive geographic approach.

(iv) **Quality Control.** BdV has also incorporated valuable lessons from its previous work with other partners, particularly from a previous stage of the same program with support from the National Fund for Regional Development (FNDR)<sup>13</sup>. The technical team highlighted that both the contracting and monitoring process had been key to ensuring the quality of the program in both its social and physical dimensions. First, they suggested that construction companies need to be selected by quality as well as cost criteria. Likewise, respecting labor laws in subcontracting short-term labor from the neighborhoods, in regards to healthy work environments, schedules and salary ranges has been especially important. Second, they have found that monitoring indicators have benefited the program by enhancing beneficiary participation in the monitoring process as well as by reducing delays through the installment of intermediate controls in the enforcement of the construction schedule.

## Urban Transport

a. **Impact on quality of life.** Recent Bank experience has shown that urban transport projects are a trigger for a more integrated improvement process in cities, when they are approached as an opportunity for creating a higher quality urban environment. Bogota's Bus Rapid Transit System (Transmilenio) for instance, is a clear example of urban modernization and development evolving around an urban transport project. This comprehensive approach has addressed infrastructure bottlenecks and dealt with public transport services, generating high impact and substantial benefits to the population. Prioritizing public over private transport has proven to be a successful strategy, when high political involvement and leadership is involved and the technical capacity to design, plan, control and regulate such system is in place. Reliable sources of funds are also a key element to ensure the sustainability of these types of long-term urban transport reforms.

b. **Non-motorized transport.** Sector experience has shown that the following measures promote the use of non-motorized alternatives: (a) expansion of adequate sidewalks, footpaths, and other pedestrian facilities; (b) clear provision for the rights as well as responsibilities of pedestrians and bicyclists in traffic regulations; (c) explicit formulation of local plans for non-motorized transport as part of the planning procedures of municipal authorities; (d) provision of separate infrastructure where appropriate (e.g. safe movement and secure parking of vehicles); (e) incorporation of bicycle and pedestrian standards in new road infrastructure design; (f) incorporation of responsibilities to provide for non-motorized transport in road fund statutes and procedures; and (g) development of small-scale credit mechanisms to finance bicycles.

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<sup>13</sup> FNDR was established in 1988 as an agency with a legal identity separate from that of the central government. Its main objectives are to promote investment projects in infrastructure and to channel local and external funds for these projects.

## Sanitation

(i) **Cost recovery.** Experience has shown that tariffs that recover full average costs are critical for the provision of sanitation services as they eliminate the need for operating subsidies from general government revenue and facilitate service expansion. Nevertheless, this process should allow flexibility to adjust tariff levels for poor households, depending on their ability to pay.<sup>14</sup> Experience has also shown that capital investments of utilities, especially for wastewater treatment investments, government subsidies are required, even in developed countries (as is the case in the USA, EU and Japan) let alone in developing countries. SAGUAPAC is fully recovering O&M costs for water and sanitation, and also part of its investment requirement, however it cannot generate all sufficient income from tariffs to account for all its investment costs. It has never received any investment subsidy, and the only support it receives is government credit guarantees, and even those are insufficient.

(ii) **Efficient management.** It has been shown that efficient and professional management of sanitation utilities is vital in achieving financial sustainability, customer responsiveness and optimal use of resources. It is standard practice in the sector to gauge effective management through operational efficiency. Operational efficiency can be monitored by ratios such as staff per 1,000 connections. The staff ratios achieved by the top 25 percent of developing country utilities suggest that a target of 5 or fewer staff per 1,000 connections is achievable. SAGUAPAC is one of the most efficient utilities in Latin America, as manifested by a productivity of 3.5 employees/1000 connections.

(iii) **Customer Service.** Bank experience has shown that customer service has been enhanced by means of the easy access by the customers to service centers located in different parts of the city and the prompt attention to customers' inquiries and complaints. Hiring of private firms for billing and collection, and operation and maintenance of sanitation networks has been effective. Furthermore, in some cases establishing a sophisticated planning department and installing modern management information systems with the latest software has helped develop a transparent and accountable corporate culture. SAGUAPAC has a good planning department and modern information systems and provides excellent customer service.

(iv) **Expansion of services to poor areas.** While the situation varies from city to city, the market for sanitation services exhibits the following characteristics: (a) *Poor provider performance hurts the poor more than others.* Poor maintenance of sanitation systems affects the poor disproportionately as they do not have the means to pay for alternative systems. (b) *The poor are willing to pay for sanitation services.* Despite the perception that the poor cannot pay for sanitation, there is increasing evidence that the poor do pay, and often pay more than the better-off consumers: for instance paying for sanitation from small-scale providers at a higher cost or paying fees for access to illegal connections to slum landlords; (c) *Cash flow is an issue in buying sanitation services.* Poor households on subsistence incomes find it difficult to pay large, infrequent bills. Likewise, high, one-time connection fees can be a deterrent to the poor who wish to connect to the network. (d) *Land tenure is a constraint to getting good services.* The poor often reside in unplanned or informal areas, and they may lack the legal status to request, or qualify for, direct access to formal services under existing legal and regulatory

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<sup>14</sup> "New designs for Water and Sanitation transactions: Making private sector participation work for the poor", Water and Sanitation program-PPIAF, 2000.

frameworks. Therefore, providing better services to improve affordability and quality of service to the consumer confirms the status of the poor as legitimate customers.<sup>15</sup>

## 9. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Natural Habitats	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pest Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cultural Property	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Involuntary Resettlement	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Indigenous Peoples <sup>16</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Forests	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Safety of Dams	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Projects in Disputed Areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Projects on International Waterways	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## 10. List of Factual Technical Documents

- *Marco de Reasentamiento Involuntario*, Guido Montañó (Beta Gama) y Juan Manuel García (Econometría)
- *Estudio Ambiental de La Paz*, Máximo Liberman
- *Estudio Ambiental de El Alto*, María del Carmen Rocabado, Beta Gama Consultants
- *Estudio Ambiental de Santa Cruz*, Máximo Liberman
- *Estudio Socio Económico de La Paz*, Eduardo Pando and Ernesto Marconi, Beta Gama Consultants
- *Estudio Socio Económico de El Alto*, Beta Gama Consultants
- *Estudio Socio Económico de Santa Cruz*, Juan Manuel García, Econometría
- *Evaluación de Capacidad de Endeudamiento y Sostenibilidad de la Deuda*, José Antonio Terán
- *Financial Study of SAGUAPAC*, Sergio Sour
- *Financial Management Assessment*, Lourdes Linares
- *Procurement Assessment*, Miriam Céspedes y Álvaro Larrea
- *Estudios de Tráfico para el Componente de El Alto*, Grupo TEC

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<sup>15</sup> Op cit, pgs 2-3.

<sup>16</sup> The indigenous people safeguard was not triggered although the project is benefiting indigenous people, because they are residing in urban areas, in which this safeguard is not triggered.

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