1. Country and Sector Background

The municipality of La Paz occupies a total of 2,012 km2 of which 1,832 km2 are classified as rural and 180 km2 as urban. Urban La Paz has a total population of 790,000 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.

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 y Comunidades de Verdad (BCdV) 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. 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; (iv) a business scheme in the public transport industry that promotes competition in the market and not for the market; (v) lack of adequate infrastructure for non-motorized transport; (v) inadequate institutional management of the public 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%.*

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 water and sanitation providers 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

Background. On December 2011, the Borrower submitted a request to the Bank for an additional finance credit for the Bolivia Urban Infrastructure Project (BUIP, or the Parent Project). The BUIP is an SDR 20.5 million (US$30 million) Sector Investment Loan approved on November 21, 2006 to the Government of Bolivia (GoB) to improve access to basic services to the urban poor in Bolivia’s major cities. The Project became effective on September 12, 2007; it is currently 95% disbursed and has consistently been rated as Satisfactory. The original closing date was November 30, 2010; which has been extended cumulatively by 23 months to October 31, 2012. The project includes the following components:

• **Component 1- Urban upgrading in the Municipality of La Paz:** This component financed comprehensive urban upgrading packages in 22 of the poorest neighborhoods of the city of La Paz, through support to the Barrios y Comunidades de Verdad (BCdV) Program\(^1\). The BCdV Program is a slum upgrading initiative launched in 2000 by the Municipality of La Paz that aims to improve the physical infrastructure, reduce the risk to natural hazards and strengthen capacities within the poorest communities.

• **Component 2 – Urban transport in the Municipality of El Alto:** This component financed infrastructure investments for three trunk roads and associated drainage works to remove bottlenecks and enhance the links between the southern and northern parts of the city of El Alto. Investments were directed to complete the city’s second ring road to improve conditions for heavy goods traffic. Technical assistance activities to support the design of a public transport modernization strategy and small investments to improve conditions of pedestrian and bicycle traffic were also included into the project design.

• **Component 3 – Sewerage and Wastewater Treatment in the Municipality of Santa Cruz:** This component financed the construction of main collectors, a sewerage pumping station and related improvements to existing infrastructure to increase sewerage and wastewater treatment coverage to 32,000 inhabitants through 8,043 new connections in low-

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\(^1\) The BCdV program is funded by the IADB, the Government of Venezuela, and the Municipality of La Paz.
income neighborhoods. The project also supported a carbon finance initiative of the water utility (through financing the technology to capture methane gas from anaerobic lagoons).

3. **Rationale for Bank Involvement**

The activities supported under this Additional Financing (AF) represent a scale up of two of the project components. The activities proposed for financing remain relevant within the Borrower’s National Development Plan, and within the 2012-2015 Bank’s Country Partnership Strategy. Specifically the proposed project will contribute to the priority area on Human Development and access to Basic Services (under Pillar 3).

The Bolivia Infrastructure Project has successfully improved the access to basic services in the three originally cities targeted (La Paz, El Alto and Santa Cruz). The original project appraisal document already identified that the loan amount would only be able to partially serve the demand for quality urban services in the selected cities, and hence could potentially be scaled up once the municipalities and implementing agencies demonstrated their capability to implement the project satisfactorily. The project has been consistently rated as Satisfactory on both implementation progress and achievement of project objectives since it became effective.

Project results to date are strong, with room for improvement in the implementation capacity in particular under Component 2. The most robust results were achieved under Component 3, where the original targets for wastewater collection and coverage of sewage services for the City of Santa Cruz were surpassed. Under the BCdV Program financed under Component 1 average traveling time to the nearest bus stop within the beneficiary neighborhoods has decreased from 19 to 7 minutes; and preliminary estimates suggest that property values have doubled since the Program’s interventions. Under Component 2 the project has improved mobility within an essential commercial route that carries supplies to the capital city.

4. **Description**

The proposed project would support scaling-up activities within the following components:

**Component 1. Expansion of Urban Upgrading in La Paz (US$20.4 million, of which US$ 12 million Bank financing).** This component will support: (i) the provision of infrastructure services in 23 additional neighborhoods under the BCdV Program, including: demand-driven local investments in street lighting, drainage infrastructure, sanitation facilities, disaster risk mitigation works, and community recreation facilities; (ii) strengthening community organization and participation during the entire project cycle, and (iii) regularization of land tenure rights. The proposed operation will finance infrastructure packages in 16 out of the 23 additional neighborhoods.

**Component 2. Expansion and Strengthening of Urban Transport in El Alto (US$12 million, of which US$12 million Bank financing).** This component will support: (i) construction of trunk transport infrastructure; (ii) construction or improvement of non-motorized transport solutions
(pedestrian sidewalks and crossings, bicycle lanes), and (iii) capacity building and institutional strengthening for the municipality of El Alto.

5. Financing

Source: ($m.)
BORROWER/RECIPIENT       8.4
International Development Association (IDA)    24.0

Total   32.4

6. Implementation

The implementation arrangements remain unchanged from the Parent Project. The Vice-Ministry of Public Investment and External Financing (VIPFE) will be the recipient of the Additional Financing, which in turn will transfer the proceeds to the Municipalities of La Paz and El Alto. Component 1 will be implemented by the Barrios and Comunidades de Verdad Program in La Paz (which is staffed by the municipal government) and Component 2 will be implemented by the Grupo de Coordinación y Asesoramiento (GCA), an executive technical unit that reports directly to Office of Works and Environment (Oficialía Mayor de Obras y Medio Ambiente - OMOMA) in ELalto Municipality (GAMEA).

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 for the Project. Second, the project was designed on the basis of existing expertise and/or experience with the infrastructure sectors addressed. The AF will work towards the expansion of services of previously existing endeavors. 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 BCdV urban upgrading program 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 overtime. 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.
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 BCdV program. Furthermore, the Bank's ongoing experience in urban upgrading projects in other countries in the Latin American 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.

Land titling.

Comprehensive upgrading. The present component design was based on the BCdV'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.

Quality Control. BCdV 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). 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

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.

(vi) **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.

9. **Safeguard Policies (including public consultation)**

The AF has been confirmed as Category B. Both the Parent Project and the AF have been designed to contribute to improve environmental management of the targeted municipalities and the improvement in the quality of life of local residents. The safeguard policies triggered by the proposed AF loan (Environmental Assessment (OP/BP 4.01); Physical Cultural Resources (OP/BP 4.11) and Involuntary Resettlement (OP/BP 4.12)) are the same as in the parent project. The Parent Project followed a safeguards management framework approach for treatment of social and environmental issues and is in compliance with all safeguard requirements.

The specific sub-projects to be financed under component 1 (La Paz) of the project have been identified. The Environmental Management Framework (EMF) has been applied to the identified sub-projects and screening has been carried-out. Environmental licenses have been issued by the corresponding authority and given the minimal expected negative impacts - most of which would occur during the construction phase - the project’s operational manual includes the mitigation measures as per the EMF. The Resettlement Policy Framework has also been applied to the identified sub-projects and a draft Abbreviated Resettlement Plan has been prepared and submitted to the Bank.

The specific sub-projects to be financed under component 2 (El Alto) of the project have not been identified. As such, Component 2 under the proposed AF loan will follow the framework approach of the parent project. The Environment and Resettlement Policy Frameworks have been updated by the implementing units to reflect lessons learned during the parent project and have been reviewed by the Bank and approved for disclosure.

10. **List of Factual Technical Documents**

- Estudio Ambiental de La Paz, Máximo Liberman
Additions to the original EMF for La Paz: (i) “Manual ambiental para la construcción de vías, graderías, alcantarilla e infraestructura comunitaria para la ciudad de La Paz”; (ii) “Política y procedimientos de gestión ambiental -Plan de salvaguarda ambiental”

- Environmental licenses for the 23 new subprojects in La Paz
- EMF for El Alto (Original, no updates needed) (Estudio Ambiental de EL Allto, María del Carmen Rocabado, Beta Gama Consultants)
- Informe de Cierre Plan Abreviado de Afectación de Predios La Paz
- Plan de Reasentamiento Involuntario, La Paz
- TESAs for the 23 new subprojects in La Paz
- Updated Resettlement Policy Framework for El Alto (Marco de Reasentamiento Involuntario, Guido Montafio (Beta Gama) and Juan Manuel García (Econometría)
- Financial Management Assessment, Marcelo J. Berthin, Lourdes Linares
- Procurement Assessment, Jose Yukio Rassmusen

11. Contact point
Contact: Angelica Nunez del Campo
Title: Sr Urban Spec.
Tel: (202) 473-4605
Fax: 
Email: anunez@worldbank.org

12. For more information contact:
The InfoShop
The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 458-4500
Fax: (202) 522-1500
Email: pic@worldbank.org
Web: http://www.worldbank.org/infoshop