

**PROGRAM-FOR-RESULTS INFORMATION DOCUMENT (PID)
CONCEPT STAGE**

Report No.:PID0001926

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Program Name	<i>Road Sector Management Program</i>
Region	<i>Latin America and Caribbean Region</i>
Country	<i>Plurinational State of Bolivia</i>
Sector	<i>Transport</i>
Lending Instrument	<i>Program for Results</i>
Program ID	<i>P144597</i>
<i>{If Add. Fin.}</i> Parent Program ID	<i>n/a</i>
Borrower(s)	<i>Plurinational State of Bolivia</i>
Implementing Agency	<i>Administradora Boliviana de Carreteras</i>
Date PID Prepared	<i>September 24, 2013</i>
Estimated Date of Appraisal Completion	<i>January 27, 2014</i>
Estimated Date of Board Approval	<i>April 30, 2014</i>
Concept Review Decision	Following the review of the concept, the decision was taken to proceed with the preparation of the operation.

I. Introduction and Context

A. Country Context

One of the priority areas of the Government of Bolivia is development of the road sector. The thrust of the road sector strategy of the Government of Bolivia aims at expanding and improving the national road network with the purpose of better integrating the various parts of the country and spur economic development. Bolivia's overall road density (national, departmental and municipal), at 7 km of roads per 100 square km of land area, is the lowest among its neighbors and well below half of the average for Latin America and the Caribbean. However when accounting for Bolivia's low population density, road km per 1000 people is more in line with regional norms.

A well-constructed, resilient and maintained road network ensures that the population has access to public services, economic opportunities and ensures social integration of the country. Many parts of the country still lack that connectivity to ensure that the population, in particular its lower-income segments, have that access and opportunity.

Budget allocated to the national road sector has grown from US\$115 million in 2002 to about US\$566 million in 2010.

A concerted effort is underway to build up the part of the road network designated as *Corredor Bioceánico*, connecting Brazil to the ports of Arica and Iquique in Chile in the west, by a road

connection through Bolivia from Puerto Suarez in the east. Other main corridors link the north to the east, the west to the north, the west to the south and central part of the country to the south.

Parallel with construction activities, the continuous need for maintenance of the road network is met with a combination of routine maintenance by microenterprises and periodic maintenance interventions short of rehabilitation by private contractors. Treasury funding is provided on ongoing basis for this type of maintenance of nearly the entire national road network through this approach.

The proposed program will support the Governments rehabilitation program on the paved primary road network, referred to as *Puesta a Punto*. The program's aim is preservation of road assets.

B. Sectoral and Institutional Context of the Program

The overall road sector responsibility is with Ministerio de Obras Publicas, Servicios (MOPSV - Ministry of Public Works, Services, and Housing). The primary road network (*Red Vial Fundamental*) in Bolivia is managed by the national road agency *Administradora Boliviana de Carreteras* (ABC). In general, the mandate of ABC is to plan, study and design, construct, maintain, preserve and operate the road network under its responsibility. Within ABC, the Technical Direction (*Gerencia Tecnica*) is in charge of most technical (planning, feasibility studies, engineering designs), fiduciary and environmental/social processes required by the Program implementation. The majority of road supervision services are performed by consultants. The Technical Direction consists of three departments: i) construction, ii) conservation and iii) Environmental and Social.

Of the national road network of 16,000 km, close to 6,000 km are paved, while the remainder is either gravel or dirt roads. In the past 7 years, paved part of the main road network has increased by nearly 1,900 km. For long term preservation of the paved network, rehabilitation on weakened sections is needed on a rolling basis. ABC program for this preservation is called *Puesta a Punto*.

(Km)	2003	2004	2005	2006	2007	2010
Paved	4.032	4.295	4.394	4.513	4.742	5.883
Gravel	4.739	5.583	5.845	6.455	7.838	4.051
Dirt	3.484	4.487	5.426	5.060	3.384	3.021
On-classified						3.254

TOTAL	12.255	14.365	15.665	16.028	15.964	16.209
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Sources: Administradora Boliviana de Carreteras-Departamento de Planificación y Desarrollo Tecnológico, Años 2003-2007 y Estudio: Inventario Vial y auscultación de la RVF Asociación Louis Berger-ITYAC, Año 2010.

The expected overall need for investment under the *Puesta a Punto* Program for the years 2013-2017 is slightly short of US\$ 900 million for about 1900 km. Within this broader need, ABC is prioritizing a sub-program which reasonably can be expected to be funded. This consists of roads already with funding and expected funding from the World Bank, *Corporación Andina de Fomento* (CAF), Inter-American Development Bank (IADB) and FONPLATA.

It can be expected that the Government will not be able to secure full funding for the program in the coming months and thus eliminate the large financing gap. In that case, during preparation, the definition of the Program could be further curtailed to reflect likely realistic achievements with a methodology for prioritization.

II. Program Development Objective(s)

A. Program Development Objective(s)

The objective of the program is improving the condition of the Bolivian national paved road network falling within ABCs *Puesta a Punto* prioritized roads, with the aim of facilitating access to communities and markets and to reduce cost of transport.

B. Key Program Results

Expected PDO disbursement linked indicators (DLI) are as follows.

- KM of roads rehabilitated
- DLIs linked to activities to be defined in an Action Plan, aimed at institutional strengthening and improvements in systems and processes. These could include:
 - Integration of various information systems and processes;
 - Updating or development of technical manuals;
 - Develop sustaining financing mechanisms for *Puesta a Punto*;
 - Systemic mitigation or elimination of key risks identified in assessments;
 - Capacity to address road safety aspects within ABCs purview.

III. Program Description

The operation includes civil works executed under ABCs *Puesta a Punto* program in Bolivia's paved primary road network. Within the program are rehabilitation and improvement works that fall within ABC categorization of 1st and 2nd grade: i) design (engineering), ii) civil works activity, and iii) supervision of the works.

The paved primary road network is 5500 km. Works under *Puesta a Punto* are rehabilitation on road infrastructure with the aim of recuperating to a condition where routine maintenance can be applied. On existing roads, the characteristics of works under *Puesta a Punto* are as follows:

- Rehabilitation of pavements and shoulders, drainage and culverts, rehabilitate bridge structures, amend horizontal and vertical signaling and improve road safety.
- These are characterized by variety of rehabilitation solutions for pavements, from simple pothole filling, crack-sealing, cleaning of drains, to full reconstruction. The technical solutions adopted will depend on the particular condition of the infrastructure.
- Road alignment will not be changed, with the exception of minor realignment to improve road safety (change in curves, crossings, improvement in visibility and traffic flow conditions).

IV. Initial Environmental and Social Screening

Bolivia is a large country (1.098 million km²), landlocked, and with a complex relieve (6542-70 meters above sea level) which generates a rich diversity of ecological regions and contains one of the highest biodiversity in Latin America. Bolivia has a forest cover of about 52.5% and has achieved the conservation of part of these forests in protected areas (some including indigenous territories) reaching about 16,63% of the country territory. ¹

The ABC Environmental and Social Department (*Gerencia Socio Ambiental, ESD*) coordinates closely with the Department of Road Conservation, all aspects related to planning, preparation of social and environmental studies, resettlement, environmental compensation programs, supervision, etc. The Environmental and Social Department of ABC has 5 staff for the overall country supervision of environmental management of all types of road works (including construction of new roads and rehabilitation works). In addition there's is one staff in each of the nine ABC Regional Offices. ESD complements the supervision of road works with additional environmental consultants per project.

Social Aspects. The Program will focus on road maintenance and rehabilitation and, therefore, is expected to have positive social impacts, such as improved access of road users to markets and services, increased road safety, and reduction of vehicle operating costs.

The adverse social impacts related to the construction activities are deemed to be low. Potential adverse impacts during construction include noise, dust and traffic issues; conflicts between construction workers and local communities; and increased risk of accidents and safety hazards in the sections of roads under construction/rehabilitation, particularly those located near urban areas.

As a general rule, the civil works to rehabilitate or maintain roads will take place within existing right of ways and, therefore, will not require the acquisition of additional land or cause physical or economic displacement. However, road rehabilitation could require minor modifications in the road alignment (for example, to correct curves). In most countries, such modifications require the acquisition of narrow strips of land adjacent to the road in order to maintain the width

¹ World Bank, Bolivia. Data.

of the right of way. However, according to ABC, this does not occur in Bolivia, where the practice is to reduce the width of the right of way to permit minor modifications in the road alignment. The Bank will examine a sample of recent road rehabilitation projects to confirm that they did not involve land acquisition.

The civil works involved in road maintenance and rehabilitation (for example, drainage improvement) could result in physical displacement and/or loss of assets (structures, crops, trees, etc.) in cases where the areas required for construction activities are occupied by informal housing or used for economic activities. According to ABC, the Program is not likely to displace houses or permanent commercial structures, but could displace informal ambulant vendors and/or roadside stalls in areas of the road located near urban centers.

ABC has in place a program to compensate for the loss of assets caused by road construction or to replace such assets. This program has clear procedures as well as a fairly well staffed team that can be engaged to ensure consistency with the principles of Bank policy OP 9.0.

The impacts of the project on Indigenous Peoples will be mostly positive. Indigenous groups with land adjacent to the roads to be improved or living near them are likely to benefit from greater road safety and improved access to markets and services. At the same time, these groups face some limited risks associated to certain components of road rehabilitation projects, such as the utilization of materials banks located within indigenous territories, work camps, asphaltting plants and disposal of rubble or waste materials. ABC has in place clear procedures to consult with all project stakeholders, including indigenous communities, and has a small but effective team that addresses concerns of indigenous communities.

In sum, the social impacts of the Program are expected to be mostly positive and the social risks associated with it are expected to be low. Risks identified include: (i) risk of mismanagement of involuntary resettlement processes; (ii) risk of unfairness in the compensation for the loss of assets caused by right of way acquisition and/or construction activities; (iii) inadequate engagement of construction contractors with indigenous communities. These risks can be addressed through the Program Action Plan.

Potential Environmental Impacts. The rehabilitation program will have important positive effects in the country such as i) improved access to transportation for passengers and transport of agricultural production; (ii) improvement of road safety, (iii) improved communication between isolated regions, among others. Roads works in Bolivia can have significant negative impacts due to country high relief, rich biodiversity, geomorphology, soil types, presence of nearby communities, among others. Impacts may include cutting of vegetation, soil erosion, changes in water quality and flows of streams, opening and management of borrow pits and quarries, contamination of pristine areas, etc. Improvement or rehabilitation of roads can also bring increase land use changes in forested areas or underdeveloped areas, increase negative effects on sensitive natural or critical environments. Local people can also be indirectly affected during the construction activities or during operation, by the increasing noise, air pollution, and more road accidents. During construction of civil works, the control of local transit is very difficult and accidents do occur. Improvement of roads could also affect the rate of road accidents.

Environmental System Regulatory Framework. The Bolivian Constitution entitles citizens to a clean environment, access of information and participation, respect to cultural diversity, etc. The main environmental legal framework protecting the environment (water, soil, forest, air) protected areas, flora and fauna, cultural resources is the Environmental Law N° 1333 from April, 1992. Other important legislation includes the Wildlife Law (DL 12301), Protected Area Regulations (DS 24781), Regulations for archeological studies (*Reglamento de Excavaciones Arqueológicas en Bolivia*. Resolución Ministerial N° 082/97).

Environmental categorization. According to the Environmental Law (Ley1333), rehabilitation or maintenance projects are classified as Category 3 (low to moderate environmental and social impact) which do not require the presentation of an EIA or the organizing of consultations, but require the preparation of a: i) mitigation plan (*Planteamiento Medidas Mitigacion*, PMM) and a ii) monitoring plan (*Plan de Aplicacion y seguimiento ambiental*, PASA) which include measures to reduce and mitigate impacts and activities which are subject of supervision by the Ministry of Environment.

Currently ABC has two group of regional environmental licenses (*Certificado de Dispensa*) issued by the Ministry of Environment, (1) for routine maintenance (2004-2014) and (2) another one for road rehabilitation and maintenance work (2012-2022) each composed of threes licenses covering a specific area of the country (Andean, Yungas and Valleys, Amazonian and Chaco Beni regions); these licenses are granted for a ten year period; ABC must renew the license for road maintenance by the end of 2014. ABC prepares annual or biannual reports to the Ministry of Environment. The license (2) excludes any road work within protected areas.

Instruments. ABC has developed with support from CAF a comprehensive instrument to guide the environmental management of road projects, the “*Manual Ambiental para la Conservación Vial de la ABC*” (ISO 9001) includes detailed description of prevention and mitigation measures to reduce impacts and risks associated with the ABC road interventions. ABC also applies different instruments for evaluation and supervision of road works such as environmental datasheet (*Ficha Ambiental*), supervision reports, mitigation and monitoring reports.

Preparation of ESSA. During preparation of the ESSA, consultations will be held with ABC staff, national authorities, departmental local agencies, and other important stakeholders such as Consejos Departamentales del Medio Ambiente (CODEMA), Sociedad de Investigación de Arte Rupestre de Bolivia (SIARB), Unidad de Arqueología y Museos (UDAM), indigenous organizations, Camara Boliviana de la Construction, contractors, NGOs, among others. One technical workshop with the ABC staff to discuss preliminary findings of the ESSA will be schedule for November 2013 and two project consultations on December 2013.

ESSA will include an action plan with proposed actions to increase environmental management, improve contractor environmental performance and overall mainstream best international best practices to reduce the impacts and risks identified in the ESSA preparation. A budget, timeline and responsibilities will be discussed and agree during preparation, with ABC to ensure full implementation.

V. Tentative financing

Source:	(\$m.)
Borrower/Recipient	55
IBRD	200
Corporacion Andina de Fomento	175
Inter-American Development Bank	35
FONPLATA	30
Financing Gap	357
TOTAL	861

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